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DOCUMENTS

OF THE

SCHOOL COMMITTEE

OF THE

CITY OF BOSTON

FOR THE YEAR 1920



CITY OF BOSTON
PRINTING DEPARTMENT
1920

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On January 17, 1921, the School Committee adopted as its Annual Report the Annual Report of the Superintendent, being School Document No. 13, 1920.

SCHOOL DOCUMENT NO. 1—1920

SCHOOL COMMITTEE OF THE
CITY OF BOSTON

ANNUAL REPORT OF THE BUSINESS AGENT

FOR THE

FINANCIAL YEAR ENDING JANUARY 31, 1920

AND

BUDGET

FOR THE

FINANCIAL YEAR ENDING JANUARY 31, 1921

AUGUST, 1920



CITY OF BOSTON
PRINTING DEPARTMENT
1920

BOSTON, MASS., August, 1920.

To the School Committee:

In compliance with section 110 of the Rules of the School Committee, I submit herewith the annual report of the Business Agent for the financial year February 1, 1919, to January 31, 1920, both included.

WILLIAM T. KEOUGH,
Business Agent.

ANNUAL REPORT OF THE BUSINESS AGENT.

MONEY AVAILABLE FROM THE TAX LEVY.

The reports of the Business Agent for the past two financial years have given the history of all legislative acts granting the School Committee authority to make appropriations for the support of the public schools, beginning with chapter 400 of the Acts of 1898, up to and including chapter 206 of the Special Acts of 1919.

Late in the financial year and during the special session of the 1919 Legislature there was enacted chapter 249 of the Special Acts of 1919, which authorized the School Committee to increase its appropriations by the amount of \$1.03 on each \$1,000 of the valuation of the city on which the appropriations by the City Council are based. This increase in the appropriations was made in response to a petition by the School Committee and was for the purpose of increasing the salaries of teachers, members of the supervising staff, janitors, and other employees, ninety-nine cents of the increase being allotted for teachers, members of the supervising staff, janitors, officers, attendance officers, and office assistants, two cents for physical education, and two cents for school physicians and nurses.

The sums available from the tax levy for the financial year 1920-21, with the passage of this act, were therefore as follows:

General school purposes	\$5 37
New buildings, lands, yards and furnishings	68
Repairs and alterations to school buildings	35
Physical education	10
School physicians and school nurses	08
Extended use of the public schools	02
Pensions	07
Promotion of Americanization	02
Vocational guidance	02
Total	<u>\$6 71</u>

FINANCIAL STATEMENT.

On April 7, 1919, the School Committee made the following appropriations on account:

Salaries of instructors	\$2,400,000 00
Salaries of officers	85,000 00
Salaries of janitors	182,000 00
Fuel and light	225,000 00
Supplies and incidentals	200,000 00
Physical education	40,000 00
Salaries and expenses of nurses	20,000 00
Medical inspection	18,000 00
Pensions to teachers	65,000 00
Pensions to attendance officers and janitors	4,000 00
Extended use of the public schools	15,000 00
Repairs and alterations, protection against fire and fire hazard, and new furniture and furnishings for old buildings, including new lighting fixtures	300,000 00
Rents of hired school accommodations	20,000 00
	\$3,574,000 00

On June 16, 1919, the School Committee appropriated the following sums on account:

Salaries of instructors	\$1,220,000 00
Salaries of officers	25,000 00
Salaries of janitors	65,000 00
Fuel and light	50,000 00
Supplies and incidentals	16,000 00
Physical education	20,757 56
Physical education, special appropriation	9,242 44
Salaries and expenses of nurses	12,000 00
Medical inspection	6,000 00
Pensions to teachers	14,000 00
Pension to attendance officers and janitors	1,000 00
Extended use of the public schools	5,000 00
Repairs and alterations, protection against fire and fire hazard, and new furniture and furnishings for old buildings, including new lighting fixtures	—
Rents of hired school accommodations	—
	\$1,444,000 00

On July 14, 1919, the School Committee appropriated the following sums in addition to those appropriated on account on April 7, 1919, and June 16, 1919:

For general school purposes:

Salaries of instructors	\$1,540,865 96
Salaries of officers	62,277 14
Salaries of janitors	173,286 39
Fuel and light	103,161 80
Supplies and incidentals	176,396 02
Pensions to attendance officers and janitors	3,137 20
For the alteration and repair of school buildings, and for furniture, fixtures, and means of escape in case of fire, and for fire protection for existing buildings, and for improving existing school yards	232,128 63
Physical education	41,469 15
School physicians and school nurses	27,744 60
Extended use of the public schools	19,134 86
Pensions to teachers	27,325 73
Promotion of Americanization	26,820 71
Vocational guidance	12,175 94
	<hr/>
	<u>\$2,445,924 13</u>

On July 14, 1919, the School Committee passed the following orders:

Ordered, That the sum of \$20,000 be transferred from the item "Rents of Hired School Accommodations" in the appropriation order passed April 7, 1919, to the item "For General School Purposes—Salaries of Instructors" in the annual appropriation order.

Ordered, That the City Auditor is hereby instructed to charge the cost of all rents of hired school accommodations for the current financial year against the appropriation for land and buildings, in accordance with section 1 of chapter 206 of the Special Acts of 1919.

Ordered, That the City Auditor is hereby instructed to charge the cost of all expenditures for salaries and expenses of nurses and for medical inspection during the current financial year to the appropriation "School Physicians and School Nurses" in the annual appropriation order, in accordance with section 1 of chapter 206 of the Special Acts of 1919.

The following amounts were received during the year and added to the sub-division item "Salaries of Instructors":

From Smith-Hughes Fund	\$26,553 96
For Conservation of Eyesight, under the provisions of chapter 229, General Acts of 1919	2,500 00
From Federal Board for Vocational Education, as reimbursement for Rehabilitation Course conducted at Boston Trade School during the summer of 1919	8,580 17

To the item "Pensions to Teachers" was added the sum of \$28,241.89, made available by chapter 289 of the Special Acts of 1916.

The sums of the foregoing appropriations were as follows:

Salaries of instructors	\$5,218,500 09
Salaries of officers	172,277 14
Salaries of janitors	420,286 39
Fuel and light	378,161 80
Supplies and incidentals	392,396 02
Physical education	111,469 15
School physicians and nurses	83,744 60
Americanization	26,820 71
Vocational guidance	12,175 94
Extended use of the public schools	39,134 86
Pensions to teachers	134,567 62
Pensions to attendance officers and janitors.	8,137 20
Repairs and alterations, protection against fire and fire hazard, and new furniture and furnishings for old buildings, including new lighting fixtures	532,128 63
Total amount appropriated	<u>\$7,529,800 15</u>

During the financial year the School Committee made the following transfers:

On December 15, 1919, from "Salaries of Instructors" to "Physical Education"	\$8,500 00
On December 15, 1919, from "Salaries of Instructors" to "School Physicians and Nurses"	1,500 00
On January 19, 1920, from "Salaries of Instructors" to "Salaries of Officers"	5,200 00
On January 19, 1920, from "Salaries of Instructors" to "Salaries of Janitors"	15,000 00
On January 19, 1920, from "Salaries of Instructors" to "Supplies and Incidentals"	20,000 00
On January 19, 1920, from "Salaries of Instructors" to "School Physicians and Nurses"	500 00
On January 19, 1920, from "Pensions to Teachers" to "Permanent Pension Fund"	18,175 03

With the above additions and transfers, the final total credits for the several items for the year were as follows:

Salaries of instructors	\$5,167,800 09
Salaries of officers	177,477 14
Salaries of janitors	435,286 39
Fuel and light	378,161 80
Supplies and incidentals	412,396 02
Physical education	119,969 15
School physicians and nurses	85,744 60
Americanization	26,820 71
Vocational guidance	12,175 94
Extended use of the public schools	39,134 86
Pensions to teachers	116,392 59
Payments to permanent pension fund	18,175 03
Pensions to attendance officers and janitors	8,137 20
Repairs and alterations, protection against fire and fire hazard, and new furniture and furnishings for old buildings, including new lighting fixtures	532,128 63
Total credits	<u>\$7,529,800 15</u>

The expenditures were as follows:

Salaries of instructors	\$5,157,544 11
Salaries of officers	176,270 93
Salaries of janitors	433,221 51
Fuel	249,314 11
Light	58,034 28
Power	9,823 08
Supplies and incidentals	408,035 17
Physical education	115,410 27
School physicians and nurses	85,720 51
Americanization	* 10,587 70
Vocational guidance	10,030 00
Extended use of the public schools	39,133 67
Pensions to teachers	116,392 59
Payments to permanent pension fund	18,175 03
Pensions to attendance officers and janitors	6,745 03
Repairs and alterations, protection against fire and fire hazard and new furniture and furnishings for old buildings, including new lighting fixtures	518,194 62
Total expenditures	<u>\$7,412,632 61</u>
Total credits brought down	\$7,529,800 15
Total expenditures brought down	7,412,632 61
Balance	<u>\$117,167 54</u>

* Expenditures for Americanization for the period January through June, 1919, are included under "Salaries of Instructors" and "Supplies and Incidentals."

The balance at the end of the year was made up as follows:

Salaries of instructors	\$10,255 98
Salaries of officers	1,206 21
Salaries of janitors	2,064 88
Fuel }	60,990 33
Light }	
Power }	
Supplies and incidentals	4,360 85
Physical education	4,558 88
School physicians and nurses	24 09
Americanization	16,233 01
Vocational guidance	2,145 94
Extended use of the public schools	1 19
Pensions to teachers	—
Pensions to attendance officers and janitors	1,392 17
Repairs and alterations, protection against fire and fire hazard, and new furniture and furnishings for old buildings, including new lighting fixtures	13,934 01
Balance	<u>\$117,167 54</u>

APPROPRIATION FOR NEW SCHOOL BUILDINGS, LANDS, YARDS, ETC.

On June 2, 1919, the School Committee passed the following order:

Ordered, That in accordance with the provisions of chapter 267 of the Special Acts of 1916, the sum of nine hundred eleven thousand, three hundred sixty-three dollars and thirty-seven cents (\$911,363.37) is hereby appropriated for the purpose of constructing and furnishing new school buildings, including the taking of land therefor, and for school yards, and the preparing of school yards for use.

On July 18, 1919, the School Committee passed the following order:

Ordered, That in accordance with the provisions of chapter 206 of the Special Acts of 1919, the sum of \$75,946.94 is hereby appropriated for the construction and furnishing of new school buildings, both temporary and permanent, including the taking of land therefor, and for school yards, and the preparing of school yards for use, and for the rent of hired school accommodations.

These sums thus appropriated for new buildings, lands, yards, etc., totaling \$987,310.31, form a part of the tax levy for the year.

This money is expended under the direction of the Schoolhouse Commission and is accounted for by them in detail in their report. It has not been considered wise to introduce such matter into this report, not only for the reason that it would be a duplication of information in the report of the commission, but because for purposes of comparison with expenditures of other years or of other cities it appears better to separate statements of maintenance and operating expenses from construction accounts.

PHYSICAL EDUCATION.

The amount of money available for physical education under chapter 206 of the Special Acts of 1919 was \$121,515.11. The amount appropriated for the year was \$111,469.15, as follows:

April 7, 1919 — Physical education	\$40,000 00
June 16, 1919 — Physical education	20,757 56
Physical education, special	9,242 44
July 14, 1919 — Physical education	41,469 15
	\$111,469 15

On December 15, 1919, the School Committee made the following transfer:

From "Salaries of Instructors" to "Physical Education"	\$8,500 00
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The total amount appropriated for this purpose was, therefore, as follows:

Appropriations for 1919-20	\$111,469 15
Transfer from "Salaries of Instructors"	8,500 00
Total amount appropriated	\$119,969 15

The expenditures were as follows:

Salaries, regular *	\$56,821 66
Supplies and incidentals, regular	18,127 92
	\$74,949 58
<i>Carried forward</i>	\$74,949 58

* Includes the salaries of the Director of Physical Training and the teachers of the several ranks who serve at the Normal, Latin, high and other schools.

<i>Brought forward</i>		\$74,949 58
Salaries of teachers, playgrounds *	\$25,668 35	
Salaries of janitors, playgrounds	3,257 72	
Supplies and equipment, playgrounds . . .	11,534 62	
		<u>40,460 69</u>
Total expenditures		<u>\$115,410 27</u>
Balance		<u>\$4,558 88</u>

TRIAL BALANCE — PHYSICAL EDUCATION APPROPRIATION.

<i>Dr.</i>		
Appropriation, physical education		\$119,969 15
Stock inventory, December 1, 1918		3,492 51
		<u>\$123,461 66</u>
<i>Cr.</i>		
Salaries, schools		\$51,825 83
Salaries, playgrounds		25,668 35
Salaries, playground janitors		3,257 72
Salaries, department		4,995 83
Supplies, schools, etc.		15,056 46
Supplies, playgrounds		7,116 02
Supplies, department		7,980 42
Supplies, undercharged to schools		255 07
Stock inventory, December 1, 1919		2,747 08
Balance unexpended		4,558 88
		<u>\$123,461 66</u>

SCHOOL PHYSICIANS AND NURSES.

The amount of money available for school physicians and nurses under chapter 206 of the Special Acts of 1919 was \$91,136.34. The amount appropriated for the year was \$83,744.60, as follows:

April 7, 1919 — Salaries and expenses of nurses	\$20,000 00
Medical inspection	18,000 00
June 16, 1919 — Salaries and expenses of nurses	12,000 00
Medical inspection	6,000 00
July 14, 1919 — School physicians and school nurses . . .	27,744 60
	<u>\$83,744 60</u>

The School Committee made the following transfers:

On December 15, 1919, from "Salaries of Instructors" to "School Physicians and Nurses"	\$1,500 00
On January 19, 1920, from "Salaries of Instructors" to "School Physicians and Nurses"	500 00

* This cost of playgrounds is exclusive of the salaries of any part of the supervising staff who were in any way connected with the playgrounds. The complete cost of playgrounds is shown later on in this report under "Costs of Playgrounds."

The total amount appropriated for this purpose was, therefore, as follows:

Appropriation for 1919-20	\$83,744 60
Transfers from "Salaries of Instructors"	2,000 00
Total amount appropriated	<u>\$85,744 60</u>

The expenditures were as follows:

Salaries:		
School physicians	\$33,752 34	
Nurses	46,156 25	
		<u>\$79,908 59</u>
Supplies:		
School physicians	\$4,370 31	
Nurses	1,441 61	
		<u>5,811 92</u>
Total expenditures		<u>\$85,720 51</u>
Balance		<u>\$24 09</u>

TRIAL BALANCE — APPROPRIATION, SCHOOL PHYSICIANS AND NURSES.

<i>Dr.</i>		
Appropriation		\$85,744 60
Stock inventory, December 1, 1918:		
Nurses		991 51
Medical inspection		258 36
		<u>\$86,994 47</u>
<i>Cr.</i>		
Salaries, department:		
Medical inspection		\$6,866 98
Nurses		1,332 62
Salaries, school physicians		26,885 36
Salaries, school nurses		44,823 63
Supplies, schools, etc.		2,327 74
Supplies, department		2,964 64
Supplies, undercharged to schools		16 49
Stock inventory, December 1, 1919:		
Nurses		908 13
Medical inspection		844 79
Balance unexpended		24 09
		<u>\$86,994 47</u>

EXPENDITURES BY SCHOOLHOUSE COMMISSION.

The appropriation made for "Repairs and Alterations, protection against fire and fire hazards, and new furniture and furnishings for old buildings, including

new lighting fixtures" (\$532,128.63) was expended under the direction of the Schoolhouse Commission as follows:

REPAIRS AND ALTERATIONS.

Carpentry:	
Repairs	\$49,210 45
Alterations	7,763 07
New floors	1,100 18
Hardware	579 66
Furniture and Equipment:	
New furniture	50,845 74
Repairs to furniture	25,384 89
New curtains	2,143 00
Curtain repairs	6,374 50
New clocks	—
Clock repairs	1,569 95
Electric clock maintenance	1,910 74
Electric clock installation	3,660 96
Industrial apparatus installation	4,964 38
Industrial apparatus maintenance	463 07
Manual training and prevocational installation	3,585 95
Manual training and prevocational maintenance	508 31
Reflectoscope maintenance	114 66
Reflectoscope installation	48 13
Vacuum cleaning maintenance	154 74
Vacuum cleaning installation	—
Rubber treads and matting	1,967 77
Gymnasium apparatus	—
Blackboards:	
New	547 60
Repairs	7,234 84
Plumbing	46,470 22
Roofing	17,253 65
Painting	30,474 78
Glazing	13,771 84
Heating:	
Repairs	81,473 83
Ventilation	241 61
Care of grounds:	
Gypsy moths	642 00
Planting	201 10
Masonry:	
Repairs	21,419 16
Plastering	3,207 73
Paving	11,165 57
Catch-basins	5,282 04
<i>Carried forward</i>	\$401,736 12

<i>Brought forward</i>	\$401,736	12
Asphalt and concrete	27	00
Waterproofing	90	00
Grading	178	25
Locks and Bells:		
Bells and telephone installation	2,649	93
Bells and telephone maintenance	2,700	76
Locksmithing	5,546	12
Electric and Gas Work:		
Electric light installation	16,844	00
Electric light maintenance	2,852	39
Gas appliance installation	1,217	83
Gas appliance maintenance	1,004	71
Fire protection:		
Fire alarm installation	2,443	59
Fire alarm maintenance	1,214	34
Fire escapes, new	1,155	00
Fire escapes, repairs	2,147	29
Fire extinguishers	377	60
Fire protection	2,432	00
Miscellaneous:		
Flagstuffs	1,393	76
Iron and wire work	6,016	43
Janitors' supplies	772	38
Care and cleaning	395	20
Teaming	2,211	17
Motors and engines	2,527	60
	<hr/>	\$457,933 47

ADMINISTRATION EXPENSES.

Salaries, commissioners and clerks	\$13,218	86
Salaries, inspectors	35,556	78
Storehouse	1,115	38
Electric lighting of offices	—	—
Postage	290	00
Printing	1,110	14
Stationery	595	91
Advertising	93	50
Telephone	65	92
Automobile expenses	5,212	33
Furniture	1,085	29
Car fares, traveling expenses	1,827	67
Boiler insurance	32	87
Sundries	26	00
Subscription	30	50
Teaming	—	—
Expert services	—	—
	<hr/>	60,261 15
Total repairs and administration expenses	<u>\$518,194</u>	<u>62</u>

SUMMARY.

Appropriation:

Repairs and alterations, protection against fire and fire hazard, and new furniture and furnishings for old buildings, including new lighting fixtures		\$532,128 63
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Expenditures:

Repairs and equipment	\$457,933 47	
Administration expenses	60,261 15	
		<u>\$518,194 63</u>
Balance		<u>\$13,934 01</u>

RENTS AND TAXES.

Under chapter 206 of the Special Acts of 1919 rents and taxes are to be charged against the appropriation for new school buildings, lands, yards and furnishings.

In consequence, while they are set forth below, it should be distinctly understood that they are no longer to be included in the accounts of maintenance costs.

Barham Memorial Church	\$400 00	
Boylston street, 48	750 00	
Bowdoin and Claybourne streets	210 00	
Eliot street, Jamaica Plain (Trustees Building)	800 00	
Everett Square Theater	20 00	
Franklin street, 149	60 00	
Glenway and Harvard streets	350 00	
Harvard street, 111	455 00	
Harvard street, 143 and 145	350 00	
Franklin Union	5,571 20	
Hanson street, 1	744 00	
Hull street, 24	420 00	
Hyde Park Gymnasium	880 00	
La Grange street, 25	5,613 40	
Moon street	11,830 00	
North Bennet street, 39	2,990 00	
Parmenter street, 20	—	
Saratoga street, 66	600 00	
Tileston street, 52	900 00	
Tremont street, 218	4,957 07	
Tremont street, 278B	923 67	
Tremont Temple	400 00	
Unitarian Church of Roslindale	667 33	
Upham Memorial Church	130 00	
Walnut avenue and Walnut park	1,140 00	
Willowood street, 3	1,000 00	
Total rents and taxes		<u>\$42,161 67</u>

INCOME.

The income for the financial year was as follows:

Tuition of non-resident pupils:	
Normal School	\$753 10
Latin and high schools	6,150 25
Elementary schools	249 60
Boston Clerical School	53 00
Trade School for Girls, day and extension classes	3,148 75
Boston Trade School	3,006 51
Boston Trade School, evening classes	215 07
Continuation School, Voluntary	70 00
Evening high schools	7 50
Speech improvement classes	—
Evening elementary schools	143 67
Summer Review elementary schools	20 00
Summer Review High School	—
State wards (from the Commonwealth)	1,077 00
Tuition of deaf mutes (from the Commonwealth)	21,322 50
	<hr/>
	\$36,216 95
Salaries of instructors overpaid refunded	3,001 81
Smith Fund	324 25
Stoughton Fund	212 00
Aid from the Commonwealth for industrial education:	
Trade School for Girls:	
One half the net cost of maintenance for the period September 1, 1917, to August 31, 1918	\$24,999 01
Boston Trade School:	
One half the net cost of maintenance for the period September 1, 1917, to August 31, 1918	23,574 87
Boston Trade School, Evening Classes:	
One half the net cost of maintenance for the period September 1, 1917, to August 31, 1918	3,884 37
Continuation School (Household Arts Class):	
One half the net cost of maintenance for the period September 1, 1917, to August 31, 1918	540 78
Continuation School, Compulsory:	
One half the net cost of maintenance for the period September 1, 1917, to August 31, 1918	33,010 03
	<hr/>
<i>Carried forward</i>	\$86,009 06
	<hr/>
	\$39,755 01

<i>Brought forward</i>	\$86,099 06	\$39,755 01
One half the net cost of maintenance for the period September 1, 1917, to August 31, 1918		
	3,974 07	89,983 13
One half tuition charges paid for Boston pupils attending state-aided schools in other cities and towns (from the Commonwealth)		284 47
Traveling expenses of deaf mutes (from the Commonwealth)		2,878 47
Light at polling places (from Election Department)		—
Sale of badges to licensed minors		442 75
Sale of books and supplies		3,511 08
Damage to property		—
Mechanic Arts High, work done for Schoolhouse Commission,		19 00
Mechanic Arts High, sale of materials, etc.		822 48
Sale of manual arts materials (elementary schools)		1,754 00
Manual arts, work done for Schoolhouse Commission		454 10
Incidentals		107 32
Trade School for Girls:		
Sale of products	\$11,244 63	
Interest on deposit	18 84	
Telephone charges	7 80	
	_____	11,271 27
Boston Trade School:		
Sale of products	\$1,364 56	
Work done for Schoolhouse Commission	2,936 30	
Telephone charges	—	
	_____	4,300 86
Boston Evening Trade School, sale of products		44 38
Continuation School, Compulsory:		
Sale of products	\$2,075 50	
Work done for Schoolhouse Commission	—	
Telephone charges	—	
	_____	2,075 50
Telephone charges		331 43
Rents of school buildings		1,063 46
Forfeited advance payments:		
Evening high schools	\$2,277 00	
Evening elementary schools	719 00	
Boston Trade School, evening classes	618 00	
Trade School for Girls, Extension Classes.		
(evening)	—	
Interest	235 53	
	_____	3,849 53
Sale of second-hand furniture, etc. (Schoolhouse Commission),		313 63
Dog licenses	\$21,472 00	
Less damages by dogs	3,133 39	
	_____	18,338 61
Total income		<u>\$181,600 48</u>

INCOME FROM TRUST FUNDS.

Bowdoin Dorchester School Fund	\$180 00
Eastburn School Fund	435 00
Franklin Medal Fund	35 00
Gibson School Fund	3,416 73
Horace Mann School Funds	307 00
Peter P. F. Degrand School Fund	1,174 26
Teachers' Waterston Fund	144 00
Charlestown School Fund	402 21
Comins School Library Fund	26 25
Latin School Prize Fund	55 14
Lawrence High School Fund	105 00
Lawrence Latin School Fund	105 00
Milmore Brimmer School Fund	10 00
Norcross School Library Fund	38 76
Sherwin School Graduates Fund	19 24
Devens Infant School Fund	20 00
Webb Franklin School Fund	70 00
Smith Fund	324 25
Stoughton Fund	212 00
	<hr/>
	<u>\$7,079 84</u>

The above total of \$7,079.84 from the income of the above funds is available for and limited to expenditures under the provisions of these funds.

AID FROM THE COMMONWEALTH FOR INDUSTRIAL
EDUCATION.

Under the provisions of chapter 471 of the Acts of 1911, chapter 106 of the Acts of 1912, chapter 805 of the Acts of 1913, and chapter 174 of the Acts of 1914, the Commonwealth has paid over into the city treasury during the past financial year the sum of \$89,983.13.

This sum is one half the net cost of maintenance of schools and classes established with the approval of the State Board of Education, as shown on pages 17-18.

Trade School for Girls:

From September 1, 1917, to August 31, 1918	\$24,999 01
Boston Trade School:	
From September 1, 1917, to August 31, 1918	23,574 87
Boston Trade School, evening classes:	
From September 1, 1917, to August 31, 1918	3,884 37
	<hr/>
<i>Carried forward</i>	\$52,458 25

<i>Brought forward</i>	\$52,458 25
Continuation School (Household Arts Class):	
From September 1, 1917, to August 31, 1918	540 78
Continuation School, Compulsory:	
From September 1, 1917, to August 31, 1918	33,010 03
Evening Practical Arts Courses (Evening Elementary Schools):	
From September 1, 1917, to August 31, 1918	3,974 07
Total	<u>\$89,983 13</u>

The Commonwealth does not bear any part of the cost of the buildings or their original equipment. At the present time there are ten activities established with the approval of the State Board of Education which come under the provisions of the above legislation, viz., Trade School for Girls (including day and evening extension classes), Boston Trade School, Boston Trade School Evening Classes, Continuation School (Household Arts Class), Compulsory Continuation School, Class for Training of Continuation School Teachers, Evening Practical Arts Courses, High School of Practical Arts (Household Arts Department), Hyde Park High School, Co-operative Course, and the Charlestown High School, Co-operative Course.

NET EXPENDITURES.

Total expenditures (exclusive of new buildings, lands, yards, etc.)	\$7,412,632 61
Total income	181,600 48
Net expenditures *	<u>\$7,231,032 13</u>
Add expenditures for new schoolhouses, additions, etc. (by the Schoolhouse Commission)†	545,015 32
Total net expenditures ‡	<u>\$7,776,047 45</u>

COMPARISON OF EXPENDITURES.

The following statement shows the expenditures for the financial years 1918-19 and 1919-20, exclusive of lands and buildings, with the increases and decreases in the several items:

* That part of the total expenditures coming from the School Committee share of the tax levy.

† Partly from loans and partly from the tax levy. For details see the report of the Schoolhouse Commission.

‡ Exclusive of interest and sinking fund.

	1919-20.	1918-19.	Increases, 1919-20.
Salaries of instructors	\$5,177,760 84	\$4,567,760 79	* \$610,000 05
Salaries of officers	176,270 93	157,393 00	18,877 93
Salaries of janitors	433,221 51	372,644 60	60,576 91
Fuel and light	317,171 47	460,447 45	† 143,275 98
Supplies and incidentals	408,436 14	345,959 11	* 62,477 03
Physical education	115,410 27	91,346 05	24,064 22
School physicians and nurses	85,720 51	67,824 24	17,896 27
Extended use of the public schools	39,133 67	24,723 90	14,409 77
Pensions to teachers	116,392 59	110,782 38	5,610 21
Payments to permanent pension fund	18,175 03	.....	18,175 03
Pensions to attendance officers and janitors,	6,745 03	7,439 10	† 694 07
Repairs and alterations, protection against fire and fire hazard, and new furniture and furnishings for old buildings, includ- ing new lighting fixtures (by School- house Commission)	518,194 62	532,293 27	† 14,098 65
Totals	\$7,412,632 61	\$6,738,613 89	\$674,018 72

* Including charges for "Americanization" and "Vocational Guidance." † Decrease.

PENSIONS TO TEACHERS.

In 1908 and each year thereafter up to and including 1914, the School Committee, under the authority of section 4 of chapter 589 of the Acts of 1908, appropriated for the purpose of paying pensions and making payments to the Permanent Pension Fund the sum of five cents on each \$1,000 of the valuation of the city, upon which appropriations by the City Council are based.

During the year 1913-14 the sum so appropriated was found insufficient to pay pensions for the year, and the additional sum of \$880.43 was transferred from the accrued interest of the Permanent Pension Fund.

In 1914-15 a transfer of \$7,628.60 from the same fund was found to be necessary for the same reason.

Chapter 304 of the Acts of 1915 has made available from the tax levy seven cents on each \$1,000 of the valuation of the city, which, during the year 1918-19, amounted to \$107,911.83. This sum was found insufficient and it became necessary to transfer \$2,870.55 from the accrued interest of the Permanent Pension

Fund, making a total of \$110,782.38 expended for the purpose during that year.

Chapter 289 of the Special Acts of 1916 provided that "The sums payable by the Commonwealth to the City of Boston, under the provisions of section 13 of chapter 832 of the Acts of the year 1913, being an act to establish a retirement system for public school teachers, as reimbursement for certain pensions paid by the city to retired school teachers, shall be put into the current pension fund held by the School Committee of the City of Boston and used in accordance with the provisions of chapter 589 of the Acts of the year 1908." Under this act the sum of \$28,241.89 paid over by the Commonwealth to the city became available during the financial year and was added to the appropriation from the tax levy for paying pensions to retired teachers.

Since the enactment of chapter 589 of the Acts of 1908, payments as pensions and to the Permanent Pension Fund have been distributed as shown in the following table:

FINANCIAL YEAR.	Pensions to Retired Teachers from the Tax Levy.	Payments to the Permanent Pension Fund from the Tax Levy.	Payments to the Permanent Pension Fund from the Fund paid over by the Commonwealth.*
1908-09.....	\$1,678 50	—	
1909-10.....	8,075 12	\$119,181 08	
1910-11.....	26,247 88	39,946 77	
1911-12.....	55,350 31	12,420 53	
1912-13.....	64,510 76	5,681 66	
1913-14.....	† 72,893 19	—	
1914-15.....	† 81,482 96	—	
1915-16.....	90,011 87	15,741 25	
1916-17.....	96,029 97	11,631 48	
1917-18.....	104,347 95	5,432 37	\$24,321 96
1918-19.....	§ 110,782 38	—	22,490 03
1919-20.....	|| 116,392 59	—	18,175 03
Totals.....	\$827,803 48	\$210,035 14	\$64,987 02
Grand total, twelve years.....			\$1,102,825 64

* Under chapter 289, Special Acts of 1916.

† Including \$880.43 transferred from the accrued interest of the Permanent Pension Fund.

‡ Including \$7,628.60 transferred from the accrued interest of the Permanent Pension Fund.

§ Including \$2,870.55 transferred from the accrued interest of the Permanent Pension Fund.

|| Including \$10,066.86 of the sum (\$28,241.89) paid over by the Commonwealth.

DISTRIBUTION OF EXPENDITURES.

The distribution of the total expenditures, exclusive of lands and buildings, pensions, repairs, alterations and rents, in percentage of the whole sum, is as follows:

Salaries of instructors.....	\$5,177,760 84	76.7
Salaries of officers.....	176,270 93	2.6
Salaries of janitors.....	433,221 51	6.4
Fuel and light.....	317,171 47	4.7
Supplies and incidentals.....	408,436 14	6.0
Physical education.....	115,410 27	1.8
School physicians and nurses.....	85,720 51	1.2
Extended use of the public schools.....	39,133 67	0.6
Total.....	\$6,753,125 34	100.0

SUPPLIES AND INCIDENTALS.

The expenditures for the year under the appropriation for Supplies and Incidentals were as follows:

Text-books	\$57,989 75
Supplementary books	16,722 52
Reference books	2,406 59
Music sheets	349 96
Globes	133 00
Maps	1,419 56
Charts	383 26
Pianos	8,300 00
Other musical instruments (new)	225 28
Dictaphone, Normal School	288 00
Piano covers, etc.	40 20
Piano tuning	2,030 00
Moving pianos	185 75
Manual training supplies (high and elementary schools)	32,942 58
Drawing supplies (high and elementary schools)	21,258 21
Science apparatus and supplies	3,894 40
Laboratory assistance, perishable supplies and incidentals	1,124 81
Supplies and equipment, commercial classes	5,358 17
Commercial machines and typewriters for high schools (including rentals)	36,148 00
<i>Carried forward</i>	\$191,200 04

<i>Brought forward</i>	\$191,200 04
Supplies for connecting work of the kindergarten and the primary grades	16 20
Kindergarten supplies	4,308 35
Sewing supplies and equipment	3,104 04
Cooking supplies and equipment	13,945 95
Supplies for Busy Work	10,856 03
Penmanship supplies (high and elementary schools)	1,100 25
Supplies and equipment for Compulsory Continuation School, Trade School for Girls, supplies and equipment	7,238 19
Boston Trade School, supplies and equipment	8,071 94
Evening Practical Arts Courses	8,654 13
Supplies for general educational purposes	113 78
Printing and printing stock	8,000 65
Advertising	25,308 84
Records, proceedings, etc.	415 03
Account books	2,142 41
Stationery	604 66
Postage (offices and departments)	35,364 77
Postage (schools)	4,449 15
Office equipment	1,417 91
Office supplies and incidentals	1,463 76
Janitors' supplies	1,110 77
Expressage	19,653 34
Railroad and other fares for Horace Mann School pupils (except street car tickets)	909 54
Car tickets as authorized by Board	1,242 38
Tuition, wards of the city	9,641 99
Tuition, others	11,502 15
Diplomas	12,255 68
Removing ashes	2,417 88
Surety bonds	2,308 00
School Committee Contingent Fund	70 00
Board of Superintendents' Contingent Fund	634 13
Assistance at teachers' examinations	1,108 07
School exhibits	1,175 00
Telephone and telegraph	74 82
Telephone (schools)	4,377 05
Bath expenses	962 80
Badges for licensed minors	1,773 49
Professional and Cultural Courses for Teachers	332 50
Supplies and equipment for automobiles	3,904 00
Services of accountants, auditing accounts	962 32
Expert services to Business Agent	1,000 00
Traveling expenses of Business Agent	593 50
Supplies for Department of Educational Investigation and Measurement	90 96
Sundries	1,080 30
	1,078 42
Total	<u>\$408,035 17</u>

FUEL AND LIGHT.

From the beginning of the financial year up to and including April 30, 1919, it having been found impossible to make contracts, coal to the amount of $4,141\frac{1}{2}\frac{2}{0}\frac{5}{0}$ tons was purchased wherever possible and at the best prices that could be obtained.

Coal was secured from the following firms: City Fuel Company, Metropolitan Coal Company, Brighton Coal Company, Burton-Furber Coal Company, D. Doherty Company, East Boston Coal Company, C. Murphy & Son, McGovern Coal Company, Roxbury Coal Company, J. A. Whittemore's Sons and Batchelder Brothers.

In addition to the coal purchased under the above conditions, deliveries to the schools were made from a quantity of $5,122\frac{2}{2}\frac{0}{0}\frac{0}{0}$ tons of bituminous coal which had been purchased and put into storage during the preceding financial year.

On April 12, 1919, proposals for furnishing coal for the public schools were advertised, those for bituminous coal being opened on April 21, 1919, and those for anthracite coal on April 23, 1919, at 12 o'clock m.

The lowest bid received on the anthracite coal was that of John A. Whittemore's Sons, who bid on the entire city, and the contract was awarded to that firm at the following prices:

Furnace	\$10 20 per ton
Egg	10 45 per ton

Examination of the bids for bituminous coal indicated that the coal could be purchased at a lower price by accepting the bids of four contractors for parts of the city, as follows:

DISTRICT.	Contractor.	Price per Ton.
East Boston.....	Cosmopolitan Coal Company.....	\$7 65
City Proper.....	East Boston Coal Company.....	8 25
South Boston.....	East Boston Coal Company.....	8 35
Charlestown.....	East Boston Coal Company.....	8 25
West Roxbury.....	Roxbury Coal Company.....	8 45
Hyde Park.....	Roxbury Coal Company.....	8 45
Dorchester.....	D. Doherty Company.....	8 39

Thus the entire city, with the exception of one district (Brighton), was covered by district bids, the total of which would be substantially less than if the one bid for the entire city (that of the City Fuel Company for \$8.40 per ton) were accepted.

In consequence, the bids of the above district bidders were accepted.

Subsequently the East Boston Coal Company took over the contract for the East Boston district for the Cosmopolitan Coal Company at the price quoted by the latter company (\$7.65 per ton).

This distribution of the contracts left the Brighton district unprovided for. Proposals for furnishing bituminous coal for the Brighton district alone were advertised on May 3, and contract was executed on May 14 with John A. Whittemore's Sons at \$8.50 per ton.

The total amount purchased under contracts during the financial year was 21,167 $\frac{1779}{2000}$ tons.

The total amount of coal delivered to buildings during the financial year was 30,431 $\frac{164}{2000}$ tons.

PURCHASES, FUEL AND LIGHT.

Bituminous Coal. Number of Tons.	Anthracite Coal. Number of Tons.		
17,093 $\frac{385}{2000}$	8,215 $\frac{1779}{2000}$		\$244,289 47
Expenses sampling, testing and expert advice on coal			1,662 31
Expenses moving coal and wood			862 00
399 $\frac{1}{4}$ cords of wood			6,474 88
Charcoal			—
			<u>\$253,288 66</u>
Add premiums allowed contractors on account of quality of coal exceeding contract requirements			—
Deduct penalties exacted from contractors on account of quality of coal falling below contract requirements			—
			<u>\$253,288 66</u>
Deduct amount charged to appropriation, Extended Use of the Public Schools, for cost of fuel used in school centers and other activities			3,974 55
Net total, fuel			<u>\$249,314 11</u>
<i>Carried forward</i>			\$249,314 11

<i>Brought forward</i>		\$249,314 11
LIGHT AND POWER.		
Electric current for light	\$53,624 96	
Electric current for power	9,823 08	
Gas	7,570 44	
Mazda lamps	246 58	
		\$71,265 06
Deduct amount charged to appropriation, Extended Use of the Public Schools, for cost of light used in school centers and other activities		3,407 70
Net total, light and power		67,857 36
Total net expenditures, fuel and light		\$317,171 47

COST IN DETAIL.

On the appended sheets will be found the costs of each school in detail, the average membership or the average attendance and the cost per pupil based on average membership or average attendance, the cost per pupil hour of instruction, and the cost per pupil hour for all direct charges.

The costs of the several playgrounds are also given and the cost per pupil per session.

The total cost of each group of schools is also given, and the average cost per pupil is shown.

These figures give only the costs of the several schools or groups of schools, exclusive of cost of administration, supervision and general charges.

To get the whole cost, the costs of administration, supervision and general charges must be apportioned among the several groups of schools.

The method of apportioning the costs of administration, supervision and general charges has been as follows: Any part of these costs which could be charged directly against a school or group of schools has been so charged. The remaining cost of administration, offices of superintendent, assistant superintendents, secretary, business agent and schoolhouse custodian have been apportioned to the several groups of schools in proportion to the

number of teachers therein. For the purpose of this apportionment the number of teachers in the evening schools and summer review schools has been reduced to a basis which takes into consideration the amount of service rendered during the year as compared with that rendered by the teachers in the elementary day schools.

The method of apportioning the costs of the educational departments has been as follows: Any part of these costs which could be charged directly against a school or group of schools has been so charged; the balance of the costs of these departments has been apportioned in accordance with the method hereinafter described.

The costs of the departments of manual arts, music, practice and training and educational investigation and measurement have been apportioned to the several groups of schools in proportion to the number of teachers therein coming under the supervision of these several departments.

The cost of the department of evening schools has been divided as follows: Evening high schools, 40 per cent; evening elementary schools, 38 per cent; Boston Trade School, evening classes, 5 per cent; Day School for Immigrants, 25 per cent.

The whole of the costs of the offices of director of kindergartens, director of household science and arts and director of special classes has been charged to the elementary schools.

The cost of the office of director of penmanship has been apportioned to the several groups of schools in proportion to the number of teachers therein coming under the supervision of that office.

The cost of the office of director of salesmanship has been apportioned two-thirds to the high schools and one-third to the compulsory continuation school.

The cost of vocational guidance has been apportioned to the high and elementary schools in proportion to the number of teachers therein.

The cost of attendance officers has been apportioned to the certificating office and the schools in proportion to the amount of service given to each.

The cost of the department of medical inspection after any items which could be charged directly were so charged has been apportioned as follows: The cost of the office of supervising nurse has been charged to elementary schools and the cost of the office of director of medical inspection has been apportioned to the several groups of schools in proportion to the number of teachers therein. The salary of the medical inspector has been charged to elementary schools.

The cost of the department of physical training after any items which could be charged directly were so charged has been apportioned as follows: The salary of the director of physical training has been apportioned to the several groups of schools and to the playgrounds in proportion to the estimated time required on each. The remaining costs of this department have been apportioned one-fourth to the playgrounds and the other three-fourths to the several groups of schools in proportion to the number of teachers therein.

The cost of supervision in connection with extended use of the public schools has been apportioned as follows: School centers, 90 per cent; use of school accommodations for municipal concerts, parents' meetings, etc., 10 per cent.

None of the cost of administration or the general account has been charged to playgrounds or the extended use of public schools.

This apportionment is, of course, to a certain extent arbitrary, but as these costs of administration and supervision are given in detail any other apportionment can easily be made.

APPORTIONMENT OF INCOME.

Any part of the income which could be directly credited to a school or group of schools has been so

credited, and the balance has been apportioned in proportion to the number of teachers in each such school or group of schools:

The result is as follows:

Credited direct	\$115,631 75
BALANCE APPORTIONED.	
Normal School	\$866 03
Latin and high schools	10,170 64
Elementary schools	18,130 92
Speech Improvement classes	67 76
Horace Mann School	21,412 84
Trade School for Girls, day and evening classes	3,397 20
Boston Trade School	3,142 03
Continuation School, Voluntary	92 59
Continuation School, Compulsory	451 73
Boston Clerical School	120 76
Boston Disciplinary Day School	22 59
Day School for Immigrants	135 52
Summer Review High School	22 59
Summer Review elementary schools	132 93
Boston Trade School, evening classes	237 66
Evening high schools	2,545 81
Evening elementary schools	5,019 13
Central Evening Elementary School	—
Summer Citizenship classes (evening)	—
Total income	<u>\$181,600 48</u>

No part of the income has been credited to the playgrounds or to the extended use of the public schools.

COST OF ADMINISTRATION, SUPERVISION AND GENERAL CHARGES.

ADMINISTRATION.

SECRETARY.

Salary of the Secretary	\$4,740 00
Salary of Assistant Secretary, one-fifth time	540 00
Salaries of clerks and stenographers (five on full time)	5,928 66
Temporary clerical service	519 75
Books and subscriptions	—
Office supplies and equipment	592 60
Typewriter	81 00
Printing and binding	300 02
Telephone and telegraph	\$86 69
Telephone switchboard charge	98 35
	185 04
Postage	642 25
Boston Directory	6 00
Car fares and incidentals	30 60
	\$13,565 92

BUSINESS AGENT.

Salary of the Business Agent	\$4,740 00
Salary of chief accountant	3,000 00
Salaries of clerks and stenographers (fourteen),	18,859 79
Temporary clerical service	689 50
Salaries of supply room assistants (eight on full	
time)	12,042 82
Salaries of chauffeurs, automobile truck (two	
on full time)	2,861 33
Temporary and emergency assistance, supply	
room	1,055 00
Account books	588 41
Surety bonds	70 00
Books and subscriptions	14 50
Office supplies and equipment	710 58
Typewriters (2)	194 41
Telephone and telegraph (office)	\$130 03
Telephone switchboard charge	203 90
	333 93
Printing	139 17
Postage	416 83
Binding account books and certifications	70 35
Boston Directory	6 00
	\$45,792 62
<i>Carried forward</i>	

<i>Brought forward</i>	\$45,792 62	
Traveling expenses of Business Agent	90 96	
Car and railroad fares, assistants	4 70	
Lunches for assistants	4 40	
Allowance for petty cash transactions	100 00	
Incidentals	23 19	
	<hr/>	
	\$46,015 87	
Credits:		
Allowance for petty cash transactions expended	100 00	
	<hr/>	\$45,915 87
<i>Supply Room.</i>		
Equipment and supplies	\$632 79	
Car fares	33 54	
Expressage	366 89	
Telephone and telegraph	\$199 87	
Telephone switchboard charge	27 59	
	<hr/>	227 46
Printing	17 44	
Postage	38 40	
Office supplies and equipment	59 82	
Account books	21 50	
Binding record books	8 40	
Lunches for assistants	—	
Incidentals	11 15	
	<hr/>	1,417 39
<i>Automobile Truck.</i>		
Tires and tire repairs (including inner tubes)	\$162 29	
Gasoline	202 61	
Lubricants	51 94	
Repairs and miscellaneous parts	88 77	
Registration fees	7 00	
Renewal of chauffeurs' licenses	2 00	
Incidentals	4 75	
	<hr/>	519 36
Total		<u>\$47,852 62</u>

SCHOOLHOUSE CUSTODIAN.

Salary of Schoolhouse Custodian	\$3,000 00
Salary of stenographer	1,181 83
Salary of janitor, assigned	—
Temporary clerical service	36 00
Office supplies and equipment	40 55
Printing	16 38
Postage	118 86
Telephone and telegraph	\$43 34
Telephone switchboard charge	51 58
	<hr/>
	94 92
<i>Carried forward</i>	\$4,488 54

<i>Brought forward</i>	\$4,488 54	
Car tickets	22 00	
Incidentals	45	
		\$4,510 99
<i>Automobile.</i>		
Tires and tire repairs (including inner tubes)	\$113 67	
Electric light	16 78	
Gasoline	150 76	
Oxygen	4 40	
Robe	7 85	
Lubricants	5 20	
Miscellaneous parts and repairs	113 26	
Incidentals	3 50	
		415 42
Total		<u>\$4,926 41</u>

SUPERINTENDENT.

Salary of Superintendent	\$10,000 00	
Salary of assistant secretary, four-fifths time	2,160 00	
Salaries of clerks and stenographers, (ten full time, seven part time)	13,153 76	
Temporary clerical service	754 88	
Typewriter	89 10	
Office supplies and equipment	535 37	
Printing	220 48	
Telephone and telegraph	\$414 18	
Telephone switchboard charge	167 92	
		582 10
Postage	348 75	
Boston Directory	6 00	
Traveling expenses	132 60	
Books and subscriptions	3 12	
Messenger service and telegrams	6 41	
Incidentals	6 13	
		\$27,998 70

Newsboys' Trial Board.

Salaries of judges	\$96 00	
Salary of clerk	32 00	
Printing	8 69	
		136 69
Total		<u>\$28,135 39</u>

ASSISTANT SUPERINTENDENTS.

Salaries of Assistant Superintendents (5)	\$27,480 00
Salary of Chief Examiner, from November 15, 1919	446 20
<i>Carried forward</i>	\$27,926 20

<i>Brought forward</i>	\$27,926 20	
Salaries of clerks and stenographers, (one full time, four part time)	2,722 68	
Office supplies and equipment	411 00	
Printing	314 80	
Telephone and telegraph	\$260 07	
Telephone switchboard charge	107 95	
	<hr/>	368 02
Postage		122 00
Assistance at teachers' examinations		1,175 00
Supplies for examinations		25 98
Traveling expenses		280 55
Car tickets		25 60
Books and magazine subscriptions		100 18
Incidentals		2 29
		<hr/>
Total		<u>\$33,474 30</u>

ADMINISTRATION ACCOUNT.

Mason Street Building:		
Salaries of janitors	\$2,840 85	
Fuel	620 10	
Electric light	1,524 71	
Gas	95 40	
Janitors' supplies	69 20	
Towels	164 19	
Ice	33 72	
Supplies (stationery)	29 41	
Incidentals	32 46	
	<hr/>	\$5,410 04
Dartmouth Street:		
Salary of janitor	\$528 47	
Fuel	300 00	
Electric light	109 10	
Towels	35 75	
Janitors' supplies	3 66	
Ice cooler	13 50	
Ice	24 00	
	<hr/>	1,014 48
218 Tremont Street:		
Salary of janitor	\$837 02	
Electric light	258 42	
Janitors' supplies	32 71	
Towels	30 72	
Ice	29 00	
Incidentals	8 75	
	<hr/>	1,196 62
801 City Hall Annex:		
Janitors' supplies	\$14 03	
Towels	50 70	
	<hr/>	64 73
<i>Carried forward</i>		<u>\$7,685 87</u>

<i>Brought forward</i>		\$7,685 87
School Committee:		
Stationery	\$38 70	
Postage	29 65	
Printing	—	
Books	—	
Telephone and telegraph	4 80	
Supplies	7 68	
Refreshments	590 65	
Taxi service for foreign visitors	7 00	
Incidentals	6 50	
		<hr/> 684 98
General Expense:		
Auditing accounts of Business Agent	\$850 00	
Advisory Committee on Music expenses	—	
Inspection of History Course, Normal School,	25 00	
Incidentals	—	
		<hr/> 875 00
Janitors' Trial Board:		
Attendance of janitor member at hearings	\$22 00	
Salary, clerical assistant	—	
		<hr/> 22 00
Printing:		
Minutes	\$2,485 92	
Index to minutes	728 90	
Binding minutes	78 10	
Binding documents	122 43	
Rules and regulations	1,585 27	
Amendments to rules and regulations	89 22	
Teachers' examinations	1,823 48	
Manuals	1,118 48	
Pay rolls	72 15	
Book labels	311 23	
Book receipts	—	
Bills and statements	209 85	
Normal School	9 29	
Normal, Latin and high schools and elementary schools	672 26	
Latin and high schools	636 73	
Elementary schools	1,242 50	
Summer Review High School	29 90	
Summer Review elementary schools	101 24	
Summer Review schools	66 74	
Business Agent's report	1,591 14	
Reprints from Board of Superintendent's circular, No. 58	220 04	
Authorized list of text and supplementary books	655 93	
Report on organization and administration of intermediate schools	308 74	
		<hr/>
<i>Carried forward</i>	\$14,159 54	\$9,267 85

<i>Brought forward</i>	\$14,159 54	\$9,267 85
Choice of a suitable secondary school	292 84	
Spelling words for Grades I to VIII	303 98	
Syllabus for Grade V	526 00	
Arithmetic, practical exercises in common fractions	199 46	
Organization and administration of intermediate schools in Boston	81 50	
Course of study for Mechanic Arts High	19 78	
Course of study for High School of Commerce, Course of study for Mechanic Arts High and for High School of Practical Arts	67 45	
Special Syllabus for drawing and manual training	299 39	
Special Syllabus for drawing, Grades I, II, III,	227 88	
List of books for home reading	319 64	
Outline of minimum requirements in Latin	24 14	
Lists, eligible candidates	261 32	
Circular of information relating to examination, certification and appointment of teachers and members of the supervisory staff	251 25	
Reappointment of teachers and members of the supervising staff	147 40	
Schedule of teachers' salaries	27 65	
Statistics on teachers' salaries	1,133 20	
Annual statistics	788 11	
Stock for printing	3,219 51	
Miscellaneous	144 78	
		<u>22,560 27</u>
Total		<u><u>\$31,828 12</u></u>

SUPERVISION OF PROFESSIONAL CONTROL.

DEPARTMENT OF PRACTICE AND TRAINING.

Salary of First Assistant Director	\$2,298 01	
Salaries of Assistant Directors (three on full time, two on part time)	7,231 06	
Salary of clerk	1,261 83	
Office supplies and equipment	70 49	
Typewriter	85 05	
Printing	107 32	
Postage	65 00	
Telephone	\$43 34	
Telephone switchboard charge	107 95	
		<u>151 29</u>
Books and subscriptions		—
Car tickets		166 80
		<u>166 80</u>
Total		<u><u>\$11,436 85</u></u>

DEPARTMENT OF EDUCATIONAL INVESTIGATION AND MEASUREMENT.

Salaries and Office Expenditures.

Salary of Assistant Director of Promotion and Educational Measurement	\$2,620 00	
Salary of assistant, elementary schools, assigned	1,232 98	
Temporary Examiner in Penmanship	205 00	
Salaries of clerks (two on full time)	2,236 66	
Temporary clerical services	—	
Office supplies and equipment	156 96	
Typewriters (two)	166 06	
Rental of typewriter	50 00	
Postage	46 00	
Printing	34 58	
Telephone	16 79	
Car tickets	30 00	
Incidentals	—	
	<hr/>	\$6,795 03

Educational Measurement.

Printing	\$142 95	
Telephone	38 78	
Supplies for tests	652 87	
Repairs to clocks	—	
Incidentals	9 99	
	<hr/>	844 59
Total		<u>\$7,639 62</u>

VOCATIONAL GUIDANCE.

Salary of Director	\$2,164 00	
Salaries of Vocational Assistants (three on full time, one on part time)	4,188 50	
Salaries of Temporary Vocational Assistants	1,733 00	
Salaries of clerks (one on full time, one on part time)	1,690 65	
Temporary clerical service	305 88	
Traveling expenses	140 40	
Office supplies and equipment	169 25	
Mimeograph	108 00	
Rental of typewriter	10 00	
Printing	140 76	
Postage	131 03	
Telephone	212 90	
Car tickets	30 26	
Books and subscriptions	13 98	
Incidentals	8 59	
	<hr/>	\$11,047 20
Total		<u><u>\$11,047 20</u></u>

DEPARTMENT OF MANUAL ARTS.

Salary of Director of Manual Arts	\$3,540 00	
Salary of First Assistant Director	2,697 93	
Salaries of Assistant Directors (two on full time, one on part time)	5,012 72	
Salaries of First Assistants in Manual Arts (two on full time)	3,762 12	
Salaries of Assistants in Manual Arts (eight on full time)	13,018 53	
Salaries of temporary teachers at Museum of Fine Arts	1,265 63	
Salary of Junior Master, assigned	231 00	
Salary of Coöperative Instructor, assigned	1,068 12	
Salaries of teachers assigned to special classes	1,328 13	
Salaries of teachers, assigned, part time	709 40	
Salaries of teachers not otherwise charged	552 16	
Salaries of clerks (two on full time)	2,209 49	
Temporary clerical service	541 50	
Office supplies and equipment	340 62	
Typewriters (3)	248 20	
Printing	—	
Postage	370 63	
Books and subscriptions	18 45	
Insurance on drawing materials	24 88	
Telephone	\$146 58	
Telephone switchboard charge	173 38	
	<hr/>	319 96
Drawing supplies	77 38	
Manual training supplies	409 70	
Car tickets	336 00	
Incidentals	21 99	
	<hr/>	\$38,104 54
Supplies for schools:		
Drawing supplies not otherwise charged ..	\$169 08	
Manual training supplies not otherwise charged	105 54	
Printing lists of visits	69 92	
Plates, prints and photographs	67 53	
Design charts and text of dynamic symmetry, Manual training supplies not severally charged to schools	69 00	
Car tickets for pupils in prevocational centers	17 39	
Incidentals	17 55	
	<hr/>	516 01
Gardening and canning:		
Salaries of Supervisors, Instructors and Assistants	\$5,548 00	
Carried forward	\$5,548 00	\$38,620 55

<i>Brought forward</i>	\$5,548 00	\$38,620 55
Salaries of janitors	229 00	
Supplies, equipment and incidentals	2,987 29	
		<u>8,764 29</u>
		\$47,384 84
Credit:		
Manual Training supplies severally over- charged to schools	\$154 13	
Drawing supplies severally overcharged to schools	104 15	
		<u>258 28</u>
Total		<u>\$47,126 56</u>

DEPARTMENT OF MUSIC.

Salary of Director of Music	\$3,449 67	
Salaries of Assistant Directors (three)	8,034 22	
Salaries of Assistants (eight on full time, two on part time)	13,246 03	
Temporary Instructor	1,472 00	
Salaries of Violin Instructors	287 00	
Salary of clerk (one on part time)	317 99	
Office supplies and equipment	35 04	
Car tickets	306 00	
Printing	43 74	
Postage	54 50	
Telephone	\$43 34	
Telephone switchboard charge	28 79	
		<u>72 13</u>
Services in connection with outside study of music by pupils	175 00	
Printing, outside study of music	—	
Books and subscriptions	20 81	
Incidentals	20 90	
		<u>\$27,535 03</u>
Tuning and care of pianos		2,030 00
Total		<u>\$29,565 03</u>

DIRECTOR OF KINDERGARTENS.

Salary of the Director of Kindergartens	\$2,558 12
Salary of Assistant Director	1,692 00
Salary of clerk (part time)	578 67
Office supplies and equipment	46 76
Car tickets	66 00
Books and subscriptions	—
Printing	48 67
Postage	139 80
	<u>\$5,130 02</u>
<i>Carried forward</i>	\$5,130 02

<i>Brought forward</i>		\$5,130 02*
Telephone	\$21 67	
Telephone switchboard charge	15 59	
	<hr/>	37 26
Incidentals		<hr/>
Total		<u>\$5,167 28</u>

DIRECTOR OF HOUSEHOLD SCIENCE AND ARTS.

Salary of the Director of Household Science and Arts		\$2,742 45
Salary of Assistant Director		1,401 75
Industrial Instructor, assigned		485 90
Salary of clerk (on part time)		578 66
Books and subscriptions		2 10
Office supplies and equipment		24 84
Typewriter		85 05
Car tickets		118 00
Printing		36 70
Postage		92 51
Telephone	\$21 67	
Telephone switchboard charge	11 99	
	<hr/>	33 66
Incidentals		6 78
Total		<u>\$5,608 40</u>

DIRECTOR OF SPECIAL CLASSES.

Salary of the Director of Special Classes		\$2,140 00
Salaries of clerks (two on part time)		418 75
Traveling expenses		72 09
Books and subscriptions		—
Office supplies and equipment		47 54
Printing		70 45
Postage		72 50
Telephone	\$21 67	
Telephone switchboard charge	14 39	
	<hr/>	36 06
Supplies for classes not otherwise charged		26 23
Car tickets for follow-up work		61 22
Car tickets		62 00
Incidentals		57
Total		<u>\$3,007 41</u>

DIRECTOR OF SALESMANSHIP.

Salary of Director (part time)	\$1,400 00
Salary of Temporary Instructor	40 00
Salary of clerk (part time)	407 25
Office supplies and equipment	2 75
Printing	9 43
<i>Carried forward</i>	<hr/>
	\$1,859 43

<i>Brought forward</i>	\$1,859 43	
Postage	34 00	
Books and subscriptions	9 00	
Telephone	\$21 67	
Telephone switchboard charge	17 99	
	<hr/>	39 66
Car tickets	116 83	
Supplies for classes	9 47	
	<hr/>	
* Total		<u>\$2,068 39</u>

DIRECTOR OF PENMANSHIP.

Salary of Director	\$1,983 96	
Salary of clerk (part time)	438 22	
Office supplies and equipment	58 43	
Typewriter	85 05	
Car tickets	87 50	
Printing	4 55	
Postage	22 00	
Telephone	\$43 35	
Telephone switchboard charge	11 99	
	<hr/>	55 34
Incidentals		<hr/>
		<u>\$2,735 05</u>

DEPARTMENT OF EVENING SCHOOLS.

Salary, Director of Evening Schools	\$3,444 25	
Salary of Supervisor of Division "C" Classes, Salaries of clerks (one on full time, three on part time)	259 50	1,982 83
Temporary clerical services	40 25	
Office supplies and equipment	118 07	
Car tickets	79 92	
Printing	61 55	
Postage	177 06	
Telephone and telegraph	\$130 03	
Telephone switchboard charge	55 17	
	<hr/>	185 20
Incidentals		1 99
		<hr/>
		\$6,350 62
For Evening Schools:		
Temporary clerical services	\$56 25	
Advertising	162 45	
Printing programs and tickets	161 45	
Printing, evening high schools	120 72	
Printing, evening elementary schools	82 47	
Printing, evening high and elementary schools	17 40	
Printing, evening high and industrial schools, Printing, evening elementary and industrial schools	61 00	28 70
Printing, evening school extension	—	
	<hr/>	<hr/>
<i>Carried forward</i>	\$690 44	\$6,350 62

<i>Brought forward</i>	\$690 44	\$6,350 62
Printing for all evening schools	54 15	
Diplomas	150 57	
Supplies	—	
		895 16
Total		<u>\$7,245 78</u>

DEPARTMENT OF PHYSICAL TRAINING.

	Physical Education Appropriation.	Regular Appropriation.
<i>Physical Training.</i>		
Salary of Director of Physical Training	\$3,220 00	
Salary of clerk	1,149 33	
Salary of clerk (part time)		\$123 83
Salaries of Supervisors of Playgrounds, assigned (part time)	454 00	
Temporary clerical service	131 50	
Salary of janitor, play teachers' meetings	41 00	
Office supplies and equipment	145 31	90 19
Typewriter	89 10	
Printing	192 43	6 50
Postage	186 28	
Books and subscriptions	2 88	
Telephone and telegraph	\$43 34	
Telephone switchboard charge	38 38	
		81 72
Incidentals	16 92	6 98
Car tickets	423 34	
Athletic certificates and military diplomas	369 26	
Playground certificates	30 30	
Badges, pins, etc., for physical tests	17 29	
Service and supplies for athletic meets	136 58	
Printing for elementary schools	58 18	
Printing, playgrounds	—	
Supplies used on Randidge trips	41 09	
Supplies not severally charged to schools and price adjustment	255 07	
Supplies not otherwise charged	—	
Military bands, use of tents, etc., annual parade	900 00	
Incidentals, playgrounds	—	
Sub-totals	\$7,859 86	\$309 22
Totals		<u>\$8,169 08</u>

DEPARTMENT OF MEDICAL INSPECTION.

	School Physicians' and Nurses' Appropriation.	Regular Appropriation.
<i>School Physicians.</i>		
Salary of Director of Medical Inspection	\$2,744 00	
Salary of Medical Inspector	2,124 00	
Salaries of physicians assigned to certificating office	986 15	
Salaries of physicians on leave of absence	213 00	
Salary of clerk	783 33	\$365 00
Temporary clerical service	16 50	
Office supplies and equipment	73 86	66 05
Typewriter	93 15	
Books and subscriptions	22 50	
Supplies	12 47	
Postage	46 00	
Stamped envelopes	355 52	
Telephone	\$86 69	
Telephone switchboard	38 38	
		125 07
Printing and stock	1,059 78	
Temperature record cards	284 76	
Incidentals	11 82	
	\$8,826 84	
Credit: Supplies severally overcharged to schools and price adjustment	1 41	
	\$8,825 43	
<i>Nurses.</i>		
Salary of Supervising Nurse	1,332 62	
Office supplies and equipment	9 79	2 31
Books and subscriptions	2 00	
Supplies	1 64	
Printing	129 03	
Postage	71 00	
Telephone		39 58
Car tickets	783 27	
Incidentals	—	
Supplies not severally charged to schools and price adjustment	17 90	
Credit: Nurses' supplies severally overcharged to schools and price adjustment	—	
Sub-totals	\$11,172 68	\$598 01
Total		\$11,770 69

GENERAL CHARGES.

ATTENDANCE OFFICERS.

Salary of Chief Attendance Officer	\$2,800 00	
Salaries of Attendance Officers (twenty-two on full time, four on part time)	36,245 88	
Salaries of Temporary Attendance Officers	3,304 00	
Salary of clerk	1,141 66	
Office supplies	35 22	
Printing	306 82	
Postage	219 00	
Telephone	\$21 67	
Telephone switchboard charge	14 39	
		36 06
Boston Business Directory		—
Badges		—
Car tickets	1,123 00	
Incidentals		—
		<u>\$45,211 64</u>

Supervisor of Licensed Minors.

Salary of Supervisor of Licensed Minors (part time)	\$688 80	
Salary of clerk	1,141 66	
Office supplies	9 91	
Telephone	\$21 68	
Telephone switchboard charge	14 39	
		36 07
Printing	57 24	
Postage	61 00	
Car tickets	89 00	
Badges and cards for licensed minors	332 50	
Incidentals	12	
		<u>2,416 30</u>
Total		<u><u>\$47,627 94</u></u>

GENERAL ACCOUNT.

Salary of City Treasurer, Custodian	\$1,500 00
Salaries of Teachers, not otherwise charged	435 00
Salaries of Officers, not otherwise charged	5 00
Sampling, testing and expert advice on coal	1,562 31
Premium on fuel	—
Storage of coal	1,557 47
Advertising	415 03
Diplomas	1,995 69
Ribbon for diplomas	271 62
	<u>\$7,742 12</u>
<i>Carried forward</i>	

<i>Brought forward</i>	\$7,742 12
Supplies broken and lost in transit and at schools	3 90
Books and supplies sold out of stock	3,129 81
Supplies used as samples	4 87
Exhibits	74 82
Penmanship material	1,081 45
Books and supplies received previous to year 1919-20, paid for year 1919-20	591 02
Supplies for connecting the work of the kindergartens and primary grades	19 05
Supplies not severally charged to schools and price adjustment	26 19
Removing ashes	2,308 00
Tuition, wards of the city	9,967 29
Transportation, wards of the city	1,534 86
Tuition, paid town of Brookline	11,442 00
Tuition, paid town of Winthrop	213 37
Transportation, paid town of Winthrop	59 85
Tuition, paid town of Dedham	45 00
Tuition, paid Massachusetts Industrial Schools	257 51
Tuition, paid Massachusetts Agricultural Schools	232 61
Rebate on high school tuition	5 34
Rebate on elementary school tuition	—
Services of experts to the Business Agent on supplies, apparatus, etc.	593 50
Short postage	13 12
Conducting professional and cultural courses for teachers	4,269 40
Supplies for courses	—
License fee, qualification of assistant as Special Commissioner, Order of Court, payment to Mrs. Agnes C. White, Workmen's Compensation Act	5 00
Salary paid Janitor, Workmen's Compensation Act	530 00
Miscellaneous telephone charges	92 00
Barrels, cans, etc	—
Barrels, cans, etc	79 00
Incidentals	11 80
	<hr/>
	\$44,332 88
Credits:	
Salaries of teachers overpaid and refunded	—
Discarded books	\$597 76
Barrels, cans, etc.	—
Adjustment on price of disinfectant	54 17
Penalty exacted from contractors on account of quality of coal falling below standard requirements	—
Supplies severally overcharged to schools and price adjustment	1,047 85
	<hr/>
	1,699 78
Total	<hr/> <u>\$42,633 10</u>

EXTENDED USE OF THE PUBLIC SCHOOLS.

	Extended Use of the Public Schools Appropriation.	Regular Appropriation.
Salary of Director, Extended Use of the Public Schools	\$2,100 00	
Salary of clerk		\$814 50
Office supplies and equipment	4 25	29 97
Printing and advertising	162 68	3 12
Postage	32 50	
Car tickets	21 20	
Telephone and telegraph \$43 34		
Telephone switchboard charge 41 98		
		85 32
Messenger services	—	
Advertising	—	
Subscriptions	—	
Services and expenses, activities	—	
Slides, etc.	18 30	
Incidentals	14 50	
Sub-totals	\$2,353 43	\$922 91
Total		\$3,286 34

SUMMARY — COSTS OF ADMINISTRATION, SUPERVISION AND GENERAL CHARGES.

Secretary	\$13,565 92	
Business Agent	47,852 62	
Schoolhouse Custodian	4,926 41	
Superintendent	28,135 39	
Assistant Superintendents	33,474 30	
Administration account, other items	31,828 12	
		\$159,782 76
Department of Practice and Training	\$11,436 85	
Department of Educational Investigation and Measurement	7,639 62	
Vocational Guidance	11,047 20	
Department of Manual Arts	47,126 56	
Department of Music	29,565 03	
Director of Kindergartens	5,167 28	
Director of Household Science and Arts	5,608 40	
Director of Special Classes	3,007 41	
Director of Salesmanship	2,068 39	
Director of Penmanship	2,735 05	
Department of Evening Schools	7,245 78	
Department of Physical Training	8,169 08	
Department of Medical Inspection	11,770 69	
Attendance Officers *	47,627 94	
General account	42,633 10	
Extended Use of the Public Schools	3,286 34	
		246,134 72
Total cost of administration, supervision and general charges		\$405,917 48

* Including Supervisor of Licensed Minors.

APPORTIONMENT OF COSTS OF ADMINISTRATION, SUPERVISION AND
GENERAL CHARGES.

Normal School	\$1,445 28
Latin and high schools	61,720 90
Elementary schools	309,917 43
Horace Mann School	837 01
Trade School for Girls	2,757 40
Boston Trade School	1,583 32
Boston Clerical School	627 76
Boston Disciplinary Day School	656 73
Continuation School, Voluntary	219 23
Continuation School, Compulsory	6,382 19
Day School for Immigrants	3,016 17
Summer Review High School	353 72
Summer Review elementary schools	1,099 64
Speech Improvement classes	627 77
Evening high schools	4,499 25
Evening elementary schools	4,166 00
Boston Trade School, evening classes	661 37
Park playgrounds	1,029 99
Schoolyard playgrounds	1,029 98
School centers	2,957 71
School accommodations	328 63
Total	<u>\$405,917 48</u>

TELEPHONE CHARGES.

All items of telephone costs which could be charged directly to the several offices have been so charged. In addition to such costs there is the cost of installation and operation of the switchboard. This is given in detail and includes the salaries of the operator and relief operator. The total cost of the switchboard is then apportioned to the several offices in proportion to the number of instruments connected to the switchboard.

TELEPHONE SWITCHBOARD.

Salaries of operators	\$1,188 16
Switchboard rental	28 38
Trunk lines	147 40
Metallic circuits	263 70
Changing equipment	18 16
Telephone sets	162 43
Operators' sets	13 35
<i>Carried forward</i>	<u>\$1,821 58</u>

<i>Brought forward</i>	\$1,821 58
Toll calls and messages	50 45
Incidentals	3 04
	<hr/>
	\$1,875 07
Credit for interruption of service	11 28
	<hr/>
	<u>\$1,863 79</u>

APPORTIONMENT OF COST OF SWITCHBOARD.

Secretary, $\frac{2}{43}$	\$86 69
Business Agent, $\frac{3}{43}$	130 03
Supply room, $\frac{2}{43}$	86 69
Schoolhouse Custodian, $\frac{1}{43}$	43 34
Superintendent, $\frac{9}{43}$	346 75
Assistant Superintendents, $\frac{6}{43}$	260 07
Department of Practice and Training, $\frac{1}{43}$	43 34
Department of Manual Arts, $\frac{4}{43}$	173 38
Department of Music, $\frac{1}{43}$	43 34
Director of Salesmanship, $\frac{1}{86}$	21 67
Director of Penmanship, $\frac{1}{43}$	43 35
Department of Evening Schools, $\frac{2}{43}$	130 03
Director of Household Science and Arts, $\frac{1}{86}$	21 67
Director of Kindergartens, $\frac{1}{86}$	21 67
Director of Special Classes, $\frac{1}{86}$	21 67
Department of Physical Training, $\frac{1}{43}$	43 34
Department of Medical Inspection, $\frac{2}{43}$	86 69
Attendance Officers, $\frac{1}{86}$	21 67
Supervisor of Licensed Minors, $\frac{1}{86}$	21 68
Director, Extended Use of the Public Schools, $\frac{1}{43}$	43 34
Continuation School, Compulsory, $\frac{4}{43}$	173 38
	<hr/>
	<u>\$1,863 79</u>

STOCK BALANCE, 1919-1920.

1919-20 STOCK BALANCE.

	<i>Debit.</i>	
Inventory of December 1, 1918:		
Books	\$11,311 73	
Manual training supplies	3,914 16	
Drawing supplies	1,669 20	
Kindergarten supplies	2,034 03	
Janitors' supplies	5,513 70	
Miscellaneous educational supplies	41,849 02	
Laboratory supplies	12 50	
Nurses' supplies	991 51	
Physical education supplies	3,492 51	
Supplies for the extended use of the public schools	67 35	
Supplies for medical inspection	258 36	
Fuel (at wharf, paid for but not delivered)	48,549 09	
		\$119,663 16
Receipts, 1919-20:		
Purchases:		
Books	\$21,331 76	
Manual training supplies	3,927 36	
Drawing supplies	5,776 28	
Kindergarten supplies	3,988 80	
Janitors' supplies	14,546 81	
Miscellaneous educational supplies	65,206 65	
Nurses' supplies	1,066 00	
Physical education supplies	8,455 32	
Supplies for the extended use of public schools	120 00	
Supplies for medical inspection	1,760 18	
Fuel	1,922 16	
		128,101 32
From schools:		
Books	\$367 73	
Manual training supplies	138 72	
Drawing supplies	166 20	
Kindergarten supplies	25 75	
Janitors' supplies	15 00	
Miscellaneous educational supplies	961 58	
Physical education supplies	62 40	
Supplies for medical inspection	—	
		1,737 38
Manual training supplies overcharged to schools	\$154 13	
Drawing supplies overcharged to schools	104 15	
Kindergarten supplies overcharged to schools	83 38	
Janitors' supplies overcharged to schools	179 56	
Books and miscellaneous supplies overcharged to schools	758 74	
Supplies for medical inspection overcharged to schools	1 41	
		1,281 37
Discarded books		597 76
Total		\$251,380 99

NOTE.—The items included in the above account are only those purchased for general distribution and do not include those purchased for any particular school. The latter are charged direct to the school.

1919-20, STOCK BALANCE.

Credit.

Deliveries on Requisition:

Books	\$26,353 36	
Manual training supplies	5,528 95	
Drawing supplies	5,804 01	
Kindergarten supplies	4,762 74	
Janitors' supplies	16,112 56	
Miscellaneous educational supplies	85,690 23	
Laboratory supplies	2	
Nurses' supplies	1,131 48	
Physical education supplies	9,008 08	
Supplies for the extended use of the public schools	53 70	
Supplies for medical inspection	1,175 16	
Fuel	50,471 25	
	<hr/>	\$206,691 73

Laboratory supplies not severally charged to schools \$0 02

Physical education supplies not severally charged to schools 255 07

Nurses' supplies not severally charged to schools 17 90

272 99

597 76

Discarded books

Inventory of December 1, 1919:

Books	\$6,794 32	
Manual training supplies	2,605 42	
Drawing supplies	1,911 82	
Kindergarten supplies	1,369 22	
Janitors' supplies	4,142 51	
Miscellaneous educational supplies	22,949 30	
Laboratory supplies	12 27	
Nurses' supplies	908 13	
Physical education supplies	2,747 08	
Supplies for the extended use of the public schools	133 65	
Supplies for medical inspection	844 79	
	<hr/>	44,418 51

Total \$251,380 99

NOTE.—The items included in the above account are only those purchased for general distribution and do not include those purchased for any particular school. The latter are charged direct to the school.

SUMMARY COST OF SCHOOLS.

	Costs Exclusive of Administration, Supervision and General Charges, and With Direct Income Deducted.	Costs with Costs of Administration, Supervision and General Charges Added.	Costs with Apportioned Income Deducted.
Normal School.....	\$47,494 70	\$48,939 98	\$48,073 95
Latin and high schools.....	1,501,220 90	1,562,941 80	1,552,771 16
Elementary schools.....	4,353,410 57	4,663,328 00	4,645,197 08
Speech Improvement classes.....	13,815 47	14,443 24	14,375 48
Horace Mann School.....	29,740 80	30,577 81	9,164 97
Trade School for Girls.....	31,366 25	34,123 65	30,726 45
Boston Trade School.....	29,182 30	30,765 62	27,623 59
Continuation School, Voluntary.....	Cr. 443 18	Cr. 223 95	Cr. 316 54
Continuation School, Compulsory.....	78,641 49	85,023 68	84,571 95
Boston Clerical School.....	17,682 27	18,310 03	18,189 27
Boston Disciplinary Day School.....	2,845 93	3,502 66	3,480 07
Day School for Immigrants.....	8,059 62	11,075 79	10,940 27
Summer Review High School.....	3,386 18	3,739 90	3,717 31
Summer Review Elementary schools.....	16,207 54	17,307 18	17,174 25
Evening High schools.....	45,511 63	50,010 88	47,465 07
Evening Elementary schools.....	35,884 81	40,050 81	35,031 68
Boston Trade School, Evening classes.....	5,738 10	6,399 47	6,161 81
Park Playgrounds.....	28,343 09	29,373 08	29,373 08
Schoolyard Playgrounds.....	13,285 31	14,315 29	14,315 29
Boston Trade School, Summer Rehabilitation Classes for Federal students.....	8,754 22	8,754 22	8,754 22
Extended Use of the Public Schools:			
School Centers.....	32,444 72	35,402 43	35,402 43
Use of School Accommodations.....	4,248 04	4,576 67	4,576 67
Totals.....	\$6,306,820 76	\$6,712,738 24	\$6,646,769 51
Add costs of administration, supervision and general charges.....	405,917 48		
Total.....	\$6,712,738 24		
Deduct apportioned income.....	65,968 73		
Net total.....	<u>\$6,646,769 51</u>		
Net total brought down.....	\$6,646,769 51		
Add total income (direct and apportioned)....	181,600 48		
Total.....	\$6,828,369 99		
Decrease in inventory.....	75,244 65		
Total expenditures, 1919-20*.....	<u>\$6,753,125 34</u>		

* Exclusive of pensions, cost of buildings, depreciation, repairs, interest and sinking fund charges.

TABLE SHOWING COST OF ADMINISTRATION FOR THE YEARS 1911-12 AND 1919-20, AND THE INCREASES IN EIGHT YEARS.

	1911-12.	1919-20.	Increases in Eight Years.	Increases in Eight Years, Per Cent.
Secretary.....	\$10,326 66	\$13,565 92	\$3,239 26	31.3
Business Agent*.....	†36,127 57	47,852 62	11,725 05	32.4
Schoolhouse Custodian.....	4,356 93	4,926 41	569 48	13.0
Superintendent.....	16,880 65	28,135 39	11,254 74	66.6
Assistant Superintendents.....	30,900 31	33,474 30	2,573 99	8.3
Administration Account, Other Items.....	16,725 58	31,828 12	15,102 54	90.2
Totals.....	\$115,317 70	\$159,782 76	\$44,465 06	38.5

* Duties of Auditor transferred to Business Agent October 14, 1912.

† Including Auditor.

TABLE SHOWING COST OF SUPERVISION OR PROFESSIONAL CONTROL FOR THE YEARS 1911-12 AND 1919-20, AND THE INCREASES IN EIGHT YEARS.

	1911-12.	1919-20.	Increases in Eight Years.	Increases in Eight Years, Per Cent.
Department of Practice and Training.....	*\$5,556 96	\$11,436 85	\$5,879 89	105.7
Department of Educational Investigation and Measurement.....		7,639 62	7,639 62	.....
Vocational Guidance.....	1,986 05	11,047 20	9,061 15	456.2
Department of Manual Arts.....	15,422 03	47,126 56	31,704 53	205.5
Department of Music.....	19,802 72	29,565 03	9,762 31	49.2
Director of Kindergartens.....	1,934 78	5,167 28	3,232 50	167.0
Director of Household Science and Arts.....	2,269 72	5,608 40	3,338 68	103.0
Director of Special Classes.....		3,007 41	3,007 41	.....
Director of Salesmanship.....		2,068 39	2,068 39	.....
Director of Penmanship.....		2,735 05	2,735 05	.....
Department of Evening Schools.....	4,971 19	7,245 78	2,274 59	45.7
Department of Physical Training.....		8,169 08		
Department of Medical Inspection.....	†10,159 04	{ 11,770 69 }	9,790 73	96.2
Totals.....	\$62,102 49	\$152,587 34	\$90,484 85	145.6

* Supervisor of Substitutes.

† Excluding salaries of assistant instructors of Physical Training and instructor and assistant instructors in Military Drill and armorer.

STATISTICS, 1911-12 AND 1919-20.

	1911-12.	1919-20.	Increases in Eight Years.	Increases in Eight Years, Per Cent.
Total expenditure*.....	*\$4,277,938 30	\$6,855,304 32	\$2,577,366 02	60.2
Day Schools:				
Average membership.....	99,272	108,031	8,759	8.8
Average attendance.....	91,049	98,312	7,263	7.9
Summer Schools:				
Average attendance.....	209	3,952	3,743	1,790.9
Evening Schools:				
Average attendance.....	7,964	4,095	† 3,869	† 48.5
Evening School Extension:				
Average attendance.....	716			
Playgrounds:				
Average attendance.....	7,391	13,206	5,815	78.6

* Exclusive of new buildings, repairs, alterations, rents and extended use of the public schools.

† Decrease.

TABLE SHOWING COSTS OF ADMINISTRATION FOR THE YEARS 1908-09 AND 1919-20,
AND THE INCREASES IN ELEVEN YEARS.

	1908-09.	1919-20.	Increases in Eleven Years.	Increases in Eleven Years, Per Cent.
Secretary.....	\$8,124 73	\$13,565 92	\$5,441 19	66.9
Business Agent *.....	† 24,112 92	47,852 62	23,739 70	98.4
Schoolhouse Custodian.....	3,011 74	4,926 41	1,914 67	63.5
Superintendent.....	13,240 53	28,135 39	14,894 86	112.4
Assistant Superintendents.....	28,812 84	33,474 30	4,661 46	16.1
Administration Account, Other Items.....	13,454 54	31,828 12	18,373 58	136.5
Totals.....	\$90,757 30	\$159,782 76	\$69,025 46	76.0

* Duties of Auditor transferred to Business Agent October 14, 1912.

† Including Auditor.

TABLE SHOWING COSTS OF SUPERVISION OR PROFESSIONAL CONTROL FOR THE YEARS
1908-09 AND 1919-20, AND THE INCREASES IN ELEVEN YEARS.

	1908-09.	1919-20.	Increases in Eleven Years.	Increases in Eleven Years, Per Cent.
Department of Practice and Training.....	* \$3,192 79	\$11,436 85	\$8,244 06	258.2
Department of Educational Investigation and Measurement.....		7,639 62	7,639 62	
Vocational Guidance.....		11,047 20	11,047 20	
Department of Manual Arts.....	13,510 37	47,126 56	33,616 19	248.8
Department of Music.....	19,331 20	29,565 03	10,233 83	52.9
Director of Kindergartens.....	1,807 81	5,167 28	3,359 47	185.8
Director of Household Science and Arts.....	1,486 51	5,608 40	4,121 89	270.5
Director of Special Classes.....		3,007 41	3,007 41	
Director of Salesmanship.....		2,068 39	2,068 39	
Director of Penmanship.....		2,735 05	2,735 05	
Department of Evening Schools.....	3,050 46	7,245 78	4,195 32	137.5
Department of Physical Training.....	16,878 34	8,169 08	3,061 43	18.1
Department of Medical Inspection.....		11,770 69		
Totals.....	\$59,257 48	\$152,587 34	\$93,329 86	157.4

* Supervisor of Substitutes.

STATISTICS, 1908-09 AND 1919-20.

	1908-09.	1919-20.	Increases in Eleven Years.	Increases in Eleven Years, Per Cent.
Total expenditures *.....	*\$3,621,304 48	\$6,855,304 32	\$3,233,999 84	89.3
Day Schools:				
Average membership.....	96,925	168,031	11,106	11.4
Average attendance.....	88,475	98,312	9,837	11.1
Summer Schools:				
Average attendance.....		3,952		
Evening Schools:				
Average attendance.....	7,778	4,095	† 3,683	† 47.3
Evening School Extension:				
Average attendance.....				
Playgrounds:				
Average attendance.....	12,264	13,206	942	7.6

* Exclusive of new buildings, repairs, alterations, rents and extended use of the public schools.

† Decrease.

PER CAPITA COSTS OF TEACHERS' SALARIES, BOOKS, OTHER EDUCATIONAL SUPPLIES, ALL EDUCATIONAL SUPPLIES AND INCIDENTALS AND TOTAL FOR INSTRUCTION, BASED ON AVERAGE ATTENDANCE.

Normal School.

	Teachers' Salaries.*	Books.	Other Educational Supplies and Incidentals.*	All Educational Supplies and Incidentals.*	Total for Instruction.*
Normal.....	\$171 83	\$0 87	\$7 24	\$8 11	\$179 94

Latin and High Schools.

	Teachers' Salaries.*	Books.	Other Educational Supplies and Incidentals.*	All Educational Supplies and Incidentals.*	Total for Instruction.*
Public Latin.....	\$91 85	\$2 02	\$1 69	\$3 71	\$95 56
Girls' Latin.....	74 03	1 83	2 09	3 92	77 95
Brighton High.....	75 39	1 28	8 14	9 42	84 81
Charlestown High.....	86 56	1 66	14 64	16 30	102 86
Dorchester High.....	73 07	2 06	3 28	5 34	78 41
East Boston High.....	83 45	1 77	5 50	7 27	90 72
English High.....	92 95	1 63	5 09	7 62	99 67
Girls' High.....	67 66	1 93	6 17	8 10	75 76
High School of Commerce.....	94 64	1 49	9 42	10 91	105 55
High School of Practical Arts...	138 00	1 03	3 22	4 25	142 25
Hyde Park High.....	70 84	1 58	4 99	6 57	77 41
Mechanic Arts High.....	155 28	3 19	3 82	7 01	162 29
Roxbury High.....	61 72	1 88	5 17	7 05	68 77
South Boston High.....	74 88	1 32	3 46	4 78	79 66
West Roxbury High.....	74 91	1 87	2 57	4 44	79 35
Averages.....	\$84 98	\$1 82	\$5 06	\$6 88	\$91 86

* Exclusive of physical education.

Elementary Schools.

	Teachers' Salaries.*	Books.	Other Educational Supplies and Incidentals.*	All Educational Supplies and Incidentals.*	Total for Instruction.*
Abraham Lincoln.....	\$40 31	\$0 88	\$1 12	\$2 00	\$42 31
Agassiz.....	56 77	61	1 52	2 13	58 90
Bennett.....	38 95	64	1 16	1 80	40 75
Bigelow.....	51 55	41	1 61	2 02	53 57
Blackinton-John Cheverus.....	42 79	69	1 20	1 89	44 68
Bowditch.....	40 99	64	1 69	2 33	42 32
Bowdoin.....	45 17	57	1 45	2 02	47 19
Bunker Hill.....	50 65	59	1 76	2 35	53 00
Chapman.....	42 39	75	1 80	2 35	44 94
Charles Sumner.....	43 86	75	1 00	1 75	45 61
Christopher Gibson.....	44 14	92	1 27	2 19	46 33
Dearborn.....	43 37	61	1 40	2 01	45 38
Dillaway.....	45 90	41	1 70	2 11	48 01
Dudley.....	50 57	62	2 31	2 93	53 50
Dwight.....	47 76	46	2 15	2 61	50 37
Edmund P. Tileston.....	43 03	61	1 35	1 96	44 99
Edward Everett.....	39 42	85	1 20	2 05	41 47
Elihu Greenwood.....	39 02	29	1 80	2 09	41 11
Eliot.....	37 62	44	1 53	1 97	39 59
Emerson.....	40 65	56	1 25	1 81	42 46
Everett.....	46 99	57	1 76	2 33	49 32
Francis Parkman.....	40 82	74	1 55	2 29	43 11
Franklin.....	44 62	48	1 21	1 69	46 31
Frederic W. Lincoln.....	46 82	61	1 16	1 77	48 59
Gaston.....	43 51	53	1 02	1 55	45 06
George Putnam.....	40 05	1 11	1 36	2 47	42 52
Gilbert Stuart.....	43 90	42	1 66	2 08	45 98
Hancock.....	40 00	49	1 38	1 87	41 87
Harvard-Frothingham.....	51 63	51	2 09	2 60	54 23
Henry Grew.....	42 06	83	1 20	2 03	44 09
Henry L. Pierce.....	41 54	1 02	2 42	3 44	44 98

* Exclusive of physical education.

Elementary Schools.—Continued.

	Teachers' Salaries.*	Books.	Other Educational Supplies and Incidentals.*	All Educational Supplies and Incidentals.*	Total for Instruction.*
Hugh O'Brien.....	\$38 55	\$0 35	\$1 39	\$1 74	\$40 29
Hyde.....	49 45	73	98	1 71	51 16
Jefferson.....	42 86	66	1 39	2 05	44 91
John A. Andrew.....	43 65	48	1 31	1 79	45 44
John Marshall.....	39 45	46	1 12	1 58	41 03
John Winthrop.....	40 75	1 03	1 07	2 10	42 85
Julia Ward Howe.....	37 49	23	67	90	38 39
Lawrence.....	46 46	36	2 05	2 41	48 87
Lewis.....	39 64	62	2 01	2 63	42 27
Longfellow.....	38 67	58	1 75	2 33	41 00
Lowell.....	42 80	62	1 60	2 22	45 02
Martin.....	55 70	1 07	1 27	2 34	58 04
Mary Hemenway.....	37 43	57	1 54	2 11	39 54
Mather.....	39 03	62	1 52	2 14	41 17
Minot.....	42 13	55	1 67	2 22	44 35
Norcross.....	45 30	64	1 10	1 74	47 04
Oliver Hazard Perry.....	44 63	72	1 57	2 29	46 92
Oliver Wendell Holmes.....	41 36	92	1 53	2 45	43 81
Phillips Brooks.....	37 87	62	1 32	1 94	39 81
Prescott.....	54 63	54	2 20	2 74	57 37
Prince.....	40 98	81	1 50	2 31	43 29
Quincy.....	50 37	29	1 99	2 28	52 65
Rice.....	42 92	61	2 35	2 96	45 88
Robert G. Shaw.....	37 78	65	1 72	2 37	40 15
Roger Wolcott.....	35 20	73	1 94	2 67	37 87
Samuel Adams.....	34 07	68	92	1 60	35 67
Sherwin.....	59 13	65	2 17	2 82	61 95
Shurtleff.....	40 53	60	1 35	1 95	42 48
Theodore Lyman.....	40 35	63	1 62	2 25	42 60
Thomas Gardner.....	38 36	68	1 11	1 79	40 15
Thomas N. Hart.....	46 16	70	1 90	2 60	48 76
Ulysses S. Grant.....	41 04	98	1 55	2 53	43 57

* Exclusive of physical education.

Elementary Schools.— Concluded.

	Teachers' Salaries.*	Books.	Other Educational Supplies and Incidentals.*	All Educational Supplies and Incidentals.*	Total for Instruction.*
Warren.....	\$43 67	\$0 25	\$1 84	\$2 09	\$45 76
Washington.....	39 85	48	1 32	1 80	41 65
Washington Allston.....	41 04	76	1 15	1 91	42 95
Wells.....	42 03	37	1 16	1 53	43 56
Wendell Phillips.....	47 75	61	2 46	3 07	50 82
William E. Endicott.....	35 81	03	65	68	36 49
William E. Russell.....	45 91	64	1 59	2 23	48 14
William Lloyd Garrison.....	34 63	25	82	1 07	35 70
Averages.....	\$40 61	\$0 62	\$1 49	\$2 11	\$42 72

* Exclusive of physical education.

Special Schools.

	Teachers' Salaries.*	Books.	Other Educational Supplies and Incidentals.*	All Educational Supplies and Incidentals.*	Total for Instruction.*
Horace Mann.....	\$202 14	\$0 43	\$4 42	\$4 85	\$206 99
Boston Clerical.....	84 07	1 58	11 50	13 08	97 15
Boston Disciplinary Day.....	90 93	6 56	8 92	15 48	106 41
Boston Trade, Day Classes.....	162 41	1 52	25 51	27 03	189 44

* Exclusive of physical education.

PER CAPITA COSTS OF JANITORS' SUPPLIES BASED ON AVERAGE ATTENDANCE.

Normal School.

SCHOOL.	Janitors' Supplies.
Normal.....	\$1 12

Latin and High Schools.

SCHOOLS.	Janitors' Supplies.	SCHOOLS.	Janitors' Supplies.
Public Latin.....	\$0 14	High School of Commerce.....	\$0 24
Girls' Latin.....	17	High School of Practical Arts..	98
Brighton High.....	23	Hyde Park High.....	24
Charlestown High.....	18	Mechanic Arts High.....	38
Dorchester High.....	17	Roxbury High.....	18
East Boston High.....	22	South Boston High.....	23
English High.....	23	West Roxbury High.....	19
Girls' High.....	19	Average.....	\$0 23

Elementary Schools.

SCHOOLS.	Janitors' Supplies.	SCHOOLS.	Janitors' Supplies.
Abraham Lincoln.....	\$0 08	Dillaway.....	\$0 21
Agassiz.....	29	Dudley.....	37
Bennett.....	42	Dwight.....	34
Bigelow.....	17	Edmund P. Tileston.....	17
Blackinton-John Cheverus.....	14	Edward Everett.....	17
Bowditch.....	19	Elihu Greenwood.....	14
Bowdoin.....	22	Eliot.....	14
Bunker Hill.....	15	Emerson.....	18
Chapman.....	16	Everett.....	28
Charles Sumner.....	18	Francis Parkman.....	14
Christopher Gibson.....	21	Franklin.....	25
Dearborn.....	20	Frederic W. Lincoln.....	17

PER CAPITA COSTS OF JANITORS' SUPPLIES BASED ON AVERAGE
ATTENDANCE.— *Concluded.*

Elementary Schools.— Concluded.

SCHOOLS.	Janitors' Supplies.	SCHOOLS.	Janitors' Supplies.
Gaston.....	\$0 14	Phillips Brooks.....	\$0 24
George Putnam.....	19	Prescott.....	13
Gilbert Stuart.....	20	Prince.....	15
Hancock.....	13	Quincy.....	24
Harvard-Frothingham.....	25	Rice.....	20
Henry Grew.....	13	Robert G. Shaw.....	20
Henry L. Pierce.....	25	Roger Wolcott.....	21
Hugh O'Brien.....	23	Samuel Adams.....	15
Hyde.....	21	Sherwin.....	35
Jefferson.....	17	Shurtleff.....	19
John A. Andrew.....	19	Theodore Lyman.....	26
John Marshall.....	16	Thomas Gardner.....	20
John Winthrop.....	22	Thomas N. Hart.....	16
Julia Ward Howe.....	10	Ulysses S. Grant.....	17
Lawrence.....	26	Warren.....	29
Lewis.....	17	Washington.....	17
Longfellow.....	20	Washington Allston.....	12
Lowell.....	17	Wells.....	17
Martin.....	33	Wendell Phillips.....	20
Mary Hemenway.....	17	William E. Endicott.....	25
Mather.....	18	William E. Russell.....	21
Minot.....	23	William Lloyd Garrison.....	19
Norcross.....	30	Average.....	\$0 20
Oliver Hazard Perry.....	19		
Oliver Wendell Holmes.....	14		

Special Schools.

SCHOOLS.	Janitors' Supplies.
Horace Mann.....	\$0 63
Boston Clerical.....	16
Boston Disciplinary Day.....	17
Boston Trade, Day Classes.....	86

**STANDARD REPORT ON THE FINANCIAL
STATISTICS OF THE PUBLIC SCHOOLS.**

STANDARD REPORT ON THE FINANCIAL STATISTICS OF THE PUBLIC SCHOOLS.*

A. PAYMENTS.

1.— EXPENSES (Cost of Conducting School System).	Total.	Salaries.	Other Objects.
EXPENSES OF GENERAL CONTROL (OVERHEAD CHARGES).			
1. Board of Education and Secretary's Office.....	\$14,272 90	\$11,728 41	\$2,544 49
2. School elections and school census.....			
3. Finance offices and accounts †.....	47,852 62	43,248 44	4,604 18
4. Legal services ‡.....			
5. Operation and maintenance of office buildings.....	16,901 19	4,206 34	12,694 85
6. Officers in charge of buildings.....	88,435 52	74,635 07	13,800 45
6a. Schoolhouse Custodian.....	4,926 41	4,217 83	708 58
7. Office of Superintendent of Schools.....	80,686 16	73,931 06	6,755 10
8. Enforcement of compulsory education and truancy laws..	47,627 94	45,322 00	2,305 94
9. Other expenses of general control.....	37,407 02	1,940 00	35,467 02
10. Totals.....	\$338,109 76	\$259,229 15	\$78,880 61

* This standard form corresponds to Schedule G 34 of the Bureau of the Census and has been worked out by that bureau after conference and correspondence with representatives of the United States Bureau of Education, the National Education Association, the National Association of School Accounting and Business Officials of Public Schools and with many school superintendents.

† Also in charge of supplies.

‡ Undertaken by Law Department of the city without expense to the School Committee.

STANDARD REPORT ON THE FINANCIAL STATISTICS
OF THE PUBLIC SCHOOLS.— Continued.

III.— OTHER PAYMENTS.		Total.
53.	Redemption of bonds.....	*\$210,500 00
54.	Redemption of short-term loans.....	—
55.	Payment of warrants and orders of preceding year.....	—
56.	Payments to sinking funds and for serial debt requirements..	466,609 00
56a.	Payments to sinking funds, receipts from sales of real property...	265 00
57.	Payments of interest.....	588,415 00
58.	Miscellaneous payments, including payments to trust funds, text-books to be sold to pupils, etc.....	18,175 03
59.	Total.....	\$1,073,464 03
60.	Balances at close of year, cash in treasury.....	\$2,129,104 84
60a.	Stock on hand, close of year.....	44,418 51
61.	Total payments (sum of totals 10-59, inclusive).....	9,088,181 58
61a.	Total payments and balances (60-61, inclusive).....	\$11,261,704 93

* Included in Item 56, therefore, not added.

B. RECEIPTS.

REVENUE RECEIPTS.		Total.
62.	Subventions and grants from state.....	\$146,287 46
62a.	Subventions and grants from Federal Government (Smith Hughes Act).....	35,134 13
63.	Subventions and grants from county.....	—
64.	Subventions and grants from other civil divisions.....	—
65.	Appropriations from city treasury.....	9,220,029 27
65a.	Transferred from accrued interest, Permanent Pension Fund.....	—
66.	General property taxes.....	—
67.	Business taxes (licenses, excise taxes, taxes on corporations, taxes on occupations, etc.).....	—
67a.	Dog tax (less damages by dogs).....	18,338 61
68.	Poll taxes.....	—
69.	Fines and penalties (forfeited advance payments, evening schools)...	3,849 53
70.	Rents and interest.....	1,063 46
71.	Tuition and other fees from patrons.....	7,447 12
72.	Transfers from other districts in payment of tuition.....	6,370 33
73.	All other revenue.....	22,141 92
74.	Total revenue receipts.....	\$9,460,661 83

STANDARD REPORT ON THE FINANCIAL STATISTICS OF THE PUBLIC SCHOOLS.— Concluded.

B. RECEIPTS.— Concluded.

NON-REVENUE RECEIPTS.	Total.
75. Loans and bond sales.....	—
75a. Sinking Funds.....	—
76. Warrants issued and unpaid.....	—
77. Sales of real property and proceeds of insurance adjustments.....	\$265 00
78. Sales of equipment and supplies.....	6,843 94
79. Refund of payments.....	—
80. Other non-revenue receipts.....	—
81. Total non-revenue receipts.....	\$7,108 94
<hr/>	
82. Total receipts (sum of 74 and 81).....	\$9,467,770 77
83. Balance at beginning of year, cash in treasury.....	1,674,271 00
83a. Credit money refunded.....	—
83b. Stock on hand, beginning of year.....	119,663 16
84. Total receipts and balances (82-83b, inclusive).....	\$11,261,704 93

C. VALUE OF SCHOOL PROPERTY.

CLASS OF BUILDINGS.	Total Value of Sites, Buildings and Equip- ment.	Value of Sites and Buildings.	Value of Equipment.	Interest on Value of School Plant.
General control.....	\$264,000 00	\$256,000 00	\$8,000 00	—
Elementary schools.....	21,529,340 03	20,794,326 47	735,013 56	—
Secondary schools.....	6,280,012 19	5,928,225 00	351,787 19	—
Normal schools.....	403,275 00	387,075 00	16,200 00	—
Schools for the industries...	610,288 26	476,631 64	133,656 62	—
Special schools.....	101,300 00	98,000 00	3,300 00	—

D. EXPENDITURES, INCOME FROM TRUST FUNDS.

	Total.
Bowdoin (Dorchester) School Fund.....	\$92 61
Eastburn School Fund.....	600 00
Franklin Medal Fund.....	59 88
Gibson School Fund.....	2,998 35
Horace Mann School Fund.....	399 82
Peter P. F. Degrand School Fund.....	—
Teachers' Waterston Fund.....	—
Charlestown Free School Fund.....	261 18
Total.....	\$4,411 84

TEXT-BOOKS.

TEXT-BOOKS LOST.

The number of text-books reported lost during the year was as follows:

High schools	1,567
Elementary schools	6,827
Evening schools	509
Special schools	18
	8,921
Total number reported lost	
The average number reported lost each year since 1885-86 (a period of thirty-four years) was 3,587, a total for the thirty-four years of	
	121,976
Total number of books lost in thirty-five years	
	130,897

The number of books in addition to the above lost and paid for, but which were not reordered by schools, was 3,579.

TEXT-BOOKS RETURNED.

The number of text-books returned from the schools as worn out during the year was as follows:

High schools	19,189
Elementary schools	69,389
Evening schools	10,013
Special schools	81
	98,672
Total number reported worn out	
The average number reported worn out each year since 1885-86 (a period of thirty-four years) was 54,738, a total for the thirty-four years of	
	1,861,099
Total number of books worn out in thirty-five years	
	1,959,771

In addition, 10,055 books were returned by principals as not being wanted.

BOOKS DESTROYED.

During the year 4,484 books were destroyed for fear of contagion.

TEXT-BOOKS GIVEN TO PUPILS.

During the year 4,977 copies of Morris's Household Science and Arts were retained by pupils completing the course in elementary schools.

TOTALS.

Since the free text-book law went into effect the schools have been supplied with 3,899,880 text-books. Of this number 1,239,758 are still in use in the schools, and the balance, 2,660,122, either have been lost or returned to the supply room as worn out or displaced.

TEXT-BOOKS CHARGED TO ELEMENTARY SCHOOLS
JANUARY 1, 1920.

Adams: Elementary Commercial Geography	4,259
Aldrich & Forbes: Progressive Course in Reading, Book I	807
" " " " " " Book II	2,067
" " " " " " Book III	2,635
" " " " " " Book IV	153
Aldrich & Forbes: Progressive Course in Reading, Book IV, Part 1	961
Aldrich & Forbes: Progressive Course in Reading, Book IV, Part 2	1,459
Aldrich & Forbes: Progressive Course in Reading, Book V	290
Aldrich & Forbes: Progressive Course in Reading, Book V, Part 1	473
Aldrich & Forbes: Progressive Course in Reading, Book V, Part 2	889
Aldrich & Foster: French Reader	290
Alexander: Spelling Book, Part I	5,095
" " " " " " Part II	9,018
Armand: Grammaire Elementaire	50
Arnold Primer	2,107
Arnold & Gilbert: Stepping Stones to Literature, First Reader	2,384
" " " " " " Second Reader,	3,477
" " " " " " Third Reader	3,665
" " " " " " Fourth Reader,	3,288
Arnold & Gilbert: Stepping Stones to Literature, Fifth Grade Reader	1,479
Arnold & Gilbert: Stepping Stones to Literature, Sixth Grade Reader	1,012
Arnold & Gilbert: Stepping Stones to Literature, Seventh Grade Reader	1,194
<i>Carried forward</i>	<hr/> 47,052

<i>Brought forward</i>	47,052
Arnold & Gilbert: Stepping Stones to Literature, Higher Grades,	1,225
Bacci & Gotti: Le Gloria della Patre	87
Bacon: New German Grammar for Beginners	33
Bailey-Manly Spelling Book, Part I	4,600
“ “ “ “ Part II	12,475
Baldwin & Bender: First Reader	362
“ “ Second Reader	506
“ “ Third Reader	898
“ “ Fourth Reader	708
“ “ Fifth Reader	839
“ “ Sixth Reader	304
“ “ Seventh Reader	448
“ “ Eighth Reader	141
Ballard: Short Stories of Oral French	79
Ballard & Stewart: Short Stories for Oral Spanish	46
Bassett: Plain Story of American History	207
Bemis: Patriotic Reader	120
Bender: The Bender Primer	510
Bennett: Master Skylark	38
Bertenshaw: Longmans' Modern French Course, Part I	375
Bierman & Frank: Conversational French Reader for Beginners	99
Blasidell: Child's Book of Health	471
“ Our Bodies and How We Live	408
“ Child Life Primer	4,322
“ Second Reader	4,688
“ Third Reader	2,017
“ Fourth Reader	2,012
Blodgett: Primer	2,252
“ First Reader	1,357
Bloomfield's: Farmer Boy, Modern Classics No. 3, etc.	45
Bolemus: Everyday English Composition	29
Boyden: First Book in Algebra	491
Brigham & McFarlane: Essentials of Geography, First Book	3,978
“ “ “ “ Second Book	5,900
Brooks: English Composition, Book I	420
Brown: The Plant Baby and its Friends	100
Browne & Haldeman: Clarendon Dictionary	9,733
Bruce: Lectures Faciles	540
Brumbaugh: Standard Fourth Reader	1,613
“ Standard Fifth Reader	957
Bryce & Spaulding: Aldine First Language Book, Part I	1,753
“ “ “ “ “ “ Complete	1,456
“ “ Aldine Second Language Book	401
Buckwalter: Easy Primer	267
“ Easy First Reader	524
“ Second Reader	1,289
“ Third Reader	1,578
<i>Carried forward</i>	119,753

<i>Brought forward</i>	119,753
Buckwalter: Fourth Reader	3,135
" Fifth Reader	1,117
Buehler & Hotchkiss: Modern English Lessons, Book I	721
Burchill, Ettinger & Shimer: Progressive Road to Reading, Book I	3,461
Burchill, Ettinger & Shimer: Progressive Road to Reading, Book II	3,027
Burchill, Ettinger & Shimer: Progressive Road to Reading, Introductory Book III	1,468
Burchill, Ettinger & Shimer: Progressive Road to Reading, Book III	1,552
Burchill, Ettinger & Shimer: Progressive Road to Reading, Introductory Book IV	457
Burchill, Ettinger & Shimer: Progressive Road to Reading, Book IV	591
Burns' Poems	90
Capus: Pour Charmer Nos Petits	270
Carroll & Brooks: Brooks Primer	351
" " First Reader	853
Chancellor: Reading and Language Lessons	18
Channing: Elements of United States History	55
" Short History of the United States	1,195
Chapuzet & Daniels: Mes Premiers Pas en Français	1,817
Chardenal: The New Chardenal	442
Claude: Twilight Thoughts	444
Coe: School Reader, Third Grade	1,171
" " " Fourth Grade	1,529
Coë & Christie: Story Hour Reader III	136
Cole: Graded Arithmetic, Book III	1,050
" " " Book IV	719
" " " Book V	361
" " " Book VI	436
" " " Book VII	406
Congdon: Music Primer, No. 1	1,456
" " " No. 2	333
Conn: Introductory Physiology and Hygiene	7,010
" Elementary Physiology and Hygiene	6,954
Cooley: Elements of Natural Philosophy	143
Cooper: The Spy	90
Culler: First Book in Physics	2,368
Cunningham: First Book for Non-English Speaking People	359
Cyr: Primer	5,857
" First Reader	4,900
" Second Reader	5,543
" Third Reader	3,682
" Fourth Reader	4,420
" Fifth Reader	2,126
<i>Carried forward</i>	191,866

<i>Brought forward</i>	191,866
Daly: Advanced Rational Speller	1,162
Davis: Seulette	3,254
Davison & Surette: Book of Words	14,307
DeMonvert: La Belle France	278
DeSegur: Les Malheurs de Sophie	93
D'Ooge: Latin for Beginners	57
Dowling: Reading, Writing and Speaking Spanish for Beginners	750
Driggs: Live Language Lessons, Third Book	686
Dryer: Elementary Economic Geography	345
Dunn: The Community and the Citizen	384
Dunton & Kelley: Graded Course in English, First Book	1,052
" " Graded Course in English, Language Lessons,	1,042
Dunton & Kelley: Inductive Course in English, Language Lessons	937
Durrell & Hall: Arithmetic, Book I	320
" " " Book II	330
" " " Book III	191
Edson-Laing: Reader I	75
" Reader II	398
" Reader III	499
" Reader IV	291
" Reader V	170
Elson: Elson Primary School Reader, Book I	691
" " " " " Book II	1,099
" " " " " Book III	1,270
" " " " " Book IV	966
Elson & Keck: Elson Grammar School Reader, Book I	587
" " " " " " Book II	762
" " " " " " Book III	1,689
" " " " " " Book IV	1,715
Elson & Runkel: Primer	391
Enekel: New Dictionary of the English and Italian Languages	95
Espinosa: Elementary Spanish Reader	209
Evans & Marsh: First Year Mathematics	697
Fall: Science for Beginners	50
Fassett: The Beacon Primer	2,461
" " " First Reader	1,558
" " " Second Reader	1,273
" " " Third Reader	749
Finch Primer	1,109
Fiske: History of United States for Schools	607
Foster: Geschichten und Marchen	210
Franklin Arithmetics	336
Franklin Readers	619
Frye: Leading Facts in Geography, Book I	1,364
" " " " Book II	853
Funk & Wagnalls: Comprehensive Standard Dictionary	2,237

Carried forward 242,084

<i>Brought forward</i>	242,084
Funk & Wagnall's: Concise Standard Dictionary	3,763
Gifford: Elementary Lessons in Physics	492
" Progressive Mental Arithmetic, Book I	3,928
" " " " Book II	3,147
Gilbert & Harris: Guide Book to English, Book I	1,330
Gordy: Elementary History of the United States	1,985
" History of the United States for Schools	1,774
Griffith: Essentials of Woodworking	38
Gronow: Jung Deutschland	1
Guerber: Contes et Légendes, Part I	943
" Märchen und Erzählungen, Part I	192
" Märchen und Erzählungen, Vol. 1, New Edition	45
Hale: Man Without a Country and Other Stories	55
Hall: All Spanish Method, First Book	168
Hall & Brumbaugh: Standard Primer	116
Hamilton: Standard Arithmetic, Book II	63
Hanson: English Composition	1
Hapgood: School Needlework	59
Harris: German Lessons	150
Harris & Gilbert: Guide Book to English, Book I	68
Harris & Waldo: First Journeys in Numberland	440
Harrison: Elementary Spanish Reader	25
Harry: French Anecdotes	6
Hartwell, McGlenen & Skelton: Boston and Its Story	546
Hazen: Fourth Reader	1,294
Heath: Primer	1,094
" First Reader	1,103
" Second Reader	1,764
" Third Reader	1,745
" Fourth Reader	1,040
" Fifth Reader	804
Hervey & Hix: Horace Mann Primer	151
" " " " Reader I	421
" " " " " II	87
" " " " " III	483
" " " " " IV	113
Hicks: Champion Spelling Book, Part I	235
" " " " Part II	691
" " " " Complete	85
Higgins: Lessons in Physics	1,742
Higginson: Young Folks' History of the United States	109
Hills & Ford: First Spanish Course	206
Hitchcock: New Practice Book in English Composition	1,307
Holmes & Gallagher: Composition and Rhetoric	145
How to Run a Lathe	135
Howe: Primer	931
" First Reader	663
<i>Carried forward</i>	277,776

<i>Brought forward</i>	277,776
Howe: Second Reader	1,367
“ Third Reader	1,481
“ Fourth Reader	2,467
“ Fifth Reader	2,605
“ Reader, Book VI	701
“ “ Book VII	1,015
“ “ Book VIII	734
Hoyt & Peet: Everyday Arithmetic, Book I	280
“ “ “ “ Book II	707
“ “ “ “ Book III	403
“ “ First Year in Number	388
Huebsch & Smith: Progressive Lessons in German	93
Hunt: Geometry	105
“ Simple Problems in Industrial Arithmetic	39
James & Sanford: Our Government, Local, State and National	3,607
Jones: First Reader	1,879
“ Second Reader	2,934
“ Third Reader	3,481
“ Fourth Reader	3,332
“ Fifth Reader	1,939
“ The Child's Own Spelling Book	98
Joynes: French Fairy Tales	93
Judson & Bender: Graded Literature Readers, First Book	170
“ “ “ “ “ Second Book	206
“ “ “ “ “ Third Book	472
“ “ “ “ “ Fourth Book	429
“ “ “ “ “ Fifth Book	40
Kelley & Morse: Natural Speller, Book I	1,591
“ “ “ “ Book II	450
King: Elementary Geography	5,933
“ Advanced Geography	5,055
Kittredge: Practical Homemaking	30
Krohn: First Book in Physiology and Hygiene	3,509
“ Graded Lessons in Physiology and Hygiene	4,334
Lewis: Lippincott Primer	259
“ “ First Reader	294
“ “ Second Reader	584
Lincoln: Boston School Kitchen Text-book	25
Lister: Writing Lessons for Primary Grades	36,644
Lohmeyer: Der Geissbub von Engelberg	30
Macaulay: Lays and Ballads	107
“ Lays of Ancient Rome	164
MacDemott: Lectura Natural de Heath, Libro Primero	330
“ “ “ “ “ Segundo	36
McLaughlin & Gilchrist: New Educational First Music Reader	10,459
McLaughlin & Gilchrist: New Educational Second Music Reader	4,674
<i>Carried forward</i>	383,349

<i>Brought forward</i>	383,349
McLaughlin & Gilchrist: New Educational Third Music Reader	4,118
McLaughlin & Gilchrist: New Educational Fourth Music Reader	3,752
McLaughlin & Gilchrist: New Educational Fifth Music Reader	3,030
McLaughlin & Van Tyne: History of the United States	596
" " History of United States for Schools, Vol. I	224
" " History of United States for Schools, Vol. II	70
McMaster: Brief History of the United States	627
Mace: School History of the United States	23
Mairet: La Tache du Petit Pierre	45
Marshall: Business Speller and Technical Word Book	50
Mason & Veazie: National Fourth Music Reader	225
Masterpieces of American Literature	6,231
Meras: Le Petit Vocabulaire	40
" Le Premier Livre	1,240
Meras & Roth: Petits Contes de France	80
Meras & Roth: Pequeno Vocabulario	284
Meservey: Bookkeeping, Single Entry	71
Metcalf: English Grammar	872
" Language Exercises	93
Metcalf & Bright: Language Lessons, Part I	1,040
" " " " Part II	763
Metcalf & Rafter: Language Series, Book I	23,871
" " " " Book II	19,258
Mickens & Robinson: Mother Goose Reader	799
Miller: Practical English Composition, Book I	1
Miller & Meras: Ein Wortschatz	93
Mims: The Van Dyke Book	142
Mitchell: Public School Class Method for Violin, Book I	217
" " " " " Book II	226
Monroe: New Fourth Reader	1,271
Montgomery: Elementary American History	5,871
" Leading Facts of American History	8,745
Moore: Second Book for Non-English Speaking People	265
Morey: Elementary Arithmetic, Part I	62
" " " Part II	61
" " " Part III	50
" Advanced Arithmetic, Part I	99
" " " Part II	35
" " " Part III	247
" Outlines of Greek History	400
Morris: Household Science and Arts	16,230
Moulton: Short Stories	381
<i>Carried forward</i>	485,147

<i>Brought forward</i>	485,147
Mowry: Elements of Civil Government	325
Murray Wide Awake Junior	382
“ “ “ Primer	4,111
“ “ “ First Reader	3,434
“ “ “ Second Reader	4,058
“ “ “ Third Reader	2,842
“ “ “ Fourth Reader	1,743
Myers: Ancient History, Rev. Ed.	515
“ Arithmetic, Book I	106
“ “ Book II	486
“ “ Book III	333
Nichols: New Graded Lessons in Arithmetic, Book III	4,138
“ “ “ “ “ Book IV	5,287
“ “ “ “ “ Book V	4,087
“ “ “ “ “ Book VI	3,618
“ “ “ “ “ Book VII	2,819
“ “ “ “ “ Book VIII	2,369
Noyes & Guild: Sunshine Primer	238
Palmer Method of Business Writing	70,548
Palmer Method of Business Writing: Business and High School Edition	7,456
Patton: Causeries en France	100
Pearson: Essentials of Latin for Beginners	159
Pelo & Gardner: Sanborn Speller, Part I	86
“ “ “ “ Part II	324
“ “ “ “ Part III	145
Perkins: Beginning Latin Book	76
Pichon: Premiers Lecons de Vocabulaire et d'Elocution	111
Pichon-Sattler: Deutsches Lese und Redebuch	170
Powell: The Narrative Poems of Longfellow	258
Redway & Hinman: Natural Introductory Geography	2,207
“ “ “ School Geography	2,301
Reinsch: Civil Government	249
Rhodes: Old Testament Narratives	45
Ripley & Tapper: Natural Music Readers, old edition	357
“ “ “ Harmonic Primer	6,193
“ “ “ “ First Music Reader	3,534
“ “ “ “ Second Music Reader	3,188
“ “ “ “ Third Music Reader	3,407
“ “ “ “ Fourth Music Reader	2,916
“ “ “ “ Fifth Music Reader	1,512
Ritchie: Fabulae Faciles	93
“ Primer of Sanitation	1,378
Ritchie & Caldwell: Primer of Hygiene	3,279
“ “ “ “ Physiology	345
Robbins: Dressel & Graff: New Barnes Readers, Book I	205
Scott & Denny: Elementary Composition	51

Carried forward 636,731

<i>Brought forward</i>	636,731
Scott & Southworth: Lessons in English, Book I	4,407
Sensenig-Anderson: Introductory Arithmetic	353
" " Essentials of Arithmetic	938
Shakespeare: As You Like It	40
" Midsummer Night's Dream	400
" Tempest	258
Sheldon-Barnes: American History	423
Snow & Lebon: Easy French	201
Solano: Class-Room Spanish	427
Southworth & Paine: Bugle Calls of Liberty	152
Southworth & Stone: Exercise Book in Arithmetic	473
Spaulding & Bryce: Aldine Primer	3,775
" " " First Reader	3,848
" " " Second Reader	3,083
" " " Third Reader	2,652
" " " Fourth Grade Reader	1,308
" " " Fifth Grade Reader	609
" " " Sixth Grade Reader	373
" " " Seventh Grade Reader	378
Spink: French Plays for Children	175
Stone: History of England	93
Stone-Millis: Arithmetic, Primary Book	4,849
Stone-Millis: Arithmetic, Intermediate Book	6,840
" " " Advanced Book	6,138
Stowell: Healthy Body	613
Summers: Primer	166
" First Reader	178
" Second Reader	537
Swinton: Language Lessons	45
Talbot: Le Français et sa Patrie	173
Tappan: Our Country's Story	2,069
Tarbell: Introductory Geography	2,125
" Complete Geography	984
Tarr & McMurry: Geography, Book I, Part 1	415
" " " Book I, Part 2	501
" " " Book I, Complete	8,499
" " " Book II, Part 1	2,111
" " " Book II, Part 2	1,326
" " " Book II, Complete	12,122
" " Geographies, old edition	105
Thwaites & Kendall: History of the United States for Grammar Schools	435
Tuell & Fowler: First Book in Latin	74
Tufts: Cecilian Series of Study and Song, Book III	1,510
" " " " " Book IV	1,058
Tufts: Cecilian Series of Study and Song, Books III and IV, combined	736
<i>Carried forward</i>	714,706

<i>Brought forward</i>	714,706
Tufts & Holt: New Normal First Music Reader	7,375
“ “ “ “ Second Music Reader, Part 1	877
“ “ “ “ “ “ “ Part 2	339
“ “ “ “ “ “ “ Complete	3,173
“ “ “ “ Third Music Reader, Part 1	2,903
“ “ “ “ “ “ “ Part 2	697
“ “ “ “ “ “ “ Complete	1,218
Van Sickle, Seegmiller & Jenkins: Riverside Primer	227
“ “ “ Riverside First Reader	199
“ “ “ Riverside Second Reader	1,088
“ “ “ Riverside Third Reader	707
“ “ “ Riverside Fourth Reader	550
“ “ “ Riverside Fifth Reader	531
“ “ “ Riverside Sixth Reader	1,668
Van Tuyl: Essentials of Business Arithmetic	800
Varney: Robin Reader	2,271
Vosburgh & Gentleman: Junior High School Mathematics, First Course	4,206
Vosburgh & Gentleman: Junior High School Mathematics, Second Course	2,425
Wallach: First Book in English for Foreigners	482
“ Second Book in English for Foreigners	27
Walsh & Suzzallo: Arithmetic, Book II	133
Walsh & Suzzallo: Arithmetic, Book III	286
Walton & Holmes: Arithmetic, Book I	5,649
“ “ “ Book II	10,178
“ “ “ Book III	10,505
“ “ “ Book IV	4,852
Ward: Sentence and Theme	254
Webster: Academic Dictionary	2,445
“ Elementary School Dictionary	1,035
“ Shorter School Dictionary	553
Wentworth & Smith: Arithmetic, Book I	281
“ “ “ Book II	1,232
“ “ “ Book III	923
“ “ Essentials of Arithmetic, Primary Book	50
Wentworth & Smith: Essentials of Arithmetic, Intermediate Book	80
Wentworth & Smith: Essentials of Arithmetic, Advanced Book	11
Werner: Primer	264
Williams & Fisher: Elements of the Theory and Practice of Cookery	19
Woodburn & Moran: Elementary American History and Government	4,716
Woodburn & Moran: Introduction to American History	1,538
Worcester: New Primary Dictionary	3,426
“ Comprehensive Dictionary	18,906
<i>Carried forward</i>	813,805

<i>Brought forward</i>	813,805
Worcester: New Pronouncing Speller	284
“ New School Dictionary of the English Language	334
Young & Jackson: Appleton Arithmetic, Primary	812
“ “ “ “ Second Book	1,024
“ “ “ “ Third Book	851
Miscellaneous books in Hyde Park schools	3,763
Total	<u>820,873</u>

SUMMARY TEXT-BOOKS CHARGED TO SCHOOLS
JANUARY 1, 1920.

Normal, Latin and high schools	357,759 .
Elementary schools	820,873
Boston Clerical School	1,647
Horace Mann School	1,679
Trade School for Girls	436
Boston Trade School	2,185
Continuation schools	624
Day School for Immigrants	648
Classes for Conservation of Eyesight	380
Speech Improvement classes	890
Boston Disciplinary Day School	418
Evening schools	32,219
Total	<u>1,219,758</u>

This shows a net decrease of 110,218 books during the year.

**ITEMIZED APPROPRIATION ORDER WITH
DETAILED ESTIMATES FOR THE
FINANCIAL YEAR 1920-21.**

BUDGET.

APPROPRIATIONS, 1920-21.

OFFICE OF THE BUSINESS AGENT OF THE SCHOOL COMMITTEE,
ROOM 801, CITY HALL ANNEX, May 3, 1920.

To the School Committee:

In compliance with paragraph 2 of section 99 of the rules, I submit herewith the estimates and itemized appropriation order to cover the expenses of the public schools for the financial year February 1, 1920, to January 31, 1921, both included.

These estimates show the cost of maintenance of the public schools on the basis existing December 1, 1919, and the costs of any provisions for growth or expansion of any kind are set forth separately.

The cost of increasing the salaries of teachers, members of the supervising staff, janitors, officers, attendance officers, and all other employees has been estimated and is also shown separately.

The average valuation of the city for the three years 1917, 1918 and 1919, with all abatements allowed up to December 31, 1919, as certified to his Honor the Mayor by the Board of Assessors, is \$1,490,343,142.57. This is the sum upon which all appropriations by the City Council and the School Committee for the financial year 1920-21 are based.

The School Committee is authorized by law to appropriate the following sums:

(a.) Five dollars and thirty-seven cents upon each one thousand dollars of the valuation of the city for general school purposes. (Chapter 206 of the Special Acts of 1919, chapter 249 of the Special Acts of 1919.)

(b.) Sixty-eight cents upon each one thousand dollars of the valuation of the city for the construction and furnishing of new school buildings, both temporary and permanent, including the taking of land therefor, and for school yards and the preparing of school yards for use, and for the rent of hired school accommodations. (Chapter 206 of the Special Acts of 1919.)

(c.) Thirty-five cents upon each one thousand dollars of the valuation of the city for the alteration and repair of school buildings, and for furniture, fixtures, and means of escape in case of fire, and for fire protection for existing buildings, and for improving existing school yards. (Chapter 206 of the Special Acts of 1919.)

(d.) Ten cents upon each one thousand dollars of the valuation of the city for organizing and conducting physical training and exercises, athletics, sports, games and play, and for providing apparatus, equipment and facilities for the same in buildings, yards and playgrounds under the control of the School Committee, or upon any other land which the committee may have the right to use for this purpose, under the provisions of chapter 295 of the Acts of 1907. (Chapter 206 of the Special Acts of 1919, chapter 249 of the Special Acts of 1919.)

(e.) Eight cents upon each one thousand dollars of the valuation of the city for the employment of one supervising female nurse and so many district female nurses, as, in the opinion of said committee, are necessary in accordance with the provisions of chapter 357 of the Acts of 1907, and for the employment of such number of school physicians, as, in the opinion of the School Committee, may be necessary, and for the care of teeth of school children. (Chapter 206 of the Special Acts of 1919, chapter 249 of the Special Acts of 1919.)

(f.) Two cents upon each one thousand dollars of the valuation of the city for the purpose of conducting educational and recreative activities in or upon school property under the control of the School Committee, and the use thereof by individuals and associations in accordance with the provisions of chapter 195 of the Acts of 1912 and chapter 86 of the Special Acts of 1916. (Chapter 206 of the Special Act of 1919.)

(g.) Seven cents upon each one thousand dollars of the valuation of the city for the payment of pensions to members of the teaching or supervising staff of the public schools of the city, and to persons who were annuitants of the Boston Teachers' Retirement Fund at the time when chapter 589 of the Acts of 1908 took effect, and other teachers who had retired prior to said time, in accordance with the provisions of said chapter 589, chapter 537 of the Acts of 1909, chapter 617 of the Acts of 1910, chapter 569 of the Acts of 1912, and acts in amendment thereof, and of the provisions of chapter 206 of the Special Acts of 1919. (Chapter 206 of the Special Acts of 1919.)

(h.) Two cents upon each one thousand dollars of the valuation of the city for promoting the Americanization and better training for citizenship of foreign-born persons. (Chapter 206 of the Special Acts of 1919.)

(i.) Two cents upon each one thousand dollars of the valuation of the city for vocational guidance. (Chapter 206 of the Special Acts of 1919.)

(j.) The unexpended balance for the financial year 1919-20.

(k.) The excess of income, if any, for the financial year 1919-20 over that estimated.

(l.) The estimated income for the financial year 1920-21.

(m.) Estimated allotment, Smith-Hughes Fund, 1920-21.

TOTAL MONEY AVAILABLE.

Exclusive of the money available for new school buildings, lands, yards and furnishings, viz., sixty-eight cents on each one thousand dollars of the valuation and amounting to \$1,013,433.34, the sums available for the financial year 1920-21 are as follows:

\$5.37 per \$1,000 for general purposes	\$8,003,142 68
.35 per \$1,000 for repairs and alterations to school buildings	521,620 10
.10 per \$1,000 for physical education	149,034 31
.08 per \$1,000 for school physicians and nurses	119,227 45
.02 per \$1,000 for extended use of the public schools	29,806 86
.07 per \$1,000 for pensions to teachers	104,324 02
.02 per \$1,000 for promoting Americanization	29,806 86
.02 per \$1,000 for vocational guidance	29,806 86
<i>Carried forward</i>	\$8,986,769 14

<i>Brought forward</i>	\$8,986,769 14
Unexpended balance general appropriation 1919-20	103,233 53
Unexpended balance appropriation Schoolhouse Department, 1919-20	13,934 01
Excess of income over amount estimated	18,019 18
Estimated income 1920-21	216,100 00
Smith-Hughes Fund (estimated allotment)	29,000 00
Total amount available	<u>\$9,367,055 86</u>

INCREASES IN SALARIES OF INSTRUCTORS.

The increases in salaries of instructors for the past ten years have been as follows:

1910-11 over 1909-10	\$136,039 34
1911-12 over 1910-11	99,206 87
1912-13 over 1911-12	321,488 72
1913-14 over 1912-13	278,135 70
1914-15 over 1913-14	182,608 65
1915-16 over 1914-15	201,297 13
1916-17 over 1915-16	78,656 15
1917-18 over 1916-17	84,146 20
1918-19 over 1917-18	149,121 62
1919-20 over 1918-19	645,818 56
Total increase in ten years	<u>\$2,176,518 94</u>

The estimated increase in the salaries of instructors for the current year over than of 1919-20 is \$1,582,782.51.

On April 5, 1920, the School Committee passed an order appropriating certain sums on account. The balance of the amounts as set forth in the following estimates should therefore be appropriated, and I recommend the passage of the accompanying order which carries this intention into effect.

WILLIAM T. KEOUGH,
Business Agent.

ESTIMATES FOR FINANCIAL YEAR 1920-21.

SALARIES OF INSTRUCTORS.

Normal School.

Normal School	\$39,082 00
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Latin and High Schools.

Public Latin	\$87,094 67
Girls' Latin	54,031 19
Brighton High	41,880 72
Charlestown High	39,314 26
Dorchester High	135,841 02
East Boston High	51,768 86
English High	173,878 40
Girls' High	115,499 42
High School of Commerce	119,866 40
High School of Practical Arts	56,633 85
Hyde Park High	48,329 07
Mechanic Arts High	139,685 87
Roxbury High	68,087 58
South Boston High	62,105 33
West Roxbury High	58,839 25
Laboratory assistance, English High	600 00
Laboratory assistance, Girls' High	500 00
Temporary teachers	9,740 00
Estimated allowance for growth in number of pupils	1,550 00
Estimated cost of promotions	216 00
1 assistant instructor of salesmanship, to fill vacancy, from April 1	801 00
Salary adjustments	32 00
	<hr/>
	\$1,266,294 89
Reduction in estimates	10,000 00
	<hr/>
	\$1,256,294 89

Elementary School Districts (Including Kindergarten Teachers).

Abraham Lincoln	\$66,952 85
Agassiz	31,603 46
Bennett	54,957 87
Bigelow	40,150 34
Blackinton-John Cheverus	54,443 26
Bowditch	39,577 60
Bowdoin	33,621 94

Bunker Hill	\$28,776 40
Chapman	43,497 39
Charles Sumner	42,810 25
Christopher Gibson	37,408 26
Dearborn	67,330 75
Dillaway	45,649 38
Dudley	44,872 61
Dwight	30,309 13
Edmund P. Tileston	34,449 73
Edward Everett	57,319 46
Elihu Greenwood	47,299 97
Eliot	85,663 23
Emerson	50,415 06
Everett	26,774 13
Francis Parkman	23,453 41
Franklin	38,701 87
Frederic W. Lincoln	31,439 19
Gaston	37,505 59
George Putnam	47,368 44
Gilbert Stuart	34,486 79
Hancock	84,214 79
Harvard-Frothingham	48,288 19
Henry Grew	25,928 27
Henry L. Pierce	60,037 88
Hugh O'Brien	51,035 32
Hyde	34,050 13
Jefferson	51,202 19
John A. Andrew	30,862 53
John Marshall	43,114 28
John Winthrop	57,813 74
Julia Ward Howe	33,771 25
Lawrence	30,327 85
Lewis	47,521 87
Longfellow	45,150 66
Lowell	42,376 08
Martin	33,128 53
Mary Hemenway	69,316 91
Mather	82,203 24
Minot	21,275 54
Norcross	38,409 63
Oliver Hazard Perry	28,731 99
Oliver Wendell Holmes	41,545 21
Phillips Brooks	55,608 16
Prescott	26,589 19
Prince	35,145 34
Quincy	48,543 47
Rice	33,034 65
Robert G. Shaw	45,342 18
Roger Wolcott	94,012 02
Samuel Adams	75,969 84

Sherwin	\$45,008 46	
Shurtleff	29,166 28	
Theodore Lyman	51,241 30	
Thomas Gardner	51,398 91	
Thomas N. Hart	44,094 94	
Ulysses S. Grant	50,026 19	
Warren	39,196 29	
Washington	60,971 73	
Washington Allston	42,706 94	
Wells	66,691 32	
Wendell Phillips	57,374 60	
William E. Endicott	56,596 09	
William E. Russell	37,083 60	
William Lloyd Garrison	30,431 07	
Allowance for special and emergency assistants	109,347 33	
Assignment of Marie A. Solano to supervision of language work in intermediate classes	600 00	
50 assistants (vacancies)	34,800 00	
11 assistants (kindergarten) vacancies	6,336 00	
Pupil clerical assistance	3,500 00	
Estimated allowance for growth in number of pupils	4,680 00	
Estimated cost of promotions	156 00	
Pupil clerical assistance, 32 additional periods per week, from September 1	230 00	
7 additional instructors of special classes, from September 1	2,044 00	
2 additional assistants, from September 1	464 00	
5 additional assistants, kindergarten, from September 1	960 00	
Assignments of teachers, Conservation of Eyesight Classes	225 00	
Salary adjustments, Conservation of Eyesight Classes	124 00	
	<hr/>	
	\$3,416,843 34	
Reduction in estimates	42,892 24	
	<hr/>	
		\$3,373,951 10

Horace Mann School.

Principal and teachers		21,592 33
<i>Trade School for Girls. (Day, Evening and Summer Classes.)</i>		
Master, teachers and clerks	\$54,378 70	
3 Emergency Trade Assistants	360 00	
1 Student Aid	300 00	
	<hr/>	
	\$55,038 70	
Reduction	676 00	
	<hr/>	
		54,362 70

Boston Trade School.

Master, teachers and clerks, day school (existing force)	\$36,750 98	
1 Toolkeeper	514 25	
3 Apprentice Helpers	2,244 00	
1 Emergency Instructor in Shop Work	1,496 00	
2 Emergency Shop Foremen	3,740 00	
4 Emergency Instructors in Academic and Technical Branches	3,029 40	
1 Division Head and 2 Shop Foremen, from May 1	3,570 00	
2 Shop Foremen, 1 Shop Instructor, and 4 Instructors in Academic and Technical Branches, from May 1	1,914 73	
3 Shop Foremen, 1 Shop Instructor, and 2 Instructors in Academic and Technical Branches, from September 1	1,320 00	
Salary adjustments	8 00	
	<hr/>	\$54,587 36

Boston Clerical School.

Head-master and teachers	\$14,635 33	
Temporary teachers	2,100 00	
1 additional Clerical Instructor, from September 1	528 00	
	<hr/>	17,263 33

Boston Disciplinary Day School.

Teachers' salaries		2,913 60
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Department of Manual Arts.

Director	\$3,540 00
First Assistant Director	2,852 33
3 Assistant Directors	6,968 00
2 First Assistants	3,741 60
7 Assistants	12,211 20
6 Shop Foremen	10,505 48
5 Foremen, Shop Work	8,624 27
11 Instructors in Manual Training	18,314 13
39 Assistant Instructors in Manual Training	54,635 86
14 Shop Instructors	19,511 46
6 Instructors, Shop Work	9,216 00
1 Prevocational Assistant, assigned	1,572 00
1 Assistant, Elementary Schools, assigned	1,368 00
1 Instructor in Manual Training, nine-tenths time	1,382 40
1 Assistant Instructor in Manual Training, one-half time	714 00
1 Temporary Shop Assistant	748 00

Instructors in Gardening, Supervisors of Gardening, and Assistant Supervisors of Gardening	\$5,500 00	
3 Vocational Art Instructors (Art Museum) on part time, and 1 Monitor on full time,	1,300 00	
5 Shop Instructors, from January 1	6,300 00	
2 Shop Instructors, from September 1	942 67	
1 additional Foreman, Shop Work, from September 1	489 33	
1 additional Assistant, from September 1	436 00	
Salary adjustments	144 00	
		\$171,016 73

Department of Household Science and Arts.

Director	\$2,820 00	
Assistant Director	1,692 00	
42 Teachers of Cookery	51,339 20	
62 Teachers of Sewing	73,610 01	
Temporary Teachers, Cookery	204 00	
Temporary Teachers, Sewing	204 00	
2 additional Teachers of Cookery, from September 1	464 00	
3 additional Teachers of Sewing, from September 1	696 00	
		131,029 21

Department of Music.

Director	\$3,540 00	
3 Assistant Directors	8,076 00	
1 Assistant Director (vacancy)	2,052 00	
9 Assistants	13,458 13	
Assignments of assistants, elementary schools, to violin instruction	250 00	
		27,376 13

Speech Improvement Classes.

Teachers' salaries	\$11,653 33	
Assignment of two additional teachers on fifth year, from April 1	1,620 00	
		13,273 33

Continuation School.

Teachers' salaries	\$95,633 55	
Temporary teachers now in service	7,317 00	
2 Assistants to fill vacancies, from September 1	104 00	
1 Trade Assistant to fill vacancy, from September 1	80 00	
Estimated cost of promotions	384 00	
		\$103,518 55
Reduction	76 00	
		103,442 55

Department of Evening Schools.

Director	\$3,697 00	
Supervisor of Division C Classes	266 00	
	<hr/>	\$3,963 00

Evening High Schools.

Salaries of principals, teachers and clerical assistants, existing schools		40,011 72
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Evening Elementary Schools.

Salaries of principals, teachers and clerical assistants, existing schools		21,325 60
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Boston Trade School, Evening Classes.

Salaries of teachers and clerks	\$6,531 44	
4 additional instructors, 72 evenings	1,044 00	
	<hr/>	7,575 44

Day School for Immigrants.

Salaries of teachers	\$3,440 00	
Special Assistants now employed	7,150 00	
Additional special assistants	3,483 33	
	<hr/>	14,073 33

SUMMER REVIEW SCHOOLS.

High Review School.

Salaries of principal and teachers	\$3,160 00	
2 additional teachers, 41 days at \$4	328 00	
	<hr/>	3,488 00

Elementary Review Schools.

Principals and teachers	\$16,820 00	
Reduction	1,435 00	
	<hr/>	15,385 00

Department of Practice and Training.

First Assistant Director	\$2,257 67	
4 Assistant Directors	7,950 66	
2 Primary Supervisors, from September 1	1,666 67	
	<hr/>	11,875 00

Director of Kindergartens.

Director	\$2,740 00	
Assistant Director	1,692 00	
	<hr/>	4,432 00

Director of Special Classes.

Director		2,260 00
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Department of Salesmanship.

Director		2,100 00
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Director of Penmanship.

Director	\$2,004 00	
Salary adjustment	352 00	
	<hr/>	\$2,356 00

Vocational Guidance.

Director	\$2,292 00	
4 Vocational Assistants	6,144 00	
1 Temporary Vocational Assistant	1,090 00	
1 Assistant to fill vacancy, from May 1	292 00	
2 additional Assistants, from September 1	1,008 00	
	<hr/>	
	\$10,826 00	
Reduction	363 00	
	<hr/>	10,463 00

Chief Examiner.

Chief Examiner		3,510 40
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Department of Educational Investigation and Measurement.

Assistant Director of Educational Investigation and Measurement	\$2,700 00	
Temporary Examiner in Penmanship	935 00	
Salary of an elementary assistant assigned	1,374 93	
Study of intermediate program	—	
Supervision of testing, summer work	—	
Salary adjustment	265 00	
	<hr/>	5,274 93
		<hr/>
		\$5,414,278 68

Estimated cost of increasing salaries of teachers and members of the supervising staff		1,346,264 67
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Total, salaries of instructors		<u>\$6,760,543 35</u>
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SALARIES OF OFFICERS.

Officers, Clerks, Assistants and Stenographers.

Superintendent	\$10,000 00
Assistants (30) to the Superintendent	28,572 00
Assistant Superintendents (5)	27,480 00
Secretary	4,740 00
Assistant Secretary	2,700 00
Assistants (7) to the Secretary	7,908 00
Business Agent	4,740 00
Chief Accountant (1), assistants (22), and chauffeurs (2) to the Business Agent	34,392 00
Schoolhouse Custodian	3,000 00
Clerk to Schoolhouse Custodian	1,116 00
City Treasurer, Custodian of the Retirement Fund	1,500 00
Telephone operator	720 00
Substitute telephone operator	300 00

Allowances for temporary assistance and increases:	
Superintendent, temporary assistance	\$1,600 00
Superintendent, proposed increase in number of assistants, two from May 1 and one from September 1	1,162 00
Secretary, temporary assistance	530 00
Secretary, proposed increase in number of assistants, one from March 1	589 00
Business Agent, temporary assistance	1,200 00
Business Agent, proposed increase in number of assistants, one from January 1	696 00
Schoolhouse Custodian, temporary assistance	60 00
	<hr/>
	\$133,005 00
Reduction	696 00
	<hr/>
Officers, clerks, assistants and stenographers	\$132,309 00
<i>Attendance Officers.</i>	
1 Chief Attendance Officer	\$2,880 00
24 Attendance Officers	39,278 10
Salary adjustments	160 80
	<hr/>
	42,318 90
<i>Supervisor of Licensed Minors.</i>	
Supervisor	1,944 00
<i>Newsboys' Trial Board.</i>	
Salaries, Judges	\$78 00
Salary, Clerk	26 00
	<hr/>
	104 00
	<hr/>
	\$176,675 90
Estimated cost of increasing salaries of officers, attendance officers, clerks, and all others	30,197 00
	<hr/>
Total, salaries of officers	<u>\$206,872 90</u>

SALARIES OF JANITORS.

Normal Group:	
Janitor	\$7,840 04
Matron	643 76
	<hr/>
	\$8,483 80
Latin and High Schools:	
English High and Public Latin	6,153 16
Brighton High	3,073 20
Charlestown High	2,974 40
Dorchester High:	
Janitor	\$5,892 12
Additional compensation	600 00
Matrons (2)	1,287 52
2 Portables	202 80
	<hr/>
	7,982 44

East Boston High	\$2,969 72	
Girls' High:		
Janitor	\$4,958 20	
Matron	643 76	
	<hr/>	5,601 96
High School of Commerce		5,006 04
High School of Practical Arts:		
Janitor	\$4,704 44	
Matron	643 76	
	<hr/>	5,348 20
Hyde Park High		2,753 40
Mechanic Arts High		7,036 64
Roxbury High		4,015 96
South Boston High:		
Janitor	\$4,014 92	
Matron	643 76	
	<hr/>	4,658 68
West Roxbury High:		
Janitor	\$3,371 16	
Matron	643 76	
2 Portables	202 80	
	<hr/>	4,217 72
Normal, Latin and High Schools		<u>\$70,275 32</u>
Normal, Latin and High Schools, as above		\$70,275 32
236 Elementary School Buildings:		
Janitors	\$299,978 64	
Matrons (4)	2,575 04	
153 Portables	15,779 40	
	<hr/>	318,333 08
Hired Accommodations:		
Barnard Memorial	\$300 00	
Lincoln House	100 00	
	<hr/>	400 00
Special Schools:		
Horace Mann School:		
Janitor	\$1,127 36	
Matron	643 76	
	<hr/>	1,771 12
Trade School for Girls		2,083 12
Boston Trade School		5,264 48
Continuation School:		
25 LaGrange street	\$1,205 88	
Brimmer Building	1,783 08	
278B Tremont street	187 20	
2 Portables	270 40	
	<hr/>	3,446 56
Boston Disciplinary Day School		—
Evening schools, existing schools		8,000 00
Summer Review schools		1,200 00
Supply Room, Dartmouth street		507 00
218 Tremont street (employment certificates, etc.)		751 40

Mason Street Building	\$2,704 00
Order of Court (compensation to Mrs. Agnes C. White, 230th week to 281st week, inclusive)	520 00
Janitors on leave of absence	1,200 00
Janitor service, new buildings to be completed during the year	1,500 00
Temporary assistance	—
	<hr/>
	\$417,956 08
Estimated cost of increasing salaries of janitors and matrons	127,971 00
Total, salaries of janitors	<u>\$545,927 08</u>

FUEL AND LIGHT.

24,000 tons bituminous coal at \$10.64	\$255,360 00	
8,500 tons anthracite coal at \$13.70	116,450 00	
375 cords of wood at \$17.50, including saw- ing, splitting and housing	6,562 50	
100 bushels charcoal at \$0.35	35 00	
Fuel for new buildings to be completed during the year	1,550 00	
Cost of expert services, advice, sampling, testing and inspecting	1,600 00	
Cost of moving coal and wood	1,000 00	
	<hr/>	
Total for fuel		\$382,557 50
Gas	\$8,000 00	
Electric current for light	50,000 00	
Mazda lamps	250 00	
Light for new buildings to be completed during the year	379 00	
	<hr/>	
Total for light		58,629 00
Electric current for power	\$10,000 00	
Power for new buildings to be completed during the year	504 00	
	<hr/>	
Total for power		10,504 00
		<hr/>
		\$451,690 50
Credit: Amount charged to Extended Use of Public Schools, for fuel and light		7,500 00
		<hr/>
Total, fuel and light		<u>\$444,190 50</u>

SUPPLIES AND INCIDENTALS.

Normal School.

237 pupils at \$6.60	\$1,564 20
Drawing supplies	150 00
Manual Training supplies	50 00
	<hr/>
Total for Normal School	\$1,764 20
(Total allowance per pupil, \$7.44.)	

Latin and High Schools.

16,332 pupils, as per schedule following, from \$3.86 per pupil to \$2.61 per pupil (average \$3.56)	\$58,139 52	
Mechanic Arts High, additional appropriation	200 00	
Manual training supplies (except Mechanic Arts High)	6,800 00	
Drawing supplies, art books, models, etc.	3,500 00	
Penmanship supplies and special materials	150 00	
Commercial machines and rental of type- writers (178 now on rental, 68 to be rented during 1920, to take the place of expired loans)	5,570 00	
Total for Latin and high schools		\$74,359 52
(Total allowance per pupil, \$4.55.)		

Elementary Schools.

Grades, 85,498 pupils, as per schedule follow- ing, from \$1.47 to \$0.97 per pupil (average \$1.38)	\$118,027 56	
Kindergartens, 7,709 pupils (average \$0.55)	4,239 95	
Martin School, additional appropriation	300 00	
Supplies for additional kindergartens	250 00	
Supplies for connecting the work of the kinder- garten and the primary grades	75 00	
Allowance for intermediate classes	12,727 40	
Regular manual training supplies and equip- ment	34,700 00	
Manual training supplies and equipment— gardening	3,200 00	
Drawing supplies and equipment for the grades, including vases, models, plants, charts and illustrative materials	21,150 00	
Cookery supplies and equipment	14,000 00	
Sewing supplies for pupils unable to purchase them	250 00	
Special class supplies	1,250 00	
Penmanship supplies and special materials	1,400 00	
Total for elementary schools		211,569 91
(Total allowance per pupil, \$2.27.)		

Boston Clerical School.

197 pupils at \$5	985 00
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Horace Mann School.

42 pupils at \$2.99 (exclusive of traveling expenses)	424 58
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Trade School for Girls (Day and Evening Classes).

Books, supplies and equipment, printing and postage, etc.	8,350 00
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Boston Trade School.

Books, supplies and equipment, printing and postage, etc.	\$7,250 00	
Additional appropriation for supplies and equipment	10,719 36	
	<hr/>	\$17,969 36

Boston Disciplinary Day School.

36 pupils at \$4.74		170 64
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Continuation School.

Books, supplies, printing and postage		6,500 00
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Evening Schools.

Supplies for existing schools		3,700 00
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Day School for Immigrants.

Supplies, etc.	\$250 00	
Additional appropriation for supplies, etc.	200 00	
	<hr/>	450 00

Summer Review Schools.

Supplies for High Review School	\$100 00	
Supplies for Elementary Review Schools	400 00	
Reimbursement to day schools for use of books and materials	250 00	
	<hr/>	750 00

Classes for Conservation of Eyesight.

Books, apparatus and supplies		600 00
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Speech Improvement Classes.

Books and supplies	\$500 00	
Additional appropriation for books and supplies	300 00	
	<hr/>	800 00

Music Appropriation.

Pianos, kindergarten (6)	\$1,800 00	
Pianos, halls (5)	1,500 00	
Pianos, speech improvement classes (3)	900 00	
Orchestral instruments	1,700 00	
Metronomes	—	
Repairs and regulation of pianos	—	
Piano covers, stools and stands	50 00	
Piano tuning and minor repairs	2,112 00	
Moving pianos	180 00	
	<hr/>	8,242 00

Printing, Etc.

Printing and stock for same	\$26,000 00	
Advertising	500 00	
Records, proceedings, newspapers, etc.	2,500 00	
	<hr/>	29,000 00

Janitors' Supplies.

Janitors' supplies		\$20,000 00
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School Committee.

Stationery and office supplies, printing and postage		100 00
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Superintendent.

Stationery and office supplies, printing and postage	\$1,200 00	
Additional appropriation for supplies, etc.	100 00	
	<hr/>	1,300 00

Board of Superintendents.

Stationery and office supplies, printing and postage		800 00
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Secretary.

Stationery and office supplies, printing and postage	\$1,300 00	
Additional appropriation for supplies, etc.	200 00	
	<hr/>	1,500 00

Business Agent (Including Supply Room).

Stationery, account books, office supplies, printing and postage	\$1,800 00	
Additional appropriation for supplies, etc.	200 00	
	<hr/>	2,000 00

Schoolhouse Custodian.

Stationery and office supplies, printing and postage	\$250 00	
Additional appropriation for supplies, etc.	50 00	
	<hr/>	300 00

Attendance Officers.

Stationery and office supplies, printing and postage		300 00
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Supervisor of Licensed Minors.

Stationery and office supplies, printing and postage		75 00
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Department of Manual Arts.

Books, pedagogical material, printing, postage and office supplies		1,200 00
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Department of Practice and Training.

Books, pedagogical material, printing and office supplies	\$250 00	
Additional appropriation for supplies, etc.	100 00	
	<hr/>	350 00

Department of Educational Investigation and Measurement.

Special printing and supplies for such investigations as may be approved by the School Committee during the year	\$375 00	
Supplies for testing	900 00	
Printing in connection with testing	375 00	
Supplies for examiner in penmanship	170 00	
Office supplies and incidentals	200 00	
	<hr/>	\$2,020 00

Director of Household Science and Arts.

Books, pedagogical material, printing and office supplies	200 00
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Director of Kindergartens.

Books, pedagogical material, printing and office supplies	200 00
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Director of Special Classes.

Books, pedagogical material, printing, and office supplies	\$175 00	
Additional appropriation for supplies, etc.	75 00	
	<hr/>	250 00

Director of Salesmanship.

Books, pedagogical material, printing, office supplies, etc.	200 00
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Director of Penmanship.

Books, pedagogical material, printing, office supplies, etc.	\$175 00	
Additional appropriation for supplies, etc.	75 00	
	<hr/>	250 00

Director of Music.

Books, pedagogical material, printing and office supplies	\$400 00	
Examiners of pupils, expenses	350 00	
	<hr/>	750 00

Director of Evening Schools.

Books, postage, printing and office supplies	\$300 00	
Additional appropriation for supplies, etc.	150 00	
	<hr/>	450 00

Vocational Guidance.

Supplies, printing, postage, etc.	450 00
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Advisory Committee on Music.

Material, copying of music, postage, etc.	—
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Express Charges.

Express charges	950 00
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Transportation.

(a) Railroad and other fares (except street car tickets), Horace Mann School pupils	\$1,300 00	
(b) Car tickets as authorized by the Board	11,000 00	
		<u>\$12,300 00</u>

Tuition.

(a) Wards of the city	\$12,000 00	
(b) Others (pupils attending school in the Town of Brookline and in outside industrial and agricultural schools, etc.)	13,000 00	
		<u>25,000 00</u>

Miscellaneous.

(a) Diplomas	\$2,800 00	
(b) Removing ashes and snow	2,500 00	
(c) Surety bonds	70 00	
(d) School Committee Contingent Fund	650 00	
(e) Board of Superintendents' Contingent Fund, traveling expenses of Board of Superintendents and teachers of all ranks, educational magazines, books, lectures, etc.	1,200 00	
(f) Assistance, teachers' examinations	2,000 00	
(g) School exhibits	300 00	
(h) Telephone and telegraph (exclusive of schools)	4,500 00	
(i) Bath expenses, and soap and towels for use in kindergartens, prevocational classes, etc.	1,800 00	
(j) Badges, licensed minors	350 00	
(k) Improvement and promotional courses for teachers	4,000 00	
(l) Services of certified public accountants, auditing accounts	1,500 00	
(m) Services of experts to the Business Agent	1,404 00	
(n) Traveling expenses, Business Agent	200 00	
(o) Automobile supplies, equipment, repairs, etc.	1,000 00	
(p) Sundries	1,565 00	
(q) Unassigned for special needs	20,000 00	
		<u>45,839 00</u>
Total, supplies and incidentals		<u>\$482,419 21</u>

SCHEDULE FOR SUPPLIES AND INCIDENTALS FOR LATIN AND HIGH SCHOOLS, 1920-21.

Each school shall be allowed \$3.86 for each pupil up to 400; for all pupils in excess of 400 each school is to be allowed \$3.61 per pupil up to 800; for all pupils in excess of 800 each school is to be allowed \$3.36 per pupil up to

1,200; for all pupils in excess of 1,200 each school is to be allowed \$3.11 per pupil up to 1,600; for all pupils in excess of 1,600 each school is to be allowed \$2.86 per pupil up to 2,000; and for all pupils in excess of 2,000 each school is to be allowed \$2.61 per pupil.

It should be understood that the allowance per pupil is the same in all schools up to the limit of the number of pupils.

NUMBER OF PUPILS.	Allowance per Pupil.	Total Allowance.
Up to 400.....	\$3 86	\$1,544
401 to 800.....	3 61	2,988
801 to 1,200.....	3 36	4,332
1,201 to 1,600.....	3 11	5,576
1,601 to 2,000.....	2 86	6,720
2,001 and upwards..	2 61	—

SCHEDULE FOR SUPPLIES AND INCIDENTALS FOR ELEMENTARY SCHOOLS —
GRADES, 1920-21.

Each school shall be allowed \$1.47 per pupil up to 600; for all pupils in excess of 600 each school is to be allowed \$1.37 per pupil up to 1,000; for all pupils in excess of 1,000 each school is to be allowed \$1.27 per pupil up to 1,400; for all pupils in excess of 1,400 each school is to be allowed \$1.17 per pupil up to 1,800; for all pupils in excess of 1,800 each school is to be allowed \$1.07 per pupil up to 2,200; for all pupils in excess of 2,200 each school is to be allowed \$0.97 per pupil.

It should be understood that the allowance per pupil is the same in all schools up to the limit of the number of pupils.

NUMBER OF PUPILS.	Allowance per Pupil.	Total Allowance.
Up to 600.....	\$1 47	\$882
601 to 1,000.....	1 37	1,430
1,001 to 1,400.....	1 27	1,938
1,401 to 1,800.....	1 17	2,406
1,801 to 2,200.....	1 07	2,834
2,201 and upwards.....	97	—

PHYSICAL EDUCATION.

Salaries.

Director of Physical Training	\$3,340 00
Clerk	1,080 00
Temporary clerical assistance	250 00
Instructor in Military Drill	2,334 00
3 Assistant Instructors in Military Drill	5,400 00
Armorer	1,440 00
14 Instructors, Physical Training	23,241 67
10 Assistant Instructors, Physical Training	12,493 07

12 Teacher Coaches	\$9,600 00	
12 Teacher Managers in high schools, from September 1, four months at \$15 each per month	720 00	
Employment of Play Teacher, English High School, 185 days at \$2 per day	277 50	
1 Pianist at \$1.50 per day	120 00	
1 Temporary Instructor of Drum and Bugle Corps, signaling and armorer, Latin and day high schools, at \$8 per day (185 days)	1,480 00	
Salary adjustments	296 00	
	<hr/>	\$62,072 24

Supplies and Equipment.

Office supplies, postage, printing and inci- dentals	\$750 00	
Printing new course of study for high and elementary schools	1,500 00	
Supplies, equipment and incidentals, high school athletics	4,748 54	
Military supplies and annual parade	10,575 00	
Exhibition drills	500 00	
Rifle practice for high school pupils	2,306 20	
Supplies for gymnastics, games and play; new apparatus and equipment and re- pairs on same	5,500 00	
	<hr/>	25,879 74

PLAYGROUNDS.

Salaries.

Salaries of Playground Supervisors and Teachers, existing basis	\$25,800 00	
Salaries of Playground Supervisors and Teachers, extension of playgrounds	706 83	
Salaries of Janitors	2,465 00	
	<hr/>	28,971 83

Supplies and Equipment.

New apparatus, repairs on apparatus, and supplies for games and play	10,362 00	
	<hr/>	\$127,285 81
Estimated cost of increasing salaries	21,748 50	
	<hr/>	\$149,034 31
	<hr/>	

SCHOOL PHYSICIANS AND NURSES. .

MEDICAL INSPECTION.

Salaries.

Director	\$3,000 00
Medical Inspector	2,124 00
43 School Physicians	25,800 00

1 School Physician	\$996 00	
3 School Physicians (on leave of absence)	1,800 00	
Temporary School Physicians	1,600 00	
Clerk	1,080 00	
	<hr/>	\$36,400 00

Supplies and Incidentals.

Special outfits, charts and apparatus	\$600 00	
Supplies, postage and office incidentals	700 00	
Medical supplies and incidentals	2,000 00	
Printing	1,400 00	
	<hr/>	4,700 00

NURSES.

Salaries.

1 Supervising Nurse	\$1,620 00	
45 School Nurses	47,820 33	
	<hr/>	49,440 33

Supplies and Incidentals.

Supplies	\$350 00	
Car tickets	1,000 00	
Postage, printing, office supplies and incidentals	300 00	
	<hr/>	1,650 00
		<hr/>
		\$92,190 33

Estimated cost of increasing salaries of school physicians and nurses		22,740 00
		<hr/>

Total, school physicians and nurses		<u>\$114,930 33</u>
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PENSIONS TO TEACHERS.

For pensions to retired teachers and payments to the Trustees of the Permanent Pension Fund, the amount available under chapter 589 of the Acts of 1908, chapter 617 of the Acts of 1910, chapter 304 of the Acts of 1915, and chapter 206 of the Special Acts of 1919, viz., 7 cents on each \$1,000 of the valuation of the city

		<u>\$104,324 02</u>
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PENSIONS TO ATTENDANCE OFFICERS AND JANITORS.

Pensions to 1 retired attendance officer and 12 retired janitors	\$7,387 20	
Proposed pensions to janitors now in the service	—	
	<hr/>	<u>\$7,387 20</u>

EXTENDED USE OF THE PUBLIC SCHOOLS.

Salaries, Administration.

Director	\$3,000 00	
Clerk	756 00	
	<hr/>	\$3,756 00

Supplies and Incidentals, Administration.

Office supplies	\$125 00	
Advertising, printing, tickets, etc.	100 00	
New office equipment		<hr/>
		\$225 00

Salaries, Centers and Other Activities.

Managers	\$3,656 00	
Associate managers	3,018 00	
Leaders, helpers, matrons	4,875 00	
Lectures, concerts, entertainments, patriotic meetings, etc.	1,400 00	
Salary adjustments	144 00	
		<hr/>
		13,093 00

Janitors' Salaries, Centers and Other Activities.

Centers	\$2,025 00	
Schoolhouse accommodations	825 00	
Lectures, concerts, entertainments, patriotic meetings, etc.	225 00	
		<hr/>
		3,075 00

Supplies and Equipment, Centers and Other Activities.

Supplies	\$307 86	
Equipment	1,150 00	
Supplies and incidentals for lectures, concerts, entertainments, patriotic meetings, etc.	700 00	
Estimated cost of fuel and light	7,500 00	
		<hr/>
		9,657 86

Total, extended use of the public schools \$29,806 86

Amount available under chapter 195 of the Acts of 1912 and chapter 206 of the Special Acts of 1919, viz., 2 cents on each \$1,000 of the valuation of the city \$29,806 86

REPAIRS AND ALTERATIONS.

(To be expended by the Schoolhouse Department.)

Repairs and alterations, protection against fire and fire hazard, and new furniture and furnishings for old buildings, including new lighting fixtures (35 cents per \$1,000 average valuation)		<u><u>\$521,620 10</u></u>
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ESTIMATED COST OF INCREASING SALARIES.

Teachers and Members of the Supervising Staff	\$1,346,264 67
Physical Education	21,748 50
School Physicians and Nurses	22,740 00

Janitors and Matrons	\$127,971 00
Officers, Attendance Officers, Clerks, and all others	30,197 00
	<hr/>
	\$1,548,921 17
Additional amount of money available under chapter 249 of the Special Acts of 1919	1,535,053 44
	<hr/>
Cost of increasing salaries of all employees in excess of the amount available under chapter 249 of the Special Acts of 1919	\$13,867 73
	<hr/> <hr/>

The foregoing estimates call for appropriations (which aggregate the total amount the School Committee may appropriate) as follows:

For general school purposes, including Americanization and Vocational Guidance:

Salaries of instructors	\$6,760,543 35
Salaries of officers	206,872 90
Salaries of janitors	545,927 08
Fuel and light	444,190 50
Supplies and incidentals	482,419 21
Pensions to attendance officers and janitors	7,387 20
Physical education	149,034 31
School physicians and nurses	114,930 33
Pensions to teachers	104,324 02
Extended use of the public schools	29,806 86
Repairs and alterations, protection against fire and fire hazard, and new furniture and furnishings for old build- ings, including new lighting fixtures	521,620 10
	<hr/>
	\$9,367,055 86
	<hr/> <hr/>

On April 5, 1920, the School Committee appropriated "on account" the following sums:

For general school purposes, including Americanization and Vocational Guidance:

Salaries of instructors	\$3,398,000 00
Salaries of officers	102,000 00
Salaries of janitors	272,000 00
Fuel and light	204,000 00
Supplies and incidentals	201,000 00
Pensions to attendance officers and janitors	4,000 00
Physical education	68,000 00
School physicians and nurses	58,000 00
Pensions to teachers	53,000 00
Extended use of the public schools	15,000 00
Repairs and alterations, protection against fire and fire hazard, and new furniture and furnishings for old build- ings, including new lighting fixtures	261,000 00
	<hr/>
	\$4,636,000 00
	<hr/> <hr/>

It is therefore necessary to appropriate the balances of the estimates for the above purposes, and the following order carries this intention into effect:

Ordered, That to meet the current expenses of the School Committee and to provide funds for repairs and alterations to school buildings, pensions to teachers, etc., during the financial year February 1, 1920, to January 31, 1921, the following sums are hereby appropriated for the purposes stated, in addition to those appropriated on April 5, 1920, on account:

For general school purposes, including Americanization and

Vocational Guidance:

Salaries of instructors	\$3,362,543 35
Salaries of officers	104,872 90
Salaries of janitors	273,927 08
Fuel and light	240,190 50
Supplies and incidentals	281,419 21
Pensions to attendance officers and janitors	3,387 20
Physical education	81,034 31
School physicians and nurses	56,930 33
Pensions to teachers	51,324 02
Extended use of the public schools	14,806 86
Repairs and alterations, protection against fire and fire hazard, and new furniture and furnishings for old buildings, including new lighting fixtures	260,620 10
	<u>\$4,731,055 86</u>

The foregoing orders appropriating the sum of \$9,367,055.86 were passed by the School Committee on April 5 and May 3, 1920, and were approved by his Honor the Mayor on April 9 and May 10, 1920.

TOTAL AND PER CAPITA COSTS OF SCHOOLS AND ALL OTHER ACTIVITIES.*

INCLUDING COST OF ADMINISTRATION, SUPERVISION AND GENERAL CHARGES, AND WITH INCOME DEDUCTED.

	Normal School.	Latin and High Schools.	Elementary Schools.	Speech Improvement Classes.	Boston Clerical School.	Boston Disciplinary Day School.	Horace Mann School.	Trade School for Girls.*	Boston Trade School, Day Classes.	Summer Rehabilitation Classes.	Continuation School, Voluntary.	Continuation School, Compulsory.	Day School for Immigrants.	Summer Review High School.	Summer Review Elementary Schools.	Evening High Schools.	Evening Elementary Schools.	Boston Trade School, Evening Classes.	Park Playgrounds.	Schoolyard Playgrounds.	School Centers.	Use of School Accommodations.	
Cost, with direct income deducted, and exclusive of administration, supervision and general charges.	\$47,494 70	\$1,501,220 90	\$4,353,410 57	\$13,815 47	\$17,682 27	\$2,845 93	\$29,740 80	\$31,366 25	\$29,182 30	\$8,754 22	Cr. \$443 18	\$78,641 49	\$8,059 62	\$3,386 18	\$16,207 54	\$45,511 63	\$35,884 81	\$5,738 10	\$28,343 09	\$13,285 31	\$32,444 72	\$4,248 04	Cost, with direct income deducted, and exclusive of administration, supervision and general charges.
Average membership.....	231	15,291	94,767		183	29	140		205														Average membership.
Cost per pupil, direct charges only (on average membership).....	\$205 60	\$98 18	\$45 94		\$96 62	\$98 14	\$212 43		\$110 12														Cost per pupil, direct charges only (on average membership).
Average attendance.....	223	14,227	85,833		167	19	124		242					357	3,595	2,234	1,578	283	7,949	6,257	3,827	† 50,236	Average attendance.
Cost per pupil, direct charges only (on average attendance).....	\$212 98	\$105 52	\$50 72		\$105 88	\$149 79	\$239 84		\$120 59					\$9 49	\$4 51	\$20 37	\$22 74	\$20 28	\$3 57	\$2 53	\$8 48	† \$0 085	Cost per pupil, direct charges only (on average attendance).
Number of pupil hours.....	215,042	15,115,972	70,361,852		176,660	24,999	117,390	265,701	339,782			790,488	57,604	67,120	431,400	316,776	235,114	38,970					Number of pupil hours.
Cost per pupil hour.....	\$0 220	\$0 099	\$0 057		\$0 100	\$0 113	\$0 253	\$0 117	\$0 085			\$0 098	\$0 139	\$0 059	\$0 037	\$0 143	\$0 152	\$0 147					Cost per pupil hour.
Cost per pupil per session, direct charges only (on average attendance).....																			\$0 021	\$0 033			Cost per pupil per session, direct charges only (on average attendance).
Above cost brought down.....	\$47,494 70	\$1,501,220 90	\$4,353,410 57	\$13,815 47	\$17,682 27	\$2,845 93	\$29,740 80	\$31,366 25	\$29,182 30	\$8,754 22	Cr. \$443 18	\$78,641 49	\$8,059 62	\$3,386 18	\$16,207 54	\$45,511 63	\$35,884 81	\$5,738 10	\$28,343 09	\$13,285 31	\$32,444 72	\$4,248 04	Above cost brought down.
Cost of administration, supervision and general charges.....	1,445 28	61,720 90	309,917 43	627 77	627 76	656 73	837 01	2,757 40	1,583 32		219 23	6,382 19	3,016 17	353 72	1,099 64	4,499 25	4,166 00	661 37	1,029 99	1,029 98	2,957 71	328 63	Cost of administration, supervision and general charges.
Total.....	\$48,939 98	\$1,562,941 80	\$4,663,328 00	\$14,443 24	\$18,310 03	\$3,502 66	\$30,577 81	\$34,123 65	\$30,765 62	\$8,754 22	Cr. \$223 95	\$85,024 68	\$11,075 79	\$3,739 90	\$17,306 18	\$50,010 88	\$40,050 81	\$6,399 47	\$29,373 08	\$14,315 29	\$35,402 43	\$4,576 07	Total.
Cost per pupil, total (on average membership).....	\$211 86	\$102 21	\$48 97		\$100 05	\$120 78	\$218 41		\$116 10														Cost per pupil, total (on average membership).
Cost per pupil, total (on average attendance).....	\$219 46	\$109 87	\$54 03		\$109 64	\$184 35	\$246 59		\$127 13					\$10 48	\$4 81	\$22 39	\$25 38	\$22 61	\$3 69	\$2 72	\$9 25	† \$0 091	Cost per pupil, total (on average attendance).
Cost per pupil hour, total.....	\$0 227	\$0 103	\$0 060		\$0 103	\$0 140	\$0 260	\$0 128	\$0 090			\$0 100	\$0 192	\$0 065	\$0 040	\$0 157	\$0 170	\$0 164					Cost per pupil hour, total.
Cost per pupil per session, total (on average attendance).....																			\$0 021	\$0 035			Cost per pupil per session, total (on average attendance).
Above total brought down.....	\$48,939 98	\$1,562,941 80	\$4,663,328 00	\$14,443 24	\$18,310 03	\$3,502 66	\$30,577 81	\$34,123 65	\$30,766 62	\$8,754 22	Cr. \$223 95	\$85,024 68	\$11,075 79	\$3,739 90	\$17,306 18	\$50,010 88	\$40,050 81	\$6,399 47	\$29,373 08	\$14,315 29	\$35,402 43	\$4,576 07	Above total brought down.
Number of non-resident pupils.....	7	61	25		1				17						5		7	3					Number of non-resident pupils.
Average number of pupil hours, non-resident pupils.....	6,300	64,900	22,500		900				15,300						600		1,190	426					Average number of pupil hours, non-resident pupils.
Deduct tuition received for non-resident pupils.....	\$753 10	\$6,150 25	\$1,326 60		\$53 00				\$3,006 51						\$20 00		\$143 67	\$215 07					Deduct tuition received for non-resident pupils.
Number of resident pupils (on average membership).....	224	15,230	95,212		182	29	140		248													† 50,236	Number of resident pupils (on average membership).
Number of resident pupils (on average attendance).....	216	14,166	86,278		166	19	124		225					357	3,590	2,234	1,571	280	7,949	5,257	3,827	† 50,236	Number of resident pupils (on average attendance).
Number of pupil hours, resident pupils.....	208,742	15,061,072	70,762,352		176,760	24,999	117,390	265,701	324,482			796,488	57,604	67,120	430,800	316,776	233,924	38,544					Number of pupil hours, resident pupils.
Cost of resident pupils.....	\$48,186 88	\$1,656,791 55	\$4,662,001 40	\$14,443 24	\$18,257 03	\$3,502 66	\$30,577 81	\$34,123 65	\$27,759 11	\$8,754 22	Cr. \$223 95	\$85,024 68	\$11,075 79	\$3,739 90	\$17,286 18	\$50,010 88	\$39,907 14	\$6,184 40	\$29,373 08	\$14,315 29	\$35,402 43	\$4,576 07	Cost of resident pupils.
Cost per resident pupil (on average membership).....	\$215 12	\$102 22	\$48 96		\$100 31	\$120 78	\$218 41		\$111 93														Cost per resident pupil (on average membership).
Cost per resident pupil (on average attendance).....	\$223 09	\$109 90	\$54 03		\$109 98	\$184 35	\$246 60		\$123 37					\$10 48	\$4 82	\$22 39	\$25 40	\$22 61	\$3 69	\$2 72	\$9 25	† \$0 091	Cost per resident pupil (on average attendance).
Cost per pupil hour, resident pupils.....	\$0 230	\$0 103	\$0 060		\$0 103	\$0 140	\$0 260	\$0 128	\$0 085			\$0 106	\$0 192	\$0 065	\$0 040	\$0 157	\$0 170	\$0 164					Cost per pupil hour, resident pupils.
Cost per resident pupil per session (on average attendance).....																			\$0 021	\$0 035			Cost per resident pupil per session (on average attendance).
Cost of resident pupils brought down.....	\$48,186 88	\$1,656,791 55	\$4,662,001 40	\$14,443 24	\$18,257 03	\$3,502 66	\$30,577 81	\$34,123 65	\$27,759 11	\$8,754 22	Cr. \$223 95	\$85,024 68	\$11,075 79	\$3,739 90	\$17,286 18	\$50,010 88	\$39,907 14	\$6,184 40	\$29,373 08	\$14,315 29	\$35,402 43	\$4,576 07	Cost of resident pupils brought down.
Deduct income, apportioned.....	112 93	4,020 39	16,804 32	67 76	67 76	22 59	21,412 84	3,397 20	135 52			451 73	135 52	22 59	112 93	2,545 81	4,875 46	22 59					Deduct income, apportioned.
Net cost of resident pupils §.....	\$48,073 95	\$1,552,771 16	\$4,645,197 08	\$14,375 48	\$18,189 27	\$3,480 07	\$9,164 97	\$30,720 45	\$27,623 59	\$8,754 22	Cr. \$316 54	\$84,572 95	\$10,940 27	\$3,717 31	\$17,173 25	\$47,465 07	\$35,031 68	\$6,161 81	\$29,373 08	\$14,315 29	\$35,402 43	\$4,576 07	Net cost of resident pupils. §
Net cost per resident pupil (on average membership) §.....	\$214 62	\$101 95	\$48 78		\$99 94	\$120 00	\$65 46		\$111 39														Net cost per resident pupil (on average membership). §
Net cost per resident pupil (on average attendance) §.....	\$222 56	\$109 61	\$53 84		\$109 57	\$183 16	\$273 91		\$122 77					\$10 41	\$4 78	\$21 25	\$22 30	\$22 01	\$3 69	\$2 72	\$9 25	† \$0 091	Net cost per resident pupil (on average attendance). §
Net cost per pupil hour, resident pupils §.....	\$0 230	\$0 103	\$0 060		\$0 103	\$0 139	\$0 278	\$0 115	\$0 085			\$0 106	\$0 189	\$0 065	\$0 039	\$0 149	\$0 149	\$0 159					Net cost per pupil hour, resident pupils. §
Net cost per resident pupil per session (on average attendance) §.....																			\$0 021	\$0 035			Net cost per resident pupil per session (on average attendance). §

* Including day, summer and extension classes.
 † Per capita cost.
 ‡ Total attendance.
 § That part of the total cost coming from the School Committee's share of the tax levy.

‡ Including the cost of tuition of pupils in the schools of Brookline, Dedham and Winthrop and of wards of the city placed in other cities and towns; the average number — 470 — and the total pupil hours — 423,000 — of such pupils should be added to the average membership, average attendance and number of pupil hours, making a total of 95,237 pupils on average membership, 86,303 on average attendance and 76,784,852 pupil hours.
 * Cost for resident and non-resident pupils.

The cost of tuition of pupils, residents of the City of Boston, attending industrial and agricultural schools in other cities and towns, amounting to \$490.12 is included under general charges, but the number of such pupils is not included in the average membership or average attendance of any of the above schools.

* EXCLUSIVE OF COSTS OF BUILDING, DEPRECIATION, REPAIRS, INTEREST AND SINKING FUND CHARGES.

Category	1914-15	1915-16	1916-17	1917-18	1918-19	1919-20	1920-21
Total	10,000	12,000	15,000	18,000	20,000	22,000	25,000

SHEET NO. 2.

NORMAL SCHOOL. LATIN AND HIGH SCHOOLS. ELEMENTARY SCHOOLS.

COST EXCLUSIVE OF ADMINISTRATION, SUPERVISION AND GENERAL CHARGES, AND WITH DIRECT INCOME DEDUCTED.

(For Total and Net Costs, see Sheet No. 1.)

Category	1914-15	1915-16	1916-17	1917-18	1918-19	1919-20	1920-21
Salaries	4,000	4,500	5,000	5,500	6,000	6,500	7,000
Materials	1,000	1,200	1,500	1,800	2,000	2,200	2,500
Utilities	500	600	700	800	900	1,000	1,100
Repairs	300	400	500	600	700	800	900
Books	200	300	400	500	600	700	800
Travel	100	150	200	250	300	350	400
Printing	150	200	250	300	350	400	450
Supplies	100	150	200	250	300	350	400
Other	50	100	150	200	250	300	350
Total	6,750	8,050	9,950	12,150	14,750	17,250	20,000

COST OF DAY SCHOOLS, EXCLUSIVE OF ADMINISTRATION, SUPERVISION AND GENERAL CHARGES, AND WITH DIRECT INCOME DEDUCTED.*

NORMAL SCHOOL.*

[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

Table for Normal School showing expenses of instruction, operation of plant, and promotion of health. Columns include Salary of Head Master, Salary of Clerks, Postage, Telephone, Salaries of Teachers, etc.

LATIN AND HIGH SCHOOLS.*

[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

Table for Latin and High Schools showing expenses of instruction, operation of plant, and promotion of health. Columns include Salaries of Head Masters, Salaries of Clerks, Postage, Telephone, Salaries of Teachers, etc.

ELEMENTARY SCHOOLS.*

[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

Table for Elementary Schools showing expenses of instruction, operation of plant, and promotion of health. Columns include Salaries of Principals, Salaries of Clerks, Postage, Telephone, Salaries of Teachers, etc.

* EXCLUSIVE OF COSTS OF BUILDING, DEPRECIATION, REPAIRS, INTEREST AND SINKING FUND CHARGES.

No. Date Name Address	Description Amount Balance
--------------------------------	----------------------------------

No.	Date	Particulars	Amount
1	1890	...	...
2	1890	...	...
3	1890	...	...
4	1890	...	...
5	1890	...	...
6	1890	...	...
7	1890	...	...
8	1890	...	...
9	1890	...	...
10	1890
11	1890
12	1890
13	1890
14	1890
15	1890
16	1890
17	1890
18	1890
19	1890
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31	1890
32	1890
33	1890
34	1890
35	1890
36	1890
37	1890
38	1890
39	1890
40	1890
41	1890
42	1890	...	...
43	1890	...	...
44	1890	...	...
45	1890	...	...
46	1890	...	...
47	1890	...	...
48	1890	...	...
49	1890	...	...
50	1890	...	...

Total
 Balance
 Total

SHEET NO. 3.

SPECIAL SCHOOLS AND CLASSES.

COST EXCLUSIVE OF ADMINISTRATION, SUPER-
VISION AND GENERAL CHARGES, AND WITH
DIRECT INCOME DEDUCTED.

(For Total and Net Costs, see Sheet No. 1.)

No. Date	Name Address
-------------	-----------------

No.	Name	Address	City	State
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

Total
 Grand Total

SHEET NO. 4.

EVENING SCHOOLS.

COST EXCLUSIVE OF ADMINISTRATION, SUPERVISION AND GENERAL CHARGES, AND WITH DIRECT INCOME DEDUCTED.

(For Total and Net Costs, see Sheet No. 1.)

COST OF EVENING SCHOOLS, EXCLUSIVE OF ADMINISTRATION, SUPERVISION AND GENERAL CHARGES, AND WITH DIRECT INCOME DEDUCTED.*

EVENING HIGH SCHOOLS.*

[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

SCHOOLS.	EXPENSES OF INSTRUCTION.																OPERATION OF PLANT.						Total.	Direct Income.	Net Total.*	Number of Sessions.	Average Attendance.	Cost per Pupil, Average Attendance.*	Number of Pupil Hours.	Cost per Pupil Hour.*	SCHOOLS.	
	Salaries of Principals.	Salaries of Clerks.	Postage.	Salaries of Teachers.	Text Books.	Supplementary and Reference Books.	Drawing Supplies and Equipment.	Manual Training Supplies and Equipment.	Laboratory Supplies and Equipment.	Musical Instruments and Supplies.	Printing.	Commercial Supplies and Equipment.	Miscellaneous Educational Supplies.	Incidentals.	Advertising.	Total for Instruction.	Number of Pupil Hours.	Cost per Pupil Hour of Instruction.	Salaries of Janitors.	Fuel.	Light.	Power.										Janitors' Supplies.	Total for Operation of Plant.
Brighton Commercial High.....	\$236 00	\$155 00	\$4 75	\$1,464 00	\$24 33					\$28 55	\$8 83	\$6 16		\$4 25	\$1,931 87	14,226	\$0 135	\$211 77	\$207 32	\$46 15	\$71 00		\$536 24	\$2,468 11		\$2,468 11*	71	100	\$24 68*	14,226	\$0 173*	Brighton Commercial High.
Central High.....	441 00	178 00	10 00	5,356 00	124 13			\$49 02		60 05	22 88	95 67			6,336 75	46,424	136	535 10	781 00	195 25	71 00		1,582 35	7,919 10	\$6 84	7,912 26*	71	327	24 20*	46,424	170*	Central High.
Charlestown Commercial High.....	435 00	223 50	32 00	2,328 00	114 85	\$6 75				38 40	63 23	69 14			3,315 87	25,772	128	286 47	368 90	105 00		760 37	4,076 24		4,076 24*	70	184	22 15*	25,772	158*	Charlestown Commercial High.	
Dorchester Commercial High.....	441 00	161 00	9 00	4,961 50	4 55					80 88	84 97	73 72			5,816 62	55,808	104	490 60	603 50	369 20		1,463 30	7,279 92	3 16	7,276 76*	71	393	18 52*	55,808	130*	Dorchester Commercial High.	
East Boston Commercial High.....	441 00	157 00	10 00	2,068 00	60 00	67 00				37 56	38 58	15 01			2,894 15	25,734	112	364 53	319 50	106 50		790 53	3,684 68		3,684 68*	71	181	20 36*	25,734	143*	East Boston Commercial High.	
Girls' Commercial High.....	447 00	176 00	5 00	3,298 50	120 76					59 99	116 68	112 09			4,336 02	39,576	109	434 55	603 50	142 00	42 60		1,222 65	5,558 67	1 36	5,557 31*	71	279	19 91*	39,576	140*	Girls' Commercial High.
Hyde Park Commercial High.....	71 00		1 80	1,068 00						9 39		12 53			1,162 72	9,888	117	134 08	225 78	58 22		418 08	1,580 80		1,580 80*	71	70	22 58*	9,888	159*	Hyde Park Commercial High.	
Roxbury Commercial High.....	435 00	176 00	52 00	5,548 50	116 00				\$10 00	93 92	149 55	98 99			6,679 96	60,746	109	503 50	528 24	195 25	35 50		1,262 49	7,942 45		7,942 45*	71	428	18 56*	60,746	130*	Roxbury Commercial High.
South Boston Commercial High.....	441 00	157 00	2 50	3,056 00						78 13	57 08	68 75			3,860 46	38,602	100	419 84	603 50	129 22		1,152 56	5,013 02		5,013 02*	71	272	18 43*	38,602	129*	South Boston Commercial High.	
Totals.....	\$3,388 00	\$1,383 50	\$127 05	\$20,148 50	\$564 62	\$73 75		\$49 02	\$10 00	\$486 87	\$546 80	\$552 06		\$4 25	\$36,334 42	316,776	\$0 114	\$3,380 44	\$4,241 24	\$1,346 79	\$220 10		\$9,188 57	\$45,522 99	\$11 36	\$45,511 63*	2,234	\$20 37*	316,776	\$0 143*	Totals.	

EVENING ELEMENTARY SCHOOLS.*

[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

SCHOOLS.	EXPENSES OF INSTRUCTION.																OPERATION OF PLANT.						Total.	Direct Income.	Net Total.*	Number of Sessions.	Average Attendance.	Cost per Pupil, Average Attendance.*	Number of Pupil Hours.	Cost per Pupil Hour.*	SCHOOLS.	
	Salaries of Principals.	Salaries of Clerks.	Postage.	Salaries of Teachers.	Text Books.	Supplementary and Reference Books.	Drawing Supplies and Equipment.	Manual Training Supplies and Equipment.	Cookery Supplies and Equipment.	Sewing Supplies and Equipment.	Musical Instruments and Supplies.	Printing.	Miscellaneous Educational Supplies.	Incidentals.	Advertising.	Total for Instruction.	Number of Pupil Hours.	Cost per Pupil Hour of Instruction.	Salaries of Janitors.	Fuel.	Light.	Power.										Janitors' Supplies.	Total for Operation of Plant.
Abraham Lincoln.....	\$220 00			\$550 00											\$770 00	7,768	\$0 099	\$230 65	\$350 35	\$41 25			\$622 25	\$1,392 25		\$1,392 25*	55	71	\$19 61*	7,768	\$0 179*	Abraham Lincoln
Bigelow.....	365 00	\$124 50	\$5 38	1,835 00				\$1 34	\$1 07		\$2 53	\$40 55			2,375 42	26,246	090	459 78	541 45	153 00	\$85 00		1,239 23	3,614 65		3,614 65*	85	154	23 47*	26,246	137*	Bigelow.
Bowdoin.....	150 00			510 00							63	31 21		\$2 50	694 34	7,494	092	191 84	191 10	39 00			421 94	1,116 28		1,116 28*	30	125	8 93*	7,494	148*	Bowdoin.
Brighton.....	220 00		5 40	602 50								7 28			835 18	6,778	123	154 45	53 30	22 00			231 75	1,069 93		1,069 93*	55	62	17 20*	6,778	157*	Brighton.
Comins.....	382 00	45 00	6 00	1,714 00	\$51 38	\$53 92		19 50	7 45			79 26			2,358 51	22,252	105	384 61	424 85	116 50			925 96	3,284 47		3,284 47*	85	131	25 07*	22,252	147*	Comins.
Dearborn.....	220 00			662 50								2 57			885 07	8,370	105	310 84	350 35	44 55			705 74	1,590 81		1,590 81*	55	76	20 93*	8,370	190*	Dearborn.
Eliot.....	370 00	42 00		1,987 50							1 14	60 39			2,461 03	23,050	106	429 79	722 50	170 00			1,322 29	3,783 32		3,783 32*	85	136	27 82*	23,050	164*	Eliot.
Franklin.....	370 00	126 00	11 82	3,233 00				34 54				85 32			3,860 68	39,204	098	530 67	430 75	205 65			1,167 07	5,027 75	\$1 75	5,026 00*	85	231	21 76*	39,204	128*	Franklin.
Hyde Park.....	370 00	45 00	4 65	1,050 50								15 03			1,485 18	12,352	120	193 42	138 30	75 75			607 47	2,092 65		2,092 65*	85	73	28 67*	12,352	169*	Hyde Park.
Phillips Brooks.....	370 00	121 50	1 50	2,381 50					11 99			11 75			1,898 24	26,025	111	816 77	1,102 01	194 85	94 35		2,207 98	5,106 22		5,106 22*	85	153	33 37*	26,026	196*	Phillips Brooks.
Theodore Lyman.....	370 00	46 50	6 87	1,267 50							38	21 32			1,712 57	20,072	085	307 14	541 45	102 00			950 59	2,663 16		2,663 16*	85	118	22 57*	20,072	132*	Theodore Lyman.
Washington.....	370 00	126 00		1,690 00				30 83							2,216 83	23,330	095	562 31	626 45	93 50	94 35		1,376 61	3,593 44		3,593 44*	85	137	26 23*	23,330	154*	Washington.
Wendell Phillips.....	220 00	6 00	2 25	842 50	Cr. 15 55			2 00			52				1,057 72	12,172	086	172 16	233 75	46 75	41 25		493 91	1,551 63		1,551 63*	55	111	13 98*	12,172	127*	Wendell Phillips.
Totals.....	\$3,997 00	\$682 50	\$43 87	\$18,326 50	\$35 83	\$53 02		\$88 21	\$20 51		\$5 25	\$354 68		\$2 50	\$23,610 77	235,114	\$0 100	\$4,744 43	\$5,911 61	\$1,304 83	\$314 95		\$12,275 79	\$35,886 56	\$1 75	\$35,884 81*	1,578	\$22 74*	235,114	\$0 152*	Totals.	

BOSTON TRADE SCHOOL, EVENING CLASSES.*

[FOR TOTAL AND NET COSTS, SEE SHEET NO. 1.]

SCHOOL.	EXPENSES OF INSTRUCTION.											OPERATION OF PLANT.						Total.	Direct Income.†	Net Total.*	Number of Sessions.	Average Attendance.	Cost per Pupil, Average Attendance.*	Number of Pupil Hours.	Cost per Pupil Hour.*	SCHOOL.	
	Salary of Principal.	Salaries of Clerks.	Postage.	Salaries of Teachers.	Telephone.	Manual Training Supplies and Equipment.	Drawing Supplies.	Miscellaneous Educational Supplies.	Office Supplies.	Carfares and Incidentals.	Total for Instruction.	Number of Pupil Hours.	Cost per Pupil Hour of Instruction.	Salaries of Janitors.	Fuel.	Light.	Power.										Janitors' Supplies.	Total for Operation of Plant.
Boston Trade School, Evening Classes.....	\$426 00	\$87 98	\$35 63	\$6,001 50		\$873 19	\$17 93	\$8 86	\$7 30	\$23 70	\$7,482 09	38,970	\$0 191	\$1,148 90	\$1,500 22	\$53 96	\$139 87		\$2,843 04	\$10,325 13	\$4,587 03	\$5,738 10*	283	\$20 28*	38,970	\$0 147*	Boston Trade School, Evening Classes.

† Half the net cost of maintenance as aid from the Commonwealth for the period, September 1, 1917, to August 31, 1918, \$3,884.37; forfeited advance payments, \$618; miscellaneous items, \$84.66; total, \$4,587.03.

* EXCLUSIVE OF COSTS OF BUILDING, DEPRECIATION, REPAIRS, INTEREST AND SINKING FUND CHARGES.

SHEET NO. 5.

**SCHOOL CENTERS.—USE OF SCHOOL
ACCOMMODATIONS.**

**COST EXCLUSIVE OF ADMINISTRATION, SUPER-
VISION AND GENERAL CHARGES.**

(For Total and Net Costs, see Sheet No. 1.)

COAST AND GEOL. SURVEY, U.S. DEPT. OF COMMERCE

Station	Date	Time	Wind	Sea	Weather	Remarks
1001	1890	0800	SE 10	3	bc	Under way
1002	1890	0900	SE 10	3	bc	Under way
1003	1890	1000	SE 10	3	bc	Under way
1004	1890	1100	SE 10	3	bc	Under way
1005	1890	1200	SE 10	3	bc	Under way
1006	1890	1300	SE 10	3	bc	Under way
1007	1890	1400	SE 10	3	bc	Under way
1008	1890	1500	SE 10	3	bc	Under way
1009	1890	1600	SE 10	3	bc	Under way
1010	1890	1700	SE 10	3	bc	Under way
1011	1890	1800	SE 10	3	bc	Under way
1012	1890	1900	SE 10	3	bc	Under way
1013	1890	2000	SE 10	3	bc	Under way
1014	1890	2100	SE 10	3	bc	Under way
1015	1890	2200	SE 10	3	bc	Under way
1016	1890	2300	SE 10	3	bc	Under way
1017	1890	0000	SE 10	3	bc	Under way
1018	1890	0100	SE 10	3	bc	Under way
1019	1890	0200	SE 10	3	bc	Under way
1020	1890	0300	SE 10	3	bc	Under way
1021	1890	0400	SE 10	3	bc	Under way
1022	1890	0500	SE 10	3	bc	Under way
1023	1890	0600	SE 10	3	bc	Under way
1024	1890	0700	SE 10	3	bc	Under way
1025	1890	0800	SE 10	3	bc	Under way

ER-

Station	Date	Time	Wind	Sea	Weather	Remarks
1026	1890	0900	SE 10	3	bc	Under way
1027	1890	1000	SE 10	3	bc	Under way
1028	1890	1100	SE 10	3	bc	Under way
1029	1890	1200	SE 10	3	bc	Under way
1030	1890	1300	SE 10	3	bc	Under way
1031	1890	1400	SE 10	3	bc	Under way
1032	1890	1500	SE 10	3	bc	Under way
1033	1890	1600	SE 10	3	bc	Under way
1034	1890	1700	SE 10	3	bc	Under way
1035	1890	1800	SE 10	3	bc	Under way
1036	1890	1900	SE 10	3	bc	Under way
1037	1890	2000	SE 10	3	bc	Under way
1038	1890	2100	SE 10	3	bc	Under way
1039	1890	2200	SE 10	3	bc	Under way
1040	1890	2300	SE 10	3	bc	Under way
1041	1890	0000	SE 10	3	bc	Under way
1042	1890	0100	SE 10	3	bc	Under way
1043	1890	0200	SE 10	3	bc	Under way
1044	1890	0300	SE 10	3	bc	Under way
1045	1890	0400	SE 10	3	bc	Under way
1046	1890	0500	SE 10	3	bc	Under way
1047	1890	0600	SE 10	3	bc	Under way
1048	1890	0700	SE 10	3	bc	Under way
1049	1890	0800	SE 10	3	bc	Under way
1050	1890	0900	SE 10	3	bc	Under way

COST OF ACTIVITIES, EXTENDED USE OF PUBLIC SCHOOLS, EXCLUSIVE OF ADMINISTRATION, SUPERVISION AND GENERAL CHARGES.*

SCHOOL CENTERS.*

[FOR TOTAL AND NET COSTS, SEE SHEET No. 1.]

	Salaries of Managers, Leaders, etc.	Services of Motion Picture Bureau, etc.	Illustrated Lectures and Song Slides.	Pathoscope and Accessories.	Musical Instruments, Music Supplies and Repairs.	Supplies for Games.	Printing and Advertising.	Postage.	Telephone.	Incidentals.	Salaries of Janitors.	Fuel.	Light.	Total.*	Number of Sessions.	Average Attendance.	Per Capita Cost, Average Attendance.*	
Charlestown School Center.....	\$2,126 75	\$810 50	\$4 20			\$5 61	\$7 51	\$8 00			\$371 73	\$272 00	\$272 00	\$3,878 30*	135	294	\$13 19*	Charlestown School Center.
Dorchester School Center.....	3,190 75	617 50	21 60			5 61	20 85				568 23	516 00	430 00	5,370 54*	158	400	13 43*	Dorchester School Center.
East Boston School Center.....	2,858 00	928 25	15 00			5 61					549 87	408 75	327 00	5,092 48*	191	408	12 48*	East Boston School Center.
Edward Everett School Center.....	95 00										93 37	32 00	16 00	236 37*	9	240	99*	Edward Everett School Center.
Michael Angelo School Center.....	655 00										65 91	88 00	66 00	874 91*	29	314	2 79*	Michael Angelo School Center.
North End School Center.....	971 50	19 54					28 00	8 00			177 78	180 00	90 00	1,474 82*	45	225	6 55*	North End School Center.
Roxbury School Center.....	3,665 25	784 00	15 00		\$5 00	6 04	17 18	8 00	Cr. \$8 93		1,126 55	846 00	1,010 00	7,474 09*	279	311	24 03*	Roxbury School Center.
Sherwin School Center.....	214 00	34 54								6 02	33 84	44 80	35 40	368 60*	20	337	1 09*	Sherwin School Center.
South Boston School Center.....	1,774 00	825 40	2 10			5 61					380 02	498 00	240 70	3,725 83*	103	357	10 44*	South Boston School Center.
Washington School Center.....	499 50	532 75									259 81	220 00	110 00	1,622 06*	57	474	3 42*	Washington School Center.
West End School Center.....	1,306 00	36 00		\$296 04							275 68	236 00	177 00	2,326 72*	71	467	4 98*	West End School Center.
Totals.....	\$17,355 75	\$4,588 48	\$57 90	\$296 04	\$5 00	\$28 48	\$73 54	\$24 00	Cr. \$8 93	\$6 02	\$3,902 79	\$3,341 55	\$2,774 10	\$32,444 72*		3,827	\$8 48*	Totals.

USE OF SCHOOL ACCOMMODATIONS FOR MUNICIPAL CONCERTS, PARENTS' AND TEACHERS' MEETINGS, ALUMNI MEETINGS, ETC.*

[FOR TOTAL AND NET COSTS, SEE SHEET No. 1.]

	Payment for Services.	Salaries of Janitors.	Fuel.	Light.	Printing.	Services, Motion Picture Bureau, etc.	Total.*	Total Attendance.	Per Capita Cost.*	
Use of School Accommodations.....	\$544 50	\$2,406 79	\$633 00	\$633 60	\$8 83	\$21 32	\$4,248 04*	50,236	\$0 085*	Use of School Accommodations.

* EXCLUSIVE OF COSTS OF BUILDING, DEPRECIATION, REPAIRS, INTEREST AND SINKING FUND CHARGES.

SHEET NO. 6.

**PARK PLAYGROUNDS.—SCHOOLYARD
PLAYGROUNDS.**

**COST EXCLUSIVE OF ADMINISTRATION, SUPER-
VISION AND GENERAL CHARGES.**

(For Total and Net Costs, see Sheet No. 1.)

No. 1

1	1867	Jan 1	to	Jan 31	1867	1867	1867	1867	1867
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SCHOOL DOCUMENT NO. 2—1920
BOSTON PUBLIC SCHOOLS
**REPORT ON MODERN LANGUAGE WORK
IN BOSTON HIGH SCHOOLS**

BASED UPON A QUESTIONNAIRE ADDRESSED TO THE
HEADMASTERS BY THE BOARD OF SUPERINTENDENTS



CITY OF BOSTON
PRINTING DEPARTMENT

1920



REPORT ON MODERN LANGUAGE WORK IN THE BOSTON HIGH SCHOOLS.

I. LANGUAGES OFFERED.

This year, (1919-1920), the Charlestown and Mechanic Arts High Schools offer French only, but Mechanic Arts expects to offer German next year. Public Latin School and Girls' Latin School offer both French and German. The Hyde Park, South Boston and Roxbury High Schools offer French and Spanish. All the other high schools offer French, German and Spanish. One high school, the Girls' High, gives Italian also. Dorchester High School offers Italian but no classes have been formed.

II. 1.—TYPES OF CLASSES.

With the exception of the Charlestown High School and the High School of Commerce, all of the high schools have to provide for college preparatory students. Public Latin School and Girls' Latin School have only this type. Dorchester, East Boston (French only), Girls' High School (French only) and Mechanic Arts have special divisions for this type of pupils. Brighton, Charlestown, English, South Boston and West Roxbury lump all pupils together. Hyde Park and Roxbury group college preparatory and Normal preparatory pupils together. Commerce has only commercial classes. East Boston has commercial classes in Spanish. Roxbury forms commercial divisions when possible. Hyde Park has commercial classes. In the other schools non-college-preparatory pupils, including commercial pupils, are grouped together in "general" classes.

II. 2.—LENGTH OF COURSE.

The average college preparatory class in French is given a three years' course. This is the case in Public Latin School, Girls' Latin School, East Boston, Dorchester, Mechanic Arts and Roxbury. Hyde Park

gives its combined college preparatory and normal preparatory pupils a three years' course. The other schools complete this work in four years but English High School allows only three years for German, Public Latin School, either three years or two years for German. Brighton offers a two years' course for the second modern language. Public Latin School and Girls' Latin School give a four years' course in French for their six-year pupils.

It is interesting to note that the two year college preparatory course has almost entirely disappeared. This shows a vast improvement over the conditions of a few years ago.

In the general courses in French, four years of the language are offered.

In Spanish the courses are either general or commercial. Schools which offer courses in commercial Spanish generally offer courses of the same length in French or German. Dorchester High School, English High School, Girls' High School, High School of Commerce, Roxbury High School, and South Boston High School offer courses of four years. In Girls' High School, two years are required, in High School of Commerce, four years. Brighton High School and Hyde Park High School offer two years only, East Boston and West Roxbury three years. East Boston offers only two years of German, all pupils being lumped together.

The assignment of week-periods is as follows:*

SCHOOL.	I.	II.	III.	IV.
Public Latin:				
French.....	5	3	3	5
German.....	5	5	5	
Girls' Latin:				
French { 6 years	3	3	3	5
{ 4 years	5	5	5	

* The Roman numerals indicate units of work, not years. Periods average about 40 minutes. The fact that the five or four period week predominates is a most encouraging sign.

SCHOOL.	I.	II.	III.	IV.
Brighton High:				
French.....	5	5	5	
Spanish.....	5	5		
Charlestown High:				
French:				
Normal preparatory.....	5	5	5	3
Commercial.....	5	5		
East Boston High:				
French:				
College preparatory.....	5	4-1	4-1	
Commercial.....	5	4	4	
German.....	4	4		
Spanish.....	5	4	4	
Dorchester High:				
College preparatory.....	5	4	4	
General.....	5	4	4	4
English High:				
French.....	5	5	5	5
Spanish.....	5	5	5	5
German.....	5	5	5	
Girls' High:				
College preparatory (French).....	5	4	4	4
General.....	5	4	*4	*4
High School of Commerce.....	4	4	5	4
Hyde Park High:				
College preparatory.....	5	5	5	
Commercial.....	5	5		
Mechanic Arts High:				
College preparatory.....	2½	5	2½	
Roxbury High:				
College preparatory.....	5	5	5	
Commercial.....	5	4	4	4
South Boston High.....	5	5	4	3
West Roxbury High:				
French.....	5	4	4	4
Spanish.....	5	4	4	
German.....	5	4		

* Optional.

It should be stated here that the above figures refer to courses offered or given at present. In general, the schools which are giving the short courses are ready to provide another year of work when there is a demand for it.

The value of the two years' course in Commercial Spanish as given, *e. g.*, in Brighton and Hyde Park is questionable. Probably in the other high schools many pupils take only two years of the foreign language. In fact the Girls' High School *requires* only two years of a modern language, while Roxbury admits that the four-year course is theoretical. In High School of Commerce four years of the foreign language are required nominally, but a boy who can offer only three years may make up the deficiency by an extra course in some other subject.

It might be worth while to ask the Modern Language Council to report in a general way upon the following points:

1. Should not the two years' requirement of modern language *e. g.*, in Girls' High School, and the four years' requirement in Commerce, be changed so that pupils who show no language sense may be directed into other work at the end of the first year?

2. Should not a pupil who is allowed to take second year language do so on the understanding that he is to continue the language for the rest of the four years' course? This would not apply to *bona fide* college preparatory pupils for whom a regular, intensive college preparatory course of three years is provided.

III. INFLUENCE OF COLLEGE ENTRANCE REQUIREMENTS UPON COURSE OF STUDY.

Such influence is denied by Charlestown, Commerce, English, Mechanic Arts, and South Boston. Other schools admit this influence to a greater or less degree upon scope or extent of work, but not upon method or

content. It is generally felt that the course offered is adequate for meeting college requirements.

IV. MEANS OF CORRELATION WITH INTERMEDIATE SCHOOLS.

Girls' Latin School, Brighton High School, Dorchester High School and High School of Commerce form special divisions for such pupils.

Public Latin School, East Boston High School, English High School, Dorchester High School, Commerce, Hyde Park High and Roxbury High School admit intermediate pupils to second year high school or tenth grade. Mechanic Arts will do the same. Roxbury High School admits intermediate school graduates of "A" grade to third year classes. At Charlestown and South Boston, the question has not arisen but South Boston recognizes the need of means of correlation in the future. West Roxbury High has too few pupils of this type to make special means necessary.

In general the high schools manifest a sympathetic attitude toward the intermediate pupils. Simply to admit them to advanced standing, demoting them if they fail to keep up, does not, however, in itself show any very high degree of coöperation.

The first year work in Dorchester, English, Girls' High School, High School of Commerce, Roxbury and West Roxbury is conducted very largely along the lines laid down for intermediate work in School Document No. 17, 1917. Reading texts are used but not grammars,—at least until late in the year. The stress is laid upon oral work and reading, formal grammar being reduced to the minimum.

V. AND VI. TEXT-BOOKS.

Only two French grammars show any very wide degree of use, "Chardenal" as the introductory work — although it often is used for three years, and "Fraser and

Squair" as the more advanced and reference grammar. Schools do about thirty lessons of Chardenal in the first year, about forty more the second year and review and complete the book in the third year. Thirteen out of the fourteen high schools use Chardenal. For advanced work twelve schools use Fraser and Squair, two use Snow's Fundamentals of French Grammar.

The use of reading material during the first two years of French has been tabulated.* The tables are of interest as showing the wide range of reading material, the independence of judgment of the teachers in the various schools in the choice of the texts, and to some extent a remarkable conservatism in the retention of fairly old books.

Twenty books are listed for the first year, thirty for the second. The lists are probably not quite complete.

Nine of the texts used in the first year appear in the list for the second year. The last part of certain readers is too hard for first year work; certain classes of beginners are older and can work faster and more intensively than others; the difficulty of a book is within certain limits largely dependent upon the methods followed by the teacher.

Of the first year texts only one — and surely the fact shows genuine conservatism — is used by ten schools. This is Guerber's *Contes et Légendes*, Part I; Méras — *Premier Livre* — is used by seven schools; Snow and LeBon's *Easy French* by four; Méras and Roth — *Petits Contes de France*, by three. The average number of texts used by any school is three. Brighton uses four; Girls' High School, five, and Dorchester High School, six.

Conditions in the second year are similar. Malot's *Sans Famille* is used in eight schools; François and Giroud's *Simple French*, Monvert's *La Belle France*, Perrichon, *Le Petit Robinson de Paris* and *Le Tour de la France* by four each. The average number of texts used is five. Dorchester uses eleven, Girls' High School, ten, and Roxbury High School, seven.

* See tables on page 19-21 in this report.

The tabulation has not been carried further. So little German is now actually given that it is not worth while to tabulate the use of German books. Only six schools are actually teaching German and practically no new classes are being formed. The Spanish list is meagre and unsatisfactory, many books are being tested, and used, although unsatisfactory, because nothing better is available. It would be unjust to the teachers to tabulate their use of Spanish books.

It has not been considered worth while to tabulate the information given on text-books for the third and fourth years. Most high school pupils carry a modern language for two years. With the third year there is a great falling off in many schools. Additional statistics are needed in order to make a special study of the matter of text-books which shall be worth while.

QUESTION VII.

Under this question are grouped several points of importance in modern language work. Practice in regard to some of them is variable. The hope was to get an expression of opinion which would be of value in recommending methods of procedure.

1.—*Phonetic Alphabet.*

Only in three schools is the phonetic alphabet employed and in these three only to a limited extent. Many teachers state plainly that they do not believe in the use of the phonetic alphabet in schools.

2.—*Practical Phonetics.*

Two schools pay no attention to this means of teaching pronunciation, evidently trusting to imitation alone. One school makes very little use of it. All others make it an essential part of the instruction in pronunciation.

3.—*Practice in Pronunciation.*

There is unanimity of opinion as to the need of such practice daily throughout the course. Certain teachers

devote 75 per cent of the recitation period for a part of first year to this work.

4.— *Dictation.*

This forms an essential part of the work of the first year in most of the schools, and is used to some extent during the rest of the course. The amount of time varies from a few minutes once a week in the first year to 15 per cent of the time in the third year. A more definite standard can be set.

5.— *Viva Voce Reading by Teacher.*

A great deal of it is done in the first year. In some cases it forms a part of every lesson. One school recommends that advance reading lessons be always read aloud by teacher at the time of assignment.

6.— *Viva Voce Reading by Individual Pupils.*

In general this is given a great deal of time. Some schools make it a regular part of each recitation, especially during the first year. One school estimates that one third of the time during the first year is spent in this way. It seems to be neglected during the second year. Is this due to the fact that after the introductory year of language work, teachers like to do a good deal of intensive grammar work in the second year? Certainly this has been the case in some schools. One school expects to postpone the intensive grammar work until the third year, making the second year mainly a reading year. It is doubtful whether extensive reading can be done intelligently without considerable training in grammar, unless the pupil is to be kept indefinitely on texts which have been made artificially easy. This can hardly be intended if a large amount of reading is to be required in the second year. The opinion of the Council on this point would be of value and should be requested. It is only fair to say,—going back to the subject of this section—that a great deal of *viva voce* reading by the pupils is done in the third and fourth years.

7.— *Viva Voce Concert Reading by Pupils.*

This practice is very generally followed throughout the course. Its chief employment is in the first year. The amount of time devoted to it varies greatly. Answers range from "very little" to "one third of the time during first year." It is used frequently to follow reading by individual pupils, also without such preliminary reading. The time devoted to it falls off sharply in the second year. It is very extensively employed in the third and fourth years.

The value of this method of teaching pronunciation is recognized in the matter of saving time in large classes, in affording opportunity for much more drill in pronunciation than would otherwise be possible, and in encouraging shy, diffident or backward pupils. Faulty enunciation or incorrect accentuation on the part of an individual pupil comes to be recognized by the teacher as readily as a false note in concert singing. No valid objection can be raised against the practice. In fact some schools report that better results are obtained by this method of teaching. It would appear that the increased use of *viva voce* concert work as a means of teaching pronunciation should be recommended and encouraged.

8 and 9.— *Oral Practice.— Conversation.*

The answers to these questions may be considered together. In the questionnaire the term oral practice was not differentiated clearly from conversation. The term should have been defined more clearly.

Oral practice does not refer to reading aloud, to the recitation of selections which have been memorized, or to the singing of songs — although all are to be included in oral work. Oral practice was understood as meaning the rapid fire of question and answer based upon a thoroughly studied but not memorized text. This is not conversation, although it is the necessary preliminary to conversation. Conversation is more general,

calls for greater knowledge on the part of the pupil, demands independent thinking, is intended to develop the pupil's power to express his own thoughts, is more spontaneous, not the direct reaction,— practically automatic, — if the preliminary work has been thoroughly done,— to a short, sharp question which as a rule contains the exact words which the pupil needs to use in his answer. Oral practice may in time be developed into conversation, but oral practice alone will never enable the pupil to carry on a conversation in a foreign language. The point to the question on conversation is: To what extent can your pupils converse in the foreign language, and how much time can you devote to developing in them conversational power? Oral practice belongs to every year of the course; conversation can be expected only from advanced pupils.

With this by way of explanation, the answers may be collated as follows:

A very large amount of time is given to oral practice throughout the course. A strong effort is made to develop conversational power, but simple common sense shows that with the large classes — even of bright and advanced pupils — there can be only comparatively little real conversation. At the same time certain schools, under favorable circumstances, might be able to do a good deal in this line, and the question was intended to bring out what was being accomplished.

10.—*Formal Grammar.*

In general the tendency is to reduce the amount of it in the early stages of language work, especially in the non-college preparatory classes. Intensive work in grammar appears to be done in the second year. In the third year the grammar begins to be used as a reference book, although some schools do a great deal of grammar work in this year. In the fourth year the grammar is used for review and reference. Perhaps 20 per cent of the time of the entire course is devoted to formal grammar.

This amount of time appears sufficient, perhaps slightly excessive. However, any pupil who has passed the age of childhood has a certain reasonable amount of grammatical drudgery to undergo, not as an end in itself but because, if properly taught, the rules of grammar furnish just so many short cuts to the acquisition of linguistic information and the development of linguistic power.

11.—*Formal Composition.*

In general, one period a week during the third and fourth years is devoted to this subject, although in some schools, composition work is started earlier. This work is placed where it belongs and the time allotted to it is not excessive.

12.—*Free Composition.*

This is small in amount and very properly limited to the third and fourth years. To expect a young pupil who is still struggling with the difficulties of pronunciation, spelling, accident and vocabulary to write original themes in a foreign language is folly. To require it would be a linguistic crime.

13.—*Translation into English.*

Teachers in general regard a certain amount of this work as absolutely essential. One school wishes all of the reading to be translated into English, but admits that the ideal is not attained. Four schools have a part of every lesson translated. Some would make this part roughly about 25 per cent. Others limit the translation to difficult passages, or, in other words, use translation when it seems necessary, in order to make sure that the reading is understood. There is no definite standard and perhaps none can be set.

From the standpoint of English, careful translation from the foreign language has everything in its favor. As a means of developing accuracy in thought and expression, the translation into English of a part of the lesson

is to be commended highly. The only valid objection — and it is a strong one — that can be alleged against translating all the reading material into English is that in the end it will prevent the pupil from being able to understand and use the foreign language directly, making it necessary for him always to translate his thoughts from English into French or from French into English, instead of using the foreign language spontaneously, thus defeating the very purpose of the introduction of modern language work into the intermediate classes and the employment of the direct method in the first year of high school. Furthermore, the time required for so much translation would decrease to too great an extent the time devoted to other purposes.

The sane method, followed by many teachers, is to read a small amount with the utmost care, having it all carefully translated, making sure that no difficulty is left unexplained, and to read a much larger amount rapidly, with a minimum of translation. The practice of the schools in this matter seems to be eminently sane and wise.

VIII. *A* AND *B*.—EXTENT OF USE OF FOREIGN LANGUAGE BY TEACHER AND PUPIL.

As far as the teacher is concerned the answers are optimistic and satisfactory. The foreign language is very generally used by teachers in the class room. Answers in regard to the pupils are more indefinite and in some schools are not encouraging. The question should have been limited so as to apply only to results visible in, say, the last half of the fourth year.

Pupils who drop the language at the end of two years cannot be expected to speak the foreign language. Three-year college preparatory classes have to limit the time to be devoted to oral practice and conversation. In general classes the large numbers are a handicap. It is a reasonable conclusion from the answers submitted that only a small proportion of the pupils can at the time of leaving school speak the foreign language

with any very high degree of fluency or accuracy. It is also a fair conclusion that a large proportion of the pupils can understand the foreign language when they hear it spoken. Teachers encourage the use of the foreign language in every way possible and some improvement in this regard may be expected.

IX. IS THE FOREIGN LANGUAGE USED AS A MEDIUM FOR EXPLAINING MATTERS OF GRAMMAR?

Five schools state plainly that they do not use the language for this purpose. All the others do, but use English whenever it seems necessary.

The position taken by the schools is absolutely sound. If a teacher has an extraordinary command of the foreign language so that he can explain grammatical or syntactical difficulties easily, simply and clearly, with the minimum of technical terminology, there is no reason why he should not use the foreign language for this purpose, on the theory that the pupils should hear the foreign language as much as possible. When the performance becomes burdensome or time-destroying it should be avoided.

X. SUPPLEMENTARY MATERIAL USED IN SPECIAL CLASSES.

The question was frequently misunderstood. It was not intended to refer to collections of books, pictures, maps or other material employed for various purposes in the regular classes. Some schools, however, seem to lack suitable material of this kind, while others have remarkably good illustrative material available. The question refers to special material or special devices employed in special, *e. g.*, commercial classes. The fourth year class in Spanish at the High School of Commerce may be taken as an example, where the instructor supplements the regular text-books by the use of trade reports, business catalogues, special collections of commercial letters, business forms, etc.

XI. SPECIAL STUDENT ORGANIZATIONS.

Eight schools have no such organizations. Conversation clubs, dramatic clubs, etc., have however existed at one time or another in schools which no longer have them. The distracting influence of the war is no doubt in some cases responsible. It is further to be noted that to conduct a conversation club or a dramatic club requires an enormous amount of time and energy. Under present conditions teachers have neither time nor strength for such undertakings. If the guidance and supervision of a well-organized conversation club, so limited in numbers that its work could be reasonably effective, might be recognized as a regular part of a teacher's work, and a place found for it during the regular school day, this valuable means of improving the students' conversational power would undoubtedly be made use of in a greater number of schools.

XII. ADVICE, REMARKS, ETC.

Unfortunately not all schools took advantage of the opportunity offered under this heading. The answers received were of value and all are given herewith.

Public Latin School advises a strong increase in the time and attention given to speaking and writing the language.

Girls' Latin School emphasizes the need of smaller classes.

Brighton High School points out the desirability of grouping pupils according to their respective aims and of allowing the formation of fourth-year classes for less than fifteen pupils. The present regulation bears very hard upon the smaller high schools and it might be well for the Modern Language Council to consider the matter thoroughly with a view to making suitable recommendations to the Board of Superintendents.

Charlestown High School would appreciate having a syllabus of minima for each year.

English High School wants better teachers — men who have made modern foreign language teaching a distinct specialty.

The Girls' High School suggests that the work in the intermediate classes should be strengthened, three years' work in the grades being barely equivalent to first year high school work. It should be stated here that the Girls' High School has shown a distinctly friendly attitude toward the intermediate schools, revising and reorganizing its course of study in modern languages so as to coöperate with them. This suggestion might well be taken up and reported upon by the Council.

The South Boston High School points out the pressing need of standardizing and coördinating the work of high and intermediate schools.

The present report goes to show that since the formation of the Modern Language Council a great deal has been accomplished in the way of improving and standardizing the work in the various high schools. The high schools have shown a high degree of initiative and of coöperation. They have shown the utmost friendliness toward the intermediate schools and have generously given them their time, encouragement and advice.

The new problem, that of coördinating the work of the senior and junior high schools and of standardizing the modern language work of the entire school system, is being met with a helpful and friendly spirit of coöperation which augurs well for the future.

The new ideals which have come into modern language work during the last twenty years have called for radical changes in the methods and materials of instruction and for a very high degree of adaptability on the part of language teachers. These changed conditions have been cheerfully met, although the new work has been carried on by the teachers under serious handicaps.

If higher standards of attainment are imposed upon the teachers, in order that the new ideals may be real-

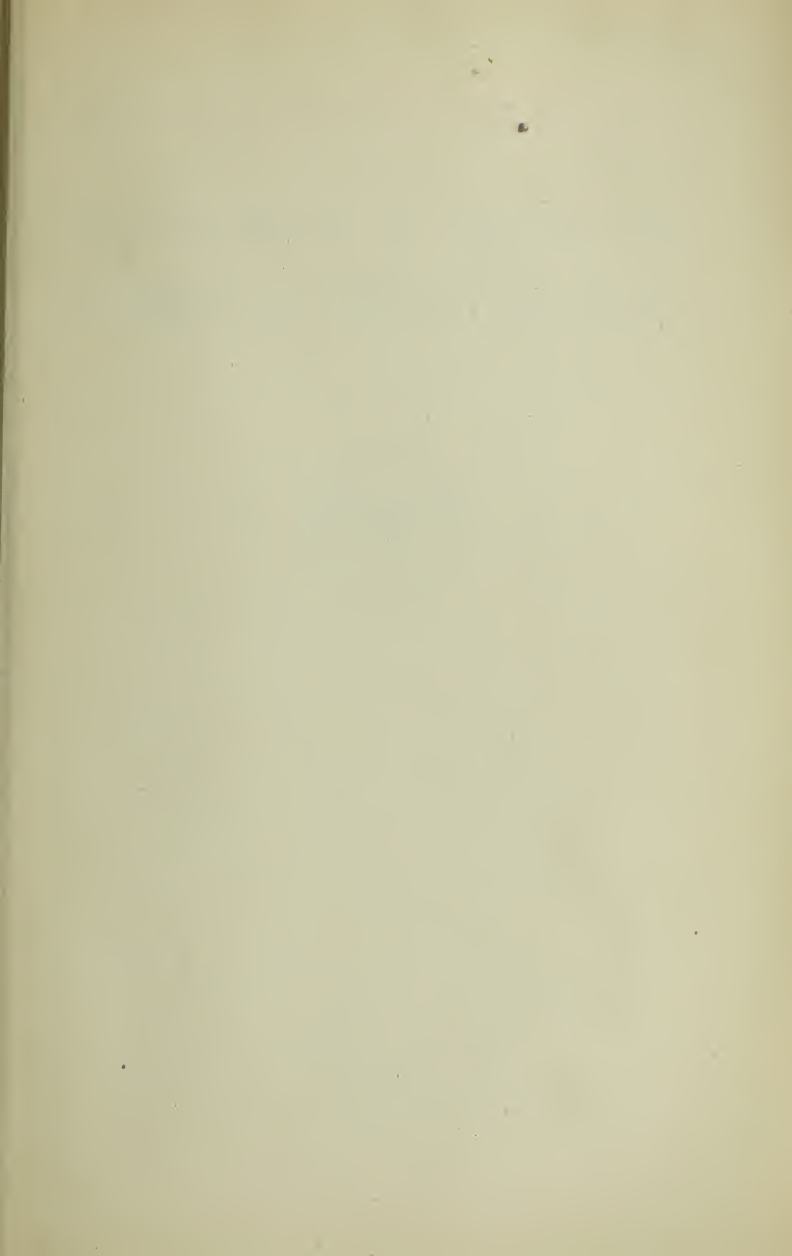
ized, then school boards and tax payers must establish such working conditions that the teacher's ability and effort are not foredoomed to failure.

For years language teachers have been directed to teach their pupils to speak the foreign language. No provision has been made for giving them small classes. The success of an extraordinarily brilliant language teacher, dealing with a class consisting of half a dozen selected pupils, has been held up to them as a standard to be attained in the class of forty average city pupils.

It is perfectly possible to teach grammar and reading to a class of forty pupils, but no teacher can impart a conversational power which is worth the name to a class of more than twenty pupils, and fifteen would be better.

The shortage of trained teachers in modern languages will probably long continue. The simplest way to offset the lack is by eliminating at the end of the first year those pupils who show no aptitude for language work, but it is questionable whether under present conditions such a policy is either educationally sound or defensible. This would, however, operate to some extent to reduce the number of pupils taking work in the modern languages. There is no gain in continuing modern language classes under inferior teachers. This results only in poor work, waste of time, and discouragement on the part of the pupil, while the teacher and the work are completely discredited.

While the progress of the last few years in modern foreign language instruction should not be cause for self-satisfaction on the part of school authorities or school teachers, both may well feel proud of the results attained, when all factors are taken into consideration.



SCHOOL DOCUMENT NO. 3 — 1920
BOSTON PUBLIC SCHOOLS
REAPPOINTMENTS OF TEACHERS AND
MEMBERS OF SUPERVISING STAFF



BOSTON
PRINTING DEPARTMENT
1920

EXCESS TEACHERS.

In the High School of Practical Arts there are three teachers in excess of the number allowed under the Regulations. During the current school year one of the teachers was assigned to the Director of Household Science and Arts and a second one absent on leave for the year, so that the school had really but one excess teacher for the current school year. I recommend that these teachers be allowed to remain in the school until the fall, at which time the membership may warrant their retention; if not, their transfer may be effected.

In the South Boston High School there is one assistant in excess of the number allowed by the Regulations. I recommend that this teacher be allowed to remain in the district until the fall, at which time the membership may warrant her retention; if not, her transfer may be effected.

In the George Putnam Intermediate District there is one assistant in excess of the number allowed by the Regulations. I recommend that this teacher be allowed to remain in the district until the fall, at which time the membership may warrant her retention; if not, her transfer may be effected.

In the Gilbert Stuart District there is one assistant in excess of the number allowed by the Regulations. I recommend that this teacher be allowed to remain in the district until the fall, at which time the membership may warrant her retention; if not, her transfer may be effected.

In the Martin District there is one assistant in excess of the number allowed by the Regulations. I recommend that this teacher be allowed to remain in the district until the fall, at which time the membership may warrant her retention; if not, her transfer may be effected.

In the Oliver Wendell Holmes Intermediate District there is one assistant in excess of the number allowed

by the Regulations. I recommend that this teacher be allowed to remain in the district until the fall, at which time the membership may warrant her retention; if not, her transfer may be effected.

SUBMASTERS.

In the following districts submasters are employed in excess of the Regulations:

Bigelow.—One. This submaster has been allowed in previous years. I recommend that a teacher of said rank be continued in the foregoing district during the school year ending August 31, 1921.

Elihu Greenwood.—One. This submaster has been allowed in previous years for assignment to the Fairmount School, in which there are several upper grades. I recommend that a teacher of said rank be continued in the foregoing district during the school year ending August 31, 1921.

Frederic W. Lincoln.—One. This submaster divides his time between the Frederic W. Lincoln and Oliver Hazard Perry Districts. I recommend that a teacher of said rank be continued in the foregoing district during the school year ending August 31, 1921.

Sherwin.—One. This submaster has been allowed in previous years. I recommend that a teacher of said rank be continued in the foregoing district during the school year ending August 31, 1921.

Thomas N. Hart.—One. This submaster has been allowed in previous years. I recommend that a teacher of said rank be continued in the foregoing district during the school year ending August 31, 1921.

In each of the following districts there is one additional submaster in charge of the pupils above the third grade as authorized by the School Committee:

Charles Sumner.

Dearborn. .

Eliot.

Henry L. Pierce.

Hugh O'Brien.

Oliver Wendell Holmes Intermediate.

Phillips Brooks.

Quincy.

Samuel Adams.

Thomas Gardner.

Washington.

Wendell Phillips.

I recommend that they be continued during the school year ending August 31, 1921.

MASTER'S ASSISTANT.

Abraham Lincoln.— One. This master's assistant has been allowed in previous years. I recommend that a teacher of said rank be continued in the foregoing district during the school year ending August 31, 1921.

FIRST ASSISTANTS, GRAMMAR SCHOOL.

In each of the following districts the position of first assistant, grammar school, is to be abolished on the retirement of the present incumbents:

Bowditch.— One.

Bowdoin.— One.

Charles Sumner.— One.

Dearborn.— One.

Gaston.— One.

Harvard-Frothingham.— One.

Henry L. Pierce.— One.

Jefferson.— One.

John Winthrop.— One.

Longfellow.— One.

Norcross.— One.

Oliver Hazard Perry.— One.

Rice.— One.

Robert G. Shaw.— One.

Ulysses S. Grant.— One.

FIRST ASSISTANTS IN CHARGE.

In each of the following districts there is one first assistant in charge in excess or in addition to the number authorized by the Regulations:

Abraham Lincoln.

Edward Everett.

Eliot.

Gilbert Stuart.

Harvard-Frothingham.

Hyde.

Martin.

Oliver Wendell Holmes Intermediate.

Sherwin.

Washington.

Wells.

I recommend that teachers of said rank be continued in the foregoing districts during the school year ending August 31, 1921.

FIRST ASSISTANT, PRIMARY SCHOOL.

In the following district the position of first assistant, primary school, has been continued from year to year by order of the Board:

Hugh O'Brien District, Samuel W. Mason School.—
One.

I recommend that the rank be continued during the school year ending August 31, 1921.

FIRST ASSISTANT IN CHARGE, SPECIAL CLASSES.

In the Wendell Phillips District there is one first assistant in charge, special classes, in excess of the number allowed by the Regulations. This is due to the falling off in membership for this year. It is expected, however, that the numbers in the fall will warrant her retention.

TEACHER TAKEN FROM TENURE.

There is one teacher in the service who was once appointed to serve during the pleasure of the School Committee but who has since been taken from tenure. This teacher has been reappointed for the year ending August 31, 1921:

Eliot District.— One.

CONSERVATION OF EYESIGHT CLASSES.

I here re-establish conservation of eyesight classes in the following districts for the year 1920-21:

Dudley.— One.

Franklin.— One.

Harvard-Frothingham.— One.

Norcross.— One.

Wells.— One.

SPECIAL CLASSES.

I hereby re-establish special classes in the following districts for the year 1920-21:

Abraham Lincoln.— Two.

Agassiz.— One.

Bennett.— One.

Bigelow.— Two.

Blackinton-John Cheverus.— One.

Bowdoin.— Three.

Bunker Hill.— Two.

Chapman.— One.

Dearborn.— One.

Dillaway.— One.

Dudley.— One.

Dwight.— Six.

Edward Everett.— One.

Eliot.— Three.

Everett.— One.

Franklin.— One.

George Putnam Intermediate.— Two.

Hancock.— Three.

Harvard-Frothingham.— Three.
Henry L. Pierce.— One.
Hugh O'Brien.— One.
Hyde.— One.
Jefferson.— One.
John Marshall.— One.
John Winthrop.— One.
Lawrence.— One.
Lewis.— One.
Longfellow.— One.
Lowell.— Two.
Mather.— One.
Oliver Hazard Perry.— One.
Phillip Brooks.— One.
Prescott.— One.
Quincy.— Two.
Roger Wolcott.— One.
Samuel Adams.— One.
Sherwin.— Seven.
Theodore Lyman.— One.
Thomas N. Hart.— One.
Ulysses S. Grant.— One.
Washington.— Two.
Wells.— Three.
Wendell Phillips.— Six.
William E. Endicott.— One.
William E. Russell.— One.

SPEECH IMPROVEMENT CLASSES.

I hereby re-establish speech improvement classes in the following districts for the year 1920-21:

Chapman.— One.
Dwight.— One.
Franklin.— One.
Hancock.— One.
Hyde.— One.
John A. Andrew.— One.
Julia Ward Howe.— One.

Martin.— One.

Mary Hemenway.— One.

Quincy.— One.

Washington.— One.

OPEN-AIR, UNGRADED AND SPECIAL ENGLISH CLASSES.

I recommend that the same policy be pursued regarding the establishment of open-air, ungraded and special English classes as in 1919-20, and that no action concerning the re-establishment of these classes for the year 1920-21 be taken at the present time. Action should be postponed until after the opening of the schools in September, when orders will be presented to the School Committee regarding the establishment of all such classes on the basis of the registration at that time. I recommend that all open-air, ungraded and special English classes at present authorized be discontinued at the close of the current school year and that such classes be re-established only by special order of the School Committee.

RAPID ADVANCEMENT CLASSES.

I recommend that no action concerning the re-establishment of rapid advancement classes for the year 1920-21 be taken at the present time. Action should be postponed until after the opening of the schools in September, when orders will be presented to the School Committee regarding the establishment of all such classes on the basis of the registration for the ensuing school year. I recommend that all rapid advancement classes at present authorized be discontinued at the close of the current school year and that such classes be re-established in the future only by special orders of the School Committee.

DISCIPLINARY DAY CLASSES.

I hereby re-establish disciplinary day classes in the following district for the year 1920-21:

Julia Ward Howe.— Two.

PART I.

REAPPOINTMENTS OF PRINCIPALS AND MEMBERS
OF THE SUPERVISING STAFF.

APPOINTED: *To serve during the pleasure of the School Committee.*

Gaston District.— Master, Josephine A. Powers.
Lawrence District.— Master, Thomas J. Sheahan.
Norcross District.— Master, Mary R. Thomas.
 Director of Medical Inspection, William H. Devine.
 Director of Physical Training, Nathaniel J. Young.
 Director of Special Classes, Ada M. Fitts.
 First Assistant in Manual Arts, Helen E. Cleaves.
 Assistant in Manual Arts, Laura W. Cook.
 School Nurse, Daisy D. McBurnie.

APPOINTED: *To serve for the term ending August 31, 1921.*

South Boston High School.— Head Master, Samuel F. Tower.
West Roxbury High School.— Head Master, Maurice J. Lacey.
Blackinton-John Cheverus District.— Master, John Carroll.
Dwight District.— Master, Hugh J. McElaney.
Horace Mann School.— Principal, Mabel E. Adams.
John A. Andrew District.— Master, Edgar L. Raub.
John Marshall District.— Master, Chester H. Wilbar.
John Winthrop District.— Master, James A. Crowley.
Julia Ward Howe District.— Master, Clarence H. Jones.
Oliver Wendell Holmes Intermediate District.— Master, Alvin P. Wagg.
Prescott District.— Master, Archer M. Nickerson.
William Lloyd Garrison District.— Master, Mary E. Keyes.
 Chief Examiner, Joel Hatheway.
 Director of Penmanship, Bertha A. Connor.
 Director of Salesmanship, Isabel C. Bacon.
 First Assistant Director of Manual Arts, Edward C. Emerson.
 First Assistant Director of Practice and Training, Katharine L. King.
 Assistant Directors of Manual Arts, Francis L. Bain, Daniel W. O'Brien.
 Assistant Director of Music, Francis M. Findlay.
 Assistant Director of Practice and Training, Madeline B. Driscoll.
 First Assistant in Manual Arts, Florence O. Bean.
 Assistant in Manual Arts, Flora L. Enright.
 Assistant in Music, Mabel T. Hackett.
 Research Assistant, Harriet M. Barthelmess.
 Vocational Assistants, Ethel S. Fletcher, Margaret M. Sallaway, Irving O. Scott.
 School Nurses, Edith C. Baldwin, Florence I. Bolles, Theresa A. Dolan,
 Emily G. Donovan, Theresa V. Kelley, Anna B. McCue, Evelyn F.
 McLaughlin, Catherine C. Mealey, Mary I. Oakes, Catherine D.
 Nolan, Mary B. O'Donnell, Roberta E. Pollard, Dorothy E. Ripley,
 Marion C. Sullivan.

PART II.

REAPPOINTMENTS OF SUBORDINATE TEACHERS.

NOTE.—Physical training teachers in Normal, High and Latin Schools are given under Part III.

NORMAL SCHOOL.

Largest number of pupils belonging at any time between September 1, 1919, and April 1, 1920	246
TEACHERS.— Entitled to 15 regular teachers	15
<i>Now serving on tenure</i>	14
Appointed: <i>To serve during the pleasure of the School Com- mittee.</i> — Master, Head of Department, J. Mace Andress	1
	— 15

PUBLIC LATIN SCHOOL.

TEACHERS.— Entitled to 31 regular teachers	31
<i>Now serving on tenure</i>	22
Appointed: <i>To serve during the pleasure of the School Com- mittee.</i> — Master, Head of Department, William R. Morse; Junior Masters, Ralph M. Corson, Max Levine	3
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Junior Masters, Elmer R. Bowker, Wilfred F. Kelley, Edward F. McKay, James D. Ryan	4
	— 29
In addition to the above-named staff of permanent teachers there were during the school year 1919–20: Two junior assistants	2
	— 31

GIRLS' LATIN SCHOOL.

TEACHERS.— Entitled to 24 regular teachers	24
<i>Now serving on tenure</i>	18
Appointed: <i>To serve during the pleasure of the School Com- mittee.</i> — Master, Head of Department, John E. Denham; Assistant, Mary E. Greene	2
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Junior Master, Harrison G. Meserve	1
	— 21
In addition to the above-named staff of permanent teachers there were during the school year 1919–20: Two assistants assigned from elementary schools. One of these assistants was absent on leave for the school year and her place was filled by a junior assistant	3
	— 24

BRIGHTON HIGH SCHOOL.

TEACHERS.— Entitled to 18 regular teachers	18
<i>Now serving on tenure</i>	10
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Junior Master, Joseph A. Leary; Assistants, Ethel T. Burpee, Katharine C. Collins, Sylvia E. Donegan, Caroline H. McCarthy, Elizabeth I. O'Neill; Assistant Instructor in Commercial Branches, Mary G. McEvoy; Assistant Instructor in Manual Arts, Marjorie Loring	8
	— 18
In addition to the above-named staff of permanent teachers there were during the school year 1919-20: Two temporary teachers; one filling the place of a regular teacher absent on leave, the other serving as a teacher coach in addition to his other duties	2
	— 20

CHARLESTOWN HIGH SCHOOL.

TEACHERS.— Entitled to 17 regular teachers	17
<i>Now serving on tenure</i>	11
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Dorothea Cushing, Marion Keeler; Co-ordinator, Maurice J. Moriarty; Co-operative Instructors, Joseph H. Connors, Robert W. Ford	5
	— 16
In addition to the above-named staff of permanent teachers there were during the school year 1919-20: One assistant assigned from an elementary school	1
	— 17

DORCHESTER HIGH SCHOOL.

TEACHERS.— Entitled to 67 regular teachers	67
<i>Now serving on tenure</i>	40
Appointed: <i>To serve during the pleasure of the School Com- mittee.</i> — Junior Master, Jared W. Davis; Assistants, Helen F. Keefe, Margaret C. Kennedy, Fannie Myerson, Elizabeth K. Nagle, Marion A. Sayward, Helen A. Taff, Mary A. Ward, Edna Willis; Assistant Instructor in Commercial Branches, Florence L. Hamblin; Industrial Instructors, Alice M. Croke, Theresa A. Fitzpatrick	12
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Junior Masters, Richard P. Bonney, John J. Connolly, Jr., Ernest J. Hall, William J. Pendergast, Arthur W. Ross; Assistants, Amy B. Baker, Mary L. Carty, Alice E. Murphy, Mary L. Sheehy; Coöperative Instructors, Arlon O. Bacon, Clarence W. Goodridge; Assistant Instructors in Commercial Branches, Marie L. Brewster, Anna J. Dolan	13
	— 65

In addition to the above-named staff of permanent teachers there was during the school year 1919-20: One junior assistant. There was, however, one teacher on leave of absence for the school year

1
—
66

EAST BOSTON HIGH SCHOOL.

TEACHERS.—Entitled to 23 regular teachers	23
<i>Now serving on tenure</i>	16
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Junior Master, Walter H. Naylor; Assistant, Grace W. Heartz; Instructor in Commercial Branches, Lewis A. Newton	3
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Bertha C. Marshall, Ruth E. Thomas; Assistant Instructor in Commercial Branches, Ellen A. Regan	3
	— 22

ENGLISH HIGH SCHOOL.

TEACHERS.—Entitled to 62 regular teachers	62
<i>Now serving on tenure</i>	50
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Master, Head of Department, Charles W. French; Junior Master, Earl M. Benson	2
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Master, Head of Department, Fred R. Miller; Junior Masters, Walter I. Chapman, George A. Cummings, Miah J. Falvey, Merrill C. Hill, Walter L. Leighton, Louis A. McCoy, Edward J. Wall, Edward N. Wilson	9
	— 61

In addition to the above-named staff of permanent teachers there were during the school year 1919-20: Three junior assistants

3
—
64

There were, however, one master, head of department, and one junior master who are in charge of annexes, doing no teaching and who are charged with pupil hours, so that the school was operated with 62 teachers.

GIRLS' HIGH SCHOOL.

TEACHERS.—Entitled to 59 regular teachers	59
<i>Now serving on tenure</i>	45
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistants, Margaret Little, Ethel R. Moulton	2
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Master, Head of Department, C. Ross Appler; Assistants, Mary D. Chadwick, Mary M. Devlin, Marion A. Guilford, Mary G. Hickey, Mildred E. Smith; Assistant Instructor in Commercial Branches, Ellen G. Wiseman	7
	— 54

In addition to the above-named staff of permanent teachers there were during the school year 1919-20: One assistant assigned from an elementary school, one junior assistant, and one temporary teacher

3
—
57

HIGH SCHOOL OF COMMERCE.

TEACHERS.—Entitled to 49 regular teachers 49
Now serving on tenure 30
 Appointed: *To serve during the pleasure of the School Committee.*— Junior Master, Thomas E. Mahoney; Instructor in Commercial Branches, George A. Fellows 2
 Appointed: *To serve for the term ending August 31, 1921.*— Master Head of Department, Leonard B. Moulton; Junior Masters, Robert Bitzer, John B. Casey, Louis J. Fish, Walter L. McLean, William F. Remmert, Henry A. Sasserno, F. Edwin Walter; Instructors in Commercial Branches, Rema J. Henderson, Walter E. Leidner, Edward J. McCarthy 11

— 43

In addition to the above-named staff of permanent teachers there were during the school year 1919-20: Two junior assistants and two temporary teachers

4
—
47

HIGH SCHOOL OF PRACTICAL ARTS.

TEACHERS.— Entitled to 21 regular teachers 21
Now serving on tenure 22
 Appointed: *To serve during the pleasure of the School Committee.*— Assistant, Jennie E. Bailey 1
 Appointed: *To serve for the year ending August 31, 1921.*— Industrial Instructor, Mary W. Cauley 1

— 24

One of the above-named staff of permanent teachers was absent on leave for the school year and another teacher was assigned to the Department of Household Science and Arts for the school year.

HYDE PARK HIGH SCHOOL.

TEACHERS.— Entitled to 26 regular teachers 26
Now serving on tenure 10
 Appointed: *To serve during the pleasure of the School Committee.*— Master, Head of Department, Emerson Rice; First Assistant, Head of Department, Laura B. Doran; Junior Masters, William M. Edmonstone, Warren W. Petrie; Coordinator, James C. Clarke; Instructor in Coöperative Branches, Martin L. Olsen 6
 Appointed: *To serve for the term ending August 31, 1921.*— Junior Master, Daniel L. Daley; Assistants, Ruby H. Cole, Marion Gee, Mary F. Osborne; Industrial Instructors, Sarah L. Cauley, Marguerite S. King; Coöperative Instructors, Thomas Aykroyd, Andrew J. Leahy 8

— 24

In addition to the above-named staff of permanent teachers there were during the school year 1919-20: One junior assistant and one temporary teacher 2

 26

MECHANIC ARTS HIGH SCHOOL.

Now serving on tenure 38
 Appointed: *To serve for the term ending August 31, 1921.*—
 Junior Masters, Francis J. Emery, James P. Farnsworth,
 Francis J. Horgan; Instructors, Mechanical Departments,
 Joseph R. B. Dunn, James H. Philbrick 5

 43

ROXBURY HIGH SCHOOL.

TEACHERS.— Entitled to 39 regular teachers 39
Now serving on tenure 24
 Appointed: *To serve during the pleasure of the School Com-*
mittee.— Assistant, Marion L. Barker; Instructor in Com-
 mercial Branches, Harold J. Smith 2
 Appointed: *To serve for the term ending August 31, 1921.*—
 Junior Master, Dennis C. Haley; Assistants, Ellen M.
 Greany, Ethel N. Pope; Assistant Instructors in Commercial
 Branches, Mary K. Austin, Alice H. M. Power, Gertrude L.
 Ward; Assistant Instructor in Salesmanship, Mary G.
 Jennings 7

 33

In addition to the above-named staff of permanent teachers, there were during the school year 1919-20: Three temporary teachers, two junior assistants, and one assistant assigned from an elementary school 6

 39

SOUTH BOSTON HIGH SCHOOL.

TEACHERS.— Entitled to 28 regular teachers 28
Now serving on tenure 19
 Appointed: *To serve during the pleasure of the School Com-*
mittee.— Master, Arthur F. Campbell; Assistant, Lucy M.
 Greeley; Assistant Instructors in Commercial Branches,
 Irene H. Corkery, Anna T. Kelley 4
 Appointed: *To serve for the term ending August 31, 1921.*—
 Junior Masters, Joseph A. Hennessey, William F. Linehan;
 Assistants, Mary C. Grandfield, Alice G. Porter; Assistant
 Instructor in Salesmanship, Alice M. Falvey; Assistant
 Instructor in Commercial Branches, Elizabeth A. Nash 6

 29

WEST ROXBURY HIGH SCHOOL.

TEACHERS.— Entitled to 28 regular teachers. 28
Now serving on tenure 22
 Appointed: *To serve during the pleasure of the School Com-*
mittee.— Assistant, Hazel M. Purmort; Instructor in Com-
 mercial Branches, Thaddeus J. Keefe 2

Appointed: *To serve for the term ending August 31, 1921.*—
 Junior Masters, Arthur V. Donnelan, Thomas P. Dooley;
 Andrew R. McCormick; Assistant Instructor in Com-
 mercial Branches, Mary G. Gould 4
 — 28

BOSTON CLERICAL SCHOOL.

TEACHERS.— Entitled to 8 regular teachers 8
 Appointed: *To serve during the pleasure of the School Com-
 mittee.*— Head Instructor in Bookkeeping, George L. Hoff-
 acker; Clerical Assistant, Winifred H. Rogers 2
 Appointed: *To serve for the term ending August 31, 1921.*—
 Clerical Instructor, Charles A. Cederberg; Clerical Assis-
 tants, Helen J. Gilmore, Mary L. Knodell, Katherine W.
 Ross, Mae G. Smith 5
 — 7

RESERVOIR TEACHERS.

	Assigned From	Assigned To
* Ellen A. Barry.....	Samuel Adams District.	Roxbury High School.
Alice A. Brophy.....	John Winthrop District.	Girls' Latin School.
Frances Burnce.....	Hancock District.	Girls' Latin School.
* Marion Daniels.....	Wells District.	Dorchester High School.
Elizabeth E. Haggerty...	Henry L. Pierce District.	Girls' High School.
Eleanor M. Kyle.....	Phillips Brooks District.	Charlestown High School.
Mary J. Mohan.....	Hugh O'Brien District.	Roxbury High School.

* Serving as junior assistants.

ABRAHAM LINCOLN DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging
 between September 1, 1919, and April 1, 1920,— 69 in un-
 graded classes; 36 in special classes; 40 in open air class;
 1,380 in Grades I to VI; 424 in Grades VII and VIII; 91 in
 Grade IX.
 Average number of pupils belonging for the period September
 1, 1919, to April 1, 1920 1,987
 TEACHERS.— Entitled to 48 grade teachers, 2 teachers of
 ungraded classes, 2 teachers of special classes, and 1 teacher
 of an open air class 53
Now serving on tenure 37
 Appointed: *To serve for the term ending August 31 1921.*—
 Instructors, Special Classes, Elizabeth J. King, Kathleen
 MacHugh; Assistants, Margaret M. Casey, Anna J. Corliss,
 Anastasia Ford, Patrick L. Geary, Mary E. McLean, Edith
 M. O'Neil, Elizabeth F. Sheehan, Hannah E. Tobin 10
 — 47

KINDERGARTENS.— Teachers.— Number entitled to	4
<i>Now serving on tenure</i>	2

AGASSIZ DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 18 in special class; 54 in prevocational classes; 527 in Grades I to VI; 147 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	694
TEACHERS.— Entitled to 17 grade teachers, 1 teacher of a special class, and 2 teachers of prevocational classes	20
<i>Now serving on tenure</i>	16
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Prevocational Assistant, Frances A. Putnam	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Prevocational Assistant, Elsie V. Karlson	1
	— 18
KINDERGARTENS.— Teachers.— Number entitled to	3
<i>Now serving on tenure</i>	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant, Christine Chapin	1
	— 2

BENNETT DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 16 in special class; 1,263 in Grades I to VI; 331 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,560
TEACHERS.— Entitled to 40 grade teachers, and 1 teacher of a special class	41
<i>Now serving on tenure</i>	26
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Instructor, Special Class, Mabel M. Leach; Assistants, Edith D. Rodgers, Helen E. Rourke	3
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Agnes L. Benson, Mary F. Cavanaugh, Alice G. Flynn, Margaret E. O'Brien, Mary L. O'Callaghan, Frances E. O'Leary, Dorothy C. Peterson, Ruth V. Tobin	8
	— 37
KINDERGARTENS.— Teachers.— Number entitled to	6
<i>Now serving on tenure</i>	3
Appointed: <i>To serve for the term ending August 31, 1921.</i> — First Assistant, Katherine D. Warren; Assistants, Marion E. Jose, Emma V. Thomas	3
	— 6

BIGELOW DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 29 in special classes; 641 in Grades I to VI; 213 in Grades VII and VIII.

REAPPOINTMENTS.

19

Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	866
TEACHERS.— Entitled to 21 grade teachers and 2 teachers of special classes	23
<i>Now serving on tenure</i>	22
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Nellie A. Condon	1
	— 23
KINDERGARTENS.— Teachers.— Number entitled to	2
<i>Now serving on tenure</i>	1

BLACKINTON-JOHN CHEVERUS DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 16 in special classes; 1,154 in Grades I to VI; 290 in Grades VII and VIII.

Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,392
TEACHERS.— Entitled to 36 grade teachers and 1 teacher of a special class	37
<i>Now serving on tenure</i>	26
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Sub-master in charge, Harry Brooks; Instructor, Special Class, Eleanor A. Rowan	2
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Marie J. Alexander, Helen A. Cole, Marie C. Doherty, Agnes J. Martin, Zetta Morrison	5
	— 33
KINDERGARTENS.— Teachers.— Number entitled to	7
<i>Now serving on tenure</i>	5
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Loretta M. Kennedy	1
	— 6

BOWDITCH DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 32 in open air class; 830 in Grades I to VI; 220 in Grades VII and VIII.

Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,066
TEACHERS.— Entitled to 26 grade teachers and 1 teacher of an open air class	27
<i>Now serving on tenure</i>	21
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Josephine M. Friery	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Dorothy M. Burnham, Gladys M. Parker, Gertrude C. Roemer	3
	— 25
KINDERGARTENS.— Teachers.— Number entitled to	4

<i>Now serving on tenure</i>	2	
Appointed: <i>To serve for the term ending August 31, 1921.</i> —		
Assistants, Irene M. Foster, Grace F. Sullivan	2	4
	—	

BOWDOIN DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging between September 1, 1919, and April 1, 1920,—46 in special classes; 10 in special English class; 61 in open air classes; 758 in Grades I to VI; 176 in Grades VII and VIII.		
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920		856
TEACHERS.—Entitled to 23 grade teachers, 3 teachers of special classes, and 2 teachers of open air classes		
		28
<i>Now serving on tenure</i>	16	
Appointed: <i>To serve for the term ending August 31, 1921.</i> —		
Instructor, Special Class, Emma A. Timberlake; Assistants, Willa M. Ashton, Mary J. Boyhan, Mary J. Deegan, Dora L. Lombard, Rose E. Segal	6	22
	—	
KINDERGARTENS.—Teachers.—Number entitled to		
		4
<i>Now serving on tenure</i>	3	
Appointed: <i>To serve for the term ending August 31, 1921.</i> —		
Assistant, Anastasia C. McCarthy	1	4
	—	

BUNKER HILL DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging between September 1, 1919, and April 1, 1920,—34 in special classes; 476 in Grades I to VI; 112 in Grades VII and VIII.		
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920		608
TEACHERS.—Entitled to 15 grade teachers, and 2 teachers of special classes		
		17
<i>Now serving on tenure</i>	11	
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Assistant, Agnes L. Harrington	1	
Appointed: <i>To serve for the term ending August 31, 1921.</i> —		
Instructors, Special Classes, Katharine A. McCarron, Margaret McCrillis; Assistants, Sarah M. Logue, Josephine A. Power	4	16
	—	
KINDERGARTENS.—Teachers.—Number entitled to		
		2
<i>Now serving on tenure</i>	1	
Appointed: <i>To serve during the pleasure of the School Committee.</i> —First Assistant, Amy A. Snelling	1	2
	—	

CHAPMAN DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging between September 1, 1919, and April 1, 1920,—18 in special class; 899 in Grades I to VI; 258 in Grades VII and VIII.

Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,142
TEACHERS.— Entitled to 29 grade teachers, and 1 teacher of a special class	30
<i>Now serving on tenure</i>	23
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Adeline R. Cropper	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Instructor, Special Class, Marion G. Cashman; Assistants, Florence C. Cunningham, Regina G. O'Connor	3
	— 27
KINDERGARTENS.— Teachers.— Number entitled to	4
<i>Now serving on tenure</i>	2
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Madeleine C. Hayes, Louise V. Tivnan	2
	— 4

CHARLES SUMNER DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 747 in Grades I to VI; 283 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,024
TEACHERS.— Entitled to 26 grade teachers	26
<i>Now serving on tenure</i>	19
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Submaster, Joseph I. Whalen; Assistants, Lillian M. Connors, Elizabeth M. Healy, Grace D. Lennon	4
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant, Helen L. Clausmeyer	1
	— 24
KINDERGARTENS.— Teachers.— Number entitled to	5
<i>Now serving on tenure</i>	3
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant, Marion E. Kelley	1
	— 4

CHRISTOPHER GIBSON DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 705 in Grades I to VI; 267 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	960
TEACHERS.— Entitled to 24 grade teachers	24
<i>Now serving on tenure</i>	21
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Agnes J. Boland, Josephine V. Hogan	2
	— 23
KINDERGARTENS.— Teachers.— Number entitled to	2
<i>Now serving on tenure</i>	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant, Pauline Miller	1
	— 2

DEARBORN DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 33 in ungraded class; 15 in special class; 60 in prevocational classes; 1,379 in Grades I to VI; 272 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,731
TEACHERS.—Entitled to 41 grade teachers, 1 teacher of an ungraded class, 1 teacher of a special class, and 2 teachers of prevocational classes 45	
<i>Now serving on tenure</i>	36
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Assistant, Anna M. Devine	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> —Prevocational Assistant, Louise Macdonald; Assistants, Philip J. Bond, Alice C. Coleman, Elizabeth A. Crowley, Annie M. Ducey, Marguerite F. Maloney 6	
	— 43
KINDERGARTENS.—Teachers.—Number entitled to 5	
<i>Now serving on tenure</i>	3
Appointed: <i>To serve for the term ending August 31, 1921.</i> —Assistant, Frances R. Kent 1	
	— 4

DILLAWAY DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 15 in special class; 903 in Grades I to VI; 241 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,124
TEACHERS.—Entitled to 28 grade teachers, and 1 teacher of a special class 29	
<i>Now serving on tenure</i>	23
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Master's Assistant, Ella M. Donkin; Assistants, Eleanor A. Gallant, Florence M. Hawes 3	
Appointed: <i>To serve for the term ending August 31, 1921.</i> —Instructor, Special Class, Dorothy C. Foley 1	
	— 27
KINDERGARTENS.—Teachers.—Number entitled to 4	
<i>Now serving on tenure</i>	2
Appointed: <i>To serve for the term ending August 31, 1921.</i> —First Assistant, Viola F. Dickey; Assistant, Catherine M. McCance 2	
	— 4

DUDLEY DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 15 in special class; 15 in class for conservation of eyesight; 109 in pre-

vocational classes; 820 in Grades I to VI; 258 in Grades VII and VIII.

Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,033
TEACHERS.— Entitled to 27 grade teachers, 1 teacher of a special class, 3 teachers of prevocational classes, and 1 teacher of a class for the conservation of eyesight	32
<i>Now serving on tenure</i>	21
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Prevocational Assistant, Grace L. Pomeroy	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Submaster, John J. Mahoney; Assistants, Helen K. Burke, Sarah E. Cohen	3
	— 25
KINDERGARTENS.— Teachers.— Number entitled to	4
<i>Now serving on tenure</i>	2
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Helen C. McLean, Bertha A. McPherson	2
	— 4

DWIGHT DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 30 in ungraded class; 91 in special classes; 32 in open-air class; 489 in Grades I to VI; 164 in Grades VII and VIII.

Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	793
TEACHERS.— Entitled to 16 grade teachers, 1 teacher of an ungraded class, 6 teachers of special classes; and 1 teacher of an open-air class	24
<i>Now serving on tenure</i>	15
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Instructor, Special Class, Mary M. Bickford	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Instructors, Special Classes, Helen L. Burnham, Alice S. Kenyon, Esther P. Thumim; Assistant, Francis J. Driscoll	4
	— 20
KINDERGARTENS.— Teachers.— Number entitled to	2
Appointed: <i>To serve for the term ending August 31, 1921.</i> — First Assistant, Mary V. Sullivan; Assistant, Eleanor G. McGrath	2

EDMUND P. TILESTON DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 45 in hospital classes; 619 in Grades I to VI; 175 in Grades VII and VIII.

Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	824
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TEACHERS.— Entitled to 20 grade teachers and 3 teachers of hospital classes	23
<i>Now serving on tenure</i>	12
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Edith F. Cotton	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Louise M. Borre, Ruth E. Delano, Gertrude Freiderman, Viola W. Hume, Leonora P. Lordan, James H. Nolan, Madge G. Ross, Lena Seitlin, Lelia P. Severy	9
	— 22
KINDERGARTENS.— Teachers.— Number entitled to	4
<i>Now serving on tenure</i>	1
Appointed: <i>To serve during the pleasure of the School Committee.</i> — First Assistant, Gertrude M. Glynn	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant, Alma C. McKenna	1
	— 3

EDWARD EVERETT DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 15 in special class; 1,216 in Grades I to VI; 314 in Grades VII and VIII. Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,524
TEACHERS.— Entitled to 38 grade teachers and 1 teacher of a special class	39
<i>Now serving on tenure</i>	29
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Madeline M. Ellis, Margaret M. Giblin, Agnes P. Goggin, Ruby E. Ladd, Mary O. Nolan, Gertrude J. Rhilinger, Marguerite R. Young	7
	— 36
KINDERGARTENS.— Teachers.— Number entitled to	4
<i>Now serving on tenure</i>	3
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Mabel A. Hernance	1
	— 4

ELIHU GREENWOOD DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 926 in Grades I to VI; 312 in Grades VII and VIII. Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,225
TEACHERS.— Entitled to 31 grade teachers	31
<i>Now serving on tenure</i>	21
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Lillian B. Blackmer, Ruth E. Clarke, Emma E. Dvorak, Mary M. J. Egar, Margaret L. Fisher, Louise J. Smith, Edith I. Swanson	7
	— 28

KINDERGARTENS.— Teachers.— Number entitled to	6
<i>Now serving on tenure</i>	4
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistants, Grace M. Dugan, Priscilla E. White	2
	— 6

ELIOT DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 68 in ungraded classes; 47 in special classes; 28 in special English class; 37 in prevocational class; 2,019 in Grades I to VI; 243 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	2,405
TEACHERS.— Entitled to 57 grade teachers, 2 teachers of ungraded classes, 3 teachers of special classes, 1 teacher of a special English class, and 1 teacher of a prevocational class	64
<i>Now serving on tenure</i>	42
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Prevocational Assistant, Sheba E. Berry	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Submaster, William S. Lenihan; Instructors, Special Classes, Mary A. Connors, Helen C. Godvin; Assistants, Esther E. Cahill, Margaret T. Casey, Mary A. E. Connolly, Bessie F. Crimmins, Mildred A. Dacey, Mary O. Duvall, Joanna M. Kilmain, Grace F. Laughlin, Mary E. Lawlor, Alice McNally, Frances S. Rodgers, Marion L. Scannell	15
	— 58
KINDERGARTENS.— Teachers.— Number entitled to	4
<i>Now serving on tenure</i>	2
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Alice M. Doran	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant, Sarah F. Cotter	1
	— 4

EMERSON DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 1,107 in Grades I to VI; 242 in Grades VII and VIII; 79 in Grade IX.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,410
TEACHERS.— Entitled to 35 grade teachers	35
<i>Now serving on tenure</i>	24
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistants, Alice J. Barry, Grace M. Curry, Anna E. McGirr, Dorothy J. McNally	4
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Mary E. Buckley, Mary B. Flynn, Agnes C. Lavery, Catherine F. Murphy, Grace M. Toland	5
	— 33

KINDERGARTENS.— Teachers.— Number entitled to	5
<i>Now serving on tenure</i>	2
Appointed: <i>To serve during the pleasure of the School Com-</i> <i>mittee.</i> — Assistant, Margaret M. Cody	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Elizabeth Cashman, Mary R. Gray	2
	— 5

EVERETT DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 18 in special class; 570 in Grades I to VI; 142 in Grades VII and VIII	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	701
TEACHERS.— Entitled to 18 grade teachers, and 1 teacher of a special class	19
<i>Now serving on tenure</i>	14
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Instructor, Special Class, Jessie M. Baker; Assistant, Mary J. O'Day	2
	— 16
KINDERGARTENS.— Teachers.— Number entitled to	2
<i>Now serving on tenure</i>	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant, Helen R. Dyer	1
	— 2

FRANCIS PARKMAN DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 529 in Grades I to VI; 145 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	645
TEACHERS.— Entitled to 17 grade teachers	17
<i>Now serving on tenure</i>	8
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Submaster, Thomas L. Mea; Assistants, Agnes C. Brennan, Helen C. Conway, Leonore F. Davis, Frances M. Holleran, Helen R. Jones, Caroline C. Moy, Mary E. Mulligan	8
	— 16
KINDERGARTENS.— Teachers.— Number entitled to	2
<i>Now serving on tenure</i>	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — First Assistant, Olivia B. Hazelton	1
	— 2

FRANKLIN DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging
between September 1, 1919, and April 1, 1920,— 17 in special
class; 12 in class for conservation of eyesight; 849 in Grades
I to VI; 134 in Grades VII and VIII.

Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	976
TEACHERS.— Entitled to 24 grade teachers, 1 teacher of a special class, and 1 teacher of a class for the conservation of eyesight	26
Now serving on tenure	21
Appointed: To serve for the term ending August 31, 1921.— Assistant, Eva Gordon	1
	— 22
KINDERGARTENS.— Teachers.— Number entitled to	5
Now serving on tenure	3
Appointed: To serve during the pleasure of the School Committee.— Assistant, Anna M. Hooke	1
	— 4

FREDERIC W. LINCOLN DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 12 in ungraded classes; 527 in Grades I to VI; 157 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	680
TEACHERS.— Entitled to 17 grade teachers	17
Now serving on tenure	14
Appointed: To serve during the pleasure of the School Committee.— Submaster, Raymond H. Young	1
Appointed: To serve for the term ending August 31, 1921.— Assistants, Grace M. MacDougall, Margaret M. Stapleton	2
	— 17
KINDERGARTENS.— Teachers.— Number entitled to	3
Now serving on tenure	2
Appointed: To serve for the term ending August 31, 1921.— Assistant, N. Medora Thorndike	1
	— 3

GASTON DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 799 in Grades I to VI; 196 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	989
TEACHERS.— Entitled to 25 grade teachers	25
Now serving on tenure	20
Appointed: To serve for the term ending August 31, 1921.— Assistants, Katherine F. Breen, Ida E. Penell, Emma A. Sellew	3
	— 23
KINDERGARTENS.— Teachers.— Number entitled to	2
Now serving on tenure	2

GEORGE PUTNAM INTERMEDIATE DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging between September 1, 1919, and April 1, 1920,—31 in special classes; 676 in Grades I to VI; 486 in Grades VII and VIII; 104 in Grade IX.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,271
TEACHERS.—Entitled to 31 grade teachers, and 2 teachers of special classes 33	
<i>Now serving on tenure</i>	23
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Master's Assistant, Eliza D. Graham; Assistants, Sigrid B. Anderson, Josephine M. Gately, Florence J. Keelan, 4	
Appointed: <i>To serve for the term ending August 31, 1921.</i> —Submaster, E. Joseph Goulart; Assistants, M. Irene Bills, John L. Mayer, Cora M. Nicoll, Marion B. Nye, Marguerite M. Patterson, Marjorie G. Smith 7	
	— 34
KINDERGARTENS.—Teachers.—Number entitled to 2	
<i>Now serving on tenure</i>	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> —Assistant, Helen E. Freeman 1	
	— 2

GILBERT STUART DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging between September 1, 1919, and April 1, 1920,—624 in Grades I to VI; 197 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	806
TEACHERS.—Entitled to 20 grade teachers 20	
<i>Now serving on tenure</i>	16
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Assistant, Mabel L. Augusta 1	
Appointed: <i>To serve for the term ending August 31, 1921.</i> —Assistants, Bessie I. Breslasky, Margaret M. Hayes, Mary C. Murphy, Muriel L. Staples 4	
	— 21
KINDERGARTENS.—Teachers.—Number entitled to 4	
<i>Now serving on tenure</i>	3

HANCOCK DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging between September 1, 1919, and April 1, 1920,—74 in ungraded classes; 45 in special classes; 41 in special English class; 40 in prevocational class; 74 in open air classes; 1,722 in Grades I to VI; 231 in Grades VII and VIII; 50 in Grade IX.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	2,185

TEACHERS.— Entitled to 51 grade teachers, 2 teachers of ungraded classes, 3 teachers of special classes, 1 teacher of a special English class, 1 teacher of a prevocational class, and 2 teachers of open air classes	60
<i>Now serving on tenure</i>	40
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Mary T. Dowling	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Instructor, Special Class, Lillian Ginsberg; Assistants, Louise F. Carangelo, Elizabeth Drea, Marion E. Hines, Loretto R. Kelley, Mary R. Mansfield, Mary W. O'Brien, Dorothy L. Quinn, Mary L. Walsh	9
	— 50
KINDERGARTENS.— Teachers.— Number entitled to	14
<i>Now serving on tenure</i>	11
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Lillian Cherry, Euphemia D. Christie, Elise W. Thurston	3
	— 14

HARVARD-FROTHINGHAM DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 33 in special classes; 12 in class for conservation of eyesight; 782 in Grades I to VI; 249 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,049
TEACHERS.— Entitled to 26 grade teachers, 2 teachers of special classes, and 1 teacher of a class for the conservation of eyesight	29
<i>Now serving on tenure</i>	24
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Submaster in charge, Charles E. Quirk	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Submaster, Robert B. Houghton; Instructors, Special Classes, Mildred E. Frazier, Elizabeth W. O. Paterson; Assistant, Mary C. Falvey	4
	— 29
KINDERGARTENS.— Teachers.— Number entitled to	4
<i>Now serving on tenure</i>	3

HENRY GREW DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 476 in Grades I to VI; 153 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	619
TEACHERS.— Entitled to 15 grade teachers	15

<i>Now serving on tenure</i>	9	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Blanche L. Donohoe, Gladys P. Douglass, Bessie A. Lovewell, Agnes L. Miller, Emma R. Plummer, Florence P. Saunders	6	15
KINDERGARTENS.— Teachers.— Number entitled to	—	4
<i>Now serving on tenure</i>	3	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant, Cornelia R. Hinkley	1	4

HENRY L. PIERCE DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 15 in ungraded classes; 1,234 in Grades I to VI; 397 in Grades VII and VIII; 105 in Grade IX.		
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920		1,693
TEACHERS.— Entitled to 44 grade teachers		44
<i>Now serving on tenure</i>	30	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Submaster, John J. Connelly; Instructor, Special Class, Anna G. Cauley; Assistants, Helen A. Barry, Anna M. Buckley, Katherine M. Dullea, Mary E. Kennelly, Mary Kirby, Florence Ridlon, Edith C. Scanlan, Alice L. Sheahan, Dora Slepian	11	41
KINDERGARTENS.— Teachers.— Number entitled to	—	4
<i>Now serving on tenure</i>	3	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant, Mary M. McEttrick	1	4

HORACE MANN SCHOOL.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 7 in ungraded classes; 108 in Grades I to VI; 32 in Grades VII and VIII.		
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920		139
TEACHERS.— Entitled to 15 grade teachers		15
<i>Now serving on tenure</i>	12	
Appointed: <i>To serve during the pleasure of the School Com- mittee.</i> — Assistant, Jane J. Wood	1	13

HUGH O'BRIEN DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 22 in special class; 1,124 in Grades I to VI; 352 in Grades VII and VIII.		
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920		1,479

TEACHERS.— Entitled to 37 grade teachers, and 1 teacher of a special class	38
Now serving on tenure	28
Appointed: <i>To serve during the pleasure of the School Committee.</i> — First Assistant in Charge, Emma F. Wilson	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Submaster, William G. O'Hare; Assistants, Helen M. Baker, Frederick L. Mahoney, Emma A. McDonald, Evelyn L. Murphy, Katharine M. Murphy	6
—	35
KINDERGARTENS.— Teachers.— Number entitled to	6
Now serving on tenure	2
Appointed: <i>To serve for the term ending August 31, 1921.</i> — First Assistant, Margaret A. Chick; Assistants, Mary A. Galligan, Alice G. Muldoon	3
—	5

HYDE DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 17 in special class; 41 in prevocational class; 510 in Grades I to VI; 137 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	690
TEACHERS.— Entitled to 16 grade teachers, 1 teacher of a special class, and 1 teacher of a prevocational class	18
Now serving on tenure	18
KINDERGARTENS.— Teachers.— Number entitled to	6
Now serving on tenure	3
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Ruth A. Gillis	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant, Anna E. Minihan	1
—	5

JEFFERSON DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 15 in special class; 1,008 in Grades I to VI; 318 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,283
TEACHERS.— Entitled to 33 grade teachers, and 1 teacher of a special class	34
Now serving on tenure	27
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Master's Assistant in Charge, Margaret T. Dooley	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Louise K. Faul, Clarice H. McIntyre, Marjorie H. Outwater, Judith Prendergast	4
—	32

KINDERGARTENS.— Teachers.— Number entitled to	6
<i>Now serving on tenure</i>	3
Appointed: <i>To serve during the pleasure of the School Com-</i> <i>mittee.</i> — Assistant, Frances E. Fiske	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — First Assistant, Mary F. Powers; Assistant, Ellen P. Colle- ran	2
	— 6

JOHN A. ANDREW DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 781 in Grades I to VI; 219 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	983
TEACHERS.— Entitled to 25 grade teachers	25
<i>Now serving on tenure</i>	14
Appointed: <i>To serve during the pleasure of the School Com-</i> <i>mittee.</i> — Assistant, Ruth M. Drury	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Submaster, Valentine F. Dunn; First Assistant in Charge, Mary C. Gartland; Assistants, Katharine A. Collins, Dorothy F. Coughlan, Alice F. Magner, Mary E. O'Connor, Helen B. Reidy	7
	— 22
KINDERGARTENS.— Teachers.— Number entitled to	2
<i>Now serving on tenure</i>	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant, Mildred J. Hannon	1
	— 2

JOHN MARSHALL DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 15 in special class; 1,089 in Grades I to VI.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,085
TEACHERS.— Entitled to 27 grade teachers, and 1 teacher of a special class	28
<i>Now serving on tenure</i>	22
Appointed: <i>To serve during the pleasure of the School Com-</i> <i>mittee.</i> — Assistant, Madeline M. Daley	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Master's Assistant, Charlotte Rafter; Assistants, Mary M. Facey, Anna M. Galvin, Margaret M. J. McAndrew	4
	— 27
KINDERGARTENS.— Teachers.— Number entitled to	6
<i>Now serving on tenure</i>	2
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Ruth K. FitzGerald, M. Isabel Sullivan	2
	— 4

JOHN WINTHROP DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 20 in special class; 1,261 in Grades I to VI; 309 in Grades VII and VIII; 66 in Grade IX.

Average number of pupils belonging for the period September 1, 1919, to April 1, 1920 1,614

TEACHERS.— Entitled to 41 grade teachers, and 1 teacher of a special class 42

Now serving on tenure 30

Appointed: *To serve for the term ending August 31, 1921.*— Assistants, Marjory T. Doherty, James L. Duffy, Gladys P. Eaton, Agnes F. McGoldrick, Margherita R. Milliken, Alice Pike. Selma S. Stern, Marguerite G. Sullivan, Helen M. Tanck 9

— 39

KINDERGARTENS.— Teachers.— Number entitled to 5

Now serving on tenure 3

Appointed: *To serve during the pleasure of the School Committee.*— Assistant, Sally S. Allen 1

— 4

JULIA WARD HOWE DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 17 in special class; 1,038 in Grades I to VI.

Average number of pupils belonging for the period September 1, 1919, to April 1, 1920 1,035

TEACHERS.— Entitled to 26 grade teachers and 1 teacher of a special class 27

Now serving on tenure 16

Appointed: *To serve for the term ending August 31, 1921.*— Master's Assistant, Ellen Carver; Assistants, Marion Goldstein, Dorothy M. G. Kenney, M. F. Martina McDonald, Helen I. Mulliken, Mary V. O'Neill, Theresa A. O'Reilly 7

— 23

KINDERGARTENS.— Teachers.— Number entitled to 2

Now serving on tenure 1

Appointed: *To serve for the term ending August 31, 1921.*— Assistant, Marguerite R. Foley 1

— 2

LAWRENCE DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 15 in special class; 65 in prevocational classes; 689 in Grades I to VI; 108 in Grades VII and VIII.

Average number of pupils belonging for the period September 1, 1919, to April 1, 1920 841

TEACHERS.— Entitled to 20 grade teachers, 1 teacher of a special class and 2 teachers of prevocational classes 23

<i>Now serving on tenure</i>	13
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Prevocational Assistants, Ellen B. Donohoe, Emma J. Ross	2
Appointed: <i>To serve for the term ending August 31, 1921.</i> —Instructor, Special Class, Annie Golden; Assistants, Julia V. Foley, Mary A. Kelley, C. Louise Shea, Margaret M. Welch,	5
	— 20
KINDERGARTENS.—Teachers.—Number entitled to	1
<i>Now serving on tenure</i>	1

LEWIS INTERMEDIATE DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging between September 1, 1919, and April 1, 1920,—701 in Grades I to VI; 582 in Grades VII and VIII; 144 in Grade IX.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,413
TEACHERS.—Entitled to 35 grade teachers	35
<i>Now serving on tenure</i>	18
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Assistants, Marguerite C. Cloney, Mary G. Murray, Lillian C. O'Neil	3
Appointed: <i>To serve for the term ending August 31, 1921.</i> —Master's Assistant, Clara E. Oakman; Assistants, Mary M. Byrne, Mary M. Callahan, Louise J. Chambers, Helen T. Cullen, Mary I. Foley, Helen T. Hannon, Rose M. Hickey, Rose A. Lewis, Margaret E. Maloney, Eileen A. Roche, Katharine M. Schubarth	12
	— 33
KINDERGARTENS.—Teachers.—Number entitled to	4
<i>Now serving on tenure</i>	2
Appointed: <i>To serve for the term ending August 31, 1921.</i> —First Assistant, Margaret S. Cauty; Assistant, Gertrude L. Mazur	2
	— 4

LONGFELLOW DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging between September 1, 1919, and April 1, 1920,—14 in special class; 1,030 in Grades I to VI; 288 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,362
TEACHERS.—Entitled to 33 grade teachers and 1 teacher of a special class	34
<i>Now serving on tenure</i>	22
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Assistants, Stella M. Ives, Margaret E. O'Connor	2
Appointed: <i>To serve for the term ending August 31, 1921.</i> —Instructor, Special Class, Mary A. Hartigan; Assistants, Mildred A. Bamberg, Katharine M. Copithorne, Mary O.	

Mackey, Gertrude C. Mellen, Helen B. Mendall, Helen G. Morgan	7	31
	—	4
KINDERGARTENS.— Teachers.— Number entitled to		4
<i>Now serving on tenure</i>	1	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — First Assistant, Agnes R. Maloy	1	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant, Josephine McCarthy	1	3
	—	

LOWELL DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,—31 in special classes; 26 in open air class; 856 in Grades I to VI; 223 in Grades VII and VIII.		
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920		1,065
TEACHERS.— Entitled to 27 grade teachers, 2 teachers of special classes, and 1 teacher of an open air class		30
<i>Now serving on tenure</i>	20	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — First Assistant in Charge, Jessie K. Hampton	1	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Instructor, Special Class, Mildred A. Bradley; Assistants, Rose A. Brady, Josephine L. Broderick, Helen G. Keefe, Mary E. Loughman	5	26
	—	4
KINDERGARTENS.— Teachers.— Number entitled to		4
<i>Now serving on tenure</i>	3	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant, Mary C. Turnbull	1	4
	—	

MARTIN DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,—439 in Grades I to VI; 147 in Grades VII and VIII.		
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920		565
TEACHERS.— Entitled to 14 grade teachers		14
<i>Now serving on tenure</i>		15
KINDERGARTENS.— Teachers.— Number entitled to		4
<i>Now serving on tenure</i>	2	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Elizabeth M. Laurie, Winnifred M. McEvoy	2	4
	—	

MARY HEMENWAY DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,—1,541 in Grades I to VI; 437 in Grades VII and VIII; 129 in Grade IX.

Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	2,099
TEACHERS.— Entitled to 52 grade teachers	52
Now serving on tenure	32
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Grace D. O'Brien	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Susan B. Barker, Annie F. Barry, Louise F. Barry, Agnes G. Brennan, Ruth I. Byrne, Charlotte L. Childs, Francis A. Duffey, Winifred A. Fohlin, Agnes M. Golden, Elizabeth A. Good, Madeline F. Goodale, Ellen C. Hennessey, Marjorie F. Keating, Louise E. Mooney, Grace A. Murray, May A. O'Brien, Bridget C. Ridge, Helen Rosnosky	18
	— 51
KINDERGARTENS.— Teachers.— Number entitled to	7
Now serving on tenure	3
Appointed: <i>To serve during the pleasure of the School Committee.</i> — First Assistant, Loretta W. Dinn	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Olivia F. O'Donnell, Consuelo S. Sedley	2
	— 6

MATHER DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 18 in special classes; 127 in prevocational classes; 1,784 in Grades I to VI; 483 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	2,362
TEACHERS.— Entitled to 57 grade teachers, 1 teacher of a special class, and 4 teachers of prevocational classes	62
Now serving on tenure	41
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Inez M. Jameson	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Submaster, Frederick A. Dunfey; First Assistant in Charge, Prevocational Classes, Agnes G. Nash; Instructor, Special Class, Linna M. Ferrer; Assistants, Gladys F. Burnham, Mary M. Cronin, Elsie M. Eckman, A. Loretto Garrity, Bertha F. Gavin, Gertrude N. Mendell, Mary F. Nolan, Marion E. Rafferty, Elizabeth F. Sarjeant, Winifred I. Swallow, Marion Turner, Agnes G. White	15
	— 57
KINDERGARTENS.— Teachers.— Number entitled to	7
Now serving on tenure	3
Appointed: <i>To serve during the pleasure of the School Committee.</i> — First Assistant, Edith G. Hunter; Assistant, Elizabeth B. Elcock	2
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant, Jessie E. Small	1
	— 6

MINOT DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging between September 1, 1919, and April 1, 1920,—415 in Grades I to VI; 142 in Grades VII and VIII.

Average number of pupils belonging for the period September 1, 1919, to April 1, 1920 552

TEACHERS.—Entitled to 14 grade teachers 14

Now serving on tenure 10

Appointed: *To serve for the term ending August 31, 1921.*—
 First Assistant in Charge, A. Isabelle Macarthy; Assistants,
 Katherine Moran, Cecilia G. Norton 3

— 13

KINDERGARTENS.—Teachers.—Number entitled to 2

Now serving on tenure 1

Appointed: *To serve for the term ending August 31, 1921.*—
 Assistant, Emily F. McLaughlin 1

— 2

NORCROSS DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging between September 1, 1919, and April 1, 1920,—36 in ungraded classes; 106 in open air classes; 12 in class for conservation of eyesight; 629 in Grades I to VI; 186 in Grades VII and VIII.

Average number of pupils belonging for the period September 1, 1919, to April 1, 1920 929

TEACHERS.—Entitled to 20 grade teachers, 1 teacher of an ungraded class, 3 teachers of open air classes, and 1 teacher of a class for the conservation of eyesight 25

Now serving on tenure 19

Appointed: *To serve during the pleasure of the School Committee.*—First Assistant in Charge, Carrie A. Whittaker 1

Appointed: *To serve for the term ending August 31, 1921.*—
 Assistant, Mary K. Grass 1

— 21

KINDERGARTENS.—Teachers.—Number entitled to 4

Now serving on tenure 2

Appointed: *To serve for the term ending August 31, 1921.*—
 Assistant, Ruth A. Bulger 1

— 3

OLIVER HAZARD PERRY DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging between September 1, 1919, and April 1, 1920,—6 in ungraded classes; 17 in special class; 610 in Grades I to VI; 158 in Grades VII and VIII.

Average number of pupils belonging for the period September 1, 1919, to April 1, 1920 779

TEACHERS.— Entitled to 19 grade teachers, 1 teacher of an ungraded class and 1 teacher of a special class	21
<i>Now serving on tenure</i>	16
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Master's Assistant in Charge, Louise A. Pieper	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant, Marie C. MacGrath	1
	— 18
KINDERGARTENS.— Teachers.— Number entitled to	2
<i>Now serving on tenure</i>	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant, Elizabeth Pishon	1
	— 2

OLIVER WENDELL HOLMES INTERMEDIATE DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 136 in Grades I to VI; 757 in Grades VII and VIII; 236 in Grade IX.

Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,112
TEACHERS.— Entitled to 28 grade teachers	28
<i>Now serving on tenure</i>	27
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Submaster, Joseph F. O'Sullivan; Assistant, Dorothy L. Devine	2
	— 29

PHILLIPS BROOKS DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 17 in special class; 30 in rapid advancement class; 1,154 in Grades I to VI; 296 in Grades VII and VIII.

Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,471
TEACHERS.— Entitled to 36 grade teachers, 1 teacher of a special class, and 1 teacher of a rapid advancement class	38
<i>Now serving on tenure</i>	24
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Anna C. Gallagher	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Instructor, Special Class, Harriet E. Gage; Assistants, Jessie L. Barth, Adelaide R. Burke, Alice E. Donoghue, Nelly G. Fannon, Frances M. Murphy, Sara Rice, Anna E. Scully, Frances E. Taylor	9
	— 34
KINDERGARTENS.— Teachers.— Number entitled to	8
<i>Now serving on tenure</i>	3
Appointed: <i>To serve during the pleasure of the School Committee.</i> — First Assistant, Mabel V. Mulrey; Assistant, Irene H. Walsh	2

Appointed: *To serve for the term ending August 31, 1921.*—
 Assistants, Dorothy M. Robinson, Helen M. Sughrue, Goldie
 G. West 3

8

PRESCOTT DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging
 between September 1, 1919, and April 1, 1920,— 16 in special
 class; 38 in prevocational class; 401 in Grades I to VI; 133
 in Grades VII and VIII.

Average number of pupils belonging for the period September 1,
 1919, to April 1, 1920 569

TEACHERS.— Entitled to 13 grade teachers, 1 teacher of a
 special class, and 1 teacher of a prevocational class . . . 15

Now serving on tenure 12

Appointed: *To serve during the pleasure of the School Com-*
mittee.— Prevocational Assistant, Corrina Barry 1

Appointed: *To serve for the term ending August 31, 1921.*—
 Instructor, Special Class, Maria T. Cogger; Assistant,
 Julia E. Hegarty 2

15

KINDERGARTENS.— Teachers.— Number entitled to 1

Now serving on tenure 1

PRINCE DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging
 between September 1, 1919, and April 1, 1920,— 751 in
 Grades I to VI; 282 in Grades VII and VIII.

Average number of pupils belonging for the period September 1,
 1919, to April 1, 1920 1,020

TEACHERS.— Entitled to 26 grade teachers 26

Now serving on tenure 17

Appointed: *To serve during the pleasure of the School Com-*
mittee.— Assistant, M. Elizabeth Gay 1

Appointed: *To serve for the term ending August 31, 1921.*—
 Assistants, Constance Bisbee, Mary E. D. Devereaux,
 Marion A. Fields, Vera A. Kingsford, Marion M. Payzant,
 Mae B. Reynolds 6

24

KINDERGARTENS.— Teacher.— Number entitled to 2

Now serving on tenure 1

Appointed: *To serve for the term ending August 31, 1921.*—
 Assistant, Marion E. Godfrey 1

2

QUINCY DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging
 between September 1, 1919, and April 1, 1920,— 31 in
 ungraded class; 30 in special classes; 103 in open-air classes;
 80 in prevocational classes; 590 in Grades I to VI; 138 in
 Grades VII and VIII.

Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	952
TEACHERS.— Entitled to 18 grade teachers, 1 teacher of an ungraded class, 2 teachers of special classes, 3 teachers of prevocational classes, and 3 teachers of open air classes	27
<i>Now serving on tenure</i>	18
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Prevocational Assistants, Mary A. A. Haverty, Eva L. Morley; Assistant, Mary J. McLaughlin	3
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Instructors, Special Classes, Helen F. Cummings, Grace H. K. Jarvis; Assistants, Jane U. Barry, Margaret E. Gallagher,	4
	— 25
KINDERGARTENS.— Teachers.— Number entitled to	10
<i>Now serving on tenure</i>	4
Appointed: <i>To serve for the term ending August 31, 1921.</i> — First Assistants, Helen M. Jameson, Abigail Linnehan; Assistants, Catherine E. Miley, Frances E. O'Neill, T. Marion Parmelee, Marion E. Puttner	6
	— 10

RICE DISTRICT.

ELEMENTARY GRADES— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 681 in Grades I to VI; 214 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	882
TEACHERS.— Entitled to 22 grade teachers	22
<i>Now serving on tenure</i>	17
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Anna C. Hughes, Catherine F. McCabe, Kathleen G. Tobin.	3
	— 20
KINDERGARTENS.— Teachers.— Number entitled to	2
<i>Now serving on tenure</i>	1

ROBERT GOULD SHAW DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 994 in Grades I to VI; 267 in Grades VII and VIII; 69 in Grade IX.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,311
TEACHERS.— Entitled to 33 grade teachers	33
<i>Now serving on tenure</i>	19
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistants, Mary L. Bradley, Mary M. Lordan, Elizabeth L. Willis	3
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Marion E. Curley, Julia A. Driscoll, Alice C. English, Bertha O. Ives, Margaret M. Moore, Margaret F. Murray, Dorothy G. O'Connor, Helen E. Sullivan	8
	— 30

KINDERGARTENS.— Teachers.— Number entitled to	3
<i>Now serving on tenure</i>	1
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Leone C. Sheen	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — First Assistant, Adelaide B. Hearn	1
	— 3

ROGER WOLCOTT DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 15 in special class; 2,148 in Grades I to VI; 615 in Grades VII and VIII. Average number of pupils belonging for the period September 1, 1919, to April 1, 1920 2,758

TEACHERS.— Entitled to 69 grade teachers and 1 teacher of a special class	70
<i>Now serving on tenure</i>	33
Appointed: <i>To serve during the pleasure of the School Committee.</i> — First Assistant in Charge, Bertha C. Quinnam; Assistants, Alvia A. Colton, Esther E. Cunningham, Florence Driscoll, Marguerite Elliott, Jessie G. Ogilvie, Dora F. Smith	7
Appointed: <i>To serve for the term ending August 31, 1921.</i> — First Assistant in Charge, Katharine C. Merrick; Instructor, Special Class, Beulah O. Berry; Assistants, Eva V. Adelson, Hilda L. Anderson, Rose Arenson, Julia A. Barrett, Annie S. Belinsky, Irene E. Cox, Francis A. Flynn, Genevieve C. Grass, Regina Hearn, Dorothy Kalker, Marion R. Kanter, Lillian H. Kenney, Helen R. Leary, Mary C. Levins, Grace M. May, Margaret McDonald, Frances B. Mea, Pauline E. Miley, Marie Mullins, Mary M. O'Hearn, Eileen E. Rogers, Gertrude A. Smith, Ellen G. Sullivan, Margaret P. Sullivan, Edith A. West	27
	— 67

KINDERGARTENS.— Teachers.— Number entitled to	15
<i>Now serving on tenure</i>	4
Appointed: <i>To serve during the pleasure of the School Committee.</i> — First Assistant, Josephine L. Kelly	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — First Assistant, Ethel M. Jones; Assistants, Margaret C. Linehan, Lillian P. Levine, Lucy E. McCarthy, Mary Miley, Mary E. Norton, Maria L. Whittredge	7
	— 12

SAMUEL ADAMS DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 11 in special class; 2,143 in Grades I to VI; 350 in Grades VII and VIII. Average number of pupils belonging for the period September 1, 1919, to April 1, 1920 2,457

TEACHERS.— Entitled to 62 grade teachers and 1 teacher of a special class	63
---	----

<i>Now serving on tenure</i>	32	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistants, Bessie M. Lassen, Dorothy S. Starratt	2	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Submaster, John F. Lynch; Assistants, Jeannette Ascolillo, Luetta C. Bolan, Mary M. Carroll, Minnie Colitz, James P. Collins, Elinor G. Cowan, Mary E. Driscoll, Margaret F. Duffy, Josephine B. Gilson, J. Irene E. Kelley, Ellen A. Leahy, Bessie MacBride, Annie V. McGonagle	14	48
	—	14
KINDERGARTENS.— Teachers.— Number entitled to		14
<i>Now serving on tenure</i>	4	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistants, Edith M. Anderson, Frances M. Brierly, Frances M. Miley	3	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — First Assistant, Mildred O'Connell; Assistants, Gladys L. Brown, Mary L. Giblin, Sarah G. Maguire	4	
	—	11

SHERWIN DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 116 in special classes; 62 in prevocational classes; 621 in Grades I to VI; 105 in Grades VII and VIII.		
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920		892
TEACHERS.— Entitled to 18 grade teachers, 8 teachers of special classes, and 2 teachers of prevocational classes		28
<i>Now serving on tenure</i>	20	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — First Assistant in Charge, Special Classes, Katherine C. Coveney; Instructor, Special Class, Anna C. Murdock; Prevocational Assistants, Vincent L. Kelley, Ellen E. Melleney	4	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Submaster, William P. McDonough; Instructors, Special Classes, Emily A. Gunn, Katherine A. Kenney, Anna E. Murphy	4	
	—	28
KINDERGARTENS.— Teachers.— Number entitled to		1
<i>Now serving on tenure</i>		1

SHURTLEFF DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 31 in an ungraded class; 614 in Grades I to VI; 150 in Grades VII and VIII.		
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920		787

TEACHERS.— Entitled to 19 grade teachers and 1 teacher of an ungraded class	20
<i>Now serving on tenure</i>	14
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Sadie G. Kennedy	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Margaret L. Collins, Mary E. Donovan, Marie C. Reardon, Anastasia K. White	4
	— 19
KINDERGARTENS.— Teachers.— Number entitled to	2
<i>Now serving on tenure</i>	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant, Adelaide W. Andrews	1
	— 2

THEODORE LYMAN DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 18 in special class; 162 in prevocational classes; 1,068 in Grades I to VI; 195 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,421
TEACHERS.— Entitled to 32 grade teachers, 1 teacher of a special class, and 5 teachers of prevocational classes	38
<i>Now serving on tenure</i>	16
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Prevocational Assistants, Mary E. McCormack, Leonora E. Scolley; Assistants, Bessie M. Cosgrove, Mildred M. Doyle, Louisa A. Gilbert, Veronica R. Grant	6
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Prevocational Assistants, Sarah N. Boyce, Claire A. Bulger; Assistants, E. Cecelia Bowen, Lillian R. Burke, Agnes F. Cullen, Helen M. Dooley, Kathryn M. Goff, Kathryn V. Riley, Louise W. Vaughan	9
	— 31
KINDERGARTENS.— Teachers.— Number entitled to	7
<i>Now serving on tenure</i>	2
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Catherine Cohen	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — First Assistant, Mary L. Holmes; Assistants, Bertha K. Rice, Eva A. Sanger	3
	— 6

THOMAS GARDNER DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 1,209 in Grades I to VI; 278 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,428
TEACHERS.— Entitled to 37 grade teachers	37

<i>Now serving on tenure</i>	27	
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Submaster, Walter C. Winston	1	
Appointed: <i>To serve for the term ending August 31, 1921.</i> —Submaster, James E. Dolan; Assistants, Katherine C. Burns, Catherine R. Day, Irene E. Hutchings, Helen W. Mosher, Edith G. Peterson	6	— 34
KINDERGARTENS.—Teachers.—Number entitled to		7
<i>Now serving on tenure</i>	3	
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Assistant, Dora E. Smith	1	
Appointed: <i>To serve for the term ending August 31, 1921.</i> —Assistant, Flora E. Ellis	1	— 5

THOMAS N. HART DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging between September 1, 1919, and April 1, 1920,—13 in special class; 819 in Grades I to VI; 210 in Grades VII and VIII.		
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920		1,019
TEACHERS.—Entitled to 25 grade teachers and 1 teacher of a special class		26
<i>Now serving on tenure</i>		25
KINDERGARTENS.—Teachers.—Number entitled to		3
<i>Now serving on tenure</i>		3

ULYSSES S. GRANT DISTRICT.

ELEMENTARY GRADES.—Largest number of pupils belonging between September 1, 1919, and April 1, 1920,—33 in ungraded class; 18 in special class; 1,015 in Grades I to VI; 247 in Grades VII and VIII; 88 in Grade IX.		
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920		1,363
TEACHERS.—Entitled to 34 grade teachers, 1 teacher of an ungraded class, and 1 teacher of a special class		36
<i>Now serving on tenure</i>	22	
Appointed: <i>To serve during the pleasure of the School Committee.</i> —Assistants, Catherine M. Burke, Ruth I. Larson	2	
Appointed: <i>To serve for the term ending August 31, 1921.</i> —Assistants, Mabel O. Dolan, Ethel F. Love, Grace V. Lynch, Margaret M. McGowan, Katherine E. Newell, Anna G. Riordan, Dorothy Rosenauer, Mary J. Sullivan, Katherine Vernon	9	— 33
KINDERGARTENS.—Teachers.—Number entitled to		6
<i>Now serving on tenure</i>	3	
Appointed: <i>To serve for the term ending August 31, 1921.</i> —Assistants, Muriel E. Lowell, Irene H. Norris	2	— 5

WARREN DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 788 in Grades I to VI; 197 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	945
TEACHERS.— Entitled to 24 grade teachers	24
<i>Now serving on tenure</i>	21
Appointed: <i>To serve during the pleasure of the School-Committee.</i> — Assistant, Beatrice M. McNally	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant, Mildred F. Carroll	1
	— 23
KINDERGARTENS.— Teachers.— Number entitled to	4
<i>Now serving on tenure</i>	3

WASHINGTON DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 31 in special classes; 73 in open air classes; 1,272 in Grades I to VI; 224 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,569
TEACHERS.— Entitled to 37 grade teachers, 2 teachers of special classes, and 2 teachers of open air classes	41
<i>Now serving on tenure</i>	29
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Submaster, William F. Cannon; Instructors, Special Classes, Loretta J. Alford, Flora E. Hinman; Assistants, C. Frances Doherty, Alice E. Gibbons, Edwina M. Goff, Mary E. Haggerty, Catherine G. McCool, M. Frances McNellis, Mary G. Sullivan	10
	— 39
KINDERGARTENS.— Teachers.— Number entitled to	7
<i>Now serving on tenure</i>	2
Appointed: <i>To serve during the pleasure of the School Committee.</i> — First Assistant, Josephine A. Hurley	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Louise E. Coyle, Mildred C. Goode, Florence E. Johnson	3
	— 6

WASHINGTON ALLSTON DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 790 in Grades I to VI; 328 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,098
TEACHERS.— Entitled to 28 grade teachers	28

<i>Now serving on tenure</i>	19	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Edith B. Ricles	1	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Esther L. Carley, Mary F. Finan, Gertrude M. Finn, Jane V. Gearon, Mary G. Hughes, Ruth G. Hunt, A. Isabelle Timmins	7	
	—	27
KINDERGARTENS.— Teachers.— Number entitled to		3
<i>Now serving on tenure</i>	1	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant, Marion E. Jones	1	
	—	2

WELLS DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 45 in special classes; 68 in open air classes; 12 in class for conservation of eyesight; 1,402 in Grades I to VI; 244 in Grades VII and VIII.		
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920		1,614
TEACHERS.— Entitled to 41 grade teachers, 3 teachers of special classes, 2 teachers of open air classes and 1 teacher of a class for the conservation of eyesight		
		47
<i>Now serving on tenure</i>	33	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Instructor, Special Class, Odessa B. Forknall; Assistant, Laura B. Tolman	2	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Master's Assistant, Selina A. Black; Instructor, Special Class, Elizabeth P. Wright; Assistant, Charlotte M. White	3	
	—	38
KINDERGARTENS.— Teachers.— Number entitled to		9
<i>Now serving on tenure</i>	5	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — First Assistant, Dora L. Adler; Assistants, Mathilde L. Hackebarth, Marie L. Hayes	3	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant, Elizabeth A. Millerick	1	
	—	9

WENDELL PHILLIPS DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 30 in ungraded class; 86 in special classes; 910 in Grades I to VI; 399 in Grades VII and VIII.		
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920		1,337

TEACHERS.— Entitled to 32 grade teachers, 1 teacher of an ungraded class, and 6 teachers of special classes	39
<i>Now serving on tenure</i>	32
Appointed: <i>To serve during the pleasure of the School Committee.</i> — First Assistant in Charge, Special Classes, Cora E. Bigelow	1
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Instructors, Special Classes, Lucy A. FitzGerald, Frances E. Webster; Assistant, Minnie Silverman	3
	— 36
KINDERGARTENS.— Teachers.— Number entitled to	2
<i>Now serving on tenure</i>	1
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistant, Imelda S. Hagan	1
	— 2

WILLIAM E. ENDICOTT DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 15 in special class; 1,601 in Grades I to VI.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	1,593
TEACHERS.— Entitled to 40 grade teachers, and 1 teacher of a special class	41
<i>Now serving on tenure</i>	22
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Assistants, Sarah B. Brennan, Irene L. Hines, Katherine M. Kelly, Margaret J. O'Brien, Jeannette A. Wall,	5
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Master's Assistant, Mary H. Brick; Assistants, Jennie F. Boles, Margaret M. Corcoran, Alice L. Gannon, Grace W. Gormley, Carmelita M. Kavanagh, Helen C. M. Lynch, Alice M. Long, Alice E. Manning, Mary E. Milliken, Marie E. Murray, Dorothy M. O'Brien, Sadie L. Siskind	13
	— 40
KINDERGARTENS.— Teachers.— Number entitled to	11
<i>Now serving on tenure</i>	6
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistants, Hattie E. Fisher, Gertrude L. Sullivan, Helen Weisman	3
	— 9

WILLIAM E. RUSSELL DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 16 in special class; 744 in Grades I to VI; 232 in Grades VII and VIII.	
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	948
TEACHERS.— Entitled to 24 grade teachers, and 1 teacher of a special class	25

<i>Now serving on tenure</i>	21	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Instructor, Special Class, Catherine E. Reardon; Assistant, Adelina G. Misite	2	— 23
KINDERGARTENS.— Teachers.— Number entitled to	2	
<i>Now serving on tenure</i>	1	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant, Barbara E. Sheridan	1	— 2

WILLIAM LLOYD GARRISON DISTRICT.

ELEMENTARY GRADES.— Largest number of pupils belonging between September 1, 1919, and April 1, 1920,— 882 in Grades I to VI.		
Average number of pupils belonging for the period September 1, 1919, to April 1, 1920	855	
TEACHERS.— Entitled to 22 grade teachers	22	
<i>Now serving on tenure</i>	11	
Appointed: <i>To serve during the pleasure of the School Com- mittee.</i> — Assistants, Eleanor P. FitzGerald, Marguerite J. Rich	2	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Submaster, John J. Lally; Master's Assistant, Arvilla T. Harvey; Assistants, Naomi M. Caldwell, B. Hazel Kane, Helen M. Nolan, Mary M. Tierney	6	— 19
KINDERGARTENS.— Teachers.— Number entitled to	6	
<i>Now serving on tenure</i>	2	
Appointed: <i>To serve during the pleasure of the School Com- mittee.</i> — First Assistant, Mary L. Carey	1	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant, Minerva A. Hegameyer	1	— 4

UNASSIGNED TEACHER.

ELEMENTARY GRADES.— Appointed: *To serve for the term end-
ing August 31, 1921.*— Assistant, Ellen S. Bloomfield.

DAY SCHOOL FOR IMMIGRANTS.

Appointed: *To serve for the term ending August 31, 1921.*—
Instructors, Ethel D. Hodson, Caroline A. Shay 2

CONSERVATION OF EYESIGHT CLASSES.

Appointed: *To serve during the pleasure of the School Com-
mittee.*— Instructors, A. Harriet Haley, Alice G. Lincoln 2

Appointed: *To serve for the term ending August 31, 1921.*—
Instructor, Alice G. Ryan 1

— 3

SPEECH IMPROVEMENT CLASSES.

<i>Now serving on tenure</i>	1	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Instructor in Charge, Theresa A. Dacey; Instructors, Desire E. Nickels, Mary J. O'Neill	3	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Instructors, Alice G. Mason, Susie E. O'Neill, Mary Ranney, Gertrude M. Reilly	4	8

MANUAL ARTS.

<i>Now serving on tenure</i>	52	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Shop Foremen, Abraham S. Burnes, Hugh J. Cox, Francis V. Kenney, John Knight, Patrick J. Smith, Orren R. Tarr; Shop Instructors, Norman P. Barker, Frederic A. Coates, Frederick L. Eames, William P. Grady, Carl E. Janson, Francis J. Lee, John J. McCarthy, Arthur E. Olsen, Walter F. Perry, Clarence R. Rees, William M. Rogers, Alden T. Stubbs, Emil W. Zepp; Foremen, Shop Work, J. Maynard Cheney, Celia B. Hallstrom, Harold P. Johnson, William E. O'Connor, Arvid J. Wahlstrom; Instructors, Shop Work, Edward W. Malone, Frederick E. Rau, Percy R. Stewart, Francis O. Wood, William L. Young; Instructor in Manual Training, Bertha A. Pettee; Assistant Instructor in Manual Training, Marion C. Donelson	31	83

HOUSEHOLD SCIENCE AND ARTS.

COOKERY.

<i>Now serving on tenure</i>	33	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Teachers, Agnes L. Callaghan, Ernestine Y. Cox, Mary M. Curry, Alberta M. Whitney	4	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Alice G. Caine, Dorothy M. Davol, Gertrude A. Foley, Mary M. Giblin, Agnes E. Perkins	5	42

SEWING.

<i>Now serving on tenure</i>	45	
Appointed: <i>To serve during the pleasure of the School Committee.</i> — Teachers, Mary L. Bishop, Catherine C. Cogan, Mary B. Howard, Helen R. Smith	4	
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Teachers, Agnes L. Anderson, Genevieve M. Conroy, Eveline B. Cook, Gertrude P. Gordon, Grace E. Jones, Madelon F. Lawrence, Odette M. Lloyd, Helen MacNeil, Marie L. Maguire, Mary A. F. Malloy, Adeline H. McCormick, Catherine L. Murray, Margaret F. Tivnan, Josephine G. Stephens, Margaret H. Sullivan	15	64

PART III.

REAPPOINTMENTS OF TEACHERS OF PHYSICAL
TRAINING AND MILITARY DRILL.

PHYSICAL TRAINING.

<i>Now serving on tenure</i>	1
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MILITARY DRILL.

<i>Now serving on tenure</i>	3
Appointed: <i>To serve for the term ending August 31, 1921.</i> — Assistant Instructors of Military Drill, Joseph McK. Driscoll, George S. Penney	2
	— 5

PHYSICAL TRAINING INSTRUCTORS IN NORMAL, LATIN,
DAY HIGH AND INDUSTRIAL SCHOOLS.*Now serving on tenure:*

Normal School	1
Girls' Latin School	1
Brighton High School	1
Charlestown High School	1
Dorchester High School	1
East Boston High School	1
Girls' High School	2
Roxbury High School	2
South Boston High School	1
West Roxbury High School	1
	— 12

Appointed: *To serve during the pleasure of the School Committee.*— High School of Practical Arts, Instructor in Physical Training, Bessie W. Howard 1

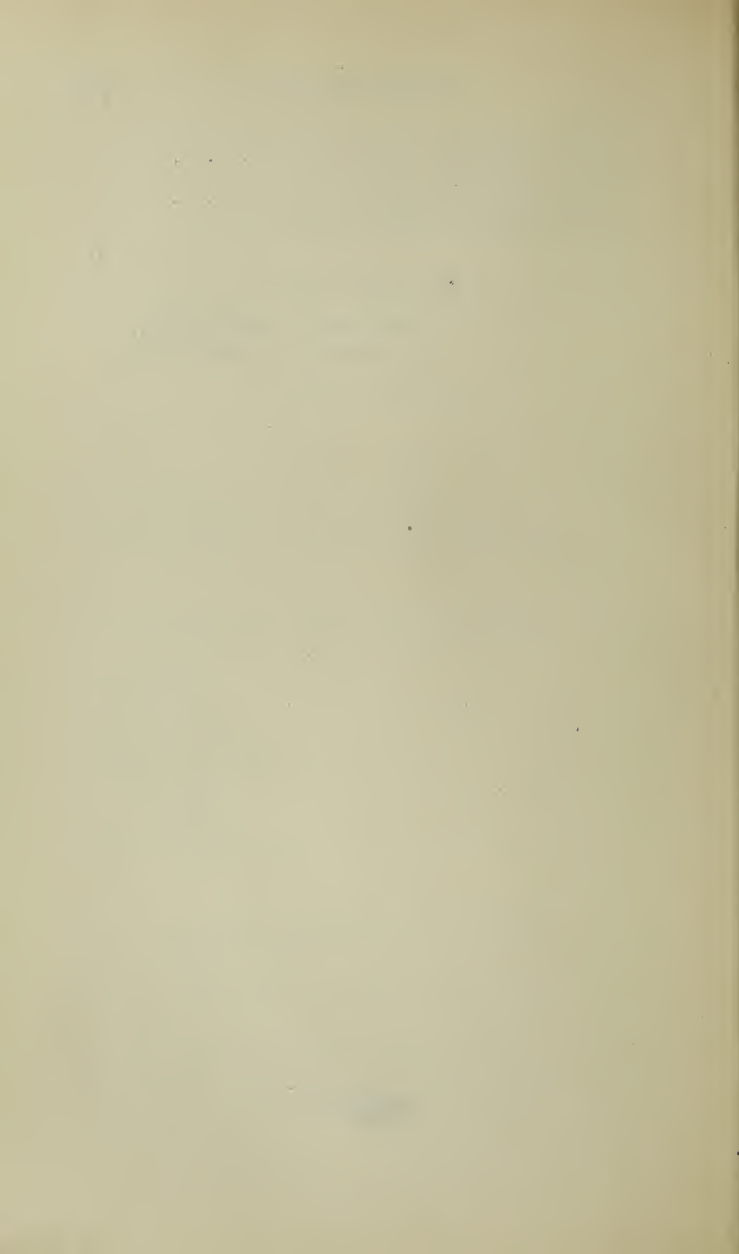
Appointed: *To serve for the term ending August 31, 1921.*—
Girls' Latin School, Instructor in Physical Training, Eleanor H. Quinlan 1
Dorchester High School, Assistant Instructors in Physical Training, Josephine U. Heffernan, Cyrilla R. Mitsch 2
Girls' High School, Instructor in Physical Training, Cordelia G. Torrey; Assistant Instructors in Physical Training, Genevieve A. Burns, Alice M. Gorman, Ellen G. Wiseman, 4

Hyde Park High School, Instructor in Physical Training, Agnes S. Thompson	1	
South Boston High School, Assistant Instructor in Physical Training, Angela C. McManus	1	
West Roxbury High School, Assistant Instructor in Physical Training, Katharine French	1	— 11

Respectfully yours,

FRANK V. THOMPSON,
Superintendent of Public Schools.





SCHOOL DOCUMENT NO. 4 — 1920
BOSTON PUBLIC SCHOOLS
SYLLABUS FOR THE SUMMER REVIEW
ELEMENTARY SCHOOLS



GRADES IV—VIII

BOSTON
PRINTING DEPARTMENT
1920

IN SCHOOL COMMITTEE, June 7, 1920.

Ordered, That the accompanying syllabus for the Summer Review Elementary Schools is hereby authorized as a School Document, and that twenty-five hundred (2,500) copies be printed.

ELLEN M. CRONIN,
Secretary pro tem.

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INTRODUCTION.

The course of study of the Summer Elementary Review Schools must be essentially the course of study of the regular schools. The aim, therefore, of this outline of work is to select for review subject-matter essential to the various grades.

The proposals which follow are made to be of assistance to the teachers in their endeavor to obtain the results for which the Summer Review Schools were established. The children are sent to the different review schools on account of various deficiencies in their regular work. The first duty, then, is a diagnosis of the symptoms before attempting to apply any remedy. An attempt should be made to localize individual needs, because the point is to administer to the particular need of the individual. The teacher, naturally, should organize her class by dividing the children into groups having similar needs.

That kind of organization means more or less individual instruction. Each pupil must realize that he is working out his own salvation. His progress must be the result of his own efforts. Under this system he is taught "how to study," which means a great deal towards his future success.

After all, there is no general method of teaching every subject everywhere to all kinds of pupils. The mode of procedure must be decided by each teacher according to her best judgment of the conditions confronting her.

After the teacher has learned the needs of her pupils and grouped them accordingly, a time schedule should be made. As the term progresses the time laid down for each particular phase of work should be adjusted to keep pace with the changing group needs. Certain

suggestions as to time divisions are made in the course of study. They are simply advisory.

COMMITTEES.

John C. Brodhead, Assistant Superintendent in Charge.

GENERAL COMMITTEE.

James T. Donovan, Chairman; George W. Gammon, Joseph E. Lynch, William P. McDonough, Raymond H. Young.

SUB-COMMITTEES.

Arithmetic.—Raymond H. Young, Chairman; Eugene H. Dorr, Charles H. Early, John McDonald, Frederick J. Murphy, Sidney T. H. Northcott, George H. Pearce, Charles A. A. Weber, Charles G. Wetherbee.

English.—George W. Gammon, Chairman; Agnes E. Barry, Annie T. Burke, Jenny W. Cronin, Ora M. McDonnell, Elizabeth W. O'Connor, Roger A. Powers, Charlotte Rafter, Gertrude A. White.

Geography.—Joseph E. Lynch, Chairman; Grace C. Maloney, John J. Maloney, Edward J. Muldoon, Walter E. Winston.

History.—William P. McDonough, Chairman; Florence A. McDonough, Catherine F. Sheehan, James F. Tyrrell, Charles A. A. Weber, Gertrude E. Welch.

Modern Foreign Language.—James T. Donovan, Chairman; Katharine E. Barr, Anna A. Maguire, Mary Polk, Marie A. Solano.

GENERAL SUGGESTIONS TO TEACHERS.

PURPOSE.

The establishment of the summer review school is an attempt to provide for individual differences among children. The school is intended to be a remedy for the too great retardation of pupils. It was created to remove deficiencies and permit children to go on with their grades. That condition of affairs which in the past meant inefficiency and increased cost is being to a large extent remedied.

This new type of school is not a vacation school where children receive instruction along somewhat different lines from the instruction of the regular school year. The summer review school is not a school for the hopelessly delinquent or incompetent, nor is it a disciplinary school for refractory children and confirmed truants.

ATTENDANCE.

As the term is very short it is essential that the attendance be very regular. Absence means loss of time which probably cannot be made up, as the course of study follows, from week to week, certain definite lines, and loss of one part breaks the continuity of the whole.

A good way, therefore, to improve attendance is to establish a friendly rivalry among the rooms for the honor of having the largest number of days of perfect attendance. The child can be made to realize the loss that is sustained through a single day's absence. The 282 "attendance" postal card which notifies the parent of the child's absence and warns him of the seriousness of absence is no small factor in improving attendance. Many parents and children begin for the first time to appreciate the necessity of regular attendance.

Tardiness also should be dealt with as a serious offence. Punctuality is a virtue which must be inculcated in children. Each offender should be invited to the office, have all the particulars recorded, and warned not to be tardy again. Tardiness will disappear almost wholly in a short time.

The rule of the committee pertaining to absence is as follows:

SECT. 185. 4. Pupils absent from the summer review schools without a reasonable excuse for two consecutive days, and pupils absent for any reason for a total of four days during the term, thereby sever their connection with the school.

THE RATING OF PUPILS.

In order that the teachers may do justice in their marking, it is suggested that they record estimates of a pupil's accomplishments twice each week in each subject. The mere making of an estimate forces the teacher to focus her mind on the pupil's weakness which she will strive later to remedy. The ratings should only be based in part on "tests."

SCHOOL AND HOME.

The degree of coöperation which the principal and teachers enjoy from parents is a large factor in determining the success of the school. A conference with a parent should be arranged before an important decision is made concerning the pupil.

Whenever a child's absence approaches the number which means his being discharged, the parent should be invited for a conference. A postal card, mailed to the parent whenever a child is absent, in most cases accomplishes results.

EARLY DISCHARGE.

Since the teaching is largely individual, a pupil may advance as quickly as he can. There is no object in keeping a pupil seven weeks if he can do the work in

six. The assurance to a pupil that he will be given his promotion, providing his attendance and conduct are excellent, as soon as his work is done, serves as a positive incentive. This incentive has been found to be efficacious.

At the expiration of four weeks of school, a pupil whose work is considered unsatisfactory should be given a letter to take to his parents. The form which follows is considered good:

We regret to inform you that your son . . . is not making the progress we had hoped for. He has failed to reach the standard required in the Summer Review Schools. By regular attendance and constant application it is believed that he may attain the standard before the end of the term. Will you please give this matter your immediate attention to the end that working with us your boy may be saved the repetition of a year in his school work.

This letter serves as a warning and usually brings the parents and the pupil to a sense of their responsibility.

Pupils who show no particular improvement on the thirtieth day of the term are given a second letter worded in substance as follows:

We regret to inform you that your son . . . has failed to reach the standard required for promotion to grade . . . and as a consequence he will not be certificated in his Summer Review School subjects. We advise you to withdraw him from the school at this time. If, however, you wish, he may remain to the end of the term and get whatever benefit he may from the regular instruction.

Many pupils withdraw after receiving this second note. Those pupils who receive no notes are encouraged, and remain usually to the end of the term, being reasonably assured of success.

ARITHMETIC.

OUTLINE FOR GRADE IV.

- I. Minimum Requirements.
 1. Ability to read and write any number to 1,000,000.
 2. Knowledge of number facts, with number language extended to include long division and fractional parts.
 3. Process work in the four operations in integers to maximum limits of the grade.
 4. Ability to express and solve any one-process problem within the maximum limits of the grade.
- II. Division of Work into Six Periods of One Week Each.

First week: Reading and writing of numbers for four days. Fractional parts and writing and reading of numbers equal parts of two remaining days.

Second week: Drill in reading and writing numbers and in fractional parts part of each lesson. Addition to six addends of five orders for six lessons.

Third week: Drill in addition part of each lesson. Two lessons in subtraction to six orders. Four lessons in multiplication to four orders by two orders.

Fourth week: Daily drill in addition, subtraction, and multiplication. Two lessons in short division to six orders. Three lessons in long division to six orders. One lesson on one-process problems.

Fifth week: Daily drill in reading and writing numbers, addition, subtraction, multiplication, and short division. Two lessons in long division. Four lessons on one-process problems.

Sixth week: Daily drill in reading and writing numbers, fractional parts, and four operations. Six lessons on one-process problems.
- III. Parts of Regular Course to be Emphasized.
 1. Reading and writing of numbers to 1,000,000.
 2. Oral work in fractional parts through one-tenth.
 3. Four operations:
 - Addition. (Six addends, five orders.)
 - Subtraction. (Six orders.)
 - Multiplication. (Multiplicand to four orders, multiplier to two orders.)
 - Short division. (Dividend to six orders, divisor units.)
 - Long division. (Dividend to six orders, divisor to two orders.)
 4. Problems involving one process.

OUTLINE OF WORK, GRADE V.

- I. Minimum Requirements.
 1. Ability to add, subtract, multiply, and divide with integers, with simple common fractions, and with decimal fractions.

2. Ability to express and solve simple problems involving the use of decimal fractions.

II. Division of Work.

First week: Reading and writing of numbers. Addition and subtraction of common fractions.

Second week: Multiplication and division of common fractions.

Third and Fourth week: Reading, addition, subtraction, and multiplication of decimal fractions.

Fifth week: Division of decimal fractions.

Sixth week: General review.

III. Parts of Regular Course to be Emphasized.

1. Integral Numbers.

Reading and writing numbers to 1,000,000,000.

Four operations with numbers not exceeding 10,000.

Multipliers and divisors not to exceed three figures.

Finding by inspection:

Prime factors.

Greatest common denominator.

Least common multiple.

2. Common Fractions.

Oral work in recognition and expression of fractions and mixed numbers.

Written work in four the four processes with simple fractions.

Application in problems.

3. Decimal Fractions.

Reading and writing decimals to and including ten-thousandths.

Addition, subtraction, multiplication, and division of decimals. No result to contain more than four decimal places.

Application of addition, subtraction, multiplication, and division of decimals in problems.

4. Mensuration.

Problem work in the use of weights and measures.

Knowledge of the tables of linear and square measures.

Practical application in very simple problems.

Recognition and practical application of the cubic inch and cubic foot, and their relation to each other.

OUTLINE FOR GRADE VI.

I. Minimum Requirements.

1. Attainment of the standard established from the Courtis Tests for the grade in the four fundamental operations with integral numbers.

2. Ability to add, subtract, multiply, and divide with both common and decimal fractions, and to solve problems involving the use of them.

II. Division of Work.

First week: Addition and subtraction of decimal fractions.
Application in problems.

Second week: Multiplication and division of decimal fractions.
Application in problems.

Third week: Addition and subtraction of common fractions.
Application in problems.

Fourth week: Multiplication and division of common fractions.
Application in problems.

Fifth week: Mensuration. Application in problems.

Sixth week: General review.

III. Parts of Regular Course to be Emphasized.

1. Integral Numbers.

Written work in the four processes, and problems involving the processes in combination.

2. Decimal Fractions.

Changing decimal to common fraction. Application in problems.

3. Common Fractions.

Addition, subtraction, multiplication, and division of fractions, including mixed numbers.

Finding what part one number is of another.

Finding the whole when a part is given.

Expressing common fractions as decimals.

Application in problems.

4. Mensuration.

Problem work in the use of weights and measures.

Knowledge and application of the tables of linear, square and cubic measures.

SUGGESTIONS FOR GRADES VII AND VIII.

1. That a daily review of fifteen minutes be given in the fundamental operations in order to bring the pupils up to and maintain the standards of the grade, and to correct and prevent failure in problem work which is due to inaccuracies in the application of the fundamental processes.
2. That in the daily work there be discussion of the subject matter and the principles involved, and that the teacher, during the written application, apply herself to the individual needs of the pupils.
3. That teachers familiarize themselves with the methods used in the various districts from which her pupils are registered.
4. That the formula, $p = br$, be taught in percentage and that this one formula serve the purpose of the rules. Also that the formula, $i = prt$, be taught in interest.
5. That the following table of correspondence in terms be placed on the blackboard for the pupils to consult.

APPLICATION.	Base.	Rate.	Percentage.
Profit and Loss.	Cost.	Rate.	Gain or Loss.
Trade Discount.	Cost.	Rate.	Discount.
Commission.	Amount bought, sold or collected.	Rate.	Commission.
Insurance.	Amount of Insurance.	Rate.	Premium.
Taxes.	Valuation.	Rate.	Tax.
Interest.	Principal.	Rate.	Interest.

6. That in mensuration the formula suggested be used in preference to rules, and that these formulas be placed on the blackboard for the pupils to refer to, rather than that they be expected to memorize them all.

$$S = \frac{1}{2}h(b + b_2) \quad \text{Trapezoid.} \quad V = a^3 \quad \text{Cube.}$$

$$C = 2\pi r \quad \text{Circle.} \quad V = Bh \quad \text{Rt. prism.}$$

$$S = \pi r^2 \quad \text{Circle.} \quad V = \pi r^2 h \quad \text{Rt. cylinder.}$$

$$V = abc \quad \text{Block.}$$

7. That in problem work the teacher have pupils explain according to definite steps; that they explain a large number of problems before applying the principles to written work; and that if inaccuracies in working problems are found, they be corrected orally before concrete work is attempted.

OUTLINE FOR GRADE VII.

I. Minimum Requirements.

1. Attainment of the standard established from the Curtis Tests for the grade in the four fundamental operations with integral numbers.
2. Ability to express and solve ordinary problems of the grade types in percentage and in its application to profit and loss, commission, and simple interest.
3. Ability to solve and express practical problems involving the finding of perimeters and areas of parallelograms and triangles.

II. Division of Work.

Divisions of the work into six periods of one week each are recommended, but are left optional. It is suggested that the principals, acting together, decide on these divisions, in order that uniform weekly tests may be given in all Summer Review Elementary Schools.

III. Parts of Regular Course to be Emphasized.

1. Daily Review.
 - Four fundamental operations.
 - Integers.
 - Common fractions.
 - Decimal fractions.

2. Percentage. (Omit direct case.)
 - Profit and loss.
 - Commission.
 - Simple interest.
3. Mensuration.
 - Perimeter and area of
 - Square; oblong; rhombus; rhomboid; triangle.
 - Formulas:
 - $S = ab$ (rectangles).
 - $S = bh$ (parallelograms).
 - $S = \frac{1}{2}bh$ (triangles).

OUTLINE FOR GRADE VIII.

- I. Minimum Requirements.
 1. Attainment of the standard established from the Courtis Tests for the grade in the four fundamental operations with integral numbers.
 2. Ability to express and solve ordinary problems of the grade types in percentage and its applications as listed below.
 3. Ability to express and solve practical problems involving the finding of perimeters and areas of the plane figures, and the volumes and surfaces of the solids listed below.
- II. Division of Work.

Divisions of the work into six periods of one week each are recommended, but are left optional. It is suggested that the principals, acting together, decide on these divisions, in order that uniform weekly tests may be given in all the Summer Review Elementary Schools.
- III. Parts of the Regular Course to be Emphasized.
 1. Daily Review.
 - Four fundamental processes.
 - Integers; common fractions; decimal fractions.
 2. Percentages.
 - Review.
 - Finding base, percentage and rate given.
 - Trade discount.
 - Simple interest.
 3. The Simple Equation.
 4. Mensuration.
 - (1) Plane figures.
 - Perimeter and area of
 - Parallelograms; triangles; trapezoids; circles.
 - (2) Solids.
 - Volume and surface of
 - Rectangular block; cube; right prism; right cylinder.

ENGLISH.

SUGGESTIONS TO TEACHERS.

The following weekly distribution of the 480 minutes (six 80-minute periods) might be used tentatively: Oral composition, 120; written composition, 100; reading, 60; dictation, 70; corrective work, 70; and spelling, 60. It is suggested that oral composition, reading and spelling be placed on each day's program. It is suggested that written composition be taken on Monday, Wednesday and Friday; and dictation followed by corrective work on Tuesday, Thursday and Saturday.

a. Motivation.—The successful teacher of English will seek every opportunity to motivate the work. The surroundings which furnish the experiences that children crave should furnish the basis for their efforts in school. There are several types of motive that may be employed such as competing for results, playing games, solving real problems, and the advancing of one's self in the estimation of others.

b. Use of Blackboard.—The blackboard may be made the teacher's most helpful ally in composition work. The correct expression may be compared with the faulty one. Compositions may be copied in part or entire, either as examples of excellence to be used as standards or for correction of typical mistakes. There are many occasions when pupils may be sent to the board to write sentences and paragraphs that illustrate the points under discussion in order to make more evident the correction of a troublesome error. The blackboard is indispensable for individual composition outlines, new words, choice words or expression, sentence drill and spelling. Colored chalk may be effectively employed in teaching technicalities, punctuation and spelling.

c. The Teacher as Exemplar.—The most powerful way of teaching the young to speak and write is through example. Children imitate their teachers. Teachers should lead the way doing tasks similar to those they ask the young to. The teacher should take her turn in giving an oral composition or in placing a letter on the blackboard, letting the children see the teacher in the act of composing or of consulting the dictionary or of punctuating.

READING.

Every child sent to Summer Review School for the purpose of being taught to speak and write good English ought to be given as much drill as possible in reading. The reading must be good reading, every word clearly and correctly pronounced, and inflections properly handled. A few carefully selected masterpieces (suitable to the grade) should be read and reread by the children till they are almost committed to memory. The kind of reading which will help the child to speak and write good English is that which comes only when the child has visualized every word and every letter of every word. A child's spoken and written English will be greatly benefited from hearing good English read well and from reading good English well to others.

ORAL COMPOSITION.

Special attention should be given to the subject of oral composition. In the beginning the oral composition should consist of two sentences about the same subject. It is difficult to teach oral composition because the faults may be easily disguised. Sprawling sentences must be avoided.

An attempt should be made in the fourth grade to have a pupil stand and give at least four good related sentences about a definite subject. In the fifth and sixth grades the number of sentences should increase, but the aim and purpose should be the same. In the seventh and eighth grades much more should be expected than in the lower grades. Until a pupil in the upper grades can deliver himself of a well formulated paragraph on a concrete subject the work should be considered unsatisfactory. As the work progresses one paragraph should become two. Simplicity of language, correct use of words, related sentences, and an interesting paragraph should be insisted upon.

WRITTEN COMPOSITION.

Almost all of the written composition should be taught through the medium of letter writing. Children can never get enough practice in letter writing, because this is the form of composition they will employ most frequently after they leave school.

One letter containing two or three sentences in its body written every day in the upper grades will insure correct letter arrangement. The plan of having the teacher write a letter on the board and of having the children answer it is considered effectual. In the upper grades the business letter should be emphasized. The letters should be brief, never containing more than seven or eight sentences even in the seventh or eighth grade. An outline should always be made before writing.

As a means of encouraging pupils to greater effort and thereby securing better results in language work, it is a good plan to have each teacher of language file a set of letters each week in the office. The principal by selecting some of the best letters of each class and by visiting the class and commenting on their good points can aid the teacher considerably in her work.

DICTATION.

A few sentences should be dictated each day to fix some one technicality found hard to master. This method is effective in clinching points already taught and in making the mechanics of English automatic.

GRAMMAR.

The study of grammar should not receive much stress in the Summer Review School. Grammar should not be studied separately but should be considered as the occasion arises in correcting faults in sentences. Grammar should be taught only as a means of improving verbal expression.

SPELLING.

Individual instruction is essential in teaching spelling. The regular list should be divided into groups of fifty words each. By the close of the

third session the children should be tested on the words of the first group. Each child's misspelled words of the first group should be his course of study until mastered.

When it seems expedient the children should be tested upon the second and successive groups and the process repeated. It is recommended that each child keep a private list of his "bug bears."

Children should be taught also to spell their own vocabularies.

GEOGRAPHY.

OUTLINE FOR GRADE IV.

Note.— It is recommended that pupils taking fourth grade Geography in the Summer Review Schools devote one-third of the geography period to geography and two-thirds of the period to reading and composition as outlined in the course of study of English.

Contents:

- I. Soil.
 1. Kinds.
 2. Uses.
- II. Land.
 1. Lowland.

Plains: Field, meadow, swamp, prairie, forest plain, desert (oasis).
(Value to man.)
 2. Highland.

Hill, mountain (plateau, valley).
(Value to man.)
- III. Water.

Brook, river, pond, lake.
(Value to man.)
- IV. Shore forms.
 1. Island, peninsula, cape, point, isthmus.
 2. Bay, sea, gulf, harbor, strait, ocean.
(Value to man.)
- V. Points of the Compass.

Direction of streets and buildings from school.
Map study.
(Top — north.)
(Bottom — south.)
(Right hand — east.)
(Left hand — west.)
- VI. Climate.
 1. Weather observations.
 2. Distant land.
 - a. The Cold Land — Greenland.
 - b. The Cool Land — Japan, China.
 - c. The Hot Land — Rainy lands (Amazon); Dry Lands — (Sahara).
 - d. Effect of altitude on climate (Alps).

VII. Boston.

1. Location.
2. Needs of people.
Food, clothing, fuel, shelter.
3. Needs supplied by occupations:
 - a. In city proper.
Marketman.
Dry goods merchant.
Builder.
Manufacturer.
 - b. In distant regions.
Wheat (flour) — Central United States.
Sugar — Cuba.
Meat, hides for leather — the Great Plains
(United States).
Tea, silk — Japan.
Cotton — the southern states.
Wool — Australia.
Rubber — Brazil.
4. Means of transporting goods to and from Boston — rail-
road, steamboat.

OUTLINE FOR GRADE V.

General Aim.

To give a simple organized knowledge of the people and some of their leading industries as influenced by the varying geographic conditions in the different parts of the continents.

LOCAL REGION.

Content.

1. For basis of climate.
The sun.
The weather.
2. For basis of surface and soil.
Origin of soil in weathering of rock.
Erosion of soil producing irregular surfaces.

THE EARTH AS A WHOLE.

Content.

1. Torrid zone — summer the year round.
Position.
Relation to life.
Tropical forests, jungles, and deserts.
People — special characteristics.
Activities — getting rich woods, rubber.
2. Frigid zones.
Position.
Relation to life.
Barren lands.
People — characteristics and manner of life.

3. Temperate zones.

Position.

Relation to life.

People not dependent upon their immediate environment, but draw upon resources of all parts of the world to supply their wants.

STUDY OF CONTINENTS.

Aim.

To become acquainted with important peoples of the continent, chief occupations, and the natural resources and physical forces which make those occupations possible.

Content.

North America.

Occupations.

1. Agriculture.
 - Products — wheat, corn, cotton.
 - Regions.
 - Centers — Chicago, Minneapolis, Galveston, Winnipeg.
2. Stock raising.
 - Products — cattle, sheep, hogs.
 - Regions.
 - Center — Chicago.
3. Lumbering — great forest belts.
4. Mining — coal, iron.
5. Manufacturing — cotton and woolen goods, shoes, iron.
 - Centers — Lowell, Fall River, Brockton, Pittsburgh.
6. Fishing.
7. Commerce — Atlantic Coast, Gulf, Pacific, Great Lakes, St. Lawrence.

South America.

Occupations.

1. Agriculture — coffee, wheat.
 - Centers — Rio de Janeiro, Buenos Aires.
2. Stock raising — meats and hides.
3. Gathering of rubber — Amazon Valley.
4. Mining — gold and silver.
5. Commerce.

Europe.

Occupations.

1. Agriculture — grain, fruit, sugar-beet.
2. Manufacturing — cotton and woolen goods, iron and steel (in England and Germany), silk goods (in France).
3. Commerce.

Asia.

Occupations.

1. Agriculture — rice, tea, cotton, spices.
2. Production of silk.
3. Commerce.

Africa.

Occupations.

1. Agriculture in Nile Valley.
2. Grazing in South Africa.
3. Mining — diamonds and gold.

OUTLINE FOR GRADE VI.

Purpose.

To give a simple organized knowledge of the character of the people, their distribution, the development of their cities and countries as influenced by geographic conditions, and their interrelations as influenced by demand and supply.

Content.

The work of the year includes a study (a) of Europe and Asia as continents and (b) of Africa and Australia in their colonial relations to the world powers.

EUROPE.

Minimum Requirement.

A study of the Six Great Powers.

Study of a Country.

- I. People — Characteristics.
- II. Government.
- III. Relation to United States.
- IV. Industries.

(NOTE. Special emphasis should be laid on the leading industry of each country.)

Agriculture.

Stock Raising.

Lumbering.

Mining.

Manufacturing.

Fishing.

- V. Commerce.

Centers.

Exports and Imports.

ASIA.

Minimum List of Countries.

China, Japan, India (including Ceylon).

- I. People.
- II. Industries.
- III. Commerce.

AFRICA AND AUSTRALIA.

The purpose is to study colonial relations with Europe, showing the value of these continents to European countries as sources of food supply, as homes for their surplus population, and as markets for manufactured goods.

Minimum Requirement.

Study of Egypt, South Africa and Australia.

- I. Relation to Mother Country.
 - Imports and Exports.
- II. Cities — Cairo, Alexandria, Johannesburg, Cape Town, Algiers, Tunis, Sydney, Melbourne.

OUTLINE FOR GRADE VII.

Aim.

To gain an intelligent understanding of the human and physical factors which have influenced the territorial and industrial growth of the United States, and have secured for her leadership in the western world.

Content.

- I. Brief survey of Geographic Region of the United States.
 - New England.
 - Atlantic Lowland.
 - Appalachian Highland.
 - Central Plain.
 - Rocky Mountain Region.
 - Pacific Ranges.
- II. Intensive Study of the United States
 1. Geographic Regions.
 - a. New England.
 - Industries.
 - Manufacturing.
 - Agriculture.
 - Industries:
 - 1. Conditions affecting development.
 - Shipbuilding.
 - Quarrying.
 - Lumbering.
 - 2. Products.
 - Fishing.
 - 3. Centers.
 - Commerce.
 - Exports and Imports.
 - b. Atlantic Lowland.
 - Industries.
 - Agriculture.
 - Manufacturing.
 - Commerce.
 - c. Appalachian Highland.
 - Industries.
 - Mining.
 - Manufacturing.
 - Transportation.
 - d. Central Plains.
 - Industries.
 - Agriculture.
 - Stock Raising.
 - Commerce of Great Lakes.

- e. Rocky Mountain Region.
 - Industries.
 - Stock Raising.
 - Mining.
 - National Park.
 - Yellowstone.
 - Transportation.
- f. Pacific Ranges.
 - Industries.
 - Agriculture.
 - Lumbering.
- 2. Possessions of the United States.
 - Alaska — Porto Rico — Philippines — Hawaii.
 - Problems.
 - 1. Where?
 - 2. Of what value to mother country.
- 3. Neighboring Regions.
 - a. Canada.
 - Study of industries according to products, regions and centers.
 - Commerce.
 - b. South America.
 - Study of industries as influenced by geographic conditions.

Minimum list of cities, the significance and location of which the pupil should know as the result of seventh grade work.

New York,	Washington,	Seattle,
Chicago,	New Orleans,	Detroit,
Philadelphia,	Galveston,	Pittsburgh,
St. Louis,	San Francisco,	Duluth,

and at least five New England cities.

OUTLINE FOR GRADE VIII.

Note.— It is well for the teacher to remember that the work of the eighth grade aims to emphasize international relationships, and to impress upon the mind of the pupil the importance of the products, industries and influences which give to each country its standing among the nations of the world. It does not aim to consider countries from a purely regional standpoint.

The work of the grade should be vitalized by the use of the problem method, and by the use of maps, pictures, articles, etc., insofar as such are possible in a summer school.

At the beginning of the term each pupil should be given a topic, *e. g.*, cotton, wheat, lumber, etc., and that pupil should assume and fulfil the responsibility of being prepared to discuss that topic in connection with any country or city mentioned in the work of the grade.

Aim.

To show the interdependence of the world's leading peoples, and to correlate with the work in history.

Content.

Interrelation of the great producing regions of the world.

United States and her possessions.

Great Britain and her colonies.

Germany.

France and her colonies.

Russia.

Mediterranean countries.

The Orient — China and Japan.

South America.

Detailed outlines indicating the ground to be covered in study of three of the regions listed above:

UNITED STATES.

- I. Natural Resources.
 - Areas suitable for agriculture, grazing, fishing in inland waters and ocean, forests, waterways, power, mineral deposits, good natural harbors.
 - Character of people.
 - Immigration.
 - Great industries and centers resulting.
- II. Contribution to other countries.
 - Chief commercial products.
 - Areas and centers of production.
- III. Dependence upon other countries.
 - Nature of product received.
 - Conditions making importation of each necessary.
- IV. Methods of transportation.
 - Trade routes and commercial centers.

GREAT BRITAIN.

- I. Great Britain relies upon other countries for
 1. Food stuffs.
 - Cause of need.
 - Density of population.
 - Limitation of natural resources.
 2. Raw materials.
 - Kinds needed.
 - Countries supplying them.
- II. Other countries depend upon Great Britain for
 1. Manufactured goods.
 - Nature of goods.
 - Conditions making output possible.
 - Natural resources of country.
 - Character of people.
 2. Means of transportation.
 - Merchant Marine of Great Britain.
 - Boston — its relation to Great Britain.

SOUTH AMERICA.

- I. Resources of South America.
 - Regions and development — Argentina and Brazil.
 - Development of resources.
 - Character of People.
 - Influence of capitalists and engineers from the United States and European countries.
 - Chief Industries and centers.
- II. Limitations of country — Due to lack of coal and to character of people.
- III. Competition for South American trade.
 - Possibilities for the United States, Boston.
 - Effect of Panama Canal.

Minimum list of cities, the significance and location of which the pupil should know as the result of eighth grade work.

- I. Those listed for Grade VII.
- II. Additional.

- a. Of United States.

Atlanta.	Grand Rapids.	Newark.
Birmingham.	Indianapolis.	Salt Lake City.
Charleston.	Los Angeles.	Savannah.
Erie.	Louisville.	Spokane.

- b. Of Canada.

Quebec.	Toronto.	Winnipeg.
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- c. Overseas.

London.	Tokio.	Genoa.
Liverpool.	Hong Kong.	Havana.
Manchester.	Pekin.	Honolulu.
Paris.	Calcutta.	Marseilles.
Hamburg.	Alexandria.	Melbourne.
Vienna.	Antwerp.	Odessa.
Petrograd.	Belfast.	Panama.
Constantinople.	Bremen.	Rotterdam.
Berlin.	Colon.	Yokohama.

HISTORY.

OUTLINE FOR GRADE VI.

NOTE.— The topics which are starred should be emphasized.

FIRST WEEK.

- * 1. The Civilization of the Nile and Euphrates.
 - * The Story of Joseph, Moses and Solomon.
- * 2. The Grecian Civilization.
 - a. Leonidas and the three hundred.
 - * b. Battle of Marathon.
 - c. Story of Alexander.
 - d. Olympic Games.

SECOND WEEK.

- * 1. The Roman Civilization.
(Rome carried civilization to what is now France, England and Spain.)
 - a. Romulus and Remus.
 - b. Horatius — Cincinnatus.
 - * c. The story of Cæsar.

THIRD WEEK.

- * 1. The Feudal Civilization.
Story of Charlemagne.
- * 2. The Age of English Chivalry.
 - a. Arthur and the Round Table.
 - b. Alfred.
 - c. The Battle of Hastings.

FOURTH WEEK.

- 1. The Middle Age Period.
 - a. Formations of nations in Europe.
 - * b. Trade Routes — Naples and Genoa.
 - * c. The Crusades — their effect on trading.

FIFTH WEEK.

Important Events which led to the Great Period of Exploration.

- * 1. Use of Compass.
- * 2. The journey of the Polos.
- * 3. Printing.
- * 4. Capture of Constantinople.
- * 5. Portuguese Exploration around Cape of Good Hope.

SIXTH WEEK.

Discovery and Exploration of America.

- * 1. Spanish Explorers.
 - a. Christopher Columbus — discovery of America, 1492.
 - b. Americus Vesputius — naming of America.
 - c. Ponce de Leon — Florida, 1513.
 - d. Balboa — Pacific Ocean — Isthmus of Panama, 1513.
 - e. Magellan — Voyage of one ship around world, 1599-21.
 - f. Cortez — Conquest of Mexico, 1519.
 - g. Pizarro — Conquest of Peru, 1533.
 - h. De Soto — Discovery of Mississippi, 1539-1541.
 - i. Coronado — Discovery of Grand Canon, 1540.
 - j. Menendez — St. Augustine, 1565.
- * 2. The French Explorers.
 - a. Cartier — St. Lawrence River, 1535.
 - b. Champlain — Quebec — Lake Champlain, 1608.
 - c. Joliet and Marquette — Great Lakes, Mississippi River, 1673.
 - d. La Salle — Ohio and Mississippi Rivers, 1682.

- * 3 English Explorers.
 - a. John and Sebastian Cabot — discovered continent of North America, 1497-1498.
 - b. Sir Francis Drake — Pacific Coast — voyage around world, 1577-1579.
 - c. Sir Walter Raleigh — attempts to found a colony, 1584-1587.
- 4. Dutch Explorers.
 - a. Henry Hudson — Hudson River, 1607.

SEVENTH WEEK.

Colonization of America.

- * 1. Virginia Colony.
 - 1. Purpose of settlers — search of gold.
 - 2. Character of settlers — gentlemen — did not wish to work.
 - 3. First settlement, Jamestown (1607).
 - 4. Hardships.
 - a. Trouble among themselves on account of work.
 - b. Starving time.
 - c. Trouble with King on account of government.
 - d. Trouble with Indians.
 - 5. Chief men.
 - a. John Smith.
 - b. Lord Delaware.
 - c. Dale.
 - d. Berkeley.
 - e. Bacon.
 - 6. Government.
- * 2. Plymouth Colony.
 - 1. Purpose to secure religious freedom.
 - 2. Character of settlers — thrifty — industrious — religious.
 - 3. First settlement — Plymouth, 1620.
 - 4. Hardships.
 - a. Sufferings from cold the first winter.
 - b. Trouble with Indians.
 - 5. Chief men.
 - a. John Carver.
 - b. William Bradford.
 - c. William Brewster.
 - d. Miles Standish.
 - 6. Government.
- * 3. Massachusetts Bay Colony.
 - 1. Purpose — to secure religious freedom.
 - 2. Character of settlers — well educated — earnest — religious.
 - 3. Settlement — Boston — Charlestown — Dorchester — Roxbury — Salem.
 - 4. Hardships.
 - a. Trouble with King on account of religion.
 - b. Trouble among themselves.
 - 5. Chief Men.
 - a. John Endicott.

- b. John Winthrop.
 - c. John Eliot.
 - d. Jonathan Edwards.
6. Government.

OUTLINE FOR GRADE VII.

NOTE.—The topics which are starred should be emphasized.

FIRST WEEK.

Period of Discovery and Exploration.

- * 1. The Spaniards.
 - 1. Columbus — discovery of America, 1492.
 - 2. Americus Vesputius — naming of America.
 - 3. Ponce de Leon — Florida — 1513.
 - 4. Balboa — Pacific Ocean — Isthmus of Panama, 1513.
 - 5. Magellan — voyage of one ship around the world, 1519–1521.
 - 6. De Soto — discovery of the Mississippi, 1539–1541.
 - 7. Menendez — St. Augustine — 1565.
- * 2. The French.
 - 1. Cartier — St. Lawrence River, 1535.
 - 2. Champlain — Quebec and Lake Champlain, 1608.
 - 3. Joliet and Marquette — Great Lakes, Mississippi River, 1673.
 - 4. La Salle — Ohio and Mississippi Rivers, 1682.
- * 3. The English.
 - 1. John and Sebastian Cabot.
 - Discovery of continent of North America and exploration along Atlantic Coast — 1497–1498.
 - 2. Sir Francis Drake — Pacific Coast — voyage around the world, 1497–1498.
 - 3. Sir Walter Raleigh — attempt to found a colony — Virginia, 1584–1587.
- * 4. The Dutch.
 - 1. Henry Hudson — Hudson River, 1609.

SECOND WEEK.

** English Colonies in America.*

- 1. Plymouth, 1620.
- 2. Boston, 1630.
- 3. Jamestown, 1607.
- 4. New York, 1614.
- 5. Connecticut, 1634.
- 6. Rhode Island, 1636.
- 7. Pennsylvania, 1681.
 - a. Causes of settlement — time — place.
 - b. The Settlers.
 - Leaders.
 - People.
 - Nationality.
 - c. Important events.

THIRD WEEK.

* *Struggle Between France and England for Possession of North America.*

1. Territory occupied by each nation in America.
2. Hostility between the two nations in Europe.
3. King William's War, 1689-1697.
 - Cause.*— Louis of France refused to recognize William of Orange as King of England. The colonists took up the struggle.
 - Events.*— The attack on Schenectady.
The attack on Haverhill.
Capture of Port Royal by English.
 - Result.*— Treaty of Ryswick.
4. Queen Anne's War (1702-1713).
 - Cause.*— England united with Germany and Holland to prevent Louis of France from putting his grandson on the Spanish throne. The colonists took up the struggle.
 - Events.*— The attack on Deerfield.
Capture of Port Royal.
 - Result.*— Treaty of Utrecht.
5. King George's War (1744-1748).
 - Cause.*— French tried to oppose Maria Theresa from ascending the Austrian throne. England opposed France. Colonists took up the struggle.
 - Events.*— Capture of Louisburg.
 - Result.*— Treaty of Aix-la-Chapelle.
- * 6. Last French and Indian War (1754-1763).
 - Cause.*— France joined with other powers to check Frederick the Great. England opposed France. Colonists took up the struggle.
 - Events.*— George Washington's mission.
Expulsion of the Arcadians.
Fall of Quebec.
 - Result.*— Treaty of Paris.

FOURTH WEEK.

The Period of the Revolution.

- * 1. *Causes.*— Taxation without Representation.
Writs of Assistance.
Stamp Act.
Townshend Act.
Mutiny Act.
Boston Massacre.
Boston Tea Party.
Boston Port Bill.
- * 2. Struggle for Boston (1775-1776).
Lexington and Concord, April 19, 1775.
Bunker Hill, June 17, 1775.
Evacuation of Boston, March 17, 1776.

- * 3. Struggle for New York and New Jersey (1776-1777).
Evacuation of Brooklyn and New York.
Washington's Retreat across New Jersey.
- * 4. Struggle for Philadelphia (1777-1778).
Howe's Plan — Brandywine and Germantown.
Winter at Valley Forge.
- * 5. Burgoyne's Expedition.
Plan of British — Failure of plan.
Results of battles of Saratoga.
- * 6. Struggle for the South (1778-1781).
British occupation of Georgia and South Carolina.
Cornwallis's advance through North Carolina and Virginia.
Operations about Yorktown.
- 7. Treaty of Peace.
Commissioners.
Peace.
Terms.

FIFTH WEEK.

The Union.

- 1. Important Steps Toward Union.
 - * 1. New England Confederation, 1643.
 - * 2. First Colonial Congress at Albany, 1754.
 - * 3. Stamp Act Congress, 1765.
 - * 4. Committees of Correspondence, 1772.
 - * 5. First Continental Congress, 1774.
 - * 6. Second Continental Congress, 1775-1781.
 - * 7. Articles of Confederation, 1781-1789.
 - * 8. The Constitution, 1789.
- * 2. Washington (1789-1797).
Cabinet.
Citizen Genet. Washington's policy — conciliation and embargo.
Jay's Treaty.
- 3. Adams (1797-1801).
Trouble with France.
Adams' policy — preparation for war.
* Alien and Sedition Acts.
Capital changed from Philadelphia to Washington.

SIXTH WEEK.

- * 1. Jefferson (1801-1809).
 - * Purchase of Louisiana.
 - * Lewis and Clarke Expedition.
 - * Embargo and Non-Intercourse Acts.
- 2. Madison (1809-1817).
 - * War of 1812.
 - * 1. Causes — injuries to commerce — impressment of seamen.
 - 2. American plan to capture Canada. General Hull surrenders Detroit.

3. Naval Battles.
 - Constitution and Guerriere.*
 - Wasp and Frolic.
 - United States and Macedonia.
 - Chesapeake and Shannon.
4. Burning of Washington.
- * 5. Treaty of Peace signed at Ghent.
6. Battle of New Orleans.

SEVENTH WEEK.

1. Monroe (1817-1825).
 - * 1. Purchase of Florida.
 - * 2. Missouri Compromise.
 - Missouri admitted as a slave state.
 - Maine admitted as a free state.
 - Slavery prohibited in the Louisiana Purchase north of 36 degrees 30 minutes.
 - * 3. Monroe Doctrine.
 - a. The United States would take no part in European Wars.
 - b. The United States would not interfere with any European colonies already established in America.
 - c. Any attempt of a European nation to interfere with the independence of an American state would be regarded as an unfriendly act.
2. John Quincy Adams (1825-1829).
 - * 1. Erie Canal.

OUTLINE FOR GRADE VIII.

NOTE.—The topics which are starred should be emphasized.

FIRST WEEK.

Features of Progress Shown.

1. In Growth of Population.
 - 1783 — 4,000,000.
 - 1830 — 13,000,000.
 - 1860 — 31,000,000.
 - 1900 — 76,000,000.
 - 1910 — 93,000,000.
 - Increase due to —
 - a. Easy distribution of products by improved means of transportation.
 - b. Immigration.
- * 2. In Western Expansion.
 - * a. Original territory (1783).
 - * b. Louisiana (1803).
 - * c. Florida (1819).

- * *d.* Texas (1845).
 - * *e.* Oregon (1846).
 - * *f.* New Mexico and California (1848).
 - * *g.* Gadsden Purchase (1853).
 - * *h.* Alaska (1867).
 - * *i.* Hawaii (1898).
3. In Means of Communication.
- a.* Old Post Roads.
 - b.* Railroads.
 - c.* Steamship.
 - d.* Telegraph.
 - e.* Telephone.
 - f.* Wireless telegraphy.
4. In Inventions.
- * *a.* Cotton Gin — Eli Whitney.
 - * *b.* Steamboat — Robert Fulton.
 - * *c.* Reaping machine — McCormick.
 - * *d.* Telegraph — Morse.
 - * *e.* Sewing machine — Howe.
 - * *f.* Telephone — Bell.
 - * *g.* Electric light — Edison.
 - * *h.* Railroad.
 - * *i.* Phonograph.
 - * *j.* Wireless telegraphy.
 - * *k.* Aeroplane.
- * 5. In Use of Coal.
- Hard coal discovered, 1790.
 First load sold in Pennsylvania, 1803.
 * Used for heating houses and reducing iron ore.
6. In Art and Literature.
- | | | |
|------------|------------|-----------|
| Copley | Bryant | Irving |
| Bierstadt | Emerson | Cooper |
| Crawford | Poe | Hawthorne |
| French | Longfellow | James |
| Huntington | Whittier | Bancroft |
| Powers | Holmes | Fiske |
| Story | Lowell | Parkman |
| West | Whitman | Ford |
| La Farge | Lanier | Hart |

SECOND WEEK.

Administrations.

- * 1. Andrew Jackson (1829-1833)—(1833-1837).

* (1) The "Spoils System."

Jackson believed that "to the victor belonged the spoils."

He therefore filled the government offices with men from his own party. System lasted till 1833.

* 2. Nullification.

The tariff of 1823 kept in force most of the high duties that the South objected to and the legislature of South Carolina passed an act nullifying the force of the tariff in its ports.

Calhoun and Haynes of South Carolina were the chief advocates of the right of nullification, while Daniel Webster defended the power of the Federal Government against the privileges of the state.

Jackson made arrangement to enforce tariff acts by military power. South Carolina raised troops to oppose Federal Government. The taxes were finally collected without bloodshed.

3. Change in Financial System.

* Jackson's change in the Financial System.

a. Vetoed rechartering bank. Thought it was undemocratic.

b. Deposited money in state banks called "pet banks."

c. Result, panic of 1837. Banks failed when government refused any money except specie.

4. First passenger railroad at Baltimore.

2. Martin Van Buren (1837-1841).

(1) Panic of 1837 result of previous administration.

* (2) Sub-treasury system.

The great event of Van Buren's administration was the Independent Treasury System. The President prevailed upon Congress to establish this system. Up to this time the United States had kept its money in the United States Bank, and then in State banks. This later led to a period of wild speculation which caused the panic of 1837.

Van Buren recommended that the government establish a treasury at Washington and sub-treasuries in the chief cities. This the government finally did in 1846.

* (3) Ocean steamships began to cross regularly.

3. William Henry Harrison and John Tyler (1841-1845).

1. Northeast boundary — Webster-Ashburton Treaty signed at Washington.

Added 7,000 square miles to Maine.

2. Annexation of Texas.

3. Invention of telegraph.

THIRD WEEK.

4. James K. Polk (1845-1849).

1. Northwest boundary — Oregon Treaty.

2. Mexican War.

* a. Causes.

Claims of American citizens against Mexico.

Annexation of Texas.

Dispute of boundary between Texas and Mexico.

* *b. Results.*

Taylor, Kearney, Scott and Fremont were successful in all battles.

Mexican cessions.

3. Wilmot Proviso.
 4. Discovery of gold in California.
 - * 5. Discovery of use of ether.
5. Zachary Taylor and Millard Fillmore (1849-1853).
1. Increased anti-slavery as result of Wilmot Proviso.
 - * 2. Compromise of 1850 — free state.
 - A. California — free state.
 - B. New Mexico and Arizona territories.
 - C. Fugitive Slave Law.
 3. Gadsden Purchase.
6. Franklin Pierce (1853-1857).
- * 1. Kansas and Nebraska Bill.
 - A. Proposed by Stephen A. Douglas.
 - B. Provisions.
 - C. Results.
 2. Treaty with Japan.
 3. Ostend Manifesto.

FOURTH WEEK.

7. James Buchanan (1857-1861).
1. Panic of 1857.
 - * 2. Dred Scott decision.
 3. John Brown's raid.
 - * 4. Secession of Southern States.
 5. Discovery of silver.
 6. Discovery of petroleum and natural gas.
8. Abraham Lincoln (1861-1865).
1. Civil War.
 - * *a.* Causes.
 - b.* Advantages to North and South.
 - c.* Battle of Bull Run.
 - * *d.* Plans of war.
 - e.* Confederate attempt to break blockade.
 - f.* Northern attempt to get control of Mississippi River.
 - g.* Peninsular Campaign.
 - h.* Lee's invasion of the North.
 - * *i.* Emancipation Proclamation.
 - j.* The Hammering Campaign.
 - k.* Sherman's March to the sea.
 - l.* Alabama and Kearsarge.
 - m.* Fall of Richmond.
 - n.* Appomattox Court House.
 - * *o.* Results of War.

2. Land Grant Act — started agricultural education.
3. Assassination of Lincoln.

FIFTH WEEK.

- * 9. Andrew Johnson (1865-1869).
 - * 1. Reconstruction.
 - a. President's Plan.
 - b. Congressional Plan.
 - c. Result.
 2. Amendments.
 - * XIII. Slavery shall not exist within the United States or any place subject to their jurisdiction.
 - * XIV. All persons born or naturalized in the United States are citizens.
 3. Impeachment of President.
 4. Purchase of Alaska.
 5. Atlantic cable successfully laid.
10. Ulysses S. Grant (1869-1873)—(1873-1877).
 1. Alabama Claims settled.
 - * 2. XV Amendment adopted — The right to vote shall not be denied on account of race, color or previous condition of servitude.
 3. Indian Reservation System.
11. Rutherford B. Hayes (1877-1881).
 1. Bland Silver Bill.
 2. Resumption of Specie Payment.
12. James A. Garfield and Chester A. Arthur (1881-1885).
 1. Assassination of President.
 - * 2. Civil Service Reform.
13. Grover Cleveland (1885-1889).
 1. Presidential Succession Act passed.
 - * 2. Interstate Commerce Act.
 - * 3. Chinese Exclusion Bill.
14. Benjamin Harrison (1889-1893).
 - * 1. Australian Ballot system adopted.
 2. Department of Agriculture established.
15. Grover Cleveland (1893-1897).
 1. Panic of 1893.
 2. Bering Sea Trouble.
 3. Venezuela Difficulty.

SIXTH WEEK.

16. William McKinley (1897-1901)—(1901 —).
 1. Annexation of Hawaii.
 - * 2. Spanish-American War.
 - * a. Cause.
 - b. Plan.

- c. Battles.
Manila; Santiago; Porto Rico.
- * d. Treaty of Peace.
- 3. Boxer Rebellion.
- 4. Assassination.
- 17. Theodore Roosevelt (1901-1909).
 - * 1. Panama Canal.
 - 2. Completion of Pacific Cable.
 - * 3. Hague Tribunal.
 - 4. Panic of 1907.
 - 5. Department of Commerce and Labor established.
- 18. William Howard Taft (1907-1913).
 - 1. Postal Savings.
 - 2. Parcel Post.
 - * 3. Discovery of North Pole.
 - 4. Mexican Difficulties.

SEVENTH WEEK.

- * 19. Woodrow Wilson (1913-1921).
 - 1. Mexican Difficulties.
 - * 2. World War.
 - * 3. United States takes part in.
 - 4. Declaration of War, April 6, 1917.
 - * a. Immediate Cause.
Germany resumes unrestricted submarine warfare.
 - b. American war aims.
 - c. German successes in 1917.
 - d. German strategic retreat to Hindenberg Line.
 - e. American man force begins to count.
 - * 5. Last year of war became a race between United States and Germany.
 - * 6. German offensive in Picardy, Flanders, on the Aisne.
* Checked at Chateau Thierry by Americans.
 - * 7. The Armistice, November 11, 1918.
 - 8. Acquisition of the Virgin Islands.
 - 9. Amendments.
 - XVI. The Congress shall have power to lay and collect taxes on income.
 - XVII. The Senate of the United States shall be composed of two Senators from each state, elected by the people thereof, for six years; and each Senator shall have one vote.
 - XVIII. After one year from the ratification of this article the manufacture, sale, or transportation of intoxicating liquors within, the importation thereof into, or the exportation thereof from, the United States and all territory subject to the jurisdiction thereof for beverage purposes, is hereby prohibited.
 - XIX. Woman Suffrage?

MODERN FOREIGN LANGUAGE.

The demand for Modern Foreign Language in the Summer Review Elementary Schools is not large enough to warrant the inclusion of the courses in a syllabus designed for general use. The sub-committee has worked out certain courses, notably French and Spanish, and is prepared to work out others as needed. Applications for copies of these should be made to the assistant superintendent in charge.



SCHOOL DOCUMENT NO. 5—1920
BOSTON PUBLIC SCHOOLS

**A COURSE IN PHYSICAL EDUCATION FOR
LATIN AND DAY HIGH SCHOOLS AND FOR
NINTH GRADE IN INTERMEDIATE SCHOOLS**



CITY OF BOSTON
PRINTING DEPARTMENT
1920

IN SCHOOL COMMITTEE, October 18, 1909.

Provisional Course in Physical Education for the High Schools adopted for the school year 1909-10.

IN SCHOOL COMMITTEE, June 20, 1910.

Course in Physical Education for High School Girls incorporated and the Provisional Course in Physical Education for High Schools adopted for the school year 1910-11.

IN SCHOOL COMMITTEE, June 21, 1920.

Revised Course in Physical Education for Latin and Day High Schools adopted, and fifteen hundred (1,500) copies ordered printed as a school document.

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FOREWORD.

I.

The course in physical education for girls in the Latin and Day High Schools consists of two periods of gymnastic work each week during the four years. The course is compulsory for every girl unless, on account of physical disability, she is excused by the school physician.

For this work, credit towards a diploma is given as follows: one point for the freshman year, or ninth grade Intermediate School, and two points for each of the succeeding three years. An eighth point is awarded when the pupil proves that she can swim.

The work in the gymnasium comprises marching, gymnastic exercises (with and without hand apparatus), apparatus work, dancing, and games.

The value of the work may be considered under three headings:

1.—THE HYGIENIC VALUE.

By means of vigorous exercises, folk dancing, and games, a stimulating effect on the whole body is produced. This is enjoyable and refreshing, and is accompanied by an increased functional efficiency of all the organs of the body.

2.—THE CORRECTIVE VALUE.

School life is always attended by a large proportion of sedentary work which, during the growing period of life, is contrary to instinct and has an unfavorable influence on posture, and, therefore, on organic development. Physical education emphasizes posture training throughout the course, so that the pupil may learn what correct posture is and may develop the motor control necessary for assuming and maintaining it.

3.—THE EDUCATIONAL VALUE.

While the two aims previously mentioned are emphasized strongly, it is recognized that a broader and more constructive purpose than either of these pervades the work.

In physical education, as in all other forms of education, the work is carefully selected and made progressive. Gymnastic exercises, which call for attention with rapid and accurate execution; dancing, with its rhythmical and less sharply defined movements, demanding ease, grace, and poise of body; and games, which bring out the spirit of loyalty, of fair play, and of team work, together with agility and the power of rapid calculation and decision:— all these are agents in acquiring that neuro-muscular co-ordination necessary to the individual who is to take her place acceptably in the social and economic world.

II.

Military drill forms part of the course in physical education for boys. Both the physical and moral possibilities of the training are recognized, special emphasis being laid upon its disciplinary advantages. The course is compulsory for each boy during the four years unless, for physical disability, he is excused by the school physician. For each year's work performed satisfactorily a boy receives one point toward his high school diploma. Special military diplomas are also awarded to all commissioned officers who receive an academic diploma.

In addition to the four points in military drill, every boy is required to obtain at least three points for physical training. These three points are given for membership, good conduct, and regular training in a recognized athletic squad; or for the completion of athletic tests, viz., dash, jumps, shot puts, pull-ups, dips, and posture. For the first year a record only is kept of performance or of membership; one point each year in the succeeding years is given, provided satisfactory improvement has been made.

An additional (optional) point is awarded for physical training when the pupil has demonstrated his ability to swim.

III.

For both boys and girls a daily ten minute setting-up drill, which is an integral part of the course, is given. In schools where there is one session the drill is given between the second and third periods; in schools where there are two sessions the drill is given in the middle of both the morning and the afternoon sessions.

DEFINITIONS OF GYMNASTIC TERMS.

FORM RANKS.

Command.—Form — RANKS !

At the command, pupils arrange themselves in double rank, in order of height from right to left, tallest on the right. Each pupil raises her left elbow by placing her hand on her hip. As soon as the pupil on the left has her interval, each pupil drops her hand by her side.

SITTING POSITION.

Feet on floor under desk, buttocks well back in chair, back erect and (in most school-room chairs) unsupported, hands at the side.

MOUNTING DESKS.

Command.—Left — FACE !

Sit on desk — ONE ! TWO !

1. Place right foot on chair, left hand on chair-back, and right on desk.
2. Sit on desk by placing left foot beside right on chair.

DISMOUNTING DESKS.

Command.—Dismount — ONE ! TWO !

1. Keep right foot on chair, face right and place left foot on floor, putting left hand on back of chair and right on desk.
2. Place right foot on floor beside left foot.

RIGHT (LEFT) DRESS.

Command.—Right (left) — DRESS ! FRONT !

At the command,— DRESS ! — pupil places left hand on hip, fingers extended and close together. Each pupil, except the right guide, turns head and eyes to the right, and, taking steps of 2 or 3 inches, places herself so that her right arm rests lightly against the arm of the pupil on her right, and so that her eyes and shoulders are in line with those of the pupils on the right. Each pupil in the rear rank stands directly behind the one in front, beginning at the right,— leaving a space behind the next to the last pupil if necessary.

At the command,— FRONT ! — each pupil turns head and eyes to the front, and drops left hand by side.

COUNT OFF.

Command.—Count — OFF !

At the command, each pupil, except the right guide, turns head and eyes to the right; pupils in each rank count, "One, "Two"; each pupil turns her head and eyes to the front as she counts.

RIGHT (LEFT) FACE.

Command.— Right (left) — FACE !

At the command, slightly raise left heel and right toe and face 90 degrees to the right, turning on right heel assisted by a slight pressure on the ball of left foot, and put right toe on floor; place left foot beside right.

RIGHT (LEFT) HALF FACE.

Command.— Right (left) half — FACE !

Similar to above, except that the facing made is 45 degrees.

ABOUT FACE.

Command.— About — FACE !

At the command, place toe of right foot about a half foot length to the rear and slightly to the left of left heel, without changing the position of left foot; face to the rear, turning to the right on left heel and right toe; lower right heel beside left. (The movement is executed in one count.)

MARCHING.

All steps and marchings executed from a halt begin with the left foot. For indoor gymnastics the cadence is to be at the rate of 140 steps per minute in quick time, and at the rate of 160 steps in double time.

QUICK TIME.

Command.— Class forward — MARCH !

At the word, "Forward," shift the weight of the body to right leg, left knee straight.

At the command,— MARCH !— move left foot straight forward, full step, near the floor, and plant it without shock; next, in like manner, advance right; continue the march. The arms should swing naturally.

HALT.

Command.— Class — HALT !

At the command,— HALT !— given as either foot strikes the floor, plant the other foot as in marching; raise and place first foot beside other.

DOUBLE TIME.

Command.— Double time — MARCH !

If at a halt, at the words, "Double time," shift the weight of the body to right leg. At the command,— MARCH !— rise on toes, take up an easy run with cadence of double time, allowing a natural swinging motion to arms.

If marching in quick time, at the command,— MARCH !— given as either foot strikes the floor, take one step in quick time, and then step off in double time.

To resume quick time:—

Command.— Quick time — MARCH !

At the command,— MARCH!—given as either foot strikes the floor, take four more steps in double time and resume quick time.

MARK TIME.

Command.— Mark time — MARCH !

If marching, at the command,— MARCH !— given as either foot strikes the floor, advance and plant other foot, bring up foot in the rear, and continue the cadence by alternately raising each foot about two inches and planting it in place.

If at a halt, at the command,— MARCH !— raise and plant feet as described above.

RIGHT (LEFT) STEP MARCH.

Command.— Right (left) step — MARCH !

If at a halt or marking time, at the command,— MARCH !— carry and plant right foot 15 inches to the right, place left foot beside it, and continue the movement in the cadence of quick time.

FUNDAMENTAL STANDING POSITION.

Command.— ATTENTION !

Heels together, toes at an angle of not more than 45 degrees, weight forward, waist in, chest high, chin in, head up, and arms stretched downward with palms resting against outer side of thigh.

AT EASE.

Command.— AT EASE !

Left foot is placed directly to the side about a foot length, the weight being equally distributed between the feet. (Pupil is required to maintain silence, but not immobility.)

REST.

Command.— REST !

Same as the above, except that the pupil is not required to maintain silence.

HIPS FIRM POSITION.

Command.— Hips — FIRM !

From fundamental position, hands are raised quickly to hips,— thumbs backward, fingers forward, wrists straight, and elbows in line with shoulders.

HEAD FIRM POSITION.

Command.— Head — FIRM !

From fundamental position, hands are raised quickly, and tips of fingers placed against the back of the head,— fingers and wrists straight, and elbows in the plane of shoulders.

ARMS UPWARD BEND POSITION.

Command.— Arms upward — BEND !

Forearms are flexed,—hands tightly closed, wrists straight, elbows close to the sides, and wrists, elbows, and shoulders in the same plane.

ARMS FORWARD BEND POSITION.

Command.—Arms forward — BEND !

From fundamental position, arms are flexed at elbows and raised quickly to horizontal position,—forearms at same height as upper arms, hands extended and wide apart, and palms down.

ARMS SIDEWAYS STRETCH POSITION.

Command.— Arms sideways — STRETCH !

From fundamental position, 1st, arms upward bend position; 2nd, arms are extended forcibly sideways in the plane of shoulders, palms down.

Or *command.*— Arms sideways — RAISE !

The same position is taken by raising extended arms evenly in the plane of shoulders to horizontal position.

Or *command.*— Arms sideways — FLING !

Same as the preceding, but done quickly.

ARMS SIDEWAYS STRETCH (PALMS UP) POSITION.

Command.— With palms up, arms sideways — STRETCH !

Same as the preceding, with palms up.

ARMS FORWARD STRETCH POSITION.

Command.— Arms forward — STRETCH !

From fundamental position, 1st, arms upward bend position; 2nd, arms are extended forcibly forward,—horizontally, palms facing each other at shoulders' breadth distance, position of shoulders unchanged.

Or *command.*— Arms forward — RAISE !

The same position is taken by raising arms forward while extended and parallel to each other.

Or *command.*— Arms forward — FLING !

Same as the preceding, but done quickly.

ARMS BACKWARD STRETCH POSITION.

Command.— Arms backward — STRETCH ! (RAISE ! or FLING !)

Same as the preceding, but arms are stretched backward as far as possible.

ARMS Y STRETCH POSITION.

Command.— Arms to Y position — STRETCH !

From fundamental position, 1st, arms upward bend position; 2nd, arms are extended forcibly to half way between arms upward and arms sideways stretch positions,—hands extended, palms up.

Or *command.*— Arms to Y position — RAISE !

The same position is taken by raising arms sideways, turning palms upward at shoulder height.

Or *command.*—Arms to Y position — FLING !

Same as the preceding, but done quickly.

ARMS UPWARD STRETCH POSITION.

Command.— Arms upward — STRETCH !

From fundamental position, 1st, arms upward bend position; 2nd, arms are extended forcibly to vertical position,— hands extended, palms facing each other at shoulders' breadth distance.

Or *command.*— Arms forward upward — RAISE !

Arms in full extension are raised forward and upward, moving parallel to each other.

Or *command.*— Arms forward upward — FLING !

Same as the preceding, but done quickly.

Or *command.*— Arms sideways upward — RAISE !

From fundamental position, the arms are raised sideways as in arms sideways stretch position, palms are turned up at shoulder level, and arms continue to move in the plane of the shoulders to stretch position.

ARM SWIMMING MOVEMENT.

Command.— Arms swimming — ONE ! TWO ! THREE !

1. Raise hands almost to shoulder height,— palms down and parallel to the floor, fingers extended and sides of forefingers touching.

2. Push arms straight forward forcibly,— hands in same position as at start.

3. Move arms sideways to shoulder height, slightly turning backs of hands forward and inward.

NOTE.— All three strokes are supposed to be exactly like the breast stroke in swimming.

STRIDE POSITION.

Command.— Feet sideways — PLACE !

From fundamental position, 1st, left foot is moved a distance of one foot length to left; 2nd right foot the same distance to right.

Or *command.*— Feet sideways — JUMP !

Same as the preceding, but done in one count by jumping.

FOOT OUTWARD PLACE POSITION.

Command.— Left (right) foot outward — PLACE !

From fundamental position, left (right) foot is moved outward to twice its length to a position half way between forward and sideways.

FOOT FORWARD PLACE POSITION.

Command.— Left (right) foot forward — PLACE !

From fundamental position, left (right) foot is moved straight forward to twice its length,— weight equally on both feet.

FOOT SIDeways TOUCH POSITION.

Command.— Left (right) foot sideways — TOUCH !

From fundamental position, left (right) toe touches floor as far as possible to side. Weight of body remains on right (left) foot.

TOE STAND POSITION.

Command.— Heels — RAISE !

From fundamental position, the body is lifted as high as possible by raising heels.

TOE KNEE BEND STAND POSITION.

Command.— Heels — RAISE ! Knees — BEND !

From toe stand position, knees are turned well out and bent to right angles,— position of trunk unchanged.

TOE KNEE DEEP BEND STAND POSITION.

Command.— Heels — RAISE ! Knees — DEEP BEND !

From toe knee bend stand position, bending of knees is continued as far as possible.

ARCH POSITION.

Command.— Chest — RAISE !

With a deep breath raise chest, draw in chin, and incline head slightly backward.

TWIST POSITION.

Command.— Trunk to left (right) — TWIST !

From fundamental position, the body is twisted as far to the side as possible,— no change in the poise of the head nor in the position of knees and feet.

TRUNK FORWARD BEND POSITION.

Command.— Trunk slightly forward — BEND !

From fundamental position, trunk is bent forward at hip joints 45 degrees,— back straight, poise of head and shoulders unchanged.

Or *command.*— Trunk forward — BEND !

The same movement, but trunk is bent forward 90 degrees.

Or *command.*— Trunk downward — BEND !

Trunk is bent downward as far as possible.

OUTWARD FALLOUT POSITION.

Command.— Left (right) outward — FALLOUT !

Foot is placed three foot lengths obliquely outward,— knee flexed about 90 degrees, trunk in line with rear straight leg, whole of rear foot firmly pressed on floor, shoulders inclined but faced forward.

FORWARD FALLOUT POSITION.

Command.— Left (right) forward — FALLOUT !

From fundamental position, the body is inclined forward quickly and left (right) foot moved straight forward to three times its length. (Particulars as described in outward fallout position.)

LUNGE POSITION.

Command.— To the left (right) — LUNGE !

Same as the fallout, except that foot is placed sideways and trunk is kept erect.

TOE SUPPORT POSITION.

Command.— Left (right) toe support — PLACE!

Same as forward fallout position, except that foot is moved backward to four foot lengths and backward toe, only, touches the floor.

PRONE FALLING POSITION.

Command.— Prone falling position — ONE! TWO!

1. Stoop, letting arms fall between knees, wrists in line with shoulders; place hands on floor, pointing obliquely toward each other.

2. Extend the body by placing feet as far back as possible, the whole body making a straight line inclined from head to heels, heels and toes together, head well poised.

SIDE FALLING POSITION.

Command.— Side falling position — ONE! TWO! THREE!

1 and 2. Same as in the preceding.

3. Turn, so that the body is supported on left (right) side, free hand on hip, free foot on supporting foot.

KNEELING POSITION.

Command.— Kneeling position — ONE! TWO!

1. Kneel on left knee.

2. Kneel on right knee.

or

1. Knees deep bend.

2. Place knees together on floor.

3. Stretch toes.

KNEE UPWARD BEND POSITION.

Command.— Left (right) knee upward — BEND!

At the command, raise left (right) knee upward to form a right angle at hip and at knee, ankle extended.

CLOSE.

Signifies that feet are close together.

HALF ($\frac{1}{2}$).

Signifies that an exercise concerns only one arm or one leg.

DOUBLE (2).

Signifies that both arms or legs must do the same movement simultaneously.

ALTERNATE.

Signifies that one arm or leg after the other shall do the same movement; or, when it concerns trunk, that movement is to be done to left and right side in a quick interchange.

BREATHING.

Abdominal breathing.

COURSE FOR GIRLS. FRESHMAN AND NINTH GRADE PUPILS.

FREE STANDING EXERCISES.

ARM AND LEG EXERCISES.

1. Hips firm foot forward place position, heel raising and knee bending (6 counts.)
2. Arms sideways fling foot sideways place position, arm raising upward and heel raising. (4 counts.)
3. Arms upward bend foot sideways place position, arm extension upward and heel raising, arm parting and knee bending. (6 counts.)
4. Hips firm toe stand position, knee deep bending.
5. Hips firm position, lunging sideways. (Series.)
6. Head firm foot sideways place position, arm flinging (palms up) and heel raising. (4 counts.)

ARCH EXERCISES.

1. Hips firm stride position, backward bending of head, chest raising and deep breathing.
2. Arm rotation outward, chest raising and deep breathing.
3. Arms forward stretch position, slow arm parting (palms up) with chest raising and backward bending of head with deep breathing.
4. Arms upward bend stride position, slow arm stretching sideways (palms up), with chest raising and backward bending of head.
5. Arm circumduction (2 counts — second slow) with backward bending of head.
6. Hips firm with alternate foot placing sideways, chest raising and deep breathing. (Slow series.)

COMPENSATORY EXERCISES.

1. Hips firm position, trunk forward bending.
2. Hips firm stride position, trunk forward downward bending.
3. Arms upward bend stride position, trunk forward downward bending.
4. Head firm stride position, trunk forward downward bending.
5. Arms upward stretch stride position, trunk forward downward bending. (Touch floor.)
6. Hips firm stride position, trunk forward downward bending, arm stretching downward, touching floor. (Series.)

HEAVING EXERCISES.

1. Arm bending and stretching sideways. (To command and in series.)
2. Arms forward bend position, arm flinging sideways.
3. Arm bending and stretching sideways and downward.
4. Arm bending and stretching sideways with palms up.
5. Arm bending and stretching to Y stretch position.
6. Arm bending and stretching upward and downward.

BALANCE EXERCISES.

1. Hips firm knee upward bend position.
2. Hips firm position, leg raising forward (sideways).
3. Hips firm close toe stand position, slow marching forward.
4. Hips firm knee upward bend position, leg extension forward.
5. Hips firm position, heel raising and knee bending. (Even and uneven rhythm.)
6. Arm raising sideways and leg raising forward.

BACK AND SHOULDER BLADE EXERCISES.

1. Hips firm stride position, trunk bending forward.
2. Arms upward bend stride position, trunk bending forward alternating with arm stretching sideways.
3. Arms forward bend foot sideways place position, trunk bending forward with arm flinging sideways and returning. (4 counts.)
4. Arms sideways stretch trunk forward bend position, arm rotation.
5. Hips firm foot outward place position, trunk twisting and trunk bending forward.
6. Arms sideways stretch stride position, trunk bending forward.

ABDOMINAL EXERCISES.

1. Alternate knee upward bending, grasping knee and pressing it toward body. (Series.)
2. Hips firm position, alternate knee upward bending. (Series.)
3. Hips firm toe stand position, alternate knee upward bending. (Series.)
4. Hips firm position, alternate leg flinging forward. (Series.)
5. Head firm position, alternate leg flinging forward. (Series.)
6. Prone falling position. (3 counts — 1, place hands on floor; 2, stretch left leg backward; 3, stretch right leg backward.)

LATERAL TRUNK EXERCISES.

1. Half head firm stride position, trunk bending sideways.
2. Hips firm (head firm) foot outward place position, trunk twisting. (To command and in series.)
3. Arms upward bend foot outward place position, trunk twisting.
4. Half hips firm half arms upward stretch position, trunk bending sideways.
5. Hips firm (arms sideways stretch) stride position, trunk bending sideways, followed by knee bending. (Separate counts.)
6. Arms sideways stretch stride position, trunk twisting and bending. (Touch floor in front of opposite foot.)

FALLOUTS.

1. Hips firm (arms upward bend) position, outward fallout.
2. Hips firm position, forward fallout.
3. Arms upward bend position, outward fallout with arm stretching upward, on same side as forward foot and downward on opposite side.
4. Arms sideways stretch position, forward fallout.

5. Hips firm outward fallout position, trunk twisting to same side as outward foot.
6. Arms upward bend forward fallout position, arm extension sideways.

JUMPS.

1. Standing free jump in place.
2. Hips firm stride position, spring jump. (Series.)
3. Hips firm position, jump with 90 degrees facing.
4. Standing position, stride spring jump with arm flinging sideways.
5. Standing position, jump in place with arm flinging sideways.
6. Hips firm half standing position (leg raised sideways), spring jump.

APPARATUS WORK.

Boom.

- Fall hanging.
- Alternate leg raising, arm bending.
- Over grasp fall hanging, hand traveling sideways.
- Over grasp hanging, alternate knee bending.
- Pendulum hand traveling.

Bar Stalls.

- Arms upward bend, high grasp, half standing, stretching and bending of arms.
- Sideways traveling.
- Hips firm half side standing, trunk bending sideways.
- Arms upward stretch grasp lean standing.
- Alternate high knee bending.
- Alternate leg raising.
- Lean hanging.
- Alternate high knee bending.
- Double knee bending.

Benches.

- Hips firm, head firm or arms sideways stretch.
- Stride sitting, trunk twisting.

Overhead Parallels.

- Hand traveling forward.

Rope Ladders.

- Climbing.

Vertical Ropes.

- Position for climbing.
- Climbing.

JUMPS AND VAULTS.

Bar Stalls.

- Star vault.

Benches.

- Deep jumps.

Boom.

- Saddle vault.

Cord.

- Running high jump.
- Scissors jump.

Box.

End or side mount, knee standing or standing.

Balance Beams.

Balance steps.

DANCING.

Folk, national, and couple dances of simple type. (Emphasis should be laid on bringing out characteristic features peculiar to different countries.)

1. Polka step.
2. Mazurka.

GAMES.

Practice in handling balls. Throwing, catching, side arm throw. Simple games developing team play; *e. g.*, relay races.

SOPHOMORES.

FREE STANDING EXERCISES.

ARM AND LEG EXERCISES.

1. Arm sideways fling foot sideways place position, heel raising. (4 counts.)
2. Hips firm position, heel raising and knee bending (uneven rhythm). (4 counts.)
3. Arms sideways stretch lunge position, progressing sideways in series.
4. Arms upward bend toe stand position, arm stretching upward and knee bending. (4 counts.)
5. Arms forward fling foot forward place position, arm parting (palms up) and heel raising, followed by knee bending. (6 counts.)
6. Hips firm foot sideways touch position, with bend of supporting knee. (Change in series).

ARCH EXERCISES.

1. Arms sideways stretch foot forward place position, arm rotation outward, chest raising, head bending backward and deep breathing.
2. Arms forward bend stride position, chest raising with deep breathing.
3. Head firm stride position, chest raising, backward bending of head and deep breathing.
4. Arms upward bend position, slow arm stretching to Y stretch position, chest raising and backward bending of head.
5. Arms sideways stretch (palms up) stride position, slow arm raising upward and backward bending of head.
6. Arms upward bend (alternating with arms sideways stretch) stride position, chest raising. (Slow series.)

COMPENSATORY EXERCISES.

1. Hips firm position, trunk forward bending.
2. Hips firm stride position, trunk forward downward bending.
3. Arms upward bend stride position, trunk forward downward bending.
4. Head firm stride position, trunk forward downward bending.
5. Arms upward stretch stride position, trunk forward downward bending. (Touch floor.)
6. Hips firm stride position, trunk forward downward bending, arm stretching downward, touching floor. (Series.)

HEAVING EXERCISES.

1. Arm bending and stretching upward.
2. (1) Arm raising forward, (2) arm flinging sideways, (3) position.
3. Arm bending and stretching upward and sideways.
4. Arm circumduction.

5. Arm bending and stretching backward and sideways.
6. Arms bending and stretching upward, forward, and sideways.
(Above exercises to be executed at first to command, then in series.)

BALANCE EXERCISES.

1. Hips firm (head firm) position, balance marching.
2. Hips firm (head firm) knee upward bend position, leg extension forward.
3. Head firm (arms forward bend) knee upward bend position, leg extension backward.
4. Hips firm toe knee bend stand position, head twisting.
5. Arms upward bend knee upward bend position, arm stretching sideways and leg extension forward.
6. Head firm position, balance march with upward bending and stretching of knee.

BACK AND SHOULDER BLADE EXERCISES.

1. Arms upward bend stride position, forward bending of trunk.
2. Arms forward bend (alternating with arms sideways stretch) stride position, trunk bending forward.
3. Arms sideways stretch position, trunk bending forward with arm rotation.
4. Arms upward bend forward fallout position.
5. Arms upward bend stride position, trunk bending forward with arm stretching sideways (palms up).
6. Hips firm forward fallout position, trunk bending forward.

ABDOMINAL EXERCISES.

1. Head firm position, alternate knee bending upward.
2. Hips firm toe stand position, alternate knee bending upward. (Series.)
3. Grasp hands sideways, leg flinging forward. (Series.)
4. Alternate leg flinging forward with arm flinging sideways.
5. Hips firm kneeling position, backward falling.
6. Prone falling position. (Three counts and 2 counts.)

LATERAL TRUNK EXERCISES.

1. Arm flinging sideways, alternate foot placing forward, side bending of trunk. (To command and in series.)
2. Head firm (alternating with arms sideways stretch) stride position, side bending of trunk.
3. Arms forward bend foot outward place position, arm flinging with trunk twisting.
4. Hips firm (head firm) kneeling position, trunk twisting.
5. Hips firm position, leg flinging sideways. (Series.)
6. Alternate leg flinging sideways with opposite arm flinging sideways. (To command and in series.)

FALLOUTS.

1. Arms upward bend (arms forward bend) position, outward (forward) fallout.
2. Arms upward bend outward fallout position, trunk twisting to same side.
3. Hips firm toe support position.

4. Hips firm backward fallout position.
5. Hips firm (arms upward bend) position, fallout outward (90 degrees).
6. Arms upward bend outward fallout position, trunk twisting to same side, arm stretching sideways.

JUMPS.

1. Hips firm half standing position, rocking step.
2. Standing position, free jump with sideways flinging of arms and legs.
3. Hips firm stride position, spring jump (facing 90 degrees).
4. Free jump forward with 1, 2, or 3 start steps.
5. Arms forward stretch toe stand position, free jump forward with arm flinging.
6. Stride spring jump with 90 degrees facing. (Face on every fourth count.)

APPARATUS WORK.

The apparatus work for the first year should be repeated.

Boom.

Plain hand traveling.

Fall hanging position in one count.

Overgrasp hanging with bent arms, slow stretching of arms.

Rope Ladder.

Climbing in pairs.

Vertical Ropes.

Overgrasp hanging with bent arms, slow stretching of arms.

Bar Stalls.

Arms upward bend, grasp high standing, hanging with slow stretching of arms.

JUMPS AND VAULTS.

Horse or Box.

Face vault mount.

Face vault.

Cord.

Running high jump with facings.

Running broad jump. (Two cords.)

Balance Beams.

Balance steps.

WAND DRILL.

Exercises to be identical with rifle exercises given in the "Junior Plattsburg Manual" (pages 260 to 278), these being from the "Manual of Physical Training, United States Army."

DANCING.

Folk, national, and couple dances of more advanced type. (Emphasis should be laid on bringing out characteristic features of different countries.)

Schottische step.

GAMES.

Further development of team play.

(a.) More complicated relay races.

(b.) Newcomb.

(c.) Squash baseball.

JUNIORS.

FREE STANDING EXERCISES.

ARM AND LEG EXERCISES.

1. Arms upward bend toe stand position, arm stretching backward and knee bending. (4 counts.)
2. Arms forward bend position, arm flinging sideways and foot placing forward (sideways), arm rotation and heel raising. (4 counts.)
3. Hips firm foot sideways touch position, bending of supporting knee. (Series.)
4. Arms upward bend stride position, arm stretching upward and heel raising, alternating with arm stretching sideways and knee bending. (Heels on floor.)
5. Arms forward bend toe stand position, arm flinging sideways and knee bending, arm bending and flinging sideways in series.
6. Arms forward stretch lunge position, arm parting with alternate knee bending. (4 counts.)

ARCH EXERCISES.

1. Arms upward bend foot forward place position, chest raising with deep breathing.
2. Hips firm, foot outward place twist position, chest raising and deep breathing.
3. Head firm (alternating with arm flinging sideways, palms up) stride position, chest raising. (Series.)
4. Hips firm half kneeling position, chest raising and deep breathing.
5. Arms upward bend foot forward place position, slow arm stretching to Y stretch position, chest raising and breathing. (Series.)
6. Arms sideways stretch foot outward place twist position, arm rotation outward, chest raising and deep breathing. (4 counts. Slow series.)

COMPENSATORY EXERCISES.

1. Hips firm position, trunk forward bending.
2. Hips firm stride position, trunk forward downward bending.
3. Arms upward bend stride position, trunk forward downward bending.
4. Head firm stride position, trunk forward downward bending.
5. Arms upward stretch stride position, trunk forward downward bending. (Touch floor.)
6. Hips firm stride position, trunk forward downward bending, arm stretching downward, touching floor. (Series.)

HEAVING EXERCISES.

1. Arm bending and stretching forward and sideways.
2. Double arm extension upward, sideways, and downward.
3. Arm flinging forward upward and forward downward. (4 counts.)

4. Arm bending and stretching,— one arm upward and other arm backward.
5. Double arm bending and stretching forward, upward, sideways, and downward.
6. Arm bending and stretching,— one arm forward and other arm sideways.

BALANCE EXERCISES.

1. Hips firm toe support position.
2. Toe support position, arm flinging sideways.
3. Arm circumduction, leg raising sideways.
4. Arms sideways stretch (palms up) position, toe touching, slow marching forward.
5. Hips firm (alternating with head firm) toe knee deep bend stand position.
6. Hips firm half standing position (leg forward), bending of supporting knee.

BACK AND SHOULDER BLADE EXERCISES.

1. Head firm stride position, trunk bending forward.
2. Arms upward bend (alternating with arms upward stretch position), trunk bending forward.
3. Arm flinging sideways with forward fallout.
4. Arms upward bend stride position, trunk bending forward with arm stretching upward.
5. Arms upward bend stride position, trunk bending forward, and arm extension forward.
6. Arms upward stretch foot sideways place position, trunk bending forward.

ABDOMINAL EXERCISES.

1. Hips firm (head firm) standing (toe stand) position, knee upward bending. (Series.)
2. Alternate knee upward bending with opposite arm flinging forward. (Series.)
3. Same as "2," from toe stand position.
4. Hips firm kneeling position, backward falling.
5. Arms forward bend kneeling position, backward falling.
6. Prone falling.

LATERAL TRUNK EXERCISES.

1. Half hips firm half head firm position, side bending of trunk.
2. Arm flinging sideways with lunge sideways, trunk bending sideways. (To command and in series.)
3. Hips firm half kneeling position, side bending of trunk.
4. Half hips firm half head firm position, side bending of trunk.
5. Arms sideways stretch stride position, trunk twisting and bending. (Touch floor in front of opposite foot.) (To command and in series.)
6. Side falling.

FALLOUTS.

1. Head firm position, fallout outward.
2. Hips firm (arms upward bend) fallout outward position, trunk twisting to opposite side.

3. Arms upward bend (head firm) toe stand position.
4. Arms upward bend forward fallout position, arm stretching upward.
5. Arm flinging sideways with fallout backward.
6. Hips firm (arms upward bend) outward fallout position, simultaneous trunk twisting to same side.

JUMPS.

1. Hips firm half standing position, rocking step forward, changing feet with stride jump on seventh count and raising opposite foot on eighth count.
2. Hips firm position, spring jump, stride and cross.
3. Hips firm half standing position (forward or sideways), cut and swing with two hops.
4. Hips firm position, toe touching and extending, cut and swing.
5. Half standing position (sideways), side jump and side flinging of arms.
6. Hips firm position, jump forward with 1, 2, or 3 start steps, facing 90 degrees.

APPARATUS WORK.

The apparatus work for the second year should be repeated.

Bar Stalls.

- Hips firm, foot grasp, prone lying, trunk bending forward.
- Hips firm, foot grasp, chest raising, trunk backward falling.
- Hips firm, foot grasp, fallout standing, trunk bending forward.

Boom.

Balance hang position. Dismount with facings.

Window Ladder.

Serpentine.

- Oblique.
- Spiral (in pairs).
- Vertical.
- Horizontal.

JUMPS AND VAULTS.

Horse, Box, or Double Boom.

Oblique vault.

Vertical Ropes.

Swing jump.

Balance Beams.

Balance steps.

DUMB-BELL EXERCISES.

SIMPLE ARM AND LEG EXERCISES.

I.

1. Walk forward, starting with left foot,— raise arms to forward stretch position.
2. Move arms to sideways stretch position and step forward (right).
3. Raise arms to upward stretch position and step forward (left).
(Click bells.)
4. Place right foot beside left, move arms sideways downward to position.
Repeat backward to place.
Repeat, right.

II.

1. Touch step backward (left), raise arms forward to upward stretch position.
2. Bend left knee upward, lower arms quickly to forward stretch position, move arms to sideways stretch position.
3. Same as "1."
4. Move arms forward downward to position.
Repeat, right.

III.

1. Touch step backward (left), move arms to backward stretch position.
2. Step forward on left foot, bend left knee and swing bells forward to upward stretch position.
3. Same as "1."
4. Position.
Repeat, right.

IV.

1. Touch step forward (left), raise arms to forward stretch position.
2. Step forward on left foot and bend left knee, move left arm upward and right arm backward.
3. Same as "1."
4. Position.
Repeat, right.

These exercises may be taken with a step instead of a touch step.

V.

1. Place left foot to side, move arms to sideways stretch position (palms facing forward).
2. Bend left knee, rest bells on shoulders (thumb end down).
3. Same as "1."
4. Position.
Repeat, right.

VI.

1. Step sideways (left), move arms to sideways stretch position.
2. Bend left knee and body sideways, rest bells on shoulders.
3. Same as "1."
4. Position.
Repeat, right.

VII.

1. Touch step forward, raise arms to forward stretch position.
2. Touch step sideways (left), move arms to sideways stretch position.
3. Touch step backward (left), click bells over head.
4. Move arms sideways downward to position.
Repeat, right.

TURNING AND BENDING EXERCISES.

I.

1. Place left foot outward, twist trunk to left, fling arms forward to upward stretch position.

2. Bend head backward, raise chest, lower arms to sideways stretch position (palms up).
3. Same as "1."
4. Position.
Repeat, right.

II.

1. Step sideways (left), move arms forward to upward stretch position.
2. Twist trunk to left, move arms to sideways stretch position.
3. Same as "1."
4. Position.
Repeat, right.

III.

1. Stretch left leg backward and kneel on left knee, raise arms to sideways stretch position.
2. Bend trunk to right.
3. Same as "1."
4. Position.
Repeat, right.

IV.

1. Place left foot to side, rest bells and thumbs on shoulders.
2. Bend forward, stretch arms forward, touch toes with bells.
3. Same as "1."
4. Position.
Repeat, right.

LUNGES.

I.

1. Lunge forward (left), fling left arm to half upward and right arm to half backward stretch position.
2. Stretch knees and make quarter turn to right, raise right arm to upward stretch position. (Click bells.)
3. Quarter turn (right), reversing to right lunge, lower left arm to half backward stretch position.
4. Position.
Repeat, right; or the same to left to complete circle, then reverse.

II.

1. Lunge outward (left), raise arms to upward stretch position. (Click bells.)
2. Change weight to right foot, move arms to backward stretch position. (Click bells.)
3. Same as "1."
4. Position.

III.

1. Lunge forward (left), raise arms to forward stretch position.
2. Stretch left knee and swing right leg forward, move arms to sideways stretch position (palms forward).

3. Same as "1."
4. Position.
Repeat, right.

DANCING.

Advanced folk and national dances.

Waltz step.

Simple interpretative dances.

GAMES.

Games demanding well developed team play and mental and bodily control.

- a. Bat ball.
- b. Volley ball.
- c. Basket ball.

SENIORS.

FREE STANDING EXERCISES.

ARM AND LEG EXERCISES.

1. Arms forward bend position, arm flinging sideways and foot placing sideways, arm rotation and heel raising. (4 counts.)
2. Arms sideways stretch foot forward place position, arm raising upward with heel raising and knee bending. (6 counts.)
3. Arms upward stretch sideways lunge position, arm parting and alternate knee bending. (4 counts.)
4. Head firm foot forward place position, heel raising and arm flinging sideways, knee bending and arm raising upward. (6 counts.)
5. Arms forward bend foot outward place position, arm flinging, trunk twisting and heel raising. (4 counts.)
6. Arms upward bend position, arm stretching upward and foot placing forward (alternating with arm stretching sideways and foot placing sideways). (4 counts.)

ARCH EXERCISES.

1. Arms forward stretch stride position, arm parting (palms up), chest raising and deep breathing.
2. Arms sideways stretch (palms up) foot forward place position, arm raising, chest raising and deep breathing.
3. Head firm foot outward place twist position, chest raising and deep breathing.
4. Arms upward bend kneeling position, chest raising, arm stretching sideways. (4 counts.)
5. Arms forward bend foot forward place position, arm flinging (alternating with arm rotation), chest raising and breathing. (6 counts.)
6. Arms upward bend stride position, slow arm stretching sideways, trunk twisting, chest raising and breathing. (4 counts.)

COMPENSATORY EXERCISES.

1. Hips firm position, trunk forward bend.
2. Hips firm stride position, trunk forward downward bend.
3. Arms upward bend stride position, trunk forward downward bend.
4. Head firm stride position, trunk forward downward bend.
5. Arms upward stretch stride position, trunk forward downward bend. (Touch floor.)
6. Hips firm stride position, trunk forward downward bend, arm stretching downward, touching floor. (Series.)

HEAVING EXERCISES.

1. Arm bending and stretching forward, upward, backward, and sideways.
2. Arm bending and stretching upward, backward, sideways, and downward. (Twice in each direction.)

3. Arm bending and stretching,— one arm upward and other arm downward.
4. Arm flinging,— one arm upward and other arm downward.
5. Arm bending and stretching,— one arm upward, sideways, and downward; other arm sideways, upward, and downward. (Series.)
6. (1) Arm flinging forward upward, (2) parting to side, (3) upward, and (4) sideways downward. (Series.)

BALANCE EXERCISES.

1. Arms upward bend toe support position, arm stretchings.
2. Arms sideways stretch (palms up) half standing position, arm raising upward and knee extension forward.
3. Arms sideways stretch half standing position (leg forward), knee bending.
4. Arms sideways stretch knee upward bend position, arm raising slowly upward and leg extension backward.
5. Hips firm toe stand position, half horizontal standing.
6. Arms upward stretch toe stand position, half horizontal standing.

BACK AND SHOULDER BLADE EXERCISES.

1. Arms sideways raise stride position, trunk bending forward.
2. Trunk forward bend position, arm circumduction.
3. Arms forward bend feet close position, arm flinging sideways with trunk bending forward.
4. Head firm foot outward place twist position, trunk bending forward.
5. Arms upward stretch stride position, trunk bending forward downward.
6. Arms upward stretch forward fallout position.

ABDOMINAL EXERCISES.

1. Head firm position, alternate knee upward bending.
2. Toe stand position, alternate knee upward bending with opposite arm flinging forward. (Series.)
3. Alternate leg flinging forward with opposite arm flinging sideways. (Series.)
4. Hips firm position, knee upward bending and forward stretching.
5. Hips firm (arms sideways stretch) kneeling position, backward falling.
6. Arms upward bend half kneeling position, backward falling.

LATERAL TRUNK EXERCISES.

1. Arms forward bend foot forward place position, arm flinging sideways with trunk bending sideways. (Six counts.— To command or in series.)
2. Arms forward bend foot outward place position, trunk twisting and arm flinging sideways.
3. Head firm foot outward place position, trunk twisting and bending.
4. Alternate arm and leg flinging sideways.
5. Half hips firm (half head firm) side falling position.

6. Half hips firm (half arms upward stretch) half kneeling position, trunk bending sideways.

FALLOUTS.

1. Arms forward bend (head firm) position, fallout forward.
2. Head firm outward fallout position, trunk twisting to same side.
3. Arms sideways stretch toe stand position.
4. Half hips firm (half head firm) outward fallout position, trunk twisting to opposite side.
5. Arms upward bend twist position, trunk to right and head to left bend, outward fallout with arm stretching (left upward, right downward).
6. Same as above, with twist, fallout, and arm stretching simultaneous; — also with facing 90 degrees.

JUMPS.

1. Hips firm half standing position, rocking step forward, changing with stride jump on seventh count and raising opposite foot forward on eighth count.
2. Hips firm position, spring jump, stride and cross.
3. Hips firm half standing position (forward or sideways), cut and swing with two hops.
4. Hips firm position, toe touching and extending, cut and swing.
5. Half standing position, side jump, flinging of arms.
6. Hips firm position, jump forward with one, two, or three start steps, facing 90 degrees.

APPARATUS WORK.

The apparatus work of previous years may be repeated.

INDIAN CLUB DRILL.

1. Single outward arm circles.
 2. Single inward arm circles.
 3. Double outward arm circles.
 4. Double inward arm circles.
 5. Parallel outward and inward arm circles.
 6. Pendulum.
 7. Pendulum and low forward dip.
 8. Outward arm and hand circles combined.
 9. Inward arm and hand circles combined.
 10. Parallel arm and hand circles combined.
- Combinations of arm and body movements at discretion of instructor.

DANCING.

Interpretative dances.

GAMES.

By the fourth year, certain games have proved themselves adaptable to the peculiar conditions of a school, and these may be profitably played.

The work described in the course for girls represents the minimum.

COURSE IN MILITARY DRILL FOR BOYS.

Two periods a week are assigned to military drill, making a total of about three hundred hours for the four years. A complete progressive course is given. This covers the "School of the Soldier," "School of the Squad," "School of the Company," and "School of the Battalion." Special stress is laid upon military ceremonies, such as "Escort to the Colors," with its emphasis on reverence to the nation's flag. Promotions are so graded that the private of the first year may, in the second, become a corporal, in the third, a sergeant, and in the fourth, a cadet commissioned officer. Officers are trained in the "School for Cadet Commissioned Officers" in "Infantry Drill Regulations" and are given lectures on military courtesy, voice drill, discipline, organization of the United States Army, and similar subjects.

Field music, consisting of fife, drum, and bugle corps, is established in every school and training in playing the fife, drum, or bugle is given to members of the corps. Military bands are being organized, as well, in all the schools. The musical instruction constitutes the major part of the military course for the fife, drum, and bugle corps and for fifty-three military band members.

Each regiment has an annual competitive drill. In the order of ratings achieved, the highest captain becomes colonel, the next, lieutenant-colonel, and the next three in order become the majors of the first, second, and third battalions, respectively.

Competitive individual certificates are awarded for proficiency in the "Manual of Arms" or for marked skill in playing the fife, bugle, or drum; certificates are also awarded to the officers of the winning companies.

An annual street parade and review of all the regiments of the Boston School Cadets is also held.

The setting-up exercises and target practice are included in the course in military drill. The former is compulsory, the latter optional. Those who volunteer for target practice receive, free of charge, indoor gallery practice under National Rifle Association rules. The training is given one hour a week in the afternoon after school hours. Each boy has an opportunity, during the lesson, to shoot under the supervision of one of the departmental instructors.

SETTING-UP DRILL.

The *head master* should *insist* that the *room teacher* be *present* during the *entire* setting-up drill to relieve the room captain of any responsibility in regard to discipline.

The room teacher shall report to the instructor of physical training or of military drill any suggestions that would tend to improve the work of the room captain.

It is preferable that the room captains should be members of third or fourth year classes and, when possible, cadet commissioned officers or candidates for the Normal School.

The room captains should visit other classes occasionally for observation.

The room captain shall teach the same group throughout the year.

Wherever it is practicable, games and marching may be substituted for the drill during the first month. Games and plays may also be substituted for the drill on one day each week throughout the year.

In the final competition in May, room teachers shall act as judges of classes not their own. The following scale of marking shall be observed in the competition: 10 points for condition of school room; 10 points for deportment, 50 points for posture, and 30 points for interest and quality of work.

Occasionally the room captains shall ask the class the purpose of the exercise.

Wherever it is convenient, corridor, hall, or gymnasium should be used for the setting-up exercises.

The following drills are given in accordance with the Rules and Regulations of the Boston School Committee, section 200, paragraph 2.

FOR GIRLS.

Preparation for drill: Clear desks, open windows, arrange class according to height.

Marching and running should be omitted when the schoolhouse commissioners decide the building to be unsafe for these exercises.

March and run for correct posture:

Plain tiptoe, or toe-in tiptoe.

1. To correct the position of shoulder blades:

Elbows— FORWARD ! (Closed fists on shoulders, elbows shoulder high.)

BACK ! DOWN ! Repeat — ONE ! TWO ! THREE ! (6 times.)
POSITION !

2. To correct the position of head:

Head backward — B-E-N-D ! (Chin in.) R-A-I-S-E ! Repeat
— O-N-E ! T-W-O ! (3 to 5 times.)

3. To correct the position of spine:
Left half (right half) — FACE! In one count — Arms sideways fling and feet sideways — JUMP! Trunk slightly forward B-E-N-D! Swimming movement — ONE! TWO! T-H-R-E-E! Trunk — R-A-I-S-E! In one count — POSITION!
4. To strengthen the muscles of the lower back and waist:
In one count — hips firm and feet sideways — JUMP! Trunk to the left — B-E-N-D! R-A-I-S-E! Repeat — O-N-E! T-W-O! (4 times.) Trunk to the right. — B-E-N-D! R-A-I-S-E! Repeat — O-N-E! T-W-O! (4 times.) In one count — POSITION!
5. To improve the balance of the body.
Hips — FIRM! Heels — RAISE! Slowly — knees deep — B-E-N-D! S-T-R-E-T-C-H! Heels — S-I-N-K! Repeat — ONE! T-W-O! T-H-R-E-E! F-O-U-R! — POSITION!
6. To broaden chest and to correct round shoulders:
Left half (right half) — FACE! Arms upward — BEND!
Arms sideways — STRETCH! Arms outward — T-U-R-N! RETURN! Arms — BEND! Repeat — ONE! T-W-O! THREE! FOUR! (6 times.) — POSITION!
7. To strengthen abdominal muscles:
* (a) Left (right) — FACE! Sit on desk — ONE! TWO! (Sit tall.) Toes under chair — PLACE! Hips — FIRM! Trunk slightly backward — F-A-L-L! R-A-I-S-E! Repeat — O-N-E! T-W-O! Hands — POSITION! Ready to stand — ONE TWO! Left (right) — FACE!
(b) Hips — FIRM! Alternate knee bending upward, beginning with left, to count of 16 — GO! POSITION!
8. To ventilate lungs:
Arm rotation outward with deep breathing — O-N-E! T-W-O! (4 times.)

FOR BOYS.

Preparation for drill: Clear desks, open windows, arrange class according to height.

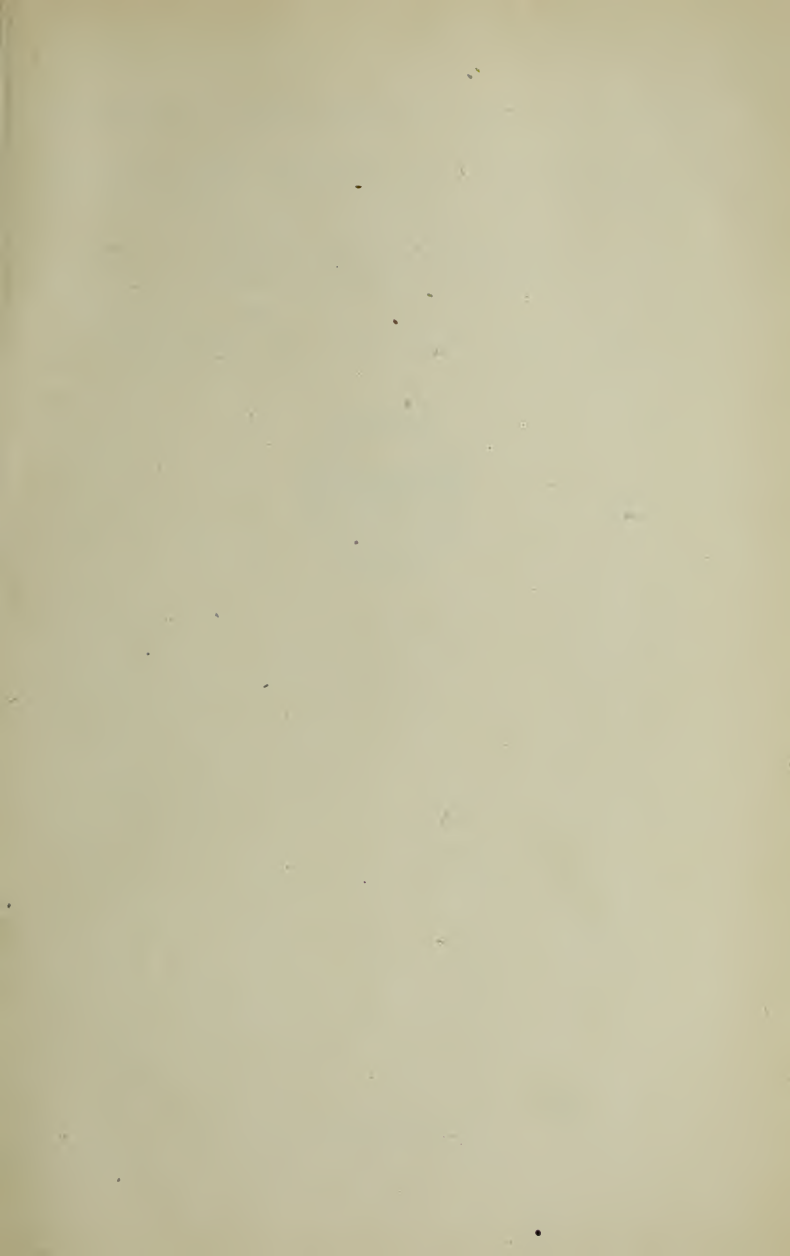
Marching or running should be omitted when the Schoolhouse Commissioners decide the building to be unsafe for these exercises.

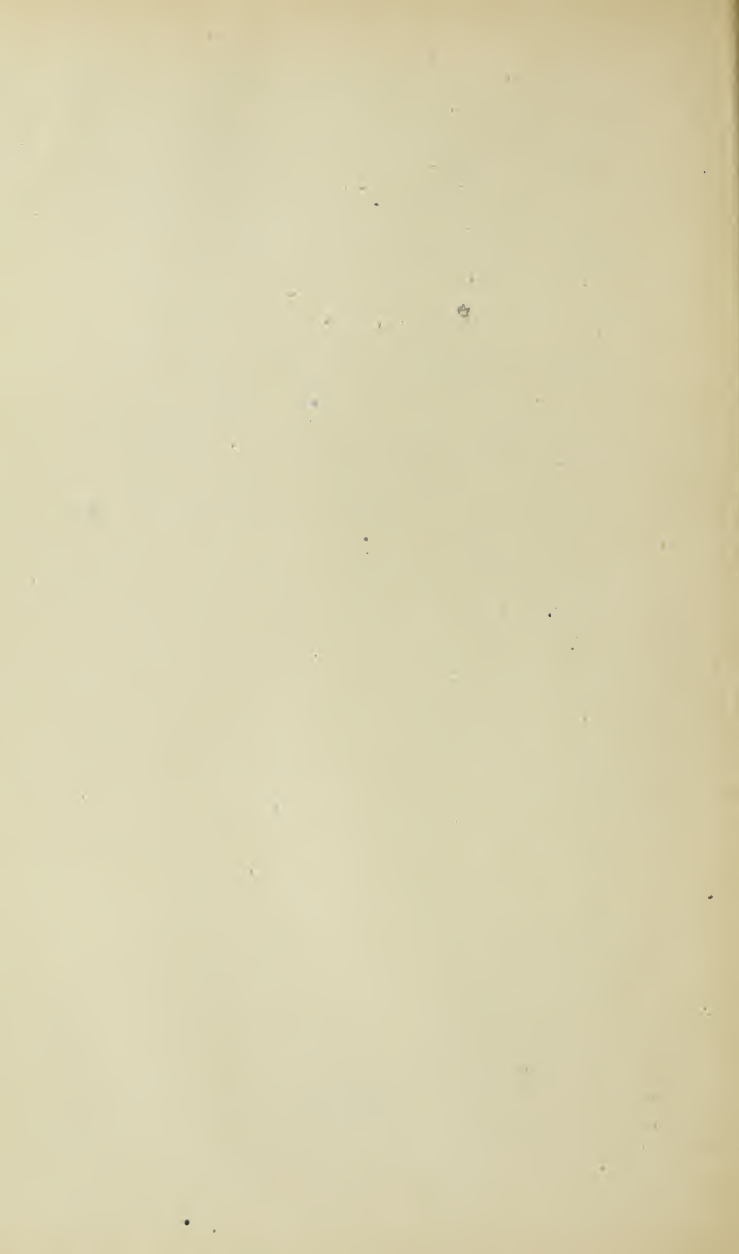
March and run for correct posture:

1. Arm — EXERCISE! — HEAD! UP! — D-O-W-N! — RAISE!
— HEAD! — UP! — D-O-W-N! — etc. — HALT!
2. Arm — EXERCISE! — FRONT! — REAR! — FRONT! — REAR! — etc., or, Continue the exercise — FRONT! — HALT!
3. Arm — EXERCISE! CIRCLE! CIRCLE! — etc., or, Continue the exercise — CIRCLE! — HALT!
4. Forearms horizontal — RAISE! — FRONT! — REAR! — FRONT! — REAR! — etc. — HALT!
5. Forearms vertical — RAISE! — UP! — DOWN! — RAISE! — UP! — DOWN! — etc. — HALT!

* If "a" is not practicable or safe on account of furniture, use "b."

6. Trunk — EXERCISE! — RIGHT! — LEFT! — RIGHT! — LEFT!
— etc. — HALT!
7. Trunk — EXERCISE! — DOWN! — BACK! — DOWN! —
BACK! — etc. — HALT!
8. Arms vertical, palms to the front, — RAISE! — DOWN! — UP! —
DOWN! — UP! — etc. — HALT!
9. Leg — EXERCISE! — Full bend — DOWN! — UP! — DOWN!
UP! — etc., *or*, Continue the exercise — Full bend — DOWN! —
HALT!
10. Leg — EXERCISE! — UP! — UP! — UP! — etc., *or*, Continue
the exercise — UP! — HALT!
11. Leg — EXERCISE! Left (or right) — FORWARD! — REAR! —
FORWARD! — REAR! — etc., *or*, GROUND! — GROUND!
— etc. — HALT!
12. Breathing Exercise — I-N-H-A-L-E! — E-X-H-A-L-E! — etc.
— HALT!
Note.— Arm — EXERCISE! — Take arms sideways fling (palms
up).
Leg — EXERCISE! — Take hips firm.





SCHOOL DOCUMENT NO. 6—1920.
BOSTON PUBLIC SCHOOLS

SPECIAL SYLLABUS DRAWING
AND MANUAL TRAINING

GRADES IV., V., VI., VII., VIII.



1920-1921

IN SCHOOL COMMITTEE, June 16, 1919.

Adopted.

Attest:

THORNTON D. APOLLONIO,
Secretary.

IN SCHOOL COMMITTEE, June 28, 1920.

Revised course adopted.

Attest:

ELLEN M. CRONIN,
Secretary pro tempore.

EQUIPMENTS.

Replenished in September on the basis of principals' reports for which blanks are furnished in March.

DRAWING. Grades IV., V., VI., VII., VIII.

ARTICLE.	Quota.
Water-color brushes.....	1 to each pupil.
Water-color boxes, long, with red, blue, yellow and black.....	1 to each pupil.
Water cups.....	1 to each pupil.
Pairs scissors, 6-inch (Grades VI. to VIII.).....	1 set to group.
In Grades IV. and V. use 6-inch manual training scissors.....	See Man. Tr.
Wooden rules (Grades VII., VIII).....	1 to 2 pupils.
Compasses (VII., VIII).....	1 set each group.

MANUAL TRAINING. Cardboard Construction.— Grade IV.

ARTICLE.	Quota. (To be Used in Sets, Each Set Shared by Two Classes.)
Pairs scissors, 6-inch (for Drawing also).....	Each set has 1 for each boy.
Rules, $\frac{1}{2}$ -inch.....	
Triangles.....	
Compass attachments.....	
Conductor's punches.....	6 to a set.
Trybom's "Cardboard Construction".....	1 to class.
"War Time Occupations".....	1 to class.

Bookbinding.— Grade V.

ARTICLE.	Quota. (To be Used in Sets, Each Set Shared by Two Classes.)
Pairs scissors, 6-inch (for Drawing also).....	Each set has 1 for each boy.
Rules, $\frac{1}{2}$ -inch.....	
Triangles.....	
Paste brushes.....	
Eyelet punches.....	1 to a set.
"Bookbinding for Beginners".....	1 to class.
"War Time Occupations".....	1 to class.

SUPPLIES

Furnished in September on the basis of principals' reports for which blanks are issued in March. The amounts delivered plus any surpluses reported should equal quotas stated.

If supplies are not received by dates given, inquiry should be made of the master or assistant in charge. If it is found that they have not arrived in the district, inquiry should be made of the Supply Department. The quotas following have been carefully and generously revised, and, if supplies are distributed and used as indicated, there should be no necessity for further requisitions except in the cases where numbers prove larger than estimates or reports last sent in.

GRADE IV.

Drawing.

ARTICLE.	Annual Quota. To be Delivered September 17, 1920.
Drawing paper, gray, 9-inch by 12-inch.	
Drawing paper, manila, 9-inch by 12-inch.	
Drawing paper, white, 9-inch by 12-inch.....	12 sheets to each pupil.
Cross section paper, 9-inch by 12-inch, manila.....	4 sheets to each pupil.
Paste, tubes*.....	2 to each class.
Pencils, E. Faber's No. 310 H. B.*.....	1 to each pupil.
Cakes of color, yellow, red, blue and charcoal gray, green, orange, violet.*	
Erasers.....	1 to to 2 pupils.
Envelopes, 10-inch by 13-inch.....	1 to each pupil.

Manual Training.

ARTICLE.	Annual Quota. To be Delivered September 17, 1919.
Gray twine.....	1 ball to 18 boys.
Pencils, Dixon's H.....	1 to each pupil.
Wrapping paper, 24-inch by 36-inch, light brown.....	1 sheet to each boy.
Bristol board, 22-inch by 28-inch, 3 colors.....	6 sheets to each boy.

* Delivered June, 1920.

GRADE V. Drawing.

ARTICLE.	Annual Quota. To be Delivered September-17, 1920.
Drawing paper, gray, 9-inch by 12-inch.	
Drawing paper, manila, 9-inch by 12-inch.	
Drawing paper, white, 9-inch by 12-inch.....	12 sheets to each pupil.
Cross section paper, 9-inch by 12-inch, manila.....	4 sheets to each pupil.
Paste, tubes*.....	2 to each class.
Pencils, E. Faber's No. 310 H. B.*.....	1 to each pupil.
Envelopes, 10-inch by 13-inch.	
Cakes of color, red, blue, yellow, charcoal gray, green, orange and violet.*	
Erasers.....	1 to 2 pupils.

Manual Training.

ARTICLE.	Annual Quota. To be Delivered September 17, 1920.
Needles, tapestry*.....	1 paper to 25 boys.
Wrapping paper, 24-inch by 36-inch, light brown.....	1 sheet to each boy.
Newsboard, 13-inch by 19-inch.....	4 sheets to each boy.
Vellum deluxe, green.....	1 yard to 2 boys.
Paper, Trimount Mills.....	1 ream to 25 boys.
Lining paper, green, 20-inch by 26-inch.....	3 sheets to 2 boys.
Paste, powdered.....	1 pound to 20 boys.
Boxes of eyelets.....	1 box to 25 boys.
Balls macramé cord, black.....	1 ball to 50 boys.
Cotton tape, $\frac{1}{4}$ -inch, white.....	1 yard to 4 boys.
Cotton tape, $\frac{1}{4}$ -inch wide, black.....	
Bookbinders' thread.....	1 skein to 25 boys.
Yards "super".....	1 yard to 50 boys.
Rolls wall paper (16 yards).....	1 roll to 50 boys.
Checkerboard paper.....	1 sheet to each boy.

* Delivered June, 1920.

GRADE VI.
Drawing.

ARTICLE.	Annual Quota. To be Delivered September 17, 1920.
Drawing paper, gray, 9-inch by 12-inch.	
Drawing paper, manila, 9-inch by 12-inch.	
Drawing paper, white, 9-inch by 12-inch.....	12 sheets to each pupil.
Cross section paper, 9-inch by 12-inch, manila.....	4 sheets to each pupil.
Paste, tubes *.....	2 to each class.
Pencils, E. Faber's No. 310, H. B.*.....	1 to each pupil.
Cakes of color, red, blue, yellow, charcoal gray, green, orange and violet *.....	1 of each to each pupil.
Envelopes, 10-inch by 13-inch.....	1 to each pupil.
Erasers.....	1 to 2 pupils.
Color charts.....	1 set of 25 to each group.
"Elementary Lettering" sheets.....	1 to each pupil.
"Elementary Lettering" charts.....	1 to each class.

GRADE VII.
Drawing.

ARTICLE.	Annual Quota. To be Delivered September 17, 1920.
Drawing paper, gray, 9-inch by 12-inch.	
Drawing paper, manila, 9-inch by 12-inch.	
Drawing paper, white, 9-inch by 12-inch.....	12 sheets to each pupil.
Cross-section paper, 9-inch by 12-inch, manila.....	4 sheets to each pupil.
Paste, tubes *.....	2 to each class.
Pencils, E. Faber's No. 310 H. B.*.....	1 to each pupil.
Cakes of color, red, blue, yellow and charcoal gray *.....	1 of each to each pupil.
Envelopes, 10-inch by 13-inch.....	1 to each pupil.
Erasers.....	1 to 2 pupils.
Color charts.....	1 set of 25 to each group.

* Delivered June, 1920.

GRADE VIII.
Drawing.

ARTICLE.	Annual Quota. To be Delivered September 17, 1920.
Drawing paper, gray, 9-inch by 12-inch.	
Drawing paper, manila, 9-inch by 12-inch.	
Drawing paper, white, 9-inch by 12-inch.....	12 sheets to each pupil.
Cross section paper, 9-inch by 12-inch, manila.....	4 sheets to each pupil.
Paste, tubes*.....	2 to each class.
Pencils, E. Faber's No. 310 H. B.*.....	1 to each pupil.
Cakes of color, red, blue, yellow, charcoal gray, green, orange and violet*.....	1 of each to each pupil.
Envelopes, 10-inch by 13-inch.....	1 to each pupil.
Erasers.....	1 to 2 pupils.
Color charts.....	1 set of 25 to each group.

* Delivered June 18, 1920.

DRAWING. GRADE IV.

There are seventy lessons, two forty-five-minute periods weekly, arranged as follows for Grade IV.:

For Tones and Tone-Relations, Space-Relations, Balance, Sequence of Repetition, Alternation, and Progression, two forty-five-minute periods weekly from September 8 through December 31, and one forty-five minute period weekly from January 1 through June 16. (Forty-eight lessons.)

For Representation one forty-five minute lesson weekly from January 1 through June 16. (Twenty-two lessons.) See Representation, page 15.

Tones and Tone-Relations.

There are eighteen exercises in Tone-Study. For continued exercises in the study of Tone-Relations see Sequences of Repetition, Alternation, Progression, and Balance. Two lesson periods may be allowed for practice in handling water-color material properly, preparatory to painting. Four periods for painting neutral gray in five values, white, light, middle, dark, and black, and learning to recognize and distinguish them from other values. Six periods for painting the six standard colors, red, orange, yellow, green, blue, and violet, full intensity. Six periods for painting neutralization scales, the above six colors neutralized to white and to black.

Note.—The number of periods used for each of the above series of exercises may be varied according to the discretion of the Drawing Supervisor.

Space-Relations.

There are seven lesson periods allowed for this series of exercises.

One period: An exercise in the study and drawing of the Circle, Square, and Oblong with diameters, and of lines representing the directions, "up and down" (vertical), left and right (horizontal), and the angle of 90 degrees (the right angle).

One period: An exercise in drawing the square with diagonals and lines representing the diagonal direction and angle of 45 degrees.

One period: An exercise in drawing the equilateral triangle and lines representing the diagonal direction and angle of 60 degrees.

One period: An exercise in drawing lines and angles representing the diagonal direction and angle of 30 degrees. (Bisection of the angle of 60 degrees.)

Two periods: Exercises in drawing (*a*) the circle, (*b*) the oblong, square, and equilateral triangle by division of the circle into two, three, four, etc., parts.

One period: An exercise in developing (within a 6-inch circle) the "square web" diagram in a sequence of progression of web sizes, 2-inch, 1-inch, $\frac{1}{2}$ -inch, and $\frac{1}{4}$ -inch.

Note.—The aim of the above series is ability to DRAW FROM MEMORY the shapes, angles, and directions named.

This power should enable pupils to start with the center of a circle (called for in the last exercise but one) and readily produce the oblong (a root 4 rectangle equal to two squares) dependent upon the accuracy of the vertical and horizontal directions; the square (root 1 rectangle) dependent upon the accuracy of the 45 degree diagonal; the oblong (root 3 rectangle) dependent upon the accuracy of the 60 degree diagonal and the equilateral triangle dependent upon the 30 degree diagonal.

The last exercise introduces the square web diagram (a harmony of root 1 rectangle) which is the base for all field webs concerned with the directions vertical, horizontal, and 45 degrees diagonal.

The exercise not only shows how this web is constructed but also illustrates the geometric progression in size and numbers peculiar to this series of web.

DESIGN.

Twenty-four exercises in Rhythm, Balance and Harmony in which due attention should be given to the various forms of order as designated below.

Note.—In the following exercises the shapes may be Lines (straight, curved, or angular), Outlines and Areas or Mass. The Mass may be pencil or crayon or free brush work with ink or water-color.

Balance.

Axial Balance.

Central Balance.

Tone Balance (Black and White). Light and Dark.

Observation and drawing of familiar forms of balance in nature.

Observation and drawing of similar forms of balance in works of art.

Sequences of Progression.

Sequences of Progression (in a row).

Sequences of Progression in a given area.

Sequences of Progression in a field.

Color Sequences of Progression.

Observation and drawing of Sequences of Progression in nature and in works of art.

Note.—The movement may be in measure or size from small to large or large to small, or more to less. In tone it may be from light to dark or dark to light; bright to dull or dull to bright; warm to cold or cold to warm, etc.

Sequences of Repetition.

Sequences of Repetition. (a) In a row. (b) In a field.

Tone-Sequences of Repetition.

Observation and drawing of Sequences of Repetition in nature and in works of art.

Note.—In each series make many different arrangements, varying the tone, measure, proportion, shape, attitude, or interval with each new arrangement.

Sequences of Alternation.

Sequences of Alternation. (a) In a row. (b) In a field.

Color Sequences of Alternation.

Observation and drawing of Sequences of Alternation in nature.

Observation and drawing of Sequences of Alternation in works of art.

Note.—Make many different arrangements in each series with the following changes in alternation: Tone, measure (size and number), proportion, shape, attitude, and interval. Sequences of Alternation are rhythmical.

REPRESENTATION.

Aim.

To develop visual discrimination, memory and imagination, together with an ability to describe visual experience and to express visual knowledge and ideas.

Subjects to be Considered and Represented.

Men, women and children, their attitudes, gestures and movements, their belongings and surroundings, in the city and in the country; care being taken to bring all the subjects suggested well within the experience of all the pupils, so that they will be describing what they have seen, and what they know, or ought to know, of Nature and Life.

Mode of Expression.

Drawing in definite outlines and coloring in flat tones. There is to be no modeling of solid forms either in Black-and-White or in Color. The interest is to be in the Shapes of objects, people and things, and in the differences of color revealed in light.

Materials.

The drawing will be done with lead pencils; the coloring, at first with colored crayons, afterwards, in the more advanced grades, with water-colors.

Method of Teaching.

The teacher's part in this, as in all educational work, is to make the pupils think clearly and express themselves well. In this particular course the thinking must be in the terms of vision: Light, color, positions, directions, distances or measures, proportions and shapes. The knowledge and ideas to be expressed by drawing and coloring are in tone-relations and in space-relations. The terms of expression are lines and spots of color. The aim is to induce the pupils to think of Nature and Life in lines and spots of color and to put these lines and spots on paper; just as in other courses of study they think in words and forms of language, using the words in speech and in writing. The knowledge and ideas which are developed and expressed by lines and spots of color are hardly less important than those which are expressed by language. Many ideas which we try to express by speech and by writing can be much better expressed more definitely and more clearly by drawing and painting.

It will be the duty of the teachers in this course to suggest the subjects to be thought about and described; to help the pupils in the comparison, criticism and judgment of their own performances; and, finally, to grade the work done according to the standard to be maintained. The teacher is expected to take a genuine interest in the work of the pupils and to be quick to recognize and appreciate what is good in the work done; what is better, and what is best.

In suggesting subjects to be thought about and described by the pupils the teacher must be very specific and particular. For example, the teacher says: "A man is going out of the door when he remembers that his wife has not told him what to get for dinner. He turns round and calls her. She comes to the door with a little girl, four years old. They stand by the door talking. The little girl is interested in the cat which, seeing a dog across the street, has its fur raised and its back up. The house is built of red bricks. There are stone steps and the door and its jambs are painted white." By these words fairly definite images are suggested and the pupils may proceed to draw and to color the subject, each one following his own imagination and

producing his own picture. Taking up any one of the pictures produced it is a question whether it is true as a representation. In what respects is it true? What mistakes, if any, have been made? What changes or corrections should be made? Has anything been left out that is natural and proper to the picture as a whole, or to the people and things represented in it? In other words, is the performance appropriate to the idea which suggested it? Because in Art nothing counts that is unnatural, untimely or inappropriate. When the pictures have been considered and criticised, one after another, they should be put up to be considered together, with a view to making a comparison and selecting the best — the best of all or the best two or three. The children must be encouraged to make comparisons and to pass judgments. The teacher should assist them and encourage them, declaring her own judgment at the end of the lesson.

As to the standard to be maintained: It should be determined always by the best work produced in the grade; the better the work the higher the standard. With this idea in mind, the best work should be selected and kept for reference; and it will be well to have exhibitions of it from time to time. As the work improves, as it should from year to year, insignificant and unimportant examples may be thrown out. It is always the best that gives the standard. It is proper that the pupils should see what the standard is and for that reason exhibitions are held. No copying should be allowed. When the children have seen the exhibition it should be taken down, and they should then proceed, as before, to think for themselves and to express, each one, his own knowledge and his own ideas.

In the work of the nine grades there should be a steady increase of visual knowledge and of the power of expression which goes along with it. The crude representations of the primary grades must pass away and in the work of the higher grades we must see more and more truth of representation and the representation must be more and more specific and particular. If in the work of the primary grades we recognize the genus, we must presently recognize the species, then the varieties of each species. Last of all we reach the representation of particular people and particular things. Whenever the child is unable to think of anything to draw, that means that he has no visual knowledge appropriate

to the subject proposed. He must proceed at once to get the required knowledge. A simple way of doing this is to have the child look in Nature for the subject-matter to be represented; to get an idea of it. A good way of doing this is for the child to trace the objects, people or things in the air with the point of his finger. When he has done that he will remember, not the object, but his own action in describing it, and he will probably be able to do with the point of his pencil what he had done with the point of his finger, or something like that.

If the subject of the next lesson is given out before the children leave the room, they will be looking out for the people and things they will have to draw. The younger children can trace what they see with the finger and then draw it. The older children may be able to draw directly from the object, if it is in any sense still-life. In most cases, however, our visual knowledge is best secured by quick observation, followed by clear recollection or vivid imagination. Still-life is a very small part of Life and the art of drawing and painting in representation must not be limited to it, as it has been, very generally, during the past fifty years. In any case we should be able to imagine and draw the human figure in its principal attitudes and actions before we undertake anything like specific portraiture. The general idea, which is always a thing of the imagination, should take precedence over any specifications of it in the direction of matter-of-fact or statistical portraiture. We should be able to draw and paint men, women and children, and the objects connected with them, as the old masters did, before we proceed to direct imitation or copying. When the child reaches the end of the ninth grade of this teaching which we propose, and has come up to the standard required, he ought to be well prepared to take up the practice of drawing and painting in a professional school; particularly if he had done well in the practice of Design which has been going on at the same time. The motive of Representation, to achieve the truth of Representation, is not sufficient in itself; nor is the motive of Design self-sufficient, Design being the arrangement and composition of lines and spots of color to illustrate the mathematical principles of Order. The two motives must come together and work together; the ultimate aim being to present the Truth of Representation in forms which will be at least orderly and, so far as possible, beautiful.

It is very important that the children of all grades should see a great many photographs and pictures. By means of photographs and pictures their visual experience and knowledge may be indefinitely increased, particularly if they make drawings from the photographs that interest them and from the pictures that please them. The photographs should represent facts and scenes of Nature and Life. Photographic reproductions of drawings and paintings by good masters should also be used. The half-tone pictures which appear in the daily and weekly papers and magazines will be of interest and serve the purpose in many ways. Photographs and pictures should be used as books are used, and referred to for information, as books are referred to. In drawing from the photographs or pictures the children should do what they will naturally and inevitably do if left to themselves. They must follow the outlines of the subject with the eye and the eye with the point of the pencil. In that way they will feel the sizes and the shapes together and draw them together; otherwise the drawing will be a matter of visual triangulation and construction, which is all right when the object is to arrange and state facts or ideas, but it is not the way to get visual knowledge and the power of imagination. We must have knowledge and ideas to express before we proceed to the Art of Arrangement and Composition.

DRAWING. GRADE IV. REPRESENTATION.

Beginning January 1, and continuing through June 16, one of the two weekly drawing lessons is devoted to "Representation." See first paragraph under "Drawing, Grade IV."

Note.

The papers should be numbered 1, 2, 3, etc., to show progress. See general note on Representation, pages 10, 11, 12, 13, 14. The interest for this grade centers about people indoors, bringing the figures nearer to the observer than out of doors. That means larger and more detailed drawings of people and things. Clothes, furniture, utensils, plants, animals, birds and other objects will be drawn in connection with the actions of people. The drawings should improve in arrangement, shapes and coloring as the children gain knowledge through observations, comparisons and their efforts in expression.

Visual memory and the power of imagination will be greatly strengthened if observations are made in definite order, beginning with the principal directions, proceeding to the shapes connected with them and coming last of all to the details. It will be well to work in zones, starting with the most important object and center of interest, adding things immediately associated with the center of interest, then the background and foreground and objects less closely associated with the center of interest. Try to make the sizes right according to the relative distances. In coloring try to keep the center of interest important by contrast of color; light, dark or neutral.

Imaginative Drawing. (Two lessons.)

Choose and illustrate an incident suggested by daily experience at home in the morning, *e. g.*:

Mother setting the table.

The baby in her high chair.

Children having breakfast.

In painting these pictures be sure that the coloring is appropriate to what is represented.

Note.— At the end of each imaginative lesson invite the children to judge the drawings, noticing the parts of the pictures which show need of more knowledge. In directed observation proceed

as in science to study several objects or pictures of objects, to learn general characteristics, not individual peculiarities. For example, study several heads to discover that the head is an oval, not a circle, that the eyes are half way down in the oval, not near the top where the children usually draw them.

Directed Observation. (Five lessons.)

Observe facts about people and furniture and make records of observation. Study to get better ideas of things which were not well drawn in the imaginative lessons. Make notes on color, or paint parts of sketches where color is of special interest.

Collect and study photographs and pictures which show people indoors. Notice ways in which pictures tell the truth. Draw heads, front view and side view. Show correct placing of eyes, nose, mouth and ears. Show by arrangement of hair and by neckwear which are boys and which are girls.

Draw whole figures of people in front views and side views, and in different attitudes, appropriately dressed.

Study and draw furniture. Use two lines to represent thickness of tops, legs braces, etc.

Draw chairs, tables, cabinets and other common furniture.

Imaginative Drawing. (Four lessons.)

Illustrate again the subject chosen in the first imaginative drawing lesson. Try to show the knowledge gained by observation.

Choose and illustrate another subject involving similar objects, *e. g.*:

Children having supper.

Mother putting the children to bed.

Mother sewing.

A little girl feeding her pet bird.

Children playing a quiet game.

Father reading his paper.

Directed Observation. (Three lessons.)

Study proportion and grouping of people and furniture and make records of observations. Color the drawings when color is of special interest.

Draw people sitting in chairs, front, side and back views. Draw dishes and other small objects, grouped on a table, shelf or tray.

Draw people and furniture in groups, *e. g.*:

Women standing behind a table, in front of a table, in front of a stove, near a book case, etc.

Color the best studies, using appropriate colors and contrasts.

Imaginative Drawing. (Four lessons.)

Illustrate again the subject chosen in the preceding imaginative drawing lesson. Try to show the knowledge gained by observation.

Choose and illustrate another subject involving similar objects, *e. g.*:
Mother reading to children or telling stories.

Children helping with the dishes or other work.

Saturday at home, indoor work and play.

Directed Observation. (Two lessons.)

Study to get better ideas of objects which were not well drawn in the preceding lesson.

Imaginative Drawing. (Two lessons.)

Illustrate again the subject chosen in the preceding imaginative drawing lesson. Try to show knowledge gained by observation.

DRAWING. GRADE V.

There are seventy lessons, two forty-five minute periods weekly, arranged as follows for Grade V.

For Tones and Tone-Relations, Space-Relations, Balance, Sequence of Repetition, Alternation, and Progression, two forty-five minute periods weekly from September 8 through December 31, and one forty-five minute period weekly from January 1 through June 16. (Forty-eight lessons.)

For Representation one forty-five minute lesson weekly from January 1 through June 16. (Twenty-two lessons.) See "Representation," page 19.

Tones and Tone-Relations.

There are sixteen exercises in Tone-Study. For further exercises in Tone-Relations see Sequences of Repetition, Alternation, Progression, etc.

Four periods: Exercises in painting neutral gray in five standard values, white, light, middle, dark, and black, and learning to recognize and distinguish them from other values.

Six periods: Exercises in Color Relationship and Color Sequences, five steps each — orange to red, orange to yellow; green to blue, green to yellow; violet to red and violet to blue.

Six periods: Exercises in painting neutralization scales, the intermediate colors, red-orange, orange-yellow, yellow-green, green-blue, blue-violet, neutralized to black and to white.

Note.— The number of periods used for each of the above series may be varied according to the discretion of the Drawing Supervisor.

Space-Relations.

There are six lesson periods allowed for this series of exercises.

Study and draw the Circle, Square and Oblong, with diameters and diagonals, the Equilateral Triangle, and lines representing the directions, up and down (vertical), right and left (horizontal), and the diagonals and angles of 45 degrees, 60 degrees and 30 degrees.

Draw (a) the Circle, (b) Oblongs, Square, Equilateral Triangle, the Pentagon, Hexagon, and Octagon by division of the circle into two, three, four, five, six, and eight equal parts.

Start with the center of the circle.

Develop (within a six-inch circle) the "square web" diagram in a sequence of progression of web sizes, 2 inch, 1 inch, $\frac{1}{2}$ inch, $\frac{1}{4}$ inch. Fill each square with a circle of corresponding diameter.

The above exercises in space-relations are a summary of work done in Grade 4 and are here given as review. See note under Space-Relations, Grade 4. Draw within a four-inch circle the progression of the square, circle, and octagon.

Note.

The last exercise introduces the CENTRAL web diagram which is the basic web for all design balanced in a center, concerned with the directions vertical, horizontal and diagonal, 45 degrees and the geometric progression 2, 4, 8, 16, etc. Nature and art are rich in examples illustrating this order of geometric setting.

DESIGN.

Twenty-six Exercises in Rhythm, Balance and Harmony in which due attention should be given to the various forms of order indicated below.

In the following exercises the shapes may be Lines (straight, curved, or angular), Outlines, and Areas or Mass.

The mass may be pencil or crayon or free brush work with ink or water-color.

Balance.

Axial Balance.

Central Balance.

Tone Balance.

Observation and drawing of similar forms of balance in nature.

Observation and drawing of similar forms of balance in works of art.

Sequences of Progression.

Sequences of Progression in a row.

Sequences of Progression in an area.

Sequences of Progression in a field.

Observation Color Sequences of Progression.

Observation and drawing of Sequences of Progression in nature and in works of art.

Note.— The movement may be in measure or size from small to large; large to small; more to less; in proportion from wide to narrow or narrow to wide; long to short, short to long, etc. In tone it may be from light to dark or dark to light; bright to dull or dull to bright.

Sequences of Repetition.

Sequences of Repetition. (a) In a row. (b) In a field.

Color Sequences of Repetition.

Observation and drawing of Sequences of Repetition in nature and in works of art.

Note.— Make many different arrangements in each series, varying the tone, measure, shape, proportion, attitude, or interval with each new arrangement.

Sequences of Alternation.

Sequences of Alternation. (a) In a row. (b) In a field.

Color Sequences of Alternation.

Observation and drawing of Sequences of Alternation in nature.

Observation and drawing of Sequences of Alternation in works of art.

Sequences of Alternation are rhythmical.

DRAWING. GRADE V REPRESENTATION.

Beginning January 1 and continuing through June 16, one of the two weekly drawing lessons is devoted to "Representation." See first paragraph under "Drawing, Grade V."

Note.

The papers should be numbered 1, 2, 3, etc., to show progress. See general note on Representation, pages 10, 11, 12, 13, 14.

The interest for this grade centers about people out of doors, in the street and in vehicles; in trolley cars, trains, boats, on teams and in automobiles. The drawings should improve in composition shapes and colors as the children gain knowledge through observation and the comparison of results.

A brief excursion by the class to gather necessary data concerning an object or a place will help more than much discussion or vague supposition as to how things look. Visual memory and the power of imagination will be greatly strengthened if observations are made in definite order, beginning with the principal directions, proceeding to the shapes connected with them and coming last of all to the details. It will be well to work in zones, starting with the most important object and center of interest, adding things immediately associated with the center of interest, then the background and foreground and objects less closely associated with the center of interest. Try to keep the sizes right according to the relative distances. Try to make the horizontal things appear to lie flat. In coloring try to keep the center of interest important by contrast of color; light, dark or neutral.

Every composition should express one idea: the subject of the composition. Nothing should be introduced which is inappropriate to the subject or idea. Nothing should be left out which is needed to express the idea satisfactorily.

In the imaginative drawing lessons the teacher should enlarge upon the indications here given, going into details which will suggest definite and clear images. Other subjects, appropriate to the neighborhood, may be substituted, but the whole class should work on the same subject in order to compare results which are similar. Never compare unlike things, *e. g.*, a picture of a street car and a picture of a boat. Where an option is given, choose one subject for the whole class.

Imaginative Drawing. (Two lessons.)

Choose and illustrate an incident suggested by daily experience in the neighboring streets, *e. g.*:

People getting on or off a street car, train, or boat.

People starting on a journey.

A family going to the beach.

Paint important parts of the picture to show interesting facts about color.

Note.—At the end of each imaginative lesson invite the children to judge the drawings, noticing the parts of the pictures which show need of more knowledge. In directed observation proceed as in science to study several objects or pictures of objects.

Directed Observation. (Five lessons.)

Observe facts about people and vehicles and make records of observations. Study to get better ideas of things which were not

well drawn in the imaginative lessons. Make notes on color, or paint parts of sketches where color is of special interest.

Collect and study street pictures in which people and vehicles furnish the theme. Notice ways in which pictures tell the truth.

Look at the vehicle chosen for study, *e. g.*, a trolley car.

Notice the proportion of one window as a key shape, the number of windows, and the space between windows. Draw from memory the row of windows. Think of the reason for so many windows.

Look at the doors, roof lines, and running gear of a trolley car. Finish the drawing of the car from memory.

Draw a group of people waiting to get on the car.

Paint the most important parts of the pictures, giving the different shapes, characteristic and appropriate coloring.

Imaginative Drawing. (Four lessons.)

Illustrate again the subject chosen in the first imaginative drawing lesson. Try to show the knowledge gained by observation.

Choose and illustrate another subject involving similar objects, *e. g.*: Starting for the beach or park with the children.

A crowded car.

Trolley off, off the track, or a break-down.

Man helping woman and children off a car.

Directed Observation. (Three lessons.)

Choose either a boat or train for study. Draw first from memory and imagination. Discuss results.

Draw details of the vehicle chosen for study, thinking of the reasons for openings and spaces between.

Draw a person (man or woman) standing. Use the head as a unit of measure for the height of the figure.

Draw groups of people, the near figures first, then those partly hidden by the others. Introduce other objects of interest, so far as they are relevant or appropriate to the subject.

By painting indicate the coloring of objects and figures. Make the coloring appropriate and suitable.

Imaginative Drawing. (Four lessons.)

Illustrate again the subject chosen in the preceding imaginative drawing lesson. Try to show the knowledge gained by observation.

Choose and illustrate another subject involving similar objects, *e. g.*:

"All aboard."

Running for the boat or car.

"Just missed it" or "Just caught it."

At the station or wharf to meet someone.

Draw appropriate groups of people and suggest surroundings.

Introduce animals, trees or other objects appropriate to the idea of the picture.

Indicate the coloring.

Directed Observation. (Two lessons.)

Study to get better ideas of objects which were not well drawn in the preceding lesson.

Imaginative Drawing. (Two lessons.)

Illustrate again the subject chosen in the preceding imaginative drawing lesson. Try to show knowledge gained by observation.

DRAWING. GRADE VI.

There are seventy lessons, two forty-five minute periods weekly, arranged as follows for Grade VI:

For Tones and Tone-Relations, Space-Relations, Balance, Sequence of Repetition, Alternation, and Progression, two forty-five minute periods weekly from September 8 through December 31, and one forty-five minute period weekly from January 1, through June 16. (Forty-eight lessons.)

For Representation one forty-five minute lesson weekly, from January 1 through June 16. (Twenty-two lessons.) (See Representation, page 24.)

Tones and Tone-Relations.

There are sixteen lesson periods allowed for this series. For further study of Tone-Relations see exercises under Sequences of Repetition, Alternation, Progression, and Balance.

One period: Exercises painting neutral gray, learning to recognize and distinguish each tone from others in a scale of nine standard values graded from white to black (white, high-light, light, low-light, middle, high-dark, dark, low-dark, and black).

Three periods: Exercises in painting each of the six colors, red, orange, yellow, green, blue, violet, full intensity with its corresponding value in the neutral scale.

Six periods: Exercises in Tone-Sequences. Value scales — six standard colors, R., O., Y., G., B., V., neutralized to white and to black, arranged to correspond in value sequence with the neutral gray standard scale of nine values (including white and black).

Six periods: Exercises in Tone Study: Full intensity and one-half intensity — of the six standard colors, R., O., Y., G., B., V. Select any color, full intensity, and paint a 2-inch square, circle, or oblong shape. Find its corresponding value in the neutral gray scale, and paint a second square. Mix this gray with the bright color or full intensity, diminishing the brightness to one-

half the original intensity without change of value. Arrange the three in a color sequence of bright to dull, full intensity, half-intensity, and neutral gray. All three should be alike in value.

Note.—The number of periods used for each of the above series may be varied according to the discretion of the Drawing Supervisor.

Space-Relations.

There are six lesson periods allowed for this series of exercises.

Exercises in drawing (a) the circle, (b) oblongs, the square, equilateral triangle, the pentagon, hexagon, heptagon, and octagon, by division of the circle into two, three, four, five, six, seven, and eight parts.

An exercise in drawing within a 4-inch circle the progression of the circle, square, and octagon.

These exercises are a review of work done in Grade 5.

Make a series of web patterns based on the square web diagram.

Use the $\frac{1}{2}$ -inch web. (See Japanese design books.)

Develop within a 6-inch circle the triangular web diagram in a sequence of progression of web sizes. Fill each oblong with an ellipse of corresponding diameters.

Note.—The above exercise introduces a new web diagram, a harmony of equilateral triangles or root 3 rectangles. It is the base for all field webs concerned with the directions vertical, horizontal and 60 degrees and 30 degrees diagonals.

The exercise not only shows how this web is constructed but illustrates the geometric progression in size and number peculiar to this series of webs.

DESIGN.

Twenty-eight Exercises in Rhythm, Balance and Harmony in which due attention should be given to the following forms of order.

Note.

In the following exercises the shapes may be Lines (straight, curved, or angular), Outlines, and Areas or Mass. The mass may be pencil, crayon or free brush work, with water color.

Balance. (a) Axial. (b) Central.

Axial Balance.

Central Balance.

Tone Balance.

Observation and drawing of similar forms of balance in nature.

Observation and drawing of similar forms of balance in works of art.

Sequences of Progression.

Sequences of Progression in a row.

Sequences of Progression of triangles in an area.

Sequences of Progression in a field.

Color Sequences of Progression.

Observation and drawing of Sequences of Progression in nature and
*in works of art.

Note.— The movement may be in measure or size from small to large or large to small; more to less; in proportion from wide to narrow, narrow to wide; long to short or short to long, etc. In tone it may be from light to dark or dark to light; bright to dull or dull to bright; warm to cold or cold to warm.

Sequences of Repetition. (b) In a row. (b) In a field.

Sequences of Repetition.

Color Sequences of Repetition.

Observation and drawing of Sequences of Repetition in nature and in works of art.

Note.— Make many different arrangements in each series, varying the tone, measure, shape, proportion, attitude, or interval with each new arrangement.

Sequences of Alternation. (a) In a row. (b) In a field.

Sequences of Alternation.

Color Sequences of Progression.

Observation and drawing of Sequences of Alternation in nature.

Observation and drawing of Sequences of Alternation in works of art.

Make many different arrangements in each series with the following changes in Alternation: Tone, measure (size and number), shape, proportions, attitude, and interval.

Sequences of Alternation are rhythmical.

DRAWING. GRADE VI.**REPRESENTATION.**

Beginning January 1 and continuing through June 16, one of the two weekly drawing lessons is devoted to "Representation." See first paragraph under "Drawing, Grade VI."

Note.

The papers should be numbered 1, 2, 3, etc., to show progress. See general note on Representation, pages 10, 11, 12, 13, 14. The

interest for this grade centers about people and details of buildings, especially doorways, gates and entrances. While the drawing of these things begins with the study of commonest facts of construction and proportion it lays a necessary foundation for appreciation of architecture which is emphasized in higher grades. The drawings should improve in shape and color as the children gain knowledge through observation and comparison of results.

A brief excursion by the class to gather necessary data concerning an object or a place will help more than much discussion or vague supposition as to how things look. Visual memory and the power of imagination will be greatly strengthened if observations are made in definite order, beginning with the principal directions, proceeding to the shapes connected with them and coming last of all to the details. It will be well to work in zones, starting with the most important object and center of interest, adding things immediately associated with the center of interest, then the background and foreground and objects less closely associated with the center of interest.

Try to keep the sizes right according to the relative distances.

Try to make horizontal surfaces appear to lie flat.

Whenever the principles of perspective are involved the necessary knowledge and understanding may be gained by observations through a pane of glass and by tracings made on the glass. Perspective has been described by a Chinese writer as "the law of the large and the small, the near and the far."

In coloring, try to keep the center of interest important by contrast of color; light, dark or neutral.

Every composition should express one idea. Nothing should be introduced which is inappropriate to the idea. Nothing should be left out which is needed to express the idea satisfactorily.

In the imaginative drawing lessons the teacher should enlarge upon the indications here given, going into details which will suggest definite and clear images. Other subjects appropriate to the neighborhood may be substituted, but the whole class should work on the same subject in order to compare results which are similar. Never compare unlike things, *e. g.*, a picture of a doorway and picture of a gate. Where an option is given, choose one subject for the whole class.

Imaginative Drawing. (Two lessons.)

Choose and illustrate an incident for which a door furnishes an appropriate setting, *e. g.*:

An agent or peddler comes to the door.

"Callers."

Children playing on the doorstep.

To complete the picture indicate the coloring of the objects represented.

Note.— At the end of each imaginative lesson invite the children to judge the drawings, noticing the parts of the pictures which show need of more knowledge.

Directed Observation. (Five lessons.)

Observe facts about people and doors and make records of observation. Collect and study pictures of people, doorways, gates and interesting entrances. Learn the essential parts of a door. Study to get better ideas of things which were not well drawn in the imaginative lessons. Make notes on color or paint parts of sketches where color is of special interest. Learn to draw an open door.

Note.— Experiments with a paper door may help. Draw people grouped in various ways about a door. Study animals and still-life objects which might appropriately come into the picture.

Imaginative Drawing. (Four lessons.)

Illustrate again the subject chosen in the first imaginative lesson.

Try to show the knowledge gained by observation.

Choose and illustrate another subject involving similar objects, *e. g.*:
Sweeping the doorsteps.

Mother starts the children to school.

A boy and his dog waiting to be let in.

Girls playing with their dolls near the front door.

A messenger rings the front door bell.

The expressman leaves a package.

Directed Observation. (Three lessons.)

Study to get better ideas of things which were not well drawn in the imaginative lessons. Study doorways near the school. Choose one to draw from memory, and make observations for this purpose. Make the memory drawing.

Take the drawing to the place where you made the observations, compare the drawing with the door. Make corrections from memory. Add shrubs, fences, steps and other objects near the door.

Imaginative Drawing. (Four lessons.)

Illustrate again the subject chosen in the preceding imaginative drawing lesson. Try to show the knowledge gained by observation. The drawing made from memory may be used as a background for a group of figures drawn from imagination.

Choose and illustrate another subject involving similar objects, *e. g.*:
The school yard gate.

Watching a man paint the gate.

Opening the gate; swinging on the gate.

The green door or gate. The locked door or gate.

Playing under the tree near the gate.

The gate in the wall. Introduce animals and people.

Color every part of the picture to help tell the truth.

Directed Observation. (Two lessons.)

Study to get better ideas of objects which were not well drawn in the preceding lesson.

Imaginative Drawing. (Two lessons.)

Illustrate again the subject chosen in the preceding imaginative drawing lesson. Try to show knowledge gained by observation.

DRAWING. GRADE VII.

There are seventy lessons, two forty-five minute periods, weekly, arranged as follows for Grade VII.

For Tones and Tone-Relations, Space Relations, Balance, Sequence of Repetition, Alternation, and Progression, two forty-five minute periods weekly from September 8 through December 31, and one forty-five minute period weekly from January 1 through June 16. (Forty-eight exercises.)

For Representation one forty-five minute lesson weekly from January 1 through June 16. (Twenty-two lessons.) (See Representation, page 30.)

Tones and Tone-Relations.

There are sixteen lesson periods allowed for this series. For further study in Tone-Relations see exercises under Sequences of Repetition, Alternation, Progression, and Balance.

One period: Exercises in painting neutral gray, learning to recognize and distinguish each tone from others in a scale of nine standard values graded from white to black (white, high-light, light, low-light, middle, high-dark, dark, low-dark, and black).

Three periods: Exercises in painting each of the twelve colors, R., RO., O., OY., Y., YG., G., GB., B., BV., V., VR., full intensity, with its corresponding value in the neutral scale.

Six periods: Exercises in Tone Sequences: Value Scales. Six intermediate colors, RO., OY., YG., GB., BV., VR., neutralized to white and to black, arranged to correspond in value sequence with the neutral gray standard scale of nine values (including white and black). Select any color full intensity and paint a 2-inch square, circle, or oblong shape. Find its corresponding value in the neutral gray scale and paint a second square. Mix this gray with the bright color (full intensity), diminishing the brilliancy or purity to one half the original intensity, **without change of value**. Arrange the three color spots in a sequence,—bright or full intensity, half-intensity, and neutral gray. **All three should be alike in value.**

Note.—The number of periods used for each of the above series may be varied according to the discretion of the Drawing Supervisor.

Space-Relations.

There are eight-lesson periods allowed for this series of exercises.

Draw (a) the Circle, (b) Oblongs, the Square, Equilateral Triangle, the Pentagon, Hexagon, Heptagon, Octagon, Decagon, and Duodecagon, by division of the circle into two, three, four, five, six, seven, eight, ten and twelve parts.

Draw within 4-inch circle progressions of the circle, square, and octagon, the equilateral triangle, circle, and hexagon.

The above exercises in Space-Relations are a review.

Make a series of web patterns based on the square web (field) diagram. Use the one half inch web. See Japanese Design Books for variety of web patterns.

Make a series of web patterns based on the triangular web (field) diagram. Use one of the web sizes developed within the 6-inch circle. See Japanese Design Books and Moorish and Persian Design for illustration of variety of web patterns.

Draw within a 4-inch circle a progression of circles, equilateral triangles and hexagons.

Note.—This exercise introduces the CENTRAL WEB diagram which is the basic web for all design balanced on a center — concerned with the directions vertical, horizontal, and diagonal, 60 degrees and 30 degrees and the geometric progression 3, 6, 12, etc.

Nature and Art are rich in examples illustrating this order of geometric setting.

DESIGN.

Twenty-four exercises in Rhythm, Balance, and Harmony in which due attention should be given to the following forms of order:

Note.— In the following exercises the shapes may be Lines (straight, curved, or angular), Outlines, and Areas or Mass.

The mass may be pencil, crayon, or free brush work with water color.

Balance.

Axial Balance.

Central Balance.

Tone Balance.

Observation and drawing of similar forms of balance in nature.

Observation and drawing of similar forms of balance in works of art.

Sequences of Progression.

Sequences of Progression in a row.

Sequences of Progression in an area.

Sequences of Progression in a field.

Color Sequences of Progression.

Observation and drawing of Sequences of Progression in nature and in works of art.

Note.— The movement may be in measure or size from small to large or large to small; more to less; in proportion from wide to narrow or narrow to wide; long to short or short to long. In tone it may be from light to dark or dark to light; bright to dull or dull to bright; warm to cold or cold to warm.

Sequences of Repetition. (a) In a row. (b) In a field.

Sequences of Repetition.

Color Sequences of Repetition.

Observation and drawing of Sequences of Repetition in nature and in works of art.

Note.— Make many different arrangements in each series, varying the tone, measure, proportion, shape, attitude, or interval with each new arrangement.

Sequences of Alternation. (a) In a row. (b) In a field.

Sequences of Alternation.

Color Sequences of Progression.

Observation and drawing of Sequences of Alternation in nature.

Observation and drawing of Sequences of Alternation in works of art.

Make many different arrangements in each series with the following changes in alternation: Tone, measure (size and number), shape, proportion, attitude and interval.

Sequences of alternation are rhythmical.

DRAWING. GRADE VII.

REPRESENTATION.

Beginning January 1, and continuing through June 16, one of the two weekly drawing lessons is devoted to "Representation." See first paragraph under "Drawing Grade VII."

Note.

The papers should be numbered 1, 2, 3, etc., to show progress. See general note on Representation, pages 10, 11, 12, 13, 14. The interest of this grade centers about people and buildings. In studying facts about buildings it is hoped that the pupils will begin to appreciate some of the qualities of good architecture, such as the geometric construction and orderly arrangement of parts.

A brief excursion by the class to gather necessary visual data will help more than much discussion or vague supposition as to how things look. Visual memory and the power of imagination will be greatly strengthened if observations are made in a definite order, beginning with the principal directions, proceeding to the shapes connected with them and coming last of all to the details.

It will be well to work in zones, starting with the most important object and center of interest, adding things immediately associated with the center of interest, then the background and foreground and objects less closely associated with the center of interest.

Try to keep the sizes right according to the relative distances.

Try to make horizontal surfaces appear to lie flat.

Whenever the principles of perspective are involved, the necessary knowledge and understanding may be gained by observations through a pane of glass and by tracings made on the glass.

Perspective has been described by a Chinese writer as "the law of the large and the small, the near and the far."

In coloring try to keep the center of interest important by contrast of color; light, dark or neutral.

Every composition should express one idea. Nothing should be introduced which is inappropriate to the idea. Nothing should be left out which is needed to express the idea satisfactorily.

In the imaginative drawing lessons the teacher should enlarge upon the indications here given, going into details which will suggest definite and clear images. Other subjects of interest to the

pupils may be substituted, but the whole class should work on the same subject in order to compare results which are similar. Never compare unlike things. Where an option is given, choose one subject for the whole class.

Imaginative Drawing. (Two lessons.)

Illustrate an incident for which a local building or a well known Boston building furnishes an appropriate setting, *e. g.*:

Crowd going to the movies. Going to school.

People in front of a store. Bargain day.

A crowd in front of the house across the street.

The concert hall.

To complete the picture indicate the coloring of the objects represented.

Note.—At the end of each imaginative lesson invite the children to study the drawings, noticing the parts of the pictures which are successful and those which show need of more knowledge.

Directed Observation. (Five lessons.)

Select a building near the school for the class to study, or choose pictures of well-known Boston buildings, *e. g.*:

The old State House.

Faneuil Hall.

Old North Church.

Park Street Church.

Public Library.

State House.

Paul Revere's house, etc.

Study the essential features of the building, the doors, windows, roof lines and other features. Analyze and draw from observation or memory. If a local building is chosen for study select a point of view and make first sketches of the building. If sketches cannot be made out of doors or from convenient windows make the observations from the chosen view point and draw from memory.

First sketches may be made on glass or on paper in the manner of tracing. Test for correctness as follows:

Positions of objects in relation to each other.

Directions of lines as compared with vertical center line.

Sizes of objects in relation to each other.

Sizes of object with regard to relative distances from the observer.

Shapes of objects as seen.

Proportions, as compared with a square.

Make study drawings of details, beginning with the most interesting part, as a door, window, or gateway. Squared paper may be used in getting proportions and shapes.

Imaginative Drawing. (Four lessons.)

Illustrate again the subject chosen in the first imaginative lesson.

Try to show the knowledge gained by observation. The drawings of buildings made in the directed observation lessons may be used as background for imaginary group of people if this seems desirable, or a new drawing may be started.

Choose and illustrate another incident involving the same or a similar setting.

Plan the arrangement of a group of people in front of the building.

Draw the figures near the center first. Add others at the left and right and behind these to suggest a crowd or large group. Think of the distance of each figure from the observer and make the size right.

Draw the lines of the building as a background, farther away than the people. Keep the interesting features of the building near the center of the picture.

Study the coloring of the objects involved. Decide upon the colors to be used and paint every part of the picture. Study class results.

Directed Observation. (Four lessons.)

Study a photograph or half-tone reproduction of a photograph in which buildings and people are represented. See newspaper prints and illustrations in geographies or magazines. Notice the contrasts of values which make things prominent. Analyze and copy all or part of a photograph or newspaper print in which people and architecture are well grouped. Indicate the darks and lights with flat tones of pencil or gray water-color. Omit light and shade. Study any details which will supply the knowledge lacking in the imaginative drawings.

Study and discuss the best available colored illustrations to understand the use of color in good pictures. Copy parts of the pictures most closely related to the work in hand.

Imaginative Drawing. (Three lessons.)

Draw a picture in which a building or group of buildings are important and the people are incidental. Center the interest about a door, window, gate or other architectural feature and use the people simply as accents. Color every part of the picture. Study the results, noticing parts of pictures needing improvement.

Directed Observation. (Two lessons.)

Study pictures or objects to get better ideas of things which were not well drawn in preceding lessons.

Imaginative Drawing. (Two lessons.)

Illustrate again the subject chosen in the preceding imaginative drawing lesson. Try to show knowledge gained by observation.

DRAWING. GRADE VIII.

There are seventy lessons, two forty-five-minute periods weekly, arranged as follows for Grade VIII:

For Tones and Tone-Relations, Space-Relations, Balance, Sequence of Repetition, Alternation, and Progression, two forty-five minute periods weekly, from September 8 through December 31, and one forty-five minute period weekly, from January 1 through June 16. (Forty-eight lessons.)

For Representation, one forty-five minute lesson weekly, from January 1 through June 16. (Twenty-two lessons.) (See Representation, page 35.)

The number of exercises assigned to color and design may be modified at the discretion of the Drawing Supervisor.

It is desirable to review the subjects in color taken in the previous grade. This may be accomplished more readily if the pupils refer to the color scales that were painted last year.

Tones and Tone-Relations.

There are six lesson periods allowed for this series.

For further study of tone-relations see exercises under Sequences of Repetition, Alternation, Progression, and Balance.

Optional: Exercises in painting neutral gray, learning to recognize and distinguish each tone from others in a scale of nine standard values graded from white to black (white, high-light, light, low-light, middle, high-dark, dark, low-dark, and black).

Optional: Exercises in painting. Arrange each of the twelve colors full intensity opposite its corresponding value in the neutral value scale.

Optional: Exercises in painting **Value Scales** in twelve colors.

Exercises in painting **Intensity Scales** in twelve colors.

Observation of color tones and tone-relations in Nature and Art and records of same written and painted.

Note.

The study of Tones and Tone-Relations outlined above is intended for classes which need such preparation in carrying out the exercises in Rhythm, Balance and Harmony, and may be modified at the discretion of the Drawing Supervisor.

Space-Relations.

There are eight lesson periods allowed for this series of exercises.

Draw (a) the Circle, (b) Oblongs, the Square, Equilateral Triangles, the Pentagon, Hexagon, Heptagon, Octagon, Decagon, and Duodecagon by division of the circle into two, three, four, five, six, seven, eight, ten, and twelve parts.

Draw within a 4-inch circle the progression of the circle, square, and octagon.

Draw within a 4-inch circle the progression of the circle, equilateral triangle and hexagon.

Make a variety of field web patterns based on the square web diagram.

Make a variety of field web patterns based on the triangular web diagrams.

Note.

The above exercises in space relation are for those classes that need such preparation in carrying out the exercises in Rhythm, Balance and Harmony, and may be omitted entirely if not needed.

Make Root 1, 2, 3, 4 and 5 Rectangles.

The square is a root 1 rectangle.

The diagonal of a square is the long side of a root 2 rectangle.

The diagonal of a root 3 rectangle and so on.

A root rectangle may be divided into its reciprocals or similar rectangles by drawing lines from the angles at the corners to cut the diagonals at right angles.

The root rectangles may be used as single webs, or field patterns.

DESIGN.

Twenty-four exercises in Rhythm, Balance, and Harmony in which due attention should be given to the following forms of order.

Note.— In the following exercises the shapes may be lines (straight, curved, or angular), Outlines, and Areas or Mass. Mass may be pencil, crayon or free brush work, with water color.

Balance.

Axial Balance.

Central Balance.

Tone Balance.

Observation and drawing of similar forms of balance in nature.

Observation and drawing of similar forms of balance in works of art.

Sequences of Progression.

Sequences of Progression in a row.

Sequences of Progression in an area.

Sequences of Progression in a field.

Color Sequences of Progression.

Observation and drawing of Sequences of Progression in nature and in works of art.

Note.— The movement may be in measure of size, from small to large or large to small; more to less; in proportion from wide to narrow or narrow to wide; long to short or short to long; in tone it may be from light to dark or dark to light; bright to dull or dull to bright; warm to cold or cold to warm.

Sequences of Repetition. (a) In a row. (b) In a field.

Sequences of Repetition.

Color Sequences of Repetition.

Observation and drawing of Sequences of Repetition in nature and in works of art.

Note.— Make many different arrangements in each series, varying the tone, measure, shape, attitude, or interval with each new arrangement.

Sequences of Alternation. (a) In a row. (b) In a field.

Sequences of Alternation.

Color Sequences of Progression.

Observation and drawing of Sequences of Alternation in nature.

Observation and drawing of Sequences of Alternation in works of art.

Make many different arrangements in each series, with the following changes in alternation: Tone, measure (size, number), shape, proportion, attitude, and interval.

Sequences of Alternation are rhythmical.

DRAWING. GRADE VIII.**REPRESENTATION.**

Beginning January 1, and continuing through June 16, one of the two weekly drawing lessons is devoted to "Representation." See first paragraph under "Drawing Grade VIII."

Note.

See general note on Representation, pages 10-14.

The interest of this grade centers about architectural and landscape interest, with emphasis on beauty of shape and color.

A brief excursion by the class or by an individual to gather necessary data for the pictures will help more than much discussion or vague supposition as to how things look. An appreciation of order and a sense of beauty should form increasingly important results of the pupils' observations. The lessons in design should help to explain the geometric construction and systems of order in architecture.

Visual memory and the power of imagination will be greatly strengthened if observations are made in a definite order, beginning with the principal directions, proceeding to the shapes connected with them and coming last of all to the details. It will be well to work in zones, starting with the most important object and center of interest, then the background and foreground and objects less closely associated with the center of interest.

Try to keep the sizes right according to the relative distances.

Try to make horizontal surfaces appear to lie flat. Whenever the principles of perspective are involved the necessary knowledge and understanding may be gained by observations through a pane of glass and by tracings made on the glass. Perspective has been described by a Chinese writer as "the law of the large and the small, the near and the far."

In coloring try to keep the center of interest important by contrast of color: light, dark or neutral. Every composition should express one idea. Nothing should be introduced which is inappropriate to the idea. Nothing should be left out which is needed to express the idea satisfactorily.

In the imaginative drawing lessons, the teacher should enlarge upon the indications here given, going into details which will suggest definite and clear images. Other subjects of interest to the pupils may be substituted, but the whole class should work on the same subject in order to compare results which are similar. Never compare unlike things. When an option is given, one subject should be agreed upon for the class.

Imaginative Drawing. (Two lessons.)

Draw from memory or imagination a picture of a place which you consider beautiful or picturesque.

Paint every part of the picture.

Note.—At the end of each imaginative drawing lesson invite the children to study the drawings made, noticing the parts of the pictures which are successful and those which show need of more knowledge.

Directed Observation. (Five lessons.)

Select a group of buildings or a bit of landscape near the school for study. Center the interest if possible on a colonial house, a historic building, a bridge, a tower or a modern building which you think good, a tree or group of trees, a bit of the river or harbor, or nearby park. Choose a definite point of view and make first sketches. If sketches cannot be made out of doors or from convenient windows, make the observations from the chosen view point and draw from memory.

First sketches may be made on glass or on paper in the manner of tracing. Perspective may be readily understood in this way.

Test for correctness as follows:

Positions of objects in relation to each other.

Directions of lines as compared with vertical center line.

Sizes of objects in relation to each other.

Sizes of objects with regard to relative distances from the observer.

Shapes of objects as seen.

Proportions, as compared with a square or some other basic rectangle.

Squared paper may be used in getting proportions and shapes.

Make study drawings of details of objects included in the picture, beginning with the most interesting part.

Drawing from Memory and Imagination. (Four lessons.)

Make a picture in which the center of interest includes the object or vista chosen for study. Try to keep the parts of the picture consistent so that nothing interferes with the central idea. Introduce groups of people as accents to help center the interest.

Paint the picture so that the colors help to express the idea. Compare and discuss results.

Directed Observation. (Five lessons.)

Study photographs or half-tone reproductions of photographs in which buildings, landscapes, and people are represented. See newspaper prints and illustrations in geographies or magazines.

Analyze and copy all or part of a photograph.

Indicate the darks and lights with flat tones of gray water-color or pencil. Omit light and shade.

Study the best available colored illustrations or Japanese prints to understand the use of color in good pictures. Copy freely with a brush and color any parts of special interest. Choose another subject which suggests a good picture. Study it as before, making sketches and any necessary notes.

Drawing from Memory and Imagination (Three lessons.)

Make a picture in which the center of interest is the object chosen.

Draw and color every part of the picture, trying to present a good idea as clearly and beautifully as possible.

Compare and discuss results.

Picture Study for Appreciation. (Three lessons.)

Study reproductions of good pictures. Try to understand the idea in the picture and study the way in which the artist expressed his idea. Visit the Museum of Fine Arts to study and enjoy the pictures.

MANUAL TRAINING. GRADE IV. CARDBOARD CONSTRUCTION.

Two one-hour lessons a week are allowed for this work.

Aims.

1. To acquaint the pupils with plain lettering and the simplest conventions of the working drawing.
2. To develop some accuracy in the use of the pencil, rule, triangle, compass and scissors.
3. To lead to the appreciation of a few fundamental principles of construction applicable to sheet metal and wood.
4. To inculcate good ideas of simple design in (a) borders, (b) contours, (c) space division.
5. To develop individual initiative, especially during the latter part of the year.
6. To promote coöperative effort.

Means.

1. Lettering on drawings and on finished problems.
2. Making simple working drawings.
3. Constructing simple geometric figures, boxes, trays, furniture and mechanical devices.
4. (a) Decorating with simple borders, (b) cutting templates for modification of rectangles and for parts of furniture, (c) placing sandpaper and pictures on mounts.
5. Deciding questions of size, proportions, contour and decoration in some of the later problems.
6. Working in groups on different objects of a set, and on different parts of one object.

Minimum Requirements.

To letter one's own name well.

To draw and dimension correctly a rectangle, a circle, a hexagon, and a few developments.

To construct from such drawings articles of familiar use.

To measure and lay off with rule graduated to eighths of an inch.

To use scissors, compasses and triangles correctly.

To apply one border, to cut and use one acceptable template, to mount one rectangle.

To assist in working out a group project.

To construct a mechanical device, individually or in a group.

General Directions.

1. Before beginning the drawing of each model, present the finished object and discuss its shape and utility with a view to creating all possible interest in it.

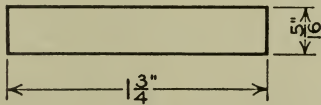
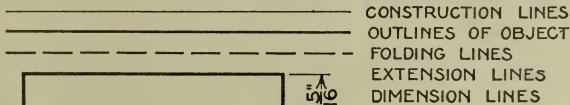
2. **Distribution of Equipment.**—The problem of prompt distribution and collection of equipment should receive careful consideration. With a little system five minutes should be ample time.

3. **Blackboard Work.**—Each teacher should have a blackboard rule, triangle and compasses, which can be secured from the master. The rule, if not graduated, should be sent to the manual training teacher, who will properly mark it if requested.

In placing work on the board, draw roughly a rectangle, the irregular outline of which will represent the torn edges of the cardboard. Draw as you wish the children to draw, using the same tools and working to scale. Use all the conventions properly, and make careful distinction between construction, extension, dimension, folding and cutting lines. The work on the board should generally precede that of the pupils, a line at a time in the first half-year, and follow rather than precede in the last half. The dictation of measurements should be immediately supplemented by the proper placing of the dimensions on the drawing. Be careful in your conversation to use accurately the nomenclature of the subject.

4. **Drawing.**—Use the special hard pencils furnished for this work. Compass attachments may be used thereon. Insist on light lines and small dots. In the use of the triangle it may be found well in erecting perpendiculars to place the inner edge on the line and the outer edge at the point. All lines should be drawn longer than required dimensions,

CONVENTIONS FOR WORKING DRAWINGS, GR. IV-V



and these dimensions should then be laid off on the lines. Avoid the use of the term *measure* when *lay off* is meant. Do not allow the boys to mark on the rules. Impress upon them at the outset that measurements are spaces, not lines, and encourage them to use the middle portion of the

rules instead of the ends. Use special rules provided, with blank ends, unless better ones are available. If the thick edge of the rule is used for laying off distances, the rule should stand upon that edge. (See, also, page 10, Trybom's "Cardboard Construction," "Drawing.")

5. Lettering.—Teach forms of letters by groups which should be placed on the blackboard as shown on Plate I. For the first seven weeks at least devote about fifteen minutes of each week to lettering. Throughout the year insist upon careful lettering, plain capitals ("upper case") only to be used.

6. Cutting.—Care is necessary at first to see that pupils hold the shears properly, a simple matter frequently overlooked.

Left-handed pupils should be encouraged to cut with right hand, as shears are made "right-handed." In the beginning specific directions should generally be given for the cutting of each line. Have cardboard held in the left hand and cut on the right side of the object. Begin to cut near the joint of the shears, making as long cuts as possible, but not closing the shears. Cut past corners where possible instead of attempting to make sharp turns. In cutting long lines the hand should be below the cardboard.

7. Scoring.—This should be done on every folding model. Using the point of the compasses, the shears, a pocket knife or a pin for the purpose, score on working side and bend so as to leave drawing on *outside*. This makes a desirable demand on the pupils for careful and neat drawing.

8. Punching.—Allow each child to punch his own work.

9. Tying.—To get a number of equal lengths of twine, wind around book and cut.

10. Disposition of Completed Work.—Work should be kept for the inspection of the assistant in manual arts as follows:

1. A full set of the last model made.
2. A full set of the last working drawing made.
3. One or two specimens of each model and each drawing made since the last visit of the assistant.
4. Several examples of any work correlating with drawing or other subjects, outlined or original.

Otherwise it is recommended that, with the permission of the principal, the work be returned to the children soon after its completion, but not at the end of the lesson in which it is completed.

Methods.

Much of the value of the training and the quality of the results depends upon the methods employed by the teacher. Not only should she

be familiar with the finished product but with the best methods of producing it. Suggestions given under general directions should be carefully noted and special attention given to correct methods. In the earlier lessons a certain amount of dictation is necessary; care should be taken, however, that the dictation is entirely clear and logical, and that the following is exact.

As soon as possible the class should be questioned concerning the work at hand, and when feasible several pupils sent to the blackboard to work out with the help of the class the problems which later is to be done by individuals at their desks, under the direction of the teacher. This independence of thought should be guided toward the original work which is to come later.

SEPTEMBER.

FIRST WEEK.

Triangles. Read General Directions 1, 2, 3, 4, 6 and 10.

On top of a sheet of drawing paper have each pupil draw two light guide lines about $\frac{1}{4}$ of an inch apart. This space may be secured by standing the rule up on the thick edge and drawing against the two faces with the pencil held vertically. Between these lines each boy should letter his own name to the best of his ability, using only capitals. This incidentally establishes the top of the sheet.

Have each pupil observe the wooden triangle, giving special attention to its right angle. Some of them will know that this angle is sometimes called a "square corner."

Near the bottom of the sheet have a line drawn from edge to edge and three points laid off on the line, the first one 1 inch from the left edge of the paper, the next 4 inches from it to the right, and the third 4 inches farther to the right. At the left point have a perpendicular erected by means of the wooden triangle. On these lines which form a right angle have 2 inches laid off and the triangle completed. At the center point have an angle drawn smaller than a right angle by placing the "square corner" of the wooden triangle at the point, but with its lower edge extending below the horizontal line. From this angle lay off 2 inches on each adjacent line and complete the triangle. At the right point have an angle drawn larger than a right angle, using the wooden triangle with its lower edge extending above the line. Complete this triangle in the same manner as the previous one. Interest in right-angled triangles will be increased by having the pupil discover those to be found in the room.

SECOND WEEK.**Mounting Triangles.**

Have at least one right-angled triangle cut from cardboard and mounted on paper. If time permits, others with varying lengths of sides may be drawn and cut. In mounting they may serve as tents, roofs of houses, sails of boats, etc., other parts to be cut from paper and mounted.

At the top of the sheet just made, have each pupil letter his own name. (See General Directions, 5.)

On all following articles and drawings have each child letter his name and when instructive the name of the object.

Lettering.

Teach the first group (see Plate I.), aiming to secure good verticals and horizontals. In teaching all groups the letters should be placed between horizontal lines as well as balanced on the verticals.

THIRD WEEK.**Rectangles.**

Several rectangles should be shown to the class, each designed for a different purpose, such as bookmark, label, tag, mount or postcard. Have the class decide which they will make and determine good proportions and size for the same. Working drawings must be made and used as guides in constructing the rectangles of cardboard. No details or decoration should be attempted on the working drawings. Leave these to be made on the bristol board. Aim to secure accuracy of measurement and correctness of dimensioning.

Have several, if not all pupils, work at the blackboard drawing rectangles, and correctly dimensioning them. Class criticisms should follow.

Lettering.

Teach the second group, having it drawn on a vertical line with good modifications of the basic "O."

OCTOBER.

NOTE.—Page numbers in the following directions refer to Trybom's "Cardboard Construction."

FIRST WEEK.**Circular Card.**

Before making circular card ask each child to choose what his circle is to represent, whether a target, alternate rings to be filled in with pencil or crayon, a mariner's compass, a clock face properly marked out and lettered, or any other article of circular shape.

Give each child a sheet of drawing paper and compasses. Allow each pupil to experiment with compasses and to draw on the paper several circles of different radii; then have him decide upon the one best suited to his purpose. Teach correct way to dimension this circle. In connection with this lesson have some blackboard work, following suggestions made for rectangle.

Have constructed and cut from cardboard a card of the size indicated by the drawing, with lines and lettering added as previously decided upon. The best method of cutting a circle should be shown to the class and insisted upon.

Lettering. Teach the third group.

SECOND AND THIRD WEEKS.

Hexagonal Card and Star. (Page 18.)

Have working drawings of hexagon made on paper. Have drawings dimensioned. Require the pupils to make the hexagon (preferably at a subsequent lesson), working from their own drawings. Show photographs of snowflakes furnished for drawing lesson and call attention to their hexagonal shape.

In connection with star, review triangles and hexagons by asking pupils to recognize the various forms into which the star is divided by the construction lines.

Lettering. Teach the fourth group.

Lettering. Teach the fifth group.

FOURTH WEEK.

Bookmark. (Page 26.)

On drawing paper have a rectangle 2 inches by 4 inches constructed with long edges horizontal. Show how to bisect the lower line with compasses. Have the drawing dimensioned. Using the plan just completed have the rectangle laid out on wrapping paper and cut out. Have the two upper corners folded to central point on the lower edge, and folds creased very hard. Holes should be punched in these corners for tying them together. Teach the bow and square knots. A piece of stout cord is useful for illustration.

Lettering.

Teach the sixth group and spacing. Notice that horizontal divisions should be about two fifths down from upper guide line.

NOVEMBER.

FIRST WEEK:

Bookmark Complete.

SECOND WEEK.**Envelope.**

(See "War Time Occupations," pages 18-21.)

Have no working drawings made by pupils but have them work from drawing placed on blackboard by the teacher.

Emphasize the use of the triangle in construction. Call attention to the small rectangles which make up the envelope.

Lettering.

Teach the seventh group. Notice that horizontal divisions should be about two fifths up from lower guide line.

THIRD WEEK.**Drinking Cup.**

Have each child construct and cut from wrapping paper an 8-inch square. Have the squares folded on one diagonal and placed with the right angle at the top. On the right and left edges have dots placed $3\frac{1}{4}$ inches from the vertex. Have each lower corner folded to the dot on the opposite side, folding one corner forward and the other backward. Have upper corners folded into the triangular pockets, one on the front side and one on the back.

FOURTH WEEK.**Optional "Tangram" or "T Puzzle."**

(See "War Time Occupations," pages 21-23.)

Have no working drawings made by pupils but have them work from drawing placed on blackboard by the teacher.

DECEMBER.**FIRST AND SECOND WEEKS.****Candy Basket.**

Present a completed basket and have several pupils work out its development at the blackboard and later have all pupils make a dimensioned drawing on paper. The finished drawing will resemble that on page 31 but should be constructed by a different method. Have drawn two concentric circles with radii of $1\frac{1}{4}$ and $2\frac{3}{4}$ inches respectively. Have these dimensioned. Across these circles have two diameters drawn at right angles to each other. The intersection of the diameters with the circumference of the inner circle should be connected to form the square base. Taking successively each end of the two diameters as a center have $\frac{3}{4}$ of an inch laid off in both directions on the outer circumference and these points connected with the corners of the

square base. At one place only have the length of this radius properly indicated. Have baskets laid out on cardboard, cut, scored, folded and tied at the corners.

Or

Candle Shade. (Page 32.)

Present candle shade and discuss its shape (conical surface) and dimensions in its completed form. Spread it out and discuss shape of the development (semicircle).

Review characteristics of the circle and note the concentric arcs.

Have working drawings made on paper and require pupils to make the model (preferably at a subsequent lesson), working from their own drawings, the blackboard drawing having been erased.

Before the cutting is done have a border consisting of a simple band, applied with crayon. Complete by punching holes and trying.

THIRD WEEK.

Rectangular Box. Read General Directions 7, 8 and 9.

This box should be not larger than 4 inches by $2\frac{1}{2}$ inches for the base and cover, with sides $\frac{3}{4}$ of an inch or an inch in height. The development should be in one piece, having the cover attached to a long side and without laps.

In presenting the box, discuss its shape and dimensions in its completed form. Spread it out and have some pupils at blackboard and others at desks working out its development. Follow this with careful drawings of development only made on paper. Do not ask pupils to put on dimensions. The teacher, however, should place them on her blackboard drawing to serve as a guide for the pupils to make the model at a subsequent lesson. Holes should be punched and the box completed by tying at the corner.

JANUARY.

FIRST WEEK.

Rectangular Box.

Complete.

SECOND WEEK.

Adaptation of Rectangular Box.

Have the class consider the box just completed and show how, with a few changes or additions, it can be made without the cover into a cart, table, cradle, bench, etc.; or with the cover for a door it may be transformed into a cupboard, a bookcase, etc.

Have such articles made, aiming for as much variety as the abilities of individuals will allow.

THIRD WEEK.

Original Work.

The object of this lesson is to interest and encourage the children in constructing articles of their own conception; some of the work may be done at home and some at school. Specimens of work from last year should be shown and a conversational lesson should follow, during which any pupils who have ideas should be encouraged to express them. Articles suggested by history, geography, or reading lessons are desirable; also those which may be observed in surrounding life.

The tangible results of this week's work may be small, but the teacher should be satisfied with arousing an interest in original planning and construction, the value of which shall be shown in later products.

Do not hesitate to make suitable suggestions as to construction, proportion of parts, materials, etc. The happiest results are those where teacher and pupils have planned together, and where the finished products have been developed from several minds.

Materials in general should be those that the boy can procure for himself, not alone to prevent undue encroachment on school supplies, but also for the far more educational reason of inducing self-reliance and the utilization of materials at hand. Pasteboard boxes, wire, brads, screws, paper fasteners are desirable accessories. Thin wood from egg, fruit, or cigar boxes is easily obtained and is a satisfactory material. Small pieces of waste wood may be obtained from the manual training teacher. This work at first should be voluntary, but it should be directed toward a satisfactory completion of the lessons outlined for May and June.

There is no objection to home assistance provided it is honestly acknowledged by the boy. A few suggestions from some one at home may assist the boy very much, but the finished article should be child's work, not adult's work in which the child has taken a minor part.

Encourage the pupils to bring in at each lesson, throughout the remainder of the year, any original work done outside. This should be exhibited to the class and the thought commended even though the work be crude. Some of the mechanical toys

in the market are very suggestive. Ideas may also be obtained from many of the current magazines, such as "Something-to-do," "Popular Mechanics," etc.

The following volumes, which have been used successfully by pupils of various schools, may be found in some of the branch libraries:

"Toy Making in School and Home,"

B. K. and M. I. B. Polkinghorne.

"Home Made Toys,"

William Hall.

"Boys' Make-at-home-Things,"

Carolyn Sherwin Bailey.

"When Mother lets us make Toys,"

Rich.

It is not necessary that this lesson be extended through the two hours allowed. Any time remaining may be used for the completion of unfinished work, or for beginning the next problem.

FOURTH WEEK.

A Village.

Choose a typical village which will illustrate reading, geography, or history lessons. The manual training should follow the trend of the subject chosen. If not already dwelt upon in the time assigned to the academic subject, it is necessary that manual training time be used to discuss some or all of the following characteristics:

1. Location and Surroundings.
Hills, valleys, lakes, streams, trees, etc.
2. Buildings.
Houses, factories, schools, churches.
3. People.
Costumes, activities.
4. Animals.
Horses, dogs, cats, sheep, squirrels, etc.
5. Transportation.
Cars, sledges, automobiles, carriages.

The general layout of the village should be on cardboard, or a table. An excellent opportunity is here presented for connecting the study of a picture and a plan of the same location. When feasible sand may be used for hills and coast line; a mirror or tinfoil to represent water; twigs will serve as trees, and cotton as snow. Buildings and vehicles may be constructed of cardboard or wood, or pictures may be used. Animals and people

may be of three types; (a) pictures, (b) cut from double paper folded at the top, and the lower edges spread apart to form a standard; (c) toys. When pictures are used a cardboard standard should be pasted to the back so that they will stand in position. Children should be expected to bring in the materials to be used. After the first impetus no urging will be needed. Encourage the children by adopting their suggestions when feasible, and let them feel responsible for the success of the project. So long as interest holds the project may be continued. When interest flags, or articles become worn it should be abandoned.

FEBRUARY. FIRST WEEK.

“A Village,” Continued.

SECOND AND THIRD WEEKS.

Model of Great Pyramid.

NOTE.—This pyramid was built by Kheops, who called it “Khuit,” meaning “Horizon.” Kheops so named it, as he was going to rest in it, as his father, the sun, was accustomed to set in the horizon.

The height of the pyramid was originally about 480 feet, with a square base about 750 feet on a side and an edge of about 715 feet. The models resulting from this lesson will be about 1-2000 size, as nearly as the necessity for even fractions of an inch will permit.

Present a finished model and discuss shape of faces, etc. (See Geographies, King's Elementary, page 190, Tarbell's Introductory, page 176, and Redway and Hinman's New, page 133.) Have development worked out on paper, each isoscles triangle to have base of $4\frac{1}{2}$ inches and sides of $4\frac{1}{4}$ inches. The simplest method of drawing this development is to strike about three fourths of the circumference of a circle of $4\frac{1}{4}$ inches radius; to lay off, on this arc, five points, $4\frac{1}{2}$ inches apart, and to connect these points with each other and with the center of the circular arc. The base should be omitted. Have proper laps and dimension lines added. Have models made from these drawings.

Or

Square Lamp Shade.

Present a finished shade and discuss the similarity between it and the pyramid. The size may be varied. Have development worked out on paper. This should consist of two concentric circles, the radius of outside circle to be not more than 6 inches and

that of the inside circle about one third as large. The outer circumference should then be divided into six equal parts and these points connected with center. Have outer and inner circles cut out, and also one sector. If straight edges are preferred, cuts should be made on straight lines drawn between points on both outer and inner circumferences. A simple border parallel to the edge should be applied but not until after the study of borders is completed in the drawing lessons. Then have pupils score and fold on all radii, after which one end section should be pasted over the other.

MARCH.

FIRST WEEK.

Mount.

Have planned a rectangular mount for a picture or calendar, and a narrow strip to serve as a support. On this strip one half inch from and parallel to one short side have a line drawn across and scored. The small rectangle formed by this line should be pasted to the back of the mount, the remainder of the strip to form a standard. In this lesson special attention should be paid to the working drawings of the rectangles and a careful well lettered sheet should be insisted upon.

SECOND WEEK.

Paper Bag.

Make the bag and present it in its completed state with other bags to the class. On a piece of wrapping paper have each pupil lay out a rectangle 9 inches by 15 inches and cut it out. On each long edge have points located 5 and 6 inches, respectively, from one short edge. Have short edges carefully folded to farthest points and resultant folds well creased, producing a lap which should then be pasted.

At each open end have a point located 2 inches from one fold. Have the bag opened and a crease made connecting these points; now have the bag flattened to make the opposite crease. Between each pair of creases have a reverse crease made by folding the pair together. On the jointed face, 1 inch from and parallel to one open end, have a line drawn; the small rectangle formed by this line and the folds should be cut from one broad face. The remaining portions below this line should be folded over and pasted to close the bottom. If desired the upper edge may be "pinked" (cut in points).

THIRD AND FOURTH WEEKS.

Box.

This box should be planned to have a base $4\frac{1}{2}$ by $2\frac{1}{2}$ inches with sides $1\frac{5}{8}$ inches high, and a cover $4\frac{1}{2}$ by $2\frac{5}{8}$ inches with sides 1 inch high. Present a finished box to the class and have several pupils draw on the blackboard developments of both box and cover, together with the necessary laps and dimensions. Have accurate working drawings made on paper and from these at a subsequent lesson the boxes should be laid out on cardboard, cut, scored, folded and pasted.

The covers may be decorated with designs resulting from drawing lessons; in case this is done have designs applied with crayon before pasting.

APRIL.

FIRST AND SECOND WEEKS.

Table.

Treat this model as a problem in development and design. Present one or more completed models to the class, and, by means of blackboard sketches, have development of parts worked out. An oblong top should be planned not to exceed 5 inches in length. Have height of table decided upon, and a rectangle drawn whose width equals this height and whose length is indefinite. On this rectangle have four sides marked off — two long and two short. To this have laps added at one end and at the upper edge of each side for attachment to the top of the table. On each side of the vertical dividing lines have width of legs (about $\frac{1}{4}$ inch) marked off; have a horizontal line drawn parallel to upper edge a short distance below it to form a top rail. Have the whole rectangle cut to form legs and rails as indicated and the end laps pasted. Have drawn another rectangle of proper size to fit the space exactly. This should then be cut and pasted to the under side of the top laps. This secures the rectangular shape of the support and strengthens the table. The visible top, which should have more overhang at the ends than at the sides, should now be laid out, cut and pasted. While this is drying it is well to lay a small book on the top to prevent curling or pulling away.

THIRD WEEK.

Cylinder.

This lesson is a problem in the development of cylindrical objects such as the round box on page 54, and should illustrate the adaptability of sheet materials (tin, zinc, cardboard) to such forms. The fol-

lowing suggestions illustrate some of the modifications which should be substituted for the typical cylinder. By turning over the box already referred to and adding a handle to the top it becomes a model of a cookie cutter; by altering its proportions and adding a handle to the side it becomes the model of a measuring or drinking cup; by adding a handle to the open end it becomes the model of a pail; by altering the proportions again and adding square bases it becomes a column or pedestal, and admirably shows the strength of sheet material so treated. Attention should also be called to such objects as ink fillers, funnels, etc.

Before having any work done with cardboard, call attention to the "grain." A little experimenting shows that the cardboard rolls easily in one direction, while in the other direction there is resistance, causing the cardboard to break. In cutting cardboard which is to be used for a curved surface this characteristic should be considered. When two pieces are to be pasted together as in the base of a cylinder, if the grain of one is placed at right angles to that of the other there is equal stiffness in both directions and less tendency to curl.

The development of a cylinder consists of two circles and a rectangle; the dimensions of the latter are: In one direction the height of the cylinder, and in the other the circumference of the circle. On cardboard have drawn a circle of a given diameter, and a rectangle whose width is equal to height of contemplated cylinder and whose length is more than long enough to fold around the circle and lap over. On the side of the rectangle to which the circular base is to be attached have a quarter inch lap drawn. When all pieces have been cut have this lap scored and cut in points; then have rectangle wrapped closely around the base and a pencil mark drawn to indicate how far one end laps over the other. Using a rule have a line drawn from this mark across the cardboard the width of the lap. Do not allow scoring on this line. If the lap is more than a quarter of an inch have additional length cut off. Call attention to the fact that the distance around the circle is a little more than three times its diameter. Have this proved by measuring with the rules.

When the rectangle has been pasted into cylindrical form have the circle pasted on the inside; then have a second circle drawn the width of a pencil line larger than the first circle, and cut and pasted outside. Have cylinder completed by the addition of a handle, cover, or other modification.

MAY.

FIRST WEEK.

Cylinder.

Complete.

SECOND, THIRD AND FOURTH WEEKS.

Group Project.

Encourage the production of models of simple and familiar articles of furniture, such as bureaus, desks, beds, stands, cradles, tabourets, chairs, etc. Plan the work so that the different articles will be related to each other in size and purpose; and, while not introducing the use of actual scale, see that it is felt by the class. Satisfactory articles should be retained from one year to the next and used as suggestive material. Encourage original thought but do not demand it. The first suggestion should come from the teacher.

In making furniture of cardboard have it based on such rectangular construction as already indicated for the table. The four sides should be laid off on one strip of cardboard with a lap at one end for joining. Laps should also be placed along the upper edge of each face to which a top may be pasted. The proportion of these sides may be varied to accord with the article it is desired to make. Modifications of the sides by cutting (such as legs for a table) or drawing (such as panels for a desk) or by both (such as cutting legs for a sideboard and drawing the compartments) should be carefully planned and executed. Tops of tables and stools should have an overhang on all four sides; those of desks, sideboards, bureaus, cabinets, chairs, etc., on three sides only that is, having no overhang at the back. Cylindrical construction may also be used either separately or in connection with rectangular construction.

From the finished products one or more sets of toy furniture should be obtained. These are more effective if assembled as in a room perhaps using a box placed on its side for the room, or placing the furniture on a "rug" made in the drawing lessons.

JUNE.

FIRST AND SECOND WEEKS.

Mechanical Device.

Many children will have already constructed mechanical devices in their "home work" (see January, Third Week) and the

success of this lesson depends largely on such previous work. This should be displayed to the class and used as suggestive material. It is not necessary that each child have an article different from the rest of the class, but every pupil should make something according to his ability that will 'work.' Carts, wheelbarrows, windmills, whirligigs, derricks, etc., are suggested. In addition to the bristol board other materials furnished by the children may be used, such as pins, toothpicks, skewers, wire, twine, button moulds, and empty spools. Emphasis should be laid on having the object correctly designed and workable rather than on accuracy of measurement and finish of workmanship.

SPECIAL, SPECIAL ENGLISH AND UNGRADED CLASSES.

Since children of these classes particularly need drill in language and number work, attention is called to the fact that, aside from its intrinsic educational value, manual training is an excellent medium for concrete work in both subjects. In most cases the work of Grade IV. will probably best meet the needs of the pupils, but in some instances it may be advisable to select problems from each grade.

Whatever the problem the work should be carried on slowly and with regard to what most interests the children. Special attention is called to the postcard circles, tangram and candy basket in the first part of Grade IV.; and for more difficult problems to the paper bag, lamp shade, tabouret and mechanical problems in the last part of the same grade.

MANUAL TRAINING. GRADE V. BOOKBINDING.

Two hours a week are allowed for this work.*

Aims.

1. To develop ability to plan simple constructive work.
2. To give practice in making the simplest working drawings.
3. To develop greater accuracy in the use of the rule, triangle and scissors.
4. To give some experience in elementary bookbinding.
5. To teach practical application of design and good lettering through correlation with drawing.
6. To develop inventional ability.

Means.

1. Planning construction of simple articles made of bookbinding materials.

* One half of this time is, in boys' schools, devoted to clay modelling.

2. Making working sketches of parts, correctly dimensioned.
3. Accurately laying out and cutting these parts.
4. Assembling these parts, using technical processes.
5. Applying good lettering, correct space division, pleasing proportions and simple decorations.
6. Working out original problems.

Minimum Requirements.

To plan and make correct working sketches of six simple articles.

To construct these articles of bookbinding materials with reasonable skill.

To bind one book.

To plan and construct one original article.

General Directions.

The work is designated as bookbinding, although it includes models which, strictly speaking, are not books. It is of an elementary character and logically follows the work in cardboard construction, employing similar processes.

To develop individual initiative and the ability to plan and to complete simple constructive work is one of the most important aims of manual training, and the one most likely to be overlooked by the conscientious grade teacher. Therefore, as far as possible all models are presented as problems to be worked out by each pupil individually, and it is hoped that many classes will be able to attain satisfactory results, the teacher giving directions no more specific than those which follow. It is not expected that these directions will be entirely clear to teachers conducting the work for the first time, without the additional information and especially the demonstration which will be given at the teachers' meetings, but a little experimenting with the actual materials, with the outline at hand, will do much toward making them intelligible.

It is desired that work be kept for the inspection of the assistant in manual arts, as follows:

1. A full set of the last model made.
2. A full set of the last working drawing made.
3. One or two specimens of each model and each drawing made since the last visit of the assistant.
4. Several examples of any work correlating with drawing or other subjects, outline or original.

Otherwise it is recommended that, with the permission of the principal, the work be returned to the children soon after its completion, but not at the end of the lesson in which it is completed.

One copy of "Bookbinding for Beginners" is furnished for each teacher and the problem numbers refer to that book.

SEPTEMBER.

FIRST WEEK.

Envelope. (Problem II.) Materials: "Wrapping Paper."

NOTE.— Before giving this lesson the teacher should place on the blackboard a sketch of the envelope without dimensions. Talk over with the class the dimensions desired and add the figures to the drawing. The face should not be larger than 10 by 13 inches, with laps of about $1\frac{1}{2}$ inches at each end, onto which the back is to be pasted. At one side plan an opening with a narrow flap. Smaller envelopes may be made if desired.

Directions.— From the blackboard sketch lay out the envelope on the wrapping paper, cut fold and paste. This should be used to hold individual materials throughout the year.

SECOND AND THIRD WEEKS.

Blotter or Holder for Temperature Card. (Problem III., C. or D.)
Materials: "Newsboard" for body; "Vellum" for covering; white or blotting paper for filling.

OCTOBER.

FIRST WEEK.

Paper Book Cover. Material: "Wrapping Paper."

Select a book for which the cover is to be made. Plan a strip of screenings which shall be wide enough to extend about 2 inches beyond the top and bottom edges of the book and long enough to extend around the back and sides and to fold back over edges with a lap of about 3 inches.

Make a dimensioned sketch of this piece. Draw it on the screenings and cut out. Leaving outside spaces approximately equal, draw two parallel lines, lengthwise of this piece, the distance between which shall be $\frac{1}{4}$ of an inch more than the distance from the top to the bottom of the book. Fold along these two lines to form laps. Lay the back of the book on the center of the strip at right angle to the folded edges, with the laps up. Wrap the strip around this book and fold the projecting ends inside the cover but not so tight that the book will not close easily. Remove screenings and crease all folds very hard. At each corner where the second fold is pressed back on the first, place a little paste, avoiding surfaces which are to touch the book. After pasting, dry the covers flat,

under weight. To apply the paper covers fold both stiff covers backward and insert them in the pockets. The name of the book should then be carefully printed on the paper cover.

SECOND, THIRD AND FOURTH WEEKS.

Pencil Holder or Needle Case. (Problem IV.) Materials: "Newsboard" for body; "Vellum" for face covering and pocket; and "Lining Paper" for back covering.

NOVEMBER.

FIRST AND SECOND WEEKS.

Calendar Stand. (Problem V.) Materials: "Newsboard," "Vellum," and "Lining Paper."

THIRD AND FOURTH WEEKS.

Checker Boards. Materials: "Newsboard," "Vellum" and "Checkerboard Paper." (See "War Time Occupations," pages 33-36.)

DECEMBER.

FIRST, SECOND AND THIRD WEEKS.

Hinged Covers for Cook Book. (Problem VI.) Materials: "Newsboard" for body of covers; "Enamelled Wall Paper" for covering; "Lining Paper" for inside of covers; "Eyelets"; "Macramé Cord."

These covers should be made for the cook books used in girls' classes. Secure a copy from the cooking teacher to use in planning. See that the covers project at least $\frac{1}{8}$ of an inch beyond the book. Cover the outside with enamelled paper and line with thinner paper. When the covers are completed they should be tied together with macramé cord and sent to the cooking teacher.

JANUARY.

FIRST, SECOND, THIRD AND FOURTH WEEKS.

Box with Covers. (Problem VII.) (For Grades I., II. and III.) Materials: "Newsboard," "Vellum" and "Lining Paper."

The bottom should be 3 inches by $4\frac{1}{2}$ inches and the sides $1\frac{5}{8}$ inches in height. The cover should be $\frac{1}{8}$ inch larger in both directions than bottom, and its sides $\frac{5}{8}$ inch in width.

Make a second set of boxes exactly like first. When completed these boxes are to be turned over to the master of the district for distribution in Grades I., II. and III. If not needed the number available should be reported to the Department of Manual Arts for use in girls' schools.

FEBRUARY.

FIRST WEEK.

Original Work.

It is desired to continue the original work begun in the fourth grade and thereby more closely connect the general constructive work of the lower grades with the wood work of the sixth grade.

The suggestions given on pages 46 and 47 apply equally well to this grade and should be used as a foundation for inspiring such work.

School time may be used for this purpose and home work should be encouraged. The object is not to secure a product that was never seen or heard of before, but to lead each boy to plan and construct for himself a pleasing article.

Suggestions by parent or teacher are desirable and helpful but the finished product should be the pupil's own work.

SECOND AND THIRD WEEKS.

Picture Frame.

First choose size of picture — a colored postcard is suggested — and then width of frame. This may be uniform on all sides or one may observe the rules for margins as for the calendar. Make a careful drawing of the outside of the frame and opening, and then lay out and cut the newsboard as indicated. For covering, plan and cut a piece of vellum, paper or other material which shall extend beyond the newsboard on each side for at least one-half an inch. On this material indicate the position of the newsboard, including the opening for the picture. Also draw lines one-half an inch inside and parallel to the lines indicating the opening. Cut on these lines and at each corner cut oblique lines to allow the laps to fold under. For the back there should be planned and cut another piece of newsboard one eighth of an inch shorter than the front and of the same width; and to cover it a strip of covering material three-eighths of an inch longer and one-quarter of an inch narrower than the newsboard.

To assemble: Paste the foundation of the front to the covering and turn under and paste the laps at the opening. At this time paste only one outside lap and that the top one. Turn the

outside strip about half an inch over one end of the newsboard-back and paste this down, leaving the remainder of the piece free. Place this piece of newsboard against the front, with the pasted end at the top, and over both pieces of newsboard paste the three laps attached to the front side. Fold back the free piece and paste as a lining over the back. The picture should be inserted at the opening in the top.

MARCH.

FIRST, SECOND, THIRD AND FOURTH WEEKS.

Portfolio or Magazine Cover. (Problem IX.) Materials: "Newsboard," "Vellum," "Lining Paper" and "Tape."

Make this for a definite purpose, such as holding the Palmer Writing Book, a notebook, composition papers, or maps. The size should not be larger than 8 inches by 10 inches.

Use lining paper or wall paper for the outside, and line the inside with drawing paper decorated with a surface pattern. (See Drawing Lesson.)

APRIL.

FIRST, SECOND AND THIRD WEEKS.

Book. (Problem X. or XI.) Materials: "Newsboard," "Vellum," "Lining Paper," 8½-inch by 11-inch "Paper," "Tape," "Sewing Linen" and "Super." This may be sewed either with or without the frame — the latter method being found easier by most teachers who have tried it. Those who desire more frames (not to exceed three to a class) should consult with the department not later than March 1, preferably sooner.

The book should consist of ten signatures each, having two sheets placed together and folded as one.

Use lining paper or wall paper for outside of the "case." If desired, fly-leaves may be made of drawing paper decorated with a surface pattern.

MAY.

FIRST AND SECOND WEEKS.

Book.

Complete.

THIRD AND FOURTH WEEKS.

Original Project.

Design and construct some object which may be based on an article previously made but having different dimensions, such as pad,

calendar, box, or covers. It is also suggested that in individual cases some mechanical construction be attempted. In such cases the newsboard may be used as a foundation for structural works, such as inclined railways, elevated stations, towers, etc. Eyelets are excellent for fastening the various parts together.

JUNE.

FIRST AND SECOND WEEKS.

Complete original project.

SPECIAL NOTE.

Pupil in boys' schools should make at least the following articles:

Blotter or holder.

Hinged covers for cook book.

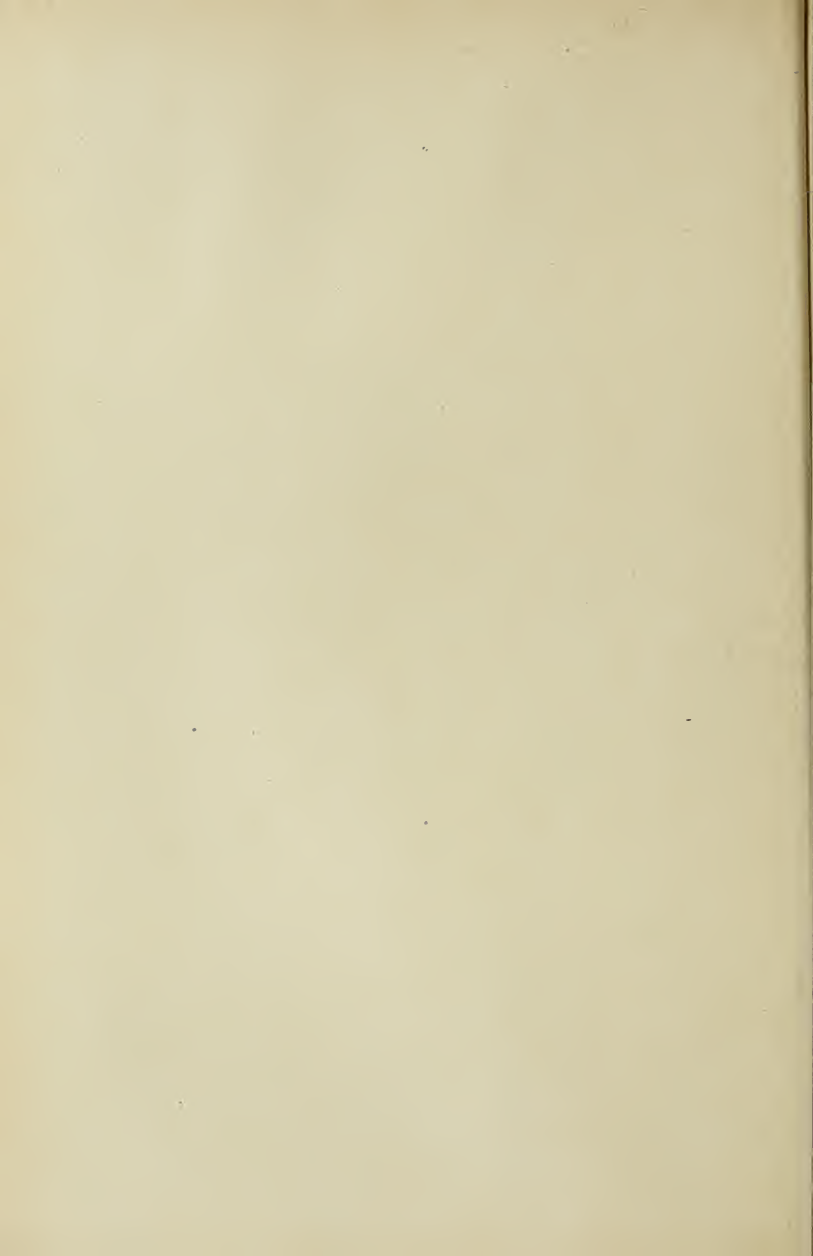
Checker board.

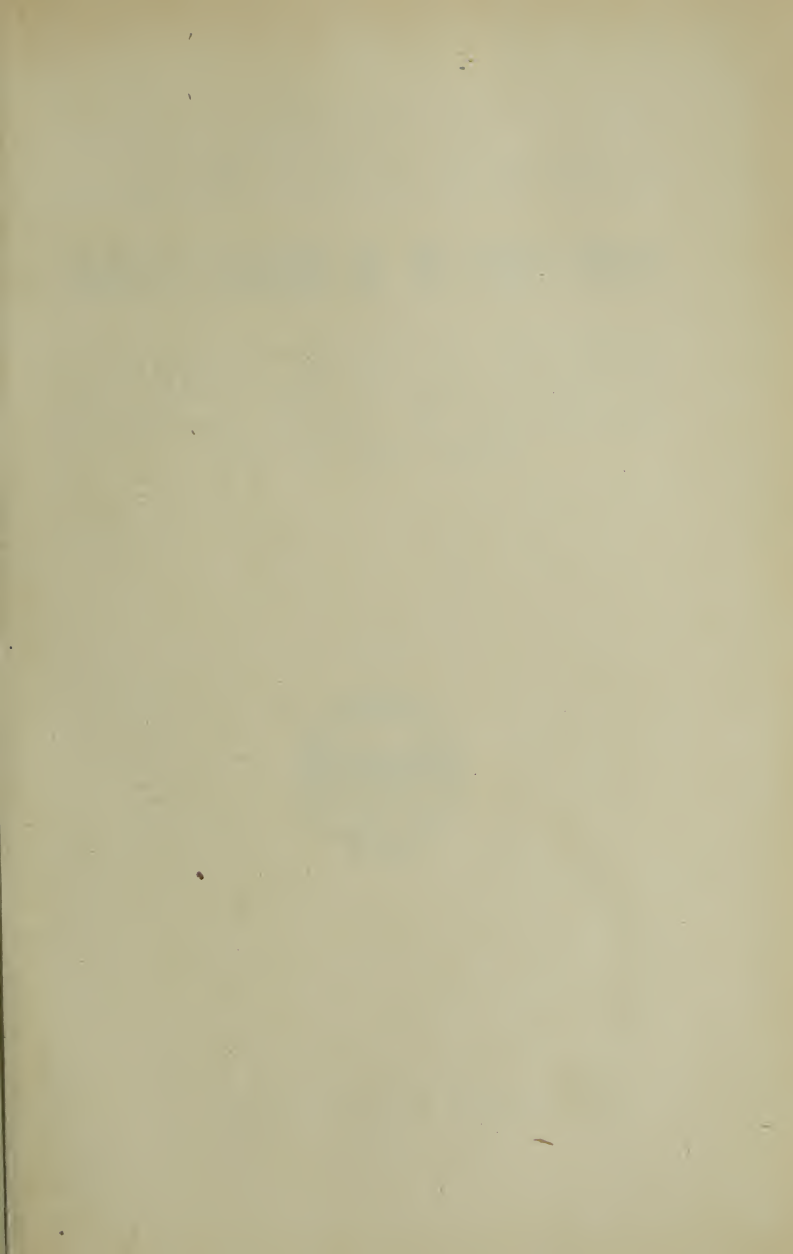
Box with cover.

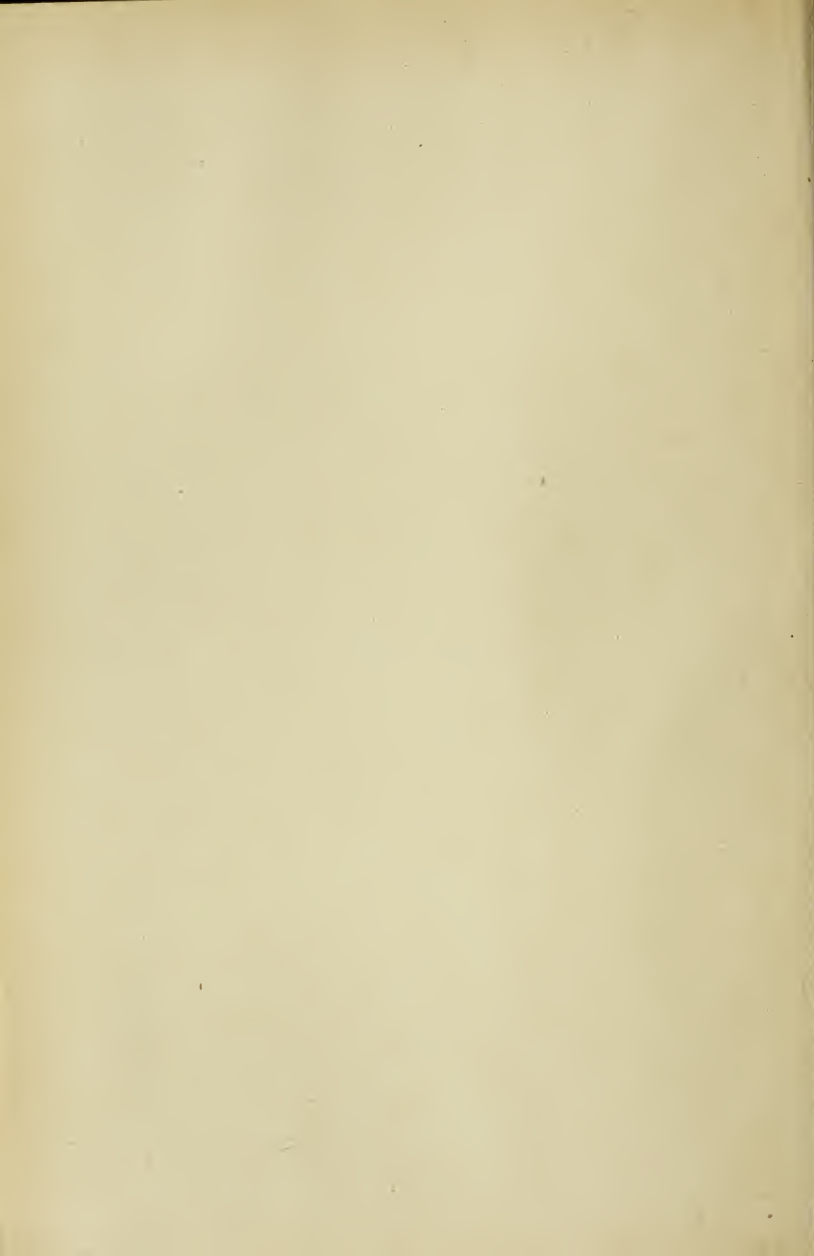
Calendar.

Book or portfolio.









SCHOOL DOCUMENT NO. 7—1920
BOSTON PUBLIC SCHOOLS

PROJECT TEACHING IN THE FIRST GRADE

A SUGGESTIVE PROGRAM OF PURPOSEFUL
ACTIVITIES PLANNED TO MAKE AN EFFECTIVE
CONNECTION BETWEEN THE KINDERGARTEN
AND THE FIRST GRADE



CITY OF BOSTON
PRINTING DEPARTMENT
1920

IN SCHOOL COMMITTEE, BOSTON, June 28, 1920.

Ordered, That the accompanying pamphlet entitled "Project Teaching in Grade I" is hereby adopted and twenty-five hundred (2,500) copies ordered printed as a school document.

Attest:

ELLEN M. CRONIN,
Secretary pro tempore.

GENERAL STATEMENT.

There has been too little appreciation of the fact that the method of learning by which the child grows outside of school may very well be applied within school, and that the school arts lend themselves readily to opportunities for social co-operation. Inasmuch as the child "learns by doing" all through his early years, he may well apply this method within the bounds of the school program. "Learning by doing" implies independent activity as well as group co-operation — this is the child's way of approaching experience, and the reconstruction of elementary education will provide for the satisfaction of this vital need.

The "project method" is the child's own device for solving the problems which his environment brings him. His is always a "purposeful activity"—individual in his early years, social in the later years of the elementary school stage. So through this method we find the natural way of approaching the reconstruction of elementary education. Its advantages are that it carries over the child's interests from his world outside to the school-room, that it is in harmony with laws governing his growth, and that it is fitting him constantly for problem solving and for living in co-operation with his fellows. In this way school is a counterpart of life outside, and not a place of preparation for a remote future. In this way the child learns to live. With the many advantages which will come through the wise administration of the project method, its dangers must be clearly seen. That "education is self-expression under guidance" must not be forgotten; that the child may not be left wholly to himself in the setting up, nor always in the solution of his problems, must be understood; otherwise the opportunity to teach social co-operation will be missed. Then, too, if this method is to prove valuable, all children in the class, not a few, must find a way to self-expression through projects. Administered by enthusiasts who, through it, train only those

children already strongly self-directing, this method will never replace the traditional in class room practice; administered with opportunities for growth for all children, we have the basis for careful conservation of individual capacity, for developing leaders as well as intelligent followers.

For some years a group of teachers in the first grades has been at work endeavoring to formulate a plan whereby a program might be made for grade one which would offer:

1. A closer connection between the kindergarten and first grades.

2. A wider opportunity for the children to work purposefully and independently, as individuals or in groups, on projects, timely and interesting.

The enthusiasm of the committee has been unbounded. The members have been generous with their time and service. They have carried out the programs in the syllabus for three years under the close observation of many visitors. We are sending out this plan in the hope that it will suggest to others new lines of work, and that it will inspire other teachers to give the children a greater opportunity to live in the classroom, as they live in the outside world.

This syllabus was prepared by the following committee; their devotion has made its publication possible:

JULIA G. LEARY, <i>Chairman</i> ,	O. H. Perry School.
JEANNETTE A. NELSON	. Wells School.
RENA LEWIS	. Mather School.
ANNA M. STEVENS	. Dearborn School.
MINNIE A. KENNEDY	. O. H. Perry School.

We have been helped as well by the contributions of Miss Agnes L. Berry and Miss Dora Lourie of the Wells School.

I have written this in an attempt to express my appreciation of the contribution which these teachers are making to education in the primary schools.

MARY C. MELLYN,
Assistant Superintendent of Schools.

FOREWORD.

The coming to school opens up a new life to the child. Previous to this time his circle has been limited to his few brothers or sisters and parents. Now his circle is enlarged and his environment broadened.

Our work is to teach him to meet this change. Here is first of all a new authority which he must feel — his teacher; and there are new equals which he must take his place among — his mates. There are also ideals to be given him — heroes in fiction and life. Stories told of them to make him appreciate their nobility and to strive to imitate them. This ought to be a very big and real thing in his school life. To so many children, these are the only ideals they meet and must be used to counteract the vicious and evil influences that the street and bad literature and picture shows are having. This must not be moralizing, but pleasant, happy work.

These influences are apparent to him and in a very short time he feels them for himself. By our stories, games, etc., we must place before him his other friends in this life — the men who labor for him, the farmer and the miller, the tradesmen of different kinds, the carpenter, the baker, the wheelwright, etc., — all of whose works are so necessary for his comfort and even his life itself. Also his dumb friends — the birds that sing; the sheep that clothe and feed him, the cow, the hens, the horse, etc.

Then, controlling and guiding and directing all of this life and activity, is God. The child feels and realizes from his talks and stories that there is something which directs and cares for all nature, and at such a time, the spiritual side of it all may be introduced with the stories and the spirit of Christmas and loving and giving, the theme of the December project.

Time and the seasons, and the study, in a simple way, of the elements — cold, frost, snow, ice, lengthening day, stronger sun, etc. — seem the logical and suggested subjects to discuss as the year goes on. Out of this grows the story and talk of the awakening and rebuilding of earth, through God and man. The trees, the plants, the gardens, the birds' nests are all rebuilt. Repairs of all sorts — houses, fences, renovating of all sorts — yards, cellars, streets etc. From nature, man takes the spirit of rebuilding and repairing (civic pride). The farmers' tools are needed, therefore they must be gotten for plowing and planting and weeding.

Finally, before the close of school in June, we can enjoy the results of the year's work out-of-doors. The green grass and budding plants, the leafing trees, the birds' nests and the flowering shrubs complete the cycle of life which was entered upon in the fall.

The education of the child comes through the contact, natural, social and spiritual, which he makes in this first year. His growth comes through the power and strength of his own response. The project for the month while chosen by the teacher brings about purposeful activity on the part of the child. Related projects are suggested by individuals or groups.

MINNIE A. KENNEDY.

SEPTEMBER.

TYPICAL PROGRAM FOR ONE DAY.

Project.—“Living Together.” Illustrated in Lessons which Teach Promptness, Obedience, Courtesy, Kindness and Helpfulness.
Problem.—“How Can We Best Live Together?”

A. M.

9-9.06.	9.06-9.20.	9.20-9.35.	9.35-9.40.	9.40-10.	10-10.05.	10.05-10.25.	10.25-10.45.
Opening exercises, Bible and song.	* School duties and obedience.	Phonics or word drill.	* Rest exercises.— Soldier games. To teach prompt obedience.	First steps in reading.	Physical exercises. (Program.)	Teaching seat work. Sorting tablets as to form and color.	Recess.
10.45-11.05.	11.05-11.08.	11.08-11.25.	11.25-11.30.	11.30-11.50.	11.50-11.55.	11.55-12.	
Preparation for work and writing.	* Rest exercises.— “How do you do” game.	Reading, “Word Drill.”	* Game for “Obedience,” or “Simon Says,” or “Lads and Lassies.”	Teaching children seat work suggested by reading. Matching words on rhyme cards or outlining printed letters with peas.	Collect material.	Dismissal.	
1.30-1.36.	1.36-1.48.	1.48-2.	2-2.05.	2.05-2.25.	2.25-2.45.	2.45-3.	3-3.20.
* Opening exercises. Talk on cleanliness or promptness.	Music. (Program.)	Writing. (Program)	* Game, “Follow the Leader.”	Reading by Seat groups. Stick laying.	Recess.	Drawing.	* Use of scissors cutting on straight lines and using strips for original construction for building of houses.
							* Story, “Lion and the Mouse.”

P. M.

* All through the month the portions of the program which are starred are given over to lessons related to the project.

OCTOBER.

TYPICAL PROGRAM FOR ONE DAY.
Project.— "The Harvest." Illustrated in Lessons which Teach the Season's Aspects and Work of the Farmer.
Problem.— "The Gathering in of the Harvest."

A. M.

9-9.06.	9.06-9.20.	9.20-9.35.	9.35-9.40.	9.40-10.	10-10.05.	10.05-10.25.
Opening exercises, Bible and song.	* Morning talk. Fall aspects and work of the farmer.	Phonics.	* Game, "Let us Chase the Squirrel."	Reading. Phrase drill. Seat work. Make original pictures, using five pegs.	Physical exercises. (Program.)	Reading in groups. Same seat work.
10.25-10.45.	10.45-11.	11-11.03.	11.03-11.25.	11.25-11.30.	11.30-11.40.	11.40-11.55.
* Recess or walk.	Writing. (Program.)	* Rest exercises, "Sand Man," Children hide heads.	Reading I chart, seat work II and III. Outline leaves with lentils and initial sound.	* "Farmer in the dell."	Quick work drill.	* Story — reproduce or dramatize. (Seasonal story.)
P. M.						
1.30-1.36.	1.36-1.48.	1.48-2.	2.05-2.25.	2.25-2.45.	2.45-3.	3-3.25.
* Talk on what children saw on the way home. Vegetables and fruits.	* Music. (Program.)	Writing. (Program.)	* Reading III and II from chart or board. Seat work. Rhythmic borders with seeds and colored sticks.	Recess.	* Drawing. (Program.)	* Construction or free play, scissors, crayons, colored paper, blocks, build barns, leaves.
						Dismissal.

* All through the month the portions of the program which are starred are given over to lessons related to the project.

NOVEMBER.

TYPICAL PROGRAM FOR ONE DAY.

Project.—“Thankfulness.” Illustrated in Lessons which Teach the Spirit of Thanksgiving.
Problem.—“To Teach Thankfulness to God and Man.”

A. M.

	9.06-9.26.	9.26-9.45.	9.45-10.	10-10.05.	10.05-10.20.	10.20-10.25.	10.25-10.45.
Opening exercises.	* Morning talk. First Thanksgiving and the Pilgrims.	* Phonics review with phonic game. Initial sounds of vegetables and fruits.	Reading from chart. Seat work. Build phonetic list from blackboard or chart.	Physical exercises. (Program.)	Reading, teach and dramatize new lesson.	Number counting, by ones.	Recess and lunch.
10.45-11.	11-11.05.	11.05-11.25.	11.25-11.30.	11.30-11.50.	11.50-11.55.	11.55-12.	
Writing. (Program.)	Game. Rhythmic movements with music.	* Reading II. Seat work, cutting and coloring fruits and vegetables.	* Game play. “Over the River and Through the Woods.”	Reading I. In Books. Seat work. Make a basket with pegs and put in definite number of peas.	* Oral English. Teacher reads selection from “Hawatha.”	Dismissal.	
P. M.							
1.30-1.36.	1.36-1.48.	1.48-2.03.	2.03-2.06.	2.06-2.25.	2.25-2.45.	2.45-3.	3-3.25.
* Opening exercises. Teach poem, “Thank you, Pretty Cow.”	* Music. (Program.)	Writing. (Program.)	* Game. “Went to visit a farmer one day.”	Reading II and III from slips. Seat work. Color printed outlines of fruit and vegetable tables.	Recess.	* Drawing. (Program.)	* Construction or free play. Thanksgiving basket, vegetables or weaving mats or build Pilgrims’ houses with blocks, or cut and color turkeys.

* All through the month the portions of the program which are starred are given over to lessons related to the project.

In certain classes special lunches are given.

ORAL ENGLISH.—SEPTEMBER, OCTOBER, NOVEMBER.

FALL PROGRAM.

Projects.

September, Living Together. October, The Harvest.
November, Thankfulness.

The aim of this work is to offer a suggestive plan in the teaching of oral English which will develop greater initiative on the part of the child. Too much time cannot be spent in this particular direction. The projects indicated for the fall months will form the basis for oral English.

I. Morning Talks.

1. Social Aspects.

Let family life be model for school life. Who takes care of us?
Lead to family — Group five to show family — Family activities — Finger song — This is the mother, etc.
Help the weaker ones, encourage the timid and so teach service, kindness and sympathy.

a. In home.

Family and pets.

b. In school.

Teachers and children. School habits.
Punctuality, etc.

c. In out-door life.

Neighbors, playmates, animals.
Other homes not like ours — bird, squirrel, horse, cow, dog, etc. Ex.— Bird's nest.
Others who help us to live — sheep, lambs, hens, etc.

2. Seasonal Aspects.

Changes in nature.

a. Natural.

Weather conditions.
Sun, clouds, rain, wind.
Length of day.

b. Physical.

(1.) Plant.

- (a.) Harvest, grains, fruits, vegetables.
- (b.) Farmer and miller, baker.
- (c.) Foliage, change in colors, falling leaves, etc.

(2.) Animal.

- Preparation for winter.
- (a.) Birds flying south.
 - (b.) Storage of food.
 - (c.) Hibernating animals.

II. Rhymes, Stories, Poems.

1. Social Aspect.

Rhymes. (Mother Goose.)

- * Old Mother Hubbard.
- * Jack and Jill.
- * Baa, Baa, Black Sheep.
- * Wee, Willie Winkie.
- * Little Jack Horner.
- * Little Miss Muffet.
- * Simple Simon.
- * Pat-a-cake.
- * Peas, porridge hot.
- * Jack, Be Nimble.
- * Hey, Diddle, Diddle.

Stories.

- * The Little Red Hen. (Industry.)
- * Susy's Dream. (Kindness — Thoughtfulness.)
- * The Three Bears. (Consideration — Obedience.)
- * The Pig Brother. (Cleanliness.)
- The House That Jack Built. (Industry.)
- The House with the Golden Windows. (Contentment.)
- Charlotte and the Ten Dwarfs. (Reliance.)
- * Billy Bobtail and His Friends. (Helpfulness.)
- * The Gingerbread Boy. (Conceit.)
- * Dilly, Dally. (Laziness.)

Poems.

- Thank You, Pretty Cow.
- The Swing. (R. L. Stevenson.)
- I Love Little Kitty. (Taylor.)
- The World is so Full of a Number of Things. (Stevenson.)
- The Friendly Cow. (Stevenson.)

2. Seasonal Aspects.

Rhymes.

- The North Wind Doth Blow.
- Hush-a-bye-Baby.
- One Misty, Moisty Morning.
- * Little Boy Blue.
- * Little Bo Peep.
- * Fly Away Jack, Fly Away Jill.

Stories.

- The Wind and the Leaves.
- The Naughty Acorn.
- The First Corn. (Children's Hour.)
- The Sun and the Wind.
- The Anxious Leaf.
- The Ant and the Grasshopper.
- The Story of Persephone.
- The Story of Christopher Columbus.

EDUCATIVE SEAT WORK (WITHOUT PENCIL).

Fall Months.

Colored Sticks.

1. Sort according to color.
2. Sort according to length.

Tablets.

1. Colored.
 - a. Sort according to color.
 - b. Sort according to shape.
 - c. Make borders from copy on board.
 - d. Make designs from copy on board.
2. Leather Board Tablets.
 - a. Sort according to shape.
 - b. Sort according to size.
 - c. Make borders (copy from board).
 - d. Make designs (copy from board).
 - e. Invent — borders and designs.

Scissors.

1. Cut on straight lines (block paper).
2. Cut out letters (sounds) taught from magazine or paper.
3. Cut out pictures of people from magazine or paper.
4. Cut out objects from magazines. Each child paste and keep "scrap book."
5. Cut out objects from hectograph copies (to emphasize sounds taught), then cut out "free hand."

Suggestive Patterns.

- | | |
|------------|------------------|
| (r) rabbit | ink bottle (ink) |
| (s) swan | clock (ck) |
| (p) pig | umbrella (u) |
| (sh) shell | duck (Qu) |
| (t) top | fox (x) |
6. Suggest *objects* children can cut *free hand*.

(m) moon	(e) egg.
(a) apple	(ch) church.
(l) leaf	(d) string of dolls.
(o) orange	(k) kite.
(b) ball	(h) hat.
(v) vase	(w) house with windows.

Suggestive "hectograph" objects.

"Fruit" for fruit basket.

"Pilgrim Father."

Peas.

1. Put peas on printed objects (large pattern).
2. Put peas on printed words taught.
3. Put peas on child's printed name.

Pegs.

1. Sort according to color.
2. Make things from objects on board.

3. Arrange in groups 1 to 10.

11 11 11.
111 111 111.

4. Make objects using 1 to 10 pegs.

Pegs and Peas.



Peas and Macaroni Stars.



Letters.

- Sort — all letters alike in rows — aaaa — mmmm.
- Match on alphabet cards.
- Match letters or sounds known with "Hammett's Word Numbers Builder."

Plasticine.

- Make objects to emphasize sound or word lesson taught.
- Make objects talked about in morning talk, reading lesson, etc.
- Let children make what they wish.

Word Cards.

- Match words on rhyme cards.
- Children put all words alike together.
- Children make rhyme from board (without cards).
- Arrange words according to initial sound.

Beads.

- Stringing (single).
1+1— 2+2— 3+3— 4+4— 5+5—
- Double stringing.
2+1—

Earned Leisure.

- Writing or drawing at the board.
- Library picture books.
- Building blocks.

CONSTRUCTION.

Original and directed construction forms a very valuable and attractive part of this work. It must be done in the seat work time, the earned leisure period or the free time at the close of the day.

At first this work must be very simple and the results will be crude. More finished products may be obtained as the year advances and the children develop.

The posters which are suggested may be the work of individuals or groups, and when used for decoration in the school room will represent to the children in concrete form the projects of the year as developed through their efforts.

FALL PROGRAM.

Projects.— Living Together. The Harvest. Thankfulness.

Materials for Use During the Year.

Scissors and paper. Blocks. Plasticine.

Sewing cards and worsted. Weaving materials. Toy knitters.
September.

Cut on lines, strip of paper.

Cut on fold, squares and oblongs.

Cut circles.

Lay with paper cut, and build with blocks, house, fence, street scene, cradle, bird-house, ladder, cart, school-house, home, grocery store.

Poster, from strips previously cut.

October.

Leaves, Indian, canoe, wigwam, moccasins.

Autumn poster.

November.

Farm-house, barn, pail, basket, barrel, fruits, vegetables, animals,
Pilgrims, log-house, boat.

Introduce weaving.

Pilgrim poster.

Pilgrims.

The First Thanksgiving.

Indian stories.

Poems.

The Wind and the Leaves.

Autumn Leaves.

I Know! I Know!

Whichever Way the Wind Doth Blow.

Games.

Finger Plays:

1. Five little squirrels sat on a tree, etc.

2. Five little frogs sat on a log, etc.

Did you ever see a lassie, etc.

I put my right hand in, etc.

The train is already, etc.

Welcome little travelers.

How do you do!
 My pigeon house.
 The family.
 Skim, skim, skim, etc.
 This is the way I wash my clothes.
 Come and skip with me.
 Follow the leader.
 The squirrel loves a merry chase, etc.
 Let us chase a squirrel, etc.
 Rhythmic movements as games.
 Hands on hips, hands on knees, etc.
 (To call attention to the different parts of the body.)
 Come little leaves, etc. (Kindergarten song played as a game.)

SEAT WORK.

This is the simplest form of supervised study. During the periods assigned to this work, children should be profitably employed, preparing for or supplementing lessons of day's program. Time should be taken to teach right habits with regard to use and care of material. It is unnecessary to say that at all times of the year seat work should be supervised, not only at the completion of the problem, but throughout the period the teacher, while employed with another section, should have a watchful eye on the little ones at work with educative material.

TRAINING FOR THE USE OF EARNED LEISURE.

After the children have been trained to right standards of seat work, the teacher may begin to prepare for the use of this time in independent activities. The children must be taught that they must earn the right to choose their occupation through doing well the task assigned. The library corner with its books and kindergarten chairs and table should be in the equipment of each class room, but until this is possible unoccupied desks and even the floor space can be well utilized if books are near.

In addition to this, puzzle pictures, pasting of scrap books, dressing of paper dolls, furnishing of doll houses, the housekeeping corner and the play school corner, weaving, knitting, modeling, with plasticine, tablet laying of border and designs, paper cutting, block projects, etc., all these indicate the various possibilities for the *earned leisure* period of the day's work.

Many of these independent activities will be carried on in groups, thus socializing the day's program and teaching the children their first lessons in self-control and respect for rights of others; thus laying the foundations of community life where the highest liberty means obedience to law.

THE FREE PERIOD AT THE END OF THE DAY.

During the time in which this committee has been at work, it has been proven that the assigned work of the year can be readily accomplished in a day of four and a half hours' intensive work. Thus there is left a free period at the end of the day which is the *earned leisure* for the entire class. Every child may now choose some project to be worked individually or in groups, and here the keynote of the month's work has special emphasis.

DECEMBER,
TYPICAL PROGRAM FOR ONE DAY.
Project.—The Spirit of "Loving and Giving." Illustrated in Lessons Which Teach the Christmas Spirit.
Problem.—"To Teach Children How to be Thoughtful and Generous."

A. M.

9-9.06.	9.06-9.20.	9.20-9.40.	9.40-9.45.	9.45-10.	10-10.05.	10.05-10.25.
Opening exercises, Bible and song.	* Morning talk. How to make others happy. Family and friends.	Phonics from chart.	* Play, "Toyman Shop."	Reading III. New words with letters.	* Physical exercises. (Program.)	Oral English. "Word Game."
10.25-10.45.	10.45-11.	11-11.03.	11.03-11.25.	11.25-11.30.	11.30-11.50.	11.50-11.55.
Recess.	Writing. (Program.)	* Rest exercises. "Jack in the Box."	Reading II. books. Seat work. * Children choose making chains, tearing chains, tree coloring and cutting stars.	Folk dance.	Reading I. new books. Same seat work.	* Read Christmas poem.
P. M.						
1.30-1.36.	1.36-1.48.	1.48-2.	2-2.03.	2.03-2.25.	2.25-2.45.	2.45-3.
* Talk on "Toyman's Shop."	* Music. (Program.)	Writing.	* Christmas game.	Reading II and III. seat work, for cutting of toys for Christmas. Tree on blackboard.	Recess.	* Drawing. (Program.)
						* Christmas work. Anything children wish to do. Treasure boxes.

* All through the month the portions of the program which are starred are given over to lessons related to the project.

JANUARY.

TYPICAL PROGRAM FOR ONE DAY.

Project.—“The Winter.” Illustrated in Lessons Which Teach Natural Phenomena and Industries of the Season.
Problem.—“To Teach Aspects and Activities of Nature.”

A. M.

9-9.06.	9.06-9.26.	9.26-9.40.	9.40-9.45.	9.45-10.	10-10.05.	10.05-10.15.	10.15-10.25.
Opening exercises, Bible and song.	* Morning talk, Winter aspects or activities.	Phonics, Review and advanced.	* Rest exercises, “Snow Man Game.”	Reading III, Seat work, Supply missing letters in words in sentences.	* Physical Exercises. (Program.)	Spelling, Preparation alphabet.	N u m b e r counting.
10.25-10.45.	10.45-11.	11-11.03.	11.03-11.25.	11.25-11.45.	11.45-11.55.	11.55-12.	
Recess.	Writing. (Program.)	* Rest exercises, “Snow Flakes.”	Reading I, Seat work II and III, N u m b e r stories with pegs from blackboard.	Reading II, seat work.	* Oral English poem.	Dismissal.	

P. M.

1.30-1.36.	1.36-1.48.	1.48-2.	2-2.30.	2.30-2.45.	2.45-3.	3-3.30.
* Opening exercises, Continue winter poem.	* Music. (Program.)	Writing. (Program.) Rest game.	* Reading II and III, Seat work. Cut snow stars.	Recess.	* Drawing. (Program.)	* Construction, Make snow man from white paper; black hat, stick and buttons. Put definite number of snow balls at feet. Mount all on gray paper.

* All through the month portions of the program which are starred are given over to lessons related to the project.

FEBRUARY.

TYPICAL PROGRAM FOR ONE DAY.

Project.—“Great Birthdays,” Illustrated in Lessons Which Teach Love and Loyalty.
Problem.—“To Teach Patriotism.”

A. M.

9-9.06.	9.06-9.20.	9.20-9.35.	9.35-9.40.	9.40-10.	10-10.05.	10.05-10.25.
Opening exercises, Bible.	* Morning talk. Heroes. Lincoln.	Reading phonic books.	* Soldier game. (See program.)	* Reading III, seat work. Copy chil- dren's stories from blackboard with letters.	* Physical ex- ercises. (See program.)	* Reading II. Same seat work.
10.25-10.45.	10.45-11.	11-11.03.	11.03-11.18.	11.18-11.38.	11.38-11.43.	11.43-11.55.
Recess.	Writing. (See program.)	* Rest exercises. Rhythmic action. Drums, flags, bu- gles, etc.	Number.	Reading I. Seat work. Number stories with pages or figures devel- oped in previous lesson.	* Rest exercises. Play statues.	* Stories of patriotism. Betsey Ross, Molly Pitcher, Barbara Friedichte.

P. M.

1.30-1.36.	1.36-1.48.	1.48-2.	2-2.10.	2.10-2.30.	2.30-2.50.	2.50-3.10.	3.10-3.30.
* Opening exercises. Salute flag. “America.”	* Music. (Pro- gram.)	Spelling from list.	Writing. (See program.)	* Reading II and III. Seat work. Cut and color shields.	Recess.	* Drawing. (See program.)	* Free play. Choice of work.

*All through the month the portions of the program which are starred are given over to lessons related to the project.

ORAL ENGLISH.— DECEMBER, JANUARY, FEBRUARY.

WINTER PROGRAM.

Projects.

December, The Spirit of Loving and Giving. January, The Winter.
February, Great Birthdays.

I. Morning talks.

1. Social Aspects.

Spirit of giving and loving.

- (1) Birthdays of "Family" relatives and friends.
Joy to others suggested by:
 Birthday party. (Sharing birthday happiness.)
 "The Basket." Froebel's mother play.
- (2) The Christ Child. (Optional.)
 St. Luke, chapter II.
 Gifts to the World from "The Christ Child."
 Star — Shepherds — Camels, etc.
 Gifts from the rich to the poor.
 Gifts from the poor to the rich.
- (3) Santa Claus — Toy Shop — Christmas Tree.
- (4) Punctuality, regularity suggested by "Talk on the
 Clock," "The New Year." Suggest sun dial —
 Factory whistles — Hour glass — School bells —
 Church bells.
- (5) Talk on "The Knights."
 The Knights and the "Good Child."
 Suggests standards of living.
 Truth — Courage — Patriotism.
 Happiness in the reward of virtue.
 The Knights of our country, in *war* and *every day*
 life.
 George Washington.
 Abraham Lincoln.
 The President.
 The soldiers and the people.
 The generals of past and present wars.

2. Seasonal Aspect.

a. Natural.

Weather conditions.
Cold — Frost — Ice — Snow.
Shorter days.
Phases of the moon — Stars — Big Dipper.
Light bird.
Rainbow.

b. Physical.

- (1) Plant.
 - (a) Winter aspect.
 - (b) Farmer — Ice man — Wood-cutter.
- (2) Animal.
 Birds and animals that stay with us.

II. Rhymes, Stories, Poems.

1. Social Aspect.

Stories.

- The Story of the Good Shepherd. (Optional.)
- The Story of Tiny Tim.
- The Story of Mrs. Santa Claus. (The Children's Hour.)
- Little Red Riding Hood.
- How Cedric Became a Knight.
- The Boy and the Dyke.
- Dora of the Light House.
- King Midas.
- The Story of Washington. (Anecdotes.)
- The Story of Lincoln. (Anecdotes.)
- Anecdotes of Heroes of Our Country, and other Countries.

Poems.

- 'Twas the Night Before Christmas.
- Which Loved Best? Joy Allison.
- . A Birdie With a Yellow Bill, etc.

III. Games.

1. * Seasonal Games.

- * The Toyman's Show.
- * The Snowflakes Dance in the Wintry Air, etc. Kindergarten song played as a game.
- * The Snow Man.
- * The Skating Game.
- The Knights and the Good Child.
- The Cat and the Mouse.
- Drop the Handkerchief.
- I say "Stoop."
- Round we go, round we go, one large circle marching so, etc.
- Language Games.
- Marching — Soldier Boy.
- Bean Bag Games.
- Eraser Games.

2. Seasonal Aspect.

Stories.

- How the Fir Tree Became a Christmas Tree.
- The Story of the New Year. (Poulson's Child World.)
- How the Robin got His Red Breast. (Children's Hour.)
- The Pot of Gold. (A Rainbow Story — Kindergarten Story.)

Poems.

- The Snow Flakes, Dodge.
- The Snow Bird.
- Bed in Summer, Stevenson.
- Twinkle, Twinkle Little Star.
- O Look at the Moon.
- Lady Moon, Lord Houghton.

SEAT WORK.—WINTER.

Each child should have a box of *words, pegs, letters* in desk to save time.

Pegs and Peas.

1. Make squares or "houses" with pegs.
Put peas inside (1-10).

Example.—



2. Arrange pegs in groups with corresponding figures.

11	11	11
2	2	2
111	111	111
3	3	3

3. Make steps with pegs and figures 1-10.

- 1
- - 2
- - - 3
- - - - 4

4. Make objects with pegs—figures opposite.

5. Count by 1's to 100 (pegs and figures).

1 1 1 1 1 1 1 1 1 1

Count by 2's to 100.

Count by 10's to 100.

Count by 5's to 100.

6. Put on board—3 2's; 4 2's; 5 2's.

Arrange groups with pegs on desk.

7. $1 + \cdot \cdot =$

Children supply answer with figures.

8. — Stories with figures 1-10.

= Stories with figures 1-10.

Will make

$2 + 2 = 4$
 $11 \ 11$
 $10 = 7 + 3$

Pegs and Peas.

1. Sounds.

Example.— U W Y

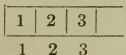
2. Numbers.

Printed Figures.

1. Sort in rows (1-10).

Example.— 1 1 1 1 2 2 2 2

2. Place under ruler —



3. Figures 1-100 in squares on back of block.

Children match figures.

4. Arrange figures in "Hammett's Word and Numbers Builder."

5. Figure puzzle.

(Figure cut up and children put together.)

6. Figures 1-50 on ruled paper in squares.
Children cut on lines.
Arrange squares with figures in correct order.

7	9	3	8	etc.
2	1	10	5	
4	6	12	11	

Words.

1. Arrange according to initial letter.
2. Simple stories from board.
3. If possible (original stories).

Tablets.

1. Arrange according to numbers 1-10.
2. Tablets.

(Made from colored cardboard.) (From letter and figure cards.)
Inventions.

3. Borders-Tablets and long colored sticks — children invent.

Letters.

1. Make words from Reading Lesson.
Copy sentences from sentences on board.
2. Put a b c at top of desk.
at bed come.
all boy cry.
3. Match letters on printed alphabet cards.
Match letters on written alphabet cards.
Match printed letters on alphabet cards.
4. Sort written letters.
5. Children make alphabet from copy on board.
6. If possible, children make alphabet without copy.
7. Make sound families:
j oy c ow se ll be nd.
b oy n ow se t be nt.
t oy h ow se nd be st.

Plasticine.

Christmas tree.
Toys children would like Santa to bring.
Shovel.
Toys Santa brought.
Snow man and snow balls.
Lincoln's log cabin.
Heart valentine.
Hatchet and cherry tree.

Numbers 1 • (make pies.) Numbers, stories, etc.
2 • • • • • 1+2=3
3 • • • • • 2+4=6

Scissors.

Suggestive hectograph patterns:

Christmas tree.

Christmas bell.

Snow stars enlarged and colored.

Reindeer.

Star.

Optional:

Shepherd with crook.

Camel with wiseman (for poster).

Red Cross.

Shovel.

Bead Stringing. (Double.)

One 2	2 2's	3 2's	4 2's	etc.
	3+1	6+2	4+3	(Numbers, stories.)

Weaving.

Red — white — blue — mats.

1+1 2+1 3+1

Sewing.

Cards with bells, stars, etc.

Knitting.

Horse reins. (Girls.)

Earned Leisure.

Soldier cap (fold newspaper) and cockade.

Badge.

Toys.

Children represent with crayons.

Library books.

Blocks.

Picture puzzles.

CONSTRUCTION.

WINTER PROGRAM.

Projects.

Loving and Giving. The Winter. Great Birthdays.

December.

Sleigh, chimney, fireplace, stocking, mitten, Christmas tree, bell, star, toys, gifts, picture frame, folded paper screen, Christmas card.

Christmas poster.

January.

Sled, snow shovel, brush, broom, stove, coal hod.

Introduce sewing cards.

Winter poster.

February.

Heart valentine, envelope, Lincoln's house, flag, gun, soldier, soldier cap, horse, monument, badge, Washington on his horse.

Blacksmith shop.

Patriotic poster.

MARCH.

TYPICAL PROGRAM FOR ONE DAY.

Project.—"The Busy World." Illustrated in Lessons Which Teach Interdependence of Labor.
Problem.—"To Teach the Value of Service."

A. M.

9-9.06.	9.06-9.20.	9.20-9.35.	9.35-9.40.	9.40-10.	10-10.05.	10.05-10.25.	10.25-10.45.
Opening exercises, Bible and songs.	* Morning talk. "The blacksmith."	Phonics. Three sounds of "Y."	* Rest exercises: Folk dance, "The shoemaker."	Reading III. Seat work, I and II. Individual number story papers.	Physical exercises. (Program.)	Reading II. Same seat work.	Recess or * visit to blacksmith.
10.45-11.	11-11.05.	11.05-11.15.	11.15-11.25.	11.25-11.30.	11.30-11.50.	11.50-11.55.	
Writing. (See program.)	* Rest exercises. Play "Blacksmith."	Number.	Spelling. (See list.)	* Rest exercises. Minor game.	* Reading I. Seat work. Making different kinds of wheels with pegs.	* Guessing game.	

P. M.

1.30-1.36.	1.36-1.48.	1.48-2.	2-2.03.	2.03-2.30.	2.30-2.50.	2.50-3.25.
* Opening exercises. Talk on walk. To teach "I saw."	* Music. (See program.)	Writing. (Program.)	* Rest exercises. Rhythmic exercises.	Reading II and III. Seat work. * Cut and color. Blacksmith's tools.	Recess.	* Ring games in kindergarten. Blacksmith, shoemaker, carpenter, etc.

*All through the month the portions of the program which are starred are given over to lessons related to the project.

APRIL.
TYPICAL PROGRAM FOR ONE DAY.

Project.—"The Coming of Spring." Illustrated in Lessons Which Teach the Beauty and Joy of Life.
Problem.—"To Teach the Awakening of Nature."

A. M.

9.-9.00.	9.06-9.20.	9.20-9.35.	9.35-9.55.	9.55-10.	10-10.05.	10.05-10.25.	10.25-10.45.
Opening exercises, Bible and song.	* Morning Talk, "SIGNS of Spring."	Phonetic regular review and advance phonics game. * New word suggested by season planting, sowing seeds, etc.	Reading II. Seat work with letters. Supply words in rhymes.	C o u n t i n g Class.	* Physical exercises. (Program.)	Reading I. Seat work.	Recess.
10.45-11.	11-11.10.	11.10-11.30.	11.30-11.35.	11.35-11.50.	11.50-11.55.		
Writing.	Number class. (Program.)	Reading III. Seat work. Counting by two's, with pegs as figures.	* Game, "Oats, Peas, Beans and Barley."	Spelling.	* Story of little seed. Read poem, "In the Heart of a Seed."		
1.30-1.36.	1.36-1.48.	1.48-2.	2-2.05.	2.05-2.25.	2.25-2.45.	2.45-3.05.	3.05-3.30.
* Opening exercises. Teach poem "In Heart of Seed."	* Music. (Program.)	Writing. (Program.)	* Rest exercises. Butterflies and birds flying.	Reading with slower children. Seat work. * Copy picture of robin with crayons.	Recess.	* Drawing. (Program.)	* Free play. Planting seeds, coloring and cutting flowers, nests, flowers with plasticine.

* All through the month the portions of the program which are starred are given over to lessons related to the project.

MAY.

TYPICAL PROGRAM FOR ONE DAY.

Project.—“Civic Pride.” Illustrated in Lessons Which Teach Respect for Property of Others.
 Problem.—“How Children Can Help to Make City Beautiful.”

A. M.

9-9.06.	9.06-9.20.	9.20-9.40.	9.40-10.	10-10.05.	10.05-10.15.	10.15-10.25.
Opening exercises.	* Morning talk. Clean up.	Phonics. Advanced work with silent letter. Kh, Gh, wr, gh, etc.	Reading I. Sight read- ing. First Reader. Seat work. Children make stories with letters from individual pictures.	* Physical exer- cises (Pro- gram.)	Numbers.	Spelling. (Pro- gram.)
10.25-10.45.	10.45-11.	11-11.20.	11.20-11.25.	11.25-11.45.	11.45-11.55.	
Recess.	Writing. (Program.)	Reading. Children who need individual atten- tion. Seat work. Making signs with cray- ons. * Clean up.	* Rest exercises. Game to emphasize cleaning.	Reading II. * Same seat work.	* Picture study. “Feed- ing the Birds.”	
1.30-1.36.	1.36-1.48.	1.48-2.	2-2.25.	2.25-2.45.	2.45-3.15.	3.15-3.25.
* Open exercises. “Paint Up.”	* Music. (Program.)	Writing. (Program.)	* Reading II and III. Seat work. Pegs, mak- ing clean-up pictures. Man cleaning, boy rak- ing, girl sweeping.	Recess.	* Constructive work. May baskets.	* Story. “Bonnie’s Sunshine.”

P. M.

* All through the month the portions of the program which are starred are given over to lessons related to the project.

JUNE.

TYPICAL PROGRAM FOR ONE DAY.

Project.—“Preparation for Summer.” Illustrated in Lessons Which Teach Beauty of Growing Things and Their Fruitfulness.
Problem.—“To Teach Appreciation of the Great Out-of-Doors.”

A. M.

9-9.06.	9.06-9.20.	9.20-9.35.	9.35-9.40.	9.40-10.	10-10.05.	10.05-10.25.
Opening exercises, Bible and songs.	* Morning talk on flowers and trees.	Phonics, words to gain power.	* Rest exercises. Sense game, "Smelling."	Reading, children who need individual attention. Seat work. Number combination, 1-10 in boxes.	Physical exercises. (Program.)	Reading I. Children choose books. Same seat work.
10.25-10.45.	10.45-11.	11-11.10.	11.10-11.30.	11.30-11.35.	11.35-11.50.	11.50-11.55.
Recess.	Writing. (Program.)	Number.	Reading II. Children choose books. * Seat work. Cut and color flowers for calendars.	* Game, Butterflies. Miss Blow.	Spelling match.	Number quick drill for dismissal.

P. M.

1.30-1.36.	1.36-1.48.	1.48-2.	2-2.03.	2.03-2.25.	2.25-2.45.	2.45-3.	3-3.30.
* Opening exercises. Neighborhood flows.	* Music. (Program.)	Writing. (Program.)	Rest exercises. "See-Saw" game.	Reading II and III. Seat work. Weaving mats for doll house.	Recess.	* Drawing. (Program.)	* Construction work. Finish. Juncalendar. Fold and cut furniture for doll house.

* All through the month the portions of the program which are starred are given over to lessons related to the project.
 In June a half or whole session may be taken for a walk.

ORAL ENGLISH.—MARCH, APRIL, MAY, JUNE.

SPRING PROGRAM.

Projects.

March,—The Busy World. April,—The Coming of Spring.

May,—Civic Pride. June,—Preparation for Summer.

I. Morning Talk.

1. Social aspect.

a. Value of service.

b. Interdependence of labor.

What each one contributes to the world.

(1) Miner.

(2) Blacksmith and wheelwright.

(3) Carpenter.

(4) Farmer and the miller.

c. Civic pride:

The "city beautiful," how it can be made so.

"Clean Up." "Paint Up."

2. Seasonal aspect.

a. The awakening of Nature.

Birds' nests.

Caterpillars and butterflies.

The light bird.

Maple sugar industry.

b. The garden.

Preparations for planting.

Sowing the seeds.

c. The world out-of-doors.

Shrubs and plants.

Wild flowers.

The spring walk — what it has given the child.

II. Stories and Poems.

1. Stories.

a. Social aspect.

Stories.

Carpenter Song.

The Three Pigs.

Piccola.

Clean Peter.

Thumbling.

Ludwig and Marleen.

b. Seasonal.

Caterpillar and Butterfly.

Benny's Sunshine.

The Farmer and the Little Larks.

The Ant and the Doe.

2. Poems.

a. Social aspect.

The Lamplighter.

The See Saw.

Good Night and Good Morning.

Wynken, Blinken and Nod.

b. Seasonal.

Oh Dandelion — Yellow as Gold.

The Wind.

Little White Snow-drop.

The Rain is Raining All Things Bright and Beautiful.

The Little Seed.

Buttercups and Daisies.

III. Games.

1. Social Aspect.

* The Miner.

* The Blacksmith.

* The Carpenter.

* The Farmer.

The Wheelwright.

Shall I Show You How the Farmer?

The Bird's Nest.

Animal Imitations.

2. Seasonal.

The Caterpillar and Butterfly.

A Little Boy Went Walking.

Oats, Peas, Beans and Barley Grow.

Peas Porridge Hot, etc.

IV. Folk Dances.

Baby Polka.

Dance of Greeting.

How do You do, My Partner.

The Shoemaker's Dance.

I See You.

Oh, Will You Dance?

Minuet.

SEAT WORK.—SPRING.

Pegs.— Number Work. (All work concrete.)

1. Subtraction, 1-10. *Example.*— $10-7=3$.

2. 3

 $\frac{+?}{7}$ Children supply missing numbers.3. Times—*Example.*— $5 \times 2=10$.11 11 11 11 11 $5 \times 2=10$.4. Division— $10 \div 2=5$.

11 11 11 11 11.

10 has how many 2's? It has five.

5. Uneven division. (If possible.) Advanced children.

 $7 \div 2=3\frac{1}{2}$ 11 11 11 1.

7 has how many 2's?

It has 3 and one left over to make another two.

Letters.

1. All sound families on back of block.

Slow children match with letters.

2. Words with and without *e* on end, mat, mate, etc.3. A E I O U combination of letters.—*Example.*—ay, ai, ae, etc.

Letters.

1. Spelling words.
2. Make sentences from written copy on board.
3. Words with certain numbers of letters from reading books:

<i>Example.</i> — 2	3	4	5
to	top	baby	kitty
up	bat	papa	slate
4. Sentences on board minus word.— Children supply missing word.

Baby has a ——— ball.
Papa — —a ——— book.
5. Original sentences.

Paste page of primer on card — Children make stories under picture using words on board. Children who have best desks read them.
6. *Words.* (Aldine.)

Make original stories.
Make rhymes from memory.

Scissors.— Suggestive hectograph patterns.

- Kites.
Rabbits.
Hen.
Chicken coming out of egg.
Spring activities.
 Girl with pin wheel.
 Boy with kite.
 Girl with hoop.
Daffodil.
Tulip in flower pot.
Bluebird.
Sunbonnet baby.
Overall boy.
Girl with umbrella up.
Summer activities "at seashore."
Figures, etc., for "June Calendar."
Mother Goose Rhymes. (Free hand.)
Cut up letters and words for next year's class. (Put in boxes.)

Plasticine.

- Chickens and eggs.
Tree with nest.
Hen.
Rabbits.
Flower in flower pot.
Butterfly.
Pussy willows.
May basket.

Weaving — Knitting — Sewing. (Continued.)

- Furniture for doll's house. (Sixteen squares.)
Children choose seat work.

Written Words on Board:

Children reproduce with crayons on unruled block paper.

Chair	Tree
Bed	Ball
Doll	etc.
Hat	

Bead Stringing.

Ten beads of one color and ten beads of another color.

Children arrange — $6 + 4$

$7 + 3$

$8 + 2$, etc.

String any way to show 3's, 4's, etc.

• • • • •
• • • • •

Earned Leisure.

Let children choose what they wish.

Do not say *what* he may do when his seat work is finished.

Furniture.

For doll house. (Sixteen squares.)

Table; bed; chair; dresser; piano, etc.

Color Work.

Pussy willows.

Children flying kites.

Illustrate story told.

Represent Mother Goose Rhyme.

"Color rug" for doll house.

CONSTRUCTION.

SPRING PROGRAM.

Projects.

The Busy World. The Coming of Spring. Civic Pride. The Preparation for Summer.

March.

Kites, windmill, lighthouse, simple furniture, home animals, washing day, ironing day.

Introduce knitting.

Poster — A windy day.

April.

Umbrella, wheelbarrow, rabbit, duck, chicken, chicken-coop, plow, hoe, rake, shovel, farm animals, basket of eggs.

Easter souvenir.

Poster — spring scenes.

May.

Sweeping, raking, painting.

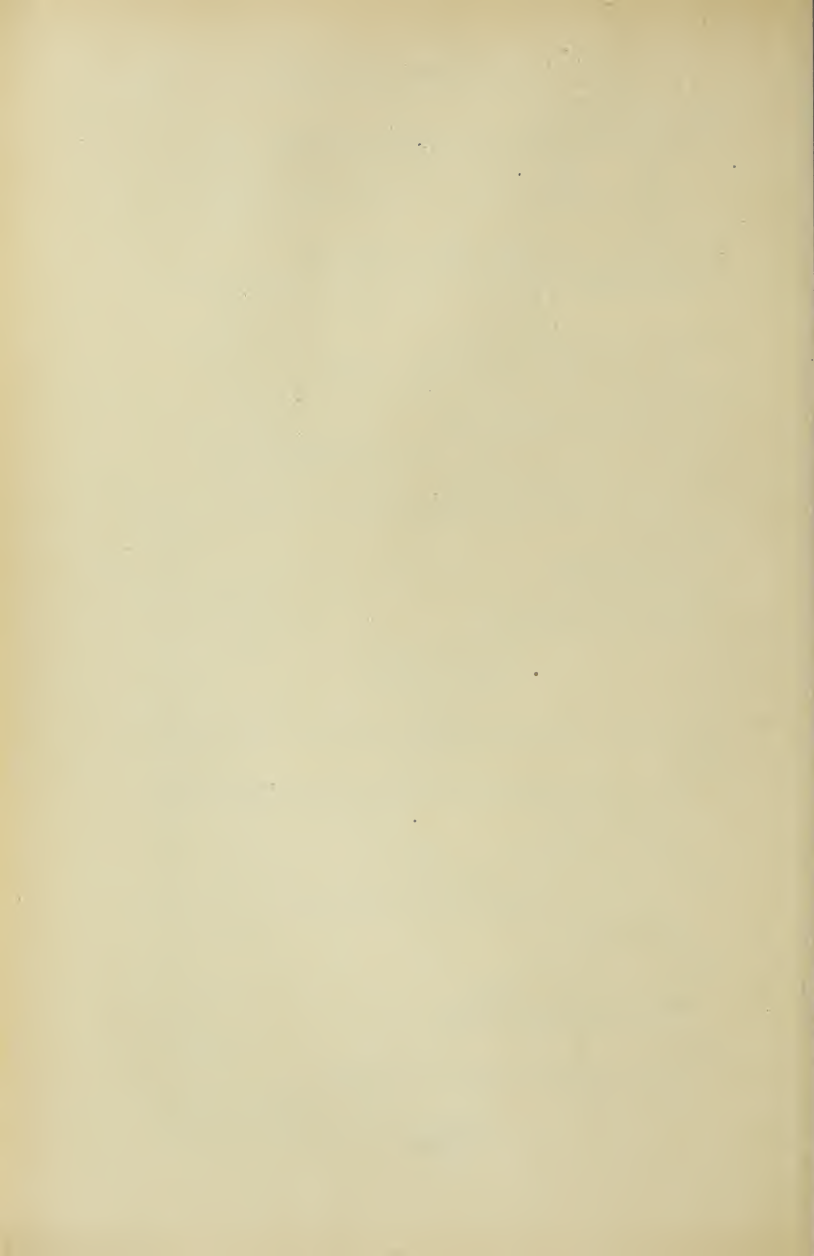
Flowers, trees, vase, May basket.

Poster — "Clean Up" and "Paint Up."

June.

Flowers, animals, tents, butterfly, drinking cup.

Poster — Circus.



SCHOOL DOCUMENT NO. 8—1920
BOSTON PUBLIC SCHOOLS
SYLLABUS FOR THE ELEMENTARY SCHOOLS



SIXTH GRADE.

BOSTON
PRINTING DEPARTMENT
1920

IN SCHOOL COMMITTEE, BOSTON, June 28, 1920.

Ordered, That the accompanying Syllabus for the Elementary Schools, Sixth Grade, Revised, is hereby adopted and five thousand (5,000) copies ordered printed as a school document.

Attest:

ELLEN M. CRONIN,
Secretary pro tempore.

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INTRODUCTION.

This pamphlet contains the complete course of study for Grade VI, except the courses for physical training, drawing and manual training; the syllabuses for these courses are printed separately and are already in the hands of teachers. This new course of study is based on the experience of sixth grade teachers in Boston in using the former provisional course, which it supersedes.

In this revision of the course of study the experience of sixth grade teachers has been capitalized through the organization of committees of teachers, representing a large number of the elementary districts of the city. These teacher-committees had many conferences, considered the former provisional course of study in the light of their experiences in using it, and made written reports indicating desirable changes.

After the several reports of the committees of sixth grade teachers were received they were turned over to the respective committees on standards. Each committee on standards considered the work outlined by the teacher-committee for that subject in order to unify the course for the eight grades. When the committees on standards completed their work, the various courses of study were submitted to the assistant superintendent in charge of the subject for his consideration and approval.

The syllabus is arranged in two parts. Part I covers the Aims, Minimum Requirements, and Objective Standards in the various subjects. The work outlined in Part I is the course of study. Part II contains Suggestions on Teaching, Type Lessons, and Additional Subject Matter, on which teachers may draw in carrying out the course of study as outlined in Part I. Teach-

ers are expected to select such portions of Part II as may be necessary to meet the minimum requirement stated in Part I. Part II of the syllabus is suggestive and not required.

Lists of the teacher-committees and of committees on standards participating in the preparation of the sixth grade syllabus follow. Other teachers and members of the supervising staff have also made contributions.

Assistant Superintendent Frank W. Ballou was general chairman of all committees and editor of the syllabus, with the exception of the revised Course in Geography and History. These courses were organized by Assistant Superintendent Mary C. Mellyn, and prepared under her direction.

COMMITTEES OF SIXTH GRADE TEACHERS.

Arithmetic.—Isabella J. Ray, Chairman; Josephine Crockett, Rosanna M. Dowd, Emma Frye, Annie A. Horton, Katharine P. Kelley, Caroline A. Meade, Elizabeth C. Muldoon, Rose A. Plunkett, Mary R. Quinn, Ellen Welin.

Geography and History.—The course of study in these subjects has been revised by a committee consisting of the following: Florence M. Hurley, Chairman; Ona I. Nolan, Alice J. F. Kane, Mary H. Healey, Helen F. Kenney, Katherine E. McEnroe, Mary G. Lyons, Mary E. Clapp, Leonard O. Packard and Mary C. Mellyn.

Reading and Literature.—Ruth M. Haynes, Chairman; Katherine C. Brady, Georgie M. Clarke, Theresa G. O'Brien, Carolena C. Richards, Elnora F. Standish, Agnes G. Strong, Stella F. Thomas.

Written and Spoken English.—Fannie G. Patten, Chairman; Mary E. Bernhardt, Rosella V. Bishop, Jenny W. Cronin, Lillie M. M. Loughlin, Katherine E. McEnroe, Bertha L. Mulloney, Elizabeth W. O'Connor.

COMMITTEES ON STANDARDS.

Arithmetic.—Clarence H. Jones, Chairman; Gertrude E. Bigelow, Alton C. Churbuck, John J. Cummings, Arthur L. Gould, Ellen M. Greaney, Anne R. Mohan, Olive A. Kee, William L. Vosburgh, and the following masters during the time when the course of study is being considered: Charles F. Merrick, W. Lawrence Murphy, George A. Smith.

Owing to other professional duties Mr. Jones found it impossible to continue to act as chairman of the committee on arithmetic. While the sixth grade syllabus was being prepared, therefore, the work of the committee was directed by Mr. Vosburgh.

Elementary Science.—Gertrude Weeks, Chairman; Anne P. O'Hara, Elmer E. Sherman, and the following sixth grade teachers: Marion E. Buswell, Margaret E. Carey, Edna B. Condon, Eliza D. Graham, Catherine T. Hunt.

English.—Charles L. Hanson, Chairman; James A. Crowley, E. Gertrude Dudley, Carolyn M. Gerrish, Arthur W. Kallom, Bertha L. Mulloney, Lincoln Owen, Henry Pennypacker, Augustine L. Rafter, Helen M. Richardson, Ellen L. Roche, Charles G. Wetherbee.

Sub-Committee on Reading and Literature.—James A. Crowley, E. Gertrude Dudley, Carolyn M. Gerrish, Augustine L. Rafter, Ellen L. Roche, and the following elementary school masters: Joshua M. Dill, Paul V. Donovan, Joseph B. Egan, William E. Perry, and Katharine H. Shute.

The final form of the course of study in Reading and Literature is largely the work of Miss Shute, assisted by Harriet M. Barthelmess and A. Frances Brennan.

Sub-Committee on Written and Spoken English.—Arthur W. Kallom, Bertha L. Mulloney, Lincoln Owen, Henry Pennypacker, Helen M. Richardson, Charles G. Wetherbee, and the following elementary school masters: Emily F. Carpenter, Augustus H. Kelley, William L. Phinney.

The report of the committee was prepared by Principals Kelley and Owen and Assistant Superintendent Rafter.

Hygiene.—Laura S. Plummer, Chairman; J. Mace Andress, Isabella J. Ray, Lillian M. Towne, and the following sixth grade teachers: Theresa Currie, Eliza D. Graham, Ellen Welin.

TIME ALLOTMENT.

SUBJECTS.	MINUTES PER WEEK.		
	Minimum.	Suggested.	Maximum.
Arithmetic.....	180	210	240
Drawing.....	75	90	120
Elementary Science.....	45	45	60
English (Spoken and Written):			
(a.) Composition, 60 per cent oral and 40 per cent written.....	75	90	120
(b.) Dictation.....			
(c.) Corrective work.....			
Geography.....	120	150	180
History.....	90	120	120
Household Science and Arts (Girls) ¹	90	90	120
Manual Training (Boys).....			
Hygiene and Physiology.....	30	30	45
Music.....	45	60	75
Opening Exercises.....	30	30	45
Penmanship.....	60	75	90
Physical Training.....	45	75	90
Reading and Literature.....	120	150	210
Recesses.....	100	100	100
Spelling.....	30	30	30
Optional.....	305	95	.....
Totals.....	1,500	1,500	

¹ The suggested time allotment for Household Science and Arts and for Manual Training is 90 minutes, instead of 120 minutes as formerly. This reduction in time makes it possible to provide for two classes in these subjects in the morning, instead of only one class as at present. The maximum time allotment of 120 minutes makes it possible to continue the former time allotment where that is desirable.

SUGGESTED DAILY DISTRIBUTION OF TIME THROUGHOUT THE WEEK.

SUBJECT.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
Arithmetic:					
Drills.....	12	12	12	12	12
Instruction.....	30	30	30	30	30
Drawing.....			45		45
Elementary Science.....	45				
English (Spoken and Written):					
Composition.....	30		30		30
Dictation.....		15		15	
Corrective Work.....		15		15	
Geography.....	30	30	30	30	30
History.....	30	30		30	30
Household Science and Arts (Girls).....					
Manual Training (Boys).....		45		45	
Hygiene and Physiology.....	30				
Music.....	10	10	20	10	10
Opening Exercises.....	6	6	6	6	6
Penmanship.....	15	15	15	15	15
Physical Training.....	15	15	15	15	15
Reading and Literature.....	20	30	{20 20}	{20 20}	20
Recesses.....	20	20	20	20	20
Spelling.....			10		20
Optional Time.....	7	27	27	17	17
Totals.....	300	300	300	300	300

CONCERNING DAILY DISTRIBUTION OF TIME.

The daily distribution of time throughout the week as indicated on page 10 has been arranged so that drill subjects, such as music, penmanship, physical training, drills in arithmetic, have frequent and short periods rather than less frequent periods of longer duration. This arrangement is made because success in such subjects depends to a large extent on the frequency of repetition.

Arithmetic.—Distinct time has been provided for oral and written drills in arithmetic and for instruction in the processes and problems of Grade VI. Best results will be obtained if some such a division of time is maintained.

Drawing.—Forty-five minute periods are provided because the course of study in drawing for Grade VI is based on this length of period. Where the preparation of materials for work will permit, and if teachers so desire, the 90 minutes for drawing may be divided into three 30-minute periods, instead of two 45-minute periods.

Elementary Science.—The 45 minutes per week for elementary science in Grade VI have been assigned to one period, because after teachers have collected perishable material the period should be long enough so that the class may make complete use of it. Instruction has been assigned to Monday because on that day many children will have interesting things to talk about which they have seen on Saturday and Sunday. If preferable, teachers may arrange for a 15-minute discussion period on Monday and a 30-minute instruction period on Friday.

ENGLISH.

Composition work in this grade should be 60 per cent oral and 40 per cent written. Oral preparation should precede written work.

Dictation.—Fifteen minutes are provided for a dictation exercise, in order that correction of the papers may follow at once and the class thereby derive the benefit from the discussion of such errors as have been made.

Corrective work has been provided for with two 15-minute periods. This time should be devoted to ways and means of improving the forms of oral and written speech. If preferable, teachers may distribute these 30 minutes over five periods of 6 minutes each, although the present arrangement would appear to be more advantageous.

Household Science and Arts and Manual Training.—Of course not all the household science and arts and manual training in a school can be given on Tuesdays and Thursdays. Those teachers whose classes take manual training on Monday and Wednesday, for example, may exchange the complete schedules for Tuesday and Thursday to Monday and Wednesday.

Reading and Literature.—Teachers should divide the 150 minutes per week between reading and literature as conditions require. Two 20-minute periods for these two subjects have been assigned to Wednesday and Thursday. It should be understood that these are two separate periods; they should not be combined and probably should not follow each other in the daily program.

Spelling.—The time schedule for spelling has been arranged for instruction in and study of new and review words for the one day of the week and a written lesson on Friday, in accordance with the plan outlined in Bulletin XI of the Department of Educational Investigation and Measurement.

Optional Time is provided for each day of the week, ranging in amount from seven minutes on Monday to twenty-seven minutes on Wednesday and on Thursday. This time should not be added to a subject at the beginning of the year and then devoted to that subject throughout the year, or for any length of time. Optional

time is provided in order that teachers may give additional instruction in those subjects which most need it from time to time. The twenty-seven minutes on Wednesday and Thursday have purposely been grouped so that each week two complete recitation periods may be devoted to those subjects which most need additional attention.

PART I.—AIM, MINIMUM REQUIREMENT AND
OBJECTIVE STANDARDS IN SUBJECTS OF
THE SIXTH GRADE.

ARITHMETIC.

Oral exercises with simple numbers, and arithmetic at sight, to precede, accompany, and follow each subject in written arithmetic.

Aim.

To secure accuracy and speed in the four fundamental processes with integral numbers.

To teach the four processes with common fractions.

To develop power in the solution of problems which deal with common fractions.

Minimum Requirement.

I. Integral numbers.

- a. Reading and writing numbers through billions.
- b. Written work in the four processes, reviewing especially long division.
- c. Finding least common multiple of several numbers by inspection.
- d. Problems reviewing the four processes in combination.

II. Fractional numbers.

- a. Decimals.
 1. Changing decimal to common fractions.
 2. Application in problems.
- b. Common fractions.
 1. Addition and subtraction of fractions with unlike denominators; mixed numbers.
 2. Multiplication and division of fractions, including mixed numbers.
 3. Finding what part one number is of another.
 4. Finding a whole when part is given.
 5. Expressing common fractions as decimals; aliquot parts.
 6. Application in problems.

III. Mensuration.

- a. Review of weights and measures taught in lower grades.
- b. Complete cubic measure.
- c. Application in problems.

Objective Standards.

In the four fundamental operations every class of normal pupils should reach the standard established from the Curtis Tests as follows:

	Speed or Number of Examples Attempted.	Accuracy or Per cent of Rights.	Efficiency or Per Cent of Pupils Reaching or Exceeding the Standard.
Addition.....	10	70	42.5
Subtraction.....	10	90	33.8
Multiplication.....	9	80	27.5
Division.....	8	80	43.5

Suggestions.

In arithmetic it is desirable to have a definite time for drills and a fixed time for the other work of the grade. While the drills for mastery of the tables and those to increase facility in computation are only a means to an end, viz., satisfactory computation, nevertheless, in this grade it is desirable that systematic attention be given to this phase of the work. The schedule of Time Allotment shows how this may be done.

(See, also, Part II, page 38, for Suggestions on Method.)

DRAWING.

For the course of study in drawing see outline issued by the Department of Manual Arts. The Department of Manual Arts has prepared the following statement of objective standards of achievement.

Objective Standards.

On the successful completion of the course of study in drawing in Grade VI the pupil is expected to have gained the definite knowledge and power of expression indicated by his ability to perform the following tasks. The subjects are arranged in the order of their importance.

- a. Represent from the object and from memory, with the lead pencil, rectilinear objects in parallel perspective.
- b. Represent the growth and color, with pencil and brush, of familiar plants.
- c. Define and make, with water colors, an analogous harmony of color suitable for a hat or other object.
- d. Interest in local industries, architecture, etc., through the voluntary sketching out of school hours in the sketch book.
- e. Appreciate beauty in nature and landscape paintings through study and observation of half-tone reproductions of paintings of snow scenes in the Boston Museum of Fine Arts.

ELEMENTARY SCIENCE.*

Aim.

To train the pupils into habits of:

1. Independent thought about and study of plants, animals and natural phenomena.

* Gardening is now becoming a school activity in Grades V and VI. At present the practical side of school and home gardening should receive special emphasis. The instructional side, which is carried on within the school, must be worked out gradually from practical experience in dealing with gardens. The publication of an outline for school gardening is for the present deferred.

2. Intelligent use of the knowledge gained and interest aroused in science in this and previous grades.

Minimum Requirement.

SEPTEMBER, OCTOBER, NOVEMBER, DECEMBER. (12 Lessons.)

Animal Life.

- * Insects; choose one from the following:

Grasshopper. (See Part II.)

Fly; flea; other house pests.

Moths and butterflies.

Brown-tail and gypsy moths.

Note especially the wintering condition (brown-tail larvæ in leaf "nests," gypsy in tawny egg clusters) as this is the season in which they can be destroyed most easily and completely.

Bee: honey; bumble.

Spider.

Note wintering conditions, especially sacs containing tiny spiders found on trees and shrubs.

Earthworm.

Appearance of castings along earth walks, etc., on damp mornings.

Appearance of earthworms on warm, dark, rainy mornings.

Formal lesson on the earthworms if pupils seem interested.

Birds.

Disappearance of many of the birds noted.

Reasons for this made a subject of investigation by the pupils.

Plant Life.

- * Duration — Annuals, biennials, perennials.

- * Bulbs and other storage stems, such as white potato.

Protective covering; food material; small buds; short, flat stem from which roots develop in bulbs.

Bulb-growing: Theory and practice.

Reference: Meier, "Home and School Gardens."

- * Fall Flowers.

Garden flowers, wild flowers, weeds.

Fruiting condition noted and reviewed from Grade V work on seed dispersal.

JANUARY, FEBRUARY, MARCH. (10 Lessons.)

Animal Life.

Birds.

- * One of the following: Pigeon, gull, crow, house sparrow, blue jay, chickadee.

NOTE.—Grade V, Course of Study, Part II, gives suggestions for bird study which will be helpful in this grade.

* Indicate Minimum Requirement.

Plant Life.

- * Trees, shrubs, weeds, in their relation to winter bird life.

Evergreen trees (conifers) and shrubs (such as azaleas and rhododendrons in the parks).

Deciduous trees and shrubs in their winter aspect.

In evergreens have pupils observe the change in closing up of needle clusters and rolling up of broad leaves on especially cold days.

- * Recognition of the trees of the neighborhood in their winter aspect.

NOTE.—Tracery of tree against a plain background (sky, building, snow); arrangement (alternate or opposite) of branches and winter buds; size, covering, form, color of buds; color and marking of trunk.

Building Stones and Minerals.

- * Teach one of the following:

Brick, concrete, puddingstone, granite, slate; copper, zinc, salt; water. (See Part II, "Suggestions.")

Heavenly Bodies.

Continue work of Grade V, with stars and planets.

Sun and moon might be profitably observed in their relation to each other, ourselves, and their effect upon our daily life.

APRIL, MAY, JUNE. (10 LESSONS.)

Animal Life.

Birds.

Effect of spring upon appearance and habits of winter birds.

Arrival of birds from the South.

Blackboard calendar of arrival of birds.

Insects.

Continue the study of those taken up in the fall.

- * Mosquito.

Reference: Hodge, "Nature Study and Life."

Dragon fly ("mosquito hawk").

- * Choose one of the following:

Spider.

Earthworm.

Toad.

Plant Life.

- * Trees.

Spring aspect of those studied in winter.

Buds.

Flowers.

* Buttercup; lilac; daisy; * dandelion.

Germination of seeds.

School garden work.

(See Part II.)

NOTES.

By lesson is meant a period of 45 minutes.

One subject may require several such lesson periods for its development.

(See, also, Part II, page 40, for Suggestive Methods of Teaching some of the above topics, and also for reference books for teachers.)

ENGLISH — SPOKEN AND WRITTEN.

Aim.

To teach the pupil:

1. That there is a correct way of saying many things which he has been saying incorrectly.
2. That it is a highly desirable thing for him to use correct forms and to wish to speak good English.
3. That he should use his voice so that it may please his classmates, his audience, and to do this he must speak distinctly, moderately and with good tones.
4. That when speaking he should be on his feet, in the center of the aisle, free from the desks on both sides of him.
5. That he is not talking to his teacher alone, but to his classmates, and to gain and to hold their attention he must have something to say and must try to say it interestingly.
6. That in his talking he must not ramble on, but must tell his thoughts upon the subject in an orderly manner, speaking of but one thing at a time.

SPOKEN ENGLISH.

Minimum Requirement.

Three stories a month told by the pupil before the class:

1. One which he has heard.
2. One which he has read.
3. One which he has originated from fact or fancy.

In this oral work the teacher "leads the child to talk about *one thing at a time*, to describe from *one position at a time*, to tell how something *appeared at one particular time*, to tell a story *proceeding along one line at a time*, to show *one kind of feeling at a time*. All this the little child can do, and, in the way of unity, the master hand can do no more."

Technicalities.

Most of the technicalities indicated in the following pages have been taught in the previous grades. The habit of using correct forms, however, has not become fixed. This applies to written quite as much as to oral composition, and it is only through eternal vigilance that the hope to make the habit automatic may be entertained.

Further, while the instruction given for the improvement of oral and written language must be largely a matter of oral instruction, yet the results are to be tested not only in the oral work but also in the written work.

Word Study.

Review the correct use of the following words:

ate, eight	bring, take
by, buy	come, came
go, went	hear, here
learn, teach	new, knew
now, know	of, off
sit, set	threw, through
to, too, two	

Teach proper use of following in phrases:

at, above, against, beneath, beyond, beside, from, to, in, into, up, upon.

Teach for purpose of enlarging vocabulary:

Homonyms.

Synonyms.

Antonyms.

Review:

Meaning of prefixes *un, mis,*

Meaning of suffixes *ful, ness, less, ar, er.*

Teach:

Meaning of prefixes *out, fore.*

Meaning of suffixes *ling, en, ship, dom.*

Review the correct use of such expressions as:

Is there? There is.

Are there? There are.

Is the boy? Are the boys?

This book. That book.

These books. Those books.

Different from; not "different than."

Somewhere; not "some place."

From him; not "off him."

John did it; not "John, he did it."

Beside; not "side of."

Could have; not "could of."

I did; not "I done."

Have to; not "hafto."

They were; not "they was."

Catch me; not "ketch me."

She came in; not "she come in."

I saw it; not "I seen it."

Ought not; not "hadn't ought."

Rather; not "kind of."

Take care of; not "mind."

There are; not "them are."

Shall I? not "will I?"

Shall we; not "will we?"

We went to; not "we went up."

Better than he; not "better than him."

It isn't true; not "It ain't true."

Let me see it; not "leave me see it."

Is there school? not "are they school?"

You were; not "you was."

He doesn't; "not he don't."

Afternoon; not "after."

I wish; not "I wisht."

Teach the correct use of:

She did it well; not "she did it good."

The answer that you have; not "the answer what you got."

He did it himself; not "he did it hisself."

Do as I did; not "do like I did."

My mother is worse; not "my mother is worser."

Because; not "'cause."

Review the work on avoidance of double negatives.

Give practice in use of such words as:

any, anything, no, not, nothing.

Language Forms.

Review the forms and correct use of:

Present, past and present perfect of verbs:

blow, buy, throw, write, go, bring, stand, win.

Review past tenses of verbs:

that sound "ed:"

added, lifted, lighted, etc.

that sound "d:"

played, learned, etc.

that sound "t:"

helped, laughed, jumped, etc.

Teach present, past and present perfect of:

begin lay

break lie

draw set

eat sit

know

Teach by many illustrations the proper *use* of the following adjectives:

bad or ill

far

good or well

little

many

Teach:

Recognition and uses of nouns, pronouns, verbs, adjectives, adverbs, very simple adjective and adverbial phrases, and clauses easily recognizable as modifiers, *as an aid in the interpretation of language.*

Suggestions.

Every oral recitation is an exercise in oral composition. Preparation for every written composition in which new features are taught should be preceded by oral work.

WRITTEN ENGLISH.

Minimum Requirement.

A pupil's composition will be formal, meager and uninteresting as long as the technicalities of spelling, penmanship, punctua-

tion, and paragraphing distract his attention from the thought which he wishes to express. Hence, it becomes the chief purpose of written composition in Grade VI to review the work of previous grades and give sufficient instruction and practice in the use of the following technicalities so as to make their use somewhat automatic.

Technicalities.

1. *Abbreviations.*

Review the following:

A. M., P. M., Capt., Gov.

For the months.

For the days of the week.

Initials in names of persons.

Abbreviations used in arithmetic, such as: ft., in., lb., oz., yd., rd., mi., sq. in., sq. ft., sq. yd.

New abbreviations to be taught:

Gen., M. D., U. S. A., Rev., Supt.

cu. in., cu. ft., cu. yd.

2. *Capitals.*

Review those already taught, as follows:

At the beginning of some abbreviations.

Title of compositions.

Titles when followed by name: Aunt, Uncle, Cousin, Miss.

In the heading, salutation and complimentary ending of a letter.

Names of the Deity.

The word *O*.

New use of capitals to be taught:

Public Buildings.

Proper adjectives.

3. *Punctuation.*

Review the following:

Comma after *Yes* and *No* used in conversation at the beginning of a sentence.

Hyphen in the syllabication of word at the end of a line.

Direct quotations.

Comma after name of person addressed.

Comma to separate words in a series.

Broken quotations.

4. *Paragraphing.*

Review indentation of paragraph.

5. *Contractions.*

Review the following:

can't, haven't, hasn't, isn't, didn't,

doesn't, don't, won't, aren't, I'll.

6. *Grammatical technicalities.*

Review the following:

Possessives.

Singular possessives.

Possessives which do not require apostrophe, as:

mine, yours, his, hers, ours, theirs, its.

Plurals of nouns including the irregular forms:
men, women, children.

Teach possessive plurals.

7. *Letter Writing.* (Friendly letters only.)

Review parts of letter.

8. *Use of dictionary.*

Review:

Principles of alphabetical arrangement.

Accent marks.

Hyphen and syllabication.

Teach:

Use of words at top of page.

Use of diacritical key.

Use of abbreviations in defining words.

Use of dictionary to find correct spelling of words.

Objective Standards.

A child who has completed the sixth grade should know the subjects of study of the grade and be able to prove his knowledge by his spoken and written English.

In spoken English at the close of the sixth grade a pupil should be able to talk readily on the familiar subject matter of the grade. He should be able to stand before the class and to give six or more complete sentences containing *related thoughts* on any familiar subject.

In written English at the close of the sixth grade a pupil should be able:

1. To copy accurately a stanza of poetry of four or more lines, or a paragraph of prose of at least fifty words.
2. To write from dictation five simple statements, questions, or quotations.
3. To write, within twenty minutes, from simple directions, a friendly letter of not less than a page of note paper. The pupil should be expected to correct his own errors. In this letter the total number of errors in grammar, punctuation, and spelling should not exceed five.
4. To write correctly the superscription on an envelope.
5. To write, within twenty minutes, a simple original composition of not less than one hundred words. In tests at the end of the year rewriting should not be permitted. The errors in spelling, punctuation, and grammar should not exceed five.

GEOGRAPHY.

What are the Aims of this Course of Study in Geography?

These are the principals aims:

1. To give the child definite information concerning the location and character of certain places and regions in the Eastern Hemisphere.
2. To lead the child to see the relation of life and conditions in the Eastern Hemisphere to life in our own country. This will lead him to a recognition of the interdependence of nations.

3. To give the child power to interpret geographic facts in the light of the principles which this Course establishes.
4. To give him power and right habits in the use of geographic material.

Minimum Requirements.

A study of the countries of Europe and Asia (with their colonial possessions in the Old World) as outlined under the subject of "General Content and Approximate Time Allotment." Consult this and what follows it before planning the year's work in Geography. See Part II for minimum list of cities to be studied.

HISTORY.

Aim. See "Project for the Year" in description of course.

1. To lead the child to think of his American citizenship and its meaning.
2. To teach the child that the liberty he enjoys was obtained at tremendous sacrifice, that the forces which "made and preserved us a nation" were no haphazard happenings of circumstance. Bred in the bone and implanted in the hearts of those who settled the thirteen colonies were principles which are living, vital truths to-day, and we are enjoying these fruits of their labors in the institutions which they established and maintained. Every child in our schools should be taught to cherish them.

Minimum Requirements.

A study of special aspects of the European beginnings of American History and the discovery, exploration, and colonization of the New World as detailed in Part II.

HOUSEHOLD SCIENCE AND ARTS.

SEWING.

Aims.

Continued study of textiles. To give the pupil instruction in regard to the selection and purchase of suitable materials for undergarments and to supply knowledge of the average width and cost of these materials.

Definite practical training in sewing and making simple undergarments, and practice in all kinds of darning and repairing.

Minimum Requirements.

Ability to cut from pattern and make successfully undergarments which have not been made in Grade V.

Making a cooking outfit.

Darning, patching and repairing articles of clothing.

Practice Work.

Buttonholes: Measuring $\frac{1}{4}$ inch, $\frac{1}{2}$ inch, and $\frac{3}{4}$ inch.

Eyelets: One round and one long.

Sewing on of hooks and eyes.

Two loops of different sizes.

Stocking darn.

Cloth darn.

Darning with piece underneath.

One plain set-in patch.

One figured or checked hemmed-in patch.

Bias piecing.

At least three fancy stitches.

Repairing of all kinds.

Articles to be Made.

1. One child's waist or a child's slip, buttoned in back, with at least four buttons and buttonholes.
2. One kimona cooking apron or kimona night dress.
3. Dutch cap.
4. One pair of drawers.

NOTE.—All seams, after the fourth grade, should be machine stitched by the teacher or mature girls.

(See, also, Part II, page 130, for suggestions.)

HYGIENE AND PHYSIOLOGY.

Aim.

The aim of this course is to help the pupils in the Boston public schools to establish hygienic habits.

Suggestions.

The course is arranged in parallel columns — Habits and Knowledge — to indicate what instruction is to be given and what habits ought to grow out of that instruction. Of the two the habits are the more important, inasmuch as knowledge is only a means to that end.

Many habits, such as keeping orderly desks, are omitted because of their slight relation to health. It is believed, however, that somewhere in the program of the day teachers will find time to see that such habits are practised.

In each grade one habit is selected for special emphasis.

“Chew food slowly and thoroughly” is chosen for Grade VI.

TWO PHASES OF THE WORK.

It is far better for a child to form habits of right living through his own desires than to have those habits imposed upon him. Knowledge of the structure and functions of the body is given in order to awaken such desires. The parallel columns — Habits and Knowledge — indicate these two phases of the subject. Knowledge is an aid to the formation of habits, but knowing is far less important than doing.

The course in hygiene is planned in such a way that most of the hygienic habits the child ought to form will begin before he reaches the seventh grade. The early formation of these habits seems of enough importance to warrant the study of systems which are sometimes postponed to later school years. This necessitates the omission of much anatomy and physiology which would be a part of the study of such systems in higher grades. To help teachers to recognize this point, much of the material in the right hand column is put in the form of the final information which the child should obtain.

FORMATION OF HABITS.

It is essential that the teacher should understand that talking to children about the habits that ought to be formed does not insure desirable

action. Habits are formed only after many repetitions of a given act. Children in the fourth grade have little interest in health itself, and any amount of mere instruction will seldom excite an interest which will lead children to form habits without oversight. But children do have an interest in competition, and they desire the approval of the teacher. Competition by rows or divisions works admirably. The choice of the cleanest children for special duties, such as distribution of material and the formation of Clean Clubs, are means of stimulating the interest of the children in hygiene.

BASIS OF PREPARING COURSE.

From the standpoint of health, habits vary in importance. It has seemed best to lay stress on the most essential habits in the lower grades. In this course of study the relative value of habits has been estimated according to:

1. Direct and vital bearing on health.
Example: Washing hands before meals.
2. Opportunity of the teacher to follow them up in the schoolroom.
Example: Washing hands before going to school.
Because the teacher can follow up the latter, it assumes an importance not inherent.

HABITS HAVING A DIRECT AND VITAL BEARING ON HEALTH.

Cover food when not in use.

Wash fruit before eating it.

Wash the hands before handling dishes.

Keep hands from part of dish the food will touch.

Clean uncooked vegetables and fruits thoroughly before using.

Chew food slowly and thoroughly.

Never read with the light in front of you.

Keep hands from eyes.

LESSONS.

Lessons should be oral, carefully planned and given at definite times.

Yet the incidental lessons called forth by circumstances or conditions closely connected with hygiene may prove the most valuable.

Text and supplementary books should be used to supplement the oral lessons.

LIST OF AUTHORIZED AND SUPPLEMENTARY BOOKS.

Text.

Conn. An Elementary Physiology and Hygiene.

Krohn. Graded Lessons in Physiology and Hygiene.

Ritchie & Caldwell. Primer of Hygiene.

Supplementary.

Coleman. The People's Health.

Conn. Physiology and Health. Book II.

Jewett. Control of Body and Mind.

Jewett. Good Health.

Millard. The Wonderful House that Jack Has.

Minimum Requirement.

The following outline constitutes the minimum requirement.

Habits.	Digestion.	Knowledge.
	I. Foods.	I. Foods.
	A. Purposes.	A. Purposes.
	1. Growth and repair.	1. Growth and repair.
	2. Supply heat and work.	2. Supply heat and work.
	B. Sources.	B. Sources.
	*C. Food stuffs.	*C. Food stuffs.
	1. Protein: Building and heat.	1. Protein: Building and heat.
	a. Found in animal foods as milk, eggs, cheese, meat, fish.	a. Found in animal foods as milk, eggs, cheese, meat, fish.
	b. Found in some vegetable foods as bread, peas, beans.	b. Found in some vegetable foods as bread, peas, beans.
	2. Starches and sugars: Heat.	2. Starches and sugars: Heat.
	a. Starches found in vegetable foods as bread, potatoes.	a. Starches found in vegetable foods as bread, potatoes.
	b. Sugars found in milk and fruits.	b. Sugars found in milk and fruits.
	3. Fats and oils: Heat. Found in milk, butter, olive oil, nuts.	3. Fats and oils: Heat. Found in milk, butter, olive oil, nuts.
	4. Water.	4. Water.
	5. Mineral matter.	5. Mineral matter.
	II. Organs.	II. Organs.
	A. Mouth.	A. Mouth.
	Teeth (review work of Grade IV, which is as follows):	Teeth (review work of Grade IV, which is as follows):
	Need of cleaning the teeth.	Need of cleaning the teeth.
	Care of the temporary teeth as important as that of the permanent teeth.	Care of the temporary teeth as important as that of the permanent teeth.
	Care of the sixth-year molar.	Care of the sixth-year molar.
	Need of regular visits to the dentist.	Need of regular visits to the dentist.
	NOTE. Add details on the cleaning of the teeth.	NOTE. Add details on the cleaning of the teeth.
	B. Gullet: Tube from throat to stomach.	B. Gullet: Tube from throat to stomach.
	C. Stomach: Bag.	C. Stomach: Bag.
	Location.	Location.
	D. Intestines: Coiled tube.	D. Intestines: Coiled tube.
	Location of small intestine.	Location of small intestine.
	E. Glands pouring secretion into small intestine.	E. Glands pouring secretion into small intestine.
	III. Process.	III. Process.
	A. Mastication.	A. Mastication.
	1. Brings out the flavor of the food.	1. Brings out the flavor of the food.

* This to be taken only if teachers find it valuable.

2. Divides food into small pieces and thus enables the saliva to act more efficiently.

3. Changes some starch to sugar.

B. Stomach and intestinal digestion. In the stomach a digestive juice, and in the small intestine more digestive juices change the food into a form that can be taken up by the blood.

IV. Hygiene.

A. Care of food.

1. Public supply.

Food in stores should be covered and kept cold.

Only pure food should be sold.

NOTE.—Have children note the care of food in markets, bakeries, candy shops, etc. Also note the wrapping of food.

2. Home supply.

a. Care of food in the home.

Hints.

Putting food away when not needed.

Protection of food from flies, dust, etc.

Washing fruit before eating it.

Removal of meat from paper.

Necessity of emptying canned goods as soon as the can is opened.

Keeping food away from the cat.

Care of the refrigerator.

b. Handling food and dishes.

Need of washing the hands before handling dishes.

Example:

Setting the table. Need of forming the habit of not touching the part of the dish the food will touch.

Cover food when not in use.

Wash fruit before eating it.

Always empty canned goods immediately after opening can.

Wash the hands before handling dishes.

Keep hands from part of dish the food will touch.

Wash hands frequently when preparing food.

Clean uncooked vegetables and fruits thoroughly before using.

Drink plenty of water.

Drink milk and cocoa instead of tea and coffee.

Chew food slowly and thoroughly.

3. Preparation of food.

a. Cleansing.

(1) Uncooked food especially.

Example:

Lettuce, celery, fruits.

(2) Cooked foods; as spinach.

b. Cooking.

Makes food more palatable and aids digestion.

4. Liquids.

Use of water, milk, cocoa, tea and coffee.

5. Value of coarse foods as an aid to digestion. Eating whole wheat bread, oatmeal, etc.

B. Mastication.

1. Importance.

a. Only part of digestion under control.

b. If mastication is thorough, the remaining processes of digestion are improved.

2. Hindrances to thorough mastication.

a. Haste.

b. Large mouthfuls.

c. Drinking water to wash down food.

d. Poor teeth.

C. Regularity of meals.

1. Injudicious eating between meals.

2. Pure candy is a food which should be eaten at end of meals.

D. Ways of improving digestion.

1. By standing and sitting correctly.

2. By being cheerful at the table.

3. By having an attractive table.

E. Effect of vigorous exercises too near meals.

F. Effect of bathing too near meals.

G. Constipation.

H. Have children suggest nutritious breakfasts, lunches, dinners.

Excretion.

- I. Organs of excretion.
 - A. Skin.
Sweat glands take water and some solids from the blood and pour this sweat upon the skin. (From Grade V.)
 - B. Lungs.
The blood takes oxygen from the fresh air in the lungs and gives off CO². (From Grade V.)
 - C. Kidneys.
- II. Hygiene.
 - A. Regular habits.
 - B. Exposure to cold.
Danger of sitting on cold steps, and on damp ground.
 - C. Importance of drinking enough water.

Drink plenty of water.

The Eye.

- I. The eyeball.
 - A. Observe the following parts:
 1. White of eye.
 2. Colored part of eye.
 3. Pupil.
 - B. Parts not seen.
Like a camera the eye has lenses which throw the image on the retina.
The retina is connected with the brain by a nerve.
- II. Protection of the eyeball.
 - A. Socket.
 - B. Eyelid.
 - C. Eyelashes.
 - D. Eyebrows.
 - E. Tears.
Explain where tears enter and leave the eye, and give their use.
- III. Muscles move the eyeballs.
Experiment: Without moving the head look up, down, to the right, to the left.
- IV. Hygiene.
 - A. Light.
 1. Direction.
 2. Reading in the twilight.
 - B. Position of the body.
 - C. Distance of work.

Never read with the light in front of you.

Keep hands from eyes.

Wear your glasses all the time. Keep
your glasses clean and adjusted.
(From Grade IV.)

- D. Cleanliness of everything coming in contact with the eye, as towels, etc. Use individual towels.
- E. Keep hands from eyes.
- F. Rest eyes by looking off.
- G. Darkness for sleep.
- H. Protection of eyes of infants in crib and in carriage out of doors.
- I. Removal of foreign particle.
- J. Care of eyes after measles, etc.
- K. Eye-glasses.
Talk on the value of eye-glasses during the annual examination of the eyes.

The Ear.

- I. Parts.
 - A. Outer.
Auricle.
Tube; in this tube is the wax.
 - B. Middle: Drum.
Tube to throat.
 - C. Inner.
The inner ear is connected with the brain by a nerve.
- II. Hygiene.
 - A. Frost bitten auricle; treatment.
 - B. Washing ear.
Removal of wax. (Don't use anything to take out wax, as pins, or twisted towel.)
 - C. Protection of ear while sea-bathing.
 - D. Relation of colds in the nose and throat to the ear.
 - E. Blowing the nose gently and one nostril at a time.
 - F. Adenoids.
 - G. Danger of pulling, or shouting in ear.
 - H. Care of baby's ears.

Blow the nose gently.
Blow one nostril at a time.

Alcohol and Tobacco.

- I. Alcohol.
 - A. Danger: Moderate use likely to become excessive.
 - B. Effect on muscular work.
 - C. Interferes with opportunities for athletic competition.
 - D. Cost.

- E. Interferes with business prospects.
- F. Unhappiness caused by its use.
- II. Tobaccó.
 - A. Importance of refraining from smoking until eighteen or twenty.
 - B. Effect on growth and scholarship.
 - C. Cost.
 - D. Effect on muscles and nerves.
 - E. Interferes with chances in athletics.
 - F. Prevents best growth of character.

MANUAL TRAINING.

For the course of study in manual training, see the syllabus issued by the department of manual arts.

MUSIC.

Aim.

- To develop further the sense of pitch and rhythm.
- To develop the power to read music.
- To develop appreciation of the best music.

Minimum Requirement.

- a. Review of the work of the previous grade.
- b. Continuation of Rote Songs.
- c. Study of two-two, three-two, four-two, and six-four time.
- d. One-part and two-part exercises and songs in various major and minor keys.
- e. Dotted eighth note followed by sixteenth, in two-four, three-four and four-four time.
- f. The triplet (three equal sounds to a beat).
- g. Further study of chromatics involving the use of the more difficult intervals.
- h. Meaning and pronunciation of the following terms: Allegro, moderato, andante, vivace, rallentando, ritardando, a tempo, molte, poco a poco, da capo, dal segno, fine.

Objective Standards.

- Ability to sing the songs for the grades with correctness of pitch and rhythm, and with clear enunciation of words.
- Ability to read exercises involving the use of simple intervals and simple rhythms.

OPENING EXERCISES.

The interests and needs of the various classes with regard to ethical or moral training differ greatly in different sections of the city. It has not seemed desirable, therefore, to outline any series of topics for sixth grade teachers. Much more material has been suggested for Grades I, II and III than can be covered in the time allowed. Sixth grade teachers would do well to turn to the syllabuses for those grades for suggestions.

Principals and teachers should also note that the laws of Massachusetts require that proper instruction be given pupils in the subject of thrift. For this, the outline for Grade III will be suggestive.

PENMANSHIP.

1. Aim to attain approved letter forms.
2. Continue instruction in hygienic position of hand and body in writing.
3. Practise writing approved small and capital letters and figures with muscular movement, and with that accuracy of form and neatness of arrangement which is the reasonable achievement for sixth grade pupils.
4. Endeavor to apply the principles of writing insisted upon in drill work to all the written work of the grade.
5. Insist on correct position *for every line of writing*.

SUGGESTIONS.

In Grade VI pupils should be expected to show considerable ability in writing approved forms in correct position without continuous supervision.

Review carefully the instructions given in regard to position or posture, muscular relaxation and pen holding, until position and movement are somewhat automatic; then as soon as a majority of the pupils in the class automatically assume a correct posture with muscles relaxed and with the pen well held, each lesson may begin as outlined in the first paragraph of page 28 of the Manual. This loosening up may require only about *two or three minutes of the penmanship period*, when the advanced drill on which the class is to work may be studied and practised.

Time with the watch the speed in the several drills and comply absolutely with the speed determined in the Manual.

Study the Manual and occasionally use the printed instructions as a reading lesson.

PHYSICAL TRAINING.

For the course of study in physical training, see the printed cards which are already in the hands of each teacher.

READING AND LITERATURE.

Aim.

To train children to find independently the thoughts expressed in written or printed words.

To train children to read aloud intelligently and agreeably.

To develop in children the habit of turning to books for knowledge and pleasure.

To give children a simple conception of what literature really is.

Means.

Wise choice of material.

Aids to reading and literature lessons.

Vocal training.

Phonics.

Study of words and phrases.

Introductory talks by teacher to supplement books.

Study of illustrative pictures and other material.

Silent study.

Reading lessons.

Oral (both *prepared* and *sight*).

Silent.

Other ways of becoming acquainted with literature.

Story telling by teacher and pupils.

Reading aloud by teacher for children's enjoyment. (Books, stories, poems.)

Outside reading.

Dramatizing.

Memorizing.

Minimum Requirement.

One reader or the equivalent.

One book from supplementary list, read by the class.

One book, or its equivalent, read aloud by the teacher and discussed with the class.

Two short stories each month.

One memory selection each month, aggregating about 150 lines for the year, thoroughly memorized; mainly verse, some prose.

Several books from the supplementary list read outside of school and reported orally or in writing. (The children can obtain and use library cards for this purpose.)

Objective Standards.

At the end of the fifth grade each child should be able:

To use phonics and phonograms in determining the pronunciation of words within his range.

To determine the pronunciation of simple words by means of the dictionary, using — rather than learning by heart — the diacritical marks at the foot of the page.

To read easily and with intelligence selections of the difficulty of: Bennett's "Master Skylark."

To read the same aloud distinctly and with expression.

To give in his own words the content of the portion read.

To tell three stories such as:

"Joseph and His Brethren."

"The Death of Baldur."

"King Robert of Sicily."

To answer a few simple, human questions about at least one book and several short stories of literary value, such as:

"Master Skylark."

"The Great Stone Face."

"A Christmas Carol."

To repeat from memory at least 150 lines of verse having literary merit.

To be able to tell what books, stories, and poems he has read during the year, in a very general way what each deals with, and what he thinks of it.

(See, also, Part II., page 132, for Suggestions on Method, and for Material for Use.)

SPELLING.

Aim.

To teach the pupil to spell those words which he uses voluntarily in his written work; and also those which may be required in the written work of the grade.

Minimum Requirement.

Ability to spell the words in the Minimum List for Grade VI.

Ability to spell other words used frequently by sixth grade pupils in their written work.

Ability to spell the words in the Minimum List of preceding grades.

Objective Standards.

Every class of normal sixth grade pupils should be able to spell the words of the Minimum List for Grade VI with the degree of accuracy indicated by the per cent following each word in the list.

The Minimum and Supplementary Lists for Grade VI follow.

TOTAL NUMBER OF WORDS IN MINIMUM LIST, 175.

(Corrected to June 1, 1920.)

The number following each word indicates the per cent of pupils who should spell that word correctly.

lying	100	altogether	97	command	96
telephone	100	arrive	97	district	96
awkward	99	automobile	97	gasoline	96
cashier	99	celebration	97	general	96
celebrate	99	difference	97	governor	96
citizen	99	discover	97	industrious	96
elevated	99	electric	97	industry	96
guest	99	equal	97	judge	96
hospital	99	factory	97	kerosene	96
plumber	99	faucet	97	mosquito	96
route	99	height	97	stomach	96
telegraph	99	icicle	97	bargain	95
wharf	99	luncheon	97	calendar	95
yeast	99	pleasure	97	choir	95
author	98	return	97	collect	95
behavior	98	salary	97	colonies	95
beneath	98	skillful	97	courtesy	95
calm	98	therefore	97	depth	95
camera	98	wreck	97	drainage	95
cancel	98	yacht	97	electricity	95
climate	98	ambulance	96	finally	95
commerce	98	anxious	96	opposite	95
extra	98	aren't	96	photograph	95
kneads	98	attempt	96	tropical	95
southern	98	bandage	96	accept	94
studying	98	bicycle	96	accident	94
theater	98	canal	96	account	94
advertisement	97	cause	96	affectionately	94

appetite	94	republic	93	occasion	90
arrange	94	sincere	93	thorough	90
attack	94	vertical	93	advice	89
century	94	complete	92	commence	89
conquer	94	familiar	92	cordially	89
diamond	94	fortieth	92	especially	89
digestion	94	gentleman	92	immense	89
entrance	94	horizontal	92	purpose	89
honor	94	increase	92	warrior	89
ignorant	94	initial	92	exclamation	88
machinery	94	medicine	92	experience	88
museum	94	mischief	92	fiftieth	88
obedience	94	orchestra	92	referred	88
occupation	94	precious	92	boundary	87
omitted	94	success	92	describe	87
possession	94	abbreviate	91	description	87
recognize	94	application	91	gradually	87
scenery	94	brief	91	material	87
scholar	94	civilize	91	impossible	86
special	94	examination	91	particular	86
syllable	94	peculiar	91	course	85
ventilate	94	persuade	91	musician	85
vessel	94	preparation	91	necessary	85
absence	93	receipt	91	nonsense	85
alphabet	93	temperature	91	coarse	84
ancient	93	appreciate	90	decide	83
athletic	93	customer	90	immediately	83
certificate	93	exercise	90	article	82
deceive	93	foreigner	90	monarchy	81
disappear	93	grammar	90		
doubt	93	injure	90		

SUGGESTIVE REVIEW LIST.

Consists of the more difficult words in the preceding minimum lists.

acre	Christmas	else	furniture
afraid	collar	engineer	further
agriculture	colony	enough	grocery
arrest	common	envelope	guilty
avenue	courage	eraser	handsome
beefsteak	crowd	escape	hoarse
beginning	cruel	excellent	hoped
biscuit	dangerous	except	horizon
break	deserve	expense	importance
buffalo	dining	favorite	important
bureau	direction	February	inquire
business	earliest	fertile	instead
carriage	easily	field	interest
ceiling	eightieth	figure	January
certain	elephant	forward	journey
chimney	elevator	friend	knuckle

lightning	penmanship	remainder	terrible
lilies	people	reply	threw
Massachusetts	phonograph	scene	through
measles	piazza	scissors	thrown
molasses	picture	search	Thursday
muscle	pitcher	seen	tobacco
national	planned	sentence	toboggan
natural	pleasant	separate	tongue
neighbor	policeman	several	traitor
nephew	position	shoulder	vegetable
niece	possible	signature	vinegar
nineteenth	practice	soldier	visitor
ninety	prairie	source	voyage
ninth	president	stitch	weather
obedient	product	straight	weight
order	prompt	strength	whether
ourselves	pumpkin	succeed	width
Pacific	pursue	sudden	won't
parcel	quarrel	suppose	wouldn't
patience	receive	surprise	wrestle
patient	recite	sympathy	writing

SUPPLEMENTARY LIST.

alley	control	disturb	group
alligator	couple	druggist	heir
amount	court	dwarf	heroine
amuse	crease	dye	hiccough
apostrophe	credit	embroidery	hickory
apt	croquet	encourage	hostile
army	cucumber	enter	huge
attach	cultivate	equality	hyphen
attend	currant	equator	impatient
auction	cushion	exact	injurious
birth	custard	excel	jealous
border	custom	excursion	journal
brittle	daffodils	explain	linen
bulge	dahlia	explanation	list
cannon	daytime	express	magician
carpenter	deal	fairly	manager
cedar	dealt	falsehood	manual
cement	deceit	fence	margin
central	defeat	flavor	marry
channel	delight	form	meeting
charge	deny	foundation	merchant
charter	dessert	frontier	mere
chores	diagram	gentle	message
chose	digest	glisten	messenger
cocoon	digestible	glorious	mirror
collection	disobey	gossip	mistake
collector	dispute	graduate	moisture

motor
mystery
nervous
numerous
oblique
ounce
palace
palm
pamphlet
parent
partner
passage
patriot
plague
plan
plantation
political
power
prefer
problem
procession
pronounce
prophecy

publish
purse
raspberries
readily
recipe
refrigerator
refuse
regard
rehearse
repair
rescue
result
revenge
rinsed
rogue
salad
sandwich
satisfy
sausage
scent
scythe
secret
select

servant
session
shriek
situation
skeleton
slavery
slouchy
snatch
speech
steal
steel
subject
summit
surface
teaspoonful
tennis
there's
title
torrid
tough
trapeze
treasure
triangle

trousers
trust
truthful
tunnel
twilight
uniform
union
unite
vaccination
vaseline
veil
vein
victim
violin
wander
wicked
wither
worn
wreath
wrinkle
Yankee
yawn
zone

PART II.—SUGGESTIONS ON TEACHING, TYPE LESSONS AND ADDITIONAL SUBJECT MATTER.

ARITHMETIC.

PRACTICE MATERIAL FOR DRILL WORK.

The time allotment and the weekly distribution of time both make provision for a regular time for practice or drill work in arithmetic. This arrangement is made because it is believed that better results will be obtained both in the drill work and in the problem work if each has its regular time in the daily program. Neither is satisfactorily taught if it receives attention only incidentally or at odd times.

Teachers are expected to give careful attention and to devote conscientious effort to drill work in this grade. In consultation with their principals, teachers should select from the following authorized list such material as will best serve the needs of pupils in the various classes.

Birch's Lessons in Rapid Calculation.

Cole's One Hundred Per Cent Number Tests.

Courtis' Practice Tests.

Fassett's Standardized Number Tests.

Hadley's Arithmetical Tables.

Hammett's Arithmetic Cards.

Lamprey's Practice Sheets.

Maxson's Practical Self-Keyed Fundamental Number Work.

Rice Drill Cards in Arithmetic.

Thompson's Minimum Essentials.

Thorndike's Exercises in Arithmetic, No. 2.

COMMON FRACTIONS.

Common fractions are to receive the emphasis in Grade VI. Hence the complete outline for the treatment of common fractions is repeated here.

It is intended that this topic (common fractions) shall now be extended and completed, according to the outline, in this grade.

I. Addition.

A. Similar Fractions.

Non-reducible.

Type 1. Answer in final form.

$$\text{Example: } \frac{2}{5} + \frac{1}{5} = \frac{3}{5}$$

Reducible.

Type 2. To integers or mixed numbers.

$$\text{Example: } \frac{4}{7} + \frac{4}{7} = \frac{8}{7} = 1\frac{1}{7}$$

Type 3. To lowest terms.

$$\text{Example: } \frac{5}{9} + \frac{1}{9} = \frac{6}{9} = \frac{2}{3}$$

Type 4. To lowest terms and mixed numbers.

$$\text{Example: } \frac{5}{6} + \frac{5}{6} = \frac{10}{6} = \frac{5}{3} = 1\frac{2}{3}$$

B. Dissimilar Fractions.

- a. Least common denominator: the denominator of one of the fractions.

Non-reducible.

Type 5. Answer in final form.

$$\text{Example: } \frac{1}{2} + \frac{3}{8} = \frac{7}{8}$$

Reducible.

Type 6. To mixed numbers.

$$\text{Example: } \frac{2}{5} + \frac{7}{10} = \frac{11}{10} = 1\frac{1}{10}$$

Type 7. To lowest terms.

$$\text{Example: } \frac{1}{2} + \frac{3}{10} = \frac{8}{10} = \frac{4}{5}$$

Type 8. To lowest terms and mixed numbers.

$$\text{Example: } \frac{3}{4} + \frac{5}{12} = \frac{14}{12} = \frac{7}{6} = 1\frac{1}{6}$$

- b. Least common denominator: the product of the denominators.

Non-reducible.

Type 9. Answer in final form.

$$\text{Example: } \frac{2}{5} + \frac{3}{8} = \frac{31}{40}$$

Reducible.

Type 10. To mixed numbers.

$$\text{Example: } \frac{2}{3} + \frac{3}{4} = \frac{17}{12} = 1\frac{5}{12}$$

- c. Least common denominator found by factoring.

Non-reducible.

Type 11. Answer in final form.

$$\text{Example: } \frac{1}{6} + \frac{2}{9} = \frac{7}{18}$$

Reducible.

Type 12. To mixed numbers.

$$\text{Example: } \frac{1}{4} + \frac{5}{6} = \frac{13}{12} = 1\frac{1}{12}$$

Type 13. To lowest terms.

$$\text{Example: } \frac{1}{6} + \frac{2}{15} = \frac{9}{30} = \frac{3}{10}$$

Type 14. To lowest terms and mixed numbers.

$$\text{Example: } \frac{5}{10} + \frac{9}{14} = \frac{80}{70} = \frac{8}{7} = 1\frac{1}{7}$$

The addition of *mixed numbers* should be on the same basis; that is, first including similar fractions, then dissimilar.

II. Subtraction.

The subtraction of common fractions may be developed on the basis outlined for addition. There will be a fewer number of types, however, since in the subtraction of fractions no answers will be reducible to whole or mixed numbers.

- a. Without "borrowing."
 1. Fraction from a fraction.
 2. Fraction from a mixed number.
 3. Mixed number from a mixed number.
- b. With "borrowing."
 1. Fraction from an integer.
 2. Fraction from a mixed number.
 3. Mixed number from an integer.
 4. Mixed number from a mixed number.

III. Multiplication.

In general the following five grades of difficulty in example should be recognized:

1. Multiplicand a fraction, multiplier an integer. (Show objectively.)
2. Multiplicand an integer, multiplier a fraction. (Show objectively as finding fractional parts.)
3. Both multiplicand and multiplier fractions (an extension of 2).
4. One factor an integer, the other a mixed number.
5. Both factors mixed numbers.

Throughout this work pupils should be required to express answers in simplest form.

Cancellation, when introduced, is to be shown as the division of both terms of a fraction by the same number.

IV. Division.

In general the following grades of difficulty should be recognized.

1. Dividend an integer, divisor a fraction. (Show objectively as measuring.)
2. Dividend a fraction, divisor an integer. (Show objectively.)
3. Both dividend and divisor fractions. (An extension of 1.)
4. Dividend a whole number, divisor a mixed number, or the reverse.
5. Dividend a mixed number, divisor a fraction.
6. A mixed number in both dividend and divisor.

It is hoped that teachers by means of objective illustrations will *develop* the idea of inverting the divisor.

ELEMENTARY SCIENCE.

Suggestions.

All science lessons should consist of first hand observation and experiment. These lessons should grow out of the experiences of the pupils.

The form of the lesson may be: Field lesson; class room study of specimens; reports of outside directed observations; experiments performed by pupils themselves.

Correlation with other subjects such as language, geography, and in the garden work, with arithmetic, manual training and domestic science, is valuable as a means of application, review, or as additional information.

In schools in the congested districts, the following suggestions for subject matter may prove helpful: Household pests; domestic animals; building materials; forms of water (liquid, solid, gaseous as in water, dew; ice, snow, frost, steam, breath). In sunny school rooms, bulb-growing in water or earth is suggested.

LESSONS ON INSECTS.

I. Grasshopper. (Locust.)

Material.

Living grasshoppers in small glass jars covered with netting. Feed on leaves, such as clover and grass.

Observations.

In class and outside.

1. Jumping — legs used. Compare with other legs.
2. Walking and clinging.
3. Flying — number of wings. Some children can compare with moths and butterflies in this respect.
4. "Molasses" — a means of defense. It is partly digested food.
5. Eating — jaws move sideways.
6. "Horns" (antennæ), feeling, direction of movement.
7. Eyes (the compound). Advantage of their location.
8. Color — protective — not easily seen in grass until it jumps.
9. Breathing (spiracles). Hearing (membrane in hind legs).
10. Egg laying. Some may lay them while in captivity.
11. Hard outside skeleton. Use.
12. Relation to man.

Notes.

1. Grasshopper good for first work with insects in fall because it is common and easily observed.
2. Insect characteristics as found in grasshopper:
 - 3 pairs of legs.
 - 2 pairs of wings.
 - Hard outside skeleton.
3. See Linville & Kelley, Text Book in General Zoology.

II. Moths and Butterflies.

1. Compare with grasshopper in respect to:
 - a. Locomotion — most common method and adaptation of wings and legs to this.
 - b. Feeding.
 - c. Relation to man. (In case of butterfly, should be taught after and reviewed with lesson on flowers.)
2. Development.
 - a. Egg — great numbers — where laid.
 - b. Caterpillar — eating stage — therefore the stage in which the injurious moths and butterflies do the most damage.

Home application first — the clothes moth. Then brown-tail, gypsy, etc.

- c. Chrysalis or pupa — purpose.
- d. Adult.

III. *Typhoid Fly.*

1. Locomotion — well adapted for both walking and flying. Wings (only two).
2. Habits.
Observe where it may be found. Its dirty habits. Breeding places.
3. Relation to man.
Why should houses be screened and for what part of year?
Why is it right to kill the fly? (Note: Never torture it.)
Why should refuse never be thrown into the back yard?
Clean and covered garbage cans.
Why should flies be kept away from sick people?
Why called "typhoid fly"?

GENERAL SUGGESTIONS FOR THE STUDY OF BUILDING STONES, MINERALS AND METALS.

Aim.

To have the pupils question intelligently, from personal observation, the values of certain building stones, minerals, and metals.

Material.

Specimens of the building stone, mineral or metal under consideration, in its varied forms. This material should be contributed largely by the pupils themselves.

Suggested Topics for a Lesson Series.

1. Uses.
Knowledge of the uses should be drawn from the individual observations and experiences of the pupils and teacher.
2. Properties of the building stone, mineral, or metal, which cause it to be used in the ways enumerated.
These properties are to be discovered by observation and experiment, in some cases by every pupil, in others by demonstration before the class by a pupil or the teacher.
Other uses will probably be inferred from such study.
3. Further observation in the home and school environment for the uses, wearing qualities, etc., of the object of special study.
4. Supplementary reading to bring out such facts as; distribution; mining or manufacture (brick, cement, brass, etc., etc.); transportation; commercial value.
5. Reports by pupils.
Oral; written; labelled collections; mounted specimens of varied forms of the special specimen studied.

LESSON ON COPPER.

NOTE.—This shows how the topics above may be adapted to a special lesson series.

Material.

1. How obtained.
Brought into class by children and teacher.
2. Kinds.
 - a. Copper plate, wire, filings.
 - b. Utensils, ornaments.
 - c. Native copper, copper alloys, copper ores, etc.
3. How used.
Children study before the lesson, or children have specimens of 2a on desks for study during the lesson, or both.

Topics.

1. Uses.
Drawn from the pupils' observation and experience.
Money; utensils, such as boilers, kettles; roofing, gutters, sinks, copper toed shoes, keels of ships, electrical appliances, wires for telephones, lights, trolley.
Ornaments.
Copper, brass (copper and zinc); bronze (copper and tin).
2. Properties of copper which make it useful in the above-mentioned ways.
Children observe and deduce the following;
Can be hammered into sheets — (malleable).
Can be drawn into wires (ductile).
Good conductor of electricity.
Can withstand weather action (does not rust readily).
Can withstand water action (does not corrode readily).
Has beauty of color and lustre.
It is fairly hard.
It is compact and opaque.
3. Supplementary Reading.
 - a. Correlation with geography.
 1. Regions where copper is found:
Lake Superior Region; Arizona; South America; Australia.
 2. Transportation.
 3. Commercial value.
 - b. Correlation with language work.
Written composition on one of the topics developed in the lesson; such as Uses of Copper in Electrical Appliances; The Story of a Copper Boiler; Mining Copper; A Piece of Copper Traced from the Mine to Its Place in My Purse, etc.

FLOWER LESSON ILLUSTRATED BY THE BUTTERCUP FLOWER.

Material.

A buttercup flower for each child.

Topics.

1. Observation.
Give a five minute period for quiet individual study of the flower.

2. Report.
Report by each pupil of what he has observed about his flower.
Verification by other pupils.
3. Generalization.
Pupils systematize facts given (with teacher's guidance).
 - a. Flower stem.
Erect green, ridged, hairy.
Leaves much cut up (gives name to the family, Crowfoot Family.)
Brings the flower up into the sunshine and into the path of flying insects whose visits are helpful.
 - b. Flower.
 - (1) Yellow color, satiny texture of the crown or corolla.
Divided into parts, the petals.
 - (2) Green cup which supports the corolla, the calyx.
Divided into parts, the sepals.
 - (3) Yellow thread like parts having yellow powder on them, the stamens.
Yellow powder is pollen.
 - (4) Green bodies on a cushion in the centre of the flower, the pistils.
Little ovule in the base of each. Children shown ovules by the teachers. If the buttercup does not show it plainly— use the pistil (pod form) of an old sweet-pea flower.
4. Further Observation.
Observe other flowers to see resemblances to buttercup flower.
Facts noted:
Flowers usually have flower stem.
Flowers usually have four circles of parts arranged always in the same order; *i. e.*, calyx, corolla, stamens, pistil.
5. Uses of each part to the flower and plant. (Develop by questions.)
 - a. Calyx.
Protects other parts when the flower is young; *i. e.*, in the bud.
Exposes corolla when flower is mature.
 - b. Corolla.
Attracts insects to the central organs, at the base of which lies nectar in little nectar glands. This, insects like for food. In getting in and out of the flower, the insects often carry pollen from one flower to another.
 - c. Stamens.
Pollen of the stamens helps to make seed.
 - d. Pistil.
Ovule of the pistil, when united with a pollen grain, makes seed.
6. Questions to stimulate further observation of flowers.
Do all flowers have all four parts?

Teach pupils that all flowers must have at least two circles:
 (1) calyx or corolla (usually considered as calyx when only one); (2) stamens or pistil.

What are flowers good for in the plant life?

Teach pupils that the flower furnishes the means for making new plants from seeds. Seeds develop only in flowers,

Do all flowers grow singly?

Teach pupils that they may grow in clusters of various sorts.

Are flowers like the dandelion and daisy single flowers?

Teach pupils that such flowers are called composite flowers.

They are composed of many little flowers (florets) in one head. Each floret has the usual flower circles. The green part at the base of the flower is not the calyx, but each floret has its own calyx.

Do all flowers attract insects?

Why do flowers attract insects?

What insects visit what flowers?

Etc., etc., etc.

SUGGESTED BOOKS FOR TEACHERS.

Suggested List of Texts and Supplementary Books in Science, authorized for use in high, Latin, or Normal schools, which would be useful to teachers of elementary science in the grades.

Nature Study.

Nature Study and Life. Hodge.

Life and Her Children. Buckley.

Winners in Life's Race. Buckley.

Animals.

Text-Book in General Zoölogy. Linville and Kelly.

Animals. Jordan, Heath and Kellogg.

Plants.

Principles of Botany. Bergen and Davis.

A Text Book of Botany. Coulter.

Experiments with Plants. Osterhout.

Animals and Plants.

Elementary Biology. Peabody and Hunt.

ENGLISH.

Every Teacher of Grade Six is Expected to Master Every Page and Every Paragraph of the Course of Study.

Spoken and written English in the grades should be progressive in character and similar in plan throughout the course, and that consistent continuity of the work may result, each teacher should become familiar with the course as a whole.

The difference in the work of the grades is a difference of degree, to be regulated by the ability and attainments of the child. It is desirable, therefore, that each teacher know the course in its entirety, to the end that every child may be permitted and encouraged to advance as far in the course as individual abilities permit. The language work of a grade is not a unit in itself. It is but a part of a course in English that must

be made flexible to suit individual aptitudes. The teacher who masters the course as a whole and encourages individual pupils to advance without class restrictions will do the best class work.

Sources of Material for Oral and Written Composition.

The material for compositions must be carefully selected from sources easily available.

Upon the judgment used in the selection of subject-matter for compositions will largely depend the value of the work in spoken and written English.

The experience of the every day lives of children can and should be made to yield topics without number for interesting themes.

Imagination, as it is related to daily life, should furnish the subjects next in number and in value to those taken from experience.

Carefully selected class reading that will give the information needed at the right time for enlarging experiences and for stimulating the imagination should furnish topics for both spoken and written composition.

While it is desirable that many of the subjects for composition work should represent experiences that are common to all the pupils of the class, the prime requisites of a good subject are that it should be concrete, personal and capable of brief treatment. In the original written exercises it is particularly desirable to allow pupils considerable freedom in the selection of subjects that represent their own individual experiences. A pupil should be allowed and encouraged to make a candid, truthful exposition of his experiences. The analysis of his fears, ambitions, expectations, likes, and dislikes often will be simple and commonplace. An honest, frank, natural story should be preferred to one artificial and plainly censored.

Experience.

"The child's own life is the basis of his interest."

The subjects for composition in spoken and written English should be related to the experiences of the child as closely as possible. The realities of daily life bring an abundance of interesting subjects that the children like to talk about. From this full reservoir, a wise grade teacher can draw topics that are sure to make the talking and writing worth while.

When interest has been aroused and pupils are free in speaking, topics for written themes will be easily found. While the experiences of children give them the material for compositions, instruction must teach them the right forms of expression. The teacher can do much to aid the children in choosing new things to see, new stories to read, new games to play, new methods of study, new chances for being useful, and new codes of honor. From each of these sources comes an opportunity for the teacher to select the topics for themes in spoken and written English.

Imagination.

The natural, creative imagination that has to do with everyday affairs is the imagination that should indicate how and where to find subjects for composition that will add value to life.

The imagination that supplements experience on every hand, that has gradually brought man from the level of the ox to where his creations

enable him to read in his morning paper what has taken place in the so-called "civilized world" on the preceding day, has its elements in every normal child. This imagination can be utilized to enlarge thought in all the affairs of life.

Upon the theory that right thinking produces right action, no limits to the creative imagination as a moral agent can beset. It is the imagination that deals closely with real life that should be cultivated, and it cannot be begun too early.

If the aroused imagination is supplemented by stories that give needed information, the growth of power to use good English will be greatly strengthened.

Stories of fairies, of brownies, and of good spirits, the impersonation of animate and inanimate objects familiar to children, the description and interpretation of suitable pictures and the stories read into the pictures, are illustrations of the sources from which topics may be drawn for theme writing involving the imagination.

Reproduction.

Reproduction can be made valuable in composition work if the stories are wisely chosen to supplement the other work, but it should be borne in mind that reproduction is supplementary to experience and imagination. The chief element of reproduction is memory. Care should be taken that it be not overworked.

Short stories told, or read and interpreted, should be used for both oral and written reproduction. Any subject that is suitable for oral reproduction is likely to prove equally desirable for written work.

The reproduction of stories representing child life that the children of the grade can appreciate and enjoy should furnish many types of themes for spoken and written composition. These are to be found in text-books and supplementary readers, and in language books. Incidents in the lives of great men and women may be used to advantage.

Stories for reproduction should be closely related to the compositions written from experience and imagination and should supplement them at every step.

Stories and readings for information that will help to interpret experiences will stimulate the constructive imagination and should be freely used for reproduction.

Spoken English.

More Than Half the Time of this Grade Should be Given to Oral Work.

The child must be taught in every grade of the elementary school to talk in sentences; to speak clearly; to pronounce words distinctly; to use natural, pleasing tones of voice.

The thoughts of the child should be shaped by the constant, sympathetic aid of the teacher in every recitation throughout the day and throughout the year.

New thoughts should grow with the new experiences of daily life. It is an important duty of the teacher to assist in the moulding of these thoughts into the approved forms. Spoken English should be made, by daily practice under the careful direction of the teacher, to keep pace with the growing thought.

The child on beginning the sixth grade should have heard and largely learned from his previous teaching:

1. That there is a correct way of saying many things which he has been saying incorrectly.
2. That it is a highly desirable thing for him to use correct forms and to wish to speak good English.
3. That he should use his voice so that it may please his classmates, his audience, and to do this he must speak distinctly, moderately, and with good tones.
4. That when speaking he should be on his feet, in the center of the aisle, free from the desks on both sides of him.
5. That he is not talking to his teacher alone, but to his classmates, and to gain and to hold their attention he must have something to say and must try to say it interestingly.
6. That in his talking he must not ramble on, but must tell his thoughts upon the subject in an orderly manner, speaking of but one thing at a time.

Suggestions on Oral Work.

Much more attention than formerly is being given by the teacher to the oral expression of the pupil, to the form as well as to the content of his recitation and his conversation, but very much more emphasis may still be laid on the oral work without the least fear of disturbing the correct balance in the language scheme.

Too often the pupil is allowed to talk apparently for *talk's sake*, the purpose of the talk is seemingly overlooked, or perhaps unknown by both pupil and teacher. A pupil recites or reads often quite unmindful of the desirability of interesting and of making his fellow pupils follow through with him. Frequently the entire class is seated behind him and he is reciting or reading to the teacher alone. The teacher's constant stress should be laid on convincing the pupil that his peers, the pupils, are his audience and that he must address them.

Reading, if well conducted, may be made of great value to oral work. A pupil may read new matter to his class from the only open book in the room. His fellows, in kindly mood and word, express their comments on his reading. Some say they understand him and approve of his work, others report that, owing to some specific (and they should specify) shortcomings on his part, they fail to follow. When the pupil attempts to explain or to justify his work he is *himself*; he will be spontaneous and natural in word, inflection, and manner, and the chances are ten to one he will interest and hold his audience.

In questions and answers about the daily lessons, oral language should be developed. A pupil should be taught how to ask an answerable question about subject matter that has been studied. He is presumably on familiar ground and so are his classmates. He should ask and they should answer with increasing confidence. It is highly desirable for a pupil to learn that he is expected to ask, not alone to answer questions, that he is to contribute his bit towards the progress of the class. Every pupil should be encouraged to stand out before his class and to tell, first, the stories he has heard, next, those he has read, and finally, those he has originated from fact or fancy.

Dramatization held within bounds and well done is a wonderful developer of spontaneous, normal, oral language. The telephone dialogue on a specific subject, well chosen, may be used to advantage. The written telephone dialogue, immediately following the oral, affords an excellent opportunity to fix certain technicalities in arrangement and punctuation. In all this oral work the teacher cannot be reminded too often that it is the pupil who should talk and not she. The teacher has heard from countless sources—instructors, lectures, books, criticisms—that she is apt to talk too much before her class. As a general thing, she acknowledges that she may be included in the group of those who are generous of speech, but rarely is she convinced that she sometimes *does monopolize* the time of the lesson. She is willing to be included in the general indictment, but is rather averse to specific details.

That study in certain New York schools in which a stenographer took down every word uttered by pupils and teachers during the lesson periods was unique and points an admonitory finger at the teacher and emphasizes the familiar phrase—"This means you!" (See "The Question as the Measure of Efficiency in Instruction"—*Romiette Stevens*.) The conclusion reached was not that perhaps the teacher talked too much. Oh, no, she did! No doubt of it. And after reading the criticisms she will admit it. When the pupils did speak, what was the type of the conversation? Out of 750 answers to the teachers' questions, 420 contained but a single word, while more than 100 other answers were elliptical sentences, or phrase answers. All of which is truly startling, and should put every teacher on her guard against this very general criticism.

If the teacher can convince herself that she ought to transfer to oral work some of the emphasis which she has been putting on written work, not only will the oral language be quickened and improved, but the written as well. What progress would result if every teacher mentally resolved at the beginning of each day to *talk less than yesterday*.

Examples of Oral Work.

Below are some specimens of oral work in Grade VI. These brief stories were taken by a stenographer just as they were given by the pupils. The paragraphs are given here not as standards, but merely to show what is being done in some classes, with the hope that oral expression may receive much more systematic attention from all teachers.

It should be borne in mind that these specimens were taken at the end of the year. Perhaps it is not reasonable to expect as good work from the average pupil in the grade before the end of the year.

The teacher's function in this work is to *attitude her class aright*. If the pupil is not convinced that he should have a pride in his spoken work, it is apt to be mediocre or poor. There is great potency in a "linguistic conscience." Praise, judiciously bestowed, on a well-organized, clean-cut, distinctly spoken paragraph with much sympathy and patience on the part of the teacher, will in time imbue the majority of a class with the desire to improve the spoken word, and better habits of speech will follow. The pupils, however, must be reminded of the desired standard in every lesson, if a well-begun effort is to continue and to become effectual.

The specimens below expose more or less clearly the instruction or lack of it in reference to the structure of a paragraph. What an advance would be registered if grade teachers would stress the necessity of eradicating superfluous "and's" "then's," "but's" and "so's!" and would drill on correct models that will choke down the weeds; if they would insist on the pupil's making his story pointed, keeping it brief, using only *related sentences*, and "sticking to the point!"

"The teacher knows that unity (she should never call it that to the class at this stage of the work) is absolutely necessary whether the composition is a sentence, a paragraph, or a story; hence she leads the child to talk about *one thing at a time*, to describe from *one position at a time*, to tell how something *appeared at one particular time*, to tell a story *proceeding along one line at a time*, to show *one kind of feeling at a time*. All this the little child can do, and, in the way of unity, the master hand can do no more."

An American humorist unconsciously gave the grade teacher a hint that might well be preserved: "My son, observe the postage stamp! its usefulness depends upon its ability to stick to one thing until it gets there."

1. My Mistake.

When I was about four years old, my mother sent me to the store to get three yards of clothesline and a half-pound of butter. I repeated the things several times. When I reached the store there were so many people there, all talking at once, I asked for three yards of butter and a half a pound of clothesline.

2. Why Everybody Laughed.

One day I decided to go to town. At Dudley St. I took the elevated train. When I got in the train I read my book which was very interesting — "Mother Carey's Chickens." I was very much interested in the book and never looked up for a long time. When I looked up a man across was laughing. He seemed to be laughing at something very funny. I read my book again. When I looked up again I thought the people were laughing at me. Then I found that in my hurry I had gone into the smoking car.

3. The Famous Sword.

One day last Summer, when I was down at Searsport, Maine, my chum and I went to see an old sea captain. He was not home, but his wife showed us many interesting things. Among them was a sword used by Columbus when he landed on the island of San Salvador. It was very flexible. It could be bent to form a perfect circle. When Columbus' men landed on the island they found Indians there. The sword was handed down from one generation of the Indians to another. The sea captain lived on the island at one time and bought the sword from them.

4. First Aid.

Every Monday night we have a boy scout meeting up at the Harvard Church. Next Monday night is going to be Parent's Night, so thought we would practice for it. They got along with the games pretty well. Then they wanted to practice the Red Cross first aid. One boy tried to bandage

up another boy's feet, but the boy didn't want him to. He finally did it. The boy could not walk around very well, so when it was time to go home the bandage had to be taken off.

5. Our Manual Training Lesson.

At about quarter of one on Tuesday afternoon, I started out for manual training school. We are making an order board. When the bell rang I went in. Mr.—, our manual training teacher, told us what to do and I set to work. He told us to gauge a line on our board $5\frac{1}{2}$ inches wide, but my board was not wide enough, so I had to do the whole thing over again. I am now almost up to what the other boys are doing. At half-past three, when our teacher told us to clean up our benches and get ready to go home I asked him if I could come in early next week and try to catch up with the other boys. He gave me permission to do so and then we filed out and went home.

6. What I Did This Morning.

This morning I got up at quarter of six. Went down stairs and ate my breakfast. After breakfast went up and opened the windows, because I forgot to do it before. Then varnished some chairs for my aunt, because we are going to move. Then it was time to go to school, so I took off my apron and put on my hat and coat and went to school.

7. Two Pets.

At home I have two little white mice one month old. They can climb a stick three feet high. They swing from a little hoop that I have made for them with a stick across it. They then will jump on a little platform and from that on to my hand.

8. A Rock in a Good Place.

One day while I was riding with a friend on a bicycle, near Duck Pond, we started down a hill as an auto went by. My friend tried to put on the brakes but he had taken his brother's bicycle which didn't have any brakes. He either had to run into the auto or go into the pond. Half way down the hill his bicycle struck a rock. That rock saved him from going into the water.

9. A Description of My Mother.

My mother is sitting on one side of the table and I am sitting on the other. She is darning a pair of black stockings, and you can hear the continuous click of the needle going in and out. How would you know her? Well she is dark and slim. She is wearing a black and white striped dress with a white apron over it. Her black hair is combed back over her head. Between the black hairs I see white streaks of gray. Suddenly the children come back and all the silence dies out.

10. My Lost Circus.

For the last few years I have cherished the hope that I might be able to go to the circus. A few years ago I had a chance to go with my brother and a lady I know but I being afraid of being lost would not go. When my brother and the lady came home, I regretted that I had not gone.

This year I do not know whether I will go or not but if my mother takes me she will most likely take me to Ringling Bros.' Circus, as she does not like the Wild West Show.

11. Just Why Stories.

Just Why the Rabbit Has Long Ears.

Over a thousand years ago, in India, there was a white rabbit who was called John. He was a quick, sharp-tempered little rabbit, and he wouldn't do what he was told, and said "No!" His mother said, "You will, when your father comes home!" Later the rabbit came in for something to eat. The mother pulled him by the ears and when the father came home he pulled the rabbit's ears greater and therewith all rabbits have long ears.

Comments.

Number 1 is brief, pointed, direct, and business-like. Note the absence of "and's" and the variety of sentences. The interest is sustained to the very end. The narrator of this little story was rewarded by spontaneous applause from her classmates who recognized the little human touch and the humor of the situation. Several pupils told specifically (any other kind of comment is practically useless) why they liked the story. A second pupil gave number 2 which is not as direct as number 1. It repeats and drags.

Number 3 betrays evidences of a rehearsal although the boy who gave it claimed it was original. When asked what he meant by "flexible" he replied, "Why, limber!"

Number 4 is rambling. It displays confusion as to time. If the narrator of this story ever heard of the element of time in a paragraph, he did not comprehend it, or if comprehending it, he gave no evidence of his knowledge by his work. When knowledge does not function in habit, the teacher's unvarying prescription should be—Drill! Drill in the simple fundamentals, drill on accepted models until habits are established!

Number 6 the pupil chose too large a subject and as a consequence her paragraph is practically a bald catalogue of events. If this girl had told her classmates what she had for breakfast, or how she washed the dishes, or how she varnished those chairs; if she had narrowed her subjects and confined herself to it, her effort might have approached nearer to a good paragraph. Incidentally it may be said that the little story created no interest, while Numbers 7 and 8, both brief, intimate, and human, were voted as "good," "fine," and even "great."

Number 9 shows a rather fine choice of words. The narrator had a clear impression of his mother. The tenderness in his treatment of the subject appealed to his hearers.

The boy who told Number 10 was confused in his thought. His vocabulary is commendably larger than that of the average of his class although the impression the telling of his story left was that he was garrulous rather than discriminating. To improve this type of paragraph, which is very common, much drill and practice should be given to strengthen in the pupil the "sentence sense."

Number 11 shows some originality and a good choice of words but the common fault is again encountered: the speaker displays but a slight knowledge of sentence structure.

A Pupil's Criticism of an Oral Story.

1. Do you like it? Why?

The pupil in his criticism might employ some of the following words or phrases:

Interesting; good subject; concerns one incident only; makes a clear picture; brings the point of the story at the right place; the sentences are short, complete, related, and in the right order; the story was told readily.

2. Suggest one improvement.

WRITTEN ENGLISH.

Less Than Half of the Language Time of This Grade Should be Given to Written Work.

"If the violets had been as like as pins, they would have stayed as like as pins when planted in that friendly dooryard. But because each had within it the power of transmitting variation, the power of responding, ever so little, to the trend of its surroundings, one violet became a pansy."—*Burbank.*

The written English should grow naturally out of the daily class room use of the spoken English. The relations of spoken and written English should be intimate and mutually helpful. No attempt at writing should be made before the power to express the thoughts in spoken words is apparent to the teacher.

The sentence forms required during the language periods, and just as consistently in the recitations in all subjects of study, should be put into writing as fast as the correct forms become fixed. Then these forms should be found in constant daily use until the ability to use them in both speaking and writing becomes a habit.

Composition as a class exercise should never be attempted until the children have something to write that it is possible for them to *tell* to the class in acceptable English; in other words, the thoughts must be developed by practice *in speaking* before any attempt is made to record them. The strict observance of this plan, under the careful direction and guidance of the teacher, will produce growth in power to use English naturally, easily and effectively.

The teacher's first and only attitude toward the pupil should be to attempt to teach him to express *himself*. Now himself may not be a Henry Van Dyke, or a Rudyard Kipling or the teacher, but just *himself*.

Time, patience, and energy, will be saved and progress will result from the observance of the following rule:

Never allow a child to attempt to write what he cannot express with reasonable accuracy in spoken form.

It is highly important that a text-book on English be in the hands of every pupil of the grade to the end that the teacher may require careful study of the standard language forms. Without a knowledge of these forms systematic progress is impossible. The text-book must be carefully followed in order that the work may be progressive, uniform and definite.

The following text-books are authorized for use in this grade: Dunton and Kelley's Graded Course in English, Language Lessons; Harris and Gilbert's Guide books to English, Book I.; Metcalf and Rafter's Language Lessons, Book I.; Scott and Southworth's Lessons in English, Book I., Revised Edition; Aldine Second Language Book.

In addition to the text-book used by her pupils, every grade teacher should have on her desk at least one other from these authorized books.

I. Essential Types of Work.

1. The perfect mastery of the sentence forms set forth in the language books as types for study.
2. Further emphasis upon the "sentence sense" that the variety of correct sentence forms studied may become a natural means of expression.
3. Special attention given to making clear the oneness, completeness of the sentence in variety of expression to fix "sentence sense."
4. Original sentences required in all the above work upon variety of sentence forms. These original sentences may be taken from all the sources for oral and written composition: experience, imagination, reproduction and all the subjects of study.
5. A rigid correlation of language with all subjects of study that every lesson may be a language lesson.
6. The grouping of sentences bearing directly upon the same general thought so that their relations may be understood.

One of the most successful ways to teach paragraphing is to divide the subject in hand into topics that shall shape the thought of the class in a direct and orderly manner. Each topic may need several sentences to make the thought clear. These sentences should finally be grouped in a paragraph.

In paragraphing as in sentence forming the emphasis should be placed upon originality. The language books should be followed to get what they have to teach about the subject.

II. Forms of Composition.

1. Narration.

It is imperative for progressive work in composition, either oral or written, that we take the child where we find him, and train his language powers in the order of their natural development.

The child tells, relates, narrates his experiences in seeing, hearing, doing, etc., as they come to him. This is the natural method of getting into communication with his fellows. He is interested in the new knowledge constantly gained through his senses and must tell of the new things he has learned while his interest is keen. He is equally anxious to hear from his playmates the experiences that tally with his own. In this interchange of thought, the child uses pure narration. These narratives are his first compositions.

The teacher's province is to shape these growing thoughts, so that the narration of them shall be expressed in the sentence forms accepted by good usage. This brings narration as the first form of composition to be taught. It is prolific. By its wise use the language of the child can be correctly formed before any attempt is made to teach the other kinds of composition. It is imperative, therefore, for progressive, economical work that narration be taught *first*.

With the equipment of the child as he comes to the sixth grade, the simple forms of the complex sentence should be studied as a

regular part of the spoken English in lessons found in the textbooks and carefully planned by the teacher. In fixing these simple forms of the complex sentence, the children should be required to use them in their oral and written work to the end that form and use may become habitual.

A. *Experiences.*

Those that require the speaking of three or more related sentences to tell of the things seen, heard, or done; *e. g.*,— at home, at play, at school, at work, on Saturdays and other holidays, on outdoor trips with the teacher, everywhere the child goes.

The talking upon themes from these sources should be followed by definite, pointed, interesting, accurate, *short stories* in writing, to accentuate the knowledge gained by the talks upon the daily themes.

The writing must have a clearly defined purpose. It must be short and clean-cut that errors may be detected during the writing period and immediately corrected.

Careful copying of sentences and short paragraphs that are closely related to the class work can be used to great advantage in fixing the forms that have been taught.

The above directions apply equally to imagination and reproduction in all forms of written composition.

Suggested Subjects Drawn from Experiences.

These subjects are suggestive merely. The teacher should be constantly gathering others from the class to meet the needs of all.

Helping Mother.	Our Hall Exercises.
A Trip to the Zoo.	Our Flag Song.
How to Play Captain Ball.	My Experience in Choosing the
How I was Tempted.	Right Way.
How I Won.	Spring Gardening.
The Stereoscope Lesson.	My Help at Home.
My Thoughts of a Picture.	An Exciting Day.
How I Learned to Swim.	Feeding the Birds.
When I Went Bathing.	Out Walking in a Big Snow Storm.
Jolly Times on Bumpkin Island.	The Lost Book.
Our Playground.	A Kind Act.
My Pets.	How We Lost the Game.
Our Spelling Match.	Playing Fairly.
My Trip to the Country.	My Opportunity.
A Funny Thing That Happened.	A Most Interesting Visit.
Taking the Cows to Pasture.	Across Lots.
My Summer in Camp.	The Baseball Match.
An Exciting History Lesson.	Fun at Recess.
At the Party.	My Foolishness.
My Morning before School.	Doing Something New.
A Morning in the Hall.	Gardening in a Box.

B. Imagination.

The stories that grow naturally from the experiences of children. Emphasis may be placed by the teacher on conditions in everyday life that may be improved.

This kind of work calls for initiative that awakens the inventive powers of the pupil and may arouse new interests in the daily life. Stories may come from the following sources:

At home, at play, at work, in school, on Saturdays and other holidays; imaginary trips and excursions; fairies, brownies, good spirits, dwarfs, giants; scenes, incidents, events, persons in history; impersonation of animate and inanimate objects; the study of pictures,—stories discovered and read into them.

Suggested Subjects Drawn from Imagination.

When I Was a Teacher.	Looking for Work.
A Piece of Coal Tells Its Story.	A Happy Day.
My Experience as a Penny.	The Runaway.
A Mountain Trip.	A Ship's Story.
My Indian Life.	Working with an Ambulance.
My Trip on the Mayflower.	Alone on an Island.
A Fight with the Indians.	Our Wireless Message.
My Life in a Colony.	The Flag's Story.
A Library Card's Life.	Looking Ahead.
In the Cotton Fields.	Out of Sorts.
When I was a Cotton Picker.	What Mary's Doll Thought.
A Piece of Slate Talks.	Which Way Shall I Go?
In the Trenches.	What I Would Do Today if I
My Dream.	Could.
My Home in the Zoo.	What I Owe to Myself.
An Interesting Arithmetic Example.	What I Owe to the School.
A Fairy.	A Day in a Miser's Life.
The Hollow Tree.	What is My Chance?
A Narrow Escape from Shipwreck.	How Giant Sunshine Helped.
On the March with Capt. Miles	Temptation Resisted.
Standish.	The Friendly Brownie.
A Cowboy's Hard Day.	A Sunbeam Dance.
My Experience on the Western	The Fairy Cave.
Plain.	The Doll Party.
A Picture of Fairyland.	Up a Tree.
A Trip in an Aeroplane.	On Board a Submarine.
My Travels as a Newspaper.	My Choice.
My Journey to a Foreign Land.	Jacob's Elf Friend.
My Dream School.	S. O. S.
A Barrel of White Mice.	Stories my Reader Could Tell.
My First Experience as a Motor-	What Tomorrow May Bring.
man.	My Summer Plan.
The Best Business.	

C. *Reproduction.*

- a. Model selected stories suited to the grade.
- b. Stories told by the teacher.
- c. All reproduction should be related as far as possible to *experience* and to *imagination* that language work may not be scattered.

Suggested Selections for Reproduction.

Incidents in the Lives of Great Men and Women; <i>e. g.</i> , Lincoln, Washington, Florence Nightingale, etc.	Any short story illustrating courage, truthfulness, cleanliness, kindness, etc.
The Wolf and the Mastiff.	The North Wind and the Sun.
Better Whistle Than Whine.	The Grumbling Merchant.
The Lark and Her Young Ones.	The Boston Boys.
The Two Brass Kettles.	What the Bear Whispered.
The Jack-o'-Lanterns.	The Boastful Rat.
The Vain Tortoise,	Dr. Wells and the Toad.
The Pin and the Needle.	A Contented Farmer.
The Hero of Haarlem.	The Beggar and the Musician.
Robert Bruce and the Spider.	The Honest Woodcutter.
How Benjamin West Became a Painter.	Little Things.
Stories from the Lives of Painters and Musicians; <i>e. g.</i> , Landseer, Chopin, Beethoven, etc.	Stories of the Knights of King Arthur.

2. *Description.*

- a. Familiar objects, scenes witnessed by pupils, a careful selection of short descriptive pieces to be read and studied with the class to set a standard; pictures suited to the grade, stories to be read into the pictures.
- b. Persons,—members of family, classmates, friends, seen on the street, in public places. Descriptions of persons drawn from literature to be studied with the class.

3. *Letters.*

- a. Friendly, to fix type of letter forms and to utilize material studied under other heads.
- b. Model letters to be studied and copied.
- c. Parts of a letter: Heading, salutation, body, complimentary ending, and signature to be taught by their use.
- d. Superscription of envelope.

4. *Exposition and Explanation.*

How objects are made, as in manual training and sewing classes; how games are played; how work is done at home, in school, and elsewhere.

Copying and Dictation.

The pupil should be trained to copy sentences and short stories accurately and rapidly. Dictation should be used mainly as a test of teaching, but it may also be used as a means of getting appropriate subject matter before a class for immediate use. In the work upon technicalities short

dictation exercises are invaluable as a means of instruction and training as well as a method of teaching. Every dictation exercise should be thoroughly planned. It is easy to waste time upon aimless dictation work.

For copying and dictation, model sentences suited to the grade should be selected from the language books, from the readers, and from the original work of the pupils. Many sentences especially designed to reinforce the teaching should be prepared by the teacher.

Examples of Written Work.

1. A Cozy Room.

I have a very cozy room. It is very bright and cheery. In the evening when you have to have the light burning I go in there and read. Sometimes I feel so comfortable I stay there long enough to read a whole book from beginning to end. There are a few pictures on the walls and many comfortable chairs. When we have company we take them in this cozy room and light the lamp and have jolly times. We have a victrola in this room and we play that and soon fall asleep in the big chairs. I invite my playmates to have a party with me and we go in this room and feel very comfortable.

2. A Kind Act.

One day when I was playing, I saw Mrs. Armstrong, the lady across the street from my house, coming home from the store. She had under her arm a number of parcels which were very heavy. She could hardly carry them. I ran over and asked her if she wanted any help. She said it was very kind of me and she would be glad to get the help. I took as many of the bundles as I could carry and took them into her house. When she came up she thanked me and said, "I wish every boy and girl was as kind as you have been today."

3. A Snow Scene.

As I awoke one morning in midwinter, I was surprised to see the glittering of snow out of my window. It looked just like fairyland. At first I thought it was a dream but when I saw that it wasn't, I jumped out of bed in a second.

When I was nearly dressed I looked out of my window and saw a snow-white birch tree overloaded with snow. It looked just like emerald, richer and whiter than any earl or king could buy?

Just then I heard a crow caw to his mate to come off of their nest as the storm was over. Chickadees jumped to and fro, twittering merrily.

A chubby snow-sparrow would light on my window. The sun was so strong that it blinded me for a moment. And its crystal rays shining on the snow looked like silver. It was too beautiful to behold. I thought I would open a window to get some snow from the window sill. A gust of wind rushed in and was so sharp and brisk that I had to close the window without my snow.

4. What I Did Last Saturday.

Last Saturday morning my mother got me up very early. She told me to mind the house until she came back. It was half-past six just then. While she was gone I gave my little sisters their breakfast and dressed them. Then I washed the dishes and swept the floor.

At half-past eight I had every bit of housework done. Mamma came home at ten o'clock. She told me she had a nice surprise for me. Yes! it was a beautiful surprise, too. Can you guess what it was? I think I'll have to tell you. It was a lovely plaid dress. She told me I could not wear it to school because it was only for Sunday.

In the afternoon I went down to the square. My mother told me she would let me go to the Scenic if my father would go with me. I told her I would rather stay at home. She said, "All right." In the evening I went to bed early because I had to be in church next morning.

5. My Experience as a Skater.

Last winter, while out skating, I fell down, much to my surprise. And now I will tell you where it was.

The people had all gathered on a large pond to skate and I had gone also. There was one young lady I refer to especially, for I am going to tell you of what benefit my fall was to her.

She was engaged to be married and had on her finger a lovely diamond ring. Taking her glove off to show it to one of her friends, the ring fell off too. The ring slid under the snow which was on the pond and she could not see it. After hunting in vain for an hour, she sat down and began to cry.

Just then I came skating by, and being clumsy at skating, down I went. As I landed on the ice, my hand struck something. I picked it up to see what could have offended me in that way, and what should I behold but her diamond ring. I returned the ring to its owner, who thanked me so much, and said my fall had brought her good luck. But it brought me bad luck, for I had scraped my arm from the elbow to the wrist.

6. Lost.

Twilight was fast falling. The last ray of sunset sank deep in the west. Soon the stars stepped from behind their curtain one by one.

I sat in the woods. Suddenly a little elf with a tall hat came to me. "What are you doing here?" said he. I told him I wanted to dance with the fairies. Soon I was no taller than a violet. Now, I danced with them. From behind the bushes a squeaky voice called me. It was the same elf with the queen. She gave me a polite welcome. I was lifted to a throne made from a daisy and escorted to fairy land. The queen gave me a great feast. I drank from buttercups. A towel spun by a spider was mine. The last thing given me was a pair of wings and a wand with a gold star. I was married to the queen's son. When the queen and king were too old to rule, we became king and queen. All the elves shouted, "Long live the new king and queen!"

A whisper of "Come, dear!" awaked me. I was sitting in the armchair. All my extraordinary experiences were but an unusual dream of being lost.

7. Two Friends. (Reproduction.)

Many years ago in the country of Greece there were two boys. Their names were Damon and Pythias. One day it happened that Pythias was put in prison for making the king angry. Damon heard this and was in despair. The day of execution was coming very soon. Pythias asked the king if he would let him see his mother before he died. The king told him if someone would take his place he would let him go. Damon heard this

and said to the king, "If I take his place will you let him see his mother?" The king said, "Yes, if he will come back in time." Pythias went home and saw his mother. Damon was very glad to be in jail.

Dionysius, the king, thought that Pythias would not return. At last the day of execution came and Pythias did not return. Damon was led out to be killed. Damon knew that Pythias must have been wrecked. When Damon was just ready to die the slaves ran up to the king and shouted, "Here he comes! Here he comes!" When the king heard this he was overjoyed. The king asked the two boys if they were friends all their lives. The two boys said, "Yes." The king was very happy and let them go free.

8. Dear Catherine,

It has been a long time since we have met. Mother told me I might ask you to come to Boston on your Christmas vacation and spend it with us. We will have such a jolly time. Helen is going to be with us too, so please come. We will have a large party and ever so much fun. There will be no end to the good time.

I just wish you could be acquainted with my playmate. She is just made of fun and her name is Mildred; she lives on the same street with me. There are woods on all sides of my house. We have a very nice time in them.

How is Aunt Mary and the boys? I send my love to all of them. Mildred and Helen and I last Saturday played house in the woods; it was ever so much fun for there were caves and some of the trees were shaped like seats. In the afternoon we swung on birches and nearly hurt ourselves.

The girls have a club named "The Happy Club." Mildred is the head of it. Rose Williams is the secretary. I am the cook. We have very nice times. Give my love to all of your family. Be sure to come and spend Christmas vacation with us.

Your loving friend,

E—B—.

9. Dear Miss —,

I am laid up here in the Charlesgate Hospital for appendicitis. Wednesday evening I did not feel well. Thursday I did not feel well enough to deliver my Posts and had Earle do it for me. Friday I could not move in bed because it hurt so much. My Literary Digests had to go because Earle said that he could not come because you kept him after school. Friday afternoon Dr. — came to the house and said that I had an abscess and had to be operated on as soon as possible. I was then rushed to the Charlesgate Hospital in a taxi. When I got there they called a special operation. I am now doing well and have been put on liquid foods. The address is, Charlesgate Hospital, Charles River Road, Cambridge. To come out here you take any car that goes on Massachusetts avenue (Cambridge side). Get off at Charles River Road and walk down. The people can tell you where it is. My mother visits me every day. It is pretty good up here and I wouldn't mind your coming to see me some time.

Please do not keep Earle after school on Fridays or Thursdays because both days he has to deliver my papers. Excuse my writing in pencil but it is all that I have.

Your pupil,

G—T—.

Comments.

These written specimens, in general, correspond in merit with the oral work from the pupils of the same grade. In their written work the pupils sometimes display more self-consciousness than in their oral, and, as a consequence, they are more artificial in their expression.

Some of these examples are good, others mediocre or poor. They have been selected and displayed here in order to show the variety that obtains in the average sixth grade work.

Number 1 displays a common fault — confusion in person and number. Exaggeration is rampant. The “sentence sense” ought to be better developed in this grade than is evidenced in this description.

Number 2 is a simple, kind, little story — a fine example of unity and directness. Note that the second sentence is complex. The writer's natural impulse was to use two short sentences, but he showed his teaching by combining them. Pupils should be given much practice in combining short, choppy sentences. Continued practice in the use of connectives should be given, and systematic instruction on transitional signs, relative pronouns, conjunctives, etc. An examination of the above written specimens will reveal a comparative scarcity of complex sentences.

Number 3 is promising. The writer made use of a fine choice of words. There is probably more imagination than fact in his description, but it is interesting and fluent. If the writer recalled a little of the “First Snow Fall,” and carried it over into the last line of the second paragraph, it should go far to offset “A chubby snow-sparrow *would* light on my window.”

Contrast the simple directness of number 4 with the grandiloquence of number 5, the latter of which gives palpable evidence of having been run in a certain kind of mold. The story of an experience, above all else, should be *true*.

Number 7 is a good example of memory plus a little original construction. The writer has handled well quotations and exclamatory sentences. A reproduction, as well done as this, is evidence that the writer has been told much of the time order in a story and that he has learned its value.

Two letters are put side by side for the purpose of emphasis. Number 8 is of the stock variety, voluble, sweet, and conventional. The presumption is allowable that “Dear Catherine” did not exist as a real correspondent for E— B—, and as a consequence the lines are not personal or intimate.

Number 9 is a remarkable letter. Dear Miss—, did exist, no doubt of it. Besides narrating the events leading up to, attending, and subsequent to his operation, the writer had “the plea of need” which motivated and made his letter of compelling interest. Note the naïveté in the concluding paragraph. It is entirely unreasonable to expect to get letters comparable to number 9 from the average pupils of grade six. That is probably unattainable; but what is unattainable is not necessarily unapproachable.

Preparation and Correction of Written Work.

Opinions on the objects and the methods of correction of compositions vary radically. From the accumulated opinions (perhaps not knowledge) of the ages, a few principles seem to have been established. Few teachers now believe, as formerly, that red ink is the life blood of a composition.

Red ink marks are being avoided by calling the individual pupil to the teacher's desk and conducting with him a clinic on his written work. Many teachers are convinced that in most cases recopying is of very slight value, that in general, first drafts only should be required. Careless, slovenly work the teacher should decline to accept — not in anger, but rather assuming that the pupil has not understood, has not recognized what was required, and that he prefers to rewrite and the teacher will not deny him the privilege.

Teachers differ so widely in their ability to make their tasks definite! Children misunderstand so easily; so, too, do teachers! Failure in definiteness on the part of the teacher is sure to call for much correction in the pupils' work.

Again, teachers differ in their power to anticipate — to head off — errors and thus avoid the occasion of correction. Oral drills in fundamentals to remedy common errors will decrease appreciably the number of corrections to be made in the written work.

Most teachers have grasped the real object of correction, namely,— to put the pupil into such an attitude of mind that he *really desires to improve his work*, and thus becomes honestly *self-critical*. The teacher touches the heights when she creates in the mind of a pupil this attitude of self-criticism and voluntary self-correction.

"Improvement in the performance of an act comes from the repetition of that act accompanied by a conscious effort to omit the imperfections of the former attempt. Therefore, the writing of a new theme in which the pupil attempts to avoid the error which occurred in his former theme, is of much greater educational value than the copying of the old theme for the purpose of correcting the errors in it. To copy the old theme is to correct a result; to write a new theme correctly is to improve a process, and besides, improvement of process is the real aim of composition teaching." — *Brooks*.

In the preparation and correction of pupils' written work the following directions should be observed:

Preparation.

1. *Neatness.*— Make every page neat and legible.
2. *Margins.*— Make the margins straight and of the right width.
3. *Heading.*— See that the heading is complete and properly spaced.
The title should be brief, to the point, and attractive.
4. *Paragraphs.*— Indent every paragraph. In other words, indent the opening sentence and every sentence which begins a new division of the subject.
5. *Sentences.*— See (1) that every sentence is complete, and (2) that it is properly punctuated.
6. *Words.*— *Spelling.* See that every word is spelled correctly. If there is any doubt about the spelling of a word, consult a dictionary.

Possessive Case. Use the sign of possession with nouns that denote possession.

Syllabication. Never divide a word at the end of a line except by syllables. Use a hyphen to mark the division.

Correction.

- Cap. or ≡ Use a capital letter.
- l. c. Use a small letter (lower case).
- ∅ Omit. (A line drawn through a word or phrase is equally suitable and frequently better.)
- K. Awkward, clumsy, stiff.
- M. Margin.
- P. Punctuation. (A more definite mark of correction is given below.)
- ,/ Use a comma. (Indicate other marks of punctuation needed in the same way.)
- Pen. Penmanship.
- Poss. Possessive case. (A check mark over the word is also suitable indication; thus; girls.)
- ¶ Paragraph.
- " Quotation marks.
- R. Repetition of word or thought.
- Sp. Spelling.
- S. Sentence incomplete or otherwise faulty.
- X Fault obvious. (The word, phrase, or erroneous form may be underlined.)
- ? Meaning not clear. Accuracy of statement questioned.
- ∧ Something should be inserted.
- # Space better.

The pupils should be trained to mark a portion of one another's written work. In marking dictation exercises and other papers that are practically alike, a single mark may be used for any kind of error; *e. g.*, a cross (×) above, or an underscore, or a vertical line.

Suggested Monthly Assignments of Technicalities in English.

The following assignments are only suggestive. They show how some sixth grade teachers plan their work. It is believed that every teacher can easily follow such a plan, or work out a plan of her own, in order to cover in a systematic way the work of the grade.

Assignment for September.

Emphasize oral expression as a preparation for written expression.

Employ co-operative exercises as a means of revealing the proper form of a written story. In these exercises the teacher should work at the board as the children work at their desks.

Give some practice in copying short stories suitable for fifth grade children to write. Require a *single margin at the left and a paragraph margin.*

Train the children to take from dictation three or four short related sentences and arrange them properly in a paragraph.

Use the period and the question mark.

Use some names of persons and places.

Teach the name of the school and of the teacher, and the names of the months, in order.

Teach the names of the days of the week in order and train the pupils to use them in sentences.

Use such expressions as the following:

This is Wednesday morning.

This is Tuesday afternoon.

Give some opportunity to read little stories written by other children.

Test the teaching of this assignment by short dictated exercises.

Assignment for October.

Train the pupils to use their spelling words in sentences of not less than five words. Oral illustration should precede a written requirement.

Train the pupils to recognize the plural of a noun and its possessive form in sentences. Train them to form and use the plural and possessive singular of any given noun.

Form possessives with the names Henry, Arthur, George, Helen, Margaret, and the names of several nearby teachers. Illustrate the use of the possessive when the name of the thing possessed is omitted, as—this book is Mary's.

Teach the pupils to write the titles of their stories properly.

Teach the writing of Columbus Day, Labor Day, Hallowe'en, and Jack-o'-Lantern.

Distinguish between know, no and not; there and they; set, sit and sat.

Require the pupils to fill blanks in sentences with the above words.

Keep in mind by use what was learned in September.

Give some practice in copying sentences suitable for fifth grade children to use.

Test the teaching of this assignment by short dictated exercises.

Assignment for November.

Study and copy short letters. Train the pupils to write a short letter from dictation. Require a few short, original letters.

Teach the writing of the names of the nearby streets; the abbreviation, St., Ave., Mr., Mrs., A. M., P. M., Dr., Gov.; the titles Miss, Uncle, Aunt, Cousin; initial letters as used in names; and Thanksgiving Day.

Use in sentences see, saw, have seen, and drill upon the following forms:

Present.

I see it now.

We see it now.

You see it now.

You see it now.

He sees it now.

They see it now.

She sees it now.

Past.

I saw it yesterday.

We saw it yesterday.

You saw it yesterday.

You saw it yesterday.

He saw it yesterday.

They saw it yesterday.

She saw it yesterday.

The Form with *Have*.

I have seen it.

We have seen it.

You have seen it.

You have seen it.

He has seen it.

They have seen it.

She has seen it.

Give practice in the use of *a* and *an*; *there* and *their*; *come* and *came*; *go* and *went*; and several verbs that end with the sound *ed*.

Require the pupils to fill blanks with the above words.

Keep in mind by frequent use what has already been taught.

Test the teaching of this assignment by short dictated exercises.

Assignment for December.

Give more practice upon letter writing, including short original letters.

Train the pupils to address an envelope and also a postal card. In this grade omit the return address on the envelope.

Train the pupils to use Christmas Day, Monday morning, Friday afternoon, Christmas present, etc.

Use in sentences *see*, *saw*, *seen*.

Drill upon the following forms:

Simple Future.

I shall see it.

We shall see it.

You will see it.

You will see it.

He will see it.

They will see it.

She will see it.

The Form with *Had*.

Before I came to school.

We had seen it.

I had seen it.

You had seen it.

You had seen it.

He had seen it.

They had seen it.

She had seen it.

Train to use correctly *to*, *two*, *too*; *hear* and *here*; *ate* and *eight*; *now* and *know*; *new* and *knew* (did know); *threw* and *through*.

Use such expressions as *too* much, *too* quickly; Christmas morning I got up very early and my baby brother did, *too*.

Fill blanks with the above words.

Teach syllabication of words, the use of the hyphen at the end of the line, and in such numbers as twenty-one, etc.

Note that *through* and *which* are not to be divided.

Test the teaching of this assignment by short dictated exercises.

Assignment for January.

Teach the writing of New Year's Day, Public Library, City Hall, State House, Art Museum, Tremont Temple, and Old South Meeting House.

Give drill upon the verb forms *am*, *is*, *are*, *was* and *were*. Include subjects in the three persons and in both numbers. Fill blanks with these verb forms.

Teach simple, direct quotations. In writing quotation marks, use primes or simple pen strokes, not the printed forms.

Teach the names of the months in order and require the pupils to write the names of the months in full and as abbreviations.

Use in sentences *not*, *isn't*, *doesn't*, *don't*, *hasn't*, *aren't*, etc.

Train the pupils to take readily from dictation brief letters and one paragraph stories that have been written in some class of Grade V.

Test the teaching of this assignment by short dictated exercises.

Assignment for February.

Use in sentences Lincoln Day, Washington's Birthday, Twenty-second of February.

Train the pupils to use commas in a series of words.

Use quotation marks with two or more sentences.

Use quotation marks with such expressions as *Mary answered*, *answered Mary*, and to enclose a question.

Make out cooperatively the inflection of many common verbs and include some regular verbs.

Drill upon some regular verbs:

1. Those that end with the sound of *ed*; as lifted, visited, wanted, etc.
2. Those that end with the sound of *d*; as called, played, answered, etc.
3. Those that end with the sound of *t*; as walked, looked, stopped, etc.

Drill upon a few other irregular verb forms, as write, wrote, have written, go, went, have gone.

Require blanks in sentences to be filled by verb forms.

Test the teaching of this assignment by short dictated exercises.

Assignment for March.

Use in sentences Evacuation Day, the Seventeenth of March. There is. There are. Is there? Are there? Is the boy? Are the boys? Isn't, doesn't, hasn't, etc.

Distinguish and use in sentences *may* and *can*; *carry*, *take*, and *bring*; *to*, *two*, *too*.

Drill again upon the use of the simple future. Train the pupils to use *will* in the first person to express a promise.

Drill upon the forms of such common verbs as *do*, *did*, *have done*; *see*, *saw*, *have seen*; *come*, *came*, *have come*; *go*, *went*, *have gone*; *pay*, *paid*, *have paid*, etc.

Give more practice in taking single paragraphs and short letters from dictation. The number of perfect papers should show a marked increase.

Test the teaching of this assignment by short dictated exercises.

Assignment for April.

Give opportunity for the children to read letters written by children.

Dictate short letters. Dictate short paragraphs.

Dictate questions as well as statements.

Use in sentences Patriots' Day, Nineteenth of April.

Train pupils to punctuate "yes" and "no" when used as part of an answer.

Use the words *not*, *any*, *no*, *anything*, and *nothing* in sentences and train to avoid double negatives. Illustrations:

- I haven't any pencil.
- I have no pencil.
- I haven't anything in my desk.
- I have nothing in my desk.
- I didn't do anything.

Give practice in using simple quotations.

Review the possessive singular of nouns, including Charles's and James's.

Use the following possessive forms that have no sign: my, your, his, her, our, their, its.

Test the teaching of this assignment by short dictated exercises.

Assignment for May and June.

Use in sentences *to, too, two; by, buy; new, knew; no, know; there, they, their; threw, through; bring, carry, take; of, off.*

Use May Day, Memorial Day, Patriots' Day, Fourth of July, Seventeenth of June.

Use *not* with common verb forms; am not, are not or aren't, does not or doesn't, did not or didn't, have not or haven't, etc.

Drill on the forms, Is there? There is. Are there? There are. That book. This book. These books. Those books.

Test the teaching of this assignment by short dictated exercises.

USE OF THE DICTIONARY.

The ability to use the dictionary intelligently and without waste of time involves:

1. Familiarity with the principle of alphabetical arrangement.

2. Such knowledge of English phonetic structure that a given sound will suggest all the letters that may represent it (*e. g.*, the sound of f = f and ph).

3. An understanding of certain words and signs used in the dictionary.

Teachers of this grade may assume that some preparation for the use of the dictionary has been made in the preceding grades. Teachers of this grade should review or give instruction in the following:

1. Arrangement in alphabetical order of familiar words having different initial letters as well as common initial letters and different second letters.

2. Use of accent marks.

3. Uses of hyphen and syllabication.

4. Uses of the following signs and words:

a. Words at top of page.

b. The diacritical key.

c. Abbreviations used in defining words.

Practice in opening the dictionary and finding a given word should be provided. By the end of the fifth or sixth grade pupils should be able to use the dictionary:

1. To determine the pronunciation of words.

2. To find the correct spelling of words.

3. To find the meaning of words.

GEOGRAPHY.

WHAT IS THE GENERAL CONTENT AND APPROXIMATE TIME ALLOTMENT?

As will be seen in the table below, the ground to be covered in the History is correlated, as far as possible, with the requirements of the Geography Course.

Europe.

Grade VI. is an intensive study of Europe, the continent most closely related to our own. It is suggested that seven months be spent in the study of the powers of Europe with their colonial possessions in the Eastern Hemisphere, the time to be divided as follows:

3 weeks in September.— Europe as a Whole.	} Correlate with study in history of European Beginnings. Spanish Explorers.
4 weeks in October.— Mediterranean. Countries (Italy and Switzerland, Iberian and Balkan Peninsulas).	
3 weeks in November.— France with study of — Her African possessions, Algeria, Tunis, the Sahara, and Kongo River Regions.	} French Explorers.
3 weeks in December and 4 weeks in January. — Great Britain, with a study of Ireland, Aus- tralia, New Zealand, Egypt and South Africa. Germany (for the last two weeks of January).	
1 week in February.— The Netherlands.	} English Explorers and English Coloniza- tion.
2 weeks in February.— Belgium and her colonies.	
1 week in March.— Scandinavian countries.	} Settlement of New York.
2 weeks in March.— Russia.	
1 week in March.— Poland, Czechoslovakia, Hungary, Jugoslavia, and Austria.	
1 week in March.— Poland, Czechoslovakia, Hungary, Jugoslavia, and Austria.	

This seven months' survey of the nations of Europe, with their African possessions and Australia, leaves only, in the Eastern Hemisphere, the study of

Asia.

Two months are to be spent in a study of Asia, with special emphasis placed on Japan, China, and British (India) and French possessions in Asia:

- 1 week in April.— Asia as a whole.
- 2 weeks in April.— Japan.
- 2 weeks in May.— China.
- 2 weeks in May.— India.

In June a résumé of all the continents and islands of the Old World may be made.

WHAT METHODS ARE SUGGESTED FOR THE TEACHING OF THIS
COURSE OF STUDY?

- | | | |
|--|---|--|
| <ol style="list-style-type: none"> 1. The use of the lesson outlines. 2. The opportunities afforded for individual study in text and reference books. 3. Interest evolved through the Project Problem Method. | } | Indicate various ways in which this Course of Study may be accomplished. |
|--|---|--|

The various subjects in this Course of Study in Geography (and History) have been presented in the form of problems, and projects, in order

to develop in the child the ability to think, for the learning through problems or projects is the child's natural approach to education. Through it his interests are touched and his school work properly motivated: (See 1919 Report of the Superintendent, page 70.)

"The 'project method' is the child's own device for solving the problems which his environment brings him. His is always a 'purposeful activity' — individual in his early years, social in the later years of the elementary school stage. So through this method, we find the natural way of approaching the reconstruction of elementary education. Its advantages are that it carries over the child's interests from his world outside to the schoolroom, that it is in harmony with laws governing his growth, and that it is fitting him constantly for problem solving and for living in co-operation with his fellows. In this way school is a counterpart of life outside, and not a place of preparation for a remote future. In this way the child learns to live. With the many advantages which will come through the wise administration of the 'project method,' its dangers must be clearly seen. That 'education is self-expression under guidance' must not be forgotten; that the child may not be left wholly to himself in the setting up, nor always in the solution of his problems must be understood; otherwise the opportunity to teach social co-operation will be missed. Then, too, if this method is to prove valuable, all children in the class, not a few, must find a way to self-expression through projects. Administered by enthusiasts who, through it, train only those children already strongly self-directing, this method will never replace the traditional in class room practice; administered with opportunities for growth for all children, we have the basis for careful conservation of individual capacity, for developing leaders as well as intelligent followers."

THE PROBLEM METHOD ILLUSTRATED.

A typical lesson might be pictured as follows: Problem for the day's study on the board: *e. g.*, Belgium is a very small country, yet it is an exceedingly important country — it has often been called the busiest workshop of Europe. Why?

The children at their seats are supplied with text and supplementary readers. The teacher tells the class that they will find material in their text (Brigham & McFarlane, pages 294, 295) or (Tarr & McMurry, pages 280-283), and (Carpenter's Geographic Reader on Europe, pages 125-133), or (Winslow's Europe (New), pages 63 and 68). She explains to them that, on a nearby shelf or on her desk they will find several books of reference. On a corner shelf or table are a number of magazines or newspapers containing articles of Belgium. In the geography collection on the same table the samples of products and a number of pictures and post cards may be seen. On the board is a map showing the density of population and transportation lines. In the children's hands are progressive outline maps.

The first step in the lesson may well be a bit of supervised study, during which the children learn to solve the problem by means of the data at hand. This passes over into a recitation, when a solution of the problem is presented from various standpoints by the class. Pupils are helped to value the facts learned. It will be seen that the Problem Method

carries with it all the essential elements of supervised study, and gives not only a knowledge of the content of geography, but teaches the pupil how to study.

The pupils may then be guided to an organization of the material they have found to the end that they may have not only a well arranged unit of knowledge but, also, power to use books.

Lack of materials cannot be offered as a reason for not using the Problem Method. Even if one text-book is the only thing available to the pupil, it is better to have him use that one book to develop thought and initiative in finding and applying the information it contains than to read and recite it by pages. Too close following of the text, or permitting the text to dominate is to be deplored, for it discourages individual effort. The statement of an assignment by the Problem Method gives the brightest child sufficient material to do his best, while there is no standard imposed to discourage the average or slow child.

However, it is to be hoped that, if the school has no collections or museums, the teacher and pupils will immediately seize upon some of the suggestions for educational materials contained in this Course of Study. A week's effort on the part of the teacher and pupils will produce a surprisingly large collection of foreign stamps, coins, postcards, railroad folders, booklets of information about various parts of the Old World, magazines, maps, and sample products. This Course of Study is replete with "Problems, Projects, Motives, and Interests (Freeland)."

Answers to every problem suggested in this Course of Study will be found in all text-books. It is the teacher's duty to direct her pupils so that it will be possible for them to find the solution of any given problem. The use of the Problem method means constant reference to the text-book and supplementary readers.

It is not the purpose of this Course of Study to set forth any outlines that are to be rigidly pursued for the study of any region or activity. It is taken for granted that teachers have sufficient knowledge of method and matter to be able to approach the study of any region without having every point to be touched developed for them.

Just as the pupils' geography (or history) notebook (if the teacher cares to use any) should be the summary and product of the pupils' knowledge of geography (or history), so the teacher's subject-matter and methods will reflect her own mastery of her subject.

It is the purpose of this Course of Study to merely suggest problems. It is hoped that teachers and pupils will use their own ingenuity, working out their own vital geographical problems themselves. It is not desirable that teachers follow the problems outlined in this Course of Study without any further thought. In fact, the best problems of all, oftentimes, are those brought in by the pupils.

The problems in this Course of Study are not fully detailed. It is hoped that each teacher will adapt the Course to the needs of her class.

Teachers and pupils should have discussions "not to settle things but to satisfy the soul that yearns for truth." The aim in the study of geography should be to have in the schoolroom "multiform thinking rather than uniform knowledge." It is not the fact alone that is so important in

geography study:— the feelings aroused by the discussion, the powers their discussion develops is what the teacher should desire. For example, in a problem such as this, "England owns both Australia and a large part of Southern Africa; which is of greater value to her?" it is not the determining of this question that is important, but the free discussion and independent thinking on the part of the child in the presentation and solving of it. Problems on comparisons of places, peoples and activities are suggested for this same purpose.

Many projects have been suggested in this Course of Study. A project is a "unit of purposeful activity"—"an organized interest." For example, the making of a map is a project; indeed, maps furnish excellent opportunities for the assigning of projects. The collecting of pictures of any region, as the basis of a talk on that country, the visiting of any industrial plant, the collections of a museum as a basis for study, are examples of projects. In this Course of Study projects that are interesting and well motivated have been suggested. Indeed, effort has been made to motivate the Course in line with the children's interests. All suggestions incorporated in this Course of Study are practical and possible. At the end of a series of problem studies the entire subject-matter should be reviewed in such a way that it remains in the pupil's minds as an organized unit of knowledge.

This Course of Study is being presented at a critical time in the affairs of the world. Let us send out children who will be able to help in solving the world's problems because they have been taught to reflect and weigh and decide in the light of correct evidence. All that has been said here about Methods in the Teaching of Geography applies equally well to the Course of Study in History which follows this. Indeed, the two subjects of geography and history are more closely allied now than ever before.

AVAILABLE EDUCATIONAL MATERIAL.

* Books.

Deposits of books may be obtained from the Public Library.

Below are printed (taken from School Document No. 11, 1918) the List of Authorized Text and Supplementary Books in Geography.

Geography.

Text-books.

Brigham, A. P., and McFarlane, C. T. Essentials of Geography. Books 1, 2. American Book Co.

First Book.

Second Book.

Part Two.

Frye, A. E. Leading Facts of Geography. Books 1, 2. Ginn & Co. Book 2.

King, C. F. Elementary Geography. Scribner.

Advanced Geography. Scribner.

Redway, J. W., and Hinman, R. Natural Elementary and Natural Advanced Geographies. American Book Co.

* Indicates books for teachers' reference only.

Tarr, R. S., and McMurry, F. M., Tarr and McMurry's Geographies,
Revised Edition. Books 1, 2. The Macmillan Co.

Book 1.

Part 1.

Part 2.

Book 2.

Part 1.

Part 2.

Asia.

Supplementary Books.

Allen, N. B. New Europe. Ginn & Co. (Geographical and Industrial Series.)

Around the World. Books 3-5. Silver, Burdett & Co.

Butterworth, H. Zigzag Journey in Europe. The Page Co.

Zigzag Journeys in the Orient. The Page Co.

By Land and Sea. Perry Mason Co. (Youth's Companion Series.)

Carpenter, F. G. Around the World with the Children. American Book Co.

Geographical Reader on Europe. American Book Co.

Geographical Reader on Asia. American Book Co.

Geographical Reader on Africa. American Book Co.

Geographical Reader on Australia, Our Colonies and Other Islands of the Sea. American Book Co.

How the World is Clothed. American Book Co.

How the World is Fed. American Book Co.

How the World is Housed. American Book Co.

Chamberlain, J. F. How We are Clothed. The Macmillan Co.

How We are Fed. The Macmillan Co.

How We are Sheltered. The Macmillan Co.

How We Travel. The Macmillan Co.

Cherubini, E. Pinocchio in Africa. Translated by A. Patri. Ginn & Co.

Gibson, C. C. In the Goden East. Little, Brown & Co.

McDonald, E. B. Little People Everywhere Series. Little, Brown & Co.

Colette in France.

Donald in Scotland.

Fritz in Germany.

Gerda in Sweden.

Boris in Russia.

Chandra in India.

Hassan in Egypt.

Josefa in Spain.

Kathleen in Ireland.

Marta in Holland.

Rafael in Italy.

Umé San in Japan.

Miller, L. T. Little People of Asia. E. P. Dutton & Co.

Morris, C. Home Life in all Lands. Books 1-3. J. P. Lippincott Co.

Riggs, E. Stories from Lands of Sunshine. American Book Co.

- * Rocheleau, W. F. Geography of Commerce and Industry. (Copyright 1918.) Revised edition. Educational Publishing Co.
 Schwatka, F. Children of the Cold. Educational Publishing Co.
 Shaw, E. R. Big People and Little People of Other Lands. American Book Co.
 Starr, F. Strange People. Heath & Co.
 Taylor, B. Boys of Other Countries. Putnam.
 Wade, M. H. The Little Cousin Series. Page & Co.
 Our Little African Cousin; Our Little Brown Cousin; Our Little Eskimo Cousin; Our Little Indian Cousin; Our Little Japanese Cousin; Our Little Russian Cousin.
 Winslow, J. O. Geography Readers. Heath & Co.
 Europe.
 Distant Countries.

The following books are valuable and helpful to Grade VI teachers and pupils. They are not on the Authorized List of 1918.

Other publications of the Macmillan Co., Boston, are:

Chamberlain: Continents and Their People.

Europe.

Asia.

Africa.

* McMurry: Geography of the Great War.

Tarr & McMurry: New Geographies.

(1919 Edition contains all census figures available to January, 1919, brief geography of the Great War, the German and Austrian peace terms and the new maps of the old world made necessary by those terms. The text based on these maps is revised, of course.)

Other publications of Ginn & Co., Boston, are:

Frye & Atwood's New Geography, Book Two.

Atwood, Allen and Robinson: Manual on Map Tracing for Pupils.

Other publications of the American Book Co., Boston, are:

Blaich's Three Industrial Readers.

Brigham, A. P., and McFarlane, C. T. Essentials of Geography.

Book I and Book II. Revised Edition.

* Dryer's Elementary Economic Geography.

Dutton's World at Work Series:

Fishing and Hunting.

In Field and Pasture.

Trading and Exploring.

Schwartz: Five Little Strangers.

Other publications of Houghton, Mifflin Co., Boston, are:

Mirick and Holmes: Home Life Around the World.

Perkins: Twin Series, including Dutch, Eskimo, Japanese, Irish, Belgian, French and Scotch, Cave and Spartan—each in separate volume.

Tomlinson: Young Americans in the British Isles.

- Stanley, Henry N.: Autobiography (Africa).
 Bacon: Japanese Girls and Women.
 * Griffis: Japan.
- Other publications of Silver, Burdett & Co., Boston, are:
 Willard, M. F.: Along Mediterranean Shores.
 * Sutherland and Sanford. Practical Exercises in Geography. (Of value in the teaching of this course because it shows the arrangement of geographic material in problem form.)
- Other publications of Holt & Co., Boston, are:
 * Semple: Influence of Geographic Environment.
 * Salsbury: Barrows and Towers: Elements of Geography.
 * Smith: Commerce and Industry.
 Industrial and Commercial Geography.
- Other publications of Heath & Co., Boston, are:
 Wonders of the Jungle. Books I and II.
- Other publications of Educational Publishing Co., are:
 Campbell: Story of Little Jan, The Dutch Boy.
 Story of Little Konrad, the Swiss Boy.
 Story of Little Metz, the Japanese Boy.
 Beale-Logan: Children of the World.
- * Chase-Clow: Stories of Industry. Vols. I and II.
 Industries of the World.
 Book I. The Story of Linen.
 Book II. The Story of Rope.
- Pratt: People and Places Here and There.
 Vol. I. Stories of Australia.
 Vol. II. Stories of India.
 Vol. III. Stories of China.
 Vol. IV. Northern Europe.
 Vol. V. Stories of England.
- Other publications of Flanagan & Co., Chicago, are:
 * Dean: How to Teach Geography.
 * Morton: Lessons on the Continents.
 * McMurry: Central Topics in Geography.
- Library of Travel: Little Journeys to
 Norway and Sweden.
 England and Wales.
 South Africa.
 China and Japan.
 France and Switzerland.
 Hawaii and the Philippines.
 Scotland and Ireland.
 Turkey, the Balkans and Greece.
 Italy, Spain and Portugal.
- Starr: Story of Mustafa, the Egyptian Boy.
 Muller: Little People of the Snow.
 Little People of Japan.
 Story of Wretched Flea, a Chinese Boy.
 Story of Akiwakoo, an African Boy.

Teachers would do well to send for the Teachers' Catalogue, which contains lists of geography games, plan books, and stencils, as well as books.

Kenney Bros. & Wolkins publish:

* Hammond's Business Atlas of Economic Geography.

Rand, McNally & Co., Chicago:

* Dodge and Kerchevey: The Teaching of Geography.

MAGAZINES AND PAMPHLETS.

Below are printed the titles of valuable publications (newspapers, magazines, etc.).

"The Journal of Geography," a magazine for teachers, published by the American Geographical Society, Broadway, at 156th street, New York City.

The National Geographic Society, Washington, D. C., publishes a weekly paper called "Geographic News Bulletin" which teachers may have sent to them without cost, and "The National Geographic Magazine." In the latter pictures of people in every country are given in abundance. Surface, climate, products, occupations, and cities are shown in illustrations of real people at work and play.

"Asia," a journal published by the American Asiatic Association, 627 Lexington avenue, New York City.

"Aids to the Teaching and Study of History and Geography"; see catalogues of the McKinley Publications, McKinley Publishing Co., 1619-1629 Ranstead street, Philadelphia, Pa.

"The Normal School Bulletin," published by the Eastern Illinois State Normal School, Charleston, Ill., a pamphlet of material on geography which may be obtained free or at small cost.

"Travel," a magazine published by Robert N. McBride & Co., 31 Union square, North, New York.

"Supplementary Materials for Teaching Geography in Elementary Schools," by J. W. Hubbard, State Normal School, Worcester, Mass.

The following magazines, published in English, contain information on Asia.

* Newspapers (English).

Japan.

Japan Advertiser, Tokyo, Japan.

Japan Chronicle, Kobe, Japan.

Herald of Asia, Tokyo, Japan.

* Magazines (English).

Far East, Tokyo, Japan.

Trans Pacific, Tokyo, Japan.

* Government Departments which furnish reports in English.

Department of Agriculture and Commerce, Annual.

Department of Finance, Monthly Return of Foreign Trade of the Empire of Japan.

Financial and Economical Annual of Japan.

* Indicates books for teachers' reference only.

* Directories.

Japan Directory, by Japan Gazette, Yokohama, Japan.

Exporters' Directory of Japan, by Commercial Museum of Agriculture and Commerce.

* Japan Year Book, published by the Japan Year Book Office, Tokyo, Japan, also sold by the Liberty Book Shop, New York City.

* Official Guide to Eastern Asia, including the East Indies, in five volumes, published by the Imperial Government Railways of Japan, Tokyo, Japan.

* Book dealers of whom one may obtain list of their publications:

Hakubun-Kwan, Hon-cho Sanchoe Nichonbashi-Ku, Tokyo, Japan.

Kelley & Walsh, Jimbo-cho, Kanda, Tokyo, Japan.

Murzen Co. Ltd., 11-16 Tori Sachome Nihonbashi, Tokyo, Japan.

China.

* Newspapers (English).

North China Herald, Shanghai, China.

The China Press, Shanghai, China.

* Magazines (English).

Far Eastern Review, Shanghai, China.

Millard's Review, Shanghai, China.

* Directories.

North China Desk Hong List, by North China Daily News and Herald Ltd., Shanghai, China.

Directory and Chronicle for China, Japan, Straights Settlements, Indio-China, Phillipines, etc., by Hongkong Daily Press, Hongkong, China.

* China Year Book (1919-20, just out.) E. P. Dutton, New York City.

* Singapore and Straights Settlements Directory, by Fraser & Neave Ltd. 11 Collyer Quay, Singapore, Straights Settlements.

India.

* Magazines (English).

The Indian Review, George Town, Madras, India.

The Hindustan Review, Allahabad, India.

The Modern Review, 210 Cornwallis street, Calcutta, India.

* Frank Waterhouse & Co. get out a Commercial Geography called Pacific Ports, published by the Terminal Publishing Company, Seattle, Wash., which gives a great deal of interesting information concerning all of the Eastern ports, also steamer routes, harbor rules, railroads, sources of the world's supply of commodities.

A free information service is maintained by the China Bureau of Public information for the purpose of bringing about better relations between China and the people of the west at Shanghai, China.

It is not possible to list in this Course of Study the hundreds of pamphlets and other publications which teachers may obtain free or for the cost of the postage. In "The Normal School Bulletin" listed above,

* Indicates books for teachers' reference only.

teachers will find the sources of hundreds of pamphlets, their value, how to obtain them, where to find new material to keep up-to-date with the geography, and all the other suggestions which teachers need in regard to the accumulation of a wealth of valuable aids to the teaching of geography.

The Bureau of Education at Washington, the Bureau of Statistics, the Superintendent of Documents at Washington, many other government catalogues, the American Consuls in foreign cities, almost all firms, societies, railroad and steamship lines are only a few of the possible sources of such educational material. Lack of space prevents a publication of all these, but, if use is made of those mentioned in this Course of Study, the avenues to countless others will be opened.

MAPS.

Maps and globes cannot be used too frequently, but it is hoped that teachers will eliminate a large part of the work that has always been connected with map study by some teachers: the learning and reciting from maps long lists of cities, capes, bays, etc. It is all right and well to mention place names, but in the course of the year, the sixth grade pupil has but little time to *learn* place names. There is a difference between the frequently repeated, and suggestive mention of the city of Hamburg with all that it means and the mechanical learning of "Hamburg is in the north-western part of Germany at the mouth of the Elbe River." Such memorizing is to be deplored and it is hoped that teachers will substitute real teaching for such a mechanical memorizing process. Then children will *know* facts, not merely memorize them. For example, a child looks at the dot which shows the position of Hamburg, while the teacher says, "Now look hard at that dot, and keep on looking while I talk and see if you can see all the things that the dot stands for. Let the dot grow bigger and bigger as you look at it, and, pretty soon, you'll begin to see Hamburg,— see that big, busy city with all its docks and wharves, and ship building plants and factories, etc."— until soon the child knows Hamburg so well that the mention of it thereafter brings not to his mind a picture of a map with symbols on it, but a great city with a harbor like Boston, and ships coming and going from the city, etc. The Rhine river becomes, by concentration, no longer a black line whose beginning, direction and end must be laboriously traced, but a wonderful great stream with cities and towns and castles and vineyards and boats, etc., upon it. (See such books as Carpenter's Europe for descriptions).

There is a very definite place for fact geography, but we must remember that the lesson on geography is to teach the child to think as well as to master facts. No teacher can be expected to teach this Grade 6 Geography (and History) Course well unless she has ready access to a reasonable number of wall maps, blackboard outline maps, and individual maps for her class. The smallest number of maps from which any Grade 6 teacher could be expected to teach is as follows: Political Maps of the World, Europe, Asia, and Africa; a blackboard outline map of the World.

The teacher who finds it possible to have an extensive equipment could utilize a Political Map of the World, Europe before the signing of the Peace Treaty, New Europe, Asia and Africa; a Physical Map of Europe, one of Asia (or one of Eurasia), one of Africa, Australia, and North America

(for comparisons): blackboard outline maps of the World and all the continents. Most teachers, however, will doubtless be called upon to exercise their generosity by sharing their maps with others, or their ingenuity by making or having made those maps which they are unable to obtain. Every teacher will, of course, want a new map of Europe, and the children can make the map on large sheets of card board which may be obtained from the school. Excellent maps may be obtained from newspapers and magazines.

Teachers should order for each child two individual outline maps of the World, Europe, British Isles, Asia and Africa.

Careful planning should be made of the number of uses to which each map is to be put in the course of the year's work in geography and history. Printed directions and numerous suggestions for their use accompany each set. The most important uses are to show:

1. Areas of production: The regions where cotton, wool, silk, coal, etc., are found.
2. Commercial routes: The principal steamship and railroad lines.
3. Industrial areas: The regions of commerce, manufacturing lumbering, etc.
4. Commercial and other important centers.

Plasticine maps, maps of flour and water or plaster of Paris, are of truly educational value if teachers and pupils have a good sense of proportion; but a map of Europe with plasticine as thick around the coast of Holland as it is in central Europe is of little educational value. If teachers have their classes well in hand, if the pupils first trace an accurate shape for the region they are to make, if the children carefully follow the detailed directions of the teacher, and if the work is done in small groups (perhaps at such times as when some of the class are at manual training, the Forsyth, the Children's Museum or the Art Museum) excellent maps may be profitably made.

In making the maps of flour and water the two should be mixed to the consistency of dough, so that it can be easily kneaded. The plaster of paris should be mixed with vinegar as it hardens too rapidly if mixed with water.

Maps and charts of product and their areas of production form a pleasurable and profitable means of teaching facts.

Maps, Charts, Globes, etc., for Use in Grade VI.

The following are taken from School Document No. 11, 1918, List of Authorized Text and Supplementary Books.

Bacon, G. W., editor. Excelsior Physical Maps. J. L. Hammett Co.

Excelsior Political Maps. (9 in set.) J. L. Hammett Co.

Faneuil Series of Blackboard Outline Maps. Kenney Bros. & Wolkins.

United States.

North America.

Europe.

Africa.

Asia.

World on Mercator's Projection.

Faneuil Blackboard Globe (12 inches). Kenney Bros. & Wolkins.

- Faneuil Terrestrial Globe with Stationary Meridian (12 inches). Kenney Bros. & Wolkins.
- Grand Series — political, with names; outline, without names.
- Hachette's Map of France. J. L. Hammett Co.
- Hammett's Blackboard Outline Maps of the World, United States, North America, Europe and Mediterranean Countries, Mercator Projection.
- Hammett's Twelve-inch Blackboard Globe with Meridian.
- Hammett's Twelve-inch Excelsior Globe with Meridian.
- Imperial Blackboard Maps Lithographed.
- Johnston, W. and A. K. Maps: Commercial and library chart of the world. (72 by 56.)
- Grand Series: Central Europe, France, Spanish Peninsula.
- Imperial Series: Africa, North America, South America, Asia, United States, United States possessions, map of the world.
- Johnston's Twelve-inch Blackboard Globe.
- Johnston's Twelve-inch Globe.
- McKinley's Geographical and Historical Outline Maps. Hinds, Noble & Eldredge. (Elementary schools.)
- Phillips' Comparative Series of Physical Maps: World, North America, British Islands, Europe, Asia and Africa.
- Phillips' Comparative Series of Wall Atlases. (33 by 43.) Asia, Europe, Africa, Australia, British Isles. Kenney Bros. & Wolkins.
- Relief of Land and Communications.
- Natural Vegetation.
- Economic.
- Density of Population. (Not yet on the authorized list.)
- Political divisions.
- Climate — summer conditions.
- Climate — winter conditions.
- Temperature.
- Phillips' Political Series of Large Schoolroom Maps. (68 by 54.) Kenney Bros. & Wolkins.
- The World on Mercator's Projection.
- The World in Hemispheres.
- North America.
- Europe.
- Africa.
- United States.
- Asia.
- Sydow-Habenicht. Physical Maps of the Two Hemispheres. J. L. Hammett Co.
- Europe.
- Asia.
- Africa.
- See 1920 additions to the Authorized List for new maps of Rand, McNally Publishing Co., Chicago.
- Outline maps are published by Babb & Co., Boston; Milton Bradley Co., Boston; Silver, Burdett Publishing Co., Boston; Educational Publishing Co., Boston; McKinley Publishing Co., Philadelphia; and Iroquois Publishing Co., Syracuse.

PICTURES.

Pictures, like maps, models, diagrams, and excursions in Boston, reproduce in some measure the features of foreign life which the teacher wishes to emphasize. Pictorial geography instruction should occupy as important a place as the language work of instruction. Pictures serve their purpose when they bring out in strong relief the features which the teacher wishes to emphasize. Children should see all kinds of pictures and so many of them that they will be able to recognize regions or people. For example, in teaching Holland, in order that children may get a good picture of the Dutch, they should see as many pictures as can be obtained. Thus they will be able to project themselves into the scene as actual witnesses. They must be furnished the materials that will give them correct imagery of the historic windmill, the sluggish river, the land so flat that from a high tower almost the whole country can be seen, the dikes, the reclaimed land, the alarm bells, the Dutch fishing boats, the boats on the canals in summer and the whole family on skates in winter, the wooden shoes, short petticoats, gay head dresses, etc., etc.

School Document No. 6, 1913, Report of the Committee on Instruction by Means of Pictures, contains valuable sources of pictorial material. Some of the magazines listed in this Course of Study furnish excellent pictures. Chief among these is the National Geographic, back numbers of which may be bought for a trifling sum. Pupils and teacher can make valuable collections from advertising material, post-card views, magazines, etc. Such material should show intelligent arrangement accompanied by suitable questions. Hit-or-miss collections are valueless. The pictures may be mounted or placed in class or individual scrap (clipping) books. The class (or individuals) would do well to keep such a book for each foreign country to be studied. Into these may be placed pictures, post-cards, clippings, etc.

Pupils can aid in the bringing in of much that is geographical and historical. They will be interested in collecting pictures and educational articles from magazines and newspapers. Thus will be brought about a real relationship between the school-room and current events. Also, it should, incidentally, train the mind away from the too frequent tendency of using periodicals for acquiring sensational information only.

The National Geographic Society has reproduced many of the beautiful illustrations contained in its magazine. These may be purchased in sets.

Teachers will, of course, make use of the opportunities afforded by the Boston Public Library, from which pictures of geographic interest may be borrowed at any time. The Art Museum and the Children's Museum welcome pupils at all times for illustrated talks. Children should become very familiar with these three educational factors in their city.

PRODUCTS AND OTHER ILLUSTRATIVE MATERIAL.

The May, 1917, Journal of Geography, the Eastern Illinois State Normal School Bulletin, and a small pamphlet entitled Supplementary Materials for Teaching Geography in Elementary Schools, by J. W. Hubbard, State Normal School, Worcester, Mass., contain lists of firms and other sources of illustrative material. Teachers will find manufacturers anxious to co-operate with the schools by furnishing such material. Lack of space prevents such a listing in this Course of Study.

STEREOGRAPHS, LANTERN SLIDES AND THE PATHESCOPE.

See Report of the Committee on Instruction by Means of Pictures — School Document No. 6, 1913. See, also, catalogues and other published material of picture firms. The next best thing to actually visiting a region, or an activity is to see it through the stereopticon, lantern slides, or moving pictures. This means of visualization should be used very frequently.

Teachers may prefer to arrange their own slide collections, uniting the best slides of different firms. For Grade VI the following slides may be used with the study of Japan and other countries.

Silk.

K-Keystone. U-Underwood.

- K538. Silkworm incubator, Japan.
- K539. Gathering mulberry leaves for silkworm, Japan.
- K540. Picking special mulberry leaves for infant silkworm, Japan.
- K541. Tray full of squirming silkworms, Japan.
- K542. Feeding mulberry leaves to young silkworms, Japan.
- K543. Making nests for the silkworms, Japan.
- K544. Silkworm cocoons in their nests, Japan.
- U865. Cocoons of the silkworm in mulberry bush, Syria.
- K545. Separating cocoons from their nests, Japan.
- U866. Steaming cocoons to deaden the worms, Syria.
- K546. Reeling silk from cocoons, Japan.
- U871. Primitive method of weaving silk, Syria.
- K547. Boiling cocoons and reeling silk, Japan.
- K548. Reeling silk, Japan.
- K549. Weighing raw silk, Japan.
- K550. Drying room, Japan.
- K551. Native silk weaving plant, Japan.
- K552. Spindle room, Japan.
- K553. One of Japan's largest modern silk weaving plants.

Wool.

- U991. Drink for 5,000 sheep, Australia.
- U985. Shearing sheep by electricity, Australia.
- U878. Loading wool on rafts, Mesopotamia.
- Manufacturing in the United States.
- U17. Sorting wool.
- U18. Carding.
- U19. Spinning.
- U20. Twisters.
- U24. Inside weaving rooms.

Rice.

- K557. Preparing field for planting, Japan.
- K558. Planters at work, Japan.
- U971. Pulling up young rice plants ready for transplanting, Japan.
- U972. Transplanting rice, Japan.
- K559. Rice harvest, Japan.
- K561. Rice harvest, Japan.

- U920. Harvesting rice in Ceylon.
- K562. Threshing machine, Japan.
- K563. Baling rice, Japan.
- U908. Handling tons of rice.
- K565. Eating rice with chopsticks, Japan.

Tea.

- K492. Tea gatherers, Ceylon.
- U973. Girl picking tea, Japan.
- K564. Tea on uplands, Japan.
- K566. Among famous tea fields, Japan.
- K568. Selecting tea leaves, Japan.
- U932. Coolies unloading tea, China.

POSSIBLE EXCURSIONS.

In this grade, as in all grades, excursions will be found most valuable in the teaching of geography (and history).

Before the excursions the teacher carefully plans

1. Her motive for the excursion.
2. That children know definitely the purpose of the excursion.

This should be talked over by teacher and pupils and placed on the board, for, after all, "What we see depends largely on what we look for." Unless every child knows what he is to look for, the time spent in an excursion is wasted.

3. That children find and understand the points of information.
4. Classroom talks on the excursion.
5. Use of text-books to verify or enlarge knowledge acquired.
6. Compositions, letters to friends, etc., so that the teacher may judge of how accurate, deep and interesting the impressions have been to her pupils.

Below is published a list of possible excursions. It is merely suggestive, and it is rather hoped that all teachers will not make use of the same excursions. Teachers should never take more than half their class at any one time, and, where the excursion is to be to a store or other place of small space, it is not desirable to take even as large a number as that. Children should be directed to refrain from touching the property of others.

Ishikawa, S. & Co., Japanese Importers, 472 Boylston street.

Salada Tea Company, Oriental, Berkeley street.

Yamanka & Co., Oriental, 456 Boylston street.

Stohn C., Textile Novelties-Silk, Bradlee street, Hyde Park.

Hecht, Wool, 497 Summer street, Boston.

Plant's Shoe Factory, Jamaica Plain.

Navy Yard, Charlestown.

Aetna Mills, Watertown.

Hews, A. H., Pottery, Cambridge.

Art Museum and Children's Museum.

Wharves and Docks.

The above are suggested because:

1. They tie up life and industries of the Eastern Hemisphere with life in Boston.
2. They give the child visible evidence of that which he has learned from such secondary sources as text-books, newspapers, etc.

3. They give him very clear ideas of people, occupations, competitions, sources of needed supplies, and the resources of foreign countries.

DETAILED COURSE OF STUDY.

The study of any series of problems must leave in the minds of the children a definite fact basis.

The following is suggested as a type of the Minimum Essentials.

For example, in a study of

Europe as a Whole.

At the end of September the child should know, in brief, that

1. Europe is the continent most closely related to us because all our forefathers and some of us came from there and because we are very closely connected by trade.

2. Europe is the home of a great many people and of most of the great powers of the world; the home of ancient peoples (*e. g.* Greek and Romans) and the home of the English, Irish, Scotch, Italians, Russians, Germans, Scandinavians, French, Dutch, etc.

3. The people of Europe are mainly of the white race and are largely well educated, hard-working and progressive, and employed in all the modern industries.

4. They suffered great changes in their fortunes and relations to the rest of the world by the World War. (This will be touched in more detail in the study of separate countries.)

5. Europe has splendid opportunities for all the leading industries, agriculture, manufacturing, commerce, mining, and fishing, because of its natural resources, position in the center of all the other continents, climate (effect of latitude, Gulf Stream, prevailing westerlies and position of mountains), very irregular coastline, navigable rivers, etc.

6. Europe has certain (name them) large countries, cities, rivers, seas, mountains and trade routes, the most important of which the child should know.

7. Europe is located (name directions) with reference to other continents and oceans and hemispheres. Its great resources are:

Note.— Only that which is to be of some specific value to the child should be learned.

The ground to be covered in the study of Europe as a whole and of England has been indicated in this Course of Study. It is not necessary to indicate the ground to be covered in the study of every country. The time allotted to its study, the material found in books and other educational material, and the few suggestive problems in this Course of Study will show the teacher whether it is a great power or one of minor importance and the phases which she should emphasize. No attempt should be made to limit the teaching solely to the problems embodied in this Course of Study. They are simply suggestive.

PROBLEMS.

Any problem can be expressed in a variety of different ways. The same subject-matter may thus be reviewed by varying the wording of the problem in three or four different assignments.

The first problem might well be expressed in any of the following ways:

Although Europe is only about the size of Canada, more than one fourth of all mankind live there. Why?

or

Europe is well fitted by physiographic advantages to be the home of many people, in spite of its small size. How?

or

Europe contains more of the great nations than any other grand division. Why is it?

or

Europe has a greater commerce, greater manufacturing and greater wealth than any other continent. Why is this so?

or

Europe is a most important continent. What physiographic advantage makes it so?

or

Europe is the smallest of the continents and yet one fourth of all the world's people live there. Why is this so?

Note.— Each pupil should be provided with a desk map of the world to outline Europe and to discover the following facts:

1. *Position.*— Europe is most fortunately located in the center of all continents. It has easy access to all parts of the world, and thus has excellent opportunities for commerce. Europe is in the northern part of the eastern hemisphere. It is east of our continent, west of Asia and northeast of Africa.

Note.— At this time it is well to explain by illustration of streets (see Tarr & McMurry, page 93) the meaning of latitude and longitude. Then pupils can get the latitude and longitude of Europe, and compare it with their own continent, country, and city.

2. *Climate.*— Europe is mainly in the temperate zone, where men can work and where the changing of the seasons forces people to be industrious and enables them to work all the year round. The prevailing westerlies sweep over the land and all parts of the continent are well watered, *i. e.*, there are no waste lands.

Note.— Review zones. Using same outline maps of the world, darken in the mountains of Europe, learning their names and reading of their history and scenery. Use stereopticon and other pictures.

The pupil may, or may not, have learned in previous grades from observations and from inference in journey geography that in the north temperate zone the winds blow from the west and are called prevailing (constant) westerlies. But he has been making a great many observations of weather conditions while in the earlier grades, so now he should be ready to make some use of these facts which he has acquired through his observations. So he may be expected now to be able to indicate on this same outline map the course of the winds which blow over Europe.

Review should now be made of the following:

- (a.) That in our latitude west coasts are warmer.
- (b.) The meaning of oceanic and continental climates.

3. *Coastline*.—Europe has the most irregular coastline of all the continents, and so she has more fine harbors than any of the continents. This is of great advantage to commerce.

Note.—Use of sand table or clay by teacher and pupils. Use individual maps, either the World maps used above or maps of Europe, to trace in the great length of European coastline.

4. *Rivers*.—Europe has a great number of very navigable rivers. Because they are navigable for such a great length, even inland parts of this continent may be reached by ocean steamers.

Note.—Use individual desk maps for coloring in rivers and showing drainage basins of Europe. If time permits, make up for solution problems suggested by the rivers of Europe.

5. *Natural Resources*.—Europe's mines are abundant in their riches and so manufacturing on a large scale results. Europe's land is most productive.

Note.—Independent study by the child of the maps of the corn, wheat, cane and beet sugar, cattle and sheep, coal, petroleum, iron, gold, silver, and silk producing areas of the world should come at this point.

6. *Soil*.—Europe has but little unproductive soil and (by intensive farming) it is well adapted to feed many people.

As will be seen, it is almost impossible to suggest one problem without others arising immediately on its trend. In fact any one problem may be followed by others. No matter how much material is offered by the child for the discussion of the problem, or how much ground is covered, he should never lose sight of the question he started out to solve. A problem dealing with a continent as a whole must, necessarily, cover considerable ground and time. But if the teacher feels that the handling of such a problem is too great an undertaking she can readily divide it into several parts, as:

The climate has been an important factor in the great development of Europe. How?

and

How has its position, or natural resources, or coastline, etc., helped its great development?

or

Even the splendid coastline of Europe would not be of much use if it weren't for two factors of climate. What are these?

The prevailing westerlies give Europe a mild climate and the Gulf Stream (the greatest and most helpful of ocean currents) keeps most of the harbors free from ice despite Europe's latitude.

The principal mountains of Europe stretch across the southern part of Europe in an east and west direction. How has their position influenced life?

1. They have not prevented the prevailing westerlies from spreading all over Europe and thus giving rainfall to every part of it, with the result that there are no barren desert regions where man cannot live.

2. For the reason suggested in 1, there are many navigable rivers all over Europe due to the good rainfall everywhere and due to the heavier rains and glaciers on top of the mountains.

3. They protect against the cold winds of the north and thus give the Mediterranean countries a warm climate which leads to semi-tropical products.

4. In the World War and in ancient times they have served as barriers to travel.

5. By separating the mountain people from the rest of the world they have developed a civilization and character peculiar to mountain regions, *e. g.*, the Swiss.

Europe is divided into many countries. Why are there so many separate countries in such a small continent?

1. Mountains separate the different parts of the continent, as the Pyrenees separating Spain, and the Alps separating Italy from the rest of the continent.

2. Seas and other bodies of water separate various parts of the continent almost wholly from each other, as Spain is separated by its surrounding water, and the British Isles, and Scandinavia, Italy, Greece, etc.

3. Such separation results in division of the people politically. This makes them differ from one another in ideals, ambitions, mode of living, industries and customs.

PROJECTS AND MOTIVATED DRILLS.

1. Make a list of all the people you know whose ancestors have come from different parts of Europe.

2. Draw a map of Europe showing the political divisions before the World War and those that exist after the Treaty is signed.

3. Compare the principal products of each country of Europe with those of your own country.

4. Bring in anything you can find that has come from Europe and prepare a talk on it.

5. Invite one of your friends who has been to Europe to come in and tell us of his journey.

6. In your home make a product map of Europe.

7. On an outline map of the world color in red all the countries of Europe that fought with the Allies; in green the Central Powers; in brown the neutral countries.

The study of the coastline, rivers, natural resources, and other physical features gives us the cities to be studied. These include as the minimum list in:

England: London and Liverpool (Commercial); Manchester and Birmingham (Manufacturing).

Ireland: Belfast and Dublin.

Scotland: Glasgow.

France: Havre, Brest, Marseilles, Bordeaux, St. Nazaire, St. Etienne, and Paris.

Germany: Berlin and Hamburg.

Russia: Petrograd and Odessa.

Italy: Rome, Naples and Milan.

Austria: Vienna.

Netherlands: Rotterdam and Amsterdam.

Belgium: Antwerp and Brussels.

English Colonies: Cairo and Alexandria in Egypt, Kimberly, Johannesburg and Cape Town in South Africa, and Sydney and Melbourne in Australia.

Every physical feature furnishes a number of problems. Indeed, an abundance of well-defined problems quickly rise from every angle at which we look at a continent, country or city.

MEDITERRANEAN COUNTRIES.

Italy.

Problems.

Manufacturing in Italy is not as extensively practiced as agriculture. Why is this?

or

More than half of the Italian people are engaged in agriculture. Why?

1. Lack of coal and iron for manufacturing.
2. Rich, level, and well watered soil for agriculture.
3. Climate mild because
 - a. The great Alpine Mountains protect Italy from cold north winds.
 - b. Warm winds from the Mediterranean.
4. Great growth of mulberry trees, rice, grapes, olives, and all semi-tropical products.
5. No great skill of the Italian people (until recently), in the use of the complicated machinery necessary for manufacturing.

Milan is the most important manufacturing and trading city of Italy. What makes it so?

1. Its position on a lowland surrounded by the rich valley of the Po, a region where mulberry trees grow.
2. Its position on the route southward from two of the great railroad tunnels through the Alps.

(Note that this city has developed despite the fact that it is not located on any body of water.)

The volcanoes of Italy have an important effect on the life there. How?

1. The melted rock or lava, stones and dust from the volcanoes fall on the mountain slopes, building them up and eventually making fertile soils.
2. The people make gardens, vineyards and homes around the foot of the volcanic mountains.
3. Sometimes the volcanoes have eruptions which endanger the lives of the people.

As has been said before in the Course, all cities studied may have problems accompanying their study in order that the children may understand the reason for their development.

Venice and Milan are in the same latitude as Montreal. Why is there such a difference between them?

Note.— Review the climatic conditions of Europe.

1. Protection of the Alps against cold winds from the north.
2. Warm winds from Mediterranean waters blow inland over the country.

SCHOOL DOCUMENT NO. 8.

Projects.

1. To Italian children: You said that your uncle lived in Rome. Perhaps he might buy you some beautiful pictures at Anderson's Via Solario.
2. A committee of the boys is going to report on what it sees coming from and going to Mediterranean ports, via the White Star Line.
3. Oral English might be: "Why I Would Like to Visit Venice."
4. Make a visit to the Art Museum to learn of the beauties of Italian art.

Switzerland.

Problems.

Switzerland has often been called "the playground of Europe" but "the workshop of the Swiss."

Solution.—From books available, pictures that show mountain climbing, mountain peaks, mountain passes, tunnels, valleys, glaciers, lakes and lake traffic, waterfalls, avalanches, hotels, motoring, mountain guides, skating, skiing, etc., in Switzerland, let the children learn all they can of Swiss life. The following questions on the board could accompany the supervised study. What effect has the beautiful scenery upon the occupations of the Swiss? What are the various tourist occupations? What are the other occupations of the Swiss besides tourist occupations? How has the surface of Switzerland influenced the occupations? How has water power helped? What are the two drawbacks to manufacturing in Switzerland? How have the people done much manufacturing despite the lack of raw material and coal? (Mostly by hand; lace, clocks, toys, etc.) What is the character of the Swiss people? Can you tell why their country is called the playground of the world?

The little country of Switzerland, surrounded on all sides by powerful nations, has maintained an independent existence. What are the reasons that it has been able to do so?

1. People living among the mountains develop a spirit of independence. (Illustrate by the story of William Tell.)
2. People who are shut in by mountains give their attention to internal affairs and do not interfere with outside affairs.
3. Mountains and lack of sea coast make approach to the country difficult.
4. When other nations tried to conquer the Swiss they made use of the mountain strongholds to which they could retreat.

Iberian Peninsula.

Problems.

Why did Spain lose most of its colonies?

or

Why is Spain now among the weak nations of the earth when once she ranked among nations as the British do now?

Note.—It is impossible to teach geography without teaching some history.

1. The backward state of the development of the people.
2. The mountainous surface of the peninsula which prevents the people from being firmly united.

In the World War, Spain remained neutral. What good geographic reasons were there why she should?

Note.—This same problem could be applied to Norway, Sweden, Denmark, Holland, or Switzerland which also remained neutral.

1. *Position.*—Separated from other countries by mountain barrier on the north.

2. *Coastline.*—Very regular, and so very few good harbors, with the result that commerce and other industries are in a backward state.

Balkan Peninsula.

Introduction.—From the educational material suggested in this Course of Study let the children find out all they can of the great diversity of the language, religion, and customs in this peninsula. The subject matter to be emphasized is that these diversities have been a hindrance to the Balkan people; that Turkish misrule has had marked effects on the countries of this peninsula; that Constantinople has held an important place among the cities of the Old World.

Problems.—The World War has been a means of bringing about very important changes in this peninsula. How?

1. The power of the Turks has been weakened.
2. Constantinople is now an independent city; the outlet from the Black Sea is now internationalized so that all countries can use it freely.
3. The changing boundaries have tended to group together people of the same language.

Projects for Switzerland, Iberian and Balkan Peninsulas.

1. Find out all you can about William Tell; about the history of St. Bernard dogs.
2. Make a map showing Switzerland and her neighbors.
3. Examine pictures that show the national pastime and the recreations of the Spaniards.
4. Read some of the stories of the ancient Greeks.

France and French Possessions.

Problems.

The seizure of Northern France and Belgium at the beginning of the War gave the Central Powers a great advantage. How?

1. They thus obtained possession of valuable mineral deposits: coal and iron necessary for the production of war supplies.
2. They then held the ports through which wool, cotton and food could come in to Europe.

France is the home of one of the greatest nations of Europe. Why?

1. Its position: well shut in by mountains and seas.
2. Its many good seaports.
3. Its navigable rivers connected by a network of canals, naturally fitting it for trade.

4. Its coal and other minerals.

5. Its many streams flowing down from the mountains and giving water power to all kinds of factories.

Why is silk manufacturing one of the leading industries of France?

or

The French have always led the world in the creation of beautiful things and luxuries. Why?

or

Paris has always been the world's centre for artistic manufacturing? Why?

1. The French people have fine skill and artistic taste.

2. Thousands of acres of mulberry trees grow around Lyon. These feed the silkworm and so Lyon makes more silk goods than any other city in the world.

3. France is covered with navigable rivers and many canals which make excellent highways of trade.

4. France has developed a number of excellent harbors for the carrying away of manufactured products.

5. France has a good supply of coal and other minerals, though not as much as Great Britain.

The people of France are very much interested in agriculture. Why?

1. The people own their small farms which they cultivate carefully.

2. Their farms are their chief source of food.

3. Their land is the source of the material for their manufactures: mulberry trees, grapes and flowers.

France is not as great a manufacturing nation as Great Britain. Why?

1. Not as much coal and iron as Great Britain. (Loss of Alsace and Lorraine in 1871 robbed France of rich coal fields. Peace Treaty gives France back these valuable lands.)

2. Not as many colonial possessions, so the people have to turn to food production.

France differs from England in her colonial policy? How?

1. France does not interfere greatly with the native inhabitants of her colonies, developing but not dominating them.

2. England, wherever she has a colony, sends settlers, merchants and soldiers there, builds railroads, establishes schools, and makes the place essentially English in institutions, customs and industries.

Projects.

1. Find out from your friends the meanings of such expressions as "an ironless France" and "the campaigns about Verdun were a fight for iron, as the campaign of Lens was a struggle for coal."

2. Collect clippings from papers that tell about France.

3. Make a map of Africa showing the British possession in green crayon and the French possessions in red crayon.

British Empire.

Problems.

From the following problem it will be seen that one question leads to so many other questions, and so many inferences may be drawn from any

problem that the field it may cover seems almost limitless. A number of problems will develop substantially the same series of thoughts, but give a view at a slightly different angle.

In the World War England was the greatest sufferer from submarine attacks. Why was this nation the one to suffer the most?

1. Because of her *position* (wholly surrounded by water), England had the greatest amount of shipping to be attacked.

Note.—Another problem springs up, "Why had England so many ships?"

2. Because of her temperate *climate* (suitable for industrial life) England was essentially a manufacturing nation and she had to send out ships with her manufactured products.

3. Because of her *coastline* (affording excellent harbors and enabling her to have great commerce) England had more trade and more ships than any other country.

4. Because of her enormous *natural resources* of coal and iron she had put many ships on the seas.

5. Because of her *small area and large population* England's trade necessarily consisted of the shipping in of raw materials and food, as she produced far less than she needed.

In the World War England was not willing to give up even after losing so many ships, for she could build ships almost as fast as Germany sank them. Why was she able to do this?

1. Splendid broken *coastline* that afforded excellent harbors.
2. Short swift *rivers* that furnished water power and that permitted inland navigation so that great ocean liners could sail out from the heart of a city.
3. *Location in the temperate zone* so that laborers could work by daylight for twelve months of the year.
4. *Resources of coal and iron* that furnished power and material for ship building: England never could have ranked high in the world's affairs without these large supplies of coal and iron.
5. *Proximity to the sea*, making ship building and commerce great industries.

Why is England (a little island) one of the chief manufacturing nations of the world?

1. England has the richest coal and iron fields of Europe.
2. England has so many good seaports, railroads and canals, that it costs but little to put the manufactured goods on the ships which are to take them to sea.
3. The people are thrifty and skilled in handling tools and machinery.

Labrador and the British Isles are in the same latitude, yet their temperatures are entirely different. Why?

1. In our latitude the winds blow from the west and they are warm sea breezes (oceanic). Therefore west coasts are warmer, and the British Isles are on the west coast.

2. Labrador does not receive the benefits of warm winds from the Gulf Stream which is deflected eastward near the Banks of Newfoundland.

England's location has been one of the most important reasons why she has become the greatest commercial nation in the world. What were some of the ways in which her location aided her great development?

1. In temperate zone, which makes for progress.
2. In place favored by westerly winds and Gulf Stream.
3. In proximity to other important lands.

A problem might be expressed:

At the outbreak of the War England had a very small army. Why has such a great power no large army?

or

England's navy has always been twice as large as that of any other country. What are the reasons for this?

or

Why are the United States and Great Britain anxious to preserve trade relations with each other?

or

It is most important to Great Britain to maintain great shipping interests. Why?

or

Great Britain has always endeavored to lead the world in commerce. Why?

1. The parts of the British Empire are so separated that England must maintain many ships to keep in touch with them.

2. Because she is wholly surrounded by water, she and her colonies would be at the mercy of other nations unless they made their commercial supremacy felt.

3. Because of her small land area, England must maintain great commerce in order to supply the people of Great Britain with food and raw materials.

Every city to be studied in geography should have a problem like the following to find out the reasons for its greatness.

Liverpool is one of the busiest cities of Europe. What are the reasons for this?

1. Its position on an island accessible to all parts of the world.
2. Its position at the sunken mouth of the Mersey river, with the result that it has one of the finest harbors of the world.
3. The character of the land behind it — rich in natural resources.
4. The accessibility of a manufacturing hinterland — easily reached by water or rail from Liverpool.

Belfast is the chief Irish manufacturing city. Why?

1. Its location on an excellent harbor which gives it connection with Scotland, England and all other parts of the world.

2. Its proximity to the coal fields and iron mines of Scotland where it can get its fuel for making steam cheaply.

3. Its proximity to the iron supply.

4. Its proximity to flax farms where material for the making of linen may be obtained.

Next to London, Glasgow is the greatest city of Great Britain in manufacturing and commerce. Why?

1. The great abundance of coal and iron near by caused the building of all sorts of factories, foundries and shipyards.

2. The industrious people of Scotland deepened the river Clyde until now ocean steamers can come to the heart of the city.

The coal and iron mines of Great Britain have been largely responsible for her development. How?

1. Coal furnished fuel for manufacturing.
2. Iron furnished material to be manufactured.
3. Presence of these both made manufacturing the great industry and thus
4. Great Britain was able to carry on commerce for she had iron goods (as well as textiles) to sell which were made by the use of her coal.

The colonial possessions of Great Britain are of great advantage to her. How?

1. An outlet for her excess population and manufactures.
2. Source of food supply in war and peace times.
3. Source of supply of wool and other raw products, wealth, and man power (as demonstrated in the World War).

Of what advantage is Great Britain to her different possessions?

1. Supplies them cheaply with manufactured goods.
2. Buys their food products and raw materials from them.
3. Protects them by her world supremacy.

Great Britain has to depend on other places for her food supply. Why?

1. Great population to feed.
2. Small area of land on which to produce food.
3. People engaged mainly in industrial pursuits because of the presence of coal and iron.
4. Location near other countries and connection with them by water enabling the cheap and easy transportation of food.

Australia was of great use to the mother country in the World War.

How?

1. Supplied splendid soldiers (called Anzacs—Australian and New Zealand Army Corps).
2. Supplied England and her allies with food products: mutton, beef, and wheat.
3. Supplied wool for the clothing of the soldiers of the Allied countries and for English manufactures.

Most of Australia's people live on the eastern coast. Why?

1. The interior of the island is largely desert and man cannot make a living there.
2. For this same reason (lack of rainfall) there are not many navigable rivers which would invite people into the interior.

Africa.

The first problem on Africa may be expressed.

Africa is the second largest continent and yet it has a smaller population than Europe. Why?

or

Why was Africa never fully explored?

or

Why is Africa called the "Dark Continent?"

or

Although Africa and South America are in the same latitude, South America is a land of republics while Africa is one of colonies which have been settled in the last half-century. Why is this?

or

Although Africa is the second largest continent, it is a land only of colonies. Why has it no important nations?

or

Africa is the home of the least developed type of savages. Why is this?

or

Africa was one of the earliest known continents and yet it has been explored only in the last half-century. When it was known early, why wasn't it settled?

or

Africa is very near Europe and Asia. Why have so few people gone there to make homes?

1. Africa has a regular coast line and almost no good harbors. (Compare coast line of Africa with that of Europe; with that of Australia; with that of North America.)

2. Africa has a climate which is not attractive; it is mainly in the torrid zone where the great heat makes deserts (in the dry parts) and jungles (in the excessively rainy parts) and many parts of the continent are unhealthful (malarial).

3. The rivers are navigable for only a very short distance from their mouths; no ships can go into the interior because of the falls and rapids. (Children delight in answering from their transportation maps of the world, "Why are the lines of transportation into Africa so short along the coast?")

4. The natives of Africa are chiefly of a very low type of civilization and, unable to develop the country themselves, they are unwilling to let others come in and develop it.

If too much ground is covered by one assignment of the above problem, it can be divided to cover two or more periods as:

The climate has had much to do with the lack of development of Africa. How?

1. Torrid zone; too hot for men to do much.

2. Excessive rainfall in parts of the continent; jungles and tropical climate hinder travel.

3. Dryness in other parts; deserts that are difficult to cross.

The coast line and rivers have played a part in keeping Africa the "Dark Continent." How?

1. Regular coast lines; few good harbors.

2. Rivers navigable for only a short distance from coast because of waterfalls and rapids.

In the study of Africa place the emphasis on the parts where the white people center.

Egypt was once a leading power of the world. What made her such a power in early times?

1. People: Cultured, highly developed in art, science and literature, peaceful and progressive.

2. Position: Shut in by bordering seas and surrounding deserts so that the country was protected from invasion with the result that the people could give their attention to internal development rather than to foreign affairs.

Egypt has declined in power until it is merely a colony under the domination of the English. Why?

1. People: A mixture from all parts of the world who naturally did not help to build up a national spirit.

2. No national spirit made it easy for Turkey and England to interfere and get control of the country.

(Discuss the effects on Africa of the coming of European control.)

These two small problems on ancient and modern Egypt might be united into one larger problem: Egypt, formerly a leading power of the world is now a colony of minor importance, under the dominion of England. Why?

Projects.

1. Make a list of the leading products of the various parts of the British Empire and star those which are exported to the United States.

2. Boys, go on Saturday morning to an iron foundry and there you will see one of the leading occupations of English people.

3. Girls, tell your mothers what the different parts of the British Empire furnish the world and see if she can't let you have some of those very things to bring to school Monday and make a product map with them.

4. On your World Outline Map show that "the sun never sets on British possessions."

5. John's brother is in the navy, and stationed at Gibraltar. In his last letter John asked his brother to tell him all about Gibraltar and what it means to England.

6. Give your big sister this puzzle to-night and report to me if she has to "give it up." Find reasons why almost all British trading is done with ships?

7. Make a *map* showing the many transportation lines that connect the different parts of the British Empire.

8. List all the industries of the different parts of the British Empire that helped the Allies to win the War.

9. If you will look up in the library the story of coral, ivory, ostriches, gold or diamonds I shall let you tell it to the class.

10. Draw a map of Africa showing the railroads and make a picture on the deserts of "the ship of the desert." (Camel.)

11. Investigate and find out all you can about where your cotton and woolen clothes come from.

12. Make a list of the Seven Wonders of the world. Check those that were in Egypt.

13. Make a comparison of the Suez Canal and the Panama Canal as to nations building, cost, time, etc.

Germany.

Subject Matter to be Taught.

In these times the teaching of Germany is not difficult because pupils have come into possession of so much valuable geographical material

through current events and experiences of their friends. Our intimate means of intercourse through such conveniences as the airship and wireless make it important that we know Germany, and, indeed, all of Europe, as never before. It is geography that will lead the children to an understanding of what is going on in the world.

The subject matter to be taught is as follows:

A study of conditions in Germany to-day, as to the army, navy, merchant marine, industries and government. One large reason is, of course, responsible for present-day German conditions.

A study of the Germany of 1914 — manufacturing, agriculture, government, ambitions and other conditions prior to the War.

A study of the reasons for the development of the Germany of 1914.

A discussion of the Germany of the future,— what part Germany will play in the future affairs of the world. Questions for discussion: Will Germany ever again have a monopoly of the toy manufacture which Japan has wrested from it? Will it ever again control the manufacture of dyes which the people of the United States find that they can make so well themselves? All of Germany's industries are in the transitional stage; therefore, current events should be very carefully watched.

The problem or the topical method may be used.

It is impossible to teach Germany without some history. It seems well to begin with 1870 and their victorious war with the French, which resulted in a spirit of national pride that led to the development of a stronger German Empire. It is necessary that pupils know of the acquisition of Alsace and Lorraine in 1871, the union of several small states to make the once great German Empire, and the losses to Germany by the recent World War.

The following are typical large fundamental problems or questions around which the subject matter could be organized.

Introduction.—From new editions of Tarr & McMurry's, Brigham & McFarlane's, Winslow's, Frye & Atwood's New Geographies, from War Catechisms, War Pamphlets, from new maps of Europe, from recent magazines and newspapers, let the children study New and Old Germany. It might be well to begin with the new boundaries and compare with the old, although such a comparison would make a good summary problem.

Problem.—Germany has been reduced from one of the most powerful nations of the world to one of the weakest at the present time. What losses to her were the cause of this?

1. Loss of Alsace-Lorraine deprived Germany
 - a. Of iron ore and coal.
 - b. Of very valuable beds of potash.
 - c. Of the great textile manufactures which took place there.
2. Losses in the east: *e. g.*, Poland — meant the loss of large area and great population, with the consequent effect on industries.
3. Loss of greater part of its army, navy, and merchant marine. (Find from the latest available statistics the present size of Germany's army and navy. How does this compare with its size in 1914?)
4. Loss of all colonial possessions in all parts of the world.

Problem.—Germany was very willing to have war. Why?

1. From 1871 to 1914 the German Empire had grown mightily — in population (from 40,000,000 to 70,000,000), in mining, manufacturing, and commerce, and they wished to keep on expanding.

2. They had a few colonies, but these were unprofitable because all the lands that were desirable and suitable for colonization had been occupied before the German Empire was created; therefore expansion could come about only through conquest.

Problem.— For over three years Germany was able to contend against the whole world. Why?

or

Before the United States showed herself to be greater, Germany was almost supreme in her commercial power. What had caused her to become thus supreme?

1. Its government: All the states were combined under an autocratic Kaiser into one great confederation for protection against the rest of the world and to better themselves in commerce.

2. Its land: It contained more land than any of the other European states except Russia and Austria-Hungary, and every bit of its territory was used for something. Every square foot of it was used for agriculture, stock raising or some other industry.

3. Its natural resources: It had many iron mines and rich supplies of coal and all other minerals and well-cared for forests which furnished the necessary materials for ship building.

4. Its location: It was situated in the heart of Europe, surrounded on all sides by rich nations.

5. Its waterways: The empire had a fine water system of navigable rivers, net-work of canals and excellent harbors.

6. Its railroads: For fifty years the Germans had built railroads all over their country, even right to the Belgian border, which was a country that all the powers of Europe had declared "neutral."

7. Its great industry "preparation for war": Germany spent enormous sums equipping the best and strongest army in the world.

8. Its people: Their population, before the war, was second only to Russia. The people were taught to believe that Germans were the wisest people on earth and that it would be a good thing for most other peoples to have Germans rule them. They said that Germans had done more than any other people in science, in art, in music, in literature, in fine business management of every kind, and so were the only people who knew enough to manage other people.

If such an assignment seems too ponderous the subject of Germany before the World War may be treated by dividing this large problem into such small ones as, "How did the government help to make Germany, etc.?" "How did the industrial conditions help, etc.?" "How did the natural resources help, etc.?"

Projects.

1. At 40 Mt. Vernon street get a copy of the Peace Treaty and see just what Germany lost by the Peace Terms.

2. Sketch a map of the Germany of 1914; over it put the boundaries of present-day Germany.

3. In the Consular report of November 1, 1919, or in any other reports, see what authorities prophesy for the Germany of the future.
4. List the moral lessons which the study of Germany has taught you.
5. On a map of Africa indicate former German possessions. How is the removal of Germany from East Africa of advantage to the British Empire?

The Netherlands.

Problems.

What conditions make dairying the chief industry of the Dutch, and where do they find a ready market for their products?

or

Holland has been called "the dairy market of Great Britain." Why?

1. Holland has very little coal and iron, so the people have to turn to the raising of live stock and gardening for a living.
2. Great Britain has much coal and iron, so the people there are engaged in manufacturing, with the result that they have to import all their poultry, eggs, cheese and butter.
3. Because the two countries are so close to each other, Great Britain naturally turns to Holland for these products.

Although Holland is a very small country, it is an exceedingly important country. What makes it so?

or

In spite of its small size, Holland is one of the greatest commercial nations of the world. Why is this so?

or

The Dutch have always had to seek their fortunes in trade, in which they have been very successful. Why?

1. Holland's position on the sea gave the Dutch easy access to the sea and thus to other parts of the world. This led to the founding of colonies.
2. Holland's position right at the northern entrance to Europe surrounded by the great nations of Europe, naturally determined that commerce would be a leading industry of the Dutch because Holland could act as a forwarding medium for the other countries of Europe.
3. Holland's coastline, although short, contains two excellent harbors, so that the Dutch always found it easy to trade.
4. The people of the Netherlands are very industrious, persevering, determined, thrifty, shrewd, hard working, and have suffered much in draining their land from the sea and in obtaining their freedom.
5. Their land is covered with a net-work of canals and railroads and is still further connected with the rest of Europe by the Rhine river which crosses Holland.

Projects.

1. Collect all the pictures you can that show how the position or the character of the land influence the occupation of the people.
2. Boys can construct a miniature wind-mill from descriptions and pictures which may be obtained.

3. Use sand table to show the necessity for canals in Holland, the necessity for so many bridges for the railroads, etc.

4. Girls can dress up in Dutch costume. Dutch scenes (as also the Japanese, Chinese, Swiss, Italian, and Scotch) are so picturesque that little children delight in portraying them in the school-room. This may be done through the use of costumes, dolls, crepe paper, etc.,—in a variety of different ways suggested to the teacher in her visits to foreign shops and such stores as Dennison's.

Belgium and Belgian Colonies in Africa.

Problems.

In the World War the Germans wanted the greater part of Belgium. What especial advantages had the possession of this territory to them?

Note.—Discuss agreement and treaty concerning the neutrality of Belgium, for, after all, politics is only sectional geography.

1. Germans could gain access through Belgium to France.

Query.—Why was Belgium not fortified on its borders as was France?

2. Possession of Belgium gave Germany ports, factories, and very valuable iron and coal mines.

Belgium has always been called the busiest workshop of Europe. Why?

1. Character of the people.
2. Natural Resources.
3. Industries.
4. Important Cities.

Indications point to a high rank among the world's powers for the Belgium of the future. Why will Belgium receive such a place?

1. Belgium's checking of the invading Germans has given her a recognized place as the world's savior. (Tell the story of invasion of Belgium and the probable results to us if Belgium had not held the enemy.)

2. Belgium is rich and well favored in its natural resources, so that it is able to take an important place among the manufacturing nations of the world.

Projects.

1. Make a map of Belgium showing the density of population.

Problem.—Belgium is the most densely populated country in the world, and yet, its industries are thriving and its people happy and contented. Account for this. (When Asia is studied, a comparison may be made between the prosperity of this country and the poverty and lack of industries in India and China where the population is a little less dense than in Belgium.)

2. Using arrows and words or pictures placed on the ocean, indicate the products that leave and arrive at Belgium; show their destination or source.

3. In your scrap book of Belgium, check those items or pictures which relate to war or its causes or results.

Scandinavian Countries.

Problems.

Most of the people of these countries follow the sea. Why?

or

Of all the neutral countries in the War, Norway lost more merchant ships by submarines than any other. Why?

or

What influence has the position or shoreline or climate on the industries of these countries?

Solution.— From the study of Norse stories, pictures, collections, and the text, find out the language, appearance, leading occupations, exports and imports of these countries. How has the peninsular location of these countries affected their occupations? How has the great extent of highlands in Norway (with the small lowland) affected agriculture, manufacturing, fishing, commerce? How have the products been affected? The narrow, mountainous land of Norway and Sweden has had what effects on the traits and characters of the people? The position surrounded by water has had what effects? (Correlate with what children have learned in American History of the importance of fishing in the discovery of the New World.) What have been the effects of latitude upon these countries? What raw material is found in Norway? What are all the conditions that make the Norwegians seafaring people and great shipbuilders? Why has Norway a large share in the carrying trade of the world? Why did the submarine attacks prove particularly disastrous to her?

In the World War, although Sweden remained neutral, she rather favored Germany's side. Why?

1. Position close to Germany.
2. Trade relations between Sweden and Germany.

Agriculture and dairying are the principal industries of the people of Denmark. Why?

1. Land is flat and so contains but little water power.
2. Land contains no coal for steam power.
3. Land contains no mines or timber land.
4. There is only agriculture (or fishing) to occupy the people, and, as they are intelligent, they successfully till the soil.

Projects.

1. Make a list of the things which you would have to know how to do if you lived near a fiord.
2. Make at home a picture or a model (for boys) of a Viking ship.

Russia.

Problems.

Russia has much less manufacturing than some of the smaller countries of Europe. Why?

Note.— Why is its manufacturing likely to increase? What steps could Russia take to improve industrially? etc., etc.

or

Russia, in spite of its enormous population and wonderful natural resources, is very backward industrially and culturally. Why?

1. Its poor government.
2. Its large illiterate population, due to lack of education.
3. Its continental climate.
4. Frozen seaports on the north and west, due to location and climate: needs other ports.
5. Lack of skill in use of machinery.

This problem could be made simpler:

as

Lack of seaports have hindered Russia's development. How?

Climate has hindered Russia's development. How? etc., etc.

Odessa is Russia's chief seaport. What geographic conditions make it so?

1. Its position further south than the ice-bound ports on the north and west of Russia.
2. Its position on the Black Sea.
3. Its good harbor.
4. The vast country behind it, great level fertile plains rich in wheat, barley, rye and flax; great forests, many fur-bearing animals, valuable deposits of coal, iron, gold and platinum, a country of navigable rivers and a surface good for railroads.

In the World War, why did the Allies make such efforts to get control of the Dardanelles?

or

Russia always wanted to control Constantinople. Why?

1. Russia's only outlets for its great supply of natural resources are through its ports on the Baltic or through the Dardanelles and the Bosphorus, the only straits giving passage from the Black Sea to the Mediterranean.

2. Constantinople controlled these straits, and, until 1918, Russia was prevented from shipping grain and all other products except with the consent of Turkey. All the other nations of Europe (as well as Russia) were hindered in their shipping in the same way. Largely because of jealousy of one another, fear that others might secure greater advantages, they had not compelled Turkey to open these straits to all until the World War.

3. During the World War the ports on the Baltic were controlled by Germany, and some other outlet had to be found for Russian products.

Projects.

1. Make a map showing Russia and her neighbors.
2. Find out if you can why an alliance between Great Britain and Russia is of advantage to both of them in times of peace and war. (Example of a project involving problems.)
3. Why have Russia and Germany each always been anxious to control Denmark? Study of population and production area maps will give the answer to this.

Poland, Czechoslovakia, Jugoslavia, Hungary and Austria.

Introduction.—Examine text and pictures in recent editions of Tarr & McMurry's, Brigham and McFarlane's, Winslow's and Frye & Atwood's Geographies, newspaper clippings and all other sources of information.

History cannot be separated from the geography of these countries. Explain to children that these countries were formerly all largely a part of Austria-Hungary and other central European countries. The reasons for their present independent existence should be explained.

Problems.

Territory was taken from Germany, Austria and Russia to form the new country of Poland. Why should this have been done?

1. The people who occupied this territory were of Polish nationality.

2. Former independence: Germany, Austria and Russia had taken territory from them and robbed the Polish people of their independence. Under the treatment accorded them by these countries, the Poles had maintained their language and national aspirations under great difficulties.

The United States staunchly demanded independence for Poland. Why?

1. American population contained a fairly large per cent of Polish people.

2. Polish officers gave aid to the United States in her struggle for independence and relations between Poland and the United States have always been friendly.

Agriculture is the principal industry of these countries. Why? (Czechoslovakia has some manufacturing.)

1. Unworked coal deposits responsible in some places — lack of coal in others.

2. Lack of seacoast, making it difficult to transport goods.

3. People not progressive for several reasons.

Problem for the Study of Asia as a Whole.

Introduction.—Examine pictures and read descriptions showing dense populations in India and China and sparse populations in northern, central and southwestern Asia.

Main Problem.—Why do so many of the people of India and China live in crowded settlements while the people of other parts of Asia are widely scattered?

Subordinate Problem. 1.—Why are parts of India and China densely populated?

Solution.—Examine pictures and read from texts and other sources showing the crowded conditions existing in parts of these countries.

Locate the most densely settled regions.

Describe carefully some of the chief occupations. Why do the people do these kinds of work? Study food, dress and homes of the people. How much must the people earn in order to make a living? How do the surface and climate aid the people in their occupations? Why can so many people live in a small area?

Subordinate Problem. 2.—Why are there so few people scattered over the plains of northern Asia (Siberia)?

Solution.—Study pictures, texts and other sources to learn habits and customs of the people and the surface and climate of the country. Describe carefully the chief occupations of the people. Why are

the people engaged in these kinds of work? How do the surface and climate aid or hinder the people in their work? Why do so few people live in this region?

Subordinate Problem. 3.—Why is central Asia sparsely settled?

Solution.—(Follow outline of Subordinate Problem 2.)

Subordinate Problem. 4.—Why is southwestern Asia sparsely settled?

Solution.—(Follow outline of Subordinate Problem 2.)

Note.—Questions should be answered in so far as possible by pupils as the result of the study of pictures, text-books, geographical readers and collections of products of the country. In general not more than three or four lessons should be given to the study of this continent as a whole. More thorough study of any part of the continent may be made in a specific treatment of that part. It is suggested that the fifth lesson on Asia as a whole might be a simple solution of the problem "Why is the heaviest rainfall in the world at the base of the Himalayas?"

Minimum List of Cities to be Studied in Asia.

Commercial cities to be emphasized, *e. g.*:

In Japan: Yokohama and Tokyo.

In China: Canton, Hongkong, Shanghai and Peking.

In India: Calcutta and Bombay.

In Siberia: Vladivostok.

The Minimum Essentials in this Work Remain the Same Without Regard to Method.—For example, after study of Japan the child should know certain definite things:

1. That Japan is a strong island kingdom — the only great world power in Asia.
2. That the Empire includes the islands off the east coast of Asia, from the peninsula of Kamchatka on the north to the Philippines on the south, and that, by the Peace Treaty, through which Germany suffered much loss of territory, four new islands, located north of the equator, have been added to the Empire. (See *Geographic Results of Great War*, published by American Book Company.)
3. That the Japanese are active, courageous people eager for colonial expansion.
4. That this country has grown to be a prosperous manufacturing and commercial nation since it has opened its ports to trade with the rest of the world.
5. That the millions of people who belong to the yellow race are crowded together on the lowlands where they make every possible use of the land in order to make a living.
6. That the chief foodstuffs of the people are rice and fish. Animals are very, very few, and so the people eat almost no meat.
7. That the people have been skilled for centuries in the raising of silk worms and the manufacture of silk, and that their artistic skill has always been shown in the manufacture of beautiful things.
8. That the people make a living by agriculture, shipbuilding, and, since the downfall of Germany, in manufacturing toys, as well as the articles always manufactured by the Japanese.

9. That a warm ocean current known as the Japanese current flows northward along the coast; that the rainfall is heavy and forests luxuriant.
10. That Tokyo, the capital, is one of the great cities of the world, and Yokohama is the important seaport.

Problem Suggested for a Part of the Study of Japan.

Introduction.— Make a list of all Japanese articles sold in Boston stores.

Problem.— Why do we find so many Japanese articles sold in American stores?

Solution.— What do these articles tell of the skill of the Japanese? What do they tell of their taste? What do they tell of the progress made by the Japanese? What are the natural resources of Japan which aid in manufacturing? Why can the Japanese make these articles more cheaply than we can? Describe the manufacture of some of the articles. Why is labor cheaper in Japan than in America? Why do American storekeepers buy these articles?

Other Suggested Problems.

Japan is much inferior to China in size, population, and natural resources, and yet it is more progressive than China. Why?

Japan is called the Great Britain of Asia. Why?

Why is Japan such a remarkably prosperous and progressive nation?

Japan is the only nation of Asia that is numbered among the Great Powers. Why is this?

Teachers and pupils will find a profitable field for discussion in the problems which the world is offering today when geography and history are in the making. For example, a sixth grade girl brought in the following problem "How do Japan's toys compare with the toys that the Germans used to make?" In the discussion and solution of this problem the class would touch:

1. The accessibility of different kinds of raw material (bamboo and clay at hand in Japan, wood in Germany).
2. The difference in artistic ideas between the Japanese who made dolls with almond shaped eyes, yellow skin, straight black hair, and Oriental dress, and the Germans who had always made for us curly flaxen haired, blue eyed, rosy cheeked dolls.
3. The old and new customers. Query: Why did we and the people of South America refuse at first to become customers of Japan; why did the Japanese study and copy the American and German types of art?

Problem Suggested for a Part of the Study of China.

Introduction.— Examine pictures and study texts giving illustrations and examples of ancestor worship by the Chinese.

Problem.— What influence has the worship of ancestors had upon the progress of China?

Solution.— Since the Chinese worship their ancestors, what are they likely to think of the methods of work used by their ancestors?

By use of pictures and texts learn the Chinese methods of farming. How do these methods compare with those used in the United States? How do they compare with methods used in China years ago? Why do we not do the work on our farms as the Chinese do? Why do the Chinese not do their work as we do? Do their methods of farming have anything to do with their worship of ancestors? How do such methods of work affect the progress of the country?

Study carefully texts and pictures to learn how the Chinese carry on manufacturing, particularly spinning and weaving, in nearly all parts of the country. How does their way of doing the work compare with that used in New England? How does this manner of doing the work compare with that used in China in past centuries? Why do we not do our work in this way? Why do the Chinese still make so much of their cloth by old-fashioned methods? What influence would ancestor worship have upon this industry? What effect do such methods have upon the development of the country?

Using pictures, text-books and geographical readers learn the manner in which the Chinese carry tea and other articles from one part of the country to another. Why do we not transport articles in that way in America? Why do we not carry wheat and meats from the Middle West to the Atlantic Coast in that way? Why do not the Chinese transport goods as we do? Why have they objected to the building of railroads in China? What had ancestor worship to do with their attitude? What effect do their methods of transportation have upon the development of the country?

State the different ways in which the worship of ancestors has affected the progress of China.

Problems Suggested for the Study of the Ganges Valley.

Introduction.—Examine pictures and study texts and geographical readers to show that the natives of India regard the Ganges river as sacred or holy.

Problems.—Why do the natives of India consider the Ganges river a sacred river?

Solution.—Of what value is the river to the people? How does its overflow help them in getting a living? How is the water carried to lands far from the river? What crops are raised? Describe the work done in raising the crops. How have the English helped in irrigating the land? Why should the English be interested in irrigating land in India? How is Great Britain benefited? Why can many people live near the Ganges river? What cities have grown up along the river? Why have these cities developed? What happens when there is not enough water in the river to water the land? Why do the natives offer sacrifices to the river at such times? Do you see why the natives should come to realize that their very lives depend upon the river? Why do they consider the Ganges sacred?

An ideal Course of Study would be a group of problems of vital interest to children and dealing with the fundamental aspects of geographic knowledge, and this Course of Study has endeavored to approximate such an ideal.

HISTORY.

WHAT IS THE GENERAL CONTENT AND APPROXIMATE TIME ALLOTMENT?

The four half hour lessons a week devoted to history are to be divided as follows:

3 weeks in September.— European Beginnings of American History.	Correlate with study in geography of Europe as a whole.
3 weeks in October.— Spanish Explorers.	Mediterranean Countries.
3 weeks in November.— French Explorers.	France.
3 weeks in December.— English Explorers.	British Empire.
2 weeks in January.— Settlement of Virginia.	
2 weeks in January.— Settlement of Massachusetts.	
1 week in February.— Settlement of New York.	Netherlands.
1 week in February.— Settlement of New Hampshire.	
1 week in February.— Settlement of Connecticut.	
1 week in March.— Settlement of Maryland.	
1 week in March.— Settlement of Rhode Island.	
1 week in March.— Settlement of Delaware.	
1 week in March.— Settlement of North Carolina.	
1 week in April.— Settlement of New Jersey.	
1 week in April.— Settlement of South Carolina.	
1 week in April.— Settlement of Pennsylvania.	
1 week in May.— Settlement of Georgia.	
3 weeks in May.— Struggle Between France and England for the Possession of North America.	

What Methods are Suggested for the Accomplishment of this Course of Study in History? See methods in the Geography Course of Study which precedes this. It is not desirable that any attempt be made to teach this Course of Study until teachers have familiarized themselves with "Methods" in the Geography Course. All that is said there applies equally well to this History Course of Study. The method here is much the same as in geography. The project problem method is suggested in this Course of Study because history adapts itself well to problems and projects. The present is used as a basis of comparison: pupils are taught to compare the problems of their ancestors with those we are meeting today.

History correctly taught (by the project problem method or any other method) will necessitate:

1. Much reading by the pupils in class silently and supplementary reading at home and in the library.
2. The skillful use of illustrative material: pictures — moving, slides, graphs and printed.
3. Occasional story-telling, oral lessons or readings by the teacher from
 - (a) Books written especially for children — stories delightful to them.

- (b) Selections made by the teacher to be read to the children.
- (c) Selections arranged for the children to take home in order to unite the school and the home and to deepen the principles of Americanization in our citizens.

Citizenship is one of the most important, necessary works of home and school today: adults can be reached through the children. The children must be so guided and practiced in their school work that they will be good citizens.

It is suggested that in Grade VI the children be given type-written copies of stirring poems or other bits of literature to take home for the other members of the family to read. The assignment might be for the children to give the poems to the older ones at home to have them explained. In some districts of the city the selection might be very poorly read and explained by the folks at home (what need that matter!) and in others it could not be read at all by the non-English speaking parents, but would probably have to be explained by the children of the family. Teachers will, of course, adapt all suggestions to the particular needs of their class.

4. Considerable dramatization. The development of the imagination is one of the foundations as well as one of the aims of successful history teaching.
5. Careful guidance in order that children may learn to read with discrimination and master the important, eliminating the unimportant.

Pupils themselves can apply to the history lesson the question of "What could we afford to forget if we cannot remember all of the history which we have learned today about Virginia?"

If the unimportant is eliminated the ground to be covered in Grade VI will not appear too great.

The great questions or problems and the review lesson used by a teacher of history will indicate to the child the important phases of the history. If the history is reviewed under such topics as are indicated in this Course of Study there will arise no confusion in the minds of the children, no "gasping for breath" on the part of teachers or pupils at the great amount of work to be accomplished, a condition which frequently arises from a too extensive Course of Study.

6. Training of the "time sense." The order of the books may be varied and teachers may prefer to teach from what is known now back to the unknown. A century calendar should be made in every room. The idea of "before and after" certain events shall be developed. For this purpose the + and — sign should be used in connection with a few "key" dates. "Key" dates represent to the child the magnets which draw the other events to them, thus, certain things happened "after" Columbus discovered America, 1492 +. Only about a half dozen of these "key" dates (the dates which open the door to a large part of our American history) should be required to be learned in the course of the year.

7. Supervised study. (*See Methods in Geography Course of Study.*)
8. Reports on projects or special topics by individuals.
9. Excursions. (*See this subject in the Geography Course of Study.*)
Cambridge.—Agassiz Museum, skeletons of prehistoric animals.
Supposed site of Northmen's hut.

Main Library.—To see objects of historic interest, Abbey's famous collection of pictures of the "Holy Grail" and interesting historical documents such as Chamberlain's collection of the handwriting of many of our famous American statesmen.

Art Museum.—To see the Egyptian room and other collections of historic value.

Teachers may know of other museums, houses, old places, early paths, first roads, taverns, and objects of historic interest. These should be visited to give color and life to the history. The following outlined "Trip Around Boston" will do much to impress a picture of colonial days upon the minds of the children. Perhaps it touches a little in some places the work of Grade VII (Revolutionary Days), but taken near the end of the year it will prove a delightful review of colonial days and a foundation for the later history.

A Trip Around Boston.

Route: Starting point, corner of Boylston and Washington streets; Boylston street to Commqn; Tremont street to Granary Burying Ground; King's Chapel; King's Chapel Burying Ground; School street to Washington street; Washington street to State street (Old State House); Old South Church; Change avenue to Faneuil Hall square (Faneuil Hall); Blackstone street to Hanover street; Hanover street to Salem street; Salem street to Old North Church; Hull street to Copp's Hill Burying Ground.

Points of Interest.

Boston Children Should be Familiar With the Statues in Their City (*e. g.*, the Statues of Washington, Hale, Lincoln and Edward Everett).

Washington street opposite Boylston street, Site of Liberty Tree.
The Common.—Central Burying Ground, Site of Old Elm, Frog Pond, Parade Ground, Crispus Attucks Monument, Tablet, Park street.

Granary Burying Ground.—Graves of Samuel Adams, John Hancock, James Otis, Victims of Boston Massacre, Peter Faneuil, Paul Revere, Parents of Benjamin Franklin, John Hull, Mother Goose.

King's Chapel.—The Chapel is open to visitors. An interesting talk on the history of the chapel and the method of conducting services in the colonial days is given by the guide in attendance.

King's Chapel Burying Ground.—Graves of John Winthrop, Mary Chilton, William Dawes.

School Street.—Site of first Public Latin School.

Old State House.— Council Chamber. Hall of Representatives.

Collection of antiquities relating to early history of colony.

Site of Boston Massacre.

Faneuil Hall.

Old North Church.

Copp's Hill Burying Ground.— Graves of Robert Newman, Rev. Cotton and Increase Mather, Daniel Malcolm. (*See Grandmother's Story of Bunker Hill.*)

10. The use of "word pictures." Teachers will, of course, use their own experience and powers to help the children make mental pictures of historical events and aspects. For example, the simple dot that might represent the ships of Columbus crossing the unknown sea, can become a complete glowing mental picture of the gallant Columbus, his sailors with anger on their faces, etc., by a little preparation and a few words of the teacher. The children should have a picture for each "key" date; they should be able to picture the wilderness with its Indians and animal inhabitants, the coming of the white men with their wanderings and adventures, the dealings between the white men and the Indians, the making of homes and farms, the getting of food, shelter, clothing, implements, churches, schools, roads, bridges, the early paths that led out of Boston, the vehicles, the industries of the people, the children then, etc.,

Effort has been made to arrange this Course of Study so that the subject of history will become more interesting to little children, less a memory subject, and less difficult. If historical dates, events and aspects are treated according to the methods suggested here children will be brought into contact with a great amount of history.

DETAILED COURSE OF STUDY.

European Beginnings of American History.

This subject is touched under the subject of "Maps" earlier in the course. During the month of September teachers can give the pupils mental pictures and knowledge of Europe before 1492 that will suffice as foundations for the understanding of American history, but, after the end of September, time is not to be taken from the history period for the study of European history unless it is necessary for the understanding of the American history.

However, it is hoped that the study of the great names in the world's history may be taken in connection with this Course of Study. In teaching the European background of American history the tendency is for the teaching to become formal memory work. Overwhelmed with the amount of ground to be covered, the teacher thinks that is the simplest way to the end desired.

Let the world history go throughout the year.

1. In part of the time assigned to reading with its corollary supervised

study. Since we are strong in the belief that oral reading is not always purposeful, we suggest that this world history become a subject for oral reading.

2. In the story-telling time.

3. In an occasional history period, one period a week is suggested.

A wall map may be placed with the names of the great heroes standing out from the background of their own country. The children need to have this knowledge, but it should be a knowledge which will inspire them to go out and read more and it should not be a formal memory exercise. This work should not be the subject for examination; its aim is cultural, enriching, and educational. In brief, the time in Grade VI — in which we begin the formal study of American History — should be given to the fundamental principles governing the origin and development of American life and ideals.

The prehistoric period of American History and the American Indians may be treated in interesting stories, the latter from the aspect of possession of the land and relations with the colonies.

Project for the Year.

A study of the establishment and development of the democratic ideal; a realization that America has been always a refuge for the oppressed, that self-government has been its watchword, and that liberty under laws made by a free people is its great bulwark.

The opening up of the country and the discovery of its great wealth may well precede the study of colonial growth; but the main work of the year is to teach the beginnings of our country with the mind intent upon the golden thread of democratic principles which runs through the story of colonial days. These principles bound the little settlements together and gave the strength needed for the overthrow of the mother country in the attempt to deprive the colonies of their rights as members of an English settlement; rights fought for and maintained in England from the fifth century.

*Discovery and Exploration Period *1492—*1607.*

Chronological Arrangement of Exploration Period.

- *1492. Columbus — Discovery of America.
- 1497. Vasco DaGama — Route to India around Africa.
- Cabots — Discovery of new lands for the English.
- Vespuccius — Naming of America.
- 1497.+Ponce de Leon — Florida.
- 1519.—Balboa — Pacific.
- 1519. Magellan — Circumnavigated the earth.
- 1519. Cortez — Conquered Mexico.
- 1519.+Pizarro — Conquered Peru.
- 1534. Cartier — St. Lawrence.
- 1534.+Coronado and DeSoto — Region of the Mississippi and Gulf of Mexico.

* Indicates important dates.

- * 1565. Menendez — First permanent settlement in the New World.
 - 1565. + Sir Francis Drake — Sailed around the world.
 - 1588. Sir Walter Raleigh — Sent out settlers to attempt a colony in the New World.
 - 1588. Defeat of the Spanish Armada.
 - * 1607. +¹ Champlain — Founded Quebec.
 - * 1607. +² Henry Hudson — Discovered Hudson river.
- LaSalle, Joliet, Father Marquette and the other Jesuit missionaries, and the French traders and trappers were later explorers, but they may properly be studied in the time allotted to the study of Exploration Period, even though their explorations were made in the last half of the seventeenth century.

Problems.

What European conditions turned the thoughts of men toward exploration?

1. The shutting of the door to the East by the capture of Constantinople in 1453
2. The voyage and writings of the Polos.
3. The Revival of Learning (Renaissance) which made men interested in geography, navigation, etc.
4. The inventing of printing, gunpowder, the compass, etc.

Spain and Portugal led the other countries in explorations. Why were they the first to look for a new route to the East?

1. They had not shared much in the profits from the old trade with the East (via Venice and Genoa) and so desired to find a route for themselves.
2. Each of these countries was at peace and now looking for a means to increase its wealth and power.
3. They had gained valuable experience in battling with the Moors on land and sea.
4. They were in a favorable position for exploration (children discover this from map work).

The search for a new route to the East was not easy. What made it difficult?

1. Lack of geographical knowledge; people knew little of the geography of Europe and scarcely anything about that of Asia or Africa, and they feared the "Sea of Darkness" (see map of the Known World in 1492).
2. Poor means of travel, boats that were small, clumsy sailing vessels with wooden bottoms which decayed on a long voyage; no way of preserving food so that disease and starvation often came to the crews.

Columbus's geographical errors were fortunate ones. Why?

Solution.—What did Columbus think of the size of the earth? How many continents did he think there were? Where did he think the Coast of Asia was? How did he think that he could reach it? Can you see why such errors were aids to Columbus?

* Indicates important dates.

Spain was fortunate in her New World possessions. Why?

Solution.—What was the climate in the West Indies, Florida, Mexico and Central America? Compare the Indians there with those further north. Which were more warlike? Of what value to the Spanish was the possession of the Gulf of Mexico and the mouth of the Mississippi? Can you see what advantages Spain had in the New World?

Although Spain led in the exploration of the New World, no part of the New World now belongs to Spain. Can you see any reasons for this?

Solution.—What was the object of the Spaniards in coming to the New World? What effect would such motives have on settlement in the New World? What would be the character of the men coming for such purposes? What effect would the obtaining of riches have upon Spain? Why does the sudden obtaining of wealth sometimes have that effect? Why is the character of the people who have to work hard for what they earn often stronger than that of those who have acquired things through no effort? Why didn't the Spanish till the soil and make homes and carry on trade? Why didn't Spain retain her strong foot hold on the New World?

The defeat of the Spanish Armada in 1588 is one of the indirect reasons why you are sitting here in school speaking *English* today. How could this be?

What kept England busy up to 1588? Why didn't the English do much exploring of the new lands before the 17th century? After 1588 what class of people returned to England? What happens when soldiers return in large numbers? What did many young men whom you know do when they returned after the World War and had no work? Instead of re-enlisting or going to France, what would they have done if they had lived in 1588? How is the defeat of the Spanish Armada connected with the settlement of our continent?

The fishing industry played an important part in the discovery and exploration of the New World. How?

Solution.—How did the Northmen happen to find Iceland, then Greenland, then North America? Why did they do so much fishing? (Geography of the Scandinavian countries.) What Englishmen in 1497 visited our land because of the fishing industry? What part of our Eastern Coast is particularly well known as fishing grounds? What kind of fish is caught there? What part did the Cabots explore? What attracted many of the French explorers? What else besides furs did the French traders come here for? Can you see how the fishing industry helped in the discovery and exploration of your continent?

The French now own no part of North America. When they sent so many explorers here, why did they not succeed in getting a permanent claim to the New World?

Solution.—What were the chief motives of the French who came here? How did their constant explorations and efforts at Christianizing the Indians hinder them from getting a permanent hold on the New World? How can any nation best get a fixed hold on new land?

Note.—Such problems as this will lead the child to see why the English alone succeeded in gaining ultimate possession of the New World.

Magellan had nothing whatever to do with North America, and yet, his explorations are a part of our history. Why?

Note.— This problem may be also applied to Marco Polo or Drake or Pizarro. It is necessary to show the children the intimate connection between these explorers and themselves or the Exploration Period will seem detached to them.

Introduction.— As in the study of every problem, let children find out all they can from the materials at hand. In the early study by the Problem Method it will be necessary for the teacher to assign the sources of material pretty thoroughly, but, later, children will become more familiar with this method of study and will be able to find the answers to problems without consulting the teacher. Black-board questions are oftentimes necessary, as is occasionally indicated in some of the problems. The definiteness of the assignment and the number of questions needed to stimulate the class will depend upon several factors. In this Course the answers are given to some of the problems and the questions that might be used in solution are given in others.

Solution.— Why was his voyage such a great voyage? What sort of a man was he? What did he teach men about the sea? What did he teach them of the new land? What did he show them about Asia? What did he show about the Pacific? What did he lead other men to do? Why do we like to study about the man himself? What effects did such men of daring have on the exploration of our land? Did they have any effects on the kind of people who came to the New World? What kind of people came to explore and settle our land? Can you see any connection between Magellan and the spirit of the settlers of the New World? Why is the voyage of Magellan of vital importance to us?

The explorers of the New World made marked changes in the geographic knowledge possessed by Europeans. How?

Note.— Give the children the problem of developing the following questions or table:

Solution.— What did they prove about

- a. The new land found by sailing west?
- b. The true continental character of the new land?
- c. The length of the Atlantic Coast?
- d. The width of North America?
- e. The length of the Pacific Coast?
- f. The ocean on the west of the new land?
- g. The width of the Pacific Ocean?
- h. The distance from Europe west to Asia?
- i. The spherical shape of the earth?
- j. The size of the earth?
- k. A water route to India?
- l. The water ways of North America?
- m. The northwestern passage?

THE SPANISH EXPLORERS. REVIEWED AS SUGGESTED ABOVE.

NAME.	Time.	Result of Explorations.
Columbus.....	* 1492	Found a new land by sailing west; showed the width of the Atlantic; started other explorers.
Vespuccius.....	1497	Suggested the idea of a new world; helped to show the length of the Atlantic Coast.
Ponce de Leon.....	* 1497	Discovered Florida and thus gave Spain a claim to that part of the New World.
Balboa.....	* 1497	First to see the Pacific Ocean; this incited others to exploration.
Magellan.....	1519	Showed the length of the Atlantic Coast of the New World; the southern passage westward; the width of the Pacific; the size of the earth; distance from Europe west to Asia; water route to India, and the spherical shape of the earth.
Cortez.....	1519	Conquered Mexico and obtained the land for the Spanish.
Pizarro.....	* 1519	Established the Spanish claim to Peru.
DeSoto and Coronado....	* 1519	Gave Spain a claim to all the region of the Gulf of Mexico and Mississippi; showed the width of North America.
Menendez.....	* 1565	By the establishment of a permanent settlement he gave Spain the first firm foothold on the New Continent.

* Indicates important dates.

The expedition of Sir Walter Raleigh taught the English some important lessons. How?

Solution.—After pupils have found out all they can about Raleigh, the following questions might be asked: What was the object of Raleigh's expedition? Did he himself try to make this settlement for purposes of trade or did a company attempt it? Which is more likely to be successful, a colony founded by an individual or one founded by a company? What are the advantages in a colony founded by a company? Did Raleigh's expeditions in any way start an interest in the New World? What did Raleigh bring back to England besides glowing reports of the New World? Give all the lessons which Raleigh taught the English.

Projects.

1. In October divide the class into groups (approximately three children to report in each group) and assign to each group the project of reporting on one of the following:

The Spanish Explorers (10) studied in this grade.

Vasco DaGama.

Bartholomew Diaz.

Marco Polo.

Prince Henry.

Conditions in the Old World at the end of the 15th century.

2. Children can form a little history of their own by writing, each month, under the guidance of the teacher, a composition on one of the big

problems or phases of the history, thus, the first page of the original history of each child might be entitled "Stumbling upon a Continent" (written in October); in November "Getting around the New Continent"; in December "Trying to get Possession of It." Paper of uniform size should be used so that in June, for review, the child may be presented with a booklet of his own which the teacher has carefully preserved from month to month for him.

3. Utilize old notebooks (or new ones if writing is desired) for each child to start an illustrated history, made by pasting in pictures and clippings. Part I might be "The Spanish," Part II, "The Work of the French," and Part III "The Work of the English."

4. Start an excursion book (correlate with geography). This will contain pictures and descriptions of scenes around Boston which the children might visit or plan to visit. Object: To develop mental powers, observation, imagination, interest, etc.

5. Children can use one of their exploration outline maps to show:

- a. Known World in 1492.
- b. Voyages of the Portuguese (Diaz and DaGama).
- c. Voyage of Marco Polo.
- d. Voyage of the Northmen.
- e. Voyage of Columbus.
- f. Voyage of Cabots.
- g. Voyage of Magellan.
- h. Voyage of Drake.

6. On another exploration outline map indicate the parts of the New World touched by Vespuccius, Ponce de Leon, Balboa, Cortez, Pizarro, Menendez, DeSoto, Coronado; Cartier, Champlain, LaSalle, and other Frenchmen; Raleigh and Hudson. (Dashes of one color, perhaps red crayon, might indicate the parts of the New World touched by the various Spanish explorers, green the parts touched by the French, blue the English, and yellow the Dutch.) Resultant problems: Since two nations conflict in their claims, what will happen? (Wars and treaties.) In order to establish their claims, what will the different nations probably do?

7. At home trace a map of the New World, and, using three colors, indicate the land claimed by Spain, France and England, respectively, at the beginning of the 17th century.

8. In November let five groups of children report on:

- a. Cartier.
- b. Champlain.
- c. Jesuit Missionaries in the New World.
- d. French traders and trappers.
- e. Present areas in North America of strongly French populations. (Correlate with November study of France in Geography.)

9. Debate: Resolved, that the French explorers made a greater permanent contribution to American history than the Spanish explorers.

10. Assign for October the stories of Columbus Day; for November, stories of Thanksgiving; December, Christmas.

COLONIZATION PERIOD ARRANGED CHRONOLOGICALLY.

COLONY.	First Settlement.	Time.
1. Virginia.....	Jamestown.....	* 1,607
2. Massachusetts.....	Plymouth.....	* 1,620
3. New York.....	Fort Orange.....	1,623
4. New Hampshire.....	Portsmouth.....	1,623
5. Connecticut.....	Windsor.....	1,633
6. Maryland.....	St. Mary's.....	1,634
7. Rhode Island.....	Providence.....	1,636
8. Delaware.....	Wilmington.....	1,638
9. North Carolina.....	Edenton.....	1,650
10. New Jersey.....	Elizabethtown.....	1,664
11. South Carolina.....	Charleston.....	1,670
12. Pennsylvania.....	Philadelphia.....	1,682
13. Georgia.....	Savannah.....	1,733

Important Dates of the Colonization Period.

Throughout this course * indicates the only dates which must be memorized.

- * 1607. Settlement of Virginia, first permanent English settlement in America.
- * 1619. Introduction of slavery and first representative government in the New World.
- * 1620. Settlement of Plymouth.
- * 1630. Settlement of Boston.
- 1639. Establishment of first free public school.
- * 1643. The New England Confederation, the first step toward a union of the colonies.

Colonization Period, 1607—1688.

Note.—The dates of the beginning or ending of any period in history are not arbitrary. Although the date 1607 would seem to indicate the beginning of a new period, if teachers choose to teach that the years that begin with 15 are the years of exploration, and those that begin with 16 are the years of colonization (for the children will see that by 1700 all but one of the thirteen original colonies had been settled), nothing is lost. Thus the date 1688 suggested because it indicates the beginning of hostilities between the English and the French in America, and the date of the Great Revolution in England, and would seem to be a favorable time to mark the beginning of a new period. Some teachers might prefer to close the Colonization Period with the year 1700 (beginning of a new century) or 1763 (end of the French and Indian Wars) or even 1775 (beginning of armed resistance against the mother country). It seems most desirable however to close the Colonization Period with the beginning of the Period of French and Indian Wars.

See Project for the year.

The keynote of this sixth grade Course of Study is a wholesome Americanism, and in this, the first formal study of American history, the child should receive a firm foundation of love and respect for the "Spirit of America," his country and her ideals.

To this end, the part which each colony played in holding fast to democratic principles is stressed in this Course of Study.

With the study of every colony we have suggested problems. After all that has been said in this Syllabus concerning problems it seems necessary to suggest only one or two problems for the study of each colony. The major or "key" problem unlocks the doors of history to the manifestation of the "Spirit of America" through the participation of each colony in strengthening the possession of a people's right to liberty under law.

A study of these problems throughout the year and in retrospect at the end of the year makes a sure foundation for the War of the Revolution—makes clear how dear their liberty was to the colonists and shows that the Spirit of the People was what carried them through a war for which they were most unprepared.

The Spirit of '76 was possible because the spirit of the two preceding centuries had proven unconquerable.

One problem—a "key" problem for each colony—with its solution, is given below. As has been previously stated in this Syllabus, the problems suggested in this Course of Study do not touch all the ground to be covered. They are mere suggestions and it is expected that teachers and pupils will have a share in the arranging of their own problems and projects dealing with other aspects of the history. It is suggested that one lesson each week be devoted to a study of the leading men of each colony with the main project of this Course of Study in mind. See review at the end of each chapter in Thwaites and Kendall's: *A History of the United States*.

The complete titles of the references given below are:

Emerson David Fite. *History of the United States* (a reference book for the teacher published by Henry Holt & Co).

Thwaites and Kendall. *A History of the United States*.

D. H. Montgomery. *Leading Facts of American History*.

D. H. Montgomery. *Elementary History*.

Bourne and Benton. *History of the United States*.

Woodburn and Moran. *Elementary American History and Government*.

E. M. Tappan. *Our Country's Story*.

Dickson. *American History for Grammar Schools*.

Beard and Bagley. *History of the American People*.

"Key" Problems.

Virginia.

How did the people of this colony provide for self-government?

Plymouth.

Find out what steps the Pilgrims took to preserve their rights under law.

Massachusetts.

What part of the golden thread of democratic principles was woven by the Massachusetts colony?

Rhode Island.

What form of liberty now enjoyed by all in this country did Rhode Island offer to colonists?

Connecticut.

The Fundamental Orders became the first written constitution by a self-governing American body. How did it differ from the Mayflower Compact?

1643.

Why is this a "key" date? What did it mean to our country?

New Hampshire.

How did the settlers at Exeter propose to govern themselves?

Maryland.

What is the Toleration Act?

How did it differ from the Enactments of Rhode Island?

What does our Constitution say about religious liberty?

New York.

What was the attitude of both the Dutch and English toward their tyrannical governors?

Pennsylvania and Delaware.

What good American institutions and principles did Penn propose in his very popular colony?

New Jersey.

What fundamental American principles did the Quakers of New Jersey give us?

The Carolinas.

What was the result of the "Grand Model"?

Georgia.

What was its history in its efforts to be self-governing?

1754.

Why is this a "key" date? What was the Albany Plan?

Supplementary Problems.

What was the attitude of England toward the colonies after the French and Indian Wars?

What were the duties of the colonial assemblies?

What was the work of the town meeting?

How did the unit of government in the northern colonies differ from that in the South?

To whom was the right to vote given in the colonies?

What attempts at government making had the colonists made?

What events have shown a tendency toward a union?

Minor Unions.

1. Union of several settlements to the Massachusetts Bay Colony.
 - a. Massachusetts and New Hampshire.
 - b. Massachusetts and Plymouth.
 - c. Massachusetts and Maine settlements.
2. Connecticut settlements.
3. "Providence Plantations."
4. East and West Jersey.

Important Unions.

1. New England Confederation.
2. Albany Congress.
3. Fighting together against the French and Indians.

Virginia.

How did the people of Virginia provide for self-government?

Solution.—Where was the first representative assembly in America? What was it called? How were the representatives to the House of Burgesses chosen? Examine text-books and other sources and find out the nature of the laws enacted in the Virginian Assembly. Do you know where such a form of government still exists? What do we call such a governing body in Massachusetts? In the United States? In England? (Correlate with geography). Why to-day do we have to have representatives? When do we ever send any representatives from this school? Find out where such American leaders as Washington, Jefferson, Madison, and Monroe obtained their ideas on government. What has Virginia contribute to our nation?

References.—Fite's History, U. S., pp. 40 and 70; W. and M. Elementary American History, p. 53; Mont. Elem. Hist., p. 36; Mont. Leading Facts, pp. 50 and 126; Bourne and B. Hist., U. S., p. 46; Thwaites and Kendall's Hist. of U. S., p. 61; Beard and B. His. American People, p. 50. Old South Leaflet No. 167.

Plymouth.

Find out what steps the Pilgrims took to preserve their rights under law.

Solution.—Why did the Pilgrims leave their native land? What was the Mayflower Compact and to what did the Pilgrims agree?

1. To unite.
2. To submit to laws and a governor.
3. To make these laws and choose their governor by common consent.

How was their first governor chosen? What was his name? Several important laws were enacted at Plymouth for the first time in history. What were they? Where did the Pilgrims decide all important questions? What has this colony left to us?

References.—"Historic Plymouth," published by A. Shuman, Boston; W. and M. Elem. American Hist., pp. 62 and 104; Mont. Elem. Hist. p. 54; Mont. Leading Facts of Am. Hist., pp. 69 and 70; Fite's Hist., U. S., pp. 46 and 115; "Spirit of America" and "New England, Old and New," published by Old Colony Trust Co.; Beard and Bagley, pp. 51 and 108; Tappan Elem. Hist., p. 59; Thwaites and Kendall, pp. 79 and 82; Bourne and Benton, pp. 52 and 140.

See Annual Report of a Town Meeting.

Massachusetts.

What part of the golden thread of democratic principles was woven by the Massachusetts Colony?

Solution.—Shortly after the colonists had settled at Boston, what steps did they take to provide for a government? Who only could vote? What did they do about their money? How were offenders against the law treated? What did they do for education? Describe how and where the

people of this colony managed the public business. We owe the Puritan founders of Massachusetts many fine institutions. What are they?

References.— Fite's Hist., U. S., pp. 50, 55 and 68; "Historic Plymouth," published by A. Shuman; Thwaites and Kendall, pp. 81 to 83; Mont. Elem., p. 56; Mont. Leading Facts, pp. 73 to 75; Woodburn and M., pp. 66 and 104; Tappan, "Our Country's Story," p. 61; Bourne and B., p. 66; Beard and B., p. 52; Dickson, pp. 81 and 82; "The Spirit of America" and New England, Old and New," published by Old Colony Trust Co., Boston. Old South Leaflets Nos. 7, 55, 66.

See Report of the Massachusetts General Court.

New York.

What was the attitude of both the Dutch and English toward their tyrannical governors?

Solution.— What was the name of one of the despotic Dutch governors? What were his opinions as to religious and political freedom? What did the colonists under him think about self-government and religious freedom? What did they insist upon? How did the Duke of York try to govern this colony? What did the people finally demand of him? Summarize the struggles for freedom made by the people of this colony.

References.— Fite, pp. 64 and 72; Woodburn and M., pp. 59 and 60; Mont. Leading Facts, pp. 62 and 63; Bourne and Benton, p. 84; Beard and Bagley, p. 62; Tappan, pp. 96 and 97; Thwaites and K., p. 97.

New Hampshire.

How did the settlers at Exeter propose to govern themselves?

Solution.— Where did the settlers at Exeter come from? What kind of government had these people been accustomed to in Massachusetts? The compact that they drew up was similar to what other agreement that we have studied? Had some of these men left Massachusetts for any other reasons than to seek new lands? Tell all you can of what the settlers of New Hampshire thought about self-government.

References.— Fite's History of U. S., p. 53; Mont. Leading Facts, p. 83.

Connecticut.

The Fundamental Orders became the first written constitution by a self-governing American body. How did it differ from the Mayflower Compact?

Solution.— What did the people of three little Connecticut settlements do? These people, like most of the colonists, loved what kind of government? Read the Fundamental Orders and compare it with the Mayflower compact. Which is longer? Which makes no mention of the king? Which set up a real government just as all our present state constitutions do? Which made all people politically equal?

References.— Fite, p. 52; Old South Leaflet No. 8; "Spirit of America," Mont. Leading Facts, Am. Hist., pp. 85 and 86; Beard and Bagley, p. 55; Tappan, pp. 79 and 82; Woodburn and M., pp. 68 and 69; Thwaites and K., p. 89.

* 1643.

Why is this a "key" date?

Solution.— What did four of the New England colonies do in this year? What was the purpose of such a Union? What were its results?

Read the records of the proceedings of the Confederation and see what provisions were made concerning war, education, relations with the Indians, etc. Why is this a date that "turned the course of history?"

References.—Fite, pp. 54 and 55; "Spirit of America;" Old South Leaflet No. 169; Woodburn and M., p. 70; Mont. Leading Facts, p. 76; Thwaites and K., p. 90; Tappan, p. 76; Beard and B., p. 55.

Maryland.

(This problem may be studied at the same time that the colony of Rhode Island is studied)

What was the Toleration Act?

How did it differ from the Enactments of Rhode Island?

What does our Constitution say about religious liberty?

Solution.—How were Roman Catholics in England treated? What influential Catholic was given a grant of land by the king? What use did Lord Baltimore wish to make of this land? What class of people flocked to his colony in large numbers? What is meant by "religious toleration?" What principle that we are now very proud of in the United States did the people of Maryland believe in? What act did they pass expressing this principle? Find out just what a settler of Maryland would have to profess a belief in and compare this with the "soul liberty" of Rhode Island. Which excluded Hebrews? In Maryland the state supported the church. Compare this with Rhode Island. Learn Amendment 1 to the Constitution.

References.—Fite, p. 57; Woodburn and M., pp. 71 and 72; Mont. Elem., p. 64; Mont. Leading Facts, p. 90; Tappan, p. 106; Thwaites and K., p. 69; Bourne and B., p. 74; Beard and B., p. 56; Old South Leaflet No. 170.

Rhode Island.

What form of liberty now enjoyed by all in this country did Rhode Island offer to colonists?

Solution.—Who was Roger Williams? Where did he live? What was his belief as to the rights of the Indians? What were his ideas about religious worship? What was he forced to do? Why would you have liked to live in his colony if you had been a child of 1636? What do you think of him and his ideas and what he accomplished? There is a line in our Constitution that might have been written by him — can you find it?

References.—Fite, p. 51; Mont. Elem. p. 62; Mont. Leading Facts, pp. 94, 95, 96 and 74; Tappan, p. 76; Woodburn and M., pp. 69 and 70; Dickson, p. 82; Thwaites and K., p. 85; Bourne and B., p. 63; Beard and B., pp. 54 and 55.

Pennsylvania and Delaware.

What good American institutions and principles did Penn propose in his very popular colony?

Solution.—What shows you that Penn's colony was a very carefully laid one? What shows you that it was very tolerant? Why did so many different nationalities flock there? What were Penn's relations with the Indians? Do you admire more a man who is liberal in his ideas and who gives everyone "a square deal" like Penn, or one who is intolerant

of the beliefs and rights of others? How did Penn arrange the government of Pennsylvania? Can you think of anything in our government that is much like his "Frame of Government" or "Great Law" as it is sometimes called? Give all the reasons why this colony enjoyed such a rapid growth. Tell why it was such a popular colony. Summarize the principles of Americanism displayed by Penn.

References.— Fite, p. 75; Old South Leaflets, Nos. 75 and 171; Mont. Elem., p. 47; Mont. Leading Facts, p. 103; Bourne and B., p. 92 on; Tappan, p. 102; Dickson, p. 87; Woodburn and M., p. 76.

The Carolinas.

What was the result of the "Grand Model?"

Solution.— What unwise form of government did the proprietors offer the Carolina settlers? To whom was all power given under this constitution? What did the common people think of such a form of government? Why did they refuse to accept it? Why was it a failure? What did the people demand? What ideas that were in the hearts of all those who settled the other colonies were strong in the hearts of the North and South Carolina settlers? Tell the story of the "Grand Model" and its failure.

References.— Fite, p. 73; Old South Leaflet, No. 172; Mont. Leading Facts, p. 99; Tappan, p. 110; Woodburn and M., p. 72; Thwaite, p. 70.

New Jersey.

What fundamental American principles did the Quakers of New Jersey give us?

Solution.— New Jersey was founded as a refuge for Quakers. Why did the Quakers need a refuge? What were their ideas? What colonies were open to them? What share did the people have in the government? What was the advantage of the intermingling of many different kinds of people in New Jersey? Tell me all that you see in the New Jersey colony indicating real American ideals.

References.— Fite, p. 72; Mont. Lead. Facts, pp. 65 and 66; Woodburn and M., p. 73; Dickson, p. 87; Tappan, p. 98.

Georgia.

What was its history in its efforts to be self-governing?

Solution.— What kind of a man was James Oglethorpe and what did he try to do? Describe all the difficulties of the new colony under their "trustees." What rights did the people demand? Compare the history of this colony with the history of the other twelve in its efforts to be self-governing. Throughout all these colonies what principles have you seen struggling for existence?

References.— Fite, p. 82; Dickson, p. 90; Woodburn and M., p. 77; Mont. Leading Facts, 107; Mont. Elem., p. 67; Thwaites, p. 71; Tappan, p. 113; Bourne and B., p. 117.

Summary Problems.

What conditions point to a union of the colonists?

1. Common danger: the Indians.

2. Native tongue and customs.
3. Relative ideas of government. (As shown by the study of the above problems.)
4. The great step taken in this direction as early as 1643: The New England Confederation.

What conditions would seem to prevent a union of the colonists?

1. Religious differences.
2. Distance from each other: poor modes of travel.
3. Difference between the people of the various colonies: aristocratic Virginia, Puritanical Massachusetts, etc.
4. Difference in industries.

What Aids are Suggested for the Accomplishment of this Course of Study?

Note.— See aids in the Geography Course of Study.

BOOK HELPS.*

The following are taken from School Document No. 11, 1918, List of Authorized Text and Supplementary Books.

Bassett, J. S. *The Plain Story of American History.* The Macmillan Co.

Channing, E. *Elements of United States History.* The Macmillan Co.

Fiske, J. *A History of the United States for Schools.* Houghton, Mifflin Co.

Gordy, W. F. *Elementary History of the United States.* Scribner.

McLaughlin, A. C., and Van Tyne, C. H. *A History of the United States for Schools.* Appleton & Co. Volume 1.

Montgomery, D. H. *An Elementary American History.* Ginn & Co.

Leading Facts in American History. Revised Edition. Ginn & Co.

* Thwaites, R. G., and Kendall, C. N. *A History of the United States.* Houghton, Mifflin Co.

Woodburn, J. A., and Moran, T. F. *Elementary American History and Government.* (After the War Edition.) Longmans, Green & Co.

SUPPLEMENTARY HISTORIES.

Atkinson, A. M. *European Beginnings of American History.* Ginn & Co.

Bourne, H. E., and Benton, E. J. *History of the United States.* Heath & Co.

Introductory American History. Heath & Co.

Dickson, M. S. *American History for Grammar Schools.* The Macmillan Co.

Eggleston, E. *First Book in American History.* American Book Co.

Higginson, T. W. *Young Folks' History of the United States.* Longmans, Green & Co.

Morris, C. *School History of the United States.* J. B. Lippincott Co.

Mowry, W. A., and A. M. *First Steps in the History of Our Country.* Silver, Burdett & Co.

Perry, A. C., and Price, G. A. *American History. First Book.* American Book Co.

* Books starred are to be used as references by teachers.

- Southworth, G. Van D. A First Book in American History with European Beginnings. Illustrated, Appleton & Co.
 Thomas, A. C. An Elementary History of the United States. Heath & Co.

SUPPLEMENTARY BOOKS.

- Andrews, J. Ten Boys Who Lived on the Road From Long Ago Till Now. Ginn & Co.
 Bass, M. F. Stories of Pioneer Life. Heath & Co.
 Blaisdell, A. F. Short Stories From English History. Ginn & Co.
 Blaisdell, A. F., and Ball, F. K. The American History Story Book. Little, Brown & Co.
 Heroic Deeds of American Sailors. School edition. Little, Brown & Co.
 * Brigham, A. P. Geographic Influences in American History. Ginn & Co.
 Brooks, E. S. Stories of the Old Bay State. American Book Co.
 Burton, A. H. The Story of the Indians of New England. Silver Burdett & Co.
 Coe, E. F. Founders of Our Country. American Book Co.
 Makers of the Nation. American Book Co.
 Drake, S. A. On Plymouth Rock. Lothrop, Lee & Shepard.
 Edgar P., editor. The Struggle For a Continent. Little, Brown & Co.
 Elson, H. W., and Macmillan, C. E. The Story of Our Country. World Book Co. (Foundation History Series.)
 Book 1.
 Book 2.
 Faris, J. T. Makers of Our History. Ginn & Co.
 Real Stories From Our History. Ginn & Co.
 Gordy, W. F. American Beginnings in Europe. Scribner.
 American Leaders and Heroes. Scribner.
 Stories of American Explorers. An Historical Reader. Scribner.
 Stories of Early American History. Scribner.
 Guerber, H. A. The Story of the Thirteen Colonies. American Book Co.
 Haaren, J. H., and Poland, A. B. Famous Men of Greece. American Book Co.
 Famous Men of Rome. American Book Co.
 Famous Men of the Middle Ages. American Book Co.
 Hale, E. E. Historic Boston and its Neighborhood. Appleton & Co.
 Hall, J. Men of Old Greece. Little, Brown & Co.
 Hancock, M. S. Children of History. Little, Brown & Co.
 Hart, A. B., and Chapman, A. B. How Our Grandfathers Lived. The Macmillan Co.
 Hart, A. B., and Hazard, B. E. Colonial Children. The Macmillan Co.
 Hart, A. B., and Hill, M. Camps and Firesides of the Revolution. The Macmillan Co.
 Hazard, B. E. and Dutton, S. T. Indians and Pioneers. Silver, Burdett & Co.
 Higginson, T. W. Young Folks' Book of American Explorers. Longmans, Green & Co.
 Johnson, W. H. The World's Discoverers. Little, Brown & Co.

- Lucia, R. Stories of American Discoverers for Little Americans. American Book Co.
- Otis, J. (pseud. of J. O. Kaler). Calvert of Maryland. American Book Co.
- Mary of Plymouth. American Book Co.
- Richard of Jamestown. American Book Co.
- Ruth of Boston. American Book Co.
- Stephen of Philadelphia. American Book Co.
- Pratt, M. L. America's Story for America's Children. Volumes 1 to 4. Heath & Co.
- American History Stories. Volume 4. Educational Publishing Co.
- Pumphrey, M. Pilgrim Stories. Rand, McNally & Co.
- Shaw, C. D. Stories of the Ancient Greeks. Ginn & Co.
- Smith, H. A. The Colonies. Edited by S. T. Dutton. Silver, Burdett & Co.
- Smith, M. P. W. The Young Puritans in King Philip's War. Little, Brown & Co.
- Southworth, G. Van D. Builders of Our Country. Book 1, 2. Appleton & Co.
- Stone, G. L., and Fickett, M. G. Days and Deeds a Hundred Years Ago. Heath & Co.
- Every Day Life in the Colonies. Heath & Co.
- Tappan, E. M. American Hero Stories. Houghton, Mifflin Co.
- Our Country's Story. Houghton, Mifflin Co.
- The Story of the Greek People. Houghton, Mifflin Co.
- Tiffany, N. M. From Colony to Commonwealth. Ginn & Co.
- Pilgrims and Puritans. Ginn & Co.
- Tomlinson, E. T. Boys of the Revolution. Silver, Burdett & Co.
- Towle, G. M. Heroes and Martyrs of Invention. Lothrop, Lee & Shepard.
- Magellan. Lothrop, Lee & Shepard.
- Pizarro. Lothrop, Lee & Shepard.
- The Voyages and Adventures of Vasco Da Gama. Lothrop, Lee & Shepard.

The following are suggested but are not on the authorized list of 1918. Houghton, Mifflin Co., Boston, publish:

- Riverside History of United States. Volume One. Beginnings of the American People.
- Hartwell, E. C. Teaching of History.
- Kendall, Calvin N., and Stryker, F. E. History in the Elementary Grades.
- Stevenson, Augusta. Dramatized Scenes from American History.
- * Stevenson, Burton E. Poems of American History.
- Tappan, Eva March. An Elementary History of Our Country.
- Our European Ancestors.
- Letters from Colonial Children.
- Little Book of the Flag.
- Deming & Bemis. Stories of Patriotism.

- * Cabot. A Course in Citizenship.
 - * Wilson. Motivation of School Work.
 - * Kendall & Mirick. How to Teach the Fundamental Subjects.
 - * Becker. Beginnings of the American People.
- Ginn & Co., Boston, publish:
- Atkinson. Introduction to American History.
 - * Kemp. General History for Graded Schools.
Outline of History for the Grades.
 - Moore. From Colony to Commonwealth.
 - Moore. Pilgrims and Puritans.
 - Church. Stories of the Old World.
- Silver, Burdett Co., Boston, publish:
- Gause and Carr. Panama. The New Route to India.
 - Newell. Indian Stories.
 - Mowry. American Pioneers.
 - Hazard. Indians and Pioneers.
 - Dawes. Colonial Massachusetts.
 - * Ellis. Historical Readings Illustrative of American Patriotism.
Price. Wandering Heroes.
 - Maitland. Heroes of Chivalry.
 - Hermans. Stories from the Hebrew.
 - Hall. Our Ancestors in Europe. An Introduction to American History.
Teachers' Manual to Accompany Our Ancestors, etc.
 - Dynes. Socializing the Child.
 - Mowry. Essentials of United States History.
 - * MacCoun. Historical Geography of the United States.
- American Book Co., Boston, publish:
- Eggleston. New Century History of the United States.
American Life and Adventure.
 - Newton and Treat. Outline of American History.
 - Kupfer. Lives and Stories Worth Remembering.
 - Guerber. Story of the Greeks.
Story of the Romans.
Story of the English.
 - Baldwin. American Book of Golden Deeds.
Old Greek Stories.
Fifty Famous Stories Retold.
Thirty More Famous Stories.
 - Shaw. Discoverers and Explorers.
 - Eggleston. A First Book in American History.
 - * Bliss. History in the Elementary Schools.
- Little, Brown Co., Boston, publish:
- Blaisdell. Pioneers of America.
Child's Book of American History.
Smoky Day's Wigwam Evenings.
 - True. The Iron Star (A History Reader).
 - Eastman. Indian Child Life.
Indian Legends Retold.
Indians, Heroes and Great Chieftains.

- Greene and Kirk. Heroes of Chivalry.
 Parkman. The Boys' Parkman.
 Stimpson. The Child's Book of American Biography.
- Flanagan & Co., Chicago, publish:
- Plan Books (monthly) for Intermediate and Grammar Grades;
 valuable in the teaching of history as well as other subjects.
 Catalogue of publications, stencils and other educational material
 contains a wealth of material too great to list here. A few
 books are:
- Early History Stories of America.
 Boys and Girls of Colonial Days.
 * Evangeline Entertainment.
 * What to Do for Uncle Sam, by Bailey.
 * Thanksgiving Entertainments.
 Cortez, Montezuma and Mexico.
 Little Journeys to Cuba, Porto Rico, and Mexico (to get the
 history of these places).
- D. C. Heath Co, publish:
- * Cornman & Gerson's Topical Survey of United States History.
 * Horton. A Group of Famous Women.
 Snedden. Docas, The Indian Boy of Santa Clara.
 * Corney & Dorland. Great Deeds of Great Men.
 Dale. Tales of the Tepee.
 Firth. Stories of Old Greece.
 Kupper. Stories of Long Ago.
 Hyde. Favorite Greek Myths.
 Dole. The Young Citizen.
 Holbrook. Cave, Mound, and Lake Dwellers.
- MacMillan Co., Boston, publish:
- Beard & Bayley. History of the American People.
 Best. Worlds Famous Stories in Historic Setting.
 Egypt and Her Neighbors.
 Glorious Greece and Imperial Rome.
 The Nations of Western Europe.
 Merry England.
 Dickson. From the Old World to the New.
 A Hundred Years of Warfare.
 Camps and Trails of Early American History.
 Pioneers and Patriots.
 Johnson. Teaching of History.
 McMurry. Pioneers on Land and Sea.
 Pioneers of the Mississippi Valley.
 Pioneers of the Rocky Mountains and the West.
 * Moley & Cook. Lessons in Democracy.
 Scott. How the Flag Became Old Glory.
 * Simpson. Supervised Study in American History.
- True Stories of Great Americans (In nineteen volumes):
 Christopher Columbus.
 Captain John Smith.
 La Salle.

- * Wayland. History Stories.
How to Teach American History.
 - Wilson. History Reader for Elementary Grades.
 - Bird & Sterling. Historical Plays for Children.
 - Educational Publishing Co., Boston, publish:
 - Welsh. Colonial Days in Virginia, Carolina, Maryland, Georgia.
 - Dawes. Stories of Our Country.
 - Macomber. Stories of Great Men.
 - Chadwick. World History in Myth and Legend.
 - Pratt. Legends of Norseland.
 - Schottenfels. Parzival and Other Stories from the Germans.
 - Pratt. Myths of Old Greece.
The Story of King Arthur.
 - Booker. Hiawatha the Indian.
 - Pratt. Stories from Old Germany.
DeSoto, Marquette and La Salle.
Stories of Old Rome.
Pizarro or the Conquest of Peru.
Cortez and Montezuma.
 - Powers. Stories of Indian Days.
 - Gordon. Patriotism in Prose and Verse.
 - Howard. Four Great Pathfinders.
 - * Miller. History in Story, Song and Action, Vol. I and II.
- See* library catalogues for other books. *See, also*, School Document No. 5, 1913, A Guide To Aid Pupils in the Selection of Books in the Boston Public Library.

MAGAZINES AND PAMPHLETS.

See List of Magazines and Pamphlets in the Geography Course of Study which precedes this. Many of the publications included there may be used in the history period.

"You Shall Not Pass," a pamphlet published by D. C. Heath Co., Boston, to introduce their Bourne and Benton Histories.

"Teaching of Citizenship," by Mrs. Trueworthy, a pamphlet which may be obtained at the State House.

"American History Leaflets," by Hart and Channing.

The Historical Outlook, a journal for readers, students, and teachers of history, published by the McKinley Publishing Co., Philadelphia, Pa.

Year Book of National Society for Study of Education.

Horace G. Brown, Worcester State Normal School, has edited the following pamphlets: The Dramatic in Teaching, Some General Principles, Dramatization in History Teaching, An Example of Dramatization in a One Room School, and Observance of Historic Days at School.

"Spirit of America" and "New England Old and New" published by Old Colony Trust Company, Boston.

Classified list of Old South Leaflets.

See catalogues of publishers and the library: Helps in the Public Library to the Study of the History of Boston in the Public Schools.

MAPS.

In the Geography Course of Study see "Maps," their study, reasoning from them, and lists of publishers.

Probably the most important map work to be done in Grade VI is the study of the representation of the Known World's growth.

For this purpose it is suggested that teachers obtain or make a map of the World (as it is known now) in very faint outline, a blackboard with a faintly stencilled map of the World remaining for the year on it, or a large sheet of cardboard with the present map of the world faintly traced in pencil, or whatever the teacher's ingenuity suggests. During the course of the year's work the teacher and class will make the map grow from the Known Lands in 1492 to the map of the World as it was at the end of the French and Indian Wars.

It would seem desirable to begin the history outlined for this grade with the map of the Known World in 1492. Children can readily darken in the Known World in 1492, and they delight in adding question marks about the lands which were partially known. This Known World in 1492 should now be used as a summary of what the teacher wishes the pupils to have as a background for the study of American history. The September work will consist of working back from this map in 1492 until the teacher has given the children a picture of the countries of the Old World as they were before 1492. While the teacher talks, the pupils, by the use of the imagination, can create pictures of people and countries such as Great Britain, Italy, Greece and Egypt as they were before 1492. (See suggestions embodied under "European Beginnings"; There is a close relation between what is said here and under "European Beginnings.") Such a well given picture of life before 1492 should suffice as a foundation of American history, for, while the story of Egypt and other Old World countries is interesting, unless the teacher is careful, what she is trying to teach, namely, *American* history, will be lost in a maze of "entangling relations." Teachers would do well to look out for the "entangling relations," remembering that Pestalozzi has said "All other things being equal, the memory retains most readily facts that are free from entangling relations."

As explorer after explorer goes forth from Europe, the map will grow. Children can indicate the same growth on their desk outline maps. Further work on outline maps is given under "projects" in this course.

For the accomplishment of this Course of Study it is very necessary that teachers have access to:

Wall maps of the World on Mercator's Projection and North America.

Blackboard outline map of the World.

Three exploration outline maps for each child, and two colonization outline maps for each child.

Two Maps of United States to show claims before and after the French and Indian Wars.

Denoyer-Geppert & Co., Publishers, Chicago and New York.

Educational Specialties, Inc., Local Agency, 120 Boylston street, Boston, publish very valuable series of maps, special numbers of which are excellent for the accomplishment of this course. See the Exhibit of 1920. See catalogue of publisher.

Breasted. Ancient series of history wall maps.

Harding. European series of history wall maps.

Hart. American series of history wall maps.

A. J. Nystrom, Geographical Publishers, Chicago, Ill. Babb & Co., local agency, 93 Federal street, Boston, also publish very valuable series of maps, special numbers of which are excellent for the accomplishment of this course. *See* catalogue of publisher.

Johnston. Classical Maps.

Johnston. European History Series.

Sanford. American History Maps.

Milton Bradley, Silver Burdett, McKinley and Babb Co., publish outline maps.

PICTURES.

See this subject in the Geography Course of Study.

See, also, School Document No. 6, 1913, report of the Committee on Instruction by Means of Pictures.

See November, 1913, "Education" or obtain from Horace G. Brown, Worcester State Normal School "Efficiency in Teaching by Pictures."

Teachers will, of course, make use of all the pictures of historical subjects, stereoscopes and slides which may be borrowed from the library.

The Children's Museum will give illustrated talks on any subject. The Art Museum also does the same thing.

Children should become very familiar with the Egyptian, Japanese and other fine rooms there. The famous collection of pictures by Abbey, the Holy Grail, should be frequently seen by the children in their visits to the Main Library: These aid in the teaching of mediaeval stories.

Bureau of University Travel, Boston.

Thompson Publishing Co., Syracuse, N. Y.

B. Harrison, New York City.

Perry Picture Co., Malden, Mass.

as well as the other sources mentioned in School Document No. 6, 1913, supply excellent inexpensive pictures.

Pictures should be much used by both teachers and pupils. Both can collect and classify. The children should have opportunities to examine the pictures at close range and then they should be thoughtfully arranged in an exhibit on the burlap or some other form of screen. Much skill and forethought is necessary to get full results.

HOUSEHOLD SCIENCE AND ARTS.

SEWING.

Purpose of the Course.

The Course of Study in Sewing as a whole has been planned with a view, first, to increase the amount of work done by the various classes. It will be noted that the work of each year has been so framed as to encourage making small garments and articles rather than large ones. The interests of young children lag and their hands tire when set upon a single garment for the year. Teachers are urged to increase the numbers of

articles made, to encourage the production of small, useful, practicable articles, and to go as far beyond this *minimum* course of study as their varying conditions justify.

It is deemed especially desirable to impress sewing classes with the thought that speed is as important a measure of their work as accuracy. This course in sewing is based on the idea that there is no subtle, hidden, "educational" value in sewing. It is believed that "hand training" is best known and best shown by readiness and excellence of hand production. Oral descriptions of processes in sewing are of value to a child only when she is describing what she *can do* well and quickly. The manual training which stands actual test, and which is a worthy aim in school, results at once in a product, and the best way to secure "training and educational value" is to improve this product and to increase the speed of its production.

A distinction must be made between haste and speed. A feeling of being hurried would react very unfavorably on our classes. But demanding a given amount of good hemming, for example, in a given ten-minute-period of the sewing lesson, is not only a highly necessary part of satisfactory training in sewing, but a useful means of showing a child what her comparative efficiency is.

Another object of the sewing course is to allow teachers and pupils the assistance of a school sewing machine. Machines should not be used by small children. They are designed mainly for the use of teachers and of sixth grade classes, but large and mature girls in lower grades may be given some machine sewing at the teacher's discretion.

And, lastly, the course has been made so as to classify demands and to set two standards, the minimum, which is herein outlined, and an extension of the minimum, which is left to the initiative of the individual teacher.

All teachers are urged to extend the minimum in such directions as their own districts advise. *Small, useful* articles, however, are urged in all grades and under all conditions. In the higher grades beauty may be added to utility, for here the work in sewing should bring to its service pupils' ability in drawing and design.

By the use of the machine and the setting of a minimum limit to the course of study it is hoped that our work in sewing may arrive at the ideal which many of our able sewing teachers have long desired it to attain.

Records Required.

1. Each teacher is required to keep a note of all garments and articles made during each year by each child under her charge.

2. All teachers shall keep at least bi-monthly record of their estimate of the skill of each child. Monthly records are preferable: 1 stands for *excellent*; 2 for *good*; 3 for *passable*; 4 for *unsatisfactory*; 5 for *poor*; and 6 for *very poor*.

3. Each teacher shall keep a speed record for each child. Speed shall be marked A for *excellent*, B for *good*, C for *passable*, and D for *deficient*.

These three records are to be kept in blank books supplied for daily record purposes. They are to be open to the inspection of any school official.

4. In all cases teachers are requested to have children mark garments in such a way that each may show the date on which it was begun and finished, and the number of hours required for its making.

Teachers are recommended to have children paste a slip of gummed tape on each garment so that these records may be kept.

Samplers.

Samplers are introduced at the end of the school year, when garments are finished, for the purpose of keeping an objective record of each child's attainment in fundamental operations.

Each pupil, excepting, of course, those beginning fourth grade, shall present her sampler at the opening of the year, one sampler to be retained (and occasionally washed) throughout her school course. Each sampler shall have upon it sampler stitches as set down for the various grades. Teachers are requested to store the samplers during vacations, and to see that they are given on graduation or on leaving school to the girls who have made them.

A sampler should contain about a half yard of cotton cloth, marked into spaces of sizes appropriate for containing the stitches of the several years. It is advised that the pupils mark with thread on the sampler each grade as they enter its work. For example, the fourth grade work should be indicated by IV, done in red thread and in such stitch as the teacher advises. It should also be thread marked with the child's initials, and with the year of beginning.

READING AND LITERATURE.

In Part I various "means" were indicated by which the "Objective Standards" there set up are to be reached through covering the amount of reading and literature indicated in the "Minimum Requirement." These are here discussed in turn, and suggestions concerning material, methods of teaching and lesson outlines are offered.

Suggestive lists of stories to be told to the children, poems to be memorized, or for reading aloud, and books to be read aloud by the teacher are also appended.

SUGGESTIONS ON AIMS AND METHODS.*

WISE CHOICE OF MATERIAL.

I. For reading lessons.

1. Regular text-books.

At the beginning of the year it is desirable to use a reader of fifth grade difficulty which has not been read by the class.

The earlier lessons in the reader of fifth grade should be chosen for sight reading; the more difficult for training in preparing a reading lesson.

The reader of sixth grade difficulty may be introduced in lessons alternating with the earlier reader; the latter may be withdrawn entirely in a short time.

* Some of the suggestions here offered were also made in the Syllabuses for Grades IV and V.

If it is not feasible to provide the children with readers of both fifth and sixth grades of difficulty, the teacher is advised to classify the lessons in the reader provided for the grade and to use the easier lessons first.

2. Supplementary books.

The supplementary reader should be chosen to fit the need of the class.

The subject matter of the supplementary reader should be interesting and within the present attainment of the children.

It should seldom be necessary to develop words with the exception of proper names.

The language structure should be so simple and clear that the children can read at sight without hesitation.

The teacher should not be dependent upon having large sets of supplementary books. The use of two books — one for the teacher and one to be passed about from pupil to pupil — is an excellent plan inasmuch as it provides an effective incentive for good readings; *i. e.*, a veritable audience. Books with some difficult passages can be used in this way, for the teacher may read such passages, incidentally explaining meanings or supplying simpler expressions.

II. For "Other ways of becoming acquainted with literature."

1. The material should satisfy two tests:

a. The children's test — *Is it interesting?*

b. The teacher's test — *Does it present the right standards: from the literary standpoint? from the moral standpoint?*

2. The poems, stories and books contained in the accompanying lists satisfy the children's test because they recognize the chief interests of children; *viz.*:

a. Child life.

Similar to the children's own experience.

Unlike their own experience.

b. The heroic and adventurous.

c. Certain aspects of the outdoor world, especially the life of animals.

d. The marvelous as depicted in myths, fairy tales, etc.

3. This material also satisfies the teacher's tests:

a. It is satisfactory from the literary standpoint.

Provided children are interested, they are not discriminating as to the literary form of the material offered them.

Therefore, if good standards are to be developed, the teacher must take pains to select:

The best versions of myths and fairy tales.

Well written stories of child life, adventure and the outdoor world.

Verse of a high order, even a little of the very highest order.

- b. It is satisfactory from the moral standpoint.

Such books, stories, and poems may not have definite "morals," but they do help to establish a wholesome attitude of mind and to develop interest in things that are worth while.

A bit of nonsense that makes for cheerfulness and helps to cultivate a refined sense of humor, a nature poem or story that opens the eyes to the beauty of the outdoor world may be as valuable in a child's life as the story with a definite moral lesson.

Verse or stories that encourage flippancy, disobedience, or irreverence, that foster the belief that a child's judgment is superior to that of his elders, or that encourage a coarse sense of humor are most emphatically unsound from the moral standpoint.

VOCAL TRAINING.

- I. Special exercises may be given to improve the voice, the articulation and the inflections, such as:

1. Breathing exercises.
2. Singing exercises.
3. Simple exercises in the production of the speaking voice.
4. Drills in articulation and inflection.

Such drills must have

- a. Purpose from the child's point of view.
- b. An interesting content.
- c. Variety.

- II. Special pains should be taken to make the conditions such in a recitation that the pupils actually talk and read to one another; these conditions help to dispel self-consciousness, to bring out the voice, to improve the articulation, and to produce natural inflections. Reading to an audience not provided with books is a helpful condition.

PHONICS.

Phonics are too often discarded when children leave the third grade.

Teachers will do well to remember that:

Children cannot be efficient readers unless they can find out independently the pronunciation of words that they have not seen before.

Children cannot find out pronunciations independently unless they have the habit of associating sounds with individual letters and groups of letters.

Children should, therefore, review the phonics and phonograms learned in the earlier grades.

Diacritical marks are generally unnecessary and should be avoided.

Letter combinations, not diacritical marks, are, in general, the factors that determine pronunciation.

Children's ears can be trained to discriminate sounds through exercises in matching sounds and rhyming words.

Phonetic analysis is a means to an end, not an end in itself.

Phonetic analysis of words may precede the reading lesson but should not be permitted to interrupt it.

Phonetic analysis should be conducted individually, not in concert.

Therefore, an exercise in phonics is valueless unless it contributes to one or both of the following ends:

Good articulation.

Independent power to pronounce unfamiliar words.

Study of Words and Phrases.

I. Results to be worked for:

1. To remove obstacles to thought-getting.
 - a. Difficulties of pronunciation.
 - b. Difficulties of meaning.
2. To train pupils to draw the line between what they do and what they do not understand.
3. To train pupils to use the dictionary.

II. Methods of working.

1. For pronunciation.

a. Guiding principles:

It is desirable that the children should learn the pronunciation of many new words as they do in everyday experience outside of school;— *i. e.*, *by hearing them used.*

It is equally desirable that they should learn how to *find out independently* the pronunciation of new words.

The teacher should try to keep the balance between these two points of view.

b. Methods.

The teacher may use the words in sentences, thus giving the pronunciation incidentally.

The pupils may, with the help of the teacher, work out the pronunciation of words at the black-board.

The pupils may work out the pronunciation of words from the dictionary. (This plan assumes a few preliminary lessons on the contents and arrangement of the dictionary. See page 67.)

2. For meanings.

a. Guiding principles.

Children should learn to gather the meaning of a phrase or idiom from its repetition or from the surrounding text.

To gain this power children need to begin with the assistance of suitable questions and illustrations.

- b. Methods. (The following ways of working are suggested; the choice should be determined by the character of the selection and the advancement of the pupils.)

Let the teacher read the lesson aloud to the pupils while they follow silently. At the end of each paragraph let the children question the teacher about words and phrases which they do not understand.

Let the teacher read the lesson aloud to the pupils while they follow silently, the teacher supplying synonymous words and phrases as she reads and later questioning the pupils on the meanings thus presented; *e. g.*, she reads, "The mists had gathered (for *congregated*) about the distant mountain side." Later she may ask either, "What word means the same as *congregated*?" or "What word means the same as *gathered*?"

Let the teacher entrust a preliminary silent reading to representative pupils, who are to make a list of words to be studied by the class before the lesson is read.

Let the teacher present new words and phrases at the blackboard in the context in which they occur, or in a similar context.

INTRODUCTORY TALKS BY TEACHER TO SUPPLEMENT BOOKS AND SELECTIONS.

- I. May consist in giving necessary information.
 1. Biographical.
 2. Historical.
 3. Geographical.
 4. Scientific.
- II. May include preliminary questions to be answered after first reading of selection. Such questions should be
 1. Interesting.
 2. Definite.
 3. Not difficult to answer.
- III. Must create a sympathetic atmosphere.

STUDY OF ILLUSTRATIVE PICTURES.

- I. Purpose.
 1. To assist the children in grasping the thought expressed in the printed page.
 2. To satisfy the children's interest in the pictures, thus preventing the turning of pages during the lesson, with resulting loss of place.
- II. Control of study.
 1. By guiding suggestions or questions.

2. Since a child's tendency at first is to see isolated details, he must be guided to see these details in relation to the central thought expressed in the picture.

SILENT STUDY OF SUBJECT MATTER.

- I. Amount — to be determined by the character of the selection.
- II. Purpose — to enable the children to grasp the central idea.
- III. Control of study.
 1. By encouraging the children to ask questions.
 2. By guiding questions and stimulating suggestions.
 3. By further inspection of words and phrases, if needed.
 - a. Judging meaning from context.
 - b. Verifying or correcting.
 4. By using such devices as are suggested under Silent Reading.

ORAL READING.

- I. Purposes.
 1. Chiefly as a preparation for intelligent silent reading, inasmuch as the children's oral reading reveals to the teacher their ability and needs.
 2. As a means of obtaining and imparting information and enjoyment in the schoolroom.
 3. As a means of developing in the children the ability to impart information and enjoyment in life outside of school.
- II. Choice of readers.
 1. If testing the pupils' ability is the purpose, let the work be distributed as fairly as possible.
 2. If information or enjoyment is the primary purpose, let the teacher call on the good readers to read the difficult paragraphs; let the teacher, also, read occasionally.
- III. Recognition of motive.
 1. Let pupils read from front of room to classmates.
 2. Let audience frequently close their books and listen.
- IV. Management of the individual lesson.
 1. First reading.

Pupil should not be interrupted.
 2. Criticism (not always necessary or desirable but frequently helpful).
 - a. By both class and teacher.
 - b. Elements to be criticised.
 1. Interpretation of thought and feeling.

N. B.—A child's own interpretation should be accepted when it is reasonable.
 2. Voice; articulation; pronunciation.
 - c. Nature of.
 1. Favorable, should be concise and discriminating. Do not praise indiscriminately; praise the distinctness of the reading or the way in which the meaning is brought out, etc.

2. Adverse, should be definite and constructive.
Do not condemn the reading as a whole; point out something that the child can remedy.
 - d. Do not be afraid to permit imitation of an intelligent reading.
 3. Re-reading (not always necessary or desirable).
 - a. By the same pupil.
 - b. By a different pupil. (This plan stimulates attention to both reading and criticism and develops ambition to read well.)
- V. Additional suggestions.
1. A few carefully chosen pieces may be studied thoroughly for drill in expression.
 2. A few pieces having interest and literary merit may be read again and again. (Pupils should be permitted to choose their favorites.)
 3. Competition between members of the class and between classes will, if rightly managed, lift the children's standard of oral reading and will improve their actual reading.
 4. Pupils who read certain selections especially well may be invited into other classes to read.

SILENT READING.

I. Importance.

In the earliest stages most of the reading time is necessarily given to oral work inasmuch as the children must master the mechanics of reading before they can get the thought from the printed page; as they progress, however, the relation between the time given to oral reading and silent gradually changes until, in after life, reading becomes almost entirely silent; in the sixth grade, if previous conditions have been favorable, *silent reading should be given at least as much time as oral.*

II. Immediate advantages.

1. If silent reading is tested by such responses as are suggested below, the teacher has even better proof that the children have mastered the thought than is offered by oral reading.
2. Through silent reading the ambitious child is given the opportunity to read more than he could in class, where he must necessarily wait for the slower child; it is also an incentive to the slower child to read better, as he recognizes and appreciates the enjoyment and ability of his brighter companions.
3. The spirit of quiet, and an appreciation of the rights of others in demanding quiet, during the period set apart for silent reading, is valuable.

III. Method.

1. Guidance.
 - a. Give preliminary questions and stimulating suggestions.
 - b. Encourage children to ask questions at close of reading.

- c. Train the children to get the main thought of the portion read, using some such device as the accompanying, which has been found effective: The teacher, watch in hand, gives the following instructions:
 - “Ready to read.” (A portion designated.)
 - “Read.” (Allow two minutes.)
 - “Close books.”
 - “Give the main thought (orally or in writing) in the fewest words possible.”
 - d. Train the children to make questions which, if answered, would give the thought of the portion read. These questions may be read and answered during the recitation period. The introduction of the time element — as above — will add to the interest and concentration of the class.
2. Response.
 - a. Narrative, and sometimes exposition, may be followed by consecutive reproduction.
 - b. Narrative with some dialogue gives opportunity for dramatization.
 - c. Narrative with significant episodes is good material for illustrative drawing.
 - d. Any type of subject matter may be profitably tested by question and answer.

[STORY TELLING BY TEACHER AND PUPIL.

- I. Aim.
 1. To give wholesome pleasure. (Be satisfied occasionally with this purpose only, *e. g.*, in telling a nonsense story.)
 2. To aid children to interpret their own experiences.
 3. To aid children to enter imaginatively into experiences different from their own. (Strive to develop tolerance by presenting stories of nobility and heroism in communities or races against which prejudice exists; work for appreciation of worthy qualities wherever they are found.)
 4. To contribute toward character building by storing the mind with serviceable ideals of temptations resisted, faults conquered, brave and generous deeds accomplished.
- II. Practical suggestions. (Adapted from Sara Cone Bryant's "How to Tell Stories.")
 1. Have more than one story on hand.
 2. Do not tell a story unless you like it.
 3. Know your story thoroughly.
 4. Work on it until you have it in the right shape for telling:
 - a. Shorten or lengthen.
 - b. Adapt to the environment of the children.
 - c. Eliminate whatever would arouse or deepen personal, local or race prejudices.
 5. Tell your story with enthusiasm.

6. Avoid digressions.
7. Let the moral — as a rule — take care of itself.
8. In choosing stories which the children are to tell later, select those that are:
 - a. Brief.
 - b. Simple in motive and construction.
 - c. Full of action and imagination.
 - d. Expressed in language that helps the children to see and hear and feel.
 - e. Definite and satisfying in their endings.
9. Do not encourage the children to tell a story until they have had time to become familiar with it. The story telling period should be enjoyable for the class as a whole; not a tax on the patience of the listeners. The slower children may be given opportunities to tell stories privately to those that learn and tell easily. Telling the story to the class as a whole in such a way as to give pleasure may be regarded as an end to be worked for.

III. An illustrative plan.

1. Introduction.
 - a. Give setting (historical, geographical, etc.) in such a way as to create a sympathetic attitude toward the story.
 - b. Ask pupils to be on the outlook for some especial point in the story.
2. Telling the story. (See above.)
3. Discussion.
 - a. Give the children a chance to ask questions and make comments.
 - b. Bring out the points of interest by questions and suggestions.
 - c. Bring out actions and qualities to be admired and imitated.
 - d. Call attention to the undesirable results of actions and qualities to be avoided.
 - e. Encourage the children to suggest similar stories from literature or real life.

READING ALOUD BY THE TEACHER.

- I. Material.

Poems, stories, books.
- II. Practical suggestions.
 1. Teachers should remember that intelligent pleasure, not detailed knowledge, is the purpose in view.
 2. To this end only such unfamiliar words and phrases as would prove obstacles to the children's enjoyment in the story should be explained.
 3. The quickest and most interesting ways of disposing of such obstacles should be adopted. (*See Words and Phrases.*)

4. Questions and suggestions that stimulate interest, thus adding to the children's enjoyment in the poem, or story, should be used freely. For example, in reading Tennyson's "Bugle Song," let the children discover from such expressions as "The splendor falls on castle walls," "The long light shakes across the lakes," and "in yon rich sky," that the sun is setting. In reading "The Great Stone Face" let them find the expressions by means of which Hawthorne makes clear to us the gigantic proportions of the face such as "the broad arch of the forehead, a hundred feet in height," "the brow with its massive depth and loftiness." Let them explain why Ernest was hopeful that each distinguished visitor in turn would resemble the Great Stone Face; why even the poet disappointed his hope, and why, even after the people had recognized his own likeness to the face, Ernest kept on trusting that the man of the prophecy would come.
5. Questions that merely examine the children should be avoided. Do not ask for *definitions* of new words; do not ask for unimportant details.

OUTSIDE READING.

- I. Necessity.
Comparatively little reading can be done in the class room; therefore teachers should encourage outside reading.
- II. Material.
 1. School libraries.
 2. Deposits from the Public Library.
 3. Books taken from Public Library by children on their own cards.
- III. Ways of interesting the children.
 1. The teacher may give a brief account of what a book contains in such a way as to stimulate curiosity.
 2. The teacher may read aloud an interesting passage or chapter.
 3. If one child likes a book, the news spreads; the supply does not satisfy the demand; often other members of the family read the books taken home.
- IV. Reactions.
 1. Informal oral reports.
 2. Written reports. The following simple outline is suggested:

Outline.

1. Author.
 - What was his name?
 - Where did he live?
 - Do you know any interesting facts about his?
 - Childhood?
 - Home?
 - Friends?
 - Name some of his books.
2. Exact name of the book.

3. Setting.
 - Where are the scenes laid?
 - Is it a story of country, city or sea life?
4. Is it a story of the present?
 - Is it a story of long ago?
5. Characters.
 - Are they people or animals?
 - What are their names?
 - Whom do you like best? Why?
6. Story.
 - Is it a story of adventure, a fanciful tale, or a story of everyday life?
 - Give a general idea of the story or tell some incident in the story.
 - Do you like it? Why?

NOTE.—The accompanying book report is one of the regular monthly reports written in the sixth grade of a Boston school. It is not one of the best, but is above the average. It is printed just as it was written, without any corrections or changes.

English.

School.....	Grade V., Room 14.
Pupil's name.....	June 3, 1917.

Book Report.

1. Author.

Kate Douglas Wiggin is the author of *Birds' Christmas Carol*. She is an American and loves to write stories about children. On the first page of the book "*Birds' Christmas Carol*" she has written something to three children. It is, "To the Three Dearest Children in the World, Bertha, Lucy and Horatia." This shows how fond she is of children. A few other books that she has written are, "Timothy's Quest," "Children's Rights" and "Rebecca of Sunnybrook Farm."
2. Name of Book.

The *Birds' Christmas Carol*.
3. Setting.
 - a. In America.
 - b. City life.
 - c. In a large house.
4. Character.

The characters are people. The names of the people are Mr. and Mrs. Bird, Donald, Paul, Hugh, Uncle Jack, Carol, and the nine Ruggles. I like Carol best, because she is so kind and loving.
5. Story.

The story is how the first girl is born in a family of three boys. As the child was born on Christmas her mother named her Carol. Another reason is that the house was beside a church and on Christmas the boys in the choir sang a beautiful carol. After Carol had seen five birthdays she became weak and lame. After

that she always lay in bed. When her eleventh birthday came Carol decided to have a happy Christmas and to help others. Beside her house there lived some poor people whose name was Ruggles. Carol grew to know the Ruggles and she invited them to her house on Christmas. They gladly came and when they sat down to supper they could not believe that what they saw was true. Later in the day presents were given out and then they went home.

That night Carol died. She was happy because before she had died she had made some one else happy too.

This story is not of adventure. It is an everyday homelife story that could easily happen.

This story shows Carol's love for her family and for other people, her self-sacrifice, her generosity, her thoughtfulness, and her kindness.

I like this story very, very much because it is such a sad story, and shows many things that little girls can do.

DRAMATIZING.

- I. Material. Selected passages or wholes supplied by:
 1. The regular reading lesson.
 2. Stories told or read aloud.
 3. Poems read or committed to memory.
- II. Stages. (Teacher and pupils should work together; as the year progresses, the teacher should leave more and more of the responsibility and work to the children.)
 1. Making a list of the characters.
 2. Arranging the episodes in order.
 3. Changing indirect speech to exact words of speaker.
 4. Assigning parts.
 5. Rehearsing parts.
 6. Criticism.
 7. Further rehearsing.
 8. Presentation of the whole.

MEMORIZING.

"Selections of poetry should be committed to memory to be recited, to be sung, to be made the subject of conversation. Especially will it develop and refine the vocabulary, provided the selections are properly made. Furthermore, it will develop taste. Passages that are but faintly understood may strongly move the imagination and mould the feelings."—*Hinsdale*.

- I. Material.

Brief selections of prose or verse, the greater proportion to be verse. (See Suggestive Lists, pages 147 and 151.)
- II. Introduction.
 1. May consist in giving necessary information: Biographical; historical; geographical; scientific; etc.
 2. May consist in teaching unfamiliar words and phrases that would prove stumbling blocks.

3. May include preliminary questions to be answered after first reading of poem.
Such questions should be interesting, definite and not difficult to answer.
4. Must create a sympathetic atmosphere.

III. Reading the selection.

1. Literature, especially poetry, is addressed to the ear. A faithful oral rendering is the most effective of all means of interpretation; the teacher must, therefore, be a good reader.
2. The first reading should generally be by the teacher, while the children read the text silently as they listen. This plan has two advantages:
 - a. The teacher's reading helps to make the meaning clear.
 - b. Both "eye-minded" and "ear-minded" pupils are reached.
3. Other readings should follow:
 - a. By the teacher; by selected pupils; sometimes by the class.
 - b. Each reading should have some special purpose in view.

IV. Questions.

1. Children may ask questions about points that they do not understand.
2. The teacher may ask questions:
 - a. That call for the children's own language; this plan reveals the children's understanding of the selection.
 - b. That call for the language of the selection; this plan leads the children to commit many lines to memory quite incidentally.

V. Features to be enjoyed.

1. The subject matter:
 - a. Make the story real.
 - b. Help the children to feel acquainted with the characters, to put themselves in their places.
 - c. Help them to see the places described, the pictures suggested.
2. The expression. (To be considered very simply, if at all, and only for the sake of better understanding and added pleasure.)
 - a. Call the attention of the children to the division of a poem into stanzas when that division is significant; *e. g.*, when the stanzas correspond with distinct aspects of a subject, as in Holmes' "The Chambered Nautilus."
 - b. Help the children to enjoy the rhythm by recognizing the swing of the verse in oral reading and recitation.
 - c. Help the children to enjoy the rhymes by allowing them to select and repeat the rhyming words, or to supply the rhymes from memory, as you repeat the lines, pausing before the rhyming words.

- d. Give the children the pleasure occasionally of finding the words which the poet uses in place of our everyday words; *e. g.*, in the "Bugle Song," *scar* for *high*, *rocky cliff*; the echoes *die* and *faint*, not *grow fainter*. In "The Chambered Nautilus" the shell is a *ship of pearl*, a *venturous bark*, a *lustrous coil*, picture-making expressions, full of beauty.
- e. Let them find and repeat single verses, or couplets, or even stanzas, that might live independently of the rest of the poem.

VI. Learning the language by heart.

1. This need not be made a task; it should be a natural result of getting well acquainted with the thought and language of the poem.
 2. With this end in view, the poem may be read again and again, orally and silently, in order to find answers to interesting questions. (*See above.*)
 3. Questions, too, should frequently be answered in the words of the poem. (*See above.*)
 4. When the above suggestions have been carried out, the children are generally surprised to find how much they already know by heart; it seems easy to learn the rest.
 5. Occasionally the pupils may be allowed to copy a stanza carefully for the sake of observing the arrangement of the lines, but teachers should not forget that many children have learned to dislike not only individual poems but poetry itself from having been forced to learn to write poems accurately from memory.
- #### VII. Recitation or oral reading (of the whole or of a significant selection) should close the study of any piece of literature in order that the last impression shall be that of the spirit of the piece itself.

GENERAL SUGGESTIONS.

1. Interest is cumulative; each reading lesson and each literature lesson must be interesting if a permanent interest is to be established.
2. There is too often a gulf between the literature read in school and the books read voluntarily outside of school.
3. Try to bridge this gulf by bringing into the schoolroom such books as children will be tempted to continue reading by themselves.
4. By a vivid presentation of portions of such stories, awaken in the children a desire to continue reading by themselves.
5. Correlate literature with other literature; let some bit of standard verse serve as a nucleus around which other poems may be grouped; encourage pupils to make such groupings for themselves.
6. Collateral material for illustration and enlargement should be plentifully provided. The study of pictures is so similar to the study of literature, both in purpose and in method, that many teachers find it of advantage to supplement the one with the other.
7. Let the bit of literature tell its own story as far as possible.

8. Do not overload the lesson with explanations; rather let the pupils question as much as they will, and direct them so that they will find out what the selection contains.

9. Encourage children to express themselves freely; do not be afraid of crude judgments; welcome them in order that you may get at the real attitude of your pupils; in this way only can you help them to a better attitude.

TESTS OF ACHIEVEMENT.

Teachers would be wise to test their work often in one or more of the following ways:

1. Reproduction of lesson in part or as a whole:
 - a. Orally.
 - b. In writing.
 - c. By illustrative drawing.
 - d. By dramatization.
2. Sight reading of unfamiliar selections which correspond in difficulty to those used in reading lessons.
3. Voluntary reading.

Are the children inclined to read by themselves books provided or recommended?
4. Correlation with other school subjects and with outside experience.
 - a. Do the children use in their oral and written language any new ideas or expressions gained from their reading lessons?
 - b. In the informal study and discussion of the reading lesson, do the children recall their own experiences?
 - c. Do the children use their textbooks in other subjects more intelligently?
 - d. In informal schoolroom conversation do the children ever furnish any evidence that their reading lessons have stimulated them to further observations; *e. g.*, does the study of the "Bugle Song" lead the children to be any more observant of the long slanting beams of the late afternoon sun and of the rich color of the sunset?
5. Enjoyment. Do the children enjoy the reading and literature periods?

SUGGESTIVE LISTS OF POEMS, STORIES AND BOOKS.

These lists are intended to aid the teacher in giving the children a conception of what literature really is; viz., a vast collection of what men have known and thought about life, told in so interesting or beautiful a way that it lasts from generation to generation and from century to century. The children are interested to learn that at first these thoughts took the form of songs and stories that were passed from one generation to another by word of mouth; that later, when men developed the art of writing, they were written down, and that still later, when the printing press was invented it became possible to preserve more of men's thoughts and to scatter them much more widely, so that a far greater number of men and women, boys and girls, could read and enjoy. The children are interested to discover,

too, that whatever a writer intends to tell us, he is sure to tell, sooner or later, perhaps quite incidentally, something about the life and the way of looking at things in his own times.

In order to give such a conception of what literature is and some knowledge of its scope it is necessary that the teacher should have a logical plan for the entire year's work. A haphazard choice of material will lead to fragmentary knowledge and will not enhance the children's enjoyment. The classification given below may be used as a basis for such a plan, but each plan should express the individuality of the teacher. The lists are sufficiently full and varied to permit a wide range of choice.

English Verse.—Poems.

Nature, child life, animal life, heroism, romance, the marvelous, humor, and religious faith are all represented in the following lists of poems.

Poems to be Memorized.

Memory selections, aggregating for the year about one hundred and fifty lines, may be taken from the following list (or from poems of equal interest and literary merit) and also from the prose list on page 100.

Aldrich, Thomas Bailey.

A Snow Flake.

Before the Rain.

Beeching, Henry Charles.

Going Down Hill on a Bicycle.

Bennett, Henry Holcombe.

The Flag Goes By.

Blake, William.

Night.

The Tiger.

Brooks, Phillips.

O Little Town of Bethlehem!

Browning, Robert.

Home Thoughts from Abroad.

Bryant, William Cullen.

March.

Burns, Robert.

A Man's a Man for A' That.

"Ca' the Yowes to the Knowes.

John Anderson.

Sweet Afton.

Carlyle, Thomas.

Today.

Cowper, William.

The Cricket.

The Nightingale and the Glowworm.

Emerson, Ralph Waldo.

The Rhodora.

The Snow Storm.

- Goldsmith, Oliver.
The First, Best Country.
- Hemans, Felicia D.
The Landing of the Pilgrim Fathers.
- Herbert, George.
The Elixir.
- Herrick, Robert.
To Daffodils.
- Hogg, James.
The Skylark.
- Holmes, Oliver Wendell.
Old Ironsides.
- Hood, Thomas.
November.
- Hunt, Leigh.
On the Grasshopper and Cricket.
- Longfellow, Henry Wadsworth.
The Ship of State (from the Building of the Ship)
- Lowell, James Russell.
The Spirit of Giving (from Sir Launfal).
To the Dandelion (a selection from).
- Miller, Joaquin.
Columbus.
- Moore, Thomas.
Canadian Boat Song.
The Light of Other Days.
The Minstrel Boy.
- Payne, John Howard.
Home, Sweet Home.
- Rossetti, Christina G.
A Green Cornfield.
- Shakespeare, William.
Hark, Hark, the Lark (from Cymbeline).
Orpheus with his Lute (from King Henry the Eighth).
The Honey Bee (from King Henry the Fifth).
- Smith, Samuel F.
America.
- Tate, Nahum.
"When Shepherds Watched Their Flocks by Night."
- Tennyson, Alfred, Lord.
The Bugle Song.
- Trench, Richard C.
The Dewdrop.
- Whittier, John Greenleaf.
The Snow Storm (from Snow Bound).
- Wordsworth, William.
"I wandered lonely as a cloud."
To a Butterfly ("I've watched you now").
To a Butterfly ("Stay near me").
To a Skylark ("Ethereal Minstrel").

Poems to be Read.

Poems from the following list, or others of equal interest and literary merit, may be read aloud by the teacher or pupils. The language of poetry generally calls for more explanation than that of prose, and poetry has to be reasonably well understood to be enjoyed, but it should be remembered that too persistent an effort to secure a thorough understanding sometimes results in sacrificing enjoyment.

Addison, Joseph.

“When All Thy Mercies, O My God!”

Ballads.

Hind Horn.

Johnie Armstrong.

Sir Patrick Spens.

Browning, Elizabeth Barrett.

The Swan's Nest.

Browning, Robert.

How They Brought the Good News from Ghent to Aix.

The Pied Piper of Hamelin.

Bryant, William Cullen.

Hymn to the North Star.

Song of Marion's Men.

The Planting of the Apple Tree.

To a Waterfowl.

Burns, Robert.

To a Mouse.

Campbell, Thomas.

Lord Ullin's Daughter.

Soldier and Sailor.

Ye Mariners of England.

Cowper, William.

Alexander Selkirk.

John Gilpin.

Holmes, Oliver Wendell.

The Wonderful One Hoss Shay.

Howitt, Mary.

The Use of Flowers.

Howitt, William.

The Wind in a Frolic.

Ingelow, Jean.

A Singing Lesson.

Echo and the Ferry.

Winstanley.

Longfellow, Henry Wadsworth.

King Robert of Sicily.

Paul Revere's Ride.

Sandalphon.

The Beleagured City.

The Bell of Atri.

- Lowell, James Russell.
 The Finding of the Lyre.
 The Singing Leaves.
- Macaulay, Thomas Babington.
 Horatius.
- Mackay, Charles.
 The Miller of Dee.
- Read, T. Buchanan.
 Sheridan's Ride.
- Rossetti, Dante Gabriel.
 The White Ship.
- Scott, Sir Walter.
 County Guy.
 Helvellyn.
 Lochinvar.
 Rebecca's Hymn.
 Rosabelle.
- Shelley, Percy Bysshe.
 To a Skylark.
- Tennyson, Alfred, Lord.
 Lady Clare.
 Sir Galahad.
 The Brook.
 The May Queen.
- Whittier, John Greenleaf.
 The Palm Tree.
 The Pipes at Lucknow.
- Wolfe, Charles.
 The Burial of Sir John Moore.
- Wordsworth, William.
 A Wren's Nest.
 Fidelity.
 Lucy Gray.
 The Solitary Reaper.
 To the Small Celandine.

Collections of Verse.

- Brackett. The Silver Treasury.
- Burt. Poems Every Child Should Know.
- Chisholm. The Golden Staircase.
- Lang. The Blue Poetry Book.
- Lovejoy. Nature in Verse.
- Repplier. Book of Famous Verse.
- Shute. The Land of Song.
- Stevenson. The Home Book of Verse for Young Folks.
- Thatcher. The Listening Child.
- Wiggin and Smith. Golden Numbers.

English Prose.

Selections to be Memorized.

Athenian Oath.
 Lincoln's Gettysburg Address.
 Lincoln's Second Inaugural (selection from).
 Roosevelt's To the Boys of America.
 Webster's Eulogy of Massachusetts.

Stories to be Told or Read.

Bible Stories.

From the Old Testament.

The Creation.
 Adam and Eve.
 Cain and Abel.
 The Deluge.
 Abraham's Sacrifice.
 Joseph.
 Moses.
 Samuel.

Parables from the New Testament.

The Good Samaritan.
 The Good Shepherd.
 The Pharisee and the Publican.
 The Prodigal Son.
 The Talents.

Classic Tales.

The Olympian Gods.
 Pandora.
 Phæton.
 Narcissus.
 Clytie.
 Hyacinthus.
 Echo.
 Perseus.
 The Pomegranate Seed.
 The Adventures of Ulysses.
 Cincinnatus.

Norse Myths.

The Beginning.
 The Gods of Asgard.
 Thor's Hammer.
 Sif's Hair.
 Tir and the Wolf.
 The Death of Baldur.
 The Punishment of Loki.
 The Twilight of the Gods.

Arabian Nights.

Aladdin.
 Ali Baba.

Caliph the Fisherman.
 The Fisherman and the Genii.
 The Magic Horse.
 Sinbad the Sailor.

Legendary Tales.

Brian Boru. (Irish.)
 Roland. (French.)
 Sigurd. (Scandinavian.)
 The Cid. (Spanish.)
 William Tell. (Swiss.)
 The Pied Piper. (German.)
 The Lorelei. (German.)
 King Robert of Sicily. (Italian.)
 Hiawatha. (American Indian.)
 Rip Van Winkle. (American.)

Modern Wonder Tales.

Stories from Carroll's "Alice in Wonderland."

Down the Rabbit Hole.
 The Mad Tea Party.
 The Lobster Quadrille.

Stories from Kipling's "Jungle Book."

Mowgli's Brothers.
 Rikki-Tikki-Tavi.
 Toomai of the Elephants.

Stories from Kingsley's "Water Babies."

How Tom Became a Water Baby.
 Tom's Adventures.

Stories from Stockton's "Old Pipes and the Dryad."

Old Pipes and the Dryad.
 The Griffin and the Minor Canon.
 The Clocks of Rondaine.

Ruskin's "King of the Golden River."

Stories of Real Life (including History, Biography and Fiction).

Audubon.
 Daniel Boone.
 Dog of Flanders, A Ouida.
 Five Little Peppers, The Sidney.
 Grace Darling.
 Great Stone Face, the Hawthorne.
 Jackanapes Ewing.
 Jennie Wren Dickens (Our Mutual Friend).
 Jo's Sacrifice Alcott (Little Women).
 Lincoln.
 Little Cosette Victor Hugo (Les Miserables).
 Little Nell Dickens (Old Curiosity Shop).
 Meg's Visit Away from Home Alcott (Little Women).
 Peterkin Stories, The L. P. Hale.
 Pippa Browning (Pippa Passes).
 The Race Dodge (Hans Brinker).
 Saving the Dyke.

Story of a Short Life, The	Ewing.
Where Love is, there God is also	Tolstoi.
White Heron, A	Jewett.
<i>Animal Stories.</i>	
Baby Robin	Olive Thorne Miller.
Busy Blue Jay	Olive Thorne Miller.
Polly's Outing	Olive Thorne Miller.
Lobo	Seton (Wild Animals I Have Known).
Raggy-Lug	Seton (Wild Animals I Have Known).
Tito	Seton (Lives of the Hunted).
Rikki-Tikki-Tavi.	Kipling (Jungle Book).
Training Elephants in Ceylon	Tennents.
Stickeen	Muir.
A Mountain Pony	Mills.

Books.

In which the stories of the preceding lists may be found, or which may be read entire.

General and Reference Books for Teachers and Pupils.

Atkinson's "European Beginnings of American History."

Baldwin's "Fifty Famous Stories Retold."

Thirty More Famous Stories Retold.

Bryant's "How to Tell Stories to Children,"
Stories to Tell Children.

Champlin's "Young Folks' Encyclopedia of Literature and Art."

Coe's "Heroes of Everyday Life."

Colby's "Literature and Life in School."

Cox's "Literature in the Common School."

Doubleday's "Stories of Inventors."

Elson and MacMullen's "Story of the Old World."

"Legendary Stories of Europe."

Lyman's "Story Telling, What to Tell and How to Tell It."

Newboldt's "Stories from Froissart."

Smith and Haliburton's "The Teaching of Poetry in the Grades."

Tappan's "Our Country's Story."

American Hero Stories.

Yonge's "A Book of Golden Deeds."

Collections of Bible Stories.

Beale's "Stories from the Old Testament for Children."

Chisholm's "Old Testament Stories."

Hodges' "The Garden of Eden."

Hodges' "The Castle of Zion."

Collections of Classic Tales.

Francillon's "Gods and Heroes."

Hawthorne's "Wonder Book."

Hawthorne's "Tanglewood Tales."

Kupper's "Stories of Long Ago."

Lamb's "Adventures of Ulysses."
 Lowell's "Jason's Quest."
 Mabie's "Myths Every Child Should Know."
 Marvin's "Adventures of Odysseus."
 Niebuhr's "The Greek Heroes" (translated).
 Peabody's "Old Greek Stories Told Anew."
 Shaw's "Stories of the Ancient Greeks."

Collections of Norse Tales.

Baldwin's "The Story of Siegfried."
 Edmison's "Stories from the Norseland."
 Foster and Cummings' "Asgard Stories."
 Guerber's "Myths of Northern Lands."
 Holbrook's "Northland Heroes."
 Klugh's "Tales from the Far North."
 Mabie's "Norse Stories."

Collections of Fairy Tales and Modern Wonder Tales.

Andersen's "Fairy Tales, Books I and II."
 Asbjörnsen's "Fairy Tales from the Far North."
 Barrie's "Peter Pan in Kensington Gardens."
 Barrie's "Peter and Wendy."
 Carroll's "Alice in Wonderland."
 Carroll's "Alice through the Looking Glass."
 Ewing's "Lob-lie-by-the-Fire."
 Grimm's "Fairy Tales."
 Kingsley's "The Water Babies."
 Kipling's "Jungle Book (I)."
 Lagerlof's "The Wonderful Adventures of Nils."
 Lang's "Book of Romance."
 Macdonald's "At the Back of the North Wind."
 Sharp's "The Story of the Weathercock."
 Wiggin and Smith's "Tales of Laughter."

Editions of the Arabian Nights.

Arabian Nights Entertainments	Andrew Lang.
Arabian Nights	Wiggin and Smith.
More Tales from the Arabian Nights	A. N. and F. J. Olcott.
Stories from the Arabian Nights	Lawrence Housman.
The Arabian Nights	W. H. D. Rouse.

Collections of Legendary Tales.

Butler's "The Song of Roland."
 Greene's "King Arthur."
 Greene and Kirke's "With Spurs of Gold."
 Kindersley's "Heroes of Chivalry."
 McFee's "Stories of the Idylls of the King."
 Pyle's "The Merry Adventures of Robin Hood."
 Pyle's "The Story of King Arthur and His Knights."
 Rhead's "Bold Robin Hood and his Outlaw Band."

Books about Animals.

Brown's "Rab and His Friends."
 Burroughs's "Squirrels and Other Fur Bearer's."
 Cram's "Little Beasts of Field and Wood."

- Harris's "Nights with Uncle Remus."
 Holder's "Stories of Animal Life."
 Jordan's "Matka and Kotik."
 Jordan's "True Tales of Birds and Beasts."
 Lang's "Animal Book."
 Long's "Secrets of the Woods."
 Miller's "Four Handed Folks."
 Miller's "Little Folks in Feathers and Fur."
 Robert's "Children of the Wilds."
 Seton's "Lobo, Rag and Vixen."
 Seton's "The Biography of a Grizzly."
 Sewell's "Black Beauty."

Books dealing with Real Life (including History, Biography, and Fiction).

NOTE.—A few rather mature books, such as *Little Women* and *Tom Brown's School Days*, have been included with the thought that they might be recommended for outside reading to the more mature pupils.

- Abbott. A Boy on a Farm.
 Abbott. The Story of our Navy for Young Americans.
 Alcott. Little Men.
 Alcott. Little Women.
 Andrews. The Perfect Tribute.
 Baldwin. The Discovery of the Old Northwest.
 Barbour. For the Honor of the School.
 Barbour. The Spirit of the School.
 Bennett. Barnaby Lee.
 Bennett. Master Skylark.
 Bolton. Lives of Girls who became Famous.
 Boyesen. Boyhood in Norway.
 Bunyan. Pilgrim's Progress.
 Coffin. The Boys of '76.
 Coffin. Building the Nation.
 Coffin. Winning His Way.
 Coolidge. A New Year's Bargain.
 Coolidge. What Katy Did.
 Coolidge. What Katy Did at School.
 De Amici's Cuore. (The Heart of a Boy.)
 Defoe. Robinson Crusoe.
 Diaz. The William Henry Letters.
 Dix. A Little Captive Lad.
 Dix. Merrylips.
 Dix. Soldier Rigdale.
 Dodge. Hans Brinker or the Silver Skates.
 Eggleston. The Hoosier School Boy.
 Ewing. Daddy Darwin's Dove Cote.
 Ewing. Jackanapes.
 Ewing. Lob-lie-by-the-Fire.
 Ewing. The Story of a Short Life.
 Greene. A Lincoln Conscript.
 Hale, E. E. A Man Without a Country.

- Hale, E. E. A New England Boyhood.
Hale, L. P. The Peterkin Papers.
Hayes. Cast Away in the Cold.
Howells. A Boy's Town.
Howells. The Flight of Pony Baker.
Hughes. Tom Brown's School Days.
Jackson. Nelly's Silver Mine.
Jewett. Betty Leicester.
Jewett. Betty Leicester's Christmas.
Kaufman. Young Folks' Plutarch.
Keller. The Story of My Life.
Kellogg. Good Old Times.
Kipling. Captains Courageous.
Lamb. Tales from Shakespeare.
Larcom. A New England Girlhood.
Lucas. Anne's Terrible Good Nature.
Martineau. Crofton Boys.
Martineau. Feats on the Fiord.
Martineau. Peasant and Prince.
Martineau. Settlers at Home.
Masefield. Jim Davis.
Montgomery. Anne of Green Gables.
Olcott. Good Stories for Great Holidays.
Ouida. A Dog of Flanders.
Ouida. The Nürnberg Store.
Paine. The Hollow Tree and Deep Woods Book.
Poulsson. Lisbeth Longfrock.
Pratt. Rhoda Thornton's Girlhood.
Robinson. A Little Daughter of Liberty.
Shaw. Castle Blair.
Skinner. Boys Who Became Famous Men.
Smith. Jolly Good Times.
Stevenson. Treasure Island.
Stockton. Buccaneers and Pirates of Our Coast.
Swift. Gulliver's Travels (Balliet).
Sydney. Five Little Peppers.
Twain. Prince and Pauper.
Vachell. The Hill.
Van Dyke. The First Christmas Tree.
Waller. A Daughter of the Rich.
Washington. Up from Slavery.
Weston. Plutarch's Lives.
Whitney. A Summer in Leslie Goldthwait's Life.
Wiggin. Rebecca of Sunnybrook Farm.
Wyss. Swiss Family Robinson.

SPELLING.

Although the teaching of spelling seems to be a simple matter, every teacher knows the difficulty with which children learn to spell the most ordinary words. There are those who insist that this is largely due to the

fact that there is less actual teaching in the subject of spelling than in any other subject in the elementary school. Teachers cannot expect to secure good results by merely assigning five, or ten, or fifteen words to be studied independently by the children. Too much of the spelling instruction consists of assigning a lesson and then hearing the children recite.

The following suggestions are offered for instruction in spelling in Grade VI.

1. Definite instruction should precede the testing of results. It is suggested, therefore, that during the first three days of the week children be taught not more than three new words, and that the several words already taught which children have misspelled should be reviewed. One day, possibly Thursday, might be used as a general review for all words in preparation for a written lesson in spelling on Friday. This plan has been tried in several districts and found effective.

2. Have the children handle the spelling words orally and in written work in as many different ways as possible.

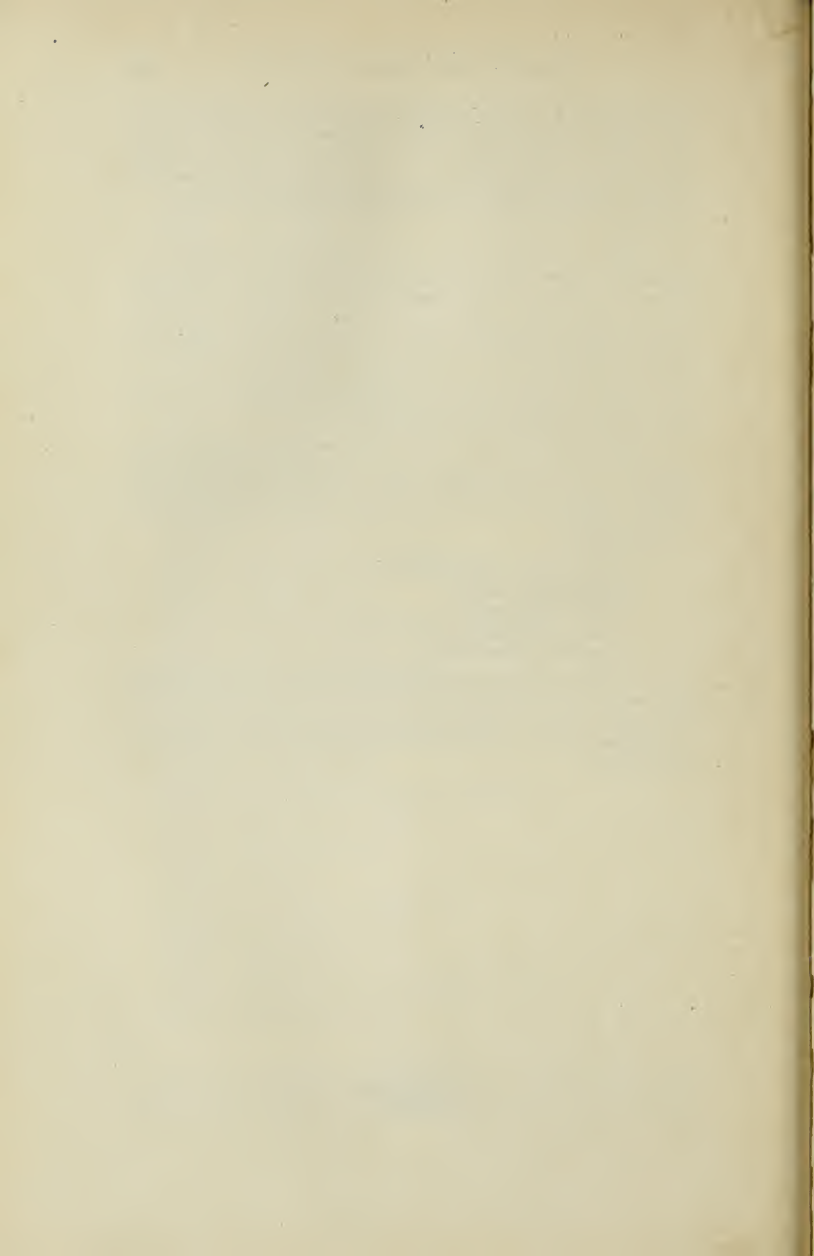
3. Tests already given in Boston show that even though children are able to spell a root word, they may not be able to spell its derivatives, therefore, in the spelling lessons and in dictation exercises the most common, inflected forms of the words that appear in the minimum list should be taught.

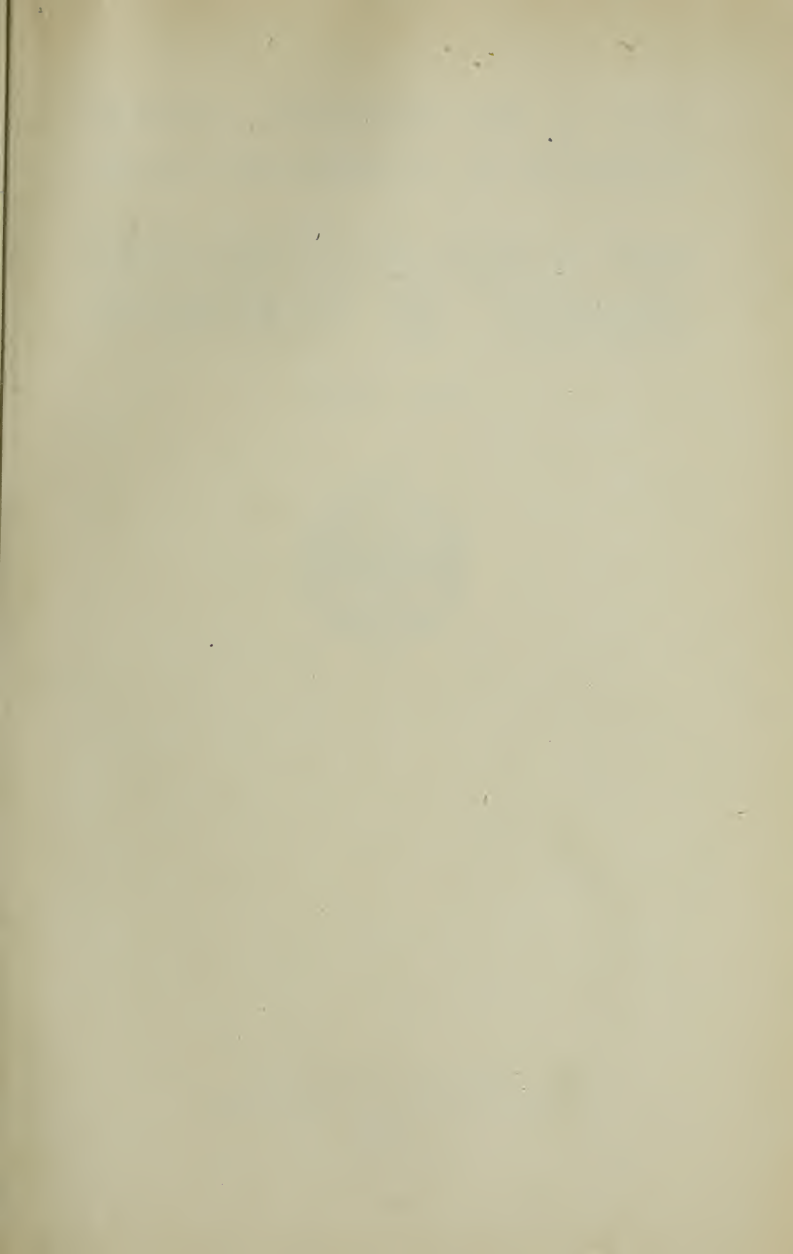
Illustrations:

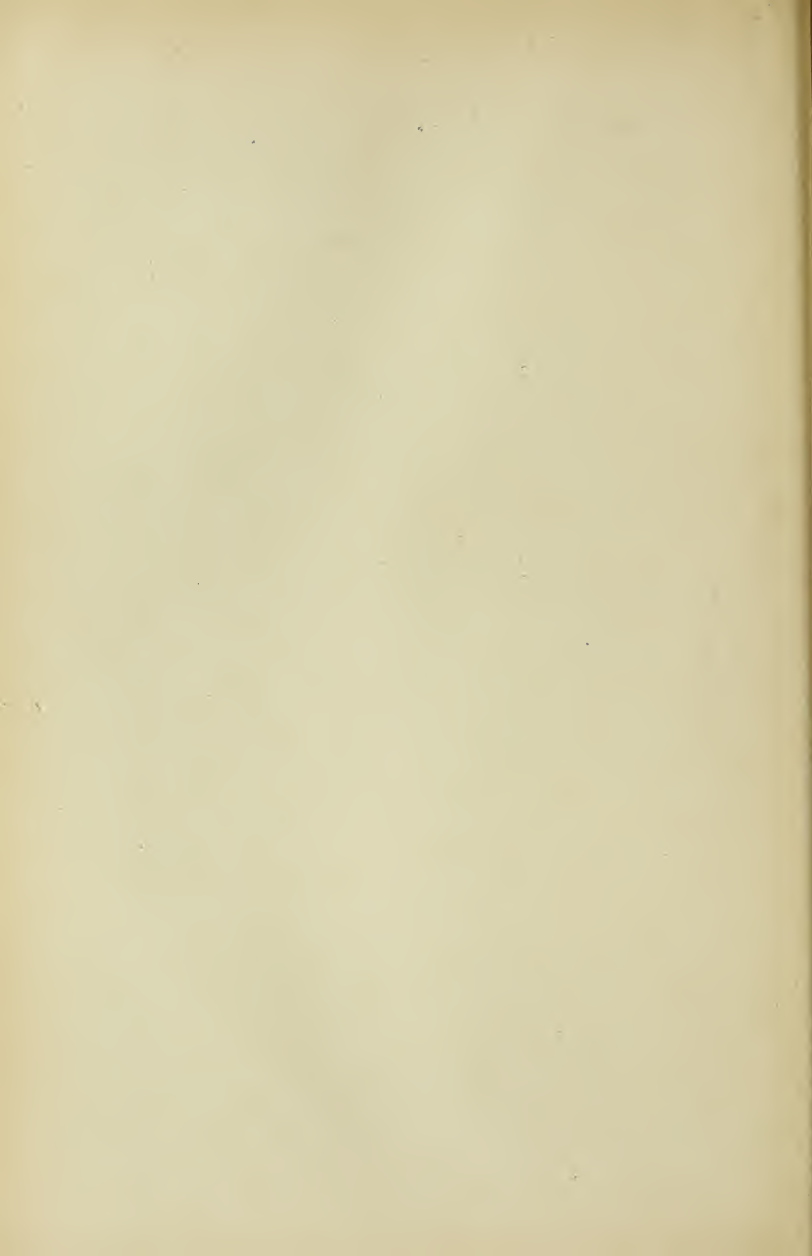
copy, copies, copying, copied;
stop, stopping, stopped;
hope, hoping, hoped;
noise, noises, noisy, noisier, noisiest;
lady, lady's, ladies, ladies'.

4. In writing spelling lessons and lists of words have the pupils begin each word with a small letter except, of course, any word that would begin with a capital in the body of a sentence.

See Bulletin No. XI on The Teaching of Spelling, School Document No. 17, 1916.







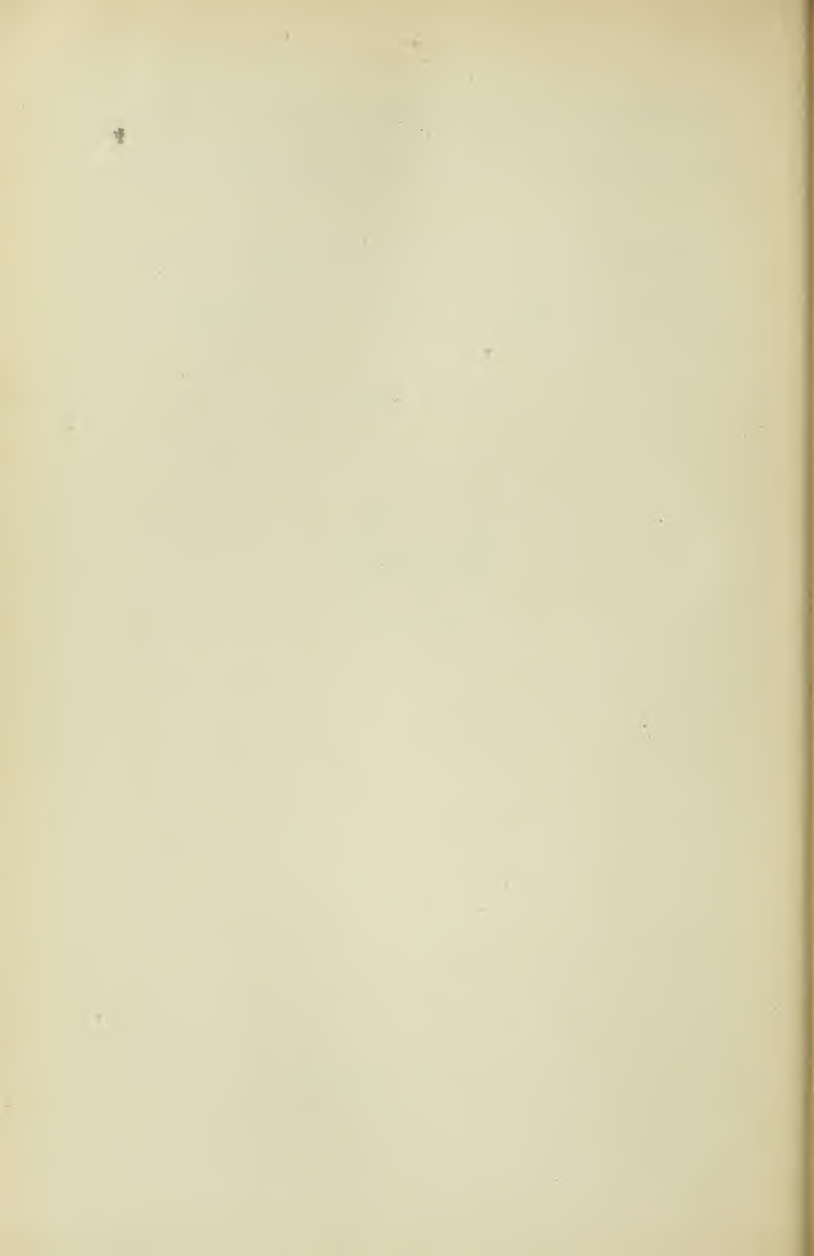
SCHOOL DOCUMENT NO. 9—1920
BOSTON PUBLIC SCHOOLS

CANDIDATES ELIGIBLE FOR
APPOINTMENT AS TEACHERS

JULY, 1920



CITY OF BOSTON
PRINTING DEPARTMENT
1920



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BOSTON PUBLIC SCHOOLS,
OFFICE OF BOARD OF SUPERINTENDENTS,
MASON STREET, July 30, 1920.

This document comprises the fifteenth list of candidates eligible for appointment to permanent positions in the public day schools of Boston, revised and completed to date. It contains the names of all candidates included in the list issued in July 1919, who have not yet been appointed to permanent positions in the service, and whose certificates are still valid, with the exception of those who have asked that their names be omitted from this list. It also contains the names of persons who have successfully passed examinations held since that date, including Boston Normal School graduates of June, 1920.

Graduates of the Boston Normal School prior to June, 1920, whose names are entered in this list have been regraded by the Board of Superintendents in accordance with the rules of the School Committee (section 83, paragraph 2), and their present ratings supersede those given in the 1919 list.

CLASS-ROOM INSPECTION OF CANDIDATES FOR CERTIFICATES OF QUALIFICATION.

The plan for the class-room inspection of candidates for certificates of qualification, established in January, 1913, has been continued, and all candidates certificated this year for permanent day school service have been visited in the class room by a member of the Board of Superintendents, with the exception of those whose original examination included a demonstration lesson. The results of the class-room demonstrations are given weight in determining the credit to be allowed for "Experience in Teaching."

SCHOOL NURSES.

This document also contains the names of candidates for appointment as school nurses in the public schools. The regulations of the School Committee with respect to the appointment, reappointment, assignment, transfer, removal, tenure of office, and marriage of teachers apply in general to nurses, and their certificates cease to be valid in accordance with the regulations governing the expiration and revocation of teachers' certificates of qualification.

PREPARATION OF ELIGIBLE LISTS.

Eligible lists of candidates with their respective ratings shall be annually prepared by the Board of Superintendents in the month of June, and appointments of teachers and members of the supervising staff shall be made from such lists in effect at the time the appointments are made; provided, that the names of candidates successfully passing prescribed examinations shall, from time to time as examinations occur, be added to said lists on the dates upon which the results of such examinations and the ratings of the candidates shall be reported by the Board of Superintendents to the Board.

ELIGIBLE LISTS MAILED CANDIDATES.

A copy of the eligible lists, as soon as printed, is mailed to persons whose names appear thereon.

APPOINTMENTS FROM THE ELIGIBLE LISTS.

Except as hereinafter provided, no person may be appointed to a permanent position as a member of the supervising staff or as a teacher whose name does not head the proper eligible list and who is willing to accept such appointment; provided, that if in the opinion of the Superintendent there is good reason why such person should not be appointed, he shall so certify to the Board, whereupon the same procedure shall be followed with respect to the second person on the list; but the person appointed shall be one of the first three on said list willing to accept appointment.

APPOINTMENTS NOT GOVERNED BY ELIGIBLE LISTS.

Appointments as principal of a school, except day elementary and day intermediate schools, as director, first assistant director or assistant director of a special subject or department, as supervisor or assistant supervisor of a special subject or department, as medical inspector of special classes, as supervising nurse, as temporary teacher, as substitute, as special assistant, as teacher in the evening schools, are not governed by the eligible lists.

AGE LIMITATION.

No person may be appointed to a permanent position as teacher or member of the supervising staff in accordance with the provisions of the foregoing paragraphs to take effect later than the thirtieth day of June following the fortieth birthday of such person; provided, that this limitation shall not affect the promotion of a permanent teacher to any position in the public schools, nor the validity of certificates issued prior to January 1, 1909.

REMOVALS AND RESTORATIONS OF NAMES FROM AND TO ELIGIBLE LISTS.

The names of persons holding certificates which include certificates of a lower grade may, upon request, be included in the eligible list of such lower grade or grades according to the rating of such holders of certificates in their respective examinations, but they shall not be entitled to a higher rating on such lower list or lists by reason of their holding higher grade certificates.

The names of persons appointed to permanent positions in the day school service are removed from the eligible lists.

A person whose name appears upon the eligible lists may, upon request, have the same removed therefrom at any time, and may, upon written application, have it restored to the next eligible lists in June of any year during the life of the certificate, with the same rating as before; or, if a graduate of the Boston Normal School, with such re-rating as the Board of Superintendents

may determine; provided, that such restoration shall not operate to extend the original period for which the certificate is valid.

The names of persons appointed as substitutes, temporary teachers, special assistants, or as teachers in the evening schools, are not removed from their respective eligible lists because of such appointment.

The name of any person who has refused three offers of permanent employment shall be dropped from the eligible list for the current school year. The name of any person appearing upon any eligible list who has failed of appointment on three separate occasions when another person on the same list has been selected and appointed, shall be dropped therefrom and shall not be restored thereto except by another examination.

CHANGE IN RATING.

Persons whose names appear on any eligible list and who desire to have their ratings changed, may have this done by passing another examination.

NORMAL SCHOOL GRADUATES MAY OBTAIN RATINGS UPON OTHER LISTS.

Boston Normal School graduates may obtain positions on the regular Elementary, Class B list by passing the prescribed examination. In that event they will be rated on the "Examined List" according to the results of such examination, and their names will be removed from the lists of holders of Normal School certificates.

DATES OF CERTIFICATE EXAMINATIONS.

The Board of Superintendents annually conducts examinations of candidates for appointment as members of the supervising staff and as teachers in the public schools.

The 1920 examinations for evening school certificates will be held on Friday, September 10, at the Boston Normal School-house, Huntington avenue, near Longwood avenue.

For information as to the time of holding the 1921 examinations for day school certificates of qualification, application should be made to the office of the Secretary of the School Committee, Mason street.

Other examinations may be held whenever, in the opinion of the Superintendent, the needs of the schools require.

CITIZENSHIP REQUIREMENTS.

The Board of Superintendents shall not admit to certificate examinations persons who are not citizens of the United States, or, in the case of women, unless they have filed their declaration of intention to become citizens.

RE-EXAMINATION FOR CERTIFICATES.

A person taking more than one examination of the same class is rated on the eligible list of that class solely upon the results of the latest examination; provided, that holders of the certificates of qualification, IV High School, XXXIII. Intermediate, or XXV. Junior Assistant, may, by re-examination, obtain a rating in more than one group under said certificates; and provided, further, that if a person holding a valid certificate of qualification shall be re-examined for a certificate of the same grade and shall obtain a rating lower than that held at the time of such re-examination, he may, in the discretion of the Board of Superintendents, retain his original rating, with date of expiration of certificate unchanged.

Detailed information with regard to examinations may be obtained in advance by application to the Secretary of the School Committee.

EXPIRATION AND REVOCATION OF CERTIFICATES.

Certificates issued on examination after June 1, 1906, cease to be valid on the thirtieth day of June of the sixth year following the date of issue; provided, that no certificate shall remain valid after the thirtieth day of June next following the fortieth birthday of the holder

thereof, except as hereinafter specified. This limitation as to age does not affect the validity of certificates which do not render the holders eligible for appointment to permanent positions as members of the supervising staff or as teachers in the public schools, nor the validity of certificates issued to permanent teachers in the public schools.

Certificates issued on examination prior to June 1, 1906, ceased to be valid on the thirtieth day of June of the second year following the date of issue, except as hereinafter provided.

* Certificates issued to graduates of the Boston Normal School prior to June 1, 1906, ceased to be valid June 30, 1912, except as hereinafter specified.

* Certificates issued to graduates of the Boston Normal School after June 1, 1906, cease to be valid on the thirtieth day of June of the sixth year following the date of issue, except as hereinafter provided.

Certificates issued on examination prior to June 1, 1906, and valid on that date by reason of renewal or of service in the Boston public schools, ceased to be valid June 30, 1908, except that regular high school certificates held by teachers serving during the year ending June 30, 1906, in permanent positions in the elementary day schools of Boston, ceased to be valid June 30, 1912, except as hereinafter provided.

The validity of certificates issued prior to June 1, 1906, which include positions in day schools of a different class, but which also include the position in which the holder thereof is employed, expired with respect to such day schools of a different class on June 30, 1912; nor does the validity of any certificate issued after June 1, 1906, extend beyond the thirtieth day of June of the sixth year following the date of issue by reason of the service of the holder thereof in schools of a different class than that in which the holder is employed.

* By action of the School Committee on April 22, 1912, the validity of Normal School certificates, issued in June, 1906, and prior to that date, was extended to June 30, 1913, with the distinct understanding that under no circumstances shall the validity of other certificates as now determined by the rules be extended.

The validity of certificates of qualification covering service in the day elementary schools held by teachers regularly employed in the Continuation School on September 1, 1920, whose return to the elementary schools is permissive under the provisions of this section, shall be valid until the thirtieth day of June of the sixth year thereafter; and in the case of teachers appointed to the Continuation School subsequent to September 1, 1920, until the thirtieth day of June of the sixth year following such appointment.

All certificates under which appointments are made to permanent positions in the day school service, and certificates of a higher grade, but including the position in which the holder thereof is employed, remain valid with respect to the class of schools in which the holder thereof is employed during the term of such service.

All certificates, except those under which appointments are made to permanent positions in the day school service, cease to be valid when the names of the holders are permanently removed from the eligible lists.

Any certificate may be revoked by the Board of Superintendents, if, in its opinion, the good of the service so demands.

TEMPORARY CERTIFICATES AND LICENSES.

All certificates are non-renewable, but the Board of Superintendents may issue instead thereof temporary certificates or licenses under such conditions as that Board may determine, which entitle the holders to serve in temporary positions of such rank and in such schools as may be specified.

Temporary certificates are valid for such length of time as the Board of Superintendents may determine, but not beyond the thirtieth day of June of the sixth year following the date of issue. Licenses may not extend beyond the thirty-first day of August of the second year following the date of issue.

THORNTON D. APOLLONIO,

Secretary.

HIGH SCHOOL CERTIFICATES.

ANCIENT LANGUAGES.

Rating.	Name.	<i>Men.</i>	Certificate Expires
902	Charles Jones		June 30, 1923
869	Clinton B. Wilbur		" 30, 1923

Women.

780	Mildred E. Hastings		June 30, 1922
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BOTANY—ZOOLOGY.

Men.

816	Walter S. Atwood		June 30, 1921
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Women.

760	Harriett A. Sleeper		June 30, 1921
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COMMERCIAL BRANCHES.

BOOKKEEPING AND COMMERCIAL ARITHMETIC.

Men.

743	Leo T. Føster		June 30, 1923
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Women.

817	Josephine Wentworth		June 30, 1926
800	Mary J. Mohan		" 30, 1926

PHONOGRAPHY AND TYPEWRITING.

Men.

792	Thomas A. Scanlon		June 30, 1926
736	John H. Finn		" 30, 1922

Women.

794	Ellen S. Keegan		June 30, 1926
746	Edith E. Bennett		" 30, 1922
730	Mary A. Cahill		" 30, 1923
727	Agnes T. Dubuc		" 30, 1922

ECONOMICS.

Men.

878	Alfred B. Sullivan		June 30, 1926
752	John A. Bergin		" 30, 1922

Women.

739	Mary J. Mohan		June 30, 1922
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High School Certificates — Continued.

ENGLISH.

Rating.	Name.	<i>Men.</i>		Certificate Expires
815	Laurence J. Jackson	.	.	June 30, 1926
794	Maurice Ferber	.	.	" 30, 1922
791	John M. Grandfield	.	.	" 30, 1925
761	Alexander W. Miller	.	.	" 30, 1922
753	Leo H. Grueter	.	.	" 30, 1923
710	Thomas W. Sheehan	.	.	" 30, 1921

Women.

881	Elizabeth M. Barden	.	.	June 30, 1926
867	Margaret E. Foster	.	.	" 30, 1926
849	Frances Burnce	.	.	" 30, 1923
846	Marjorie G. Smith	.	.	" 30, 1923
837	Flora E. Billings	.	.	" 30, 1923
837	Olive B. White	.	.	" 30, 1926
831	Elaine S. Whitman	.	.	" 30, 1922
827	Sophia M. Palm	.	.	" 30, 1925
824	Miriam N. Marsh	.	.	" 30, 1921
822	Catharine B. Beatley	.	.	" 30, 1922
820	Alice A. Brophy	.	.	" 30, 1921
811	Regina J. Kees	.	.	" 30, 1926
804	Floralyn Cadwell	.	.	" 30, 1921
788	Ellen A. Barry	.	.	" 30, 1923
786	Marguerite Condon	.	.	" 30, 1926
768	Olive A. Beveridge	.	.	" 30, 1922
767	Lillian M. Smith	.	.	" 30, 1921
754	Marion B. Lincoln	.	.	" 30, 1921

FRENCH.

Men.

802	Joseph G. Green	.	.	June 30, 1926
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Women.

847	Edith M. Gartland	.	.	June 30, 1924
839	Katharine E. Barr	.	.	" 30, 1926
777	May B. Whiting	.	.	" 30, 1923
771	Edith H. Bradford	.	.	" 30, 1923
769	Hazel W. Ruggles	.	.	" 30, 1924
750	Dorothy Stanwood	.	.	" 30, 1925
723	Marguerite McKelligett	.	.	" 30, 1926
714	Anna F. Walsh	.	.	" 30, 1922

GERMAN.

859	Helen M. Fitzgerald	.	.	June 30, 1923
774	Katharine M. Schubarth	.	.	" 30, 1922

High School Certificates — Continued.

HISTORY.

Rating.	Name.	<i>Men.</i>	Certificate Expires
888	Warren C. Johnson	. . . . .	June 30, 1923
888	Earl S. Lewis	. . . . .	" 30, 1923
865	Lester H. Cushing	. . . . .	" 30, 1923
848	John B. FitzGerald	. . . . .	" 30, 1926
825	Fred H. Kierstead	. . . . .	" 30, 1925
817	Percy V. Stroud	. . . . .	" 30, 1922
814	John J. Boyan	. . . . .	" 30, 1922
808	Ralph F. V. Quinn	. . . . .	" 30, 1926
771	James H. Carroll	. . . . .	" 30, 1922
766	Frank L. Mansur	. . . . .	" 30, 1926

Women.

849	Marie R. Madden	. . . . .	June 30, 1923
750	Geraldine B. Kennedy	" 30, 1922

HOUSEHOLD SCIENCE.

901	Agnes L. Callaghan	June 30, 1926
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MATHEMATICS.

Men.

901	Bancroft Beatley	June 30, 1925
785	Charles H. Mergendahl	" 30, 1924
732	John F. McCarthy	. . . . .	" 30, 1924
708	Guy C. Blodgett	. . . . .	" 30, 1922
705	Thomas J. Hoey	. . . . .	" 30, 1922

Women.

897	Gertrude M. Greene	. . . . .	June 30, 1925
842	Marion C. Moreland	. . . . .	" 30, 1923
828	Mary J. Quigley	. . . . .	" 30, 1925
809	Louise B. Foster	. . . . .	" 30, 1922
707	Eleanor M. Kyle	. . . . .	" 30, 1922

PHYSICS—CHEMISTRY.

Men.

827	Charles L. Kelley	. . . . .	June 30, 1922
810	Arthur B. Stanley	. . . . .	" 30, 1923
796	John W. McCormack	. . . . .	" 30, 1923
791	Thomas A. Pickett	. . . . .	" 30, 1923
788	Ralph H. Bragdon	. . . . .	" 30, 1923
772	Christopher A. FitzGerald	. . . . .	" 30, 1922
771	Raymond S. Tobey	. . . . .	" 30, 1922
769	Frank V. Gordon	. . . . .	" 30, 1922
765	Earl W. Battles	. . . . .	" 30, 1922
747	William J. Nutter	. . . . .	" 30, 1921

High School Certificates — Concluded.

Rating.	Name.	Certificate Expires
716	Clayton E. Gardner	June 30, 1922
714	Edward W. Ellsworth	" 30, 1925
713	Leighton S. Thompson	" 30, 1921

Women.

774	Angie G. Allbee	June 30, 1921
727	Eleanor M. Kyle	" 30, 1926

SALESMANSHIP.

804	Tilla McCarten	June 30, 1922
787	Constance E. Burrage	" 30, 1921
780	Anjennette Newton	" 30, 1922

SPANISH.

Men.

825	Cecil T. Derry	June 30, 1923
778	Frederick J. Hurley	" 30, 1926

Women.

841	Elizabeth W. Loughran	June 30, 1923
833	Katharine E. Barr	" 30, 1925
810	Grace H. Kennedy	" 30, 1923
796	Marie Scollard	" 30, 1926
784	Dorothy J. Connelly	" 30, 1925
757	Ulrika E. Benson	" 30, 1922
709	Marietta L. Kirby	" 30, 1922
700	Leonora C. Murray	" 30, 1923

SPECIAL CERTIFICATES VALID IN DAY HIGH SCHOOLS.

COMMERCIAL BRANCHES.

BOOKKEEPING AND COMMERCIAL ARITHMETIC.

Men.

Rating.	Name.	Certificate Expires
766	Stanley O. Smith	June 30, 1925
758	Roland V. Tracy	" 30, 1923
743	Joseph S. Snow	" 30, 1922
718	Arthur W. Leavitt	" 30, 1924

Women.

732	Margaret E. Campbell	June 30, 1926
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PHONOGRAPHY AND TYPEWRITING.

Men.

874	Harold B. Foye	June 30, 1926
786	William Ogreaan	" 30, 1926

Special Certificates Valid in Day High Schools — Continued.

		<i>Women.</i>	
Rating.	Name.		Certificate Expires
825	Elizabeth E. Haggerty		June 30, 1926
787	Marion J. Cromwell		" 30, 1925
784	Alice G. Carr		" 30, 1925
766	Catherine E. Creedan		" 30, 1926
765	Katherine E. Holland		" 30, 1926
764	Marie G. Gookin		" 30, 1926
757	Mary E. Doherty		" 30, 1925
704	Mary H. Plimpton		" 30, 1926
702	May M. Austin		" 30, 1924

MANUAL ARTS.

DRAWING.

Men.

753	Alfred F. Burke	June 30, 1926
719	Carl H. Adams	" 30, 1926
712	Roland S. Stebbins	" 30, 1923

Women.

827	Mary P. Barry	June 30, 1925
823	Laura W. Cook	" 30, 1923
797	Clara E. Glover	" 30, 1925
772	Florence F. Cooper	" 30, 1926
771	Evelyn Silvester	" 30, 1924
744	Dorothea Davis	" 30, 1922

MANUAL TRAINING.

740	Kenrick M. Baker	June 30, 1924
735	William E. O'Connor	" 30, 1921
706	William A. Courchene	" 30, 1924

PHYSICAL TRAINING.

881	Miriam R. Driscoll	June 30, 1926
876	Rosamond W. Estabrook	" 30, 1926
846	Theresa B. Maley	" 30, 1924
826	Gertrude M. Fossett	" 30, 1924
825	Catherine L. McCormick	" 30, 1924
824	Marion W. Owen	" 30, 1924
819	Clare Eastman	" 30, 1924
816	Florence C. McGann	" 30, 1926
813	Dorothy Sayer	" 30, 1924
812	Mary T. McDermott	" 30, 1924
807	Virginia E. Pierce	" 30, 1924
800	Izannah A. Lucas	" 30, 1921
793	Elisabeth M. Hampe	" 30, 1924
787	Grace E. Kingsbury	" 30, 1921

Special Certificates Valid in Day High Schools—Concluded.

Rating.	Name.	Certificate Expires
773	Joanne F. Tobin	June 30, 1924
770	Matilda F. Ractliffe	" 30, 1924
768	Matilda E. Cogan	" 30, 1924
766	Grace M. Monahan	" 30, 1922

SALESMANSHIP.

839	Gladys C. Gilmore	June 30, 1924
827	Helen J. Kiggen	" 30, 1924
737	Florence R. Joyce	" 30, 1926

VOCATIONAL ASSISTANT CERTIFICATE.

Rating.	Name.	Certificate Expires
<i>Men.</i>		
847	Newell W. Edson	June 30, 1921
<i>Women.</i>		
704	Elizabeth E. Lewis	June 30, 1922

INDUSTRIAL INSTRUCTORS, DAY HIGH SCHOOLS
CERTIFICATES.

HOUSEHOLD SCIENCE.

Rating.	Name.	Certificate Expires
771	Carrie E. Hoit	June 30, 1926

DRESSMAKING.

788	Nina G. Moore	June 30, 1921
758	Catherine A. Murray	" 30, 1922
754	Nelly Marrinan	" 30, 1922

MILLINERY.

807	Eileen M. Harrington	June 30, 1921
772	Mary A. Hourihan	" 30, 1924
745	Mary Travers	" 30, 1921

DAY CLERICAL SCHOOL CERTIFICATE.

(CLERICAL INSTRUCTOR.)

PHONOGRAPHY AND TYPEWRITING.

Rating.	Name.	Certificate Expires
826	Basil N. Perkins	June 30, 1926

JUNIOR ASSISTANT CERTIFICATES.

Rating.	Name.	Certificate Expires
BIOLOGY.		
773	John L. Mayer	June 30, 1922
ECONOMICS.		
740	James A. Dunbar	June 30, 1921
ENGLISH.		
<i>Men.</i>		
868	Philip Marson	June 30, 1922
849	John M. Grandfield	" 30, 1923
831	James H. Nolan	" 30, 1923
811	Francis J. Driscoll	" 30, 1923
776	William V. McKenney	" 30, 1922
743	Joseph A. Mahoney	" 30, 1922
<i>Women.</i>		
854	Frances Burnce	June 30, 1921
851	Lilian Holmes	" 30, 1926
841	Madeline M. Ellis	" 30, 1923
825	Constance Billings	" 30, 1923
824	Marjorie G. Smith	" 30, 1922
810	Agnes E. Kelley	" 30, 1924
788	Sarah G. Stowers	" 30, 1922
778	Katherine Moran	" 30, 1923
773	Helen T. Campbell	" 30, 1921
761	Dorothy S. Starratt	" 30, 1921
758	Regina Hearn	" 30, 1922
732	Mary A. Winn	" 30, 1923
FRENCH.		
885	Anastasia B. Connor	June 30, 1926
783	Rena M. Jaquith	" 30, 1922
718	Mildred A. Dacey	" 30, 1923
717	Alice E. Mills	" 30, 1921
GERMAN.		
<i>Men.</i>		
801	Philip Levy	June 30, 1921
727	Myron Livingston	" 30, 1922
<i>Women.</i>		
850	Signhild V. Gustafson	June 30, 1922
798	Katharine M. Schubarth	" 30, 1922

Junior Assistant Certificates — Continued.

HISTORY.

Rating.	Name.	<i>Men.</i>	Certificate Expires
865	William F. Looney		June 30, 1926
817	William F. Walsh		" 30, 1926
809	William F. Ward		" 30, 1922
803	Philip J. Bond		" 30, 1922
768	Vincent L. Greene		" 30, 1922
753	Manus J. Fish, Jr.		" 30, 1922
746	Robert E. Patterson		" 30, 1922
735	Saul L. Seiniger		" 30, 1924
722	William J. Murphy		" 30, 1923
705	Charles O. Halloran		" 30, 1922

Women.

884	Lucile A. Harrington		June 30, 1925
732	Mary C. Brogan		" 30, 1923

LATIN.

Men.

779	Richard G. Donahue		June 30, 1923
744	George H. Sullivan		" 30, 1922

Women.

819	Mildred E. Hastings		June 30, 1922
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MATHEMATICS.

Men.

861	John J. Doyle		June 30, 1926
857	Matthew F. Mealy		" 30, 1926
832	Charles F. Murphy		" 30, 1923
798	Walter V. O'Brien		" 30, 1926
790	Henry M. J. Halligan		" 30, 1923
716	Herbert C. Bird		" 30, 1922
712	Christopher A. Connor		" 30, 1923

Women.

781	Gertrude M. Greene		June 30, 1921
739	Eleanor M. Kyle		" 30, 1921
722	Josephine M. Calderara		" 30, 1922

PHONOGRAPHY AND TYPEWRITING.

816	Marguerite M. O'Brien		June 30, 1924
767	Agnes T. Conroy		" 30, 1924

PHYSICS-CHEMISTRY.

Men.

788	William F. Greely		June 30, 1922
734	John A. Dunn		" 30, 1926
708	Daniel J. Shea		" 30, 1926

Junior Assistant Certificates — Concluded.

Rating.	Name.	Women.	Certificate Expires
775	Viola C. Owen		June 30, 1922
771	Alice Driscoll		" 30, 1926

SPANISH.

		Men.	
763	Thomas L. Sullivan		June 30, 1925
751	Louis F. Moore		" 30, 1923
731	James E. Fihelly		" 30, 1923

Women.

776	Leonora C. Murray		June 30, 1924
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NORMAL SCHOOL ELEMENTARY CERTIFICATES, CLASS OF 1920, AND OTHERS AS INDICATED.

(Certificate covers Grades I. to VI., inclusive, except as indicated.)

Rating.	Name.	Certificate Expires
840	Mary M. Mallard	June 30, 1926
826	Mabel I. Cormack† (Class of 1918)	" 30, 1924
822	Margaret M. Cronin	" 30, 1926
818	Katharine M. Glidden*	" 30, 1926
813	Gertrude L. Bacon*	" 30, 1926
810	Theresa V. Donahue	" 30, 1926
805	A. Louise Kupelian	" 30, 1926
804	Helen D. Hart	" 30, 1926
804	Daisy Pokroisky	" 30, 1926
804	Gertrude L. Kindred‡ (Class of 1917)	" 30, 1923
803	A. Theresa Skierski	" 30, 1926
803	Helen I. Thompson*	" 30, 1926
803	Gertrude E. Rockwood‡ (Class of 1919)	" 30, 1925
799	Elinor J. Fowles‡ (Class of 1918)	" 30, 1924
799	Catherine F. Mulligan	" 30, 1926
798	Nora A. Mehigan	" 30, 1926
797	Helen H. MacBurney	" 30, 1926
797	Anne E. McCoy	" 30, 1926
796	Evelyn H. Manley	" 30, 1926
794	Gertrude A. Steer	" 30, 1926
793	Sophie M. Hess	" 30, 1926
793	Ursula M. Ryan	" 30, 1926
791	Margaret M. Corbett	" 30, 1926
787	Helen R. Pengilly	" 30, 1926

* Holds Normal, Kindergarten-Primary Certificate.

† Holds Elementary School Special Certificate.

‡ Certificate covers all elementary grades.

Normal Elementary, Class of 1920 — Continued.

Rating.	Name.	Certificate Expires
787	Rosemary R. Carr	June 30, 1926
786	Anna L. Scott	" 30, 1926
785	Elizabeth L. Maggioni† (Class of 1918)	" 30, 1924
780	Gladys M. Carnegie	" 30, 1926
780	Alice L. Carroll	" 30, 1926
780	A. Margaret Fallon	" 30, 1926
779	Margaret A. Lynch	" 30, 1926
779	Margaret Smyth	" 30, 1926
779	Frances B. Damon*	" 30, 1926
778	Virginia E. Turnbull‡ (Class of 1919)	" 30, 1925
778	Marguerite MacKay	" 30, 1926
776	Marion C. Gilman‡ (Class of 1919)	" 30, 1925
775	Marjorie S. Horne* (Class of 1918)	" 30, 1924
774	Louis F. Moore‡ (Class of 1917)	" 30, 1923
774	Jessie C. McPhee	" 30, 1926
772	Gertrude R. Gorey	" 30, 1926
770	Helen M. Lack	" 30, 1926
769	Mary Flynn*	" 30, 1926
769	Caroline M. Kelley	" 30, 1926
769	Rita M. Sherry*	" 30, 1926
764	Eva Green	" 30, 1926
756	Ida Burgin	" 30, 1926
756	Marion I. Evans	" 30, 1926
756	William J. Murphy† (Class of 1917)	" 30, 1923
756	Eloise R. FitzGerald	" 30, 1926
755	Pauline C. Luppold	" 30, 1926
755	Theresa H. Aiken	" 30, 1926
754	A. Louise Facey	" 30, 1926
753	Hazel C. Brady	" 30, 1926
752	Frances W. Kelley	" 30, 1926
750	Eleanor M. Whelton	" 30, 1926
749	Margaret M. McHugh	" 30, 1926
748	Mildred E. Parsons*	" 30, 1926
748	Elizabeth M. McCrann	" 30, 1926
747	Virginia McKillop	" 30, 1926
745	Elizabeth M. Merz	" 30, 1926
744	Barbara M. Murphy	" 30, 1926
743	Grace C. Doherty	" 30, 1926
740	Gertrude M. Wyeth	" 30, 1926
740	Josephine V. Dalton	" 30, 1926
739	Mary V. Kane	" 30, 1926
739	Judith M. Oliva	" 30, 1926
739	Mary H. Crotty*	" 30, 1926
738	Rebecca E. Daniels	" 30, 1926

* Holds Normal, Kindergarten-Primary Certificate.

† Holds Elementary School Special Certificate.

‡ Certificate covers all elementary grades.

Normal Elementary, Class of 1920 — Concluded.

Rating.	Name.	Certificate Expires
738	Annie E. Mahoney† (Class of 1918)	June 30, 1924
737	Helen R. Sullivan† (Class of 1918)	" 30, 1924
736	Agnes R. Collier	" 30, 1926
731	Helen M. Norton*	" 30, 1926
728	Frances K. Moriarty	" 30, 1926
725	Catherine E. Flannery† (Class of 1919)	" 30, 1925
724	George F. Fitzgerald† (Class of 1915)	" 30, 1921
721	Catherine R. Sullivan	" 30, 1926
720	Marie D. Forrester	" 30, 1926
718	Mary F. Tierney	" 30, 1926
709	Ethel M. Hall† (Class of 1919)	" 30, 1925

The following-named candidate left the Normal School before the completion of the required course of study and too early for a final mark for academic work during the period of the war, in order to meet the then pressing need for temporary teachers in high school service. The rating given him is based wholly upon his record of teaching service.

906	Ralph F. V. Quinn† (Class of 1918)	June 30, 1924
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NORMAL SCHOOL ELEMENTARY CERTIFICATES, PRIOR TO
1920.

(Ratings which are exactly alike are connected by a brace. In other cases of similar ratings there is a decimal difference in favor of the name appearing first on the list.)

Rating.	Name.	Certificate Expires
905	Lucile A. Harrington	June 30, 1922
900	Philip Marson †	" 30, 1922
888	Helen E. Maxwell	" 30, 1923
876	Charles F. Murphy †	" 30, 1923
875	Leo V. Halloran †	" 30, 1923
875	Maurice Davis †	" 30, 1922
874	Dorothy M. Lyons	" 30, 1924
870	Helen T. Fitzgerald	" 30, 1925
869	Ellen A. Dwyer	" 30, 1924
869	William F. Ward †	" 30, 1922
868	Alice K. Schulenkorf	" 30, 1925
868	Helen C. Tobin	" 30, 1925
864	Marion B. Mooney	" 30, 1925
864	Christopher A. Connor†	" 30, 1923

* Holds Normal, Kindergarten-Primary Certificate.

† Holds Elementary School Special Certificate.

‡ Certificate covers all elementary grades.

Normal Elementary, Prior to 1920 — Continued.

Rating.	Name.	Certificate Expires
863	Cyril C. Conroy*	June 30, 1922
860	Abigail F. Burke	" 30, 1923
859	Helen M. Lally	" 30, 1925
859	Agnes E. Kelley*	" 30, 1923
859	Muriel G. Gillis	" 30, 1925
859	Clyde M. Broaders*	" 30, 1922
858	Helen R. Tobin	" 30, 1923
858	Dorothy S. Glover	" 30, 1925
858	Margareta M. Muldoon	" 30, 1925
857	Loyola P. Pfeffer	" 30, 1925
856	Albert F. Smith*	" 30, 1923
856	Mary I. Tierney	" 30, 1925
856	Violet C. Goetz	" 30, 1925
852	Mary A. Dunbar	" 30, 1925
851	Lillian M. Hanson	" 30, 1923
850	Marion A. Cotter	" 30, 1925
850	Margaret A. Canney	" 30, 1925
850	Katherine M. Stroup	" 30, 1925
849	Lorion G. Hallett	" 30, 1925
847	Phyllis E. Geary	" 30, 1925
846	Irene E. Kiely	" 30, 1925
845	Agnes M. McNamara	" 30, 1925
844	Ruth V. Doyle	" 30, 1925
840	Rosalie C. Simpson	" 30, 1925
840	William F. Fleming*	" 30, 1923
837	Ellen V. McLaughlin	" 30, 1925
837	James L. O'Brien*	" 30, 1923
836	Celia Levinson	" 30, 1925
835	Mary J. Carroll	" 30, 1925
833	Vincent L. Greene*	" 30, 1922
832	William M. McCarthy*	" 30, 1922
829	Anna E. Dawley	" 30, 1925
827	Marguerite A. Wiles	" 30, 1925
827	George S. McCabe*	" 30, 1923
826	Alice G. Price	" 30, 1925
826	Agnes M. Leavey	" 30, 1925
826	Herbert C. Bird*	" 30, 1922
825	Ida S. Guptill	" 30, 1924
825	Marguerite G. Crowley	" 30, 1925
824	William F. Greely*	" 30, 1922
824	Constance McBride	" 30, 1923
821	Mary A. Campbell	" 30, 1925
821	Florence Hurwitz	" 30, 1925
821	Manus J. Fish, Jr.*	" 30, 1922
820	Catherine V. Daley	" 30, 1925

* Holds Elementary School Special Certificate.

Normal Elementary, Prior to 1920 — Concluded.

Rating.	Name.	Certificate Expires
817	Bertha A. Mee	June 30, 1925
816	Josephine M. Calderara*	" 30, 1922
814	Marion T. Hughes	" 30, 1925
814	William A. Fitzgerald*	" 30, 1922
814	Dorothy M. Tatum†	" 30, 1924
{ 813	Viola C. Owen*	" 30, 1922
{ 813	Everett C. Yates*	" 30, 1923
813	Frances I. Gallagher	" 30, 1925
812	Mary A. Winn*	" 30, 1923
811	Robert E. Patterson*	" 30, 1922
810	Pauline M. Halpin	" 30, 1925
810	Frederick J. Murray*	" 30, 1922
806	Agnes L. McQueeney	" 30, 1924
804	Catherine E. Craig	" 30, 1923
803	Kathryn F. Mahoney	" 30, 1925
802	Myron Livingston*	" 30, 1922
798	Carolyn R. Hedstrom	" 30, 1925
796	Margaret R. Durant	" 30, 1925
792	Mary G. Armstrong	" 30, 1924
792	M. Anne Green	" 30, 1925
786	George S. Hennessy*	" 30, 1922
780	Helen Carey	" 30, 1923
780	Saul L. Seiniger*	" 30, 1924
779	Francis R. McManus*	" 30, 1923
777	Elizabeth G. Savage	" 30, 1924
766	Marie P. Denihan	" 30, 1922
761	George H. Sullivan*	" 30, 1921
749	Helen B. Morse*	" 30, 1921
718	Winifred A. Golden	" 30, 1923
712	Maurice F. Murphy*	" 30, 1922

INTERMEDIATE AND ELEMENTARY SCHOOL CERTIFICATES,
EXAMINED CANDIDATES.

INTERMEDIATE CERTIFICATE.

DRAWING.

Rating.	Name.	Certificate Expires
887	Florence A. Dunbar (1)	June 30, 1924
827	Bessie E. Kennedy (2)	" 30, 1924
818	Frances L. Eager‡ (3)	" 30, 1925
810	Edith M. Snow (4)	" 30, 1924

* Holds Elementary School Special Certificate.

† Holds Normal Kindergarten-Primary Certificate.

‡ Holds Elementary School, Class A certificate.

NOTE.— Figures in brackets indicate minor subjects as stated on page 26.

Intermediate and Elementary Certificates, Examined Candidates—
Continued.

ENGLISH.

Rating.	Name.	<i>Men.</i>	Certificate Expires
807	Arthur L. Young (3)	. . . . .	June 30, 1921
741	Ernest W. Anderson* (5)	. . . . .	" 30, 1924
<i>Women.</i>			
904	Winifred H. Nash* (6)	. . . . .	June 30, 1924
893	Elizabeth G. Diman (7)	. . . . .	" 30, 1925
822	Emma B. Harvey* (7)	. . . . .	" 30, 1926
811	Angela M. Pearce* (8)	. . . . .	" 30, 1925
787	Mary F. McMorrow* (9)	. . . . .	" 30, 1926
779	Florence M. Murphy* (9)	. . . . .	" 30, 1925
768	Mary R. Quinn* (7)	. . . . .	" 30, 1925
764	Clara E. Oakman* (10)	. . . . .	" 30, 1924
742	Carrie M. Schroeder* (11)	. . . . .	" 30, 1926
739	Minnie G. Feely (12)	. . . . .	" 30, 1926
734	Maria T. Cogger (7)	. . . . .	" 30, 1926

HISTORY — GEOGRAPHY.

Men.

831	Philip J. Bond* (13)	. . . . .	June 30, 1926
796	John P. McEleney (8)	. . . . .	" 30, 1925

Women.

867	Anna M. Killion (13)	. . . . .	June 30, 1926
851	Grace L. Pomeroy (13)	. . . . .	" 30, 1926
807	Elizabeth W. O'Connor* (13)	. . . . .	" 30, 1926
799	Mary A. A. Haverty* (12)	. . . . .	" 30, 1926
799	Bessie MacBride* (13)	. . . . .	" 30, 1926
796	Evelyn M. O'Bryan (13)	. . . . .	" 30, 1926
746	May B. Thompson* (13)	. . . . .	" 30, 1926
733	Mary F. Roome (15)	. . . . .	" 30, 1926
722*	Ellen A. McMahan (14)	" 30, 1926

MATHEMATICS.

Men.

904	James L. Early* (1)	June 30, 1926
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Women.

860	May H. Sears* (1)	June 30, 1926
780	Helen G. McKenna* (16)	" 30, 1924
775	Bertha L. Palmer (1)	" 30, 1926
712	Louise E. McLaughlin (17)	. . . . .	" 30, 1926
708	Elinore F. Donoghue* (10)	. . . . .	" 30, 1926

* Holds Elementary School, Class A Certificate.

NOTE.—Figures in brackets indicate minor subjects as stated on page 26.

**Intermediate and Elementary Certificates, Examined Candidates —
Continued**

MUSIC.		
Rating.	Name.	Certificate Expires
824	Jennie M. Henderson (14)	June 30, 1925
813	Anna M. Niland* (15)	" 30, 1925

SCIENCE.

<i>Men.</i>		
Rating.	Name.	Certificate Expires
827	John L. Mayer (11)	June 30, 1924
751	John P. McEleney (7)	" 30, 1926

Women.

775	Elsie M. Paul (2)	June 30, 1926
708	Bertha C. Quinnam* (18)	" 30, 1924
700	Agnes K. Mallard* (19)	" 30, 1926

ELEMENTARY SCHOOL, CLASS A CERTIFICATE.

<i>Men.</i>		
Rating.	Name.	Certificate Expires
863	James L. Early	June 30, 1926
790	George L. McKinnon	" 30, 1923
790	A. Irvin Studley	" 30, 1922
774	Thomas F. McHugh	" 30, 1921
738	William L. MacDonald	" 30, 1922
723	John O. H. Shields	" 30, 1922

ELEMENTARY SCHOOL, CLASS B CERTIFICATE.

(Certificate covers Grades I. to VI., except as indicated.)

Rating.	Name.	Certificate Expires
878	Rachel E. Cotton	June 30, 1926
878	Esther L. Dalrymple	" 30, 1926
845	Marion E. Gallagher	" 30, 1926
844	Helen M. Little	" 30, 1926
840	Mary A. Searle	" 30, 1926
838	Margaret M. Briel	" 30, 1922
826	Norma I. Bake	" 30, 1924
819	Eleanor A. Parker	" 30, 1926
817	Stella A. Cannon	" 30, 1925

* Holds Elementary School, Class A Certificate.

MINOR SUBJECTS:

- | | |
|-------------------------------------|---------------------------------|
| (1) English, History-Geography. | (11) History-Geography, German. |
| (2) English, Music. | (12) Mathematics, Music. |
| (3) Mathematics, Science. | (13) English, Mathematics. |
| (4) History-Geography, Music. | (14) English, French. |
| (5) History-Geography, Latin. | (15) English, Drawing. |
| (6) German, Music. | (16) Drawing, Music. |
| (7) Mathematics, History-Geography. | (17) English, Latin. |
| (8) Mathematics, Latin. | (18) French, Drawing. |
| (9) Mathematics, Drawing. | (19) Mathematics, French. |
| (10) French, Music. | |

Intermediate and Elementary Certificates, Examined Candidates —
Concluded.

Rating.	Name.	Certificate Expires
817	Mary C. Hopkins	June 30, 1926
812	Ruth Willey	" 30, 1926
810	Mary I. Elliott	" 30, 1926
808	Margaret P. O'Leary	" 30, 1926
801	Edna S. Evans	" 30, 1926
794	Mary L. McNamara	" 30, 1926
781	Mary R. Greeley	" 30, 1926
774	Marguerite Stetfield	" 30, 1926
772	Clara H. Franke*	" 30, 1921
772	Mary E. Shea	" 30, 1926
771	Victoria R. Cotichini	" 30, 1926
767	Ellen A. Cochrane	" 30, 1926
767	Ruth E. Reynolds	" 30, 1926
766	Bernadette U. Driscoll	" 30, 1926
766	Margaret E. McKenna	" 30, 1926
761	Martha Reid French*	" 30, 1922
740	Cecilia A. Bergin	" 30, 1921
739	Dorothy W. Farnham*	" 30, 1923
726	Mary A. Dennehy	" 30, 1926
724	Mary L. Geary	" 30, 1926
715	Margaret M. Joyce	" 30, 1924
715	Daisy I. MacDowell	" 30, 1926
710	Marion A. Burnham	" 30, 1926
705	Margaret H. Kenney	" 30, 1926
705	Isabel F. Sullivan	" 30, 1924
704	Ethel R. Epstein	" 30, 1925
703	Nellie W. Riley	" 30, 1922
701	Nellie K. Bishop*	" 30, 1922
701	Katherine F. Dooley	" 30, 1926
700	Catharine I. Farrell	" 30, 1925

KINDERGARTEN CERTIFICATES.

NORMAL, KINDERGARTEN-PRIMARY CERTIFICATE, CLASS OF 1920, AND
OTHERS AS INDICATED.

Rating.	Name.	Certificate Expires
818	Katharine M. Glidden	June 30, 1926
813	Gertude L. Bacon	" 30, 1926
803	Helen I. Thompson	" 30, 1926
779	Frances B. Damon	" 30, 1926
775	Marjorie S. Horne (Class of 1918)	" 30, 1924
769	Mary Flynn	" 30, 1926
769	Rita M. Sherry	" 30, 1926
748	Mildred E. Parsons	" 30, 1926

* Certificate covers all elementary grades.

Kindergarten Certificates — Concluded.

Rating.	Name.	Certificate Expires
739	Mary H. Crotty	June 30, 1926
731	Helen M. Norton	" 30, 1926

NORMAL, KINDERGARTEN-PRIMARY CERTIFICATES, PRIOR TO 1920.

Rating.	Name.	Certificate Expires
814	Dorothy M. Tatum	June 30, 1924

KINDERGARTEN CERTIFICATE.

Examined Candidates.

Rating.	Name.	Certificate Expires
862	Helen G. Herron	June 30, 1924
861	Mary A. Watson	" 30, 1926
850	Margaret M. Donahue	" 30, 1926
839	Irene O. Mulrey	" 30, 1926
813	Freda R. Muller	" 30, 1926
807	Anna A. Kingman	" 30, 1926
804	Harriett M. Angell	" 30, 1926
800	Josephine E. Noether	" 30, 1926
800	Charity M. Traynor	" 30, 1926
795	Lillian H. Herter	" 30, 1926
791	Ruth G. Dulligan	" 30, 1926
791	Mildred A. Horne	" 30, 1926
780	Alice H. Baker	" 30, 1926
757	Helen M. Coleman	" 30, 1924
754	Hester C. Davis	" 30, 1926
746	Dorothy Sanger	" 30, 1926
745	Florence N. Creed	" 30, 1926
734	Helen Mahoney	" 30, 1922
734	Helen M. Tivnan	" 30, 1926
730	Mary A. Mahan	" 30, 1926
727	Pearl E. Folsom	" 30, 1926
726	Mary A. Kelly	" 30, 1926
722	Marie A. Gordon	" 30, 1926
714	Mary A. Collins	" 30, 1926
709	Catherine A. Keohane	" 30, 1926
706	Gertrude M. Hughes	" 30, 1926
702	Isabel E. Olney	" 30, 1924
700	Marguerite L. Leonard	" 30, 1926

ASSISTANT PRINCIPAL, HORACE MANN SCHOOL FOR THE DEAF.

Rating.	Name.	Certificate Expires
866	Jennie M. Henderson	June 30, 1926
864	Elsa L. Hobart	" 30, 1926
702	Sarah W. Jenkins	" 30, 1926

SPECIAL CERTIFICATES VALID IN DAY ELEMENTARY SCHOOLS.

Rating.	Name.	COOKERY.	Certificate Expires
871	Fannie C. Bacon		June 30, 1922
861	Bessie E. Robbins		" 30, 1926
847	Lucy H. Nash		" 30, 1925
817	Beatrice McGovern		" 30, 1926
813	Miriam E. Priest		" 30, 1922

SEWING.

906	Jessie Guttentag	June 30, 1925
862	Marion A. Driscoll	" 30, 1926
834	Hester E. Hurlbutt	" 30, 1926
790	Clara K. Hogan	" 30, 1926
777	Eileen R. Griffin	" 30, 1926
767	Leila E. Hunton	" 30, 1922
762	Margaret E. Minton	" 30, 1926
727	Beatrice G. Coyle	" 30, 1922
715	Margaret M. Casey	" 30, 1922
708	Mary A. Griffin	" 30, 1921

MANUAL TRAINING.

FOREMAN, SHOP WORK.

818	Edward W. Malone	June 30, 1926
785	Frederick E. Rau	" 30, 1926

INSTRUCTORS.

715	Alvin J. Long	June 30, 1924
706	Harold R. Rippon	" 30, 1926
704	Americo B. Ventura	" 30, 1926

ASSISTANT INSTRUCTORS.

712	Myldred Moore	June 30, 1921
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MODELING.

816	L. Reginald Chandler	June 30, 1922
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PREVOCATIONAL ACADEMIC.*

812	I. Virginia Lyons	June 30, 1924
802	Sadie M. Knight	" 30, 1924

SPECIAL CLASS CERTIFICATES.

FIRST ASSISTANT IN CHARGE.

Rating.	Name.	Certificate Expires
726	Florence E. Hosmer	June 30, 1924

* See, also, Prevocational Academic Certificates, page 30.

Special Class Certificates — Concluded.

INSTRUCTORS.		
Rating.	Name.	Certificate Expires
898	Esther P. Thumim*	June 30, 1926
835	Elizabeth W. O. Paterson*	" 30, 1926
824	Elizabeth P. Wright*	" 30, 1925
821	Edythe M. McKelligett	" 30, 1926
805	Maria E. Riek	" 30, 1926
705	Loretta J. Alford*	" 30, 1926

CONTINUATION SCHOOL CERTIFICATE.

ASSISTANTS.		
<i>Men.</i>		
Rating.	Name.	Certificate Expires
796	Emmanuel F. Vantura*	June 30, 1926
719	Irving O. Scott	" 30, 1921
<i>Women.</i>		
909	Anna M. Killion	June 30, 1925
864	Julia E. Fletcher	" 30, 1925
862	Josephine Shanahan	" 30, 1925
856	Mary E. Flaharan	" 30, 1925
855	Julia A. Barrett	" 30, 1925
855	Grace D. Fisher	" 30, 1924
855	Anne Sheridan	" 30, 1924
854	Dorothy C. O'Connor	" 30, 1924
836	M. Elizabeth Gay	" 30, 1925
823	M. Theresa O'Hare	" 30, 1924
820	Mary A. Kennedy	" 30, 1925
820	Mary C. Murphy	" 30, 1923
816	Emma A. Sellew	" 30, 1923
814	Anastasia K. White	" 30, 1924
809	Edith E. Bennett	" 30, 1921
808	Margaret M. Casey	" 30, 1924
774	Elizabeth H. Flaharan	" 30, 1925
755	Agnes C. Lavery	" 30, 1922
740	Anna M. Bagley	" 30, 1921
720	Josephine F. Hagarty	" 30, 1923

XXVI. (c.) PREVOCATIONAL ACADEMIC CERTIFICATE.†

903	Mary A. Starkey	June 30, 1926
862	Anna F. Cotter	" 30, 1926
856	Mary C. Culhane	" 30, 1926
841	Mildred E. Frazier	" 30, 1926
814	Helen J. Roberts	" 30, 1926
807	Alice M. Colleton	" 30, 1926

* Appointed, to take effect May 3, 1920.

† See, also, Prevocational Academic Certificates, page 29.

DAY AND EVENING INDUSTRIAL SCHOOLS CERTIFICATES.

XXX. (SHOP INSTRUCTORS, HELPERS, AND TRADE ASSISTANTS IN DAY OR EVENING INDUSTRIAL, CONTINUATION, INTERMEDIATE, OR PRE-VOCATIONAL SCHOOLS OR CLASSES) AND XXXI. (TECHNICAL INSTRUCTORS).

AUTO MECHANICS.

Rating.	Name.	Certificate Expires
801	Alexander MacGilvray	June 30, 1926
704	Cornelius T. Curtin	" 30, 1926

BOOKBINDING.

727	Arthur L. Haverty	June 30, 1921
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CABINETMAKING.

833	Frederick C. Ritchie	June 30, 1922
781	Fred J. Thorburn	" 30, 1921
767	Charles J. Rodgers	" 30, 1924

CARPENTRY.

792	Gustaf A. Johnson	June 30, 1921
786	Alfred M. Borden, Jr.	" 30, 1921
784	George F. Pushee	" 30, 1922
780	Jesse J. Maguire	" 30, 1921

CATERING.

703	Elizabeth C. Harbison	June 30, 1926
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DRAFTING.

822	Percy R. Finer	June 30, 1921
787	Harold J. Miller *	" 30, 1922
786	Arthur E. Spencer	" 30, 1921

DRESSMAKING.

839	Helen F. Morton	June 30, 1921
804	Gwendolyn A. Summers	" 30, 1922
801	Kathryn Whalen	" 30, 1925
790	Mary A. O'Brien *	" 30, 1923
773	Annie L. Robertson	" 30, 1924

ELECTRICITY.

852	M. Alonzo Eason*	June 30, 1922
824	Ernest F. Lawrence	" 30, 1922
819	Nils Engstrom	" 30, 1923
777	Patrick J. McGuinness	" 30, 1926
764	George G. Noren	" 30, 1925

* Holds XXXI. (Technical Instructor) certificate only.

Day and Evening Industrial Schools Certificates — Continued.

Rating.	Name.	Certificate Expires
751	John F. Fitzsimmons	June 30, 1926
751	W. Russell Parker	" 30, 1921
703	John D. McLaughlin	" 30, 1921
MACHINE SHOP PRACTICE.		
893	Percy E. Collins	June 30, 1923
843	Hugh Wilton	" 30, 1922
824	Henry S. Crosby	" 30, 1921
801	Frank Mullen	" 30, 1921
782	William Buxbaum	" 30, 1921
771	Charles A. T. Kerr	" 30, 1921
755	John H. Farrell	" 30, 1924
743	Patrick J. Fox	" 30, 1924
740	Arthur H. Farrell	" 30, 1921
734	Charles Laird	" 30, 1925
725	Hugh J. Ejsenhauer	" 30, 1924
715	Royal R. Eglinton	" 30, 1921
MILLINERY.		
875	Alice A. Alden	June 30, 1923
752	Marie C. Turner	" 30, 1926
701	Annie J. Herring	" 30, 1921
PATTERN MAKING.		
923	Harry H. Tukey	June 30, 1922
846	Joseph Hackett	" 30, 1926
829	George S. Clarkson	" 30, 1921
827	James B. Cummings	" 30, 1922
785	John Black, Jr	" 30, 1922
767	Robert S. Waite	" 30, 1926
PLUMBING.		
879	James A. Sullivan	June 30, 1921
813	John J. Downey	" 30, 1921
PRINTING.		
915	Richard V. Barry	June 30, 1925
885	Charles R. Forbes	" 30, 1923
841	Ralph L. Boudreau	" 30, 1923
831	John B. Martell	" 30, 1923
829	Frank B. Kaulbeck	" 30, 1926
814	Frank P. Rich	" 30, 1926
750	Ralph W. Hadley	" 30, 1925
738	Thomas F. Woods	" 30, 1924
729	Charles M. Doherty	" 30, 1924
SHEET METAL WORK.		
791	Matthew T. Cavanaugh	June 30, 1924

Day and Evening Industrial Schools Certificates — Continued.

XXXI.— A. (HEADS OF DEPARTMENTS (SHOP WORK) IN THE TRADE SCHOOL FOR GIRLS, AND SHOP FOREMEN IN DAY OR EVENING INDUSTRIAL, CONTINUATION, INTERMEDIATE, OR PREVOCATIONAL SCHOOLS OR CLASSES.)

AUTO MECHANICS.		
Rating.	Name.	Certificate Expires
791	Warren C. Burnham	June 30, 1926
CABINETMAKING.		
783	Alden T. Stubbs	June 30, 1925
ELECTRICITY.		
727	Louis E. Levy	June 30, 1925
MACHINE SHOP PRACTICE.		
849	Joseph P. Shea	June 30, 1926
818	Abraham S. Burnes	" 30, 1925
757	Carl E. Janson	" 30, 1925
736	William J. Doherty	" 30, 1925
735	Grover C. Russell	" 30, 1925
PRINTING.		
751	William P. Grady	June 30, 1925
712	Frederick G. E. Zeidler	" 30, 1925
SHEET METAL WORK.		
784	Arthur E. Olsen	June 30, 1926

XXXI.— B. (DIVISION HEADS AND SHOP SUPERINTENDENT IN THE BOSTON TRADE SCHOOL, TO CO-OPERATIVE INSTRUCTORS AND CO-ORDINATORS IN DAY HIGH SCHOOLS, AND TO DIVISION FOREMEN IN THE CONTINUATION SCHOOLS.)

CABINETMAKING.		
749	Harold P. Johnson	June 30, 1926
DRAFTING.		
813	Walter H. Naylor	June 30, 1926
ELECTRICITY.		
802	George G. Rose	June 30, 1926
PRINTING.		
716	Frederick L. Eames	June 30, 1926

Day and Evening Industrial Schools Certificates—Concluded.

XXXII.—A.—([a] INSTRUCTORS IN THE BOSTON TRADE SCHOOL AND VOCATIONAL ASSISTANTS IN INDUSTRIAL OR CONTINUATION SCHOOLS.)

			<i>Men.</i>		
Rating.	Name.			Certificate Expires	
806	Russell B. Leonard	. . . . .		June 30, 1921	
788	Daniel M. Daley	. . . . .		" 30, 1926	
780	Albert L. Shaughnessy	. . . . .		" 30, 1926	
758	Thomas L. Sullivan	. . . . .		" 30, 1926	

			<i>Women.</i>		
Rating.	Name.			Certificate Expires	
896	Eva L. Morley	. . . . .		June 30, 1921	
795	Bertha D. Tucker	. . . . .		" 30, 1926	

XXXIV. DAY AND EVENING INDUSTRIAL SCHOOLS
CERTIFICATE.

			PHYSICAL TRAINING.		
Rating.	Name.			Certificate Expires	
821	Alice B. Felton	. . . . .		June 30, 1924	

ASSISTANT IN MANUAL ARTS CERTIFICATE.

			DRAWING.		
Rating.	Name.			Certificate Expires	
885	Elizabeth M. P. Bartlett	. . . . .		June 30, 1926	
878	Mary P. Barry	. . . . .		" 30, 1926	
814	Annette M. Lavoie	. . . . .		" 30, 1924	
780	Amy E. Adams	. . . . .		" 30, 1924	
740	Josephine G. Malone	. . . . .		" 30, 1924	
725	Hannah E. McDonough	. . . . .		" 30, 1926	

ASSISTANT DIRECTOR OF MUSIC CERTIFICATE.

Rating.	Name.		Certificate Expires
803	Francis M. Findlay*	. . . . .	June 30, 1926

ASSISTANT IN MUSIC CERTIFICATE.

Rating.	Name.		Certificate Expires
942	Mabel T. Hackett*	. . . . .	June 30, 1926
787	Mildred Martin	. . . . .	" 30, 1926
755	Alma D. Holton	. . . . .	" 30, 1926
700	Gertrude F. O'Brien	. . . . .	" 30, 1926

EXAMINER IN PENMANSHIP CERTIFICATE.

Rating.	Name.		Certificate Expires
821	Anna T. Roche†	. . . . .	June 30, 1926

* Appointed, to take effect April 26, 1920.

† Appointed, to take effect April 6, 1920.

INSTRUCTOR OR ASSISTANT INSTRUCTOR OF MILITARY
DRILL CERTIFICATE.

Rating.	Name.	Certificate Expires
849	Forrest B. Moulton*	June 30, 1925
813	Daniel J. Canty	" 30, 1921
809	James J. Kelley	" 30, 1926
792	Robert A. O'Neill	" 30, 1925
781	William J. McCluskey	" 30, 1925
753	George F. A. Mulcahy	" 30, 1925

SCHOOL NURSE CERTIFICATE.

Rating.	Name.	Certificate Expires
862	Margaret C. Murphy	June 30, 1921
852	Mary E. Hines	" 30, 1921
840	Inez W. Nichols	" 30, 1921
824	Miriam B. Downing	" 30, 1926
824	Annie K. Gillies	" 30, 1921
820	Ruth E. Hawkins	" 30, 1921
807	Barbara R. Zimmerman	" 30, 1921
805	Alice E. Hughes	" 30, 1921
798	Mary E. Macdonald	" 30, 1921
795	Mary E. Murray	" 30, 1921
787	Marion E. Branagan	" 30, 1926
786	Christine E. Sweeney	" 30, 1924
783	Mary F. Johnson	" 30, 1921
776	Gladys Huse	" 30, 1926
774	Veronica T. Cashin	" 30, 1926
774	Hulda Cederstrom	" 30, 1925
763	Margaret E. Crockstad	" 30, 1923
749	Mildred V. Prescott	" 30, 1925
737	Katherine A. Grady	" 30, 1926
734	Olive M. Houghton	" 30, 1923
727	Helen C. Riley	" 30, 1922
722	Genevieve E. Hiney	" 30, 1922
719	Margaret E. Cullen	" 30, 1922
713	Helena M. Howard	" 30, 1922
700	Dora E. Manning	" 30, 1925
682	Lauretta M. Quinn	" 30, 1926
680	Eleanora A. Tobin	" 30, 1926
652	Frances E. Grasse	" 30, 1925

* Eligible for appointment as Instructor of Military Drill only.

ALPHABETIC LIST OF CANDIDATES.

(Unless otherwise indicated, all addresses are in Massachusetts).

A.

	PAGE
Adams, Amy E.....	5 Jefferson street, Newton 34
Carl H.....	57 Groveland street, Haverhill 16
Aiken, Theresa H.....	42 Auburn street, Charlestown 21
Alden, Alice A.....	22 Freeman street, Arlington 32
Alford, Loretta J.....	44 Nichols street, Everett 30
Allbee, Angie G.....	162 Gregory avenue, Passaic, N. J. 15
Anderson, Ernest W.....	64 Fulton street, Medford 25
Angell, Harriett M.....	15 Forest street, Roxbury 28
Armstrong, Mary G.....	561 East Fifth street, South Boston 24
Atwood, Walter S.....	Box 41, Hyannis 12
Austin, May M.....	Portland, Conn 16

B.

Bacon, Fannie C.....	3 Bacon place, Newton Upper Falls 29
Gertrude L.....	36 Cherry street, Spencer 20, 27
Bagley, Anna M.....	89 Robbins street, Waltham 30
Bake, Norma I.....	100 Beechwood avenue, Watertown 26
Baker, Alice H.....	51 Gardner street, Allston 28
Kenrick M.....	53 Wendell avenue, Brockton 16
Barden, Elizabeth M.....	7 Dell avenue, Hyde Park 13
Barr, Katharine E.....	139 Highland street, Roxbury 13, 15
Barrett, Julia A.....	40 Prospect avenue, Norwood 30
Barry, Ellen A.....	813 Beacon street 13
Mary P.....	16 Dunwell street, West Roxbury 16, 34
Richard V.....	29 Bellflower street, Dorchester 32
Bartlett, Elizabeth M. P.....	136 Hemenway street 34
Battles, Earl W.....	4 Story terrace, Marblehead 14
Beatley, Bancroft.....	11 Wabon street, Roxbury 14
Catharine B.....	11 Wabon street, Roxbury 13
Bennett, Edith E.....	9 Nottingham street, Dorchester 12, 30
Benson, Ulrika E.....	24 Oliver street, Everett 15
Bergin, Cecilia A.....	9 Crawford street, Roxbury 27
John A.....	16 Upland road, North Cambridge 12
Beveridge, Olive A.....	16 Nixon street, Dorchester 13
Billings, Constance.....	22 Burroughs street, Jamaica Plain 18
Flora E.....	887 Washington street, Canton 13
Bird, Herbert C.....	30 Spruce street, Dedham 19, 23
Bishop, Nellie K.....	56 Seaver street, Wellesley Hills 27
Black, John, Jr.....	Box 311, Cohasset 32
Blodgett, Guy C.....	92 Belmont street, Somerville 14
Bond, Philip J.....	104 Geneva avenue, Dorchester 19, 25
Borden, Alfred M., Jr.....	50 Coral street, Fall River 31
Boudreau, Ralph L.....	32 Bayfield road, Atlantic 32
Boyau, John J.....	3 Fayette street, Cambridge 14
Bradford, Edith H.....	272 Summer street, West Somerville 13
Brady, Hazel C.....	20 Chauncy place, Jamaica Plain 21
Bradon, Ralph H.....	123 North avenue, North Abington 14
Branagan, Marion E.....	1415 Commonwealth avenue, Allston 35
Briel, Margaret M.....	395 Ashmont street, Dorchester 26

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Broaders, Clyde M.	35 Florence street, Medford 23
Brogan, Mary C.	192 Grant avenue, Medford 19
Brophy, Alice A.	58 Eliot street, Jamaica Plain 13
Burgin, Ida.	25 Temple street 21
Burke, Abigail F.	14 Mark street, Roxbury 23
Alfred F.	112 Magazine street, Cambridge 16
Burnce, Frances.	76 Allen street 13, 18
Burnes, Abraham S.	43 Chambers street 33
Burnham, Marion A.	221 Broadway, Revere 27
Warren C.	1 Orne street, Worcester 33
Burrage, Constance E.	Weston 15
Buxbaum, William.	1139 Commonwealth avenue, Allston 32

C.

Cadwell, Floralyn.	11 East Newton street 13
Cahill, Mary A.	313 Prospect street, Cambridge 12
Calderara, Josephine M.	12 East Union street, Milford, N. H. 19, 24
Callaghan, Agnes L.	72 Gardner street, Allston 14
Campbell, Helen T.	66 Bowdoin avenue, Dorchester 18
Margaret E.	100 Decatur street, Charlestown 15
Mary A.	208 Hampden street, Roxbury 23
Canney, Margaret A.	450 Main street, Charlestown 23
Cannon, Stella A.	Millbury 26
Canty, Daniel J.	28 Highland street, Roxbury 35
Carey, Helen.	15 Allen street 24
Carnegie, Gladys M.	77 Gustine street, Dorchester 21
Carr, Alice G.	150 St. Botolph street 16
Rosemary R.	75 Allston street, Allston 21
Carroll, Alice L.	21 Speedwell street, Dorchester 21
James H.	St. Thomas's College, St. Paul, Minn. 14
Mary J.	17 Old Harbor street, South Boston 23
Casey, Margaret M.	79 Howland street, Roxbury 29
Margaret M.	89 Cedar street, Roxbury 30
Cashin, Veronica T.	48 Hartford street, Dorchester 35
Cavanaugh, Matthew T.	94 Central avenue, Medford 32
Cederstrom, Hulda.	33 Kerwin street, Dorchester 35
Chandler, L. Reginald.	489 Common street, Belmont 29
Clarkson, George S.	53 Stark road, Worcester 32
Cochrane, Ellen A.	14 Morss avenue, Brookline 27
Cogan, Matilda E.	61 Farragut road, South Boston 17
Cogger, Maria T.	25 Union street, Charlestown 25
Coleman, Helen M.	59 Esmond street, Dorchester 28
Colleton, Alice M.	20 Charlesgate West 30
Collier, Agnes R.	212 South street, Jamaica Plain 22
Collins, Mary A.	57 Monument avenue, Charlestown 28
Percy E.	West Auburn 32
Condon, Marguerite.	13 Bartlett Crescent, Brookline 13
Connelly, Dorothy J.	80 Esmond street, Dorchester 15
Connor, Anastasia B.	6 Vista street, Roslindale 18
Christopher A.	322 Hyde Park avenue, Jamaica Plain 19, 23
Conroy, Agnes T.	475 East Fifth street, South Boston 19
Cyril C.	394 Broad street, East Weymouth 23
Cook, Laura W.	1298 Commonwealth avenue, Allston 16
Cooper, Florence F.	250 Grove street, Melrose 16
Corbett, Margaret M.	59 Chestnut street, Charlestown 20
Cormack, Mabel I.	197 Bunker Hill street, Charlestown 20
Cotichini, Victoria R.	59 Riverdale street, Allston 27
Cotter, Anna F.	56 Claybourne street, Dorchester 30
Marion A.	31 Prospect street, Charlestown 23
Cotton, Rachel E.	48 Glen street, Malden 26

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Courehene, William A.	44 Central avenue, Hyde Park 16
Coyle, Beatrice G.	18 Edwin street, Dorchester 29
Craig, Catherine E.	35 Bayard street, Allston 24
Creed, Florence N.	197 Dorchester street, South Boston 28
Creedan, Catherine E.	Elm street, Hopkinton 16
Crockstad, Margaret E.	33 Bullard street, Dorchester 35
Cromwell, Marion J.	63 Sagamore avenue, Chelsea 16
Cronin, Margaret M.	13 Hamilton street, Dorchester 20
Crosby, Henry S.	90 Vernon street, Waltham 32
Crotty, Mary H.	73 Eutaw street, East Boston 21, 28
Crowley, Marguerite G.	24 Lorette street, West Roxbury 23
Culhane, Mary C.	33 Mellen street, Cambridge 30
Cullen, Margaret E.	10 Hill street, Winchester 35
Cummings, James B.	3 Lamson court, East Boston 32
Curtin, Cornelius T.	6 Porter road, North Cambridge 31
Cushing, Lester H.	495 Wilder street, Lowell 14

D.

Dacey, Mildred A.	18 Muzzey street, Lexington 18
Daley, Catherine V.	36 Roseclair street, Dorchester 24
Daniel M.	Sherwood road, Medford 34
Dalrymple, Esther L.	67 Eustis street, Revere 26
Dalton, Josephine V.	56 Tyler street 21
Damon, Frances B.	28 Puritan avenue, Dorchester 21, 27
Daniels, Rebecca E.	52 Agawam street, Revere 21
Davis, Dorothea.	382 Longwood avenue 16
Hester C.	71 Waldeck street, Dorchester 28
Mauric	25 McLean street 22
Dawley, Anna E.	32 Windermere road, Dorchester 23
Denihan, Marie P.	160 Dorchester street, South Boston 24
Denehy, Mary A.	6 Cliff street, Beverly 27
Derry, Cecil T.	12 Trowbridge street, Cambridge 15
Diman, Elizabeth G.	3 Monadnock street, Dorchester 25
Doherty, Charles M.	62 Allen street 32
Grace C.	4 Chestnut place, Brighton 21
Mary E.	46 Adams street, Dorchester 16
William J.	86 Leverett street 33
Donahue, Margaret M.	11 Centre avenue, Dorchester 28
Richard G.	11 Centre avenue, Dorchester 19
Theresa V.	69 Sheridan street, Jamaica Plain 20
Donoghue, Elinore F.	33 Dunster road, Jamaica Plain 25
Dooley, Katherine F.	32 Market street, Cambridge 27
Downey, John J.	121 Sycamore street, Roslindale 32
Downing, Miriam B.	24 St. Mary's street 35
Doyle, John J.	39 Dorr street, Roxbury 19
Ruth V.	10 Granada avenue, Roslindale 23
Driscoll, Alice.	9 Kent street, Brookline 20
Bernadette U.	13 Talbot street, Malden 27
Francis J.	7 Sherman square, Charlestown 18
Marion A.	21 Kent street, Brookline 29
Miriam R.	45 M street, South Boston 16
Dubuc, Agnes T.	12 Fenelon street, Dorchester 12
Dulligan, Ruth G.	126 Millbury street, Worcester 28
Dunbar, Florence A.	194 Washington street, Canton 24
James A.	27 Jefferson avenue, Charlestown 18
Mary A.	27 Jefferson avenue, Charlestown 23
Dunn, John A.	138 Myrtle street, Rockland 19
Durant, Margaret R.	32 Belfort street, Dorchester 24
Dwyer, Ellen A.	15 Corey street, Charlestown 22

E.

	PAGE
Eager, Frances L.....	25 River street, Mattapan 24
Eames, Frederick L.....	94 Locust street, Winthrop 33
Early, James L.....	28 Young's avenue, Riverpoint, R. I. 25, 26
Eason, M. Alonzo.....	Stantonsburg, N. C. 31
Eastman, Clare.....	25 Wheatland avenue, Dorchester 16
Edson, Newell W.....	71 Highland road, Brookline 17
Eglinton, Royal R.....	1356 Lake avenue, Whalom, Fitchburg 32
Eisenhauer, Hugh J.....	64½ Prospect street, Cambridge 32
Elliott, Mary I.....	38 Brookford street, Dorchester 27
Ellis, Madeline M.....	116 Thorndike street, Brookline 18
Ellsworth, Edward W.....	21 Hancock street, Dorchester 15
Engstrom, Nils.....	1015 Washington street, Newtonville 31
Epstein, Ethel R.....	62 Johnston road, Dorchester 27
Estabrook, Rosamond W.....	88 Corey street, West Roxbury 16
Evans, Edna S.....	33 Walter street, Salem 27
Marion I.....	128 Cushing avenue, Dorchester 21

F.

Facey, A. Louise.....	42 Hopedale street, Allston 21
Fallon, A. Margaret.....	81 Sedgwick street, Jamaica Plain 21
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Farrell, Arthur H.....	333 Neponset avenue, Neponset 32
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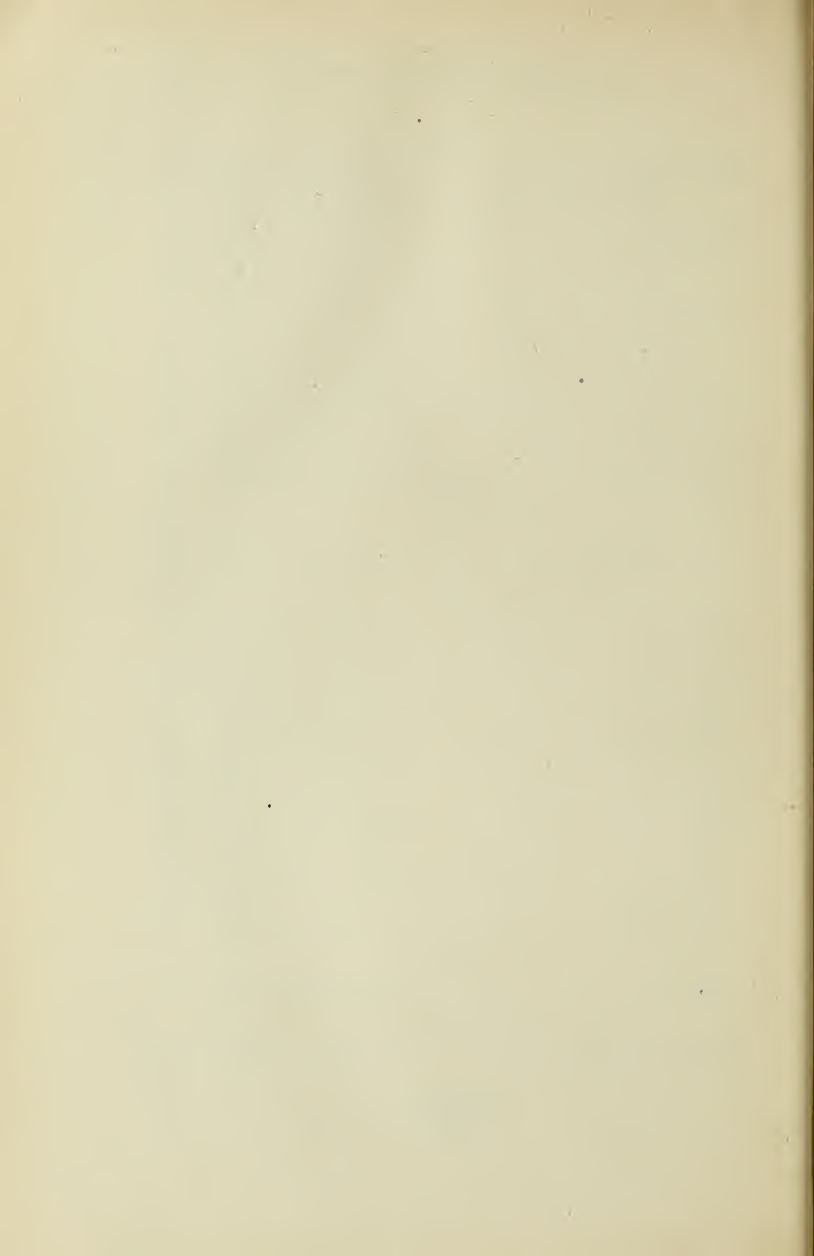
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CALENDAR YEAR 1919
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IN SCHOOL COMMITTEE,
BOSTON, October 4, 1920.

To the School Committee:

I submit herewith the eleventh annual report of the statistics of the Boston Public Schools.

The total registration in all schools during the year was 143,320; the average membership, 119, 895; and the average number in daily attendance, 107,779. The total registration was 2,020 more than during the school year next preceding. The total registration was distributed as follows:

Regular day schools	123,392
Evening schools	9,911
Continuation school	8,705
Day School for Immigrants.	1,312

The number of pupils registered in the Summer Review Schools was 4,194. This total of 4,194 is not included in the total registration because, with few exceptions, these pupils were registered in the public day schools during the term ending in June, 1920.

The high and Latin schools showed an increase of 518 pupils. The registration for the intermediate ninth grade of the elementary schools showed a total registration of 1,258, making a net total increase in the high and Latin schools of 813 pupils. The elementary grades (exclusive of the ninth) showed a decrease of 488 pupils. The Continuation School showed a decrease of 946 pupils. The increases in registration throughout the city were as follows:

Normal School	4
Kindergartens	443
Special schools	168
Evening schools	1,651

The average number belonging in all day schools was 109,110, an increase of 2,367.

The total number of principals and teachers, including the members of the supervising staff, in the employ of the city June 30, 1920, was 3,828 — eight more than on the corresponding day of the preceding year. The number of teachers in the Normal School remained the same; the day high and Latin schools had one more teacher; the day elementary grades had seven additional teachers; the kindergartens two less teachers, and the special schools one additional. Of this number — 3,828 — 638 were men and 3,190 women. The average number of pupils per teacher in the Normal School was 14.7; in the day high and Latin schools, 27.6; in the grades, 41.2; and in the kindergartens, 26.1.

The number of classes of special types in the day elementary schools and the number of pupils belonging at the end of the school year was as follows:

	Number of Classes.	Number Belonging.
Conservation of Eyesight (semi-blind)	5	62
Hospital Classes.....	3	43
Open-Air Classes.....	21	649
Pre-vocational Classes.....	26	770
Rapid Advancement Classes.....	1	28
Special Classes.....	77	1,183
Special English Classes.....	5	118
Speech Improvement Classes (stammerers) (11 centers).....		824
Ungraded Classes.....	15	448

The detailed reports of membership and attendance of pupils assigned to the classes mentioned above are included in the total of respective districts in which they were registered.

Summer Review Schools were reopened June 28 and were continued in session six days per week up to and including August 13, 1920. There was one Summer Review High School conducted in the Roxbury High School-house. There were nine Summer Review Elementary Schools and one branch.

Following is the summary of the distribution of children of public school grade in all day schools of the city for the past six years, based on the daily average number belonging:

SCHOOL YEAR.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
Public schools.....	109,223	110,990	107,153	106,690	106,743	109,110
Parochial schools.....	21,186	21,376	22,071	22,784	23,805	24,552

GENERAL SUMMARIES.

AVERAGE MEMBERSHIP SCHOOL YEARS 1915-16 TO
1919-20.

DAY SCHOOLS.	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
Normal.....	286	295	262	230	235
High and Latin.....	16,882	16,755	15,368	14,963	15,632
Elementary Grades.....	85,884	83,087	83,326	83,703	84,875
Kindergartens.....	7,014	6,180	6,879	7,059	7,489
Special Schools.....	924	836	855	788	879
Totals.....	110,990	107,153	106,690	106,743	109,110
Increase over previous year..	1,767	* 3,837	* 463	53	2,367

* Decrease.

ENROLLMENT ON JUNE 30 OF EACH OF THE LAST FIVE
YEARS.

DAY SCHOOLS.	1916.	1917.	1918.	1919.	1920.
Normal.....	282	289	254	227	234
High and Latin.....	15,276	15,074	13,612	13,815	14,294
Elementary Grades.....	85,143	83,224	82,520	83,219	84,390
Kindergartens.....	7,605	7,087	7,572	7,942	8,318
Special Schools.....	718	625	633	797	796
Totals.....	109,024	106,299	104,591	106,000	108,032

TOTAL REGISTRATION.

School Year Ending June 30, 1920.

	Boys.	Girls.	Total.
Normal.....	9	237	246
High and Latin.....	8,266	9,245	17,511
Elementary Grades.....	48,826	46,188	95,014
Kindergartens.....	4,710	4,754	9,464
Special Schools.....	609	548	1,157
Totals.....	62,420	60,972	123,392

SUMMARY.

School Year Ending June 30, 1920.

SCHOOLS.	Total Registration.	Average Number Belonging.	Average Attendance.	Per Cent of Attendance.	NUMBER ENROLLED JUNE 30, 1920, OF THE FOLLOWING AGES.				
					Under 5.	5 to 7.	7 to 14.	14 to 16.	16 and over.
Normal	246	235	229	97	.....	.....	.....	1	233
High and Latin	17,511	15,632	14,537	93	.....	.....	2,669	7,087	4,538
Elementary Grades	95,014	84,875	77,135	91	233	16,083	63,987	3,861	226
Kindergartens	9,464	7,489	5,645	75	6,202	2,114	2	.....	.....
Totals	122,235	108,231	97,546	90	6,435	18,197	66,658	10,949	4,997
Special Schools	1,157	879	770	88	3	23	158	285	327
All Day Schools (except the Continuation School)	123,392	109,110	98,316	90	6,438	18,220	66,816	11,234	5,324
Evening High	5,016	2,750	2,195	80	.....	.....	.....	.....	.....
Evening Elementary	3,922	1,870	1,451	78	.....	.....	.....	.....	.....
Boston Trade School (Evening Classes)	973	395	303	77	.....	.....	.....	.....	.....
Totals	9,911	5,015	3,949	79	.....	.....	.....	.....	.....
Continuation School	8,705	5,190	5,035	97	.....	.....	.....	.....	.....
Day School for Immigrants,	1,312	580	479	83	.....	.....	.....	.....	.....
Total of all Day and Evening Schools	143,320	119,895	107,779	89	.....	.....	.....	.....	.....

DAY SCHOOLS.

NORMAL, LATIN AND DAY HIGH SCHOOLS.

School Year Ending June 30, 1920.

SCHOOLS.	Total Registration.	AVERAGE NUMBER BELONGING.			AVERAGE ATTENDANCE.			Average Absence.	Per Cent of Attendance.
		Boys.	Girls.	Total.	Boys.	Girls.	Total.		
Normal.....	246	8	227	235	9	220	229	6	97
High and Latin:									
Public Latin.....	1,025	966	.....	966	921	.....	921	45	92
Girls' Latin.....	823	.....	745	745	.....	705	705	40	93
Brighton High.....	623	188	366	554	168	329	497	57	90
Charlestown High....	576	170	310	480	154	284	438	42	91
Dorchester High.....	2,130	610	1,296	1,906	565	1,191	1,756	150	92
East Boston High....	796	274	408	682	253	378	631	51	93
English High.....	2,308	2,003	.....	2,003	1,867	.....	1,867	136	93
Girls' High.....	2,129	.....	1,863	1,863	.....	1,677	1,677	186	90
High School of Commerce.....	1,435	1,325	.....	1,325	1,270	.....	1,270	55	96
High School of Practical Arts.....	502	.....	470	470	.....	429	429	41	91
Hyde Park High.....	819	325	413	738	302	383	685	53	93
Mechanic Arts High..	1,130	978	.....	978	927	.....	927	51	91
Roxbury High.....	1,400	.....	1,241	1,241	.....	1,155	1,155	86	93
South Boston High...	923	305	510	815	288	481	769	46	93
West Roxbury High..	892	207	659	866	196	614	810	56	94
Totals, Normal, High and Latin.....	17,757	7,359	8,508	15,867	6,920	7,846	14,766	1,101	93
Totals, High and Latin.....	17,511	7,351	8,281	15,632	6,911	7,626	14,537	1,095	93

ELEMENTARY GRADES.

School Year Ending June 30, 1920.

SCHOOL DISTRICTS.	Total Registration.	AVERAGE NUMBER BELONGING.			AVERAGE ATTENDANCE.			Average Absence.	Per Cent of Attendance.
		Boys.	Girls.	Total.	Boys.	Girls.	Total.		
Abraham Lincoln.....	2,336	940	1,031	1,971	863	938	1,801	170	91
Agassiz.....	750	615	81	696	575	71	646	50	93
Bennett.....	1,685	827	742	1,569	769	684	1,453	116	93
Bigelow.....	940	720	136	856	681	126	807	49	93
Blackinton-John Cheverus.....	1,488	729	658	1,387	670	593	1,263	124	90
Bowditch.....	1,084	234	821	1,055	205	751	956	99	90
Bowdoin.....	989	216	626	842	192	569	761	81	90
Bunker Hill.....	651	306	304	610	280	279	559	51	92
Chapman.....	1,265	552	589	1,141	502	532	1,034	107	91
Charles Sumner.....	1,082	516	484	1,000	472	435	907	93	91
Christopher Gibson.....	1,049	509	447	956	462	401	863	93	90
Dearborn.....	1,915	983	743	1,726	906	673	1,579	147	91
Dillaway.....	1,201	274	833	1,107	237	745	982	125	89
Dudley.....	1,235	868	167	1,035	796	152	948	87	91
Dwight.....	957	579	207	786	539	177	716	70	91
Edmund P. Tileston....	922	433	376	809	394	340	734	75	91
Edward Everett.....	1,589	846	739	1,585	687	672	1,359	226	85
Elihu Greenwood.....	1,366	608	607	1,215	555	550	1,105	110	89
Eliot.....	2,762	1,880	521	2,401	1,643	484	2,127	274	99
Emerson.....	1,510	705	693	1,398	634	620	1,254	144	90
Everett.....	861	186	524	710	157	467	624	86	88
Francis Parkman.....	731	317	327	644	298	306	604	40	94
Franklin.....	1,191	287	681	968	257	621	878	90	91
Frederic W. Lincoln....	724	569	110	679	532	96	628	51	93
Gaston.....	1,068	207	767	974	182	714	896	78	95
George Putnam.....	1,319	590	667	1,257	538	598	1,136	121	90
Gilbert Stuart.....	926	413	383	796	376	348	724	72	93
Hancock.....	2,623	473	1,699	2,172	441	1,581	2,022	150	93
Harvard-Frothingham...	1,263	565	485	1,050	526	444	970	80	92
Henry Grew.....	771	308	314	622	272	274	546	76	88
Henry L. Pierce.....	2,036	825	861	1,686	756	776	1,532	154	91
Hugh O Brien.....	1,516	893	566	1,459	824	514	1,338	121	98
Hyde.....	829	114	573	687	98	521	619	68	90
Jefferson.....	1,420	642	638	1,280	599	593	1,192	88	93
John A. Andrew.....	1,056	509	439	948	464	391	855	93	90
John Marshall.....	1,120	549	519	1,068	492	457	949	119	89

ELEMENTARY GRADES.

School Year Ending June 30, 1920.—Concluded.

SCHOOL DISTRICTS.	Total Registration.	AVERAGE NUMBER BELONGING.			AVERAGE ATTENDANCE.			Average Absence.	Per Cent of Attendance.
		Boys.	Girls.	Total.	Boys.	Girls.	Total.		
John Winthrop.....	1,728	835	761	1,596	753	684	1,437	159	90
Julia W. Howe.....	1,089	556	476	1,032	491	414	905	127	88
Lawrence.....	930	636	199	835	606	183	789	46	94
Lewis.....	1,486	708	697	1,405	626	614	1,240	165	88
Longfellow.....	1,303	603	642	1,245	542	568	1,110	135	89
Lowell.....	1,206	534	534	1,068	497	496	993	75	93
Martin.....	757	276	284	560	252	259	511	49	91
Mary Hemenway.....	2,127	1,033	1,027	2,060	942	926	1,868	192	91
Mather.....	2,613	1,232	1,125	2,357	1,145	1,029	2,174	183	92
Minot.....	633	287	262	549	256	238	494	55	90
Norcross.....	1,043	198	732	930	183	687	870	60	94
Oliver H. Perry.....	835	395	382	777	365	347	712	65	92
Oliver W. Holmes.....	1,238	542	562	1,104	501	515	1,016	88	92
Phillips Brooks.....	1,587	740	726	1,466	670	652	1,322	144	90
Prescott.....	708	326	242	568	300	225	525	43	92
Prince.....	1,269	498	502	1,000	448	445	893	107	89
Quincy.....	1,038	758	191	949	687	173	860	89	91
Rice.....	1,093	495	379	874	450	342	792	82	91
Robert G. Shaw.....	1,460	644	659	1,303	594	607	1,201	102	92
Roger Wolcott.....	3,137	1,443	1,331	2,774	1,300	1,197	2,497	277	90
Samuel Adams.....	2,742	1,204	1,252	2,456	1,124	1,144	2,268	188	92
Sherwin.....	951	715	171	886	648	146	794	92	89
Shurtleff.....	877	163	620	783	147	571	718	65	92
Theodore Lyman.....	1,561	756	667	1,423	701	613	1,314	109	92
Thomas Gardner.....	1,675	749	680	1,429	702	629	1,331	98	93
Thomas N. Hart.....	1,152	855	163	1,018	801	147	948	70	93
Ulysses S. Grant.....	1,456	738	638	1,376	659	576	1,235	141	90
Warren.....	1,015	499	452	951	459	410	869	82	91
Washington.....	1,624	793	766	1,559	737	703	1,440	119	92
Washington Allston....	1,305	561	525	1,086	518	475	993	93	82
Wells.....	1,948	496	1,107	1,603	436	1,005	1,441	162	90
Wendell Phillips.....	1,560	1,262	76	1,338	1,161	67	1,228	110	92
William E. Endicott....	1,753	809	779	1,588	710	671	1,381	207	87
William E. Russell.....	1,028	490	441	931	455	398	853	78	92
William L. Garrison....	848	451	400	851	397	349	746	105	88
Totals.....	95,014	44,067	40,808	84,875	40,137	36,998	77,135	7,740	91

KINDERGARTENS.

School Year Ending June 30, 1920.

SCHOOL DISTRICTS.	Total Registration.	AVERAGE NUMBER BELONGING.			AVERAGE ATTENDANCE.			Average Absence.	Per Cent of Attendance.
		Boys.	Girls.	Total.	Boys.	Girls.	Total.		
Abraham Lincoln.....	132	42	51	93	29	35	64	29	69
Agassiz.....	70	29	22	51	20	15	35	16	69
Bennett.....	164	71	82	153	51	58	109	44	71
Bigelow.....	62	18	21	39	14	16	30	9	77
Blackinton-John Cheverus.....	198	81	79	160	59	66	125	35	78
Bowditch.....	125	53	45	98	41	31	72	26	73
Bowdoin.....	158	55	53	108	40	39	79	29	73
Bunker Hill.....	61	22	27	49	16	20	36	13	73
Chapman.....	124	39	55	94	29	43	72	22	76
Charles Sumner.....	155	57	58	115	44	45	89	26	77
Christopher Gibson.....	64	22	24	46	14	17	31	15	67
Dearborn.....	145	49	59	108	36	44	80	28	74
Dillaway.....	125	45	52	97	32	36	68	29	70
Dudley.....	128	49	46	95	37	35	72	23	76
Dwight.....	66	21	28	49	15	21	36	13	73
Edmund P. Tileston.....	88	36	37	73	25	25	50	23	68
Edward Everett.....	115	55	50	105	40	39	79	26	75
Elihu Greenwood.....	178	63	76	139	45	51	96	43	55
Elliot.....	114	48	51	99	42	43	85	14	86
Emerson.....	146	57	54	111	42	41	83	28	75
Everett.....	74	29	28	57	18	16	34	23	60
Francis Parkman.....	101	30	32	62	26	27	53	9	85
Franklin.....	151	55	52	107	44	43	87	20	80
Frederic W. Lincoln.....	89	35	40	75	25	30	55	20	74
Gaston.....	56	23	23	46	16	18	34	12	74
George Putnam.....	66	28	24	52	21	20	41	11	79
Gilbert Stuart.....	121	44	44	88	34	33	67	21	79
Hancock.....	502	162	182	344	137	151	288	56	84
Harvard-Frothingham..	143	46	48	94	36	38	74	20	79
Henry Grew.....	113	46	46	92	32	29	61	31	67
Henry L. Pierce.....	133	46	46	92	37	34	71	21	78
Hugh O'Brien.....	152	60	59	119	47	46	93	26	78
Hyde.....	164	52	72	124	40	56	96	28	77
Jefferson.....	155	70	58	128	53	42	95	33	74
John A. Andrew.....	57	19	26	45	14	18	32	13	71

KINDERGARTENS.

School Year Ending June 30, 1920.—Concluded

SCHOOL DISTRICTS.	Total Registration.	AVERAGE NUMBER BELONGING.			AVERAGE ATTENDANCE.			Average Absence.	Per Cent of Attendance.
		Boys.	Girls.	Total.	Boys.	Girls.	Total		
John Marshall.....	161	60	64	124	45	45	90	34	73
John Winthrop.....	122	55	51	106	42	36	78	28	74
Julia Ward Howe.....	49	24	20	44	19	14	33	11	75
Lawrence.....	29	14	9	23	12	6	18	5	82
Lewis.....	126	48	55	103	32	37	69	34	67
Longfellow.....	92	47	42	89	33	30	63	26	72
Lowell.....	123	52	53	105	42	41	83	22	79
Martin.....	125	48	48	96	38	38	76	20	79
Mary Hemenway.....	182	65	72	137	46	52	98	39	72
Mather.....	210	90	66	156	75	52	127	29	81
Minot.....	47	22	22	44	17	16	33	11	75
Norcross.....	120	54	41	95	42	31	73	22	77
Oliver Hazard Perry....	61	28	23	51	22	18	40	11	80
Phillips Brooks.....	235	90	92	182	67	67	134	48	73
Prescott.....	46	17	13	30	12	9	21	9	70
Prince.....	60	30	29	59	21	20	41	18	69
Quincy.....	284	123	114	237	103	89	192	45	81
Rice.....	56	28	14	42	22	9	31	11	71
Robert G. Shaw.....	127	45	43	88	33	32	65	23	74
Roger Wolcott.....	356	165	177	342	121	125	246	96	72
Samuel Adams.....	378	152	182	334	117	135	252	82	75
Sherwin.....	37	7	23	30	6	18	24	6	80
Shurtleff.....	74	22	35	57	17	23	40	17	70
Theodore Lyman.....	191	82	71	153	63	53	116	37	76
Thomas Gardner.....	165	65	70	135	51	54	105	30	78
Thomas N. Hart.....	95	49	30	79	38	25	63	16	80
Ulysses S. Grant.....	190	72	72	144	56	57	113	31	78
Warren.....	110	42	45	87	30	33	63	24	72
Washington.....	172	91	71	162	70	57	127	35	78
Washington Allston....	89	33	28	61	24	22	46	15	77
Wells.....	274	106	111	217	83	83	166	51	76
Wendell Phillips.....	55	30	16	46	24	13	37	9	80
William E. Endicott....	319	109	133	242	83	98	181	61	75
William E. Russell.....	52	22	24	46	14	16	30	16	65
William L. Garrison....	157	72	64	136	52	47	99	37	73
Totals.....	9,464	3,716	3,773	7,489	2,823	2,822	5,645	1,844	75

SPECIAL SCHOOLS.

School Year Ending June 30, 1920.

SCHOOLS.	Total Registration.	AVERAGE NUMBER BELONGING.			AVERAGE ATTENDANCE.			Average Absence.	Per Cent of Attendance.
		Boys.	Girls.	Total.	Boys.	Girls.	Total.		
Horace Mann School....	141	67	71	138	60	59	119	19	86
Boston Clerical School...	205	.....	173	173	.....	156	156	17	90
Boston Disciplinary Day School.....	34	35	.....	35	27	.....	27	8	77
Fort Strong School.....	13	7	6	13	7	6	13	.....	100
Spectacle Island School..	5	3	2	5	3	2	5	.....	100
Boston Trade School....	500	330	.....	330	291	.....	291	39	88
Trade School for Girls....	259	.....	185	185	.....	159	159	26	86
Totals.....	1,157	442	437	879	388	382	770	109	88

TRADE SCHOOLS.

Total Registration by Departments, School Year Ending June 30, 1920.

BOSTON TRADE SCHOOL.

DEPARTMENT.	DAY.		Evening.
	Complete Enrollment.	Original Enrollment.	
Electrical.....	101	94	126
Machine.....	140	78	245
Printing.....	40	33	.....
Sheet metal.....	67	41	76
Woodworking.....	101	66	64
Auto mechanics.....	31	20	175
Mechanical drawing.....	.....	.....	247
Firing and engineering.....	.....	.....	38
Totals.....	480	332	971

TRADE SCHOOL FOR GIRLS.

DEPARTMENT.	Day.	Extension.	Total.
Dressmaking.....	190	188	378
Millinery.....	57	89	146
Operating.....	52	109	161
Catering.....	22	25	47
Nursing.....		25	25
Totals.....	321	436	757

Summer Term 1920.

Total registration	105
Average number belonging	90
Average attendance	79
Per cent of attendance	88
Length of term — July 6 to August 27:	
Number of teachers employed, July	12
Number of teachers employed, August	12
Part time extension:	
Number enrolled	14
Average number belonging	12

DISTRIBUTION OF PUPILS IN RESPECT BOTH

The age given is

GRADES.		4 Years and Under.	5 Years.	6 Years.	7 Years.	8 Years.	9 Years.	10 Years.
Normal School.	All Grades.....	Males.....	.....	.....	.....	.....	.....	.....
	Totals.....	Females.....	.....	.....	.....	.....	.....	.....
High and Latin Schools.	Post-Graduate Course.....	Boys.....	.....	.....	.....	.....	.....	.....
		Girls.....	.....	.....	.....	.....	.....	.....
	Fourth-year Group.....	Boys.....	.....	.....	.....	.....	.....	.....
		Girls.....	.....	.....	.....	.....	.....	.....
	Third-year Group.....	Boys.....	.....	.....	.....	.....	.....	.....
		Girls.....	.....	.....	.....	.....	.....	.....
	Second-year Group.....	Boys.....	.....	.....	.....	.....	.....	.....
		Girls.....	.....	.....	.....	.....	.....	.....
First-year Group.....	Boys.....	.....	.....	.....	.....	.....	.....
	Girls.....	.....	.....	.....	.....	.....	.....
Out-of-Course Group.....	Boys.....	.....	.....	.....	.....	.....	.....
	Girls.....	.....	.....	.....	.....	.....	.....
V. Class Latin Schools.....	Boys.....	.....	.....	.....	.....	.....	.....
	Girls.....	.....	.....	.....	.....	.....	.....
VI. Class Latin Schools.....	Boys.....	.....	.....	.....	.....	.....	4	
	Girls.....	.....	.....	.....	.....	.....	5	
Totals.....								9
Inter-mediate.	Ninth Grade.....	Boys.....	.....	.....	.....	.....	.....	.....
	Totals.....	Girls.....	.....	.....	.....	.....	.....	.....
Elementary Schools.	Eighth Grade.....	Boys.....	.....	.....	.....	.....	.....	8
		Girls.....	.....	.....	.....	.....	.....	9
	Seventh Grade.....	Boys.....	.....	.....	.....	.....	.....	3 215
		Girls.....	.....	.....	.....	.....	.....	6 200
	Sixth Grade.....	Boys.....	.....	.....	.....	3	147	1,376
		Girls.....	.....	.....	.....	2	134	1,502
	Fifth Grade.....	Boys.....	.....	.....	1	99	1,512	1,750
		Girls.....	.....	.....	2	143	1,613	1,563
	Fourth Grade.....	Boys.....	1	111	1,613	1,795	1,027	
		Girls.....	3	138	1,609	1,698	794	
	Ungraded.....	Boys.....	.....	.....	4	14	69	69
		Girls.....	.....	.....	3	7	33	30
	Third Grade.....	Boys.....	1	88	1,740	2,056	866	294
		Girls.....	1	106	1,744	1,841	720	260
	Second Grade.....	Boys.....	102	2,209	2,196	849	226	60
		Girls.....	1	128	2,112	1,907	705	184
	First Grade.....	Boys.....	117	3,243	2,583	849	217	54
		Girls.....	110	2,984	2,351	700	158	48
	Special Classes.....	Boys.....	.....	.....	11	63	105	131
		Girls.....	.....	.....	1	10	30	43
	Pre-vocational Classes.....	Boys.....	.....	.....	.....	.....	.....	.....
		Girls.....	.....	.....	.....	.....	.....	.....
	Special English Classes.....	Boys.....	.....	.....	.....	.....	.....	.....
		Girls.....	.....	.....	.....	.....	.....	.....
	Open-air Classes.....	Boys.....	.....	.....	.....	.....	.....	.....
		Girls.....	.....	.....	.....	.....	.....	.....
	Rapid Advancement Classes.....	Boys.....	.....	.....	.....	.....	.....	.....
		Girls.....	.....	.....	.....	.....	.....	.....
Conservation of Eyesight Classes.....	Boys.....	.....	.....	.....	.....	.....	.....
	Girls.....	.....	.....	.....	.....	.....	.....
Hospital Classes.....	Boys.....	2	1	1	1	3	8	
	Girls.....	1	1	2	.....	4	2	
Totals.....		233	6,513	9,570	9,631	9,612	9,475	9,533

TO AGE AND TO GRADE JUNE 30, 1920.

that of September 1, 1919.

11 Years.	12 Years.	13 Years.	14 Years.	15 Years.	16 Years.	17 Years.	18 Years.	19 Years.	20 Years.	21 Years.	Over 21 Years.	Totals.
				1	19	59	68	46	20	16	66	9225
				1	19	59	68	46	22	7	12	234
				1	3	4	3	5	1	2	3	18
			5	143	418	330	137	30	7	2		1,072
			6	130	562	529	150	30	8	1		1,417
	1	10	126	559	459	173	51	8	2		2	1,391
	1	7	124	739	570	161	27	4				1,633
	13	187	683	584	243	65	11	2				1,788
	11	164	912	731	235	61	11					2,125
9	164	781	807	349	95	13	1	1				2,220
2	156	861	832	327	85	11	1					2,275
					1	1						2
12	38	32	3	2				1				87
3	20	34	13	3								73
36	35	9	2									86
27	30	17	5	1								85
89	469	2,102	3,518	3,569	2,671	1,355	398	84	18	6	6	14,294
4	54	168	137	54	7			1				425
3	70	284	186	61	17	1						622
7	124	452	323	115	24	1		1				1,047
197	1,164	1,298	645	194	35	3						3,544
215	1,333	1,311	664	217	58	6	2					3,815
1,421	1,562	902	280	61	14	3						4,461
1,515	1,550	856	304	67	8	2						4,508
1,630	996	437	135	29	6	4	2					4,765
1,618	894	420	108	28	2							4,708
1,034	562	244	69	16	1							5,288
880	388	174	53	16	3	1						4,842
437	189	64	22	3	2	2	1					5,267
315	136	31	12	2	2							4,738
56	24	18	11	4	2	3						274
32	30	17	11	5	1							169
63	12	4	1									5,125
66	21	6	2	1								4,768
17	2	1										5,662
11	8	2	1	1								5,099
7	3		2									7,089
3		2	1									6,368
111	80	59	43	24	1							755
57	42	55	29	12	5		1					428
25	96	220	203	92	21	4	5					666
11	28	35	22	3		1						104
6	9	6	4	5		1						59
8	6	5	10	3								59
15	4	1										247
26	19	4	2	1								402
4												16
5												12
5	5	5	3		1							33
3	4	3	2									29
2	3	1										24
2	3	2										19
9,797	9,173	6,183	2,639	784	160	29	11					83,343

DISTRIBUTION OF PUPILS IN RESPECT BOTH

The age given is

GRADES.			4 Years and Under.	5 Years.	6 Years.	7 Years.	8 Years.	9 Years.	10 Years.
Kinder- gartens.	All Grades.....	Boys...	3,080	974	74	1	1	.....	.....
		Girls...	3,122	996	70	.....	.....	.....	.....
	Totals.....		6,202	1,970	144	1	1	.....	.....
Special Schools.	Disciplinary Day School...	Boys...	.....	.....	.....	.....	.....	1	1
		Girls...	.....	.....	.....	.....	.....	.....	.....
	Horace Mann.....	Boys...	1	2	1	3	7	5	4
		Girls...	2	4	10	4	6	7	4
	Trade School for Girls.....	Boys...	.....	.....	.....	.....	.....	.....	.....
		Girls...	.....	.....	.....	.....	.....	.....	.....
	Boston Trade School.....	Boys...	.....	.....	.....	.....	.....	.....	.....
		Girls...	.....	.....	.....	.....	.....	.....	.....
	Fort Strong.....	Boys...	.....	.....	3	2	.....	.....	.....
		Girls...	.....	.....	.....	1	2	1	2
Spectacle Island.....	Boys...	.....	.....	1	.....	.....	.....	1	
	Girls...	.....	.....	1	.....	.....	.....	.....
Totals.....		3	7	16	10	15	14	12	
Totals all Day Schools...			6,438	8,490	9,730	9,642	9,628	9,489	9,554

TO AGE AND GRADE JUNE 30, 1920.
that of September 1, 1919.—Concluded.

11 Years.	12 Years.	13 Years.	14 Years.	15 Years.	16 Years.	17 Years.	18 Years.	19 Years.	20 Years.	21 Years.	Over 21 Years.	Totals.
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,130
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4,188
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8,318
6	20	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	40
9	10	5	9	5	4	1	1	.....	.....	.....	.....	67
11	5	7	8	.....	6	3	2	.....	.....	.....	.....	79
.....	.....	10	61	47	25	6	6	4	3	.....	.....	164
.....	.....	9	78	71	44	20	4	1	4	.....	2	295
.....	.....	.....	.....	6	22	45	33	21	5	1	64	133
2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6
.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
28	35	44	156	129	101	75	46	26	12	1	66	796
9,921	9,801	8,781	6,636	4,598	2,975	1,519	524	156	52	14	84	108,032

CALENDAR YEAR 1919.

NORMAL, LATIN AND HIGH SCHOOLS.

Membership, Attendance and Absence.

SCHOOLS.	Average Number Belonging.	Average Attendance.	Average Absence.
Normal.....	231	223	8
High and Latin Schools:			
Public Latin.....	950	903	47
Girls' Latin.....	736	700	36
Brighton High.....	578	528	50
Charlestown High.....	470	428	42
Dorchester High.....	1,974	1,806	168
East Boston High.....	684	625	59
English High.....	1,938	1,803	135
Girls' High.....	1,812	1,628	184
High School of Commerce.....	1,262	1,223	39
High School of Practical Arts.....	444	409	35
Hyde Park High.....	708	664	44
Mechanic Arts High.....	889	848	41
Roxbury High.....	1,196	1,111	85
South Boston High.....	815	771	44
West Roxbury High.....	835	780	55
High and Latin Totals.....	15,291	14,227	1,064

CALENDAR YEAR 1919.

ELEMENTARY GRADES AND KINDERGARTEN.

Membership, Attendance and Absence.

SCHOOL DISTRICTS.	Average Number Belonging.	Average Attendance.	Average Absence.
Abraham Lincoln.....	2,002	1,833	169
Agassiz.....	743	683	60
Bennett.....	1,666	1,536	130
Bigelow.....	896	845	51
Blackinton-John Cheverus.....	1,506	1,355	151
Bowditch.....	1,142	1,039	103
Bowdoin.....	1,067	943	124
Bunker Hill.....	659	604	55
Chapman.....	1,208	1,090	118
Charles Sumner.....	1,122	1,013	109
Christopher Gibson.....	1,030	925	105
Dearborn.....	1,832	1,672	160
Dillaway.....	1,221	1,081	140
Dudley.....	1,171	1,063	108
Dwight.....	821	747	74
Edmund P. Tileston.....	895	810	85
Edward Everett.....	1,658	1,525	133
Elihu Greenwood.....	1,355	1,213	142
Eliot.....	2,400	2,271	129
Emerson.....	1,511	1,357	154
Everett.....	747	657	90
Francis Parkman.....	717	669	48
Franklin.....	1,073	969	104
Frederic W. Lincoln.....	752	685	67
Gaston.....	1,017	945	72
George Putnam.....	1,855	1,676	179
Gilbert Stuart.....	939	846	93
Hancock.....	2,493	2,290	203
Harvard-Frothingham.....	1,158	1,053	105
Henry Grew.....	718	623	95
Henry L. Pierce.....	1,785	1,623	162
Hugh O'Brien.....	1,526	1,400	126
Hyde.....	811	726	85
Jefferson.....	1,370	1,259	111

ELEMENTARY GRADES AND KINDERGARTENS.—*Concluded.*

SCHOOL DISTRICTS.	Average Number Belonging.	Average Attendance.	Average Absence.
John A. Andrew.....	989	886	103
John Marshall.....	485	437	48
John Winthrop.....	1,716	1,527	189
Julia Ward Howe.....	429	375	54
Lawrence.....	860	813	47
Lewis.....	2,079	1,809	270
Longfellow.....	1,328	1,202	126
Lowell.....	1,174	1,081	93
Martin.....	737	666	71
Mary Hemenway.....	2,205	1,992	213
Mather.....	2,507	2,293	214
Minot.....	597	543	54
Norcross.....	1,031	962	69
Oliver Hazard Perry.....	835	759	76
Oliver Wendell Holmes.....	2,777	2,467	310
Phillips Brooks.....	1,669	1,477	192
Prescott.....	637	574	63
Prince.....	1,054	945	109
Quincy.....	1,197	1,094	103
Rice.....	873	794	79
Robert G. Shaw.....	1,390	1,266	124
Roger Wolcott.....	3,029	2,705	324
Samuel Adams.....	2,717	2,472	245
Sherwin.....	909	825	84
Shurtleff.....	836	769	67
Theodore Lyman.....	1,516	1,391	125
Thomas Gardner.....	1,520	1,403	117
Thomas N. Hart.....	1,107	1,026	81
Ulysses S. Grant.....	1,504	1,331	173
Warren.....	1,026	930	96
Washington.....	1,679	1,534	145
Washington Allston.....	1,145	1,048	97
Wells.....	1,894	1,685	209
Wendell Phillips.....	1,321	1,203	118
William E. Endicott.....	728	634	94
William E. Russell.....	944	862	82
William Lloyd Garrison.....	398	343	55
Totals for Elementary Schools.....	91,708	83,149	8,559

CALENDAR YEAR 1919.

SPECIAL SCHOOLS.

SPECIAL SCHOOLS.	Average Number Belonging.	Average Attendance.	Average Absence.
Horace Mann School.....	140	124	16
Boston Clerical School.....	183	167	16
Boston Disciplinary Day School.....	29	19	10
Boston Trade School.....	265	242	23
Trade School for Girls.....	184	161	23
Totals.....	801	713	88

NUMBER OF PUPILS PER TEACHER.

January 31.	Normal. (Excluding Head Master.)	High and Latin. (Excluding Head Masters.)	ELEMENTARY.	
			Grades (Excluding Principals.)	Kindergartens.
1897.....	26.1	28.4	51.5	28.6
1898.....	26.9	28.2	49.5	30.9
1899.....	26.1	28.0	51.4	29.0
1900.....	23.1	27.9	52.7	29.4
1901.....	18.9	27.5	49.8	28.6
1902.....	18.7	25.8	48.9	28.6
1903.....	18.8	26.4	48.0	28.5
1904.....	19.3	26.5	48.3	27.1
1905.....	19.9	27.3	48.4	28.5
1906.....	20.3	27.4	48.2	28.1
1907.....	17.0	26.9	47.9	26.8
1908.....	16.4	26.9	47.1	27.4
1909.....	14.0	29.2	45.6	25.7
1910.....	15.6	27.5	43.6	25.6
1910-11.....	16.0	28.9	42.2	23.4
1911-12.....	16.1	28.8	40.3	25.9
1912-13.....	14.0	27.8	42.7	25.4
1913-14.....	13.4	29.4	43.4	25.6
1914-15.....	15.4	31.2	42.9	27.4
1915-16.....	19.0	30.8	42.4	27.5
1916-17.....	19.6	30.3	41.4	23.9
1917-18.....	16.3	28.1	40.9	25.5
1918-19.....	15.3	26.7	40.1	25.4
1919-20*.....	14.7	27.6	41.2	26.1

* The average number of teachers for the school year 1919-20 was: Normal, 16; Latin and high, 566; elementary grades, 2,058; kindergartens, 287.

ELEMENTARY SCHOOL PUPILS PROMOTED.

June 30, 1920.

District.	Grade IX.	Grade VIII.	Grade VII.	Grade VI.	Grade V.	Grade IV.	Grade III.	Grade II.	Grade I.	Ungraded.	Special English Class.	Special Class.	Open-Air Class.	Rapid Advance-ment Class.	Prevocational Class.	Conservation of Eyesight Class.	Kindergartens.	Total.
Abraham Lincoln	75	160	188	197	245	199	160	107	199	41	.....	12	22	.....	.....	.....	82	1,777
Agassiz	72	56	75	98	98	53	59	48	.....	.....	1	.....	52	.....	.....	50	662
Bennett	146	172	179	185	193	185	207	226	.....	.....	16	.....	.....	.....	.....	156	1,065
Bigelow	99	98	95	95	81	83	74	86	.....	.....	19	.....	.....	.....	.....	53	783
Blackinton-John Cheverus	135	108	136	138	171	145	174	188	.....	.....	3	.....	.....	.....	.....	151	1,319
Bowditch	77	96	87	107	108	133	117	172	.....	.....	.....	28	.....	.....	.....	89	1,014
Bowdoin	77	79	69	57	44	100	111	100	.....	13	17	48	.....	.....	.....	88	803
Bunker Hill	53	46	56	87	71	55	75	72	.....	.....	28	.....	.....	.....	.....	40	583
Chapman	96	112	119	121	112	133	136	149	.....	.....	3	.....	.....	.....	.....	91	1,072
Charles Sumner	123	131	123	129	71	91	117	149	.....	.....	.....	.....	.....	.....	.....	120	1,054
Christopher Gibson	117	111	121	148	127	60	82	83	.....	.....	.....	.....	.....	.....	.....	44	893
Dearborn	116	119	137	187	178	207	221	257	23	.....	9	.....	47	.....	.....	100	1,601
Dillaway	94	107	106	90	102	135	132	170	.....	.....	5	.....	.....	.....	.....	89	1,030
Dudley	79	76	65	113	98	91	115	118	.....	.....	.....	.....	.....	.....	.....	94	941
Dwight	41	71	78	66	72	37	67	71	17	.....	.....	29	.....	.....	.....	40	508

Edmund P. Tileston.....	62	67	62	70	78	92	85	98	.....	*13	.....	70	727
Edward Everett.....	122	153	152	161	139	177	213	215	.....	5	.....	102	1,439
Elihu Greenwood.....	112	152	116	133	126	148	130	159	.....	.....	.....	114	1,190
Eliot.....	84	104	172	207	223	228	288	366	†81	20	11	18	84	1,886
Emerson.....	63	91	117	122	136	149	143	158	192	.....	.....	113	1,284
Everett.....	61	62	69	65	66	85	91	117	.....	3	.....	40	659
Francis Parkman.....	59	65	85	76	79	82	93	77	.....	.....	.....	74	690
Franklin.....	47	65	62	95	67	154	161	179	6	12	103	951
Frederic W. Lincoln.....	54	60	66	59	59	63	80	85	8	.....	.....	54	588
Gaston.....	71	90	118	124	107	106	94	124	.....	.....	.....	48	882
George Putnam.....	88	208	220	113	85	99	108	107	110	.....	11	55	1,204
Gilbert Stuart.....	76	81	83	67	84	98	96	99	.....	.....	.....	86	770
Hancock.....	37	65	118	157	195	277	194	282	69	28	20	20	286	2,094
Harvard-Frothingham.....	115	120	125	128	111	110	101	116	6	11	88	1,031
Henry Grew.....	61	70	65	71	74	70	67	82	.....	.....	.....	87	647
Henry L. Pierce.....	94	160	175	194	179	177	189	200	.....	15	.....	102	1,642
Hugh O'Brien.....	147	169	189	207	181	100	147	189	.....	10	.....	121	1,460
Hyde.....	59	66	70	71	85	33	79	103	.....	3	.....	95	693
Jefferson.....	97	140	139	158	131	148	132	176	.....	3	.....	128	1,252
John A. Andrew.....	62	88	75	98	94	82	99	76	.....	.....	.....	43	717
John Marshall.....	.....	.....	127	111	124	108	208	215	.....	15	.....	114	1,082
John Winthrop.....	59	125	138	151	148	188	216	224	.....	6	.....	101	1,509

† Includes 11 pupils at Fort Strong School.

* Hospital Classes.

ELEMENTARY SCHOOL, PUPILS PROMOTED.

June 30, 1920. — Concluded.

District.	Grade IX.	Grade VIII.	Grade VII.	Grade VI.	Grade V.	Grade IV.	Grade III.	Grade II.	Grade I.	Ungraded.	Special English Class.	Special Class.	Open-Air Class.	Rapid Advancement Class.	Prevocational Class.	Conservation of Eyesight Class.	Kindergartens.	Total.
Julia Ward Howe.....				137	172	143	152	149	154								47	954
Lawrence.....	51		46	68	75	94	119	124	116						49		26	773
Lewis.....	130		303	124	96	124	98	110	117								104	1,460
Longfellow.....		134	140	132	148	139	135	165	171								87	1,251
Lowell.....		102	108	126	111	116	127	112	123			4	17				89	1,035
Martin.....		71	53	59	48	52	61	62	76								90	572
Mary Hemenway.....	115	188	224	197	207	221	216	244	236								135	1,983
Mather.....		202	205	231	240	238	257	264	290			6		96			153	2,182
Minot.....		57	74	71	74	55	69	51	66								40	557
Norcross.....		88	76	74	80	30	114	117	136	31			102			9	97	954
Oliver Hazard Perry.....		74	65	75	112	117	79	60	95	* 5		3					51	736
Oliver Wendell Holmes.....	209	298	362	37	44	46												996
Phillips Brooks.....		108	145	119	183	189	206	208	198			3		28			165	1,552
Prescott.....		67	56	64	64	57	50	51	59			9			17		22	516
Prince.....		128	122	123	89	111	102	102	90								60	927

Quincy.....	53	60	48	62	95	77	105	83	20	20	78	64	203	968			
Rice.....	94	90	100	137	133	65	63	71	.....	.....	.....	.....	44	797
Robert G. Shaw.....	55	137	173	152	140	127	167	171	.....	.....	.....	.....	127	1,345
Roger Wolcott.....	253	293	311	267	294	333	341	394	.....	.....	12	.....	314	2,812
Samuel Adams.....	129	181	254	239	274	295	327	370	.....	.....	5	.....	230	2,304
Sherwin.....	34	57	58	78	79	109	97	94	.....	.....	.....	56	31	693
Shurtleff.....	67	55	58	74	74	127	85	100	12	.....	.....	.....	38	690
Theodore Lyman.....	81	96	87	148	190	165	173	209	.....	.....	19	153	139	1,460	
Thomas Gardner.....	82	147	123	130	138	179	176	249	.....	.....	.....	.....	139	1,363
Thomas N. Hart.....	89	91	80	98	79	154	138	152	.....	.....	.....	.....	75	956
Ulysses S. Grant.....	79	117	114	131	170	154	189	200	30	.....	15	.....	134	1,440	
Warren.....	69	111	121	107	107	93	125	147	.....	.....	.....	.....	73	953
Washington.....	70	112	151	151	166	141	163	254	.....	.....	17	53	146	1,424	
Washington Allston.....	127	146	125	136	136	107	110	116	.....	.....	.....	.....	56	1,059
Wells.....	96	117	136	137	124	203	244	254	.....	.....	5	62	199	1,587	
Wendell Phillips.....	166	192	222	219	178	54	32	58	12	.....	5	.....	44	1,181	
W. E. Endicott.....	.....	.....	246	226	237	244	241	270	.....	.....	16	.....	252	1,732
W. E. Russell.....	97	99	104	116	95	95	97	85	.....	.....	1	.....	40	829
W. L. Garrison.....	.....	.....	131	137	135	136	128	153	.....	.....	.....	.....	140	960
	1,004	6,965	7,960	8,434	8,998	8,922	9,148	9,732	10,929	349	61	372	28	679	56	6,991	81,223

* Spectacle Island School.

ELEMENTARY SCHOOL PUPILS NOT PROMOTED.

June 30, 1920.

District.	Grade IX.	Grade VIII.	Grade VII.	Grade VI.	Grade V.	Grade IV.	Grade III.	Grade II.	Grade I.	Ungraded.	Special English Class.	Special Class.	Open-Air Class.	Rapid Advancement Class.	Prevocational Class.	Conservation of Eyesight Class.	Kindergartens.	Totals.
Abraham Lincoln.....	4	14	16	19	17	19	27	22	29	24	.....	19	12	.....	.....	.....	10	232
Agassiz.....	10	3	15	20	1	5	9	.....	.....	16	.....	.....	4	.....	8	91
Bennett.....	2	6	8	8	8	3	8	27	.....	.....	.....	.....	.....	.....	.....	.....	70
Bigelow.....	1	4	18	13	13	1	6	36	.....	.....	7	.....	.....	.....	.....	3	102
Blackinton-John Cheverus.....	3	27	33	34	25	11	18	37	.....	.....	12	.....	.....	.....	.....	22	222
Bowditch.....	11	17	8	13	22	8	10	30	.....	.....	.....	2	.....	.....	.....	26	147
Bowdoin.....	5	.....	1	5	1	4	16	36	.....	.....	29	4	.....	.....	.....	34	135
Bunker Hill.....	12	22	5	16	1	5	25	.....	.....	2	.....	.....	.....	.....	20	108
Chapman.....	13	17	16	14	13	21	11	34	.....	.....	11	.....	.....	.....	.....	32	182
Charles Sumner.....	4	13	12	8	5	4	4	10	.....	.....	.....	.....	.....	.....	.....	6	66
Christopher Gibson.....	13	17	8	11	5	13	12	12	.....	.....	.....	.....	.....	.....	.....	9	100
Dearborn.....	1	22	27	32	29	9	36	57	8	.....	3	.....	10	.....	.....	28	202
Dillaway.....	8	16	17	25	18	9	8	49	.....	.....	9	.....	.....	.....	.....	28	187
Dudley.....	4	13	40	26	24	5	20	28	.....	.....	15	.....	.....	.....	8	16	199
Dwight.....	3	37	19	15	10	1	4	35	7	.....	85	2	.....	.....	.....	12	230

Edmund P. Tileston.....	8	20	9	17	16	6	17	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13	137
Edward Everett.....	2	32	20	14	4	12	18	35	.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	151
Elihu Greenwood.....	10	25	15	19	20	8	12	39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	63	211
Eliot.....	5	13	44	81	99	49	71	124	*10	39	35	.....	.....	.....	.....	.....	.....	.....	10	20	600
Emerson.....	11	8	12	12	19	11	26	55	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11	197
Everetl.....	11	12	7	8	10	4	2	48	.....	.....	14	.....	.....	.....	.....	.....	.....	.....	.....	22	138
Francis Parkman.....	1	3	2	4	5	5	4	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9	43
Franklin.....	5	11	.....	11	6	10	14	35	.....	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	30	131
Frederic W. Lincoln.....	15	15	20	22	29	14	11	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22	171
Gaston.....	.....	25	19	18	17	9	18	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	136
George Putnam.....	5	8	31	8	9	7	4	9	22	.....	19	.....	.....	.....	.....	.....	.....	.....	.....	4	126
Gilbert Stuart.....	4	21	12	13	10	15	8	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25	120
Hancock.....	2	9	37	48	51	11	16	73	5	18	26	31	.....	.....	.....	.....	.....	.....	.....	75	404
Harvard-Frothingham.....	.....	1	9	10	7	7	8	43	.....	.....	42	.....	.....	.....	.....	.....	.....	.....	.....	33	161
Henry Grew.....	4	9	11	9	7	10	8	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20	103
Henry L. Pierce.....	5	10	23	15	9	5	13	23	51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	158
Hugh O'Brien.....	9	5	3	19	13	13	12	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	19	131
Hyde.....	4	4	6	15	10	5	6	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	45	145
Jefferson.....	.....	6	14	18	11	19	19	42	.....	.....	14	.....	.....	.....	.....	.....	.....	.....	.....	23	166
John A. Andrew.....	.....	11	44	55	61	44	25	47	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9	319
John Marshall.....	.....	.....	2	6	6	16	22	38	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	28	118
John Winthrop.....	4	4	15	12	15	21	11	42	.....	.....	13	.....	.....	.....	.....	.....	.....	.....	.....	9	161

* Includes 2 pupils at Fort Strong School.

Quincy.....	5	14	9	17	12	8	28	27	15	10	17	14	32	208	
Rice.....	3	14	25	21	6	3	16	16					8	112	
Robert G. Shaw.....	2	7	11	8	5	3	9	23						81	
Roger Wolcott.....	16	46	39	33	26	12	20	49		4			53	298	
Samuel Adams.....	3	16	13	18	23	38	32	205		11			100	459	
Sherwin.....	1	7	5	10	14	1	15	46		110		3	3	215	
Shurtleff.....	7	14	28	14	12	7	12	26	17				18	155	
Theodore Lyman.....	8	1	2	8	7	19	22	38			3		20	128	
Thomas Gardner.....		25	18	30	22	21	26	83					30	255	
Thomas N. Hart.....	1	25	26	23	32	6	8	7		14			20	162	
Ulysses S. Grant.....		1	4	1	2		8	27					7	50	
Warren.....		9	4	4	20	4	7	19	28				19	110	
Washington.....	16	6	10	11	16	23	39	105		12	12		9	259	
Washington Allston.....	20	22	18	7	8	3	3	15					26	122	
Wells.....	6	15	6	6	9	18	19	55		36	4		2	197	
Wendell Phillips.....	15	5	6	6	31	9	7	11	24	71			11	196	
William E. Endicott.....			33	42	4	16	24	46					36	171	
William F. Russell.....	3	22	26	28	19	3	9	22		14			5	151	
William Lloyd Garrison.....			6	4	4	3	5	8					15	45	
	43	394	1,009	1,132	1,083	745	1,029	2,528	112	57	811	99	6	1,324	11,488

GRADUATES, JUNE, 1920.

SCHOOL OR DISTRICT.	Boys.	Girls.	Total.	SCHOOL OR DISTRICT.	Boys.	Girls.	Total.	
Normal.....		65	65	Dearborn.....	† 64	52	116	
HIGH AND LATIN.				Dillaway.....		94	94	
Public Latin.....	108		108	Dudley.....	‡ 79		79	
Girls' Latin.....		87	87	Dwight.....		41	41	
Brighton High.....	29	73	102	Edmund P. Tileston...	29	36	65	
Charlestown High.....	3	37	40	Edward Everett.....	56	66	122	
Dorchester High.....	112	252	364	Elihu Greenwood.....	49	62	111	
East Boston High.....	46	87	133	Eliot.....	§ 84		84	
English High.....	346		346	Everett.....		62	62	
Girls' High.....		299	299	Francis Parkman.....		16	44	60
High School of Com- merce.....	87		87	Franklin.....		43	43	
High School of Prac- tical Arts.....		77	77	Frederic W. Lincoln...	54		54	
Hyde Park High.....	28	66	94	Gaston.....		70	70	
Mechanic Arts High...	73		73	Gilbert Stuart.....	41	35	76	
Roxbury High.....		198	198	Harvard-Frothing- ham.	64	51	115	
South Boston High.....	35	85	120	Henry Grew.....	29	32	61	
West Roxbury High...	25	116	141	Hugh O'Brien.....	84	63	147	
	892	1,442	2,334	Hyde.....		¶ 60	60	
ELEMENTARY.				Jefferson.....	40	52	92	
Agassiz.....	* 73		73	John A. Andrew.....	30	32	62	
Bennett.....	80	66	146	Lawrence.....	* 51		51	
Bigelow.....	77		77	Longfellow.....	62	75	137	
Blackinton-John Chev- erus.....	72	63	135	Lowell.....	43	59	102	
Bowditch.....		77	77	Martin.....	38	33	71	
Bowdoin.....		77	77	Mather.....	¶ 97	105	202	
Bunker Hill.....	16	37	53	Minot.....	28	29	57	
Chapman.....	42	54	96	Norcross.....		89	89	
Charles Sumner.....	54	69	123	Oliver Hazard Perry...	30	44	74	
Christopher Gibson...	59	58	117	Phillips Brooks.....	47	58	105	
				Prescott.....	§ 36	31	67	
				Prince.....	57	51	108	

* Also 18 given Pre-vocational diplomas.

† Also 20 given Pre-vocational diplomas.

‡ Also 35 given Pre-vocational diplomas.

§ Also 9 given Pre-vocational diplomas.

¶ Also 8 given Pre-vocational diplomas.

¶ Also 36 given Pre-vocational diplomas.

GRADUATES, JUNE, 1920.—*Concluded.*

SCHOOL OR DISTRICT.	Boys.	Girls.	Total.	SCHOOL OR DISTRICT.	Boys.	Girls.	Total.
Quincy.....	* 53	.....	53	Washington Allston....	66	61	127
Rice.....	47	47	94	Wells.....	.....	96	96
Roger Wolcott.....	123	129	252	Wendell Phillips.....	166	.....	166
Samuel Adams.....	47	79	126	William E. Russell....	45	52	97
Sherwin.....	† 34	.....	34		2,523	2,632	5,155
Shurtleff.....	.....	67	67	SUMMARY.			
Theodore Lyman.....	‡ 33	48	81	Normal.....	.....	65	65
Thomas Gardner.....	38	44	82	High and Latin.....	892	1,442	2,334
Thomas N. Hart.....	89	.....	89	Elementary.....	2,523	2,632	5,155
Warren.....	30	39	69		3,415	4,139	§ 7,554
Washington.....	30	41	71				

* Also 21 given Pre-vocational diplomas.

† Also 31 given Pre-vocational diplomas.

‡ Also 34 given Pre-vocational diplomas.

§ In addition, 239 were given Pre-vocational diplomas in June and 132 were given regular diplomas in September after satisfactorily completing the work of the Summer Review Schools. (See page 34.) The net total number of graduates in 1920 was 7,686.

SUMMER REVIEW SCHOOLS.

Graduates, September, 1920.

SCHOOL OR DISTRICT.	Boys.	Girls.	Total.	SCHOOL OR DISTRICT.	Boys.	Girls.	Total.
Brighton High.....		1	1	Jefferson.....	2	1	3
Dorchester High.....	1	1	2	John A. Andrew.....	1		1
English High.....	15		15	Lawrence.....	3		3
Girls' High.....		1	1	Longfellow.....		2	2
High School of Com- merce.....	2		2	Martin.....		1	1
Hyde Park High.....		1	1	Mather.....	1	1	2
Mechanic Arts High....	1		1	Phillips Brooks.....	2	1	3
Roxbury High.....		4	4	Prince.....	9	1	10
South Boston High.....		1	1	Quincy.....	1		1
	19	9	28	Rice.....	2	1	3
				Roger Wolcott.....	5	3	8
Bowditch.....		3	3	Samuel Adams.....	2		2
Bowdoin.....		3	3	Sherwin.....	1		1
Chapman.....	2	1	3	Shurtleff.....		3	3
Dearborn.....	1		1	Theodore Lyman.....	3	1	4
Dillaway.....		4	4	Washington.....	2		2
Dwight.....	1		1	Washington Allston....	4	3	7
Edmund P. Tileston....	1	5	6	Wendell Phillips.....	10		10
Elihu Greenwood.....		4	4	William E. Russell.....		1	1
Everett.....		4	4		56	48	104
Franklin.....		4	4	SUMMARY.			
Frederic W. Lincoln....	2		2	High.....	19	9	28
Gilbert Stuart.....	1		1	Elementary.....	56	48	104
Hyde.....		1	1		75	57	132

**SUMMER REVIEW ELEMENTARY SCHOOL PUPILS
PROMOTED.**

September, 1920.

NAME OF SCHOOL.	Grade VIII.	Grade VII.	Grade VI.	Grade V.	Grade IV.	Special English Class.	Totals.
Bigelow.....	7	46	70	58	62	.....	243
Shurtleff Branch.....	3	14	31	18	16	.....	82
Charlestown.....	.....	35	49	34	84	.....	202
City.....	65	116	70	83	75	.....	409
Dorchester.....	70	147	90	93	71	.....	471
East Boston.....	40	63	98	65	55	22	343
Hugh O'Brien.....	.....	55	61	99	99	.....	314
Hyde Park.....	10	42	29	36	21	.....	138
Lewis.....	60	173	88	65	48	.....	434
West End.....	15	39	76	96	103	.....	329
Totals.....	270	730	662	647	634	22	2,965

**SUMMER REVIEW ELEMENTARY SCHOOL PUPILS
NOT PROMOTED.**

September, 1920.

NAME OF SCHOOL.	Grade VIII.	Grade VII.	Grade VI.	Grade V.	Grade IV.	Special English Class.	Totals.
Bigelow.....	1	1	5	17	17	.....	41
Shurtleff Branch.....	.....	5	12	9	14	.....	40
Charlestown.....	.....	21	30	20	10	.....	81
City.....	33	28	20	31	8	.....	120
Dorchester.....	7	27	47	26	16	.....	123
East Boston.....	3	19	4	37	35	5	103
Hugh O'Brien.....	.....	19	21	15	24	.....	79
Hyde Park.....	1	20	17	3	7	.....	48
Lewis.....	11	27	32	24	28	.....	122
West End.....	1	14	17	26	31	.....	89
Totals.....	57	181	205	208	190	5	846

ADMISSIONS TO NORMAL, HIGH AND LATIN SCHOOLS.
September, 1919.

SCHOOLS TO WHICH PUPILS WERE ADMITTED.	Boys.	Girls.	Total.	Boston High School Graduates, June, 1919.	Received from Other Sources, September, 1919.	AVERAGE AGE OF HIGH 1919 GRADUATES.		AVERAGE AGE OF ALL ADMITTED.	
						Years.	Months.	Years.	Months.
Normal.....			91	64	27	17	5	18	4
SCHOOLS TO WHICH PUPILS WERE ADMITTED.									
	Boys.	Girls.	Total.	Boston Elementary Graduates, June, 1919.	Received from Other Sources, September, 1919.	AVERAGE AGE OF BOSTON ELEMENTARY GRADUATES.		AVERAGE AGE OF ALL ADMITTED.	
						Years.	Months.	Years.	Months.
Public Latin.....	362		362	161	* 201	13	10	13	7
Girls' Latin.....		265	265	106	† 159	13	8	13	3
Brighton High.....	63	108	171	142	29	14	2	14	2
Charlestown High.....	147	179	326	211	115	14	.....	14	2
Dorchester High.....	170	262	432	327	105	14	2	14	4
East Boston High.....	76	127	203	151	52	13	10	13	11
English High.....	638		638	546	92	14	2	14	3
Girls' High.....		711	711	577	134	14	3	14	4
High School of Commerce.....	507		507	367	140	14	8	14	6
High School of Practical Arts.....		223	223	191	32	14	7	14	8
Hyde Park High.....	166	167	333	223	110	13	9	14	.....
Mechanic Arts High.....	540		540	400	140	14	3	14	4
Roxbury High.....		391	391	315	76	13	10	13	11
South Boston High.....	141	230	371	329	42	14	.....	14	.....
West Roxbury High.....	71	211	282	219	63	14	1	14	1
Totals, High and Latin.....	2,881	2,874	5,755	4,265	1,490	14	2	14	2

* Includes 95 pupils below eighth grade.

† Includes 92 pupils below eighth grade.

ADMISSIONS TO NINTH GRADE INTERMEDIATE CLASSES.
September, 1919.

SCHOOLS TO WHICH PUPILS WERE ADMITTED.	Boys.	Girls.	Total.	Boston Elementary Graduates, June, 1919.	Received from Other Sources, September, 1919.	AVERAGE AGE OF BOSTON ELEMENTARY GRADUATES.		AVERAGE AGE OF ALL ADMITTED.	
						Years.	Months.	Years.	Months.
Abraham Lincoln.....	49	46	95	95	.....	13	10	13	10
Emerson.....	49	42	91	90	1	14	.....	14	.....
George Putnam.....	42	66	108	106	2	13	4	13	4
Hancock.....	.....	52	52	47	5	14	.....	13	11
Henry L. Pierce.....	46	74	120	114	6	14	2	14	2
John Winthrop.....	31	34	65	65	.....	13	10	13	10
Lewis.....	72	83	155	155	.....	13	8	13	8
Mary Heinenway.....	56	79	135	133	2	14	1	14	1
Oliver Wendell Holmes.....	94	142	236	228	8	14	1	14	1
Robert G. Shaw.....	25	44	69	62	7	14	3	14	3
Ulysses S. Grant.....	47	41	88	88	.....	13	6	13	6
Totals.....	511	703	1,214	1,183	31	13	10	13	11

TEACHERS.

SUMMARY OF ALL TEACHERS—JUNE 30, 1920.

Number of Schools.

SCHOOLS.	Number of Schools.	NUMBER OF TEACHERS.		
		Men.	Women.	Total.
Normal.....	1	4	12	16
High and Latin.....	15	281	284	565
Elementary.....	* 71	155	1,992	2,147
Kindergarten.....	† 159	.....	286	286
Special.....	‡ 7	99	309	408
Totals.....	253	539	2,883	3,422

* Represents the number of districts.

† Includes fifteen afternoon classes, as follows: Blackinton-John Cheverus (1); Hancock (2); Hugh O'Brien (1); Phillips Brooks (1); Quincy (2); Roger Wolcott (2); Samuel Adams (3); Theodore Lyman (1); Ulysses S. Grant (1); William E. Endicott (1).

‡ Horace Mann, Trade School for Girls, Boston Trade School, Continuation School, Boston Clerical School, Boston Disciplinary Day School, and the Day School for Immigrants. The number of teachers given includes the teachers of the special schools and all general supervisors and directors.

NORMAL SCHOOL TEACHERS.

June 30, 1920.

RANK.	Men.	Women.	Total.
Head Master.....	1	.....	1
Masters, Heads of Departments.....	* 3	.....	3
First Assistants, Heads of Departments.....	.....	6	6
Assistants.....	.....	5	5
Instructor.....	.....	1	1
Totals.....	4	12	16

* Excludes one master, head of department, who is assigned principal of the Model School.

SUMMARY OF HIGH AND LATIN SCHOOL TEACHERS.

June 30, 1920.

RANK.	Men.	Women.	Total.
Head Masters.....	15		15
Masters, Heads of Departments.....	49		49
First Assistants, Heads of Departments.....		31	31
Assistant Principals.....		2	2
Masters.....	24		24
Junior Masters.....	156		156
Assistants.....		185	185
Industrial Instructor, Head of Department.....		1	1
Instructors in Special Branches.....	20	13	33
Assistant Instructors in Special Branches.....		30	30
Co-ordinators.....	2		2
Co-operative Instructors.....	6		6
Industrial Instructors.....		12	12
Junior Assistants.....	8	5	13
Temporarily assigned for the school year.....	1	5	6
Totals.....	281	284	565

HIGH AND LATIN SCHOOLS.

Number and Rank of Teachers June 30, 1920.

SCHOOLS.	Head Masters.	Masters, Heads of Departments.	First Assistants, Heads of Departments.	Assistant Principals.	Masters.	Junior Masters.	Assistants.	Industrial Instructor, Head of Department.	Instructors in Special Branches.	Assistant Instructors in Special Branches.	Co-ordinators.	Co-operative Instructors.	Industrial Instructors.	Junior Assistants.	Temporarily Assigned for the School Year.	Total.
Public Latin.....	1	6			6	17								2		32
Girls' Latin.....	1	2	3			1	15		2					1	2	27
Brighton High.....	1	2		1		2	11		1	2					1	21
Charlestown High.....	1	2	1			2	7		1	1	1	2			1	19
Dorchester High.....	1	3	4		4	12	33		1	6		2	3	1		70
East Boston High.....	1	1	4			3	11		3	1						24
English High.....	1	7			8	46								3		65
Girls' High.....	1	3	4			4	40		2	6				1	1	62
High School of Commerce.....	1	6			2	30	1		4					2		46
High School of Practical Arts.	1	2	3			1	9	1	1				*7			25
Hyde Park High.....	1	2	1			4	10		2	1	1	2	2	1		27
Mechanic Arts High.....	1	6		1	3	24			10							45
Roxbury High.....	1	2	4			2	19		2	6				2	1	39
South Boston High.....	1	2	3		1	4	15		1	5						32
West Roxbury High.....	1	3	4			4	14		3	2						31
Totals.....	15	49	31	2	24	156	185	1	33	30	2	6	12	13	6	565

* Excludes one industrial instructor assigned to Director of Household Science and Arts.

SUMMARY OF ELEMENTARY SCHOOL TEACHERS.

June 30, 1920.

RANK.	Men.	Women.	Total.
Masters.....	62	8	70
Submasters.....	82		82
Masters' Assistants.....		73	73
First Assistants, Grammar Schools.....		19	19
First Assistants, Primary Schools.....		4	4
First Assistants in Charge.....		98	98
Prevocational Assistants.....	2	21	23
Instructors, Special Classes.....		74	74
Other Assistants.....	9	1,689	1,698
Junior Assistants assigned from High Schools.....		6	6
Grand Totals.....	155	1,992	2,147
Kindergartens:			
First Assistants.....		157	157
Assistants.....		129	129
Totals.....	155	2,278	2,433

ELEMENTARY SCHOOLS.
Number and Rank of Teachers June 30, 1920.

SCHOOLS.	Masters.	Submasters.	Masters' Assistants.	First Assistants, Grammar Schools.	First Assistants, Primary Schools.	First Assistants in Charge.	Prevocational Assistants.	Instructors, Special Classes.	Other Assistants.	Junior Assistants, Assigned from High Schools.	Total Number of Grade Teachers, June 30, 1920.	KINDER- GARTENS.	
												First Assistants.	Assistants.
Abraham Lincoln.....	1	2	2	1	1	1	1	2	39	.....	48	2	.....
Agassiz.....	1	1	1	.....	1	.....	2	1	12	.....	19	1	1
Bennett.....	1	1	1	.....	.....	2	.....	1	32	.....	38	3	3
Bigelow.....	1	2	1	.....	.....	1	.....	2	17	.....	24	1	.....
Blackinton-John Cheverus.....	1	2	2	.....	.....	1	.....	1	27	.....	34	4	2
Bowditch.....	1	.....	1	1	.....	2	.....	.....	21	.....	26	2	2
Bowdoin.....	1	.....	1	1	.....	1	.....	2	17	.....	23	2	2
Bunker Hill.....	1	1	1	.....	.....	1	.....	2	11	.....	17	2	.....
Chapman.....	1	1	1	.....	.....	1	.....	1	23	.....	28	2	2
Charles Sumner.....	1	2	1	1	.....	1	.....	.....	19	.....	25	3	1
Christopher Gibson.....	1	1	1	.....	.....	1	.....	.....	20	.....	24	1	1
Dearborn.....	1	2	1	1	.....	2	2	1	34	.....	44	2	2
Dillaway.....	1	.....	1	.....	.....	3	.....	1	21	.....	27	2	2
Dudley.....	1	2	1	.....	.....	2	3	1	16	.....	26	2	2
Dwight.....	1	.....	1	.....	.....	1	.....	# 5	13	.....	21	1	1

STATISTICS.

Edmund P. Tileston.....	1	1	1	1	1	1	1	1	1	20	23	2	1
Edward Everett.....	1	1	1	1	1	1	1	1	1	32	39	2	2
Elihu Greenwood.....	1	2	1	1	1	1	1	1	1	25	30	4	2
Eliot.....	1	3	1	1	1	1	1	1	3	47	59	2	2
Emerson.....	1	1	1	1	1	1	1	1	1	30	35	2	3
Everett.....	1	1	1	1	1	1	1	1	1	13	17	1	1
Francis Parkman.....	1	1	1	1	1	1	1	1	1	14	17	2	.....
Franklin.....	1	1	1	1	1	1	1	1	1	18	23	2	2
Frederic W. Lincoln.....	† 1	2	1	1	1	1	1	1	1	14	19	1	2
Gaston.....	1	1	1	1	1	1	1	1	1	20	25	1	1
George Putnam.....	1	1	1	1	1	1	1	1	2	29	35	1	1
Gilbert Stuart.....	1	1	1	1	1	1	1	1	2	17	22	2	1
Hancock.....	1	1	1	1	1	1	1	1	2	44	52	7	7
Harvard-Frothingham.....	1	2	1	1	1	1	1	1	2	20	30	3	.....
Henry Grew.....	1	1	1	1	1	1	1	1	1	13	16	2	2
Henry L. Pierce.....	1	2	1	1	1	1	1	1	2	34	42	2	2
Hugh O'Brien.....	1	2	1	1	1	1	1	1	1	29	36	3	2
Hyde.....	1	1	1	1	1	1	1	1	2	14	19	2	3
Jefferson.....	1	1	2	1	1	1	1	1	1	26	33	3	3
John A. Andrew.....	1	1	1	1	1	1	1	1	1	19	23	1	1
John Marshall.....	1	1	1	1	1	1	1	1	1	23	28	2	2
John Winthrop.....	1	1	1	1	1	1	1	1	4	32	41	2	2

* Includes one first assistant in charge, special classes.

† The master of the Frederic W. Lincoln District also served as master of the Oliver Hazard Perry District.

ELEMENTARY SCHOOLS.

Number and Rank of Teachers June 30, 1920. — Concluded.

SCHOOLS.	Masters.	Submasters.	Masters' Assistants.	First Assistants, Grammar Schools.	First Assistants, Primary Schools.	First Assistants in Charge.	Prevocational Assistants.	Instructors, Special Classes.	Other Assistants.	Junior Assistants, Assigned from High Schools.	Total Number of Grade Teachers, June 30, 1920.	KINDER- GARTENS.	
												First Assistants.	Assistants.
Julia Ward Howe.....	1	1	1	.....	.....	1	.....	.....	20	.....	24	1	1
Lawrence.....	1	1	1	.....	.....	1	2	1	14	.....	21	1	.....
Lewis.....	1	1	1	.....	.....	1	.....	.....	30	1	35	2	2
Longfellow.....	1	1	1	1	.....	.....	.....	1	27	.....	32	2	1
Lowell.....	1	1	1	.....	.....	2	.....	1	20	.....	26	2	2
Martin.....	1	1	1	.....	.....	2	.....	.....	11	.....	16	2	2
Mary Hemenway.....	1	2	1	1	.....	2	.....	.....	45	.....	52	3	3
Mather.....	1	2	1	1	.....	2	§ 3	1	48	.....	59	3	3
Minot.....	1	.....	1	.....	.....	1	.....	.....	11	.....	14	1	1
Norcross.....	1	.....	1	1	.....	2	.....	.....	19	.....	24	2	1
Oliver Hazard Perry.....	†	.....	1	1	.....	1	.....	1	14	†	18	1	1
Oliver Wendell Holmes.....	1	2	1	.....	.....	1	.....	.....	25	.....	30	.....	.....
Phillips Brooks.....	.....	2	1	.....	.....	1	.....	1	31	.....	37	4	4
Prescott.....	1	1	1	.....	.....	1	2	1	10	.....	17	1	.....
Prince.....	1	1	1	.....	.....	1	.....	.....	21	.....	25	1	1

Quincy.....	1	2	1	.....	1	2	17	.....	26	5	5
Rice.....	1	1	1	1	.....	1	17	.....	22	1	.....
Robert Gould Shaw.....	1	1	1	1	.....	2	25	.....	31	2	1
Roger Wolcott.....	1	2	1	1	.....	5	57	.....	68	6	6
Samuel Adams.....	1	2	1	.....	2	.....	42	.....	49	5	6
Sherwin.....	1	2	1	.....	2	* 8	13	.....	29	1	.....
Shurtleff.....	1	.....	1	.....	1	.....	17	.....	20	1	1
Theodore Lyman.....	1	.....	1	.....	1	4	24	1	33	3	3
Thomas Gardner.....	1	2	1	.....	.....	.....	31	.....	35	3	2
Thomas N. Hart.....	1	2	1	.....	2	.....	19	† 1	27	2	1
Ulysses S. Grant.....	1	1	1	1	.....	1	28	.....	34	3	2
Warren.....	1	1	1	.....	1	.....	20	.....	24	2	1
Washington.....	1	2	1	.....	2	.....	32	.....	40	3	3
Washington Allston.....	1	1	1	.....	1	.....	24	.....	28	1	1
Wells.....	1	.....	1	.....	3	.....	33	.....	41	5	4
Wendell Phillips.....	1	3	1	.....	1	* 5	26	.....	37	1	1
William E. Endicott.....	1	1	1	.....	1	.....	36	.....	41	4	5
William E. Russell.....	1	1	1	.....	1	.....	19	.....	24	1	1
William Lloyd Garrison.....	1	1	1	.....	.....	.....	17	.....	20	3	1
Totals.....	70	82	73	19	4	98	1,698	6	2,147	157	129

* Includes one first assistant in charge, special classes.

† The master of the Frederic W. Lincoln District also served as master of the Oliver Hazard Perry District.

‡ One junior assistant assigned from South Boston High School to the Oliver Hazard Perry and Thomas N. Hart Districts, one-half time in each school.

§ Includes one first assistant in charge, prevocational classes.

SPECIAL TEACHERS, SUPERVISORS AND DIRECTORS.

June 30, 1920.

	Men.	Women.	Total.
Boston Clerical School:*			
Head Instructor in Bookkeeping.....	1		1
Clerical Instructor.....	1		1
Clerical Assistants.....		5	5
Teacher Assistants.....	2		2
Clerical Aid.....		1	1
Horace Mann School:			
Principal.....		1	1
Assistants.....		13	13
Day Industrial Schools:			
Trade School for Girls:			
Master.....		1	1
Heads of Department.....		7	7
Instructor in Personal and Shop Hygiene.....		1	1
Vocational Assistants.....		4	4
Trade Assistants.....		17	17
Helpers.....		3	3
Boston Trade School:			
Master.....	1		1
Vice Principal.....	1		1
Instructors in Academic and Technical Branches.....	5		5
Division Heads.....	5		5
Shop Foremen.....	3		3
Shop Instructors.....	2		2
Household Science and Arts:			
Director.....		1	1
Assistant Director.....		1	1
Teacher, assigned to Director from a high school.....		1	1
Cooking.....		42	42
Sewing.....		† 64	64
Department of Manual Arts:			
Director.....	1		1
First Assistant Director.....	1		2
Assistant Directors.....	2		1
Acting Assistant Director.....	1		2
First Assistants.....		2	2
Assistants.....		8	8
Foremen, Shopwork.....	5		5
Shop Foremen.....	6		6
Instructors, Shopwork.....	7		7
Shop Instructors.....	13		13
Instructors in Manual Training.....		12	12
Assistant Instructors in Manual Training.....		40	40
Assigned Teachers.....		2	2
Music Department:			
Director.....	1		1
Assistant Directors.....	4		4
Assistants.....		9	9
Practice and Training:			
First Assistant Director.....		1	1
Assistant Directors.....		4	4
Director of Evening Schools.....			
	1		1
Continuation School:			
Principal.....	1		1
Heads of Division.....	2	1	3
Division Foremen.....	3		3
Shop Foremen.....	2		2
Shop Instructors.....	2		2

* The head master of the Roxbury High School served also as the head master of the Boston Clerical School. He is counted in the number of high and Latin school teachers.

† Includes one temporary teacher in place of a teacher assigned to the Continuation School.

SPECIAL TEACHERS, SUPERVISORS AND DIRECTORS.

June 30, 1920.— Concluded.

	Men.	Women.	Total.
Instructors, Boys' Classes.....	12		12
Vocational Assistant.....		1	1
Trade Assistants.....		5	5
Assistants.....	4	23	27
Helper.....		1	1
Aids.....		4	4
Assigned Sewing Teacher.....		1	1
Department of Educational Investigation and Measurement:			
Assistant Director.....	1		1
Research Assistant.....		1	1
Chief Examiner.....	1		1
Director of Kindergartens.....		1	1
Assistant Director of Kindergartens.....		1	1
Director of Special Classes.....		1	1
Director of Salesmanship.....		1	1
Boston Disciplinary Day School.....		* 2	2
Day School for Immigrants.....		† 2	2
Speech Improvement Classes:			
Instructor in Charge.....		1	1
Instructors.....		7	7
Assigned Teachers.....		3	3
Conservation of Eyesight.....		‡ 5	5
Director of Penmanship.....		1	1
Examiner of Penmanship.....		1	1
Teacher of Penmanship.....		1	1
Director of Medical Inspection.....	1		1
Physical Training:			
Director of Athletics.....	1		1
Instructor in Physical Training.....	1		1
Military Drill:			
Instructor.....	1		1
Assistant Instructors.....	3		3
Vocational Guidance:			
Director.....		1	1
Vocational Assistants.....	1	3	4
Temporary Vocational Assistant.....		1	1
	99	309	408

* Includes two assistants, elementary schools, assigned for the school year 1919-20.

† In addition there were seventeen special assistants on part time.

‡ Includes two temporary teachers.

MISCELLANEOUS SUPERVISORS.

Nurses (including supervising nurse)	48
School Physicians	47
Attendance Officers (including chief attendance officer)	25
Supervisor of Licensed Minors	1
Medical Inspector of Special Classes	1
Director of Extended Use of Public Schools	1

NUMBER OF TEACHERS.

January 31, 1920.

1.	Normal School		* 17
2.	Latin and High Schools		† 582
3.	Elementary Schools:		
	Principals	71	
	Grade Teachers	‡2,064	
		-----	2,135
4.	Kindergartens		293
5.	Boston Clerical School		10
6.	Horace Mann School		14
7.	Special Teachers:		
	Department of Household Science and Arts:		
	Director, Assistant Director and Industrial Instructor assigned from High School of Practical Arts		3
	Cookery		42
	Sewing		§ 64
	Department of Manual Arts . . . . .		|| 104
	Department of Music		¶ 13
	First Assistant Director and Assistant Directors of Practice and Training		5
	Director of Evening Schools		1
	Assistant Director and Research Assistant, De- partment of Educational Investigation and Measurement		2
	Chief Examiner		1
	Director and Assistant Director of Kindergartens		2
	Director of Special Classes		1
	Director of Salesmanship		1
	Department of Vocational Guidance		5
	Speech Improvement Classes		** 9
	Conservation of Eyesight Classes		†† 5
	Director of Penmanship		1
	Teacher and Temporary Examiner in Penmanship		2
	Director of Medical Inspection		1
	Director of Athletics		1
	Instructor in Physical Training		1
	Instructor and Assistant Instructors in Military Drill		4
8.	Day Industrial Schools:		
	Boston Trade School	21	
	Trade School for Girls	37	
		-----	58
9.	Continuation School		69
10.	Boston Disciplinary Day School		†† 2
11.	Day School for Immigrants		§§ 28

* Excludes one master, head of department, acting principal of Model School.

† Includes five assistants assigned from elementary schools and one shop instructor assigned from Department of Manual Arts.

‡ Includes eight temporary teachers in place of two assistants assigned to Department of Manual Arts; two assistants assigned to Disciplinary Day Classes; three assistants assigned to Speech Improvement Classes, and one assistant assigned to Special Classes.

§ Includes one temporary teacher in place of teacher assigned to Continuation School.

|| Includes four temporary teachers and two teachers assigned from elementary schools.

¶ Includes one temporary assistant director.

** Includes three teachers assigned from elementary schools.

†† Includes two temporary teachers.

‡‡ Assigned from elementary schools.

§§ Includes twenty-six special assistants.

EVENING SCHOOLS.

Summary of Statistics—School Year 1919–20.

	Number of Schools.	Number of Regular Teachers.	TOTAL REGISTRATION.			Average Number Belonging.	Average Attendance.	Average Absence.	Per Cent of Attendance.
			Males.	Females.	Total.				
High Schools.....	9	126	2,454	2,562	5,016	2,750	2,195	555	80
Elementary Schools...	9	109	1,680	2,242	3,922	1,870	1,451	419	78
Boston Trade School,*	1	28	972	1	973	395	303	92	77
Totals.....	19	263	5,106	4,805	9,911	5,015	3,949	1,066	79

* Includes three branches.

EVENING SCHOOLS.

School Year 1919–1920.—Continued.

HIGH SCHOOLS.	TOTAL REGISTRATION.			Average Number Belonging.	Average Attendance.	Average Absence.	Per Cent of Attendance.	Number of Nights.
	Males.	Females.	Total.					
Brighton.....	99	110	209	109	83	26	76	71
Central.....	749	116	865	429	349	80	81	71
Charlestown.....	198	177	375	240	194	46	81	71
Dorchester.....	436	466	902	476	372	104	78	71
East Boston.....	192	184	376	218	174	44	80	71
Girls'.....		601	601	331	263	68	79	71
Hyde Park.....	76	129	205	79	59	20	75	71
Roxbury.....	426	519	945	529	422	107	80	71
South Boston.....	278	260	538	339	279	60	82	71
Totals.....	2,454	2,562	5,016	2,750	2,195	555	80	71

EVENING SCHOOLS.

School Year 1919-20.—Concluded.

ELEMENTARY SCHOOLS.	TOTAL REGISTRATION.			Average Number Belonging.	Average Attendance.	Average Absence.	Per Cent of Attendance.	Number of Nights.
	Males.	Females.	Total.					
Bigelow.....	168	291	459	210	171	39	81	71
Bowdoin.....	100	169	269	160	123	37	77	71
Comins.....	196	411	607	301	238	63	79	71
Eliot.....	278	130	408	181	149	32	82	71
Franklin.....	312	302	614	274	227	47	83	71
Hyde Park.....	122	323	445	178	128	50	80	71
Phillips Brooks.....	167	301	468	236	154	82	65	71
Theodore Lyman.....	163	154	317	169	132	37	78	71
Washington.....	174	161	335	161	129	32	80	71
Totals.....	1,680	2,242	3,922	1,870	1,451	419	78	71
TRADE SCHOOLS (Evening Classes).								
Boston Trade School.....	642	.....	642	242	180	62	74	72
Central Branch.....	242	1	243	110	87	23	79	71
Common Street Branch.....	52	.....	52	20	16	4	80	54
East Boston Branch.....	36	.....	36	23	20	3	87	72
Totals.....	972	1	973	395	303	92	77	

CLASSIFICATION AND AGES OF PUPILS IN EVENING SCHOOLS, MARCH, 1920.
High Schools.

SUBJECTS.	14 YEARS.		15 YEARS.		16 YEARS.		17 YEARS.		18 YEARS.		19 YEARS.		20 YEARS.		OVER 21 AND UNDER 25 YEARS.		OVER 25 AND UNDER 35 YEARS.		35 YEARS AND OVER.		TOTALS FOR EACH GRADE OR SUBJECT.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
Commercial Subjects*	115	70	265	221	520	495	380	408	282	352	181	219	101	146	224	304	154	197	35	61	2,257	2,473	4,730
Other Subjects †	1	1	4	4	20	2	30	2	16	15	20	4	10	8	50	31	40	20	6	7	197	89	286
Totals	116	70	269	221	540	497	410	410	298	367	201	223	111	154	274	335	194	217	41	68	2,454	2,562	5,016
Total number of pupils of each age	186		490		1,037		820		665		424		265		609		411		109				

* Including all subjects offered in Evening Commercial High Schools.
 † Those subjects not offered in Evening Commercial High Schools.
 (Ages as of September 1, 1919.)

CLASSIFICATION AND AGES OF PUPILS IN EVENING SCHOOLS, MARCH, 1920.—Continued.
Elementary Schools.

GRADES.	14 YEARS.		15 YEARS.		16 YEARS.		17 YEARS.		18 YEARS.		19 YEARS.		20 YEARS.		OVER 21 AND UNDER 25 YEARS.		OVER 25 AND UNDER 35 YEARS.		35 YEARS AND OVER.		TOTALS FOR EACH GRADE OR SUBJECT.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
Graduating.....	55	77	77	77	46	55	29	34	24	11	8	16	11	43	13	38	9	12	6	419	281	700	
Subgraduating.....	18	13	22	18	12	15	5	11	2	16	7	9	10	52	19	58	14	12	13	225	116	341	
Elementary.....	1				2	3	1	2	3	6	1	3	4	9	9	21	17	9	9	54	46	100	
Citizenship.....														9		20		5		34		34	
Lip Reading.....						2							2	2	7	2	11	13	32	19	52	71	
Advanced.....	2	1	3	18	14	12	10	27	6	33	6	14	11	53	16	63	24	29	35	250	130	380	
Intermediate.....		1	1	7	15	8	9	8	11	14	10	17	9	88	17	106	28	31	7	280	107	387	
Beginners.....				18	15	22	18	15	9	32	15	17	9	81	54	120	48	52	18	357	186	543	
Ungraded.....										2	1	1		4	1	13	5	5	9	25	15	40	
Cooking.....					1						1		3	9			7		3			24	24
Dressmaking.....			4		15		26		31		34		41		113		183		97		548	548	
Embroidery.....		1					6		9		9		9		36		40		16		126	126	
Home Nursing.....					6		3				2				17		27		31		86	86	
Millinery.....				1		8		13		14		20	30		120		189		114		509	509	
Totals.....	74	101	104	135	138	115	119	97	110	114	112	77	139	341	434	441	602	168	390	1,663	2,226	3,889	
Total number of pupils of each age.....	152	205	273	234	207	226	216	775	1,043	558													

(Ages as of September 1, 1919.)

Trade Schools.

SUBJECTS.	16 YEARS.		17 YEARS.		18 YEARS.		19 YEARS.		20 YEARS.		OVER 21 AND UNDER 25 YEARS.		OVER 25 AND UNDER 35 YEARS.		35 YEARS AND OVER.		TOTALS FOR EACH GRADE OR SUBJECT.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
Shopwork.....	91		70		56		34		29		120	1	152		53		605	1	606
Drawing.....	49		26		24		21		13		40		68		19		260		260
Theory.....	14		10		10		7		9		13		30		14		107		107
Totals.....	154		106		90		62		51		173	1	250		86		972	1	973
Total number of pupils of each age.....	154		106		90		62		51		174		250		86				

(Ages as of September 1, 1919.)

CLASSIFICATION AND AGES OF PUPILS IN EVENING SCHOOLS, MARCH, 1920.—*Concluded.*
Grand Total.

	14 YEARS.		15 YEARS.		16 YEARS.		17 YEARS.		18 YEARS.		19 YEARS.		20 YEARS.		OVER 21 AND UNDER 25 YEARS.		OVER 25 AND UNDER 35 YEARS.		35 YEARS AND OVER.		TOTALS FOR EACH GRADE OR SUBJECT.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
High Schools.....	116	70	269	221	540	497	410	410	298	367	201	223	111	154	274	335	194	217	41	68	2,454	2,562	5,016
Elementary Schools.....	74	78	101	104	135	138	115	119	97	110	114	112	77	139	341	434	441	602	168	390	1,663	2,226	3,889
Trade Schools.....	.....	.....	.....	.....	154	.....	106	.....	90	.....	62	.....	51	.....	173	1	250	.....	86	.....	972	1	973
Totals.....	190	148	370	325	829	635	631	529	485	477	377	335	239	293	788	770	885	819	295	458	5,089	4,789	9,878
Total number of pupils of each age.....	338	695	1,464	1,160	962	712	532	1,558	1,704	753													

(Ages as of September 1, 1919.)

*Non-English Speaking Pupils.**

	16 YEARS.		17 YEARS.		18 YEARS.		19 YEARS.		20 YEARS.		21 YEARS AND OVER.		TOTALS FOR EACH GROUP.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Total.
Illiterates between 16 and 21 years of age.....	49	44	38	38	50	25	73	32	45	26	.....	.....	255	165	420
Illiterates over 21 years of age.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	691	273	964
Total number of pupils of each age.....	93	.....	76	.....	75	.....	105	.....	71	.....	.....	.....	946	438	1,384

* Also reported under "Grades," Elementary Schools, page 52.
(Ages as of September 1, 1919.)

Countries of Birth of Pupils in Evening Schools.

COUNTRIES OF BIRTH.	High Schools.	Elementary Schools.	Trade Schools.
Austria-Hungary*	8	19	10
Belgium.....	8	9	1
British Possessions†.....	372	351	144
China.....	2	8	.....
Denmark.....	4	4	1
France.....	12	12	1
Germany‡.....	9	25	17
Greece.....	8	86	2
Italy.....	67	729	41
Japan.....	2	6	.....
Mexico.....	.....	.....	.....
Netherlands.....	3	7	3
Norway.....	7	9	8
Portugal.....	.....	21	.....
Roumania.....	2	4	1
Russia§.....	401	588	103
Spain.....	.....	17	.....
Sweden.....	10	39	14
Switzerland.....	.....	2	1
Turkey||.....	18	84	7
United States.....	4,081	1,779	610
African Countries.....	.....	12	.....
South American Countries.....	.....	8	7
Other North American Countries.....	.....	47	.....
Other European Countries.....	2	18	2
Other Asiatic Countries.....	.....	5	.....
Totals.....	5,016	3,889	973

* Includes Austrians, Bohemians, Galicians and Hungarians.

† Includes Australians, Canadians, English, Irish, Newfoundlanders, Scotch and Welsh.

‡ Includes Germans, Hebrews, and Poles.

§ Includes Finns, Hebrews, Lithuanians and Poles.

|| Includes Albanians, Armenians, Syrians and Turks.

DAY SCHOOL FOR IMMIGRANTS.

School Year, 1919-20.

Number of Regular Teachers.	TOTAL REGISTRATION.			Average Number Belonging.	Average Attendance.	Average Absence.	Per Cent of Attendance.
	Males.	Females.	Total.				
2*	460	852	1,312	580	479	101	83

* Not including special assistants.

DAY SCHOOL FOR IMMIGRANTS.

Summer Term, 1920.

Total registration	31
Average number belonging	16
Average attendance	14
Average absence	2
Per cent of attendance	85

AFTERNOON PRACTICAL ARTS CLASSES.

School Year 1919-20.

SCHOOL.	TOTAL REGISTRATION.			Average Number Belonging.	Average Attendance.	Average Absence.	Per Cent of Attendance.	Number of Afternoons.
	Females.							
Francis Parkman.....	24			20	18	2	90	20

CONTINUATION SCHOOL.

School Year 1919-20.

CLASSES.	Number of Regular Teachers.*	TOTAL REGISTRATION.			Average Number Belonging.	Average Attendance.	Average Absence.	Per Cent of Attendance.
		Males.	Females.	Total.				
Compulsory Classes.....	57	4,890	3,815	8,705	5,190	5,035	155	97.0
Voluntary Classes.....	1	24	2	26	22	19	3	83.0

* Not including per diem teachers equivalent to 2.9 full time teachers.

SUMMER REVIEW SCHOOLS.

1920.

NAME OF SCHOOL.	Total Registration.	Average Membership.	Average Attendance.	Percentage of Attendance.	Average Daily Number of Teachers.
High.....	361	338	319	94.5	18.8
Elementary:					
Bigelow (including Shurtleff Branch).....	408	389	383	98.4	13.0
Charlestown.....	304	270	253	94.0	9.0
City.....	529	489	474	97.0	15.0
Dorchester.....	593	570	560	98.2	19.0
East Boston.....	446	427	418	98.0	14.0
Hugh O'Brien.....	393	343	331	96.7	11.0
Henry L. Pierce.....	186	178	172	97.0	6.0
Lewis.....	556	543	527	97.0	17.0
West End.....	418	394	389	98.7	13.0
Totals:					
Elementary.....	3,833	3,603	3,507	97.3	117.0
High.....	361	338	319	94.4	18.8
Totals, High and Elementary.....	4,194	3,941	3,826	97.7	135.8

NOTE.— For other Summer Review School Statistics see pages 34 and 35.

PLAYGROUNDS.

Number of Teachers School Year 1919-20.

SEASONS.	First Assistants.	Assistants.	Sand Garden Assistants.	Supervisors.	Play Teachers.	Totals.
1919.						
Fall (September 8 to October 31, 1919):						
Men.....	1			3	46	50
Women.....	32	19	15	4	6	76
Totals.....	33	19	15	7	52	126
1920.						
Spring (April 12 to June 26, 1920):						
Men.....	2			3	57	62
Women.....	29	20	26	3	8	86
Totals.....	31	20	26	6	65	148
Summer (June 28 to July 31, 1920):						
Men.....				1		1
Women.....	71	29	41	3		144
Totals.....	71	29	41	4		145
Summer (August 1 to September 4, 1920):						
Men.....				1		1
Women.....	69	4	72	3		148
Totals.....	69	4	72	4		149

SCHOOLHOUSE SUMMARY.

School Year Ending June 30, 1920.

GRADE OF SCHOOL.	Number of Buildings.	Number of Portables. (Wood.)	Assembly Halls.	Drill Halls and Gymnasias.	CONSTRUCTION OF SCHOOLHOUSES.	
					Wood.	Brick.
Normal.....	1	.....	1	1	.....	1
High and Latin..	* 18	4	16	14	.....	18
Elementary.....	239	155	80	.....	49	190
Boston Clerical School.....	1	.....	.....	.....	.....	1
Boston Trade School.....	1	.....	1	.....	.....	1
Trade School for Girls.....	3	.....	1	.....	.....	3
Horace Mann....	1	.....	2	.....	.....	1
Continuation....	1	1	.....	.....	.....	1
Totals.....	265	160	101	15	49	216

* Includes two elementary buildings (Patrick A. Collins and Sarah J. Baker Buildings) used exclusively for high schools.

NOTE.— In addition to the above there were in use during the school year the following rented quarters: High schools, 1; elementary schools, 9; the Continuation School, 25 LaGrange street, with branches at 52 Tileston street and 278 Tremont street, and Day School for Immigrants at 48 Boylston street. A class was also conducted at Fort Strong and Spectacle Island.

SCHOOLROOMS AND SITTINGS.

SCHOOLS.	Day Rooms.	Evening Rooms.	Day School Sittings.
Normal.....	22	.....	228
High and Latin (including all rooms in which instruction of any character is given).....	604	102	20,445
Elementary.....	2,569	89	111,227
Horace Mann School.....	15	.....	203
Industrial Schools.....	46	28	1,289
Totals.....	3,256	219	133,392

CLASS ROOMS IN NORMAL, DAY HIGH AND LATIN SCHOOLS.
(Including Laboratories and all Other Rooms in which Instruction of any
Character is Given.)

SCHOOLS.	Rooms.	Gymnasias and Drill Halls.
Normal.....	22	* G.
Public Latin School.....	33	† D. H. and G.
Girls' Latin School.....	25	* G.
Brighton High School.....	29	D. H. and G.
Charlestown High School.....	23	G.
Dorchester High School.....	61	G.
East Boston High School.....	29	G.
English High School.....	‡ 66	† D. H. and G.
Girls' High School.....	53	G.
High School of Commerce.....	53	G.
High School of Practical Arts.....	30	G.
Hyde Park High School.....	29	D. H.
Mechanic Arts High School.....	48	.....
Roxbury High School.....	§ 48	D. H.
South Boston High School.....	29	G.
West Roxbury High School.....	26	G.
Total.....	604	

* Used jointly.

† Used jointly.

‡ Including Patrick A. Collins Schoolhouse and Franklin Union.

§ Including Sarah J. Baker and High School of Practical Arts Annexes and Boston Clerical School.

CLASS ROOMS IN DAY ELEMENTARY DISTRICTS.
 (Including Regular Schoolhouses, Portables, Hired Quarters and
 Improvised Rooms in Halls, Corridors and Basements.)

June 30, 1920.

DISTRICT.	Class Rooms.	DISTRICT.	Class Rooms.
Abraham Lincoln.....	53	John Winthrop.....	48
Agassiz.....	23	Julia Ward Howe.....	26
Bennett.....	46	Lawrence.....	33
Bigelow.....	33	Lewis.....	40
Blackinton-John Cheverus.....	42	Longfellow.....	35
Bowditch.....	30	Lowell.....	31
Bowdoin.....	27	Martin.....	35
Bunker Hill.....	28	Mary Hemenway.....	55
Chapman.....	29	Mather.....	62
Charles Sumner.....	33	Minot.....	15
Christopher Gibson.....	17	Norcross.....	35
Dearborn.....	49	Oliver Hazard Perry.....	22
Dillaway.....	34	Oliver Wendell Holmes.....	35
Dudley.....	44	Phillips Brooks.....	39
Dwight.....	27	Prescott.....	23
Edmund P. Tileston.....	26	Prince.....	23
Edward Everett.....	42	Quincy.....	38
Elihu Greenwood.....	37	Rice.....	28
Eliot.....	67	Robert Gould Shaw.....	34
Emerson.....	36	Roger Wolcott.....	74
Everett.....	25	Samuel Adams.....	62
Francis Parkman.....	19	Sherwin.....	31
Franklin.....	34	Shurtleff.....	22
Frederic W. Lincoln.....	24	Theodore Lyman.....	34
Gaston.....	26	Thomas Gardner.....	41
George Putnam.....	33	Thomas N. Hart.....	29
Gilbert Stuart.....	31	Ulysses S. Grant.....	37
Hancock.....	61	Warren.....	31
Harvard-Frothingham.....	49	Washington.....	46
Henry Grew.....	22	Washington Allston.....	32
Henry L. Pierce.....	42	Wells.....	60
Hugh O'Brien.....	38	Wendell Phillips.....	43
Hyde.....	30	William E. Endicott.....	49
Jefferson.....	46	William E. Russell.....	31
John A. Andrew.....	28	William Lloyd Garrison.....	27
John Marshall.....	32		
		Total.....	2,569

SEATING CAPACITY.

NORMAL, LATIN AND DAY HIGH SCHOOLS.

(Seats Available for "Home" Seating.)

June 30, 1920.

SCHOOLS.	Regular Seats.	Hall Seats.	Portable Seats.	In Rented Quarters.	In Base- ments.	In Portable Buildings.	Totals.
Normal School.....	228						228
Public Latin School.....	1,083	25	395				1,503
Girls' Latin School.....	923		39				962
Brighton High School.....	665		40				705
Charlestown High School.....	540		290				830
Dorchester High School.....	1,585	96	477		24	84	2,266
East Boston High School.....	655		148				803
English High School.....	1,695	70	274	600	42		* 2,681
Girls' High School.....	2,125						2,125
High School of Commerce.....	1,794						1,794
High School of Practical Arts.....	415		464				879
Hyde Park High School.....	651		200	†			851
Mechanic Arts High School.....	941		28				969
Roxbury High School.....	1,680		109		53		† 1,842
South Boston High School.....	865		145				1,010
West Roxbury High School.....	847	60				90	997
Totals.....	16,692	251	2,609	600	119	174	20,445

* Including Patrick A. Collins Schoolhouse and Franklin Union.

† Y. M. C. A. Gymnasium.

‡ Including Sarah J. Baker and High School of Practical Arts Annexes and Boston Clerical School.

SEATING CAPACITY OF DAY ELEMENTARY SCHOOLS.

June 30, 1920.—Continued.

District.	REGULAR SEATS.				EXTRA SEATS.												TOTAL NUMBER OF SEATS.						
	Grades.	Kinder- garten.	Total.	Total.	PORTABLE SEATS IN REGULAR ROOMS.		HALL CLASSES.		BASEMENT.		PORTABLE BUILDINGS.		RENTED QUARTERS.		TOTAL NUMBER OF EXTRA SEATS.		Grades.	Kinder- garten.	Total.				
					Grades.	Kinder- garten.	Total.	Grades.	Kinder- garten.	Total.	Grades.	Kinder- garten.	Total.	Grades.	Kinder- garten.	Total.							
Dwight.....	879	42	921	124	124	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	124	.....	124	1,003	42	1,045
Edmund P. Tileston.....	802	90	892	.....	152	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	152	.....	152	954	90	1,044
Edward Everett.....	1,793	121	1,914	4	4	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	89	.....	89	1,902	121	2,023
96 Elihu Greenwood.....	1,208	160	1,368	8	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	177	.....	177	1,393	160	1,553
Eliot.....	2,400	102	2,502	107	107	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	472	102	2,974
Emerson.....	1,376	108	1,484	12	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	177	.....	177	1,565	108	1,673
Everett.....	893	48	941	47	47	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47	48	988
Francis Parkman.....	760	54	814	27	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	36	54	877
Franklin.....	1,556	56	1,612	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50	1,662
Frederic W. Lincoln.....	861	80	941	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47	908
Gaston.....	1,087	50	1,137	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	114	1,251
George Putnam.....	985	60	1,045	7	7	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	477	1,522
Gilbert Stuart.....	1,180	108	1,288	6	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	1,294
Hancock.....	2,080	350	2,430	67	67	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	364	2,901
Harvard-Frothingham.....	1,566	90	1,656	1,566	90	1,656
Henry Grew.....	680	77	757	17	17	30	697	804	
Henry L. Pierce.....	2,007	113	2,120	2	2	157	2,166	113	2,279

EXTENDED USE OF PUBLIC SCHOOLS.

SUMMARY OF STATISTICS—SEASON OF 1919-1920.

SCHOOL CENTERS.	Total Attendance.	Number of Sessions.	Average Attendance.
1. School Center Activities:			
(a) Afternoon.....	84,004	342	246
(b) Evening.....	379,890	1,049	362
Totals.....	463,894	1,391	333

NON-SCHOOL CENTER ACTIVITIES.*	Total Attendance.	Number of Sessions.	Average Attendance.
2. Non-School Center Activities:			
(a) Morning.....	1,050	11	95
(b) Afternoon.....	54,394	924	59
(c) Evening.....	6,132	31	197
Totals.....	61,476	966	617

* Thirteen buildings were used sixty-one times for army food sales. They are not included in the number of times buildings were used. Figures are up to and including May 30, 1920.

Forums.....	591	4	148																	
Girls' Clubs.....				20	2	14														
Girls' Gymnasium, Gaires, etc.....							452	16	28	46	4	13								
Girl Scout Troups.....							736	36	21											
Hebrew Clubs (Boys and Girls).....										50	1	50								
Hebrew School Classes (Boys and Girls).....	2,752	111	25																	
League of Women Voters.....					172	7	25													
Motion Picture Programs.....	6,785	18	376	14,243	23	619	900	3	300	375	1	375	1,500	2	750					
Pagant Clubs.....						19	1	19												
Parliamentary Clubs.....				206	10	20														
Patriotic Meetings.....	700	1	700																	
Rehearsals.....					22	3	7	149	12	12			417	20	21					
Socials and Dances.....				1,392	7	199							528	6	88					
Whist Clubs.....	493	14	35		28	1	28									50	1	50		
Women's Club.....	2,279	30	76	3,294	29	114							3,556	42	80	19	3	8		
Totals.....	17,956			32,628			2,350						7,304			1,269				1,500

NON-SCHOOL CENTER

ACTIVITIES.	NORMAL SCHOOL.			GIRLS' LATIN SCHOOL.			BRIGHTON HIGH SCHOOL.		
	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.
Alumni and Alumnae Meetings.....	275	2	138	120	1	120	.....	.....	.....
American Legion.....	.....	.....	.....	.....	.....	.....	100	1	100
Army Food Sales.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Boy Scouts.....	.....	.....	.....	.....	.....	.....	166	8	21
Camp Fire Girls.....	1,200	2	600	.....	.....	.....	.....	.....	.....
Civil Service Examination.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Election Officers.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Home and School Associations.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Immigrant Classes.....	.....	.....	.....	.....	.....	.....	118	5	24
Course in Methods of Teaching English to Foreign-born.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Memorial Day Exercises.....	.....	.....	.....	.....	.....	.....	150	1	150
Naturalization Bureau.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Playground Teachers.....	1,225	10	123	.....	.....	.....	.....	.....	.....
Prize Drill.....	.....	.....	.....	.....	.....	.....	348	1	348
Receptions, Dances, etc.....	250	1	250	.....	.....	.....	.....	.....	.....
Total Attendance.....	2,950	.....	.....	120	.....	.....	882	.....	.....

ACTIVITIES.	WEST ROXBURY HIGH SCHOOL.			ABRAHAM LINCOLN SCHOOL.			AGASSIZ SCHOOL.		
	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.
Alumni and Alumnae Meetings.....	300	1	300	.....	.....	.....	.....	.....	.....
American Legion.....	250	1	250	300	1	300	.....	.....	.....
Army Food Sales.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Boy Scouts.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Home and School Associations.....	.....	.....	.....	.....	.....	.....	162	1	162
Course in Methods of Teaching English to Foreign-born.....	.....	.....	.....	633	6	109	.....	.....	.....
Social Club.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Spanish War Veterans.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total Attendance.....	550	.....	.....	953	.....	.....	162	.....	.....

ACTIVITIES, 1919-20.

CHARLES-TOWN HIGH SCHOOL.			DORCHESTER HIGH SCHOOL.			EAST BOSTON HIGH SCHOOL.		ENGLISH HIGH SCHOOL.			GIRLS' HIGH SCHOOL.			HYDE PARK HIGH SCHOOL.			ROXBURY HIGH SCHOOL.			SOUTH BOSTON HIGH SCHOOL.		
Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Sessions.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	
200	1	200	300	1	300	3	90	1	90	450	1	450										
	9						50	1	50													
							5,066	85	60	30	1	30	38	2	19	20	2	10				
			125	1	125											41	1	41				
													75	1	75	150	1	150				
450	1	450											47	8	6							
																				250	1	250
650			425				5,206			480			160			211			250			
BENJAMIN DEAN SCHOOL.			BOWDITCH SCHOOL.			BRIMMER SCHOOL.		BOWDOIN SCHOOL.			CHAPMAN SCHOOL.			CHRISTOPHER GIBSON SCHOOL.			COMINS SCHOOL.					
Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.		
			425	1	425	23	1	23														
									265	3	88	500	1	500					425	3	142	
															1,486	45	31					
116	1	116	153	1	153							470	2	235								
116			578			23			265			970			1,486			425				

NON-SCHOOL CENTER

ACTIVITIES.	COTTAGE PLACE SCHOOL.			CUSHMAN SCHOOL.	DEARBORN SCHOOL.			DILLAWAY SCHOOL.		
	Total Attendance.	No. of Sessions.	Average Attendance.		Total Sessions.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.
Alumni and Alumnae Meetings.....										
American Legion.....										
Army Food Sales.....					3					
Boy Scouts.....					930	21	44			
Committee Meetings.....										
Garden Exhibits.....										
Home and School Associations.....								1,025	2	513
Mass Meetings.....										
Receptions, Dances, etc.....										
Spanish War Veterans.....	249	7	31							
Total Attendance.....	249				930			1,025		

ACTIVITIES.	FRANKLIN SCHOOL.			FROTHINGHAM SCHOOL.			GEORGE PUTNAM SCHOOL.			HENRY GREW SCHOOL.
	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	
Alumni and Alumnae meetings.....										
American Legion.....	75	2	38							
Army Food Sales.....										7
Boy Scouts.....							678	29	23	
Citizens' Improvement Associations.....										
Committee Meetings.....										
Home and School Associations.....										
Lectures.....							205	2	103	
Mass Meetings.....				2,100	3	700				
Memorial Day Exercises.....										
Receptions, Dances, etc.....										
Total Attendance.....	75			2,100			883			

NON-SCHOOL CENTER

ACTIVITIES.	JOHN MARSHALL SCHOOL.			JOHN WINTHROP SCHOOL.			JOSHUA BATES SCHOOL.	LONGFELLOW SCHOOL.		
	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Sessions.	Total Attendance.	No. of Sessions.	Average Attendance.
Alumni and Alumnae meetings.....				200	1	200				
American Legion.....										
Army Food Sales.....							2			
Boy Scouts.....								138	8	17
Citizens' Improvement Associations.....										
Committee Meetings.....								8	1	8
Home and School Associations.....	350	1	350					370	2	185
Lectures.....										
Memorial Day Exercises.....										
Receptions, Dances, Etc.....										
Total Attendance.....	350			200				516		

ACTIVITIES.	ROBERT GOULD SHAW SCHOOL.			ROGER WOLCOTT SCHOOL.			SAMUEL ADAMS SCHOOL.		
	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.
American Legion.....	625	4	156						
Army Food Sales.....									
Auxiliary (Women) American Legion.....									
Boy Scouts.....	834	35	24	617	31	16	1,146	19	66
Citizens' Improvement Associations.....	1,580	9	176						
Committee Meetings.....									
Garden Exhibits.....									
Girl Scouts.....	233	5	47						
Home and School Associations.....	500	2	250						
Junior City Council.....									
Lectures.....	410	7	59						
Memorial Day Exercises.....	50	1	50						
Receptions, Dances, Etc.....	650	1	650						
Zionists.....									
Total Attendance.....	4,882			617			1,146		

ACTIVITIES, 1919-20.—Continued.

LOWELL SCHOOL.			MARY HEMENWAY SCHOOL.			MINGT SCHOOL.			OLIVER WENDELL HOLMES SCHOOL.			PHILLIPS BROOKS SCHOOL.			QUINCY E. DICKERMAN SCHOOL.			RICE SCHOOL.		
Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.
25	1	25							1,900	6	317									
	7		1,860	6230					1,015	28	35				648	24	27	184	10	18
			114	257															2	
			600	1 600	100	1	100					1,162	3	387						
25			2,574		100			2,915				1,162			648			184		
SARAH GREENWOOD SCHOOL.			SHERWIN SCHOOL.			THEODORE LYMAN SCHOOL.			THOMAS N. HART SCHOOL.			TRESCOTT SCHOOL.			TYLER STREET SCHOOL.					
Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.
1,900	13	146																		
				5																
19	1	19	924	30	31	204	11	19	1,085	33	32	128	7	18	437	26	17			
451	5	91																		
27	1	27										50	1	50						
												150	1	150						
			49	4	12															
375	2	188																		
475	2	238																		
3,247			973			204			1,085			328			437					

NON-SCHOOL CENTER ACTIVITIES, 1919-20.— *Concluded.*

ACTIVITIES.	WASHINGTON ALLSTON SCHOOL.			WILLIAM E. RUSSELL SCHOOL.			WILLIAM BLACKSTONE SCHOOL.	WILLIAM LLOYD GARRISON SCHOOL.		
	Total Attendance.	No. of Sessions.	Average Attendance.	Total Attendance.	No. of Sessions.	Average Attendance.	Total Sessions.	Total Attendance.	No. of Sessions.	Average Attendance.
American Legion.....				850	1	850				
Army Food Sales.....							6			
Auxiliary (Women) American Legion.....				750	1	750				
Boy Scouts.....				779	30	26		305	20	15
Mass Meetings.....				100	1	100				
Receptions, Dances, etc.....	180	1	180							
Totals.....	180			2,479				305		

WORKERS EMPLOYED.—SCHOOL CENTERS.

TITLE.

	Abraham Lincoln School Center.	Bowdoin School Center.	Charlestown High School Center.	Dorchester High School Center.	East Boston High School Center.	Edward Everett School Center.	Michael Angelo School Center.	Roxbury Practical Arts High School Center.	Roxbury High School Center.	Sarah Greenwood School Center.	South Boston High School Center.	Washington School Center.	William Blackstone School Center.	Totals.
Managers *.....	1	1	1	.....	1	1	.....	.....	1	.....	1	7
Associate Managers †.....	1	1	1	.....	.....	1	.....	.....	.....	.....	.....	4
Special Leaders ‡.....	1	1	3	4	2	1	2	5	.....	3	4	1	2	29
Leaders.....	1	1	7	1	5	1	1	1	1	.....	.....	19
Operators.....	1	1	1	1	1	1	.....	1	1	1	1	10
Special Helpers.....	3	3	4	.....	.....	6	2	2	1	3	1	24
Pianists.....	2	3	4	.....	2	4	.....	1	3	1	.....	20
Doormen.....	1	1	2	.....	.....	4	.....	1	1	.....	.....	10
Helpers.....	1	3	4	.....	3	7	.....	.....	4	2	.....	27
Matrons.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	2
Totals.....	1	1	14	19	26	3	15	30	6	9	16	8	4	152

*Manager of Michael Angelo School Center also managed Washington School Center. Manager of Roxbury Practical Arts High School Center also managed Roxbury High School Center and Abraham Lincoln School Center. Manager of South Boston High School Center also managed Edward Everett School Center. Manager of William Blackstone School Center also managed Bowdoin School Center.

†Each associate manager served in one center only. Nine centers had no associate manager.

‡A special leader managed the Sarah Greenwood School Center.

Numbers varied somewhat from month to month. The above figures are taken from the May, 1920, pay roll. This table does not include volunteer workers.

THE FOLLOWING TABLE IS A RECORD OF THE NUMBER OF CERTIFICATES ISSUED TO WORKING CHILDREN AND YOUNG PEOPLE FOR TWO YEARS UNDER THE ACTS OF 1913, CHAPTER 779.

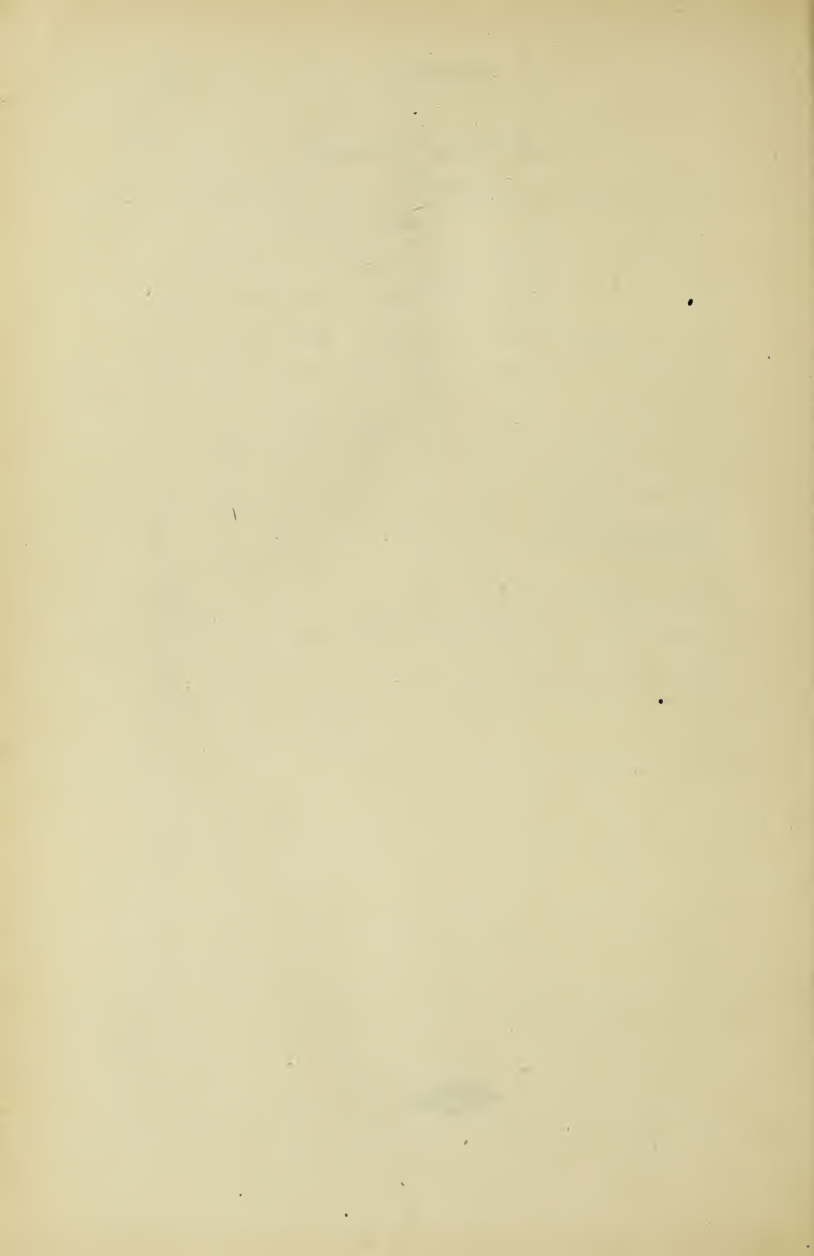
MONTH.	EMPLOYMENT CERTIFICATES.						EDUCATIONAL CERTIFICATES.					
	1918-19.			1919-20.			1918-19.			1919-20.		
	New Certificates.	Re-Issues.	New Certificates.	Re-Issues.	New Certificates.	Re-Issues.	New Certificates.	Re-Issues.	New Certificates.	Re-Issues.	New Certificates.	Re-Issues.
	EVENING SCHOOL ATTENDANCE NOT REQUIRED.						EVENING SCHOOL ATTENDANCE COMPULSORY.					
September...	708	1,743	828	1,890	910	2,524	986	2,115	13	53	12	24
October.....	609	1,069	458	1,231	1,098	2,647	874	1,813	13	52	14	25
November....	539	1,129	351	882	789	2,021	708	1,460	17	45	22	20*
December....	350	892	285	695	800	2,059	652	1,445	13	47	31	18
January.....	352	1,049	305	850	748	2,110	695	1,668	19	47	40	36.
February....	265	759	178	451	590	1,551	511	1,235	11	31	42	19
March.....	281	793	308	832	638	1,644	724	1,778	10	26	49	42
April.....	238	607	235	803	579	1,351	691	1,591	5	11	32	33
May.....	297	703	311	774	577	1,747	611	1,610	3	14	26	32
June.....	1,261	791	1,754	773	1,079	1,801	1,315	1,684	13	28	44	36
July.....	1,326	811	1,105	613	1,261	2,177	1,010	1,444	10	25	36	33
August.....	555	794	412	612	733	1,762	582	1,492	7	16	43	39
Totals....	6,781	11,140	6,530	10,406	9,802	23,394	9,389	19,335	134	395	391	357

REGISTRATION OF MINORS.

April 1, 1920.

GROUP.	ENROLMENT OF PUPILS.					
	5 TO 7 YEARS.		7 TO 14 YEARS.		14 TO 16 YEARS.	
	Males.	Females.	Males.	Females.	Males.	Females.
Boston public schools.....	8,714	8,183	35,422	33,072	9,902	9,401
Private schools.....	162	140	855	915	127	196
Business schools.....					24	113
Parochial schools.....	2,313	3,030	7,787	10,147	797	1,402
Schools outside of Boston...	17	8	258	130	226	71
Charitable institutions.....	4	6	25	20	1	
Institutions for educational and custodial purposes...	27	58	309	347	28	125
Physically or mentally de- fective children not en- rolled in any school.....			34	22	9	5
Continuation School.....					2,996	2,325
Special home permits.....					2	183
Grand totals.....	11,237	11,425	44,690	44,653	14,112	13,821
Illiterate minors.....					258	177





SCHOOL DOCUMENT NO. 11 — 1920
BOSTON PUBLIC SCHOOLS
SPECIAL SYLLABUS-SHOPWORK



GRADES VI., VII., VIII., IX.

1920-1921

The subject-matter of the course in Shopwork is hereby approved.

FRANK V. THOMPSON,
Superintendent of Public Schools.

IN SCHOOL COMMITTEE, June 28, 1920.

Ordered, That the accompanying syllabus in shopwork for Grades VI. to IX., is hereby adopted for elementary schools and intermediate schools and classes, and that eight hundred fifty (850) copies be printed as a school document.

Attest:

ELLEN M. CRONIN,
Secretary pro tempore.

SHOPWORK FOR GRADES VI., VII., VIII., IX.

INTRODUCTION.

Owing to the compulsory education law requiring boys to attend school up to the age of fourteen, and thereafter up to the age of sixteen unless in approved employment, there is now ample opportunity for specialized shopwork beyond the elementary school. The Boston Trade School, the Mechanic Arts High School and the coöperative courses in a number of the general high schools all give such opportunity. It would seem, therefore, that the elementary shopwork, while continuing to emphasize technique, might hereafter embrace a greater variety of experiences.

PART I.—AIMS, MEANS AND MINIMUM REQUIREMENTS.

Aims.

I. To secure a vigorous, mental reaction through the pupil's manual activity and his interest in the constructive problem.

II. To develop a general industrial intelligence by stimulating an interest in those industries which are fundamental to civilization, and through the acquaintance with the particular industrial activities of the community.

III. To develop an ability to execute with a fair degree of skill a variety of tool manipulations.

IV. To develop such general sense of construction as will aid the pupil in solving many of those mechanical problems which he will encounter in his daily life.

V. To develop discrimination in purchasing, and intelligence in using objects of everyday use.

Means.

I. A graded series of manipulative experiences drawn from wood-working and increasingly as conditions permit from other trades, such as printing, cobbling, bookbinding, concrete construction, machine shop, electrical and sheet metal work.

II. Trips to manufacturing establishments and guided observation of building activities of industrial significance which may be in progress in the community.

III. The display of and frequent reference to instructive and illustrative material as follows:

Charts showing the evolution of tools in process of manufacture.

Books on tools and industry.

Pamphlets of information on concrete.

Specimens of the common woods.

Government bulletins pertaining to forestry, bird life, industrial conditions, etc.

Catalogues of machines and tools.

Charts showing screws, nails, hooks and other hardware supplies.

Blueprints, drawings and photographs of interesting problems.

* Files of "Manual Training and Vocational Education."

* Files of "The Industrial Arts Magazine."

† Lantern slides on:

Manual Training in Boston.

Prevocational Work in Boston.

Lumbering.

Woodworking Processes.

Art Subjects.

Motion pictures of industrial processes given from time to time through the coöperation of different manufacturers.

IV. The undertaking of such construction and repairs as are within the ability of the pupil and are consistent with the principles of education. (See page 9, "Orders required.")

Minimum Requirements.

NOTE.—Numbers in parenthesis refer to sections in Griffith's "Essentials of Woodworking."

The following statements represent the recommendations of the committee for the minimum manual training requirements in ability and knowledge to warrant a mark of "2" at the end of the eighth grade of the elementary school.

The requirements in knowledge include not only that information which comes to the boy through actual contact with materials, but also that given to him by the teacher through class talks.

The boy should know the names and prominent characteristics of the woods used. He should have a general knowledge of the sources and

* Available at the office of the department.

† The department will gladly arrange for lectures to Parents' Association or loan slides for this or other purposes. It is earnestly desired that teachers give occasional illustrated talks to their pupils, using these slides or those from other sources.

preparation of lumber, including the processes and results of seasoning, and of such defects as warping and checking (113-120):

PROCESSES.	TOOLS AND MATERIALS.	KNOWLEDGE.
1. Measuring and laying off distances on wood. (1.) (10.)	Rule, pencil and knife.....	The common bench rule and its characteristics.
2. Making straight lines at right angles to reference faces. (2.)	Try square, pencil and knife,	The try square and its parts. Condition of knife point necessary for good work.
3. Setting marking gage to a definite dimension and gaging straight lines parallel to reference faces. (5.)	Marking gage and rule.....	The marking gage and its parts. Condition of spur necessary for good work.
4. (a) Crosscut and rip sawing. (12-13.)	Crosscut and rip saws and sawhorses.	The characteristics of the common hand saws. (11.)
(b) Back sawing. (14.).....	Back saw and bench hook.	
5. Setting the common bench planes for general use and planing. (19-20.)	Jack plane.....	The names and characteristics of the common bench planes. The reasons for choice for specific work. Methods of sharpening. The cabinet scraper and its use. (63.)
(a) Planing edges straight and at right angles to one side, testing with try square and straight edge. (21.)	Straightedge and try square.	
(b) Planing to gage lines for width. (29.)	Jack plane. (21.)	
(c) Block, planing ends to knife lines. (24.) (31.)	Block plane.	
(d) Planing sides flat. (26.)	Jack and jointer planes. Straightedge and winding sticks.	
(e) Planing sides to gage line for thickness. (30.)	Jack and jointer planes and straightedge.	
6. Driving and setting nails without splitting. (65-68.)	Hammer, nails and nail set.	The names and characteristics of the common kinds of nails.
7. Boring. (36-43).....	Bit brace and auger bit.....	The names and characteristics of the common wood boring tools.
(a) Perpendicularly to a given surface through stock. (44.)		
(b) Perpendicularly to a given surface, to a given depth. (45.)		
8. Boring for and driving screws. (39-40.) (71-72.)	German or drill bits, countersink and screwdriver. (70.)	The names and characteristics of the common wood screws. Choice of bit.
9. Chiselling and gouging.....	.....	The names and characteristics of the common bench chisels and gouges.
(a) Chiselling to pencil guide lines in modifying contours. (49.)	Firmer chisels.	
(b) Chiselling to gage and knife lines.		
(c) Gouging recesses to fit a template. (51.)	Firmer gouges.	

PROCESSES.	TOOLS AND MATERIALS.	KNOWLEDGE.
10. Sandpapering. (60.) (64.)... (a) Sandpapering flat surfaces. (b) Sandpapering curved surfaces.	Sandpaper and sandpaper blocks.	Sandpaper, its manufacture and grading. Its proper use.
11. Preparing work for gluing. Gluing work and applying hand screws and clamps in proper manner. (73-75.)	Cold glue, hand screws, cabinet clamps.	Glue, its sources and commercial forms. Hand screws, clamps and their parts.
12. (a) Marking on wood from template. (b) Plotting curves on wood. (c) Curve sawing. (15.)... (d) Spoke shaving. (59)...	Wood or paper template and pencil. Compasses, rule, pencil and try square. Hand-turning saw. Spoke shave.	Various methods of getting curved line on wood. Various methods of cutting to curved lines.
13. (a) Making a square butt joint. (b) Making an edge to edge joint. (83-84.)	Such of above tools as work demands. Jointer plane. (23.) Try square and straightedge. Cold glue.	Appearance and use of halved, tongue and groove, housed, rabbeted, mortise and tenon, mitered, dowelled and open dovetail joints. (76-100.)
14. Finishing..... (a) Oiling. (b) Staining. (c) Waxing.	Brushes, oil, stains and wax,	Effect of oil, stain, shellac and wax on surface of wood. Methods of application.

Drawing.

PROCESSES.	TOOLS AND MATERIALS.	KNOWLEDGE.
1 Dr. Reading working drawings of simple objects.	.....	Blueprints.
2 Dr. (a) Pencil tracing. Transferring lines to wood. (b) Drawing on wood.	Tracing paper.....	Carbon paper.
3 Dr. Sketching the views necessary for the construction of an object of simple outline and dimensioning the sketch.	Drawing board, pencil, rule and eraser.	The three basic views and their relations.
4 Dr. Making instrumental working drawings of some of the objects made in the shop.	Drawing board, T square and triangles. Paper, thumb tacks, rule, pencil, eraser and compasses.	Such geometric problems as are applied.
5 Dr. Modifying contours of such subjects as the outlined work demands.	.....	Some principles of good form.
6 Dr. Making instrumental drawings of models not directly related to the course, but such as give further knowledge of principles of orthographic projection.	.....	Broken drawing. Sections. Auxiliary views. Drawing to scale.

PART II.— SUGGESTIONS ON AIMS, MATTER AND METHODS.

Admission of Pupils to Shopwork.

Only pupils over twelve years of age, or who have reached Grade VI., may be admitted to classes in shopwork.

Time Allotment.

Two hours a week are allowed for this work except in classes where a 90-minute shop period is necessary to meet the requirements of the intermediate school organization.

To adjust programs it may be necessary for some classes to have two one-hour periods weekly. When necessary the department will attempt to arrange for the admission of classes to the school shops at 8 o'clock, the classes to be compensated by early dismissal at such time during the week as the principal shall direct.

Courses Planned by Teachers.

Teachers are encouraged to originate courses of study but should arrange their subject-matter in the manner suggested by the treatment in this syllabus (see pages 15 to 22, inclusive), giving special consideration to the first column in order that the several experiences shall be presented to the boy at such times in his development as to result in a vigorous mental reaction.

The plan of such a special course of problems must be available for inspection at any time, and a copy placed on file at the office of the Department of Manual Arts. Such courses should adequately cover the minimum requirements in woodworking, unless planned to follow other authorized forms of shopwork.

Direction Sheets.

At the discretion of the teacher the "Typical Directions" for any problem in the suggestive seventh or eighth grade course may be copied on the blackboard, or duplicated and used as direction sheets in the place of some of the verbal instruction.

Drawing.

One fourth of shopwork time for year is to be given to mechanical drawing. This means one and one half hours per month in classes taking one and one half hour periods of woodworking, or two hours per month for classes taking two-hour periods of work. The aim of the work is to familiarize the pupil with the principles of orthographic projection and the use of drawing board, T-square and triangles, and should follow along practical lines in so far as possible. One-quarter-inch squared paper may be used for some preliminary free-hand working drawing.

Disposition of Product to City.

Each pupil may be called upon to work a reasonable amount of time (10 to 20 per cent) for the schools. The necessary omission from the stated course should be, in every case, that problem, regardless of position, which most nearly corresponds in exercises and difficulty to the work done for the schools. In cases of *class* work of this character, team work and industrial methods are recommended.

Orders Required.

The Schoolhouse Commissioners and the Business Agent have ruled that pupils should not do work affecting the structure of school buildings, or involving the use, aside from the prescribed course of study, of materials supplied by the city, except *upon their respective orders* placed through the Department of Manual Arts.

Placement of Work.

The department welcomes all opportunities of having the pupils of the industrial, manual arts, manual training, prevocational and (as agents for the supervisor) special class shops do such work, not of an emergency or rush character, as is within their capacity and will be of educational benefit. The pupils in prevocational classes may go outside their own districts to do such work.

Kinds of Work.

Work can be done in woodworking, printing, bookbinding, machine shop work, electricity, sheet metal, concrete, painting and lettering.

Charge for Work.

Work having the general character of supplies must be ordered on School Committee requisitions and will be charged against the principal's per capita allowance at a fair market price.

Work in the nature of furniture or of structural alterations must be ordered upon requisitions of the Schoolhouse Commissioners. In such cases the School Committee acts as a contractor in the employ of the Schoolhouse Commissioners and is paid at the above rate.

Sending Requisitions.

In all cases where the department can be of service, a requisition made on the proper form and signed by the principal should be sent to the office of the department. If the work is to be done in the local shop, this requisition should be accompanied by the shop teacher's estimate of the price to be charged as described above. The requisition will be forwarded after approval and the addition of the price and the name of the school to which it is proposed to assign the work.

Following are sample requisitions:

A. On the Schoolhouse Commissioners (for furniture, shelves attached to walls of building, etc., or repairs to any school property of which the Schoolhouse Commissioners are custodians).

B. On the School Committee (for small articles other than furniture and not attached to any part of the school building).

A.

NOTICE.

ALL REQUESTS MUST BE MADE ON THESE BLANKS. A SEPARATE BLANK
MUST BE USED FOR EACH KIND OF WORK.

BOSTON,.....Date.....192 .

To the SCHOOLHOUSE COMMISSIONERS:

I request that the following work be done:

Furnish one chestnut bookcase, size 3 feet 6 inches wide by 6 feet high by 10 inches deep, with 6 shelves (adjustable). Finish "Brown Oak."

I recommend that this work be done by the Department of Manual Arts.
.....
.....
.....
.....
.....

Estimated cost,.....\$.....	School.....	
Contractor.....	(Signed).....	Principal.
.....	Commissioner. Approved,	
.....192		Inspector.

B.

CITY OF BOSTON — SCHOOL COMMITTEE.
REQUISITION ORDER.

Approved

* No.....

Date..... June, 192.....

Laid out by..... To Business Agent:

Checked by..... Please send the following to..... School.

Date Delivered.	Checked as Delivered.	Quantity.	Articles.	CHARGE TO		Price.	Amount.
				Account.	Sub.-Div.		
		3	Boxes for holding kindergarten materials.				
			I recommend that these be made by the Department of Manual Arts.				
			Signed by Principal of the School.				
	Signature of Principal.						

Do not write beyond this line.

ORIGINAL.
TO BE SENT TO THE BUSINESS AGENT

* Teachers must not fill in this blank.

Blackboard Erasers.

The blackboard erasers made in the school shops may be disposed of in either of the following ways:

1. Where the erasers are needed in the district, the manual training teacher should inform the principal of the number of erasers available and receive from him a receipted requisition on the School Committee for this number. This requisition should then be sent to the office of the department. The erasers may then be put into use in the district in which they were made. This procedure will stimulate the boys' interest in the problem as they will see their particular work actually fulfilling a school need.

2. Where the erasers are not needed in the district the manual training teacher should bundle them and address the package thus: "Supply Rooms.....erasers for stock from the....."

school" (number of erasers and name of school to be stated). Leave the package where the driver of the school team can get it. The department should be informed of the number of erasers thus available for stock in order that the proper credit memorandum may be made out and sent to the Supply Rooms.

Home Mechanics and Material.

In so far as equipment will permit emphasis should be placed upon home repair work such as: Setting glass, soldering of utensils, making thresholds, repairing furniture, putting in window cords, placing new washers in faucets, etc.

Because of the very high cost of material, pupils may be encouraged, occasionally, to bring in from home such supplies as: Tin cans and boxes, boards from packing cases, etc. Caution should be exercised by the teacher, however, to see to it that such salvage material is obtained legitimately and not in excessive quantities.

Disposition of Product to Pupils.

When problems are worked out in materials furnished by the school, the products are technically the property of the city, but regular, personal problems, executed during shop periods, may be given to the pupils, with permission of the principal, as follows:

One object each year, if desired by the pupil for a Christmas gift, may be given him immediately after completion.

Class sets of complete problems may be given when the next full set is completed, provided one or two specimens of each problem, and several examples of any work, required or original, correlating with drawing or other subjects, have been selected to be kept for one year.

Work for Individuals.

Work for other than school purposes may be done, but only in limited quantities, and must be charged at a full market price except in the case of pupils. (See below.)

Payments by Pupils.

For Materials.

The School Committee has ordered that "pupils be required to pay the cost of all materials used in making articles other than those termed the regular models." This is construed as meaning that, if the pupil selects a problem which calls for materials disproportionate in amount or value, he should pay the difference between the price of such materials and those which he might reasonably be expected to use during the regular shop time.

For Broken or Lost Tools.

The shop equipment, as in the case of books, is "loaned to pupil," and if any part of it be "lost or damaged by carelessness or accident beyond what may be reasonably allowed . . . it is to be replaced by the pupil to whom it is loaned, and in the way required by the School Committee."

Accessories and Finishes.

Teachers of shopwork are to use their discretion in the distribution of limited quantities of hooks, screw eyes, canvas, shellac, stain, etc., sent to them, giving only to pupils who have constantly given their best efforts to the work.

Sandpaper.

Sandpaper is a finishing tool and should be used only after all work with edged tools has been completed.

In sandpapering flat surfaces use a sandpaper block and work in the direction of the grain.

In sandpapering end grain use the sandpaper block and work only in one direction.

In sandpapering concave surfaces use a rounded edge of a sandpaper block, a dowel, tool handle or other object with a curved surface.

Use sandpaper without the block only on curved or shellaced surfaces.

Authorized List of Problems.

Bench cradle (19-B.).	Coat and trouser's hanger (35).
Bench hook.	Corner bracket.
Bird houses and feed trays.	Cover handle (1-D.).
Blackboard eraser (21-A.).	Desk flag holder.
Blotter with knob (16).	Dish drainer.
Book rack.	Door weight, concrete (25).
Book rack blank, hinged.	Drawing board (13-A. and B.).
Book rack blank, housed.	Elliptical bread board (17).
Book rack blank, mortised.	File handle.
Book supports (23).	Flat ruler (6-D.).
Box blanks (10).	Flower pin.
Bread and cookie cooler.	Flower pot (concrete).
Broom holder (3-D.).	Flower pot stand.
Butterball paddle (5-B.).	Flower stick.
Calendar stand.	Footstool, reed top.
Card holder blank (6-C.).	Footstool, slat top (8).
Clothesline winder (2-E.).	Footstool, solid top.
Coat hanger (16-A.).	Fork (2-D.).

- Half lap joint.
 Half lap miter joint.
 Hammer handle.
 Hatchet handle.
 Hook strip.
 Inkstand (26).
 Inkstand and tray (7-A.).
 Jardiniere stand.
 Key rack, carved.
 Key rack, plain (5-C.).
 Kitchen rack (11).
 Kite string winder (1-B.).
 Knife polishing board.
 Lap writing board (20).
 Laundry stick (i-C.).
 Letter box.
 Letter holder (6-A.).
 Letter opener.
 Letter opener (4-C.).
 Loom, small.
 Mallet (21-B.).
 Matchbox holder.
 Mixing spoon (15-B.).
 Nail box.
 Necktie holder (37).
 Needle (2-B.).
 Order board (3-A.).
 Ottoman (9).
 Paper cutter.
 Paper knife (7-B.).
 Pencil holder (36).
 Penholder.
 Pen tray (14-C.).
 Pen tray with calendar holder.
 Picture frame.
 Picture frame (cigar boxes).
 Plant stand (22).
 Revolving kitchen rack (38).
 Rolling pin (3-A.).
 Round bread board.
 Round ruler.
 Sandpaper blocks (1-A.).
 Scoop (6-B.).
 Shelf blank, horizontal (14-A.).
 Shelf blank, vertical (14-B.).
 Shelf (fixed contour).
 Shoe polisher (19-B.).
 Shrub label.
 Sink scraper.
 Skewer (2-A.).
 Sleeve board (24).
 Sleeve board with base (4-A.).
 Solitaire board.
 Spoon (4-B.).
 Stationery holder (39).
 Strop (7-C.).
 Swing board (3-B.).
 Taboret (round).
 Taboret (square).
 Teapot stand.
 Tie rack (18).
 Tool rack.
 Towel holder (40-A.).
 Towel rack.
 Towel roller.
 Toy, dog (12).
 Toy, topsy turvey.
 Toy, tumbler man.
 Trellis.
 T square (13-C.).
 Twine holder.
 Ventilator (2-F.).
 Vise handle.
 Wall pocket.
 Wedge.
 Whisk broom holder.
 Winding sticks (2-C.).

SIXTH GRADE.

The purpose of shopwork in this grade is to introduce the common woodworking tools by means of problems of simple construction and to give some knowledge of the underlying principles of mechanics.

Although pupils should be induced to use tools freely, careful attention should be given to a correct technique, that good habits of manipulation may be formed.

The problems are such as encourage freedom of action.

Some opportunity is furnished for practical application of constructive and decorative design.

To Square to Dimensions When Wood is of the Desired Thickness.

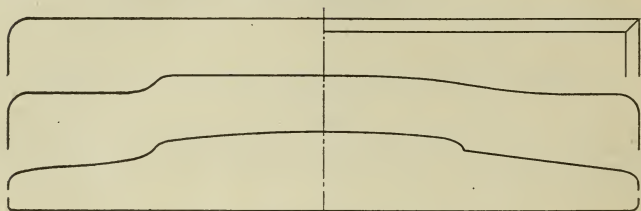
NOTE.—The STATEMENTS are short and to the point, and should be learned and used by the pupil. For the sake of brevity, the number of the rule is used for reference in this syllabus. The pupil should be able to give the substance of the directions or tests for each rule.

Directions A (Unless Otherwise Directed).

STATEMENTS.	DIRECTIONS.	TESTS. (Precede with eye test.)
1. Select better side. Mark it I.	If warped, choose the concave side.	With back of try square.
2. Plane better edge. Mark it II	Plane it smooth, straight and square with marked side.	For straightness — with straight-edge. For squareness — with try square in at least three places from marked side only.
3. Gage width and plane.....	Gage from marked edge on both sides. Saw if necessary, plane to the gage lines and stop.	For flatness — if necessary, with back of try square.
4. Square better end.....	Squaring from marked surfaces only, score a knife line around near end. Saw close to outside of line. Plane to the line and stop.	For flatness — if necessary, with back of try square. For squareness — try square from marked surfaces only.
5. Lay off length and square the other end.	Lay off from finished end. Score knife line around, squaring from marked surfaces only. Saw close outside of line. Plane to the line and stop.	For flatness — if necessary, with back of try square. For squareness — with try square from marked surfaces only.



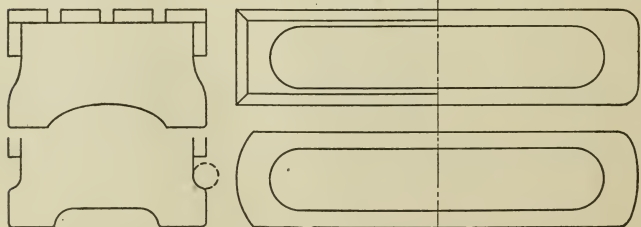
ORDER BOARD



TIE RACK AND KEY RACK



LETTER HOLDER



FOOT STOOL

PEN TRAY

Suggestive Course.

EXPERIENCES. (NOTE.—Numbers refer to Minimum Requirements. "Dr." indicates Drawing.)	ILLUSTRATIVE SUGGESTIVE PROBLEMS. (NOTE.—The number fol- lowing the name of the wood indicates the number of feet required for 10 boys.)	TYPICAL DIRECTIONS.
1. 1 Dr., 1, 2, 3, 4a, 4b, 5a, 5b and 7a.	Sandpaper block (1-A), $\frac{1}{2}$ - inch white pine (2.3). ("Our Native Trees," page 443.)	Make two blocks. Get out stock long enough for both and plane in one piece. Square to dimensions. (Omit block planing.) Locate hole and bore vertically.
2. 1 Dr., 1, 2, 3, 4, 5a, 5b, 7a and 10a.	Garden marker (30-A) $\frac{1}{2}$ - inch country pine (2.14). Class Options.—String winder, clothes reel.	Get out stock. Square to dimensions. (Omit block planing.) Lay out with pen- cil, saw and plane point. Mark corners and cut them with a 1-inch chisel. Locate hole and bore vertically. Sandpaper.
3. 1 Dr., point whittling and 10b.	Sharpening pencil. Individual Option.—Cuticle or finger stick, $\frac{1}{4}$ -inch hard wood dowel (40-B).	Whittle away from body, with a shearing cut. NOTE.—After this lesson the boys should be held responsible for the condition of the pencils.
4. 1 Dr. and drawing of semi-circle, 4a, 5a, 12b, 12c, 12d and 10.	Bread board (semi-circular ends) $\frac{1}{2}$ -inch white pine (30-B) (6.41). Class Option.—Bread board rounded corners. Individual Option.—Bread board (elliptical) hard wood.	Get out stock. Square to dimensions 1 and 2. With gage locate near ends center line on marked side parallel to marked edge. Draw center line with pencil. Draw semi- circles on center line. Curve saw $\frac{1}{4}$ inch outside of line. Spokeshave to line. Test for squareness. Gage pencil lines for guide in cutting molding on edge. Spokeshave bevels. Spokeshave to curve. Sandpaper.
5. 4 Dr. and 5 Dr., 1, 2, 3, 4, 5a, 5b, 5c, 12a, 12c, 12d, 7a and 10.	Bill holder (31) $\frac{3}{4}$ -inch white- wood (2.5). Option.—Newspaper holder (3-A). Supplementary.—Memo- randum pad holder. Supplementary.—Calendar back.	Make drawing of blank. Get out stock. Square to dimensions 1-3. Design contour of top. Make three trials, choose the best and cut out for template. Apply template to wood. Curve saw. Spokeshave or whittle to line. Bore hole horizontally. Square to dimensions 5. Sandpaper. Fasten on clip.*
6. 1 and 4 Dr., 1, 2, 3, 4a, 4b, 5a, 5c, 5b, 12a, 12c, 9a, 10a, 10b and 6.	Plant stand (22), $\frac{1}{2}$ -inch chestnut (5), $\frac{3}{4}$ -inch chest- nut (1.25) ("Our Native Trees," page 386) or whitewood. Class Option.—Footstool (8), $\frac{1}{2}$ -inch chestnut (1.2) and $\frac{3}{4}$ -inch chestnut (7.5). Individual Option.—Dish- pan rest.	Get out stock (for slats, have stock wide enough for at least two slats). Slats.—Square to dimensions 1, 2, 4, 5. Gage width of slat from marked edge. Gage width of slat plus $\frac{1}{4}$ inch to allow for sawing. Saw between gage lines. Plane to lines, mark new reference ||, and repeat process. Supports.—Use same processes as for slats in squaring to dimensions. Locate centers of arcs in forming feet. Hold- ing both pieces together in vise, bore holes. Gage lines tangent to holes. Saw with turning saw and chisel to lines. Sandpaper all surfaces except those which form joints in finished stand. Nail outside slats. Space inside slats and nail. Set nails. Sandpaper top.
7. 2 Dr., 1, 2, 3, 4b, 5a, 5b, 5c, 6, 7a, 7b, 8, 9a, 9b, 10, 12c.	Toys.— $\frac{1}{4}$ -inch and $\frac{1}{2}$ -inch country pine (5).	
8.	Larger Toys.—Pupils sup- ply material; packing boxes, etc.	

* To be furnished by pupil, if he so desires.

SUPPLEMENTARY PROBLEMS.

(From Industrial Arts Magazine.)

Teapot stand	March, 1918, page 113
Solitaire board	March, 1918, page 113
Derrick	March, 1918, page 113
Twine holder	March, 1918, page 113
Shelf (14)	March, 1918, page 113
Pile driver	March, 1918, page 113

SEVENTH GRADE.*

The purpose of shopwork in this grade is to provide for somewhat technical instruction in the execution of problems in advance of those of the previous year, including some actual work in materials other than wood. Further opportunity is given for the application of construction and decorative design.

To Square to Dimensions When Wood is Not of the Desired Thickness.

See note — Grade VI.

Directions B (Unless Otherwise Directed).

STATEMENTS.	DIRECTIONS. (Examine stock for size and soundness.)	TESTS. (Precede with eye test.)
1. Plane better side. Mark it |.	If warped, observe grain and plane convex side, smooth and flat. On thin warped pieces it will be found advisable to observe grain and first plane concave side near enough flat to rest firmly on bench. Then again observe grain and plane convex side as above.	For flatness — with back of try square, straightedge and winding sticks.
2. Plane better edge. Mark it ||.	Observe grain and plane edge smooth, straight, and square with marked side.	For straightness — with straight-edge. For squareness — with try square in at least three places, testing from marked side.
3. Gage width and plane.	Gage from marked edge on both sides. Observe grain, saw if necessary and plane to the lines.	For flatness — if necessary, with back of try square.
4. Gage thickness and plane.	Gage from marked side on both edges (and on ends, if necessary). Observe grain and plane to the gage lines.	For flatness — with back of try square.
5. Square better end.	Score knife line around near end, squaring from marked surfaces only. Saw close to outside of line and plane to the line.	For flatness — if necessary, with back of try square. For squareness — with try square from marked surfaces only.
6. Lay off length and square the other end.	Lay off from finished end, score knife line around, squaring from marked surfaces only. Saw close to outside of line and plane to the line.	For flatness — if necessary, with back of try square. For squareness — with try square from marked surfaces only.

* Woodworking with printing, cobbling, cement work, chair seating and other incidental activities as equipment is furnished.

Suggestive Course.

EXPERIENCES. (NOTE.—Numbers refer to Minimum Requirements. "Dr." indicates Drawing.)	ILLUSTRATIVE SUGGESTIVE PROBLEMS. (NOTE.—The number following the name of the wood indicates the number of feet required for 10 boys.)	TYPICAL DIRECTIONS. (NOTE.—"Ins." indicates inspection by the teacher.)
1. 1, 2, 3, 4 and 5 Dr., 1, 2, 3, 4, 5, 9a, 10, 14.	Key rack (5-C), $\frac{3}{4}$ -inch rough gum, butternut or mahogany (4.8). ("Our Native Trees," pages 160 and 274.) Class Option.—Garment holder (32-A), $\frac{3}{4}$ -inch rough gum butternut or mahogany (2.06). Supplementary.—Trellis.	Make dimensioned sketch. (Ins.) From sketch, guided by sheet 5-C, make complete working drawing, one-half scale. (Ins.) Get out stock. Square to dimensions 1. (Ins.) (Use of winding sticks.) Square to dimensions 2, 3, 4 and 5 (Ins.), 6 (Ins.). Show on drawing slight modification of contour, or other features of decoration, such as bevelled or rounded arrises. Locate position of hooks. Mark guide lines for feature of design. (Ins.) Cut to guide lines. (Ins.) Sandpaper. (Ins.) Finish with oil, wax or both. (Ins.) NOTE 1.—Kamlac may be used by the good workers. Put in hooks.
2. 3 and 4 Dr., 1, 2, 3, 4, 5, 7a, 8, 9a, 9b, 10.	Kitchen rack (11), $\frac{1}{8}$ -inch whitewood (5.2), $\frac{1}{2}$ -inch whitewood (4.8). NOTE.—Back to be $\frac{1}{2}$ -inch thick. Class Option.—Tool rack for kitchen or workshop. Broom holder.	Make dimensioned sketch at home to meet individual needs. (Ins.) From sketch (guided by woodworking sheet 11) make working drawing, full size. (Ins.) Get out stock. Square to dimensions 1-6. (Ins.) Lay out channels, first in fine pencil lines. (Ins.), then in knife and gage lines. Saw and chisel channels. (Ins.) Locate holes on top side. Mark slots with knife lines. (Ins.) Bore holes and cut slots. (Ins.) Lay out corners on both sides and chisel to lines, cutting vertically on a waste piece of stock. (Ins.) Locate screws, bore and countersink. Sandpaper. (Ins.) Assemble. (Ins.)
3. 1 Dr., 1, 2, 3, 4, 5, 7, 8, 9a, 10.	Blotter with knob (16-A), $\frac{1}{2}$ -inch sweet gum (1.8), $\frac{1}{2}$ -inch sweet gum (2.2). Class Option.—Shoe polisher (19-A.) (4.8).	Get out stock. Top: Square to dimensions (Directions A). Base: Square to dimensions 1-6. (Ins.) Construct templates. Apply templet to both edges. (Ins.) Back saw kerfs almost to line. Chisel horizontally to line (first bevelling from each edge). (Ins.) Smooth with block plane. Bore for screw in top piece for loose fit. Bore for screw in base for tight fit and countersink. (Ins.) Knob. Design shape. (Ins.) From piece not less than 6 inches long, square to dimensions 1, 2, 3, 4 and 5. Shape sides. Shape on end (optional). Square to dimensions 6. (Ins.) Shape other end. Apply decoration on top piece at the discretion of the teacher. Sandpaper all parts. (Ins.) Assemble. (Ins.)
4. 1 Dr., 1, 2, 3, 4, 5, 7a, 8...	* Bench cradle (19-B), $\frac{1}{2}$ -inch whitewood (10).	Get out stock in one piece wide enough for 2 pieces plus waste. Square to dimensions 1, 2, 4, 5 and 6. Gage maximum width and plane to line. From each edge gage width of pieces on both sides. (Ins.) Mark for bevel on each edge (pencil lines). Plane to lines. (Ins.) Saw between gage lines and plane to widths. Bore for screws and assemble. Bore for dowel. Cut dowel to length and glue. (Ins.)

* To be made only if needed for equipment or as an individual option.

<p>EXPERIENCES. (NOTE.—Numbers refer to Minimum Requirements. "Dr." indicates Drawing.)</p>	<p>ILLUSTRATIVE SUGGESTIVE PROBLEMS. (NOTE.—The number following the name of the wood indicates the number of feet required for 10 boys.)</p>	<p>TYPICAL DIRECTIONS. (NOTE.—"Ins." indicates inspection by the teacher.)</p>
<p>5. 1 Dr., 1, 2, 3, 4, 5a, 5b, 10.</p>	<p>Dibble (32-B), $\frac{1}{4}$-inch hickory or $\frac{1}{4}$-inch maple (18). ("Our Native Trees," pages 276-66.) NOTE.—May be made from old broom handle or shovel handle, 1 inch to $1\frac{1}{2}$ inches in diameter. Class Options.—Rolling pin (3-A), $2\frac{1}{2}$-inch by $2\frac{1}{2}$-inch maple (20 r. ft.), and mallet (21-B), $\frac{1}{4}$-inch maple (12), $2\frac{1}{2}$-inch by $2\frac{1}{2}$-inch maple (6 r. ft.) Jump rope handles, ring toss, pointer.</p>	<p>Get out stock. Square to dimensions 1-6 (omitting block planing). (Ins.) On one side of square piece square two lines which, with the arrises will form a square. (Ins.) Draw the diagonals. Lay off with knife point one-half the diagonal on the edge of a piece of paper. From each arris lay this distance off on one of the squared lines. (Ins.) Set gage and gage light guide lines for the octagonal prism. (Ins.) Plane to lines, holding piece in bench cradle. Remove corners to form sixteen-sided prism, thirty-two, etc. (Ins.) Mark out length of point. Chisel and plane point, first to square. (Ins.) Finish round end. (Ins.) Sandpaper. (Ins.)</p>
<p>6. 1, 2, 3, 4 and 5 Dr., 1, 2, 3, 4, 5, 6, 9a, 9b, 10, 14.</p>	<p>Letter holder (6-A), $\frac{1}{4}$-inch sweet gum (1-8), $\frac{1}{2}$-inch sweet gum (8). Class Options.—Card holder (6-B.) Open-end pen tray.</p>	<p>While still at work on problem 5 design and make at home a free-hand sketch of a letter holder similar to 6-A., without standards. (Ins.) Form corrected sketch make working drawing, full scale. (Ins.) Get out stock. Square to dimensions 1, 2, 4, 5, 6. (Ins.) By means of tracing paper and carbon, transfer design of contour from drawing to wood. (Ins.) Back saw perpendicularly to grain nearly to line. Break out between saw cuts and chisel to line. (Ins.) Mark out channels (gage and knife lines). Cut channels (back saw and chisel). (Ins.) Take cleaning shaving with smooth plane. Sandpaper all parts except those surfaces which form joints. (Ins.) Assemble. Finish with oil, stain or wax. (Ins.) NOTE.—Kamlat may be used by the good workers.</p>
<p>7.</p>	<p>Concrete work. Form to be made of $\frac{1}{4}$-inch country pine (11): Teapot stand, flower pot, teapot tile with wood base.</p>	
<p>8.</p>	<p>Individual Project.—Pupils supplying material: Packing boxes, or other salvaged material.</p>	

SUPPLEMENTARY PROBLEMS.

Trouser hanger.

Match box holder (with brass trim).

Calendar stand.

(From "The Manual Training Magazine.")

Skirt marker June, 1917, page 442

Yarn holder May, 1918, page 327

(From "The Industrial Arts Magazine.")

Yarn holder Feb., 1918, page 76

Towel holder Oct., 1916, page 465

EIGHTH GRADE.*†

The shopwork of this grade should make demands on the pupils for some originality and initiative in selecting and planning for the execution of problems involving somewhat exacting tool manipulation. Special emphasis is laid on joinery and the principles of construction.

From the problems suggested selections may be made from each group. These may be presented to the class as a whole or different problems from one group (beyond the second) may be given to different boys in the class according to their abilities. After the completion of the first two problems, individual options may be allowed in cases where pupils have sufficient patience, strength and skill to produce substantial, attractive and well-finished pieces of furniture without disproportionate demands on the instructor.

To Square to Dimensions. (Same as Grade VII.)

Suggestive Course.

EXPERIENCES. (NOTE.—Numbers refer to Minimum Requirements. "Dr." indicates Drawing.)	ILLUSTRATIVE SUGGESTIVE PROBLEMS. (NOTE.—The number fol- lowing the name of the wood indicates the num- ber of feet required for 10 boys.)	TYPICAL DIRECTIONS. (NOTE.—"Ins." indicates inspection by the teacher.)
1. 1 Dr., 1, 2, 3, 4, 5, 9b, 9c, 10.	Blackboard eraser (21-A). 1-inch rough whitewood (1.6).	Get out stock. Square to dimensions. Mark out rabbet. (Gage and knife lines.) (Ins.) Saw and chisel rabbet on ends. Score out rabbet on edges (chisel and mallet) and finish with chisel. Mark in pencil groove on edges, and gouge to lines. (Ins.) Make template for groove in top and mark on ends. Mark guide lines in pencil. (Ins.) Gouge to lines and to fit template. (Ins.) Round corners with block or smooth plane. (Ins.) Sandpaper. Cut carpet to size and tack it on. (Ins.)
2. 1 Dr., 1, 2, 3, 4, 5, 7, 8, 10a, 11, 13b.	Drawing board and T square (13), $\frac{1}{4}$ -inch white pine (19.2), $\frac{1}{4}$ -inch maple (3.2), $\frac{1}{4}$ -inch maple (2). Class Options.—Checker board. Score and stain squares. Winding sticks, $\frac{1}{4}$ -inch rough butternut and $\frac{1}{4}$ -inch white pine (10.8). Lap writing board, $\frac{1}{4}$ -inch white pine and $\frac{1}{4}$ -inch sweet gum (14.7). Tray.	Get out stock in three pieces. Square to dimensions 1. Indicate with arrow the direction of grain on each piece. Observe grain and annual rings and plane edges to form joints. (Ins.) Glue. (Ins.) Remove glue. Square to dimensions 1-6. Get out stock for cleats. Bottom cleats: Square to dimensions (1-5, Directions A). Chamfer corners. Locate holes and bore. (Ins.) Attach to board. End cleats: Square to dimensions 1, 2, 3, 5, 6. Locate holes. Bore and cut slots. Attach to board. Square to dimensions 4. Sandpaper. (Ins.) T-square. Square to dimensions 1-5 (Directions A). Locate and bore hole in place. (Ins.) Locate, drill and counter-sink holes for screws. Mark and cut corners of head. Sandpaper sides of blade and all but inside edge of head. (Ins.) Locate blade on head and with aid of bradawl drive one screw. Square blade with head and drive remaining screws. (Ins.) NOTE.—T-squares well made should be shellacked.

* See footnote under Seventh Grade.

† Problems may be omitted to give time for the making of articles needed in the school or ordered by the department.

EXPERIENCES. (NOTE.—Numbers refer to Minimum Requirements. "Dr." indicates Drawing.)	ILLUSTRATIVE SUGGESTIVE PROBLEMS. (NOTE.—The number following the name of the wood indicates the number of feet required for 10 boys.)	TYPICAL DIRECTIONS. (NOTE.—"Ins." indicates inspection by the teacher.)
3. 1, 3 and 4 Dr., 1, 2, 3, 4, 5, 7, 8, 9b, 10, 11.	A Bench hook (33), 1½-inch oak; (2.5); ¼-inch oak, (6.4).	<p>Make Instrumental working drawing from dimensioned sketch. Get out stock for board. Square to dimensions 1, 2, 3, 5, 6. Plane thin shaving off each wide surface. (Ins.) Lay out centers for screw holes, bore and countersink. Lay off centers for auger bit, hole and bore.</p> <p>Get out stock long enough for two end pieces. Square to dimensions 1, 2, 3, 4, 5, 6, while in one strip. (Ins.) Sandpaper. (Ins.) Assemble pieces. Mark screw centers on end blocks. Punch or bore small hole. Put on thin coat of cold glue. Fasten with 1¼-inch No. 8 screws. (Ins.) Mark out bevels. Cut with 1-inch chisel. (Ins.) Sandpaper. (Ins.)</p>
4.	Diploma or Picture Frame.—One-half-inch whitewood, (22). (NOTE.—Make size of frame to conform to size of diploma or picture.)	<p>Get out stock in one piece; long enough for one short strip and one long strip, and wide enough for two. Square to dimensions 2. On both sides gage width from each side. (Ins.) Before separating pieces mark out rabbet. Cut rabbet, using gage knife and chisel. (Ins.) Separate pieces. Finish squaring to dimensions. (Ins.) Mark out half lap joints for corners, being sure that slide pieces overlap top, bottom and front sides. (Ins.) Face off pieces. Bore and counter bore for ¾-inch screw through back lap. (Ins.) Fasten together with cold glue. Sandpaper. (Ins.)</p>
5. 1, 3 and 4 Dr., 1, 2, 3, 4, 5, 6, 8, 9b, 10, 11, 13a, 14.	Covered box (10), ¾-inch whitewood or ½-inch sweet gum (24). Individual Option.—Knife box, window box, shoe polishing box, concrete form for flower pot, match box holder, stationery box, feed and suet box.	<p>Design box. Make working drawing.</p> <p>Get out stock for frame in one piece (over twice as wide and over length of side plus length of end, if possible). Square to dimensions 1, 2, 4, 5. Square other end. Lay off length of sides from one end and length of ends from other end. (Rule 6.) Gage width * of frame pieces on each piece. Gage width of frame plus ⅜ inch and saw between lines. Plane to lines. (Rule 3.) (Ins.)</p> <p>Get out stock for top and bottom. For flush top and bottom: Square to dimensions 1, 2, 4 and 5. Saw top and bottom pieces ⅜ inch longer and ⅜ inch wider than frame of box. Clean and sandpaper inside surfaces. Glue and nail frame pieces. (Ins.) Plane bottom edges of frame to fit bottom piece. Glue, nail (or both) bottom piece onto frame with squared end and marked edge flush with end and side of frame, respectively. Treat top in same manner if box is to be sawn apart. (Ins.) Plane projecting ends and edges off flush with ends and sides of box. Gage from top of body for height, and height of cover. (Ins.) Saw between gage lines and plane to lines. (Ins.) Fit hinges and lock, or catch. (Ins.) Remove fittings. Sandpaper and apply finish. (Ins.) Put back fittings. (Ins.)</p> <p>NOTE.—Where the conditions differ from the above the method of procedure should be determined by the instructor.</p>

* If the cover is to be made by sawing the box apart, make width ½ inch greater than the inside height of box.

<p>EXPERIENCES. (NOTE.—Numbers refer to Minimum Requirements. "Dr." indicates Drawing.)</p>	<p>ILLUSTRATIVE SUGGESTIVE PROBLEMS. (NOTE.—The number following the name of the wood indicates the number of feet required for 10 boys.)</p>	<p>TYPICAL DIRECTIONS. (NOTE.—"Ins." indicates inspection by the teacher.)</p>
<p>6. 4 and 5 Dr., 1, 2, 3, 4, 5, 7b, 9a, 9b, 10, 11, 14. Making rabbeted joint and doweling.</p>	<p>Book supports (23), $\frac{3}{4}$-inch gum (6.2) and $\frac{1}{2}$-inch gum (6.2).</p>	<p>Determine size of uprights. (Ins.) (Have grain vertical.) Make drawing of blank. (Ins.) Modify contour of upright. (Ins.) Uprights. Get out stock. Square to dimensions 1-6. (Ins.) Bases. Get out stock twice the length of one base plus $1\frac{1}{2}$ inches. Square to dimensions 1, 2, 3, 4, 5. Square other end. (Ins.) Lay off length from each end and square knife lines. Draw guide lines for taper. (Ins.) Plane tapers. (Nail to waste piece for support if necessary.) Block plane curved edge. Saw and plane to length. Joint: Layout guide lines on uprights with marking gage and knife. Saw and chisel rabbet. Locate and bore dowel holes with base and upright held securely together in proper position. (Devise jig.) Sandpaper. Cut dowels a little longer than depth of holes. Apply glue and assemble. Clamp (devise and use such methods as will insure squareness.) When glue is set, remove from clamps, cut off projecting dowels, remove glue and prepare for finish. Stain and shellac, oil or wax finish.</p>
<p>7. 1.Dr., 1, 2, 3, 4, 5, 9a, 9c, 10, 14.</p>	<p>Inkstand and pen tray, $\frac{3}{4}$-inch mahogany, gum or quartered oak. (6.4).</p>	<p>Get out stock. Square to dimensions 1-6. (Ins.) Lay out grooves and openings for inkwells. (Knife and gage.) Gouge groove (Ins.) Chisel opening for inkwell. (Ins.) (Leave corners to conform to beveled edge of inkwell.) Gage pencil guide lines for bevells. (Ins.) Plane bevells with block plane. (Ins.) Sandpaper. (Ins.) Stain and finish. (Ins.)</p>
<p>8.</p>	<p>Original projects. Pupils supply material; rough packing boxes, etc.</p>	

Individual Problems.

NOTE.—Materials not exceeding 25 cents per pupil in value may be used for some choice individual problem involving construction. Pupils desiring to make projects calling for materials in excess of the above amount shall pay for such excess, if taken from the school stock, at a rate and in the manner authorized by the School Committee.

Following is a collection of suggestive problems which may be helpful to the teacher in meeting the needs and interests of the individual pupils. The designing of proportions and contours to meet individual tastes should be encouraged.

SUGGESTIVE PROBLEMS.

(From "The Manual Training Magazine.")

- Book racks of structural design April, 1916, page 616
- Plant stand May, 1918, page 330

Costumer	Nov., 1914, page 195
Costumer	Nov., 1915, page 206
Temperature alarm	April, 1915, page 524
Chest, clothes	Dec., 1916, page 174
Chest, tool	Dec., 1916, page 172
Brooder coop	June, 1917, page 439
Concrete flower box	Dec., 1916, page 143
Costumer	June, 1916, page 801
Magazine rack	March, 1917, page 312
Magazine rack	Sept., 1915, page 71
Library tables	April, 1916, page 651
Telephone desk and stool	March, 1916, page 578

(From "The Industrial Arts Magazine.")

Cabinets (chafing dish and music)	Feb., 1918, page 72
Chair (straight)	June, 1917, page 258
Electric motor without castings	Oct., 1916, page 442
Evaporators (fruit and vegetable)	April, 1918, page 145
Fruit dryer (portable)	Sept., 1917, page 381
Magazine stand	Sept., 1917, page 379
Ski (with suggestions for bending)	March, 1918, page 112
Telegraph set for an eighth grade	July, 1918, page 274

NINTH GRADE.*

Owing to the varying conditions in the different elementary schools the shopwork for ninth grade boys need not be uniform throughout the city. Where possible, work in shops equipped for some other activity than woodwork should be given. Where only the woodworking room is available the shopwork may include the following:

Suggestive Course:

1. Bead loom, candlestick, axe handle (to fit axe or hatchet).
2. Bedside table, buck saw or turning saw frame, refugee chair, saw-horse, shelf and towel rack.
3. Electric lamp table, refugee table, telephone table and seat, umbrella stand, woven reed seat.
4. Checker board (glued together strips of light and dark wood), clock case, jewelry case, magazine stand, picture frame (half-lap mitre), stationery holder, step ladder.
5. Serving tray (inlaid), tool chest.
6. Supplementary — Joints, (construction and use), home repair work, tool sharpening.
 - (a) Problems closely related to the needs of the times, such as making evaporators for the preservation of fruits and vegetables.
 - (b) Work for the school, requisitioned for by the Master or ordered for stock, such as kindergarten boxes, bulletin boards, jumping standards, blackboard rulers, etc., and repair work.
 - (c) Concrete work, including the making of wood mold for flower pot, window box, bird bath or other suitable problem.
 - (d) The making of jigs to assist in quantity production of articles such as erasers, kindergarten boxes, concrete forms, etc.
 - (e) Problems where boys work in groups somewhat according to industrial methods in which subdivision of labor is an important feature.

NOTE.—In working out "b" the methods suggested in "d" and "e" may be followed.

* Teachers having ninth grade work should confer with the department relative to a course of study that will meet the local conditions.

MECHANIC ARTS COURSE, INTER-MEDIATE ORGANIZATION.

SEVENTH AND EIGHTH GRADES.

All the regular problems should be completed before end of year. These should be supplemented by such production problems as may be needed and by individual problems in:

Home repair work.

Cement work.

Electrical work (simple).

Soldering and riveting.

Glass setting and cutting.

Cane seating.

Tin toy construction.

Soldering kitchen utensils.

Work may be laid aside to do things for Master of school.

Trips to factories, etc. (to be made a basis for written work).

ARTICLES OF INTEREST.

(From "The Manual Training Magazine.")

Books related to industrial arts	Nov., 1916,	pages 102-105
Cane seating	March, 1916,	page 515
Course of study, Seventh and Eighth Grades (1½ hours per week)	April, 1918,	page 266
Gluing devices	June, 1916,	page 771
The Junior High School and industrial education,	Jan., 1918,	page 153
Manual arts lesson plans	April, 1916,	page 594
Germination box problem	April, 1917,	page 339
Organization of projects in manual and industrial arts	April, 1916,	page 629
The Teacher's Need of Practical Experience	May, 1916,	page 721
Reed weaving	May, 1916,	page 690
Rush seating	April, 1916,	page 603
Speed	Feb., 1918,	page 191

ARTICLES OF INTEREST.

(From "The Industrial Arts Magazine.")

Diversified Industrial Activities as a means of Educational and Vocational Guidance for Seventh, Eighth and Ninth Year Boys . . .	Oct.,	1917,	page 385
Practical Teaching at the Stout Institute . . .	Sept.,	1917,	page 366
Printing, A Vitalizer of School Work . . .	May,	1918,	page 185
An Experimental Course in Concrete . . .	Feb.,	1918,	page 44

A FEW BOOKS OF INTEREST.

"Bird Houses Boys Can Build" *	A. F. Seepert
(Many designs, including drawings.)	
"Boys' Book of Mechanical Models" *	W. B. Stout
"Furniture Design for Schools and Shops" *	F. D. Crawshaw
"Our Schools in War Time — And After"	A. D. Dean
Ginn & Co.	\$1 25
"Problems in Woodwork"*	E. F. Worst
Including weaving, basketry, splint work and upholstery.	
"Seat Weaving"	L. Day Perry
Manual Arts Press	\$1
"Problem of Finishing Room" *	W. K. Schmidt
Comprehensive treatise on finishing.	

* In the office.

SCHOOL DOCUMENT NO. 12—1920
BOSTON PUBLIC SCHOOLS
REPORT ON SUPERVISED STUDY SUBMITTED
TO THE BOARD OF SUPERINTENDENTS BY
THE HEAD MASTERS' ASSOCIATION



BOSTON
PRINTING DEPARTMENT
1920

IN SCHOOL COMMITTEE, September 20, 1920.

Ordered, That the report on Supervised Study submitted to the Board of Superintendents by the High School Head Masters' Association is hereby authorized as a school document, and that twenty-five hundred (2,500) copies be printed.

Attest:

THORNTON D. APOLLONIO,
Secretary.

SUPERVISED STUDY.

A REPORT MADE TO THE BOARD OF SUPERINTENDENTS BY A COMMITTEE OF THE BOSTON HEADMASTERS' ASSOCIATION.

In 1919, at the request of Assistant Superintendent Burke, the Boston Headmasters' Association appointed a committee to investigate and report upon the question of supervised study. To avoid unnecessary duplication of results, the committee decided to take as a basis a recent bulletin of the Massachusetts State Board of Education (1918, No. 3, whole number 94), and sent out the following questionnaire to the 105 schools mentioned in that bulletin.

BOSTON, March 1, 1919.

A committee of the Boston Headmasters' Association has been asked to report to the Board of Superintendents on supervised study in the high schools.

In 1918 the Massachusetts Board of Education published an extremely valuable bulletin (1918, Number 3, whole number 94) on "Supervised Study and the Longer School Day." We desire to learn what has been done since this bulletin appeared, and should be grateful for helpful replies on the following topics:

1. The working of supervised study in your school since Massachusetts Bulletin 1918, Number 3, appeared.
2. Changes in your personal views concerning supervised study.
3. Incidents causing or confirming these views.
4. Schools, others than those mentioned in Massachusetts Bulletin 1918, Number 3, on pages 6, 12-13, 18-19, 26-27, 32-33, in which anything of interest has been done recently in the way of supervised study.

In return for the courtesy of your replies, we shall take pleasure in sending you any information resulting from this study.

Cordially yours,

WILLIAM B. SNOW, *Chairman,*
Headmaster, English High School.

JAMES E. DOWNEY,
Headmaster, High School of Commerce.

OSCAR C. GALLAGHER,
Headmaster, West Roxbury High School.

PETER F. GARTLAND,
Headmaster, South Boston High School.

CHARLES W. PARMENTER,
Headmaster, Mechanic Arts High School.

Of the replies received, thirty contained only such answers as:

"We have not experimented with supervised study because pupils, teachers and parents are opposed to it. I personally am in favor of it, and am endeavoring quietly to lead people to my point of view."

"We tried two years ago to put over the supervised plan together with a longer school day, but found opposition which resulted in nothing being done. I am very strongly interested in this work."

"We have not had supervised study in our school."

"I am unable to report any progress with supervised study, owing to the fact that we are trying to accommodate 250 more pupils than we have desk room for."

A few replies state that supervised study seems good in theory, but means more time, more money and more and better-trained teachers to be of practical advantage.

Several replies are similar to the following one received from the Manual Training School, Kansas City, Mo.:

"We have been very closely tied to a short school day, and that has eliminated any chance for supervised study. This school has been studying the question for several months, but has not found a scheme that can be worked."

Here and there a school arranges to give from "several minutes" to "a third" of the regular recitation period to what is technically known as the "assignment" or "socialized preparation" of the next lesson.

The Classical High School, Lynn, Mass., says:

"Our periods are forty-five minutes, and the teachers are giving more and more a longer part of it to assigning the lessons and directing study, especially with the poorer divisions."

An occasional school has rearranged the program or so lengthened the day that one period daily is available for supervised study. Some restrict this opportunity to the "lame ducks." Others plan to have each study get it once a week in turn. One gives it to Latin exclusively, another picks out English, and a third algebra for this special favor.

The views expressed by a considerable number of principals are well summed up by the headmaster of the Hartford (Conn.) High School:

"The data, although interesting, are not as conclusive as one might wish. Nearly all the principals seem to favor supervised study theoretically, but there seems to be little agreement as to the best method of carrying it out, and in some cases the benefits have appeared rather hazy. We do not have supervised study in this school. I believe that it is a good plan if carried out with the whole-hearted support of the teachers."

A very few schools have given up supervised study after trying it. The superintendent at Cheyenne, Wyo., says:

"Doesn't work well unless we have one-hour periods at least. Did not have a good plan and have gone back to the old way."

The principal of the San Mateo, Cal., High School replies:

"We have given supervised study a thorough trial and have come to the following conclusions:

"1. Supervised study is a marked benefit to weak students in that it increases the amount of knowledge acquired.

"2. It is detrimental to all students in that it relieves them of the sense of responsibility.

"3. It wastes the time of the good and excellent students.

"4. It might be advisable in the freshman years where the departmental system is not used in the elementary schools."

El Paso, Texas, has tried in the high school first five double periods of ninety minutes each, and then eight sixty-minute periods in which a portion was used for supervised study according to the discretion of the teacher. The principal says:

"We came to the conclusion here that the shorter day, made up of recitation periods alone, was the better plan. This is due to two factors, the inability of teachers to adapt themselves to the longer day and to proper management of supervised study time, and to the pressure outside of school for shorter time in school. A few teachers seemed to be successful with the two plans which we tried, and a few students seemed to do better under the supervised study plan.

"I should like to try high school supervised study if I had teachers adapted to it and if I had a school and patrons giving co-operation. With conditions as they are, I believe we get better results under the present plan, which provides simply for a student's unsupervised use of his study time either in the library or in a quiet study hall, together with after-school assistance from teachers in whatever subjects he most needs help."

The principal of the Arlington, Mass., High School says:

"This school does not devote time to supervised study. In the hands of a competent teacher it may be very effective, but I wish that the educational departments of our colleges would spend some of their time in teaching their students the best methods in supervised study. The technique of this has not been completely developed, and until we have teachers trained along these lines I am not willing to increase the school session nor to assign valuable time to this feature of school work."

The principal of the Chicopee, Mass., High School is "inclined to believe that the first two high school classes will profit by the establishment of a definite system of supervised

study. The students in these years are more dependent upon the teacher for guidance in the new subjects of study. Where, however, there is a well organized plan for departmental instruction in the upper grades of the elementary school, the necessity of this supervision of study may not be so apparent."

Chicopee has not, however, established such a system, because

"Many of our most successful students find it necessary to give their afternoons to outside employment, and their attendance at school may continue only so long as they are able to secure a financial return in this way. They are of a type who would profit little by the forms of supervised study that have been proposed. Their success later in business or in higher education is due in a measure to the efficient habits of study which their circumstances have obliged them to form. To subject these students to the control of a system of supervised study would be an injustice."

Trenton, N. J., says:

"We have had supervised study for about five years. Last year we arranged for eighty-minute periods instead of the sixty-minute period. We are firmly convinced that the longer period is the best arrangement of time. We have four periods a day, our school day running from 8.45 to 3.20. A recent questionnaire filled out by pupils of the school indicates an overwhelming approval of the plan of supervised study where the teachers do not fail in proper division of time. The whole problem falls or rises in value according to the teachers' interest in this plan of work."

The headmaster of the Charlestown, Mass., High School calls attention to certain dangers:

"We find the teachers regard the supervised study as an opportunity, if they have the energy for it, and as a burden, if they have not. Among the former, we find that there is likely to be active class teaching carried on during the so-called supervised study hour. This has the effect of increasing the student's task rather than lightening it.

"It should be borne in mind that, whereas the adoption of the supervised study plan on an extensive scale would mean

a lengthening of the school day, no provision is made for an adequate pause in the work of the day for food or rest. An hour's intermission might make all the difference between a harassed and nerve-strained body of teachers and a body of teachers in a comparatively normal state.

"The adoption of the elective plan led, in the first place, to such complications of the program as to make necessary a drastic shortening of the period of instruction; then to a demand for what amounts to a lengthening of that period of instruction by the provision of an opportunity for supervised study; this lengthening of the period of instruction not to be compensated for by a diminution of the number of such periods."

The Richmond, Va., High School has a fifty-five minute period, thirty minutes for recitation and twenty-five minutes for supervised study. They have had supervised study since 1916 and the principal says:

"I am more and more convinced that supervised study brings better results than the old plan of the study hall."

At the Fargo, N. D., High School, the principal regards

"supervised study as a permanent institution. It works well and meets with the approval of both students and teachers. With teachers who recognize the needs of the pupils and who are not prone to develop a dependent attitude on their part, it will be a success. The tendency of most teachers is to over-emphasize the recitation period and to encroach upon the time which should be allotted to actual study."

The principal of the Central High School of Minneapolis, Minn., draws two conclusions: First, that supervised study is of great advantage to the first and second year high school pupils; second, that it is not entirely satisfactory in the junior and senior years.

"The ideal arrangement, from my point of view, would be to have supervised study for the first two years, and independent study for the last two. If this could be arranged, I am sure that it would be better than either unsupervised study or the out-and-out supervised study."

From Little Rock, Ark., the principal writes:

"We are enthusiastic in regard to the use of supervised study. It works most satisfactorily in algebra, Latin, English composition, science, commercial work, domestic science and art, and manual training. The slower pupils seem to gain more from the supervised study than those more mature and mentally advanced. The teachers find that the pupils can do twenty to fifty per cent more work than they could before."

The Elmira, N. Y., Free Academy has had supervised study for over two years, with double periods of about seventy-five minutes. The principal finds it

"especially effective in classes in first-year Latin and mathematics. Only a small number of my teachers would be willing to go back to the old system. A study hall in which students are pursuing various studies is an abomination and an anachronism."

The Lexington, Ky., High School, in session from 8.20 to 1.59, divides its time allotted to class room work into four seventy-minute periods daily. Five subject programs are made possible by a fifth block which replaces daily and successively one of the others, thus giving five four-period subjects per week.

"The plan has worked well. My belief in the scheme is more firmly established than ever."

Topeka, Kan., after three years' trial of a sixty-minute period, is trying a sixty-five minute period and considering a still longer one, perhaps of eighty minutes, for next year.

The superintendent at Laramie, Wyo., writes:

"We adopted the seventy-minute period a year ago last September. I think our teachers are agreed that the plan is an improvement over the ordinary recitation plan."

At Baker, Ore., they have introduced five seventy-minute periods in place of the former six sixty-minute

periods. They have had supervised study for three years and the superintendent says:

"I believe that we are getting good results in the system; much better than formerly, because teachers are learning better how to direct study and teach its art."

Huntington, W. Va., also has a school day with five seventy-minute periods, running from 8.30 to 3.25, with an intermission between noon and 1 p. m. The principal writes:

"I know it is the opinion of every teacher on the force that it is far better than the old plan of forty-five minutes for each period. The only serious objection is that the period of seventy minutes is a little short for some of the laboratory work. The biggest task is in getting the teachers to adjust themselves to the change in plan. It is difficult to change the habits of long standing. After the year and one half experience, however, I find all of them becoming more and more enthusiastic over it each day. In all but laboratory work, teachers report that they can accomplish much more than they had ever been able to accomplish in previous years. Last year we had a higher percentage of pupils passing in their work than ever before. To my mind there is absolutely no question as to the value and need of the supervised study plan."

The principal of the Broadway High School writes from Seattle, Wash.:

"We should not care to go back to the old system, as a result of our experience covering about five years.

"Two years ago we changed our sixty-minute periods to seventy minutes. Sixty minutes was too short, and we think that eighty would be too long. Our school day proper lasts from 8.50 to 3.10, thus providing for five periods and a half-hour lunch period.

"We also provide a fifty-minute period at 8 a. m. to accommodate students needing early dismissals to go to work. No attempt at supervised study is made in this period. It is a makeshift which we hope to get away from some day.

"We are now confirmed in our opinion that advanced students do not profit much by the arrangement, but certainly

the first and second year pupils gain enough to offset the inconvenience that may be imposed upon upper classmen by it."

The Emporia, Kan., High School has had supervised study for three years. The principal writes:

"Supervised study is accomplishing much more good than the old plan. Our teachers are of the same opinion. There is a regularity about it which is not found under the old plan. However we find one difficulty about it, that some of our teachers have a tendency to use some of the study period for recitation work."

The tendency to encroach on the study period is also emphasized by the principal of the Virginia, Minn., High School, who says:

"Only last week I held a series of meetings on the plan, as I found it was being abused by using the study part for too much talking and reciting. We still believe most heartily in the plan."

For the following statements from New Britain and Bristol, Conn., we are indebted to Principal F. R. Willard of Watertown, Mass.

New Britain has double periods of sixty-nine minutes, forty for recitation and twenty-nine for study. A proposed new schedule gives thirty minutes for recitation and thirty-three for study. The principal says:

"It seems hard for some teachers to realize that much of the work which we have been doing as class work is individual work and should be so treated. When from the old fashioned recitation we shall have eliminated all work which is properly individual and without any considerable class-connection, thirty minutes will be in my opinion enough time."

A teacher writes:

"At first the longer school day was very tiresome.

"1. It required more energy mentally and physically to supervise study than it does to teach.

"2. The pupils often wanted to study for their next recitation instead of preparing the next day's lesson in my subject.

"3. The pupils watched others, and worked so slowly that they had only begun to get a lesson when the bell rang.

"4. They wanted to have all little difficulties explained, with little effort on their part.

"However, as we have become adjusted, I find:

"1. I have become accustomed to giving the extra energy for supervised study, and find that it helps with marking to know what each by himself can do.

"2. The pupils have become accustomed to studying the next day's lesson, and want to do my work and know that they are progressing in the right direction.

"3. Usually part of the pupils get all the work done, and most of them get enough done so that we can have a good recitation next day even though no more time is spent in preparation.

"4. By educating the pupils to believe that the teacher is only going to suggest and correct and not actually do the pupil's work, the latter learns to depend on himself, and likes to bring a finished product of his own up for approval.

"5. The teacher has a splendid opportunity to learn the pupil's difficulties and explain them away; to know the pupil and to let the pupil know him."

Bristol, like new Britain, has a long day with a double session. The principal finds an eighty-minute double period too long, and they are likely to reduce it. Teachers are much divided on the questions whether pupils use the supervised study time to better advantage than study time at home, and whether better results are obtained with an added study period and a longer school day. Latin I, first and second year mathematics, freshman English and bookkeeping are mentioned as subjects in which the work seems better than before. Some consider the supervised study periods easier, and others fully as hard as a recitation.

A system of supervised study was introduced into the main building of the Boston English High School in September, 1918.

To avoid lengthening the school day (9.00 to 2.45) three only of the five daily periods were made seventy minutes in length, two of them divided into thirty-five

minutes for recitation and thirty-five for study of the lesson just assigned during the recitation-half of the period. The third double period comes at the end of the day, and gives a forty-minute recitation unit and thirty minutes only to the study unit. Pupils who are passing in every subject are allowed to go home instead of remaining for this study unit. In this way teachers devote the last thirty minutes daily to the pupils (forty to forty-five per cent of the membership) who are failing in one or more subjects. As there is a rotary program, each class in turn comes once a week at the end of the day. Every class thus gets 100 minutes a week for supervised study, unless the pupil is passing in all his work, in which case he gets but seventy. The capable pupil whose work in a particular subject is satisfactory may further be excused from a thirty-five minute supervised study unit if he wishes to attend at that time a class in public speaking or one of the literary or scientific club meetings.

After six months' trial, teachers and pupils were requested to give their opinion of the experiment, pupils not being asked to sign names. About 200 pupils expressed no opinion. Of the 853 who did, 518 voted in favor of the plan and 335 against it.

The different opinions expressed are shown by a considerable number of quotations from the replies of both pupils and teachers,—quotations which the editor has treated with the utmost respect despite certain rather unconventional expressions. We give first the favorable statements of the pupils, grouped under convenient heads.

A. Help from teacher.

"Pupils have not learned how to study and cannot get their mind to do this studying in a coherent manner. By supervised study a pupil can learn more and understand better, and therefore receive better marks."

"The pupil can get information from his teacher concerning the subject."

"I believe that the supervised study is beneficial to the average student, for he has a teacher always on hand, and so, if any technical point comes up and is hard to understand, he has the help needed."

"I do not think that this method of studying tends in any way to lessen the amount of study a boy does at home, and I know that for my part it has tended to help me do my lessons at home with a better understanding of the subject."

"Supervised study has been good because the work which I did during that period I appreciated most. You have the advantage of asking special help from the instructor, which is really a great help in many cases. At home, if the rest of the work depends in any way upon a doubtful point, you may do the entire home lesson wrong. If you can ask help from your teacher this possibility is in a way avoided."

"You have the opportunity to get real individual help from your teacher, which you cannot get from the regular study period. In a regular study period you would naturally waste time, but in supervised study the teacher takes more interest in your work because it is the subject he is teaching."

"It enables him to ask more and fuller questions which the teachers gladly answer."

"It helps a boy to get his home lessons done the same day they are assigned."

"It enables a boy to get better marks by asking the teacher for help during the study period; it also enables him to do his home lessons so that he can have more time for himself. I think it should be adopted in all the schools."

"I believe that the supervised study periods are very helpful. During these periods I have been able to do a great deal of my home work and with much better results because there were the teachers ready to help me. I used to sit up late nights doing home lessons, but since the era of the supervised study period I have been able to save time without any loss in workmanship."

"I have found the supervised study period a great help this year, and I am strongly in favor of its continuance. In past years I have found it very difficult to make out certain passages in the foreign languages that I was taking. This year I was

helped by those subject teachers and consequently saved time, and my marks in those languages have improved."

"Supervised study is a great improvement. In former years if a boy was unable to understand examples he had for a home lesson, he relied on what he knew, but now he can receive help from the teacher and get along easier."

"In my opinion the supervised study period is an excellent plan and should be kept up for the following reasons:

"1. It gives a boy a chance to do part of his home lessons in school; if there are any hard parts in his home lessons he is able to get extra help from his teachers.

"2. There are many boys in this school who work evenings; by giving them a supervised study period it gives them a chance to do their home lessons, whereas they would otherwise not do them."

"We need the supervised study because a fellow might miss something in a recitation; then by having a supervised study he can get an explanation in this period."

"A flunker has a chance to receive all the help he needs in the subject he is flunking in. The supervised study period is more of a help to the flunkers than to the smart boys, because generally the flunkers would not do their home lessons outside, while the supervised period gives them a chance."

"Mainly three advantages:

"1. The home lesson is lightened considerably.

"2. No subject can be slighted for another in the matter of time.

"3. The lesson is fresh in the mind and reflection on it in the study period will clear up many points which if left until later would present difficulties. Therefore I firmly believe that the supervised study plan is at present a success and will be so in the future."

"Very advantageous because a pupil can do his home lessons and get coaching when in difficulty. Additional help means less flunkers."

"The supervised study hour is extremely helpful to me both in doing my school work and knowing what I am doing. There is plenty of opportunity for having puzzling things explained to me, whereas in ordinary study hours that cannot be done because the right teacher is not present."

"Pupils can get information on the home lesson when they need it, while at home they have to wait until the next day, and then it is too late. It gives the pupil satisfaction to know that his home lessons are nearly all done before going home."

"I have learned more on account of having the teacher right there handy to answer any questions about the lesson."

"I can accomplish more in the supervised study period than in twice that time at home. Everyone hates home lessons. It is much easier to do the lesson in school. Then you can get help from the teacher. That is quite a help."

"I think that supervised study is a good plan for the following reasons:

"1. A boy who attends strictly to his work during the study period perhaps will be able to finish his home lesson for the following day, but if not finished surely one half finished.

"2. If there is something in the lesson which he is in doubt of, he has this time for having it explained for him by the teacher.

"3. A boy who has a regular study period with an English teacher may wish to ask a question in some other subject which that teacher does not know very well; then he does not have it explained clearly.

"4. Boys may come from a home where there are youngsters running and playing and preventing him from doing his lessons; while in the school room he will not be disturbed.

"5. Boys who flunk because they do not do their home lessons are under the authority of a teacher in school, and the teacher can make them do their work during the study period.

"6. Boys giving the excuse that they had no pen or ink at home get no satisfaction because they should do most of their work in school and prove that they did all they could in the supervised study period."

"These supervised study periods should continue because:

"1. At least one half of the home lesson is done in the room.

"2. A little time is saved at home.

"3. A few more minutes are thereby put on some other lesson.

"4. The time is evenly distributed on each lesson.

"The plan of supervised study is a very great help to the fellow who wishes to glance over his home work for the next day. If there is a very difficult problem which he could not

work out at home, he has a chance to ask his teacher to give him a little help. When fellows are in a supervised study period their mind is on a subject which has just been taught them, and it takes no time to set their minds working on the home lesson for the next day, but it gives them a chance to look over the home lesson in which they failed. If a fellow has a study period in another room and he is studying commercial law with a teacher who is not acquainted with that subject he will have to wait until he gets a chance to speak to his commercial law teacher before he can have his question answered. In my mind the supervised study period is a very good plan."

"I think the supervised study is one of the best plans which can help a boy in high school towards better scholarship. It helps to acquaint both the boy and the master with each other. This gives the master a better chance to know the weak and strong points of the pupil, and gives the pupil a chance to become more familiar with the teaching of the master. It gives the boy a chance to place his mind firmly on the subject he is studying. It gives the pupil a chance to find out the points which he does not know about the previous or advance home lesson. It gives all the boys some study hours."

"I think that the supervised study period has its advantages, because if you are studying and come across a difficult question you can ask the teacher and he will tell you all about it; otherwise one would have to wait until the next day and leave the remainder of his lesson undone. I prefer the supervised study period rather than the plain."

"There are some advantages to the supervised study plan, because you can ask your French teacher about French and he will be willing to answer it. But if you ask another teacher about it while you are in his room he will say to you, 'Ask your French teacher about that.'"

"When a boy has just had a thing explained to him it is much easier for him to sit down and work out a few problems of the same kind than to wait until he has gone home and forgotten all about it."

B. Teachers require study that would otherwise be evaded.

"I am in favor of supervised study because the large number of pupils if left to study alone will not do so."

"In school the teachers see to it that the boys do their lessons whereas at home they have a tendency to do other things."

"Many boys work after school and when they come home from work they feel tired and would neglect their home lessons, but with the supervised study they do their lessons in it."

"A fellow who is flunking has to study in the supervised subject because the teacher sees to it that he does study."

"The majority of boys would not study the required amount at home because they have no one to make them, whereas in school the teacher has a right to make you study. Some boys that I knew last year flunked because of not studying home lessons. This year they are passing in every subject. They do some of their lessons in these supervised study periods and finish them at home."

"First, the boy has a long period to study the subject; second, the supervised study makes the boy study that lesson while he is in that room, thereby he will not skip doing it when he goes home; third, it gives the boy more time for himself at home to work and do other useful things. These three reasons are sound, and the boy who objects to this plan is a loafer and wishes a longer hour to read a novel because the teacher does not look to see if he is studying any special subject."

C. Supervised study saves time.

"A large percentage of English High School boys could not go to school if they did not earn something for themselves. These supervised study periods give a boy a chance to do his home lesson directly after the subject. In this case the boy who works after school has nothing to worry about."

"Many times if I had not done my lessons in school I should not have been able to do them at home, for important business matters would arise."

"A boy who works after school and is not able to devote much time to outside study can do at least one half his home lessons in class; second, in school there is more of an atmosphere of study."

"It allows a boy who works to do much of his home lessons

in school: I work nights, and if it were not for the supervised study I should not be able to do all my lessons."

"In the supervised study periods the boys can do much of their home lessons and have time to ask the teachers questions concerning their work; otherwise they would have to do without help until the next day. In my case I have more time for outside business which I have to attend to, and more time for athletics and exercise."

"I believe that the supervised study periods which we are now having are a great benefit for the boys who work nights. These boys, as you know, are very tired after they are through work, and do not feel like doing their home lessons. But in this supervised study they can do their home lessons for the next recitation."

D. Concentration is easier.

"In the evening, after being out of school for three or four hours, it used to take me fifteen or twenty minutes to get my mind down to studying, and after putting a half hour or so on one subject, I would often get confused, especially in languages, on doing my next home lesson. But with the supervised study period, after having a recitation on a certain subject, it is fairly easy for one to concentrate his mind on that subject for a half-hour or more, and to get some real good out of that extra studying. Another benefit is that it makes us get down to real hard work in a specific time. For instance, in my English division, instead of giving out a home lesson, the teacher gives us an assignment and we have to hand it in at the end of the period. If this piece of work were to be done at home it would probably take much longer to do it, and maybe it would not be done so well."

"The pupil's mind is on the work, as he has just recited on that subject that he is supposed to be studying. He can do at least one half of his home work."

"When a boy becomes interested in a certain piece of work, he can continue it during the supervised study period, whereas if he went home he would forget the subject and lose interest."

E. It is convenient for making up back work.

"If a pupil is out and has lost some explanation he can get help without coming around after school. If a home lesson

example is not clearly understood the teacher is there to help. The supervised study hour is a good thing for the fellow who works after school, because he has a chance to get some of his lessons before leaving the building, and therefore has more time to put on his other lessons after work."

"It also enables boys backward in studies to catch up with the rest of the class during school hours, which appeals to them more than staying after school."

"The supervised periods are quite necessary for those who are back in their work in different subjects. Some of the students of this school I know did not have good fundamental explanations in certain subjects. When they have these periods they have an opportunity to make up the amount they lost."

F. Some boys feel that work done in the supervised period is more likely to be honest.

"Boys do their home lessons honestly, instead of copying from some boys."

"It gives a pupil a chance to do his own home work instead of copying from someone else."

G. A somewhat slow boy finds this advantage in the plan.

"When tests are given and I need more time, I may use part of the supervised study period to finish."

H. Many boys think school is a better place than home for study, a preference which would not apply to supervised study only.

"In school the teachers see to it that the boys do their lessons, whereas at home they have a tendency to do other things."

"I believe that supervised study is better than studying at home, because although when I took my books home I had the best of intentions, I hardly ever studied them. I think that I get higher marks, as one can concentrate better in the study time in school."

"The working chap is helped a great deal. I think a fellow will do more work in school in that period than he will at

home in double the time because he has greater facilities, a comfortable seat, ink, books, etc."

"The student is able to make more progress because he is in the place where he can study under favorable conditions. At home a boy has a great many things to distract him from his work, while in the schoolroom everything is in his favor. The fact that there is someone (the teacher) in the room that knows the subject and can help the pupil in knotty problems is also a great aid."

"I also find that at school I can concentrate upon my subjects during the study period better than at home, because it is quiet and I have no other cares but that of my school work on my mind."

"It enables a pupil to gain the right method of studying, besides insuring that his home lessons are done. The school room is, in most cases, a more suitable place for study than the home, for there are liable to be many interruptions at home. There is also the advantage of having better equipment in the school, and usually better light."

"It gives the boy a solid period of study in which he can concentrate his thoughts to the best of his ability, for it is always quiet, and there are no interruptions."

"If he is in school and tries to leave the lesson for later, while other boys are doing their lessons, he soon becomes tired of doing nothing and does at least part of his lesson."

I. One enthusiastic boy declares:

"I think that the supervised study is one of the best movements that this school has undertaken. I know that it has helped me tremendously in my work."

Others less certain speak as follows:

"I think that the supervised study period is a help to the poor student, a hindrance to the good student, and of little aid to the mediocre student."

"It seems to me to be fifty-fifty — some good and some bad."

J. The plan makes for a fair distribution of time.

"It makes each pupil put some time on every subject. Under the old system of allowing a pupil to study when he

pleased during the study period, he usually studied the subject which he liked best, devoting little or no time to the subjects which he disliked, and therefore was getting poor marks in. Now he cannot do this, for he is forced to give himself a fair chance for good marks in every subject."

DISADVANTAGES.

Most of the bad is centered about the point that all treatises on supervised study emphasize especially — too much talk on the part of the teacher. Teachers were warned particularly about this at the beginning of the experiment, but evidently have not yet learned the lesson. A majority of the boys express such views as the following:

"As it should be carried out I am in favor of it. As it is being carried out I am against it. By this I mean that the plan is not being carried out by the teachers as it was meant to be carried out. Most teachers take up half the study period with recitations or lectures which should have been made the first half of the period."

"The teachers very rarely allow their class the privilege of the supervised study. This makes it very much harder for me than previous years I have been in this school. Very few of the teachers complete the recitation during the first half of the double period, most of them keeping on until half or even more of the supervised study has been consumed. Then it is too late to do anything, the result being extra work to be done at home."

"The work of the first half of the period runs over until or very nearly until the completion of the supervised study, so we get only rarely a study period."

"The supervised study period has been a benefit to me, but one disadvantage appears when the teacher takes the liberty of trespassing within the limits of the supervised study period and completes a recitation in it. I believe that no teacher has a right to do this. The bell announcing the study half of the period should stop the recitation just as though the pupils were leaving that room to study in another."

"Most teachers do not give the boys the time, but utilize it for work to be made up or other things which do not concern the class as a whole."

"Most of the teachers somehow forget that there is such a thing as supervised study. They say, 'H'm, double period! Test today, boys!' Now I don't want anybody to think that I am kicking, because I enjoy tests as well as anybody, teachers included."

"The teachers very often use this period to teach in, and this has two evils: First, the pupils is cheated out of the greater part of his study hour; the second, the teacher has been able to cover more ground so that the boy has a longer home lesson."

"Out of the five teachers that I study with, only one stops the recitation when the bell rings for study. The others continue the recitation or explanation or oral theme work until ten or fifteen minutes before the last bell rings. Some do not even get through at that time with their explaining."

"If we were given the hour for study, as we are supposed to have been, it would be the best system I have known."

"Some of the teachers use up the study period any way they wish. If the teacher would not do this it would be a great thing."

"The disadvantage is that some teachers think that the period is made to give two home lessons a day, one in school and one at home."

"I am taking four subjects and only two of my teachers give us the study period. One of the others gets kind-hearted sometimes and lets us have it. The other makes us write the whole period."

"'Supervised study' is a misnomer. There is a tendency among the teachers to take advantage of this period and devote it to regular recitation work. I have five teachers. Four of these teachers regularly use the extra period in conducting recitation work. The other teacher allows the extra period for study."

"Some teachers give you work for that period besides giving you a home lesson. You hardly ever get the study period."

"The chief dislike I have for it is that the teachers do not know enough to give it to us, and believe me it is just like robbing a fellow of his rights. I hope it will continue and be done right."

"It would be better if the supervised study took up about one and one half hours and the recitation period about ten minutes."

This boy wants more study and less talking, evidently.

"I hardly ever get a chance to study in the room. The teacher usually takes up the time in one kind of work or another."

"The teachers take up from five to twenty minutes every day assigning home lessons."

"Many teachers have taken advantage of it and have turned the supervised study into a recitation. As a result of this the student leaves the recitation room with a fagged brain and in the next recitation probably falls down."

"Most of the teachers do not give you the supervised study; they keep on with the lesson and forget that the latter part of the hour is supposed to be devoted to study."

"Some of the teachers have a tendency to use up some of the supervised study period talking and explaining where no explanation is needed."

"The system has not been carried out as you outlined it to us when it was first adopted. The trouble is the teachers in their zeal cannot resist trying to teach us more than we can possibly absorb, and to further this desire they do not notice when the supervised study approaches. If a pupil ventures to suggest that it is time for the study hour to start, it is looked upon as a Bolshevik threat, inasmuch as it is the will of the majority and has nothing back of it. As I am not against the system, I can only suggest that you read the riot act to the teachers concerning the study periods."

"If the teachers would co-operate, this plan would be wonderful, but as they do not, and evidently have no intention of doing so, this plan is very poor."

"In P2 the teacher starts the recitation, then experiments, assigns the home lesson, which he never forgets, about five

minutes left, so he says, "Take a study period until the bell rings." If we do not understand anything, how can we all ask him questions in five minutes?"

"Many fellows fool away the supervised study period because they do not know how much time they can count on, and would rather do nothing than try to do the home lesson."

"Some of them tell us that while they are telling us certain things not connected with the next day's lesson we are getting valuable information and therefore should not mind the loss of the period for our next day's lesson."

"Out of the five teachers that I have, there is only one who always allows us that time for study. Two of them sometimes do and sometimes do not allow the time, and the other two never do and I suppose never will give the time at all."

"In one of my rooms the teacher says: 'You cannot have a study period till we get through with today's lesson.' He doesn't care if he always takes up the supervised study period."

"The teacher gives us home lessons taking about three quarters of an hour, expecting us to do them in the study period. Then he begins to talk on all subjects and pester the poor human being who is supposed to be studying. Of course some of the teachers who have some heart for their pupils stop talking as soon as the bell rings. The other kind I guess like to hear themselves talk, so they make us the victims for thirty-five minutes. Of course the teachers are the rulers, and we have to stand it."

"The other day I got a rather big home lesson in English, and when one o'clock came the teacher kept right on with the recitation, saying that he could not afford to give us our study period."

"The study period has been a joke. Some teachers have taken the period in directing the class, others have taken it to give tests or even oral tests. Give the study period another chance in a good system, that is, have the students study!"

"Four out of five teachers continue the recitation during the entire double period with the intention of giving a shorter home lesson, but when the period is ended the home lesson assigned is just as long as usual."

One pupil takes a fair shot at the official who has permitted this abuse of his boys:

"Discipline is used to see that the boys study the subject they are in, but the headmaster does not enforce the law to such an extent as to see that every teacher stops the recitation the minute the bell rings at the end of the first half."

The headmaster contritely acknowledges his shortcomings and will endeavor to do his duty better in the future.

The first thought that occurs in connection with these complaints is that any attempt at class instruction during supervised study hours should be absolutely forbidden. But there are undoubtedly times when group preparation and help are most effective. This view appears in the following quotations:

"I think the teacher in charge should go over the lesson assigned for the next day with the boys and explain and show the difficult points to them."

"I think that instead of a study period as they are it would be better to put the period in on a review of the subject. This should be done by quick calling around the class to keep the boys 'on their toes,' and no marks should be put down. I do not feel that one boy should take the teacher's time when he is able to go at 2.15 for his individual instruction."

"I should prefer a longer recitation hour, and in such classes as I am in where most everybody is on the job, I should gain a great deal more than from the supervised study period."

"There are some teachers who, instead of giving a study hour, give valuable information on the subject they are teaching. This information is very instructive."

"One of my teachers has a very good method. Instead of letting fellows study by themselves, he goes right on with translating or notebook work, and much can be learned in this small amount of time. This does not allow the fellows to talk and kill time as is done in other classes."

"In my opinion supervised study is much better than studying at home, and I know that the method employed by

Mr. X has helped me a great deal. The boys can get more good from his method than any other. He points out the important things, and by refreshing these points at home we are pretty sure to remember them the next time. If we were to study by ourselves we should not know these important points, and in that way we should not gain knowledge as fast. We should not be able to do our lessons for the next day as easily. I am entirely in favor of the supervised study method because I can get more good from it."

"I study more under this plan than I should otherwise because I understand just what I am studying. The teacher explains it and then questions are asked, and by so doing the hard parts are made easy."

"Instead of having the study period where you do all the work yourself, it would be more advantageous to have the teacher do the work with you, since the teacher is always likely to find more difficult points which need special attention than you are."

"I think that supervised study should continue even if the teacher does use the study hour for a recitation, for the pupil is able to get more benefit from his work since the teacher has more time. Also, in the previous high school years subjects were not taught as they should be, and most of the time which is spent in the third year of high school consists of studying that which we should have had in the first two years. An excellent illustration of this is the study of French."

Next to the objection that teachers run the recitation over into the study period and so rob the boys of time that the latter need for study, the chief complaint is that boys wish to study any subject they choose and not be restricted to the subject of the teacher in charge of the period. They say:

"I think that last year I received better marks because if I had a study period I could prepare for the next period, but this year I can only study the subject in which I am that period. In a certain room if we want to we read Spanish magazines the second part of the period. Friday we have the supervised study period, and if you do not feel just like studying Spanish you would forget the Spanish you studied by the time you reach

class Monday morning. If we had the former method of study periods we could study Spanish the period before we had Spanish."

"Some lessons can be done with advantage at school, but the majority can be done much better at home."

"Were pupils allowed to study the subject which comes after the study period during those study periods, it can be clearly seen that each boy would be more prepared in his studies."

"A boy usually knows what he needs to study and what he would like best to study. He might not have to study one subject as much as another, and therefore the time put in on the subject needing less study would be wasted. A pupil knows his condition of studies more than the teacher can guess on, and he ought to be left to do his studying in his own systematic manner."

"A good improvement I think would be to let the pupil study what he wishes and not be forced to study that which he does not want. A good illustration would be in the history class. The home lesson for the next day requires a lot of work to be looked up in the library, owing to the fact that the history books of ours are too detailed. But still the history teacher insists that we study history in the supervised study hour."

"Sometimes the pupil does his home lessons at home. I think that most of the boys had rather finish up the easier lesson and get the harder lesson at home; besides, sometimes a boy has neglected to do a certain lesson at home, or for some reason or other has not finished it. Then he would like to finish it in school, which is against the rule."

"Many a time I have wanted to look over my French to prepare for a test, but as I was getting out my book the teacher would yell at me, 'This is a bookkeeping period now.'"

"There are many times that come to me when I wish to study some other subject than French during the French supervised study period, for the following reason. As history follows French, I believe I can make a better preparation of the history home lesson by reviewing it just before entering the class."

"The pupils have certain studies that they would like to do at home, and when the supervised study comes along they have to study that subject in school."

"One is compelled to do certain work that he could do much better at home. For example, mathematics, physics, English, or any other written work can be done in class, but French, German, history or any other work that is entirely study can be done much better at home, where one can get more concentration. When I have a supervised study period in German, I look at the type and translate about a paragraph in thirty minutes, while at home in thirty minutes I could translate a couple of pages."

Complaint is made that the thirty-five minute period is too short for study.

"A half-hour is not sufficient time for one to do a lesson."

"The supervised study periods are so short that it is difficult to accomplish much and most of the work is left half done."

"It is very hard to do a whole home lesson in one period of thirty-five minutes.

"Sometimes we do not finish the home lesson and so we have to take home three or four lessons that are half done."

"Boys who are naturally good in some subjects or who are failing or doing poorly in another can spend their time much more profitably in plugging on their weak subjects during the supervised periods they now have in their strong subjects. Again, the time of a supervised study period is so short that many fellows do not buckle down to work, saying 'it is not worth their while.'"

Some, however, find the period all too long, instead of too short.

"If a boy is studying one thing for an hour or so, he will get tired of it. During the latter part of the fourth period, most of the boys keep their books open, but have a very hazy idea of what is in the book.

"Some lessons a pupil can do better at home, with nobody to bother him, than he could do in school. Oftentimes a fellow gets the home lesson assignment done and would like

to spend the remaining time on some other subject, but by the ruling he is required to spend his time on the subject that he had before — that of the supervised study period.”

Indeed, some, with yearning for earning rather than learning, would fain abolish all study time.

“If this system was discontinued, pupils who work after school would be able to get out earlier and earn more.”

“If he is allowed to go home at twelve, if his recitations are through, he has sufficient time to study, work and get recreation.”

The supervised study may inspire over-confidence.

“A bad effect of the supervised study hour is that the pupil thinks that when he has studied all the hour the lesson is done, and so he leaves his work at school with the result that he forgets what he thought he knew and flunks in his recitation.”

Some believe that supervised study for upper grade boys smacks of “soft pedagogy,” but others contend that boys do not ask questions enough to profit by the opportunity. The same boy defends both theses when he says:

“4. Help obtained from teachers is very little, *i. e.*, pupil seldom asks for help.

“5. Promotes laziness, for pupil, when stuck with problem or hard piece of translation, instead of working it out, merely gets the teacher to do it for him.”

“I do not think the teacher is able to help the students so much as is said, and also the pupil does not learn to rely on himself, but meeting any difficulty, he goes to his teacher who solves it for him.”

“I believe it brings about a good deal of bad. It retards the boy's initiative and ingenuity, matters which are the main objects of all education. As soon as the boy meets an obstacle in the home lesson, if he happens to be in a supervised period of that subject, he does not gain and try to overcome his difficulty. He shirks it by going to the teacher and having him explain the difficulty. Yes, indeed, supervised study helps

the boy to his lesson. But is doing the home lesson the object of the English High School? I am quite sure it is not. It is needless to say that overcoming individually difficult obstacles in any sphere, educational, business, literary is worth 100 times more than being ferried across a thousand."

"In my opinion the supervised study does not benefit the students, for very few of them go to the teacher during the study to inquire about the lesson."

Certain criticisms show the pupils to be observant of both excellencies and defects in their instructors. Complaints of lax discipline are not infrequent.

"Most of my instructors never pay the slightest attention to what the boys do in class during supervised study periods."

"I have seen several times that whenever the teachers would give a study period in history the boy would begin his mathematics or German, thereby not gaining the advantages of the idea. Other times I would see him rushing through both his mathematics and history."

Dawdling during the recitation period is given as a reason for robbing boys of their study period.

"More work could be pulled through in the thirty-five minutes. For instance, the French class had two pages of translation for a day, and the bell rings at 9.52, leaving only one page of translation finished. If the class had not a study period in the other thirty-five minutes, the other page could have been finished."

While many boys say that they like to study at school because it is quiet, some have the opposite experience.

"A study period under the old plan possessed the property necessary to a perfect condition for studying — quiet. In the average supervised study period this condition is not present. Pupils are continually asking the man in charge to explain such and such a point. This is an interruption. The reply is another interruption."

"A boy can study better at home because a class room is usually a noisy place, because boys begin to whisper."

"Doing home work during a supervised study period sometimes is harmful for the simple reason that there is lots of noise, making one unable to study as well as in a quieter place. But this does not happen every supervised study period."

"Most boys, as I have seen, always talk, or read something else beside that supervised study."

"One point is that boys waste time and fool instead of asking questions about the home lesson or doing the home lesson."

"I think that the supervised study period is a big advantage to any boy, that is, in a room where the teacher can handle his boys."

Boys like to have their teachers "on the job."

"The opportunity is taken by the boy and the teacher to take a rest. The teacher goes out of the room, the boy takes the opportunity to read a book or to study some other subject. That is the teacher's fault. On the other hand, if the teacher stays in the room, ready to help anyone on his lessons, that opportunity should be taken, but it is not, not to any great extent. That is the fault of the pupil."

"Unfortunately those periods do not do us any good, for the simple reason that we are in a room where there is either no teacher at all, or if there is a teacher he has so many pupils that he could not attend to them."

Replies are characterized by frankness that might give some of us a chance to see ourselves as others see us.

"Mr. S. runs over into the supervised study too much. So does Mr. G."

"Mr. B. runs the recitation into the study, but lightens the home lesson proportionately."

This refers to an English teacher whose method of having themes for the next day written in the supervised study period was favorably mentioned by another pupil. Another boy says of the same teacher:

"In my E5B I sometimes get the study period, but Mr. B. regulates his work well, giving every fellow a square deal. He

sometimes gives us written work that takes the whole period, but I do not mind it because it gives me more time to think. Leave it to Mr. B.— he knows.”

This youth sizes up his other instructors as follows:

“When the teacher conducts the recitation way into the second part of the period, calling a boy, receiving the answer, then calling on another, etc., throughout the class, not giving the students a bit of information in regard to study work or home lessons, then I object! Sometimes Mr. W. conducts the recitation until 10.15 (supervised study period, 9.52 to 10.27), and then says: ‘Take the rest of the period for study.’ Besides doing this he piles on work for the home lesson, part of which was supposed to be for the study period. In my Spanish class (Mr. C.) I get the regular study period with all the benefit I can possibly receive. In F8S I get the regular study period with the teacher’s kindly co-operation. He (Mr. S.) is a prince when it comes to that. In E3L I get my regular study and the teacher’s team work.”

“Mr. M. gives us about ten minutes in which to study and he gives us that mainly because the boys ‘kick.’ On the other hand, Mr. C. stops at the exact ringing of the bell, and then some of us (I included) ‘kick’ because he stops too soon, so the subject may have something to do with the amount of work the boys want.”

We now turn to the teachers and see what opinions they express.

“As applied in high schools to second, third and fourth year boys, I regard it as ‘soft pedagogy,’ that enervates instead of strengthens, that gives no opportunity to develop initiative and independence, and that sends the boy out of school without having accustomed him to work without props and without compulsion.”

“Typewriting, shorthand and bookkeeping are routine and in a sense mechanical subjects. They require constant drill. The lengthening, therefore, of each period of instruction makes the subject monotonous and wears out the patience and interest of pupils.”

A view exactly opposite is expressed by one who says:

"I consider the supervised study hours especially valuable for bookkeeping classes. Part of the bookkeeping period has always been figured as supervised study, but a single period is too short a time to accomplish much in bookkeeping. I wish that all the periods were double. It is of great importance to the poor student to be able to clear up his difficulties immediately. Nine times out of ten he will forget to ask for any explanation of hazy points the next day. In my opinion it does not decrease the power of independent work; it helps the poorer pupil; I think results are somewhat better."

Another teacher of commercial subjects says:

"I do not think, in my own experience, that supervised study has decreased the power of independent work. The subjects I teach (typewriting and advanced phonography) are largely supervised at all times. In typewriting the extra time on this subject ought to show good results next year in advanced work. I am in favor of the supervised study period when properly conducted."

"Typewriting has always been a supervised study, and the only change has been to add to the time given to the subject. The pupils have done more work, but I do not think that they have acquired greater facility and accuracy than have my classes in the past.

"The result in commercial law has been that the pupils have *studied* law, have asked for more help, and have progressed more rapidly, with a keener appreciation of the subject.

"Properly used by the teachers, I believe that supervised study will prove of great benefit."

Still another teacher of the Commercial Department says:

"I am distinctly in favor of the plan. It develops concentration and insures some study of the lesson. I find that independent work has been markedly increased, the pupils' work is decidedly more intelligent, the interest strong, and the failures less. I can often save failures by timely warnings. I can take in clippings and specimens, and straighten out troubles of boys who have been absent or excused."

A less favorable opinion is thus expressed:

"My work is mainly bookkeeping, in which the supervised study plan has always been followed to a large extent. I find the extra time of much advantage there and reflected in the better work done, especially in the beginners' class.

"In other subjects my observation leads to the following conclusions:

"*Hours.*—Supervised study during the first period is of the greatest benefit. The boys are all there and in the spirit of work.

"During the fourth period I find little benefit in the plan. Boys who need the work most are in public speaking; also the time cannot be counted on, being much broken in on by meetings of one kind or another.

"During the last period results are wholly unsatisfactory. Boys who need the work have glee club, orchestra, drum corps, etc. Also there is in the room a number of boys who are there, not for failure in that subject, but because they have forfeited dismissal privilege for failure in some other subject. Keeping them in order and busy takes most of the energy that should be used in helping such failures in the subject as may be there.

"*Scholarship.*—Extremely low grade boys show little gain under the plan. They are either lazy or mentally unfit to grasp the subject no matter how much time and pains are given them.

"Medium grade boys are benefited most. In many cases they are boys who grasp things slowly and the extra chance saves them in many cases. But they are few in number, compared with the total enrollment of the class.

"High grade boys are not helped, but rather hindered. They do not find the extra time needed, and often could plan their own time to better advantage.

"*In General.*—In theory supervised study has some things to commend it, especially in the cases of medium grade pupils. In practice in this school it has so far been of little benefit.

"The chief benefit is to the slow-minded boy, who is in much less numbers than is often assumed.

"The lazy boy is far more numerous and to him the plan is of little use. He will use it to lie down on and let the teacher carry him along. This in spite of effort on the teacher's part not to allow this abuse of his time and effort.

"To the good boy the plan is an insult in that his ability to plan his own time to best advantage is not recognized.

"Although, as I said in the beginning, the extra time is of much help to me personally in my classes, I do not think that in the case of general recitation subjects the advantages come near offsetting the disadvantages. Its great defect is that it is a continuing of grammar school apron strings and pap methods and chokes the pupil's initiative and ability to run his own affairs. Some time during his life he has got to be capable of independent action. The majority of our boys are getting very near the time when they must face the world and stand or fall on *their* ability. If they have been coddled along up to this point they are poorly prepared. At least during the last two years of school they must know that their destiny is in their own hands.

"Owing to the need of extra double periods for science work in the laboratory, no arrangement could be made for supervised study here, except in two three-point courses, one in physics and one in chemistry. The teacher of the latter says: 'I have tried a number of methods, none of which has resulted in any marked difference in the quality of the work subsequently offered. Theoretically the idea seems good; practically, I cannot say that it has shown benefits that warrant an unqualified expression of approval. I am neither strongly opposed nor especially ardent in approval of the scheme.' "

The teachers of the physics course say:

"In my P2 course the boys seem to be more interested than the P5 boys, and I have wondered whether the supervised work, giving as it does a chance for more of a working-together spirit, has been the cause of the difference. . . . I believe that directed study has been of great value to these boys. When they had straight study time I was surprised at the kind of questions they asked, most of them questions that called for answers which were simply restatements of principles already given several times in the recitation. All boys should have had the first of the year instruction in methods of study. The poorer boys need it all the year. . . . My vote is in favor of supervised study."

"I believe in supervised study. I had misgivings before trying it that it would decrease the power of independent work.

I have not found my misgivings verified. Few boys ask questions or seek aid on any part of the work which has been clearly presented or outlined by me; sometimes pupils have asked questions which showed me that I had not clearly presented the lesson. Such questions help both teacher and pupil. Frankly, I cannot say that I have had better work since the introduction of supervised study periods. To decide this question fairly needs more investigation than I have given it. I have had more work from my classes, and it is at least as good as it was before."

"Now and then, when the next day's work has seemed to me unusually difficult, I have spent the whole time going over it, asking questions about the most difficult points, and trying to help them to answer them. In this sort of thing, however, there is danger of doing too much, and thus decreasing in them the power of independent thought. I think it is usually better to assign the work definitely, let the boys attack it themselves, and invite them to ask you individually about such special difficulties as arise. If there are some matters which you feel sure will prove troublesome to most of the class, time is saved by explaining them to all of the class together.

"As the year has advanced, I have adopted more and more the policy of giving out the work and letting the boys go at it, holding myself ready to answer the questions of individuals."

The drawing teacher says:

"The teaching of drawing, from its nature, is conducted largely by supervised study. Consequently, the opportunities under the present advantages of supervised study, with its double periods, offer the most ideal condition under which I have taught drawing in the public schools.

"I am getting better work than ever from pupils of moderate ability who make up the average."

The following extracts are taken from the reports of English teachers:

"I consider supervised study a very valuable aid to teacher and pupil. In the summer school the success is very marked, and the fact that the result was a permanent benefit and not a decrease in power of independent thinking was shown by the very large percentage of those who succeeded in the advanced

work during the next year. The testimony of the pupils in large numbers was that they had learned how to study, had gained confidence and independence. This convinced me that where there has been failure of the system in a class, the failure is due to the incorrect handling of the matter by the teacher. The boy 'sponge' who tries to get help in all of his work can be made to rely on himself, and the boy who needs help and does not realize the fact can be greatly aided. This theoretical discussion is from practical demonstration."

"I assign the home lesson and frequently take four or five minutes to outline the method of attack — seldom being so specific as to give definite answers to questions which will come up in recitation, but trying to make the pupils find the points and questions which are important. I then expect individual attention to the work. I am willing to answer questions, but always to stimulate the efforts of the pupil, almost never to give a concrete or categorical answer. My impression is that a number of my weaker boys have improved. I feel that it is 'up to me' to make more of them do so."

"I am heartily in favor of the supervised study period. They enable me to insure the accomplishment by the pupils of a definite and satisfactory amount of assigned work."

"In English the supervised study period is helpful in several ways. The slacker must do some work if he is made to keep his nose to the grindstone during the supervised study period. The composition work gains from the opportunity which the pupil has of doing his work at the bench, where all the tools are, and where he can work without distraction. He must do his own job, without any help except such as the teacher thinks that he needs. In the literature, the dictionary and the reference books are at hand.

"I think the supervision is less needed as the pupil advances, fourth-year pupils requiring very little. There has been no evidence of decrease in power of independent work.

"The percentage of failure I should say is less under the supervised study plan. No improvement in the scholarship is apparent, nor has any more work been done. The shortening of the recitation to thirty-five minutes takes away valuable time. Furthermore, the seventy-minute period is a long strain on the younger pupils. The restless youngsters try to interfere with studious boys. Some of the boys simulate study so effect-

ively that the extra study periods are extra loafing periods. This year I have had all composition work done in school, using the double periods for this purpose. This insures independent work under good conditions, where helpful suggestions can be put into effect immediately.

"From my observation, the advantages outweigh the disadvantages, although the plan has not yet had a sufficient trial under normal conditions to give us very reliable conclusions."

"Comparatively few boys ask for help. Those that do are more likely to be of average and high rather than of low scholarship. I think I have had more work independently done than before the introduction of supervised study periods. It is painfully clear, however, that many boys prepare their work as something that is to be done. They are more concerned about finishing it than about finding interest and profit in it."

"In English, supervised study gives an opportunity for personal conferences on written work, which conferences are of high value."

History teachers express the following views:

"The supervised study plan has enabled me to get better results earlier in the year. As most of the boys in my classes have not studied history since the grammar school, they do not know how history should be studied, and I now have more time to show them.

"I can look at note-books more frequently.

"I can continue discussions in which a few boys are interested without taking up the attention of the whole class.

"I use the period for make-up work. This relieves both the boys and me from a certain amount of after-school work.

"One difficulty I have experienced is this: When the recitation closes the boys are likely to relax, and sometimes I have found them restless and apparently more or less unwilling to get to work.

"On the whole I find the plan more effective than the old method."

"I favor the plan because it gives the boys time to study lessons in school, and to secure help from me in questions that are apt to perplex them. I find that the work is growing a little easier than in past years and can attribute it to the supervised study periods."

"The supervised study period is good, and would be even better if a larger reference library were at hand for us. It gives the pupil an opportunity to do individual work in parallel reading, to make reports, outlines, maps, etc."

A teacher of Latin finds the supervised study hour very useful with a beginners' class. Another uses the time chiefly for answering questions and says:

"I have done very little walking around among the class, and the tone of the boys' criticisms makes me glad of it. I should like to see the experiment continued."

One teacher of modern languages says:

"Supervised study is an excellent thing in its place, but in my opinion that place is not in the Senior High School, at least not after the first or second years. It seems to me that in our American education the tendency is far too great to 'bolster up,' to 'mollycoddle,' to feed the pupil predigested mental 'pap.' The spirit of 'Let George do it' (George being the teacher) is very strong.

"I have made many inquiries this year among the boys, and the general opinion is that supervised study tends to lessen the amount of work and study done by the pupils.

"I believe that for pupils in the upper classes of the high school the plan of supervised study tends to weaken rather than strengthen, to lessen their endeavors rather than to promote them, to encourage hasty superficial work in place of concentrated earnest endeavor."

Other men in this department favor supervised study.

"In F3 the pupils are all picked boys and do not need much individual assistance. In the average class, however, I think the system of supervised study is beneficial, as it gives the teacher a chance to find out the difficulties of the boy who is slow. The average boy is helped by the system. There were, however, a few boys who considered that no further study at home was necessary, and who forgot what they had been taught at school, and their plight was at least as bad as before. This tendency to consider the supervised study

periods as sufficient for a day has resulted in fewer books being taken home, and has destroyed much of the good which would have resulted from the system."

"I am heartily in favor of the plan as it is at present carried out. I feel that the boys receive more benefit from the time allotted to them for study under supervision than if this amount of time were added to their recitation periods. My only suggestion for improvement would be to give more time for supervised study."

This recommendation is directly in conflict with the opinion of a Latin teacher who says:

"I should like the experiment continued if the proportion of time given to supervised study could be lessened."

A teacher of Spanish reports:

"Supervised study is of value in my work with the elementary classes, but its value lessens as the classes go into the third and fourth years. I get better work out of my first-year group, as it gives me a chance to lead them in the written work, and they avail themselves of the opportunity to ask questions.

"Supervised study is of little value to the pupil of high scholarship, but the pupil of medium or low scholarship is greatly helped. The percentage of failures is not much lower than in past years, but the average work done by the boys who fail is of a higher grade. I find that I can do a little more work. I believe that the power of independent work is really increased, as the dull pupil gets assistance from the teacher rather than from a fellow pupil, less work is cribbed, and with the feeling that help is at hand he makes a greater effort to do the work assigned.

"We have demonstrated, I think, that it applies the teacher's power when and where needed. My one reservation is that I have not been asked as many questions as I anticipated. I have not seen any evidence that a single pupil was exploiting my knowledge to save his own effort. I have seen no evidence of the system tending to so called 'soft pedagogy.' All the pupils — the best and the poorest — have availed themselves of my help. It has seemed to me that I have had fewer fail-

ures this year. I am of the opinion that not all the better pupils have done so well, *i. e.*, the best have not done their best.

"The system affords bright pupils an opportunity to use the pamphlets, magazines, or monographs in Spanish that I keep on my desk, or books that I may have with me. This opportunity is thoroughly enjoyed and has a value in widening their interest and broadening their vocabulary. This is one method of counteracting the argument that it is a positive detriment to the bright pupil. I cannot see that the power of independent work has been decreased, for I have noticed no tendency to rely upon the teacher.

"During the study period I stand somewhere among the class or circulate up and down the aisles, and if the work they are doing is written I point out corrections with the reasons therefor. I agree with the statement of the principal of the South Boston High School that supervised study should diminish as the pupil goes up into the higher grades of the senior high school. In S4 I do not as a rule circulate among the pupils, but wait for them to come for any assistance they may want.

"I am of the opinion that the strain on the teacher is increased.

"For first-year work I am firmly convinced that supervised study is of the greatest advantage. The great danger of a pupil getting 'lost' in a foreign language is practically eliminated. We are able to do work in pronunciation and explanation of grammatical idioms which was impossible in the old system. For second-year work I consider the supervised study of great advantage as I have used it. I have devoted it to grammar and composition. We have the written work prepared the first day, and the second day we have a recitation and test, and then the test is corrected and handed back all in the same hour. This gives an intensive driving in and clinching of grammatical points.

"For third-year work I am not so convinced of the desirability of supervised study. Here I miss the longer recitation period.

"If used properly I think that supervised study increases rather than diminishes the power for independent work. It certainly increases the interest of the pupil in his work."

"In my French classes, I find the supervised study hour of unquestionable value. It is more valuable, however, to my second-year than to my fourth-year boys. I feel convinced that the supervised study hour has helped materially in

"1. Keeping the low average pupil up to the passing mark.

"2. Securing better work from the classes as a whole.

"3. Promoting better relations between pupils and teacher.

"4. Teaching the pupil to use his time to the best advantage.

"I do not believe at all that it stops independent thought on the part of the pupil, but rather stimulates the boy, since he feels that he can have some knotty point in grammar explained or some obscure idiom translated, over which he might pore in vain at home."

The head of our mathematics department presents the following interesting phase of the matter:

"The number of boys who avail themselves of the opportunity of consulting the teacher is about as many in the upper half of the class as in the lower half, but the questions asked are different in character. The better boys generally know how to do the work, but often consult me about the best method to use. This gives me an opportunity to suggest methods suited only to the bright boys.

"The supervised study period gives the teacher a chance not only to direct the work of the dull boys, but also to talk with the bright boys about methods which would not be brought to the notice of the class as a whole. The hour can be used to broaden the outlook of the bright boy. I use the hour as an opportunity for consulting rather than for forcing instruction upon the boys.

"In the second-year class in mathematics I give more attention to the dull boys than in a fourth-year class. I think that I have saved a few boys from failing, but I do not see a great change in the amount or character of the work done.

"The supervised study period does not diminish the power of independent work unless the teacher uses the time badly. I am in favor of supervised study."

Another mathematics teacher says:

"I should very much dislike to see supervised study abandoned. Why? I believe I can get a little closer to the

individual pupil in my class and he can get closer to me. This should prove helpful to both of us. I cannot see that the grade of work generally has improved from that of last year. I have not seen desired results in the matter of failures. We must educate ourselves to help pupils in the right way of using supervised study. The room teacher cannot do much but show his pupils the practical possibilities of this mode of study. I am anxious to give this plan further trial, and urge that a comparative experience of all teachers be made conveniently accessible to us all."

From the replies of both men and boys, the headmaster draws certain deductions. It must be remembered that the experiment has been conducted for only a portion of a year, and during this time sessions were suspended for a month because of an epidemic of influenza. Moreover, the distractions of a war atmosphere have been much in evidence. The conditions gave us 100 minutes a week of supervised study, of which thirty minutes, coming at the end of the session, were devoted exclusively to boys who were failing in at least one subject. To secure this 100 minutes without lengthening the school day involved a reduction of thirty-one minutes per week in the recitation time formerly given to a five-period subject, and of nineteen minutes per week in the time formerly given to a three-period subject. Thus far in the year the percentage of failures and of different grades has not materially changed. The natural effect of certain unfavorable conditions would have been to lower scholarship and to cause a higher percentage of failures. We have been experimenting and learning how to use the supervised study period, and the replies quoted are the first general "round-up" of impressions. It seems to me that the prospect of success is excellent, and that teachers should observe the following points in future procedure:

1. The right of the pupil to use the supervised study period for seven twelfths of the preparation required for his next lesson must be absolutely respected. The recitation must go on without dawdling or loss of

time, the ideal being that every minute must be profitable for the entire class; that no boy with work half prepared should be allowed to waste time for the group, and that the teacher must have his work so planned that he can cover it smoothly and rapidly. "Consult me about that in the study periods," should be the direction to the weak pupil who needs more help on a point which is already clear to the large majority. Time for tests and the assignment of lessons must not be taken from a study period unless the preparation for the next lesson is diminished in proportion to the study time so consumed, and this should not be a common practice.

Bearing in mind that the use for class purposes of fifteen minutes of the study time means a reduction of one fourth of the time rightfully demanded for preparing the next lesson, there seem to be certain group purposes for which the teacher may legitimately use such time if his own strength and voice permit.

Composition in English or in foreign language may be assigned with great advantage to the supervised period. By quietly walking about the class and calling the pupil's attention to mistakes as he makes them, teachers can save much time and render very valuable assistance.

At the beginning of modern language work, if the teacher can stand the strain, a half hour of group work on pronunciation, dictation and oral exercises may very properly constitute one half of the preparation for the next lesson. Another day, the teacher may profitably take a half hour of the supervised study time to go over with the class a portion of the text assigned for translation, showing just how to attack it, the points to emphasize, the way to use grammar or dictionary,—work which should easily diminish by one half the time necessary for preparing such a lesson. But the teacher must always be able to answer in the affirmative these questions:

Is it profitable for the entire group?

Is it the most effective preparation for the next lesson?

Similar principles may lead the mathematics teacher

to work through with his class a model problem in algebra or an advanced proposition in geometry.

2. In the study period individual aid must be given so quietly and discreetly that the work of other pupils shall not be unreasonably disturbed. The study period is no time for the teacher's pet story, for elucidating his theories on social or economic subjects, or for any interruption that does not have immediate importance for the whole group. Teachers and boys should maintain an attitude of reverence for the quiet that is conducive to the best study. Movements should be as noiseless as possible; no whispering between pupils should be tolerated; conversation between the teacher and the individual pupil should take place at the desk of one or the other, and be in a tone so low as not to attract the attention of others not concerned.

3. While many hold that a pupil can get better marks and may study with greater interest if the supervised study period immediately precedes the recitation, the opposite plan is favored for the following reasons:

a. The time allotted in the English High School to supervised study — thirty-five minutes — is not long enough for complete preparation of a home lesson, but would undoubtedly be an excuse for taking no books home and saying, "Oh, I have a study period to get that lesson in." It would be a constant pretext for hurried and insufficient preparation. Moreover, it would encourage precisely the wrong kind of study, *i. e.*, not study for the purpose of retaining at least over night what one has been studying, but study which aims only at remembering for the next hour what has been studied, a fleeting, useless kind of learning.

b. Under the English High plan, except for the free study period afforded by a block with no class assignment, a five-block system in which the pupil has four different studies, or less, the pupil knows that he must prepare all his lessons for the day before coming to school; he will have no time in school to prepare

the day's lessons, as all his supervised study periods come after the day's recitations in the subject and must be devoted to preparing for the following day. There can be no valid excuse for saying, "I expect to have time in school to prepare that lesson."

c. The close of the recitation, when the subject is fresh in the mind and has just been taught and explained, is the best possible starting point for beginning to study the lesson of the following day. That lesson has just been assigned; any hints as to how to go at it are still in the memory; the mind is focused, ready to go on with the subject with no intermediate diversion.

d. While not long enough for complete preparation of a lesson, thirty-five minutes does give sufficient time to get a good general idea of it; to try the first few examples in algebra; to make the first rough rendering of a translation lesson; to grasp the salient features of a history or science lesson; and to get help from the teacher if any point needs further explanation before final work is done on the task. Twenty-five minutes of home work remains, and this time spent in reviewing and completing what has been blocked out in the supervised study period gives the best possible opportunity to memorize intelligently and effectively.

4. The headmaster is of the opinion that not every lesson should be accompanied by a supervised study period. Three such periods a week in each study give the teacher a reasonable opportunity to see how his students work and to give useful assistance to those who need it; the other two lessons per week in a five-period subject give the boy a chance to practice independently what he has learned concerning the best way to study.

The headmaster expects that what has been learned during the first part of the year will enable teachers to use the study period the rest of the year more effectively and in a way more satisfactorily to all; by the end of June their views should have had sufficient confirmation to be fairly definite and trustworthy.

December 16, 1919, pupils and teachers were again asked to state their opinion of the plan. The same objections were repeated, although, as one instructor put it, "The cry of the children is less bitter."

Sixty-nine per cent of the boys voted in favor of the system, as against 61 per cent in April. It was interesting to note a close correspondence in the vote of the teachers, 69.6 per cent voting in favor, 17.4 per cent against, 13 per cent uncertain.

The committee submits the results of its investigation with no thought of a final decision, but in the hope that these results may promote an intelligent understanding of a problem which will need long and systematic study before the last word is said. Most schools that have tried supervised study are still continuing it, and a constantly increasing number of institutions are experimenting with it. Many who would like to do so are still deterred by one or more of the following reasons:

1. Opposition from parents, pupils and teachers.
2. Impossibility of lengthening the school day.
3. Insufficient room to accommodate pupils.
4. A belief that it demands more time, more money, more and better-trained teachers.

The following tentative plans have been tried:

1. Giving part of the regular class period to "socialized preparation of the next lesson."
2. Giving one period daily to supervised study.
3. Providing supervised study for "lame ducks."
4. Giving supervised study to a particular subject, as Latin, English, or algebra.

More complete systems are of three types:

1. Those involving a considerable lengthening of the school day.
2. Those which limit the school day to four periods and so restrict the number of recitations per week.

3. Those which, without lengthening the school day, keep five or more periods daily, not all of them with supervised study units.

Our own English High School has tried the latter plan, and a very large number of replies are submitted from both teachers and pupils.

Those in favor emphasize:

1. Time'y help from teachers.
2. Pressure on pupils who would otherwise not study.
3. Saving of time due to teacher's supervision.
4. Better chance to concentrate.
5. Systematic distribution of study time.
6. Convenience of making up back work.
7. Additional time possible for slow pupil, in tests.
8. Better facilities for study in school than for study at home.

Those opposed stress the following disadvantages:

1. Teachers rob pupils of their study time. They take it for long-winded explanations. for tests, for sight work, for scoldings, for futile chatter, and to finish up lessons.
2. Boys object to compulsory study of a particular subject at a special time. They especially desire to study for the next period rather than for the next day.
3. A thirty-five minute study period is too short.
4. A double period (seventy minutes, including both recitation and supervised study) is too long to keep attention on the same subject.
5. It is "soft pedagogy" and lessens independent thinking by giving unnecessary help.
6. Boys do not ask help often enough to make supervised study profitable.
7. Boys can study better at home because of the noise and interruptions in the class.
8. It encourages teachers to dawdle and waste class time.

Some of these criticisms contradict others; some, for instance, consider the period too long, while others find it too short. The most serious complaints are due to bad administration rather than to any fault of the system.

It is clear that few teachers at present know how to make the best use of the opportunity which supervised study undoubtedly affords. Valuable points as to the employment of the supervised study period are given in a monograph by Prof. H. L. Miller of the University of Wisconsin (Bulletin of the University of Wisconsin, Serial No. 894, General Series 684).

The committee believes that it is not desirable to increase the present length of the school day, or to attempt a program with less than five regular class periods daily. Under these conditions a plan which assigns to each subject a definite number of supervised study periods each week seems advantageous.

Supervised study appears to afford opportunities which compensate for a slight shortening of the usual recitation period and which would warrant some increase of the teaching force by allowing some pupil-hour credit for supervised study periods. Its usefulness depends very largely on the skill and tact of the teacher in charge. It is no panacea for school troubles, but it gives a competent teacher a much needed opportunity to know his pupils and do his best for them all. While it is probable that it is especially needed in the earlier years of work, and that it may be a hindrance rather than a help to the good students if injudicious interference with them is permitted, it seems to offer a priceless opportunity for the real teacher to get into close communion with the real student, to broaden the latter's views, to direct his vision into vistas of which he never dreamed, and give him a glimpse into the promised land of scholarly achievement.



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BOSTON PUBLIC SCHOOLS

ANNUAL REPORT OF THE SUPERINTENDENT

NOVEMBER, 1920



BOSTON
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1920

Boston, November 30, 1920.

To the School Committee:

I submit herewith the thirty-eighth annual report of the Superintendent of Public Schools.

Respectfully submitted,

FRANK V. THOMPSON,
Superintendent of Public Schools.

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ANNUAL REPORT OF THE SUPERINTENDENT
OF SCHOOLS.

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With respect to continuity of school sessions the year just ended was normal, following three successive years during each of which, for various reasons, such as epidemics and coal shortage, the schools were closed for extended periods. There is a feeling, consequently, on the part of teachers and principals that school accomplishments have been more substantial than during the period of interruptions. It is hoped that abnormal conditions may have permanently passed and that the schools may continue to enjoy an uninterrupted period of effort and achievement.

SALARY MATTERS.

To those concerned with the immediate conduct of the schools,—the teachers, the executives, the administration,—the past year has been of unusual importance. Many and vital problems have arisen demanding settlement, taxing the patience, ingenuity and professional spirit of all concerned. At the beginning of the present scholastic year the problem of teachers' salaries became pressing. It was obvious to every one that substantial relief to the teachers was necessary. Differences arose between the School Committee and representatives of the teachers as to the amount of increase which should be granted. These differences were finally brought to the Legislature but the bill which became a law did not meet the expectation of the teaching force. The campaign for better compensation for teachers became nation wide in the course of the year and many large cities made provision for larger compensation than had been allowed in Boston. Later in the year and after the reorganization of the School Committee, an agreement was reached whereby the sum originally asked for, namely \$600 increase, should be granted to the larger group of teachers, provided the Legislature would authorize the additional tax levy. Should the proposed increase be authorized, the majority of our teachers will receive a substantial increase over salaries hitherto prevailing. But

the action of other large cities with regard to salaries does not make the action of Boston extravagant; rather will Boston have moved more moderately than is true of a number of other great cities. New York City, and in fact the cities of New York State, have made what in comparison seems a generous provision for the payment of teachers. Doubtless the action of the most forward looking communities means the setting of new standards for the financial reward of the teacher. The response of the American people to the issue of adequate payment for teachers is a hopeful sign of an abiding faith in free popular education.

NO PROPAGANDA IN THE SCHOOLS.

The war taught the American people the lesson of the power and danger of organized propaganda. It was natural that fear and suspicion should arise that the schools themselves might become the instruments of propaganda. With the present disturbed state of public opinion on political, racial and religious questions it is natural that groups of citizens should feel suspicion that something in the nature of unfair propaganda may be taught in our schools. It is the function of the public schools, manifestly; to teach the truth to the children, to play no favorites with respect to disputed questions, particularly those concerning creed or nationality. When the schools offend this principle they deserve the suspicion and condemnation of the parents of the children. Great effort has been made during the past year to avoid the suspicion of allowing propaganda of any description to come into the schools. It may be safely said that the schools have never knowingly fallen into this error, but they may have unwittingly done so through the use of some not strictly impartial text, or through the utterance of speakers in addresses to pupils. The war showed what a power the schools may be in promoting a great cause. Thereupon nearly all organized forces for human betterment, or those which were assumed to be such, sought to have their claims brought in to the schools. It must not be supposed that the enthusiasts promoting these causes are insincere — far from it. Very often they are those who perpetually agitate reforms and who oftentimes succeed in putting their ideas into the statutes. But the school is not a place for winnowing the chaff from the wheat. The purpose of the school is to create intelligent and virtuous citizens, tolerant,

law abiding and with developed sympathy for things righteous. We cannot bring into the schools contentious matters about which our adult citizens are in conflict. We must await the sanctions of law and the unmistakable pronouncements of public opinion before deciding what is proper material for the instruction of youth.

KEEPING THE SCHOOL SYSTEM PROGRESSIVE.

Candor makes it necessary to point out some of the signs of educational reaction observable in American systems at the present moment. One of the signs that the public schools are close to the people is seen in the reflections of popular movements in what is urged for the schools. There is, perhaps, less faith in the possibility of improving school methods at the present time. Educational experiments do not meet with popular approval. It seems to many that the methodology of a generation ago was superior to the body of practice evolved since that time. This mode of thinking is quite general in the world outside the school room. It is in the atmosphere of social, business and political action. The political slogan of the present moment, "Back to Normal," is considered by many the concrete expression of a reactionary tendency.

In school practice not only does the difficulty arise in securing enthusiasm for progressive changes but, what is more disturbing, there is an observable tendency to abandon some of the fundamental improvements which have been adopted during the period of rapid progress characterizing the last decade. During the spring of the current school year an order was introduced and debated by the School Committee which would have forbidden the teaching of modern foreign languages in any schools except the high schools. The effect of this order, had it prevailed, would have been the abandonment of the intermediate school plan which is in successful operation in twenty odd elementary schools in our city. The return to the old nine elementary grade system was advocated simultaneously with the discussion of the abandonment of the intermediate school project.

It must not be presumed that the tendencies noted in Boston are peculiar to our community. The condition is nation wide, yea, world wide. The manifestations of thinking and acting observable throughout the world in this early post-war period have amazed the optimists and idealists who looked for an

immediate and marked upward swing of the aspiration and action of mankind. The optimist and idealist dominated during the struggle and turmoil of the war. He is temporarily in the background at the present moment.

There is comfort in the reassuring lessons of history concerning similar epochs of post-war tendencies. Faith returns and confidence is restored that we of this generation can build a worthy superstructure on the foundations laid by our fathers. The present barriers of doubt and hesitation cannot hold the waters in check and eventually the currents will flow onward.

In the judgment of the superintendent it was fortunate that the proposition to abandon the intermediate school organization did not prevail. The progress of the schools would have been impeded. The great amount of professional constructive effort expended on this idea and abandoned forthwith would have been particularly disheartening to the teachers, principals and executives of our school system. It is the superintendent's faith that progress and betterment in the end will prevail, and it is fortunate that we need not at this moment face a setback. There have been reactions in educational practice in the past. There have been temporary defeats. Reaction has had its brief days of triumph, but in the development of the American public school system, in spite of brief halts, there has been a constant march towards progress and improvement.

It would be a sad indictment against educational methods if it were to be assumed that in education nothing had been learned in the generation just closing. The present generation, indeed, has seen a wonderful period of progressive development in such fields as science, government, and economic welfare, and has likewise been a creative period in the schools. The public has demanded improved school methods. Legislation has reflected this demand. There has been more educational legislation during this period than during the preceding one hundred years. Education has been made compulsory in all the states. The upper limits of compulsory education have been extended in practically all states. Increased moneys have been appropriated and the number of pupils in the schools has grown by millions. Boston has been in the forefront of educational progress. Experiments have been made; much has been learned. Not all that has been tried has proved profitable. The problems of education in a degree are empirical. We must start with an hypothesis. Pedagogy is not a fixed or static science.

The attempts to get better schools are always opposed by some because of the danger of mistakes. The taunt of "Fads and Fancies" is continually flung at those in the school system who seek to find a better way to solve the difficult problems of education.

During the past twenty years the school system of Boston has been substantially improved by the efforts of progressive teachers and administrators encouraged by the attitude of progressive school committees. Public opinion as gauged by the press and organizations of parents and citizens has been favorable to progressive tendencies. The superintendent believes that the public opinion of Boston citizens would not now support a policy of reaction if it were clearly recognized as such. The period in question has seen a better grading of our elementary schools, abandonment of the nine grade system, the substitution of the eight grades, the expansion of the kindergarten provision. The intermediate school project has come into being, high school attendance has been expanded enormously. Prevocational schools have been established and trade and industrial education undertaken. Health education has been recognized as the legitimate province of the schools. Organized and supervised play has been given a function hitherto unrecognized.

The expansion of school effort into regions hitherto unexplored has come unit by unit as the needs were recognized. The old education was concerned largely with the mental and moral instruction of the child. The new education seeks to encompass every need of the child. "Educate the whole child" is the modern watchword. The old education assumed a standard type of childhood and offered but one pathway. Modern education recognizes an infinite variety in childhood and plans many pathways so that each may find a road suitable for his progress.

To those who would have us return to the old nine grade system it should be pointed out that conditions have very materially changed since that system was in successful operation. The old nine grade plan was abandoned for the following reasons: High school attendance was growing more popular. The average and satisfactory educational equipment had been what was called a common school education. Those who went beyond were as much distinguished as those who go to college today. There were two chief objections to the ninth

grade itself; one was the fact that in it little new ground was covered and the other was that for those going on to high school, there was an obvious and unnecessary delay.

It may be admitted, of course, that pupils who completed nine grades in the elementary school were better prepared to enter high school than are those who now take but eight. Our pupils would be better prepared to enter college after five or six years in the high school and better able to undertake the work of the professional school with more years of college work. The question in regard to the elementary period is whether a reasonably satisfactory preparation can be made in less time than nine years. Preparation is not an end in itself; it is the object of the preparation that is significant. The object of all public education, at least, is virtuous and effective citizenship. It has been the constant effort of public education to attract pupils to the higher forms of education, or as it is commonly stated, to persuade pupils "to stay in school as long as possible." With limitations, the end of the compulsory period of education is fourteen years of age. Pupils, or their parents, must see for themselves the advantages of more extended education. If in the elementary stage we can give the pupil a glimpse of higher education, he will wish to see more fully. This is why we say that in the seventh grade some high school subjects should be undertaken. The eight grade system meant a tremendously increased high school enrollment and a similarly increased persistence. The nine grade system means a lesser number entering and a lesser number graduating from the high school. I am confident that this tendency will be found constant wherever the eight grade and the nine grade system may be analyzed and compared. There is, consequently, in an eight grade system more educational attainment in the average equipment of our citizens. To those who believe that education is a good thing, and more of it a better thing, it is clear that the present plan in Boston should be supported and defended.

For those pupils who intend to go through the schools and thence to college and to professional schools, the necessity of spending thirteen years in pre-college work is an unnecessary and unfair burden. Beginning school at five and a half or six years of age means entering college at or about nineteen years of age. This means finishing the professional school at an age

which all candid observers pronounce too advanced. Our practice in this respect is widely at variance with that of other and progressive countries.

If our school system had not developed piecemeal there could not have arisen the present difference of opinion respecting the number of grades in the elementary school. It is the child that is important; the machinery of education is only important as a means of benefiting him. At first the public conscience could see no obligation beyond furnishing a common school education. The free public high school was bitterly fought by the narrow-minded of past days. The high school came but it was poorly adjusted to the lower schools. Its customs, methods and organization were adopted on lines wholly independent of the lower schools. For many years they have remained apart. Educators seeing this condition have sought to "bridge the gap." The specific instrument for this purpose is the intermediate or junior high school, designed to aid the child to overcome the difficulties in passing from familiar conditions to conditions wholly different. The educators who have labored in this important field have frequently been accused of being faddists, of seeking personal fame, and so on. They are merely meeting the fate of the innovator. Instead of blame they should be praised and undoubtedly will be by a wiser generation when analyzing in retrospect the steps of educational progress.

UNIFICATION OF EDUCATIONAL STEPS.

There is enough evidence now in sight to indicate that the present classifications of elementary, intermediate and high schools will eventually be abandoned. The more we exalt the child and the less we cherish the form of institution, the less we shall care what names we give to educational machinery. How far the public will take the child up the educational ladder, we have yet to determine. In most states the public already maintains the whole range of educational institutions, from the kindergarten up through the university. In Massachusetts it is only through the high schools. But whatever the range of educational institutions maintained at public expense, we shall eventually reckon progress in years of effort and not in terms of different and sometimes unfriendly institutions. Elsewhere we are seeking evidences of a new trend. In Gary, Indiana,

there are twelve years of instruction with no dividing line between the elementary and high school grades. At least one comprehensive national survey during the past year has urged the adoption of the same principle.

This report recommends that the present salary differences between elementary and high schools be gradually abolished. The academic and professional training required of elementary school teachers is rapidly approximating that which is required of high school teachers. Formerly the elementary teacher was a graduate of the high school with added normal school training; the high school teacher was a college graduate with little or no professional training. At present the elementary teacher is acquiring a better academic equipment, and nearing the standards demanded of high school teachers. The Boston Normal School maintains courses which are accredited seven points out of the sixteen necessary for graduation from Harvard or Radcliffe. With the differences disappearing between the elementary and the high school teachers, most if not all dispute will disappear about the province of elementary and high school education. There will be one progressive course of education for the child; there will be twelve or even more years if the public school system shall provide instruction in the college field. Indeed, more venturesome communities are already undertaking work beyond the present high school limits. Springfield, Massachusetts, maintains post-graduate high school work which is credited in Massachusetts colleges. The junior college project is immediately ahead of school systems desirous of furnishing at public expense a more extended educational opportunity than now exists. What is most important in American public school systems is the abolition of gaps existing at any point in the educational career of the child. At a not remote period there was a gap between the primary and so-called grammar schools. This gap has been bridged largely by destroying the separate organizations and distinctions between teachers. At an earlier period in the Boston school system there was a division between the subjects of instruction. There were grammar masters and writing masters. Against this situation Horace Mann labored but the system was not abandoned without a prolonged struggle. "Vested rights" are found in educational institutions as in all other institutions conceived by men. It must constantly be remembered that the educational institution exists for the child and not for those

who control the destinies of the institution. The times change and the educators must change with them. We are in a period of rapid change in social and industrial affairs, and our school system must make the adjustments which the new conditions demand.

THE MERIT SYSTEM OF PROMOTION.

The merit system with rated lists based upon concrete evidence has now been in operation for a whole year. From the masters' list have been appointed six men and two women. In the face of some objection the School Committee has sustained the continuance of the present plan. Indeed the School Committee has encouraged the superintendent to expand the idea so that no important nomination during the past year has been made for any position except as the result of an open and free competition for all in the service who aspire for consideration. When a vacancy for a principalship or directorship is opened it is now the practice to send from School Committee headquarters a circular letter to the schools announcing the vacancy and inviting candidates to file credentials. The Board of Superintendents then examines with great care all the evidence in connection with each candidate, evaluates the facts and makes a list. It is the practice of the superintendent to nominate the candidate with the highest rating and the School Committee during the past year has uniformly confirmed these nominations.

In Boston for many years some method of determining merit has been maintained. The rules and regulations of the School Committee demand that the superintendent nominate by merit. The present system differs from preceding attempts to determine merit in that the specific items of merit are listed, evaluated, and defined in definite terms. Another difference is that instead of one individual judgment, namely, that of the superintendent, there is the group judgment of a board. One characteristic of the present system that should inspire greatest confidence is the fact that the ratings are definite, recorded and published. Each candidate may see his rating, and interview the examiner and know specifically the reasons of the judgment in his or her case.

The whole procedure surrounding public appointments must be such as to inspire public confidence. We may assume that appointments made by an individual, such as the super-

intendent, can be satisfactory, but one individual decision in such important matters is open to the suspicion of bias, of coercion or of favoritism. It is as important to inspire confidence in the procedure in connection with appointments as it is to secure good appointments. The present system is designed to effect both purposes. The publicity of the present method is designed to focus the attention of all concerned upon the methods adopted. If there are defects they are patent to all, they can be challenged, and the methods can be progressively improved. The Board of Superintendents has frankly invited the criticisms of the teachers affected by the present promotional system. The members have appeared at the meetings of the Submasters' Club and the Master's Assistants' Association and have explained the principles and details of the present plan. Several hearings have been held by the Board of Superintendents at which committees of the Submasters' Club and of the Masters' Assistants' Association have appeared to discuss the suggestions of their organizations. It is of interest to note that the Submasters' Club has voted approval of a rated list and of the main principles underlying the present procedure. The representatives of both the Submasters' Club and the Masters' Assistants' Association have asked for certain modifications of the present plan and undoubtedly the Board of Superintendents will find virtue in several of their carefully considered recommendations.

TEACHING MORALE AND COOPERATION.

The morale of the teaching service and the spirit of cooperation have undergone the greatest strains possible during the past year. The tremendous burden of the cost of living and the inadequate recompense granted public servants have cut deep into the spirits of those who customarily and temperamentally have met their problems with cheerfulness. More than this even has been the effect of the somewhat indefinable spirit of the times, the thing we call unrest. There is the tendency at present to break old bonds, to abandon traditions, to better conditions irksome but hitherto tolerable. The economic condition of both the rich and the poor has been bettered, but the economic status of the middle class has been strained to the breaking point, especially the salaried class to which our teachers belong. In spite of the temptations of the year just passed our Boston teachers have shown great stead-

fastness. The class room work has been conducted without diminution of effectiveness. Our teachers through their spokesmen have been more assertive of their grievances but they have done their work conscientiously and well. The teachers may find fault with their employers, the public, but they will not show resentment to the children under their charge. The teachers believe that the worker is worthy of his hire, but they do not work with the spirit of hirelings.

THE RELATION BETWEEN THE HIGH SCHOOL AND THE COLLEGE.

In the last annual report the superintendent had occasion to discuss the unsatisfactory situation concerning college entrance requirements. Substantial progress has been made during the current year towards a more satisfactory method of admitting boys and girls to college. Dartmouth College announces that admissions will be made upon certificate from the highest quarter of high school graduating classes. This institution abandons certain specific requirements, such as so many years of Latin, and seeks instead to get youth of native ability. Harvard College has reduced the required number of points for admission from sixteen and a half to fifteen and makes the subjects of examination of wider range and less restrictive in character. Columbia is using mental ability tests to supplement the former examinations. It is likewise significant that Harvard College has selected to head its local board of college entrance requirements, Mr. Henry Pennypacker, former head master of the Public Latin School of Boston. We may view the present trend with satisfaction, but we must not be content until the gap between the high school and college is completely bridged.— There is no pedagogical, biological, or sociological reason why the transition from the twelfth to the thirteenth year of education should be different from that between any other two years. The reasons for the present gap are primarily those of organization, the same reasons fundamentally for the gaps that were found, and are now found, in the lower years of educational progress. These are, as has been pointed out, separate organizations in control of the separate institutions. Separate organizations inevitably tend to create separate standards, and look with slight sympathy or understanding upon other organizations dealing with the education of the child at different stages. In New England most of our

colleges are private institutions. They are governed by boards not in any way responsible to the people. These boards are rarely representative of the economic, social or political affiliations of the people. On the other hand, they are increasingly sensitive to the pressure of public opinion. The present more liberal tendencies noted above are evidence of this sensitiveness. But they can, with benefit to the public, be still more sensitive. The present tendencies and interpretations of democracy will increase their desire to render broader service. The need or welfare of the mass takes precedence over the interest of the single group. Both capital and labor are seeing this higher law. Property is no longer considered an absolute right but rather a conditional one. The limits within which the people may tax individual wealth for the common good are broad indeed.

In general our private colleges desire to be classified as public institutions. They constantly oppose movements to tax their holdings on the ground that they render a public service, and few will deny their assertions. The public, however, desires to be a party to the decisions made by those rendering service. There is an essential incompatibility in being served and having no voice in what shall be the service. Public service is in large part the carrying out of the people's will. The state university, found now in practically all states except Massachusetts, does represent the popular voice in what shall be the character of the conditions governing higher education. It should be noted that the gap between the high school and the college has been closed where there is the state university. It is unwise, perhaps, at the present time, to urge the founding of a state university in Massachusetts. We have numerous colleges performing great services, and some of them are as liberal with respect to conditions of admission and character of instruction as can be demanded. We have a state college of agriculture and a well-developed plan of university extension. There may exist conditions, however, which will call for serious consideration of a state university for Massachusetts. If our present institutions should lack the funds for the expansion necessary to receive the qualified students who apply, or if our present institutions should fail to be sufficiently heedful of reasonable public demands as to the conditions of entrance and the character of instruction offered, then the state university should be

sought for Massachusetts. The provisions and character of higher education cannot be left to the disposition of individuals or groups. Individuals or groups may set the educational conditions for other individuals or groups who desire to accept them, but they may not set the only ones for the mass who may desire something different. In the end public opinion must control the character and conditions of higher education as it does the educational provisions in the lower years.

WORK OF THE BOARD OF APPORTIONMENT.

The substantial achievements made in the past year by the Board of Apportionment impel the superintendent to make some comments anent the organization and operations of this important body. The work of this board was discussed briefly in the last annual report and the auguries of success discernible then have but presaged the achievements of the current year. The union of the educational and business forces on the board makes the decisions resulting more practicable than could be the case were only one influence in control. Three important matters come regularly before the attention of the Board of Apportionment. They are the preparation of the general maintenance budget, the land and building budget, and all items involving over-drafts by individual schools.

The year just closing has been of unusual importance with respect to land and buildings, or general school accommodations. The war and its resulting confusion had caused Boston to run noticeably behind in its building program. The enormous increase in the cost of schoolhouse construction was another disturbing factor. After seriously studying the problem, the Board of Apportionment prepared a comprehensive plan which was adopted by the School Committee and made the basis of a legislative bill which was passed in the spring. The plan was known as the three-year building program and is designed in this interval to make provision for the well established building needs for the Boston school children. The land and building budget prepared as the result of the estimates of building needs for the three-year period ahead and for which provision had been made by legislative enactment contained forty-two items. In general, these items contemplate provision for two new high schools, one in Dorchester and one in West Roxbury; one substantial addition to the Roxbury High School; about six intermediate and elementary schools, and a dozen

or more primary buildings. Several minor items contain provisions for acquiring or enlarging school yards. It is planned during the current year to use the funds made available by the recent legislation, as well as the funds available under prior legislation, for the acquisition of all the school sites needed for the carrying out of the three-year program and, in addition, for paying the architects' fees for completed plans for buildings. During the current year the conditions affecting building construction appear unfavorable. There is the shortage of available material; there are difficulties of transportation and perplexities in the labor market. It is hoped that in the two succeeding years conditions may prove more favorable so that specifications for buildings may be advertised and contracts let to better advantage to the city than at present. Should this hope prove a reality, at the end of three years Boston will have made good progress both in catching up and in keeping abreast with the more pressing needs for adequate schooling facilities for our school children.

The superintendent desires to comment favorably upon the procedure followed by the Board of Apportionment in arriving at the conclusions which were adopted by the School Committee in the form known as the three-year program. The danger and difficulty of the single-year program for meeting building needs is that immediately there is precipitated upon the School Committee pressure for priority in the recognition of claims. Promises of future action do not satisfy. It is natural that interested bodies of citizens in localities demanding attention should endeavor to make each appear immediately urgent. Hearings are demanded and held. Those representatives most eloquent and insistent have often been successful. Dispassionate judgment will frequently recognize that districts without organizations may be those which should first receive attention.

The Board of Apportionment gave judicious and dispassionate attention to all the building needs of the city. The masters of all school districts were asked to make written reports upon the housing needs of their districts, the number of pupils in assembly halls, portable buildings and in hired accommodations. With the reports of these principals before them the Board of Apportionment, accompanied by a representative of the School-house Commission, and frequently by members of the School Committee, visited the districts where needs were reported

and after careful inspection made the plan before referred to. Certain items appear in the program of the first year; others are assigned to the second and third years. The judgment in each case is made in the light of facts evaluated with discrimination. Such a procedure cannot fail to result in a more careful and economical plan than has hitherto existed. The needs of the children are better protected and the city is assured of as economical a program as is possible in view of the pressing needs for better and more accommodations. Increasing responsibility comes to school administrators in proportion to the wealth of the community assigned to school needs. School administrators are faced as never before with the necessity of adopting a most conscientious and careful procedure.

EXTENSION OF FEEDING TO CERTAIN ELEMENTARY SCHOOLS.

For many years lunches have been served in high schools for pupils who desired to purchase at cost wholesome and carefully selected food. This splendid cooperative service has been carried on by the Women's Educational and Industrial Union. Only commendation has been heard for the excellent way in which this service has been rendered to our high schools. Only sporadically have lunches been served in elementary schools. These schools are conducted on a two-session plan and the longer session in the morning is but three hours in length. Assuming that children come to school with adequate breakfasts there is not the same need for lunches as in high schools. There are, however, many physiological reasons why growing children of elementary school age should receive nourishment in the middle of the morning. On the other hand, any plan of feeding in the elementary schools, has been viewed with suspicion by those who feared to weaken the home by paternalistic schemes of any character. To my mind a plan of furnishing luncheons at cost is as defensible in one type of school as in another. The policy is necessary in the high school and highly desirable in the elementary, in each case without pauperizing the pupil or weakening the responsibilities of the home.

During the past year a more definite plan has been worked out which promises to achieve the above desirable ends. The Food Economy Kitchen for the feeding of elementary school children was originally opened under the auspices of the National Civic Federation, Women's Department, New England Section, at 24½ North street, Boston, on January 7,

1919, with Mrs. Roland Baker as chairman, and ran until May 31, 1919. It was opened again on October 17, 1919, and closed April 16, 1920. During the first winter, soup was sold in nine schools in Boston and in seven schools in Cambridge, 33,618 quarts being sold in Boston, and about 25,000 quarts in Cambridge. Last fall the Food Economy Kitchen was reopened, soup was sold in nine schools in Boston, but that number rapidly increased, and during the season soup was sent into forty-two Boston schools. The greatest amount sold in any one day was 800 quarts, but a fair daily average would be about 600 quarts. As five cups are estimated to a quart, this would mean portions for about 3,000 children a day.

It is very hard to estimate exactly what the soup costs per quart to make, but as is known, bones are used which cost three and one half cents per pound, and which are sold to the renderers after all human food has been cooked out of them, for two and three-quarter cents per pound. The vegetables and cereals added to the soup make the cost about six cents per quart. On Fridays cocoa is always sent, and during the sugar shortage a milk chowder was made instead of the cocoa. Eleven schools had helpers paid by the School Committee, and about seven of the schools had volunteer helpers as well. The plan of having volunteer workers is an excellent one, for it arouses an interest in the community which is as beneficial to the women who volunteer as it is to the children whom they serve.

The soup contains vegetables, a starch, and meat which contribute not only to the child's energy requirement, but to his growth requirement. A standardized formula is used, in which all solids are weighed, in order to guarantee the standard of 1,000 calories per quart.

RESTORING CONFIDENCE.

It is commonly agreed that in the present period there exists as never before in the memory of our generation the spirit of unrest, accompanied by sharp differences of belief on matters political, social, industrial and otherwise. It is observable that the faith of men in their fellows has been shaken, as well as faith in themselves. Allegiance to causes as well as to leaders has weakened. New leaders are sought not so much that it is believed that others will do better as to rebuke those with whom we are dissatisfied. New issues are taken up not so

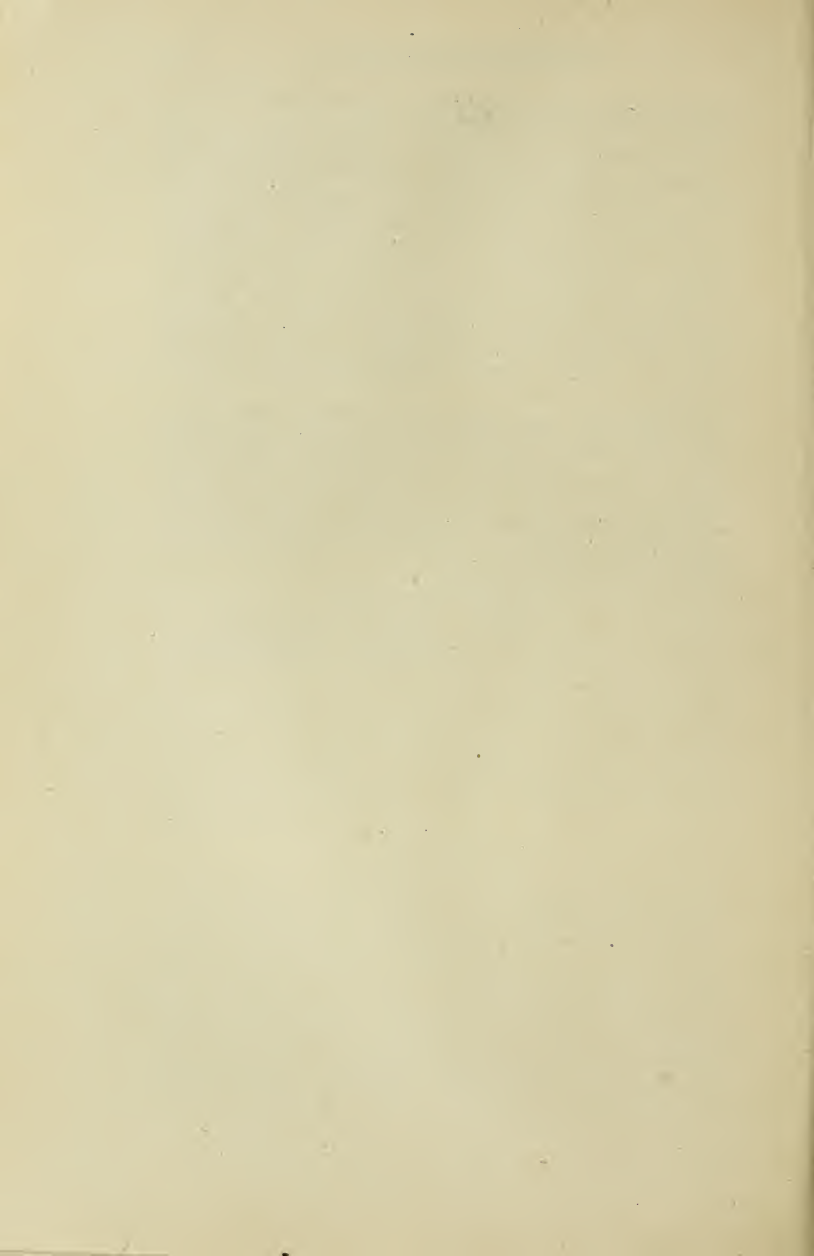
much that they are more promising, as that they are different from those that have wearied us.

Such a situation is not favorable to morale either in public or private service. Those of us engaged in the greatest of public services, the instruction of the young, may not yield to current influences. With what faith, strength and courage that our cause may inspire we must stand firm and maintain the line: "They shall not pass!" We see in the young the hope of human betterment. By better and nobler influences such as education can bring, these children in the schools may become finer citizens than we of this generation. The pupil shall exceed the master. Society is progressive only by such a process.

The difficulties of the period are a challenge to the teacher with appreciations of the trust and hope which society places in the function of education and in the office of the teacher. It is the confidence of the superintendent that the school force of this city responds to the challenge, that its members appreciate their responsibilities, accept their trust and will prove steadfast in the hour of strain.

Respectfully submitted,

FRANK V. THOMPSON,
Superintendent of Public Schools.



APPENDIXES TO REPORT OF
SUPERINTENDENT FRANK V. THOMPSON.

APPENDIX A.

REPORT OF ASSISTANT SUPERINTENDENT
AUGUSTINE L. RAFTER.

MR. FRANK V. THOMPSON,
Superintendent of Public Schools, Boston, Mass.:

DEAR SIR,—Last year I reported somewhat in detail in reference to most of the subjects over which I have immediate supervision. For the present year I propose to write very briefly on a few topics that may need some explanation.

SPEECH IMPROVEMENT CLASSES.

During the past year we have opened speech improvement centers in the Joshua Bates School, in the Tyler Street School, and in the Farragut School. I have not been entirely satisfied with the manner in which certain pupils who attended the Speech Improvement Classes have been considered in their parent schools. It will be recalled that the masters on two occasions were notified by you that no pupil in a speech improvement class should be penalized because of his absence from his regular class to attend a speech improvement class. At the close of the present school year several cases came to my attention in which children had failed in their parent schools to receive credit, usually in one subject, because they were in a speech improvement room and consequently absent from their grade rooms. By taking each case individually I was able, I think, to adjust the cases fairly satisfactorily, but next year I propose with your co-operation to place this matter on a permanent pedagogical basis, to the end that no pupil may be dissuaded from attending a speech improvement class.

In the opinion of speech experts, and it would seem that such opinions would appeal to the average layman as reasonable, the ability to overcome vocal impediments is of paramount importance to almost any other consideration to children afflicted. The failure on the part of a few masters to entirely

co-operate with the teachers of the speech improvement classes is due, I am certain, to their misconception of the subject which may need some explanation the coming year.

As rapidly as possible the speech improvement classes have absorbed the youngest pupils who need attention. The younger the child the sooner his defects are remedied. An increasing number of high school pupils whose speech defects have persisted have been in our minds for the past year, but we have been in no position to attend to them, owing to a scarcity of teachers who have had experience with older pupils. Happily the coming year we are to have the services of a teacher who has had much experience with pupils of high school grade, and it is hoped that all such pupils may be formed into classes and may receive expert attention.

CONSERVATION OF EYESIGHT CLASSES.

Under the direction of the Director of Medical Inspection, the supervising nurse, Miss Helen F. McCaffrey, made during the last three months an exhaustive survey of the vision of children in the public schools. The report of this survey is of very great value, in that it contains the names, ages, grades, addresses, and the condition of eyesight of every child in Boston whose vision should receive consideration. The report was sent to Miss Ida E. Ridgeway, field worker for the Massachusetts Commission for the Blind, who recommended that at least one additional sight saving class be instituted in Boston. You will recall that by recent legislation the state of Massachusetts now partially supports sight saving classes, in that it allows \$750 for the institution of each new class; it goes further and subsidizes annually each sight saving class to the amount of \$500. The co-operation between the State Commission for the Blind and the Boston school authorities has been cordial, satisfactory, and effective. There is no lost motion, no jealousy, but entire harmony and good feeling.

As a result of the survey a sixth sight saving class will be organized in the fall in the John J. Williams School. As this class will be composed entirely of primary children, they will be sent into the grade rooms of the Williams School for their oral work in language, number, music, physical training, etc., returning to their own room for technical work requiring special and intensive instruction.

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DISCIPLINARY DAY SCHOOL.

As confidently anticipated, and predicted last year, the two disciplinary day school rooms housed in an approved building, with specially trained teachers, have proved a decided success. The attendance in these two classes has been remarkably constant. The numbers have grown until the quota of twenty to a teacher has been exceeded, and as a result there will be opened in the Sarah J. Baker School in the fall a third disciplinary day school room. In theory a pupil in regular attendance in the disciplinary class whose conduct is in every way commendable, and who makes progress in his studies, should be returned either to his own school or to his grade in a neighboring school. This would seem to be a reasonable theory, but in practice it has not worked out well. It has been fairly well established by experience that a boy who persistently refuses to go to school in his own district, in the grade to which he is assigned, will refuse just as persistently to go to any other school than the disciplinary. The disciplinary room appears to be not only a clinic but a hospital.

CO-OPERATION BETWEEN THE SCHOOLS AND THE
PUBLIC LIBRARIES.

In order that there might be the closest articulation and co-operation between the schools and the public libraries, on March 19, 1920, I appeared at the Boston Public Library, before the assistant librarian thereof and the librarians of all the branches throughout Boston. For two hours the subject of closer co-operation was discussed in the friendliest, heartiest, frankest manner possible. Many of the suggestions made have been put into operation, both on the part of the librarians and on the part of schools.

COMMITTEE ON ELIGIBILITY.

On the acquisition of Mr. Joel Hatheway as chief examiner, I, as chairman of the Committee on Eligibility, began to submit to him the preliminary investigations of doubtful cases, which in the past have consumed a considerable amount of time on the part of the Committee on Eligibility. Mr. Hatheway took hold of the subject with his accustomed vigor and directness and as a result the committee has been relieved of a deal of work.

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It is proposed in the future to have Mr. Hatheway do the bulk of the work on this committee, reporting to the committee such cases as need special attention.

The above is an indication of the value that the chief examiner will be to the Board of Superintendents.

Very truly yours,

A. L. RAFTER,
Assistant Superintendent.

APPENDIX B.

REPORT OF ASSISTANT SUPERINTENDENT
JOHN C. BRODHEAD.

MR. FRANK V. THOMPSON,
Superintendent of Public Schools, Boston, Mass.:

DEAR SIR,—In accordance with your request I submit herewith brief reports on the work during 1919-20, for schools and departments under my supervision, making some comparisons of the past years and giving expression to their hopes for the future.

I. MECHANIC ARTS HIGH SCHOOL.

The report of the Superintendent issued a year ago included a statement regarding this school together with details of its new program, and an interesting graph showing past enrollments and past per capita costs. In that report the hope was expressed that the adoption of the new courses, with the opportunity for preparation for the higher engineering training of technical colleges, would so appeal to the public as to attract larger numbers to the school. This hope seems to have been realized. The total enrollment in September, 1918, was 911 pupils. In September, 1919, there were 1,096 enrolled, while incomplete returns on the enrollment for September, 1920, would indicate an enrollment of over 1,250.

This is a complete reversal of the tendency of previous years that is most gratifying. An additional fact of interest is, that not only is the total enrollment larger but there has been in the upper classes an appreciable gain in percentage of persistence, that is, less pupils are terminating their courses before completion.

An additional proof that the revised courses commend themselves to the public is revealed by the fact that many boys who entered the school before the new courses were adopted are taking advantage of the new courses to equip themselves

for still higher education. The number of boys thus interested in equipping themselves for higher education will average 50 per cent of the upper classes.

It is probable that the choice of courses has been made this fall with a much clearer knowledge of the significance of the two courses offered and the number of mistakes in assignment will prove to be smaller.

Quite substantial readjustments of rooms and equipment to accommodate classes operating under the new courses in the upper classes were planned in the spring and are about complete.

All who are interested in the school seem convinced that the new courses provide distinctly better training for those who cannot go to college, and tend to arouse ambition, while furnishing adequate preparation for those who wish further and higher education.

II. HIGH SCHOOL OF PRACTICAL ARTS.

When this school was established in 1907, French and German were both included in the course of study. With the building up of the practical arts course, and a desire to provide as much instruction therein as possible, these languages were dropped from the course (1911). The school continued to grow in numbers until 1914. With the establishment of the intermediate schools and the opportunity for language study in these schools and the natural tendency to retain pupils in the intermediate schools through the ninth grade, the numbers in the school fell off until in September, 1918, there were but 457 enrolled. With a better understanding of the provision for entering the Practical Arts High School at the end of the eighth grade, the figures rose in September, 1919, to 493.

In harmony with the action passed a year previously in regard to the Mechanic Arts High School, the Board of Superintendents recommended, and the School Committee approved, two modifications of the course of study. One, the introduction of a modern language throughout the four years, which would enable graduates of the school to qualify for entrance to higher institutions, and the other, the introduction of a minimum amount of commercial work, beginning with the second year, for pupils desiring to prepare for commercial pursuits while getting the advantage of the practical arts courses offered. The figures obtainable to date would indicate that the com-

mercial course makes its appeal, as a class in commercial subjects has been organized and a teacher assigned to the work. While not many pupils have applied for the modern language course as yet (the possibility of taking this course has not been widely advertised), yet the knowledge that the school will prepare graduates for higher institutions is showing its effect and the enrollment figures as far as obtainable at this time are 602.

Upon consultation with the State Department of Education it was found that the amount of practical work done in this school, and the character of it, was such that the city could be reimbursed for one-quarter of the expense of instruction and maintenance of all the work of the school, and the approval of the State Department has been extended to this school, and with slight changes in the matter of records and slightly greater stress on some previously informal assignments of work, the school is now operating with the approval of the State Department of Education. During the past year short unit courses for salesgirls from various department stores have been conducted with profit to the girls and satisfaction to their employers. This will be continued during the coming year. The school during the year past has furnished the lunches for the Roxbury Latin School in addition to lunches for its own pupils and instructors.

III. DEPARTMENT OF MANUAL ARTS.

Drawing.

A year ago the work for primary and grammar grades was reconstructed and throughout the past year an attempt has been made to bring to the grade teachers a clearer conception of the possibilities of the new course, and it is believed that it has been effected. In April the Eastern Arts Convention was held in this city, at which time drawings of our children were exhibited. Visiting teachers were greatly impressed by these drawings, and we are in receipt of a request by the art teachers in Philadelphia for this exhibition to be shown in their city this fall.

The art appreciation course in the ninth grade of our intermediate schools, introduced in September, 1918, continues to meet with the approval of principals and teachers. Through a study of the modes of order in nature and the arts, supplemented by lectures given by the director, his assistants, and the

Director of Education and his assistant in the Museum of Fine Arts, the pupils have received a valuable training which will enable them to enjoy a manifestation of beauty in the world. Through much exercise of judgment in selecting that which is best, they will undoubtedly show a higher standard of taste in whatever field of life they may enter. It is to be regretted that it has been found necessary to make drawing an elective subject in the seventh and eighth grades in the intermediate schools. Until the Board of Superintendents finds some way of relieving this situation, without unduly crowding these grades, some of the time assigned to art appreciation in the ninth grade must of necessity be given the work which could be done in the seventh and eighth grades.

In the Normal School the assignment of time for drawing in double periods has promoted both economy and interest in the work this year. There has been a saving of material, and longer visits to the Museum have been made possible. The gradual increase of illustrative material, including a Balopticon lantern, has greatly enriched the course and has made it possible to illustrate fully the principles of design both in nature and the arts. The biological department of the school has loaned many valuable slides of nature material, while the Museum has loaned architectural slides and photographs. The beautiful textiles loaned by the Museum have been of special value in the teaching of color and design, while greatly enriching the appearance of the room. Each class has been to the Museum at least once with a definite project in color, design or representation to investigate. The seniors have taken "architectural walks nearby," to study the adaptation of historic styles of architecture to modern buildings.

In the high schools the special committee on courses of the Drawing Council has been formulating motivated courses which will tend to standardize the teaching and these will be introduced wherever the conditions are favorable. The director believes that a course on art appreciation, similar in character to that given in the ninth grade of intermediate schools, should be required in the high schools. Such a course has been introduced in the first year classes in the Hyde Park High School with marked success. Ever since the new program of high school courses has been in use the number of pupils electing drawing has diminished. This is a matter of concern, and is due to difficulties of program making, and the fact that drawing

is an elective in most high school courses. Head masters of high schools and the Board of Superintendents should seriously consider requiring drawing as a first year subject or requiring motivated drawing somewhere in courses such as the normal and commercial.

The high school vocational drawing class conducted in the Museum of Fine Arts has now completed its seventh successful year. The standard was so high during the past year that it was found impossible to restrict advancement to the customary twenty pupils, so twenty-six advanced scholarships were awarded. In addition to the above, after drawings had been submitted by eighth and ninth grade pupils intending to enter high school in September, twenty scholarships were awarded. Past pupils of this class have made excellent records in the Museum school. One pupil is now a teacher of drawing in the public schools. Another, still in the school, has been most successful in stage craft, designing and painting stage settings for productions at Harvard College, Amherst College, and elsewhere. A recent graduate is now a designer with the Society of Decorative Arts. In the department of design, a former pupil of the high school class won an "Equal First" prize in the third-year class and a similar honor in the second-year class, while others have won "Mentions."

Manual Training and Shop Work.

Under this heading I would like to comment on some of the activities of this division of the Department of Manual Arts.

The co-operative courses in high schools continue to grow and attract the attention of pupils. The agricultural course in the West Roxbury High School is now entering its third year. A year ago there was but one such high school department in the state having a larger enrollment. The indications are that it is now the largest department in the state.

A special committee on mathematics for co-operative courses was appointed about a year ago and has made a tentative report on mathematics for the first year. The council on English and the council on science are actively engaged in formulating courses for co-operative groups.

The co-operative course in woodworking in the Brighton High School has been superseded by a course in auto mechanics, this school being in the neighborhood of a large number of automobile repair shops and salesrooms. This course was authorized to begin in February last and already has an enroll-

ment of over ninety boys. Eighteen were engaged in the industries during the summer term. The co-operative courses in machine shop practice in the Hyde Park High School and in electricity in the Charlestown High School are now operating under the approval of the State Department of Education, above the first year and including the fifth year, securing to the School Committee reimbursement of 50 per cent of the maintenance charges, including instruction.

Manual training in the intermediate schools has presented an interesting problem. An attempt has been made to introduce variety without loss of economy or effectiveness and so there have been established this year classes in electricity in the George Putnam and Bigelow Districts, metal work in the Robert G. Shaw District, sheet metal work in the Mary Hemenway and Roger Wolcott Districts, and printing in the Lewis District. The Henry L. Pierce District had previously been equipped for metal working.

Home gardening is being carried on in a steadily increasing number of districts. The work of canning for the conservation of product has been added to the work of gardening and has been very successful in stimulating the interest of the children in growing products that can be preserved for winter use. It has been found possible to operate these canning classes in our school kitchens and receive state aid for them.

The work of the prevocational centers is intended to be very human and the department and teachers are seriously concerned with questions as follows:

How many boys are retained in school through this agency?

What is the average numbers of boys in your class who leave before graduation and why do they leave?

One teacher reports that between fifteen and twenty boys per year have been kept in school because of the influence of prevocational work. Some people have felt that prevocational schools appeal only to mentally deficient or bad boys. The career of one boy will show how much in error this judgment has been. This boy was deeply interested in electricity. He was encouraged and helped by books, pamphlets, pictures and models, and given opportunity to tell his classmates of his experiments. He became an electric worker and enlisted. He volunteered for submarine service and was a radio operator for eight months at Colon. In an examination of eighteen candidates, all older than himself, for commercial

wireless operator's license, first grade, only two passed successfully and this boy was one of them. It is felt certain he would never have continued in our regular school routine, and he most highly recommends prevocational work to boys like himself. The teacher of this boy feels that boys with prevocational training are more self-reliant than others. They stand for manliness and poise. They are devotedly loyal to their teachers and school. They return at every opportunity to give an account of themselves. They come back to get advice on changing jobs, where to bank their savings, to bring a picture of the girl they expect to marry and to tell any good news of their family. The teacher is their confidant, an interested friend to whom they go in their joy or sorrow, assured that she will understand.

The Eastern Arts Association, meeting in Boston April 1, 2, and 3, was of great interest to the department and its teachers. They contributed largely in planning and arranging the exhibitions, furnishing an exhibition in drawing and in the enrichment of the manual training course and in prevocational work. Boston University was attracted by our local exhibit and tried to find space for giving it further publicity, as they considered it of exceptional educational value. Failing to find such space, an arrangement was made to use the exhibition rooms at the Public Library and for three weeks in May the prevocational exhibit was shown entire. The original intention was to show the exhibit for one week, but it attracted so much attention that the library authorities requested its continuance for an additional two weeks. The value of such an exhibit in our Public Library can scarcely be measured. The interest of hundreds of people was once more aroused in schoolroom work; parents who never visit the schools, and citizens who no longer discuss education, spent hours sometimes looking over the work and talking it over with the one in charge.

In closing this report I wish to call attention to the fine cooperation of the Schoolhouse Commission which has found it possible to materially ameliorate the conditions which have not been of the best in many of our manual training rooms throughout the city, and to provide additional equipment for the intermediate and co-operative high school work.

Very truly yours,

JOHN C. BRODHEAD,
Assistant Superintendent.

APPENDIX C.

REPORT OF THE DIRECTOR OF EVENING SCHOOLS.

MR. FRANK V. THOMPSON,

Superintendent of Public Schools, Boston, Mass.:

DEAR SIR,—In accordance with your request I herewith respectfully submit a report of the activities of the Evening School Department.

While any adequate explanation or understanding of the present status of the evening schools would require some reference to conditions affecting evening schools since the outbreak of the World War, it were futile to attempt to show the comparative effect upon evening schools of enlistment and the operation of the Selective Service Act, of the cessation of immigration, of the abundant opportunities for employment at unprecedented salaries, or of other causes connected with or incident to the war, such as the fuel shortage and the influenza epidemic.

The following tables serve to illustrate the cumulative effect upon evening school registration of these conditions:

REGISTRATION.

	ELEMENTARY.			HIGH.		
	Males.	Females.	Total.	Males.	Females.	Total.
1915-16.....	5,658	3,892	9,550	3,189	2,715	5,904
1916-17.....	4,123	3,209	7,332	2,918	2,602	5,520
1917-18.....	2,269	2,725	4,994	2,707	3,297	6,004
1918-19.....	1,432	1,811	3,243	1,582	2,339	4,121
1919-20.....	1,680	2,242	3,922	2,454	2,562	5,016

Administrators are naturally more concerned with plans and policies for the future than with successes or failures of the past, except in so far as the past may serve as an inspiration or as a warning for the future.

The lesson of the above tables would seem to be that the

low mark of evening school enrollment was reached last year, and that a steadily increasing registration may be expected during the coming years.

Despite war conditions the evening school department as a whole has made considerable progress during recent years, and certain of the forward steps will be noted below in connection with the various types of schools. It was not so long ago that evening schools, which had made a humble beginning in the face of determined opposition and prejudice half a century ago, were still regarded as a sort of unwelcome foster child in the school system.

The evening schools were first housed in old-fashioned ward rooms, in a chapel in the South End, in a bath house near the Roxbury line and in a room in the Dorchester Almshouse, and until comparatively recently any sort of accommodations and equipment was considered adequate for evening schools.

While day schools had departed somewhat from the traditional notion that anyone could teach school who was serious of face and severe of hand,—after the manner of Goldsmith's schoolmaster,—principals and teachers of evening schools, even in our experience, were selected without regard to professional training or capacity. Within our experience, too, the only books supplied evening schools were discarded day school books, and these neither suitable in content nor sufficient in number.

Through the ability, energy and aggressive measures of the first Director of Evening Schools, Mr. Charles M. Lamprey, and the painstaking efforts of his immediate successors, the deplorable standards of the old régime no longer obtain.

It goes without saying that the reforms effected were made possible only through a keener appreciation of the aims and purposes of the evening schools on the part of recent school committees, and a greater readiness to assist the evening schools by progressive legislation and increased appropriations, to the end that they might make the fullest possible contribution to the welfare of the community.

Today the evening schools are located in the best of our schoolhouses and there is no day school principal who does not appreciate that the school building with its equipment really belongs to the taxpayers and is not his personal property.

It is a pleasure for me to express to the day school principals my grateful appreciation of their generous co-operation and

ready assistance during the last few years in every measure that looked to the betterment of the evening school department.

It is only fair to state that the Schoolhouse Commission has evinced a genuinely co-operative attitude and has shown a willingness to make needed improvements and to furnish necessary equipment that would surprise those familiar only with former conditions. Most of our schools are now equipped with bookcases, filing cabinets and adequate lighting facilities. A few of the schools still require additional equipment for electric lighting, but fixtures are being installed as rapidly as funds are available. It is true that the seating arrangements in some of the evening elementary schools are still scarcely suitable for adults, yet our experience has shown that residents of the congested sections of the city, especially immigrants, prefer to attend a school in their own immediate environment, though perhaps with inferior seating facilities, rather than a centrally located school with adequate seating arrangements. Our school buildings are intended primarily for pupils of compulsory school age, and under present conditions, with the prevalent congestion, and the excessive cost of labor and materials, it would be unreasonable to expect class rooms suitable for children and for adults.

All classes of the Day School for Immigrants which are housed in school buildings have been furnished by the Schoolhouse Commission with comfortable chairs and tables and, where necessary, with blackboards.

In this connection I should like to recommend that in the erection of new school buildings plans be made to equip at least one room with chairs and tables, or with adjustable and movable furniture suitable in the day for socialized recitations, committee meetings, homemaking classes, or classes of the Day School for Immigrants, and in the evening for practical arts classes, citizenship classes, or classes for adult immigrants.

In the matter of text books, supplementary books, and educational material, the evening schools have made much advancement. Practically all day school books have been authorized for use in the evening schools, and in addition a number of books especially adapted for evening school use has been authorized. There is still need of suitable supplementary readers for use in the classes for non-English speaking persons, but the present popular and professional interest in this type of citizen-

ship training should insure at an early date a supply of suitable reading material upon American government, history, institutions and ideals.

In the selection of principals and teachers the evening schools are steadily approaching the standards of the day schools. No person is appointed to evening school service who does not hold a proper certificate of qualification issued by the Board of Superintendents. The examinations for evening school certificates have gradually been made more professional and searching, and it has been the unfailing practice of the director never to request the Board of Superintendents for a temporary certificate while any person holding a regular certificate has been available for service.

The day has gone when appointment to evening schools meant merely an opportunity to supplement a meager income, regardless of personal worth or efficiency. It is now almost universally recognized that evening schools are maintained solely for the benefit of the pupils, and the present improved standards of selecting teachers serve to emphasize the fact that evening school service is a service of serious importance and grave responsibility, a service which demands equally with that of the day schools professional qualifications and professional training.

In the selection of principals a still greater advance has been made. Not only are principals pedagogically equipped and possessed of the necessary certificate of qualification, but in addition they must evidence such executive capacity as would warrant their appointment to day school principalships. The Board of Superintendents has devised a system of rating candidates for day school principalships and from the compiled rated list evening school principals are selected. It is not claimed that the present system is perfect. It is still subject to modification and improvement, and it is to be hoped that in any revision of the present system substantially greater credit will be given to executive experience as evening school principal, in view of the fact that the qualifications of this position are most nearly comparable to those of the position for which the candidates are rated, and the further fact that a comparative rating of the executive capacity of the respective candidates as evidenced in this position is most readily made.

Anticipating the purpose of such rating, an attempt has been made during recent years to impress upon principals their

responsibility for the selection, supervision and training of class room teachers. No teacher is appointed except upon nomination of the principal and reappointments are made only after specific request of the principal in the case of each individual.

The regulation which provides that no person in the permanent day school service shall serve in the same rank or grade in the evening schools for more than five years in any period of six consecutive years purposely includes principals, and affords an opportunity for a greater number of men to furnish evidence of executive and administrative ability in a position of responsibility in our own system. It is rather interesting to note that there is no submaster on the present rated list who has not had an opportunity to serve in an executive capacity in our own system, either in charge of a day school building or as principal of an evening elementary or a summer review school.

While the overhead expense of the evening school department has been substantially diminished, the per capita cost of instruction shows a slight increase, due largely to two important improvements, — first a lengthened evening school term and second a more nearly adequate salary schedule.

The present evening school term, exclusive of vacation periods, averages approximately twenty-five weeks, beginning on the last Monday in September and continuing through the week preceding the April vacation.

While a substantial salary increase has been authorized, our salaries are lower than those of competing private institutions, and there is still need of salary readjustments in our own system. Certain ranks of the department itself have received disproportionately small increases in salary during the last few years. The present salary schedule as originally adopted recognized the parity of service in evening and summer review schools. Yet at a recent meeting of the School Committee the names of certain ranks of the summer review schools were changed, apparently for the purpose of securing salary increases. Technically new ranks were created and a salary for each new rank was established. While no criticism of the salary schedule of the summer review schools is intended, and while there is no suggestion that the new salaries are excessive or unwarranted, yet it seems obvious that a policy of raising salaries in any one department without consideration of the merits of other

departments of the service will ultimately lead to difficulties. Teachers themselves will be the first to admit that evening school service is more onerous and exacting than summer review school service. While the sessions of the evening schools are somewhat shorter in duration, yet the greater length of term, the traveling back and forth at night, and the inclement weather of the winter months combine to produce a greater physical and nervous strain. I respectfully recommend that corresponding ranks in evening schools and summer review schools be given the same title and the same salary.

Some years ago at my suggestion the former superintendent decided that no person should serve as principal of an evening school and of a summer review school during the same year. In my opinion a similar decision should be made with respect to teachers. It is physically impossible for a day school teacher to serve in an evening school, in a summer review school and in playgrounds during the same year without impairing her efficiency in one or all of these positions. In addition, there is every year a large number of properly qualified applicants for appointment to evening schools who are necessarily disappointed. I respectfully recommend, therefore, that no teachers be permitted to undertake both evening school work and summer review school work during any one school year.

It is superfluous to remark that the success and standing of Boston's evening schools are due in largest measure to the earnestness and ability of the teachers. Nowhere is a greater degree of skill in teaching shown, and nowhere can be found a corps of teachers more earnest, faithful and efficient. It is but fitting that more general and more generous recognition be accorded evening school teachers, whose knowledge of and sympathy with the aims and purposes of our evening classes have contributed so much to the success of the schools and to the welfare of the community.

I desire also at this time to express my appreciation of the co-operation and kindly attitude of the Director of the Extended Use of Public Schools. While the evening schools and the evening centers have distinctly different problems and purposes, an arrangement has been perfected whereby evening school classes may be maintained in evening centers and center activities may be housed in evening schools. It is needless to

state that such a policy of co-operation is mutually advantageous to the departments and is economically advantageous to the city.

The Evening School Department, as organized in 1917, includes the evening high schools, the evening elementary schools, and the Day School for Immigrants, all in charge of the Director of Evening Schools. The evening classes of the Boston Trade School, the extension classes of the Trade School for Girls, and the classes of the Continuation School, all formerly in the Department of Evening and Continuation Schools, are now in charge of the respective principals of these schools.

EVENING HIGH SCHOOLS.

The evening high schools, which numbered five in 1910-11, are now nine in number. The latest evening high school to be established by the School Committee was the Brighton Evening High School, which was authorized two years ago, the better to serve the needs of the rapidly growing community of Brighton. The Roslindale, West Roxbury section of the city is still without adequate evening high school facilities, and pupils are compelled to ride to Hyde Park, to Roxbury, or to the city proper, if they wish to attend an evening high school. Should the demand warrant, it would be possible to offer all evening high school subjects, except typewriting, in the Charles Sumner Schoolhouse, which will open next year as an evening elementary school.

The growth of the evening high schools in number and influence has been accompanied by a distinct change in character. In 1910 the evening high schools, with the exception of the Central Evening High School, were changed from general high schools to commercial high schools. The Central Evening High School offers both academic and commercial subjects. The number of pupils pursuing so-called cultural subjects is comparatively small, only 286 this year out of a total of 5,016, and questioning of these pupils on various occasions has disclosed the fact that most of them are taking academic subjects with a strictly vocational end in view. In other words, our evening high schools are today vocational schools, with the emphasis on commercial subjects. In 1916 the commercial character of these schools was further intensified and specialized commercial courses with definite requirements for graduation

were authorized. In consequence of the changed character of the evening high schools the course of study was revised through the efforts of principals and teachers and was ready for distribution in printed form in September, 1917. The revised course of study offers pupils an opportunity to attempt specialized commercial courses with a view to receiving intensive training for particular types of commercial work. Among the specialized courses offered are the secretarial course, which emphasizes a mastery of phonography and typewriting; the accountancy course, which includes the principles and practices of advanced bookkeeping; the merchandising course, which includes principles of business organization, selling and service to customers; and the office practice course, which includes the principles and methods of adjusting one's self to modern business office conditions, and familiarity with the principles of filing systems and labor-saving machines and devices. Commercial Spanish was authorized as a subject in all evening high schools in 1917, and last year the subject of American Government was likewise authorized.

EVENING ELEMENTARY SCHOOLS.

Quite in contrast to the growth in the number of evening high schools has been the experience of the evening elementary schools. In 1915-16 there were twenty-one evening elementary schools. This year there were, exclusive of branches, only nine. As indicated by the registration tables shown on page 37 the influence of war conditions is most noticeable and the decrease in enrollment is most marked in the case of the evening elementary schools. For a number of years these schools have been to all intents and purposes schools for immigrants, and with the opening of the war immigration practically ceased.

The evening elementary schools were originally intended to serve the needs of pupils who entered employment before completing the regular day school course, and who wished an opportunity to obtain an elementary school diploma.

With the raising of the compulsory school age from twelve to fourteen and with the establishment of the Continuation School, which provides for children between fourteen and sixteen who are in employment, the original purpose of the evening elementary schools was rendered less significant, although this year 256 pupils of the Continuation School

attended these schools for the purpose of attempting to secure diplomas. A still greater change in the purpose and character of these schools was caused by the influx of immigrants who came to America at the rate of a million a year just before the war. Of these immigrants illiterate minors between sixteen and twenty-one are compelled by law to attend evening schools. In 1914-15 over five thousand illiterate minors were enrolled. Last year there were only 367 and this year the registration reached 427. The slight increase this year is due first to the resumption of immigration on the part of Italians, Greeks and Portuguese, and second to the change in the school laws made last year to provide that no person shall be employed who does not possess a knowledge of English equivalent to that required for the completion of the sixth grade instead of the fourth grade as formerly. It is obvious that were immigration not resumed, we should have comparatively few illiterate minors to instruct next year. While many have acquired sufficient knowledge to pass the literacy test, the mere lapse of years would practically eliminate minors from consideration. An illiterate minor who was sixteen years of age in 1914-15 has now attained the age of twenty-one.

On the authority of the Commissioner of Immigration we can safely predict a constantly increasing stream of immigrants during the next few years, and of these new immigrants, if we are to judge by the experience of the present year, many will be minors. It is some satisfaction to note that as preparation against the day of increased immigration, Boston has worked out a comprehensive and effective system of registering and of checking the school attendance of these minors, and too much credit cannot be given to the attendance department for the efficient manner in which the regular school attendance of illiterate minors has been insured.

As a further preparation for the new immigration it would seem to be advisable to petition the Legislature to modify the present laws governing employment and school attendance of illiterate minors to the end that every resident of Massachusetts between sixteen and twenty-one years of age shall receive adequate instruction in the English language. At present there is some discrepancy between employment laws and school attendance laws. Only illiterate minors in certain kinds of employment are bound by employment laws, and while

the school attendance laws are general in their application, judges have been loath to impose penalties in cases that do not come within the purview of the employment laws.

It would seem desirable, also, that the Americanization Act, enacted last year, by which the Commonwealth has obligated itself to reimburse cities and towns for half the cost of maintenance of classes for adult immigrants, should be broadened to include in its provisions illiterate minors between sixteen and twenty-one. It is rather anomalous that cities and towns, should receive reimbursement for instructing adult immigrants whose attendance at school is wholly voluntary, and should be denied reimbursement for classes for immigrants under twenty-one years of age, especially when the statutes make the establishment and maintenance of evening schools for such pupils mandatory and the attendance of such pupils compulsory.

In 1913-14 practically the same number of minor and of adult immigrants attended evening classes for non-English speaking persons. This year the adults outnumbered the minors two to one. There is, of course, a certain measure of encouragement in the knowledge that adults have responded to the appeal of the schools in relatively greater numbers than formerly, yet in view of the efforts made to attract pupils and in view of the number of residents of Boston who are sadly in need of instruction in English, it must be confessed that the results as a whole are far from satisfactory. No effort has been spared to acquaint non-English speaking people with the advantages and opportunities afforded by our evening schools. Advertising campaigns have been prosecuted with the utmost vigor. Various public, semipublic and private organizations have given generous assistance. The press, both English and foreign, has rendered effective co-operation. Posters have been placed on the dashboards of street cars, screens have been displayed in motion picture houses, and circulars printed in foreign languages have been distributed.

Continued emphasis has been placed on instruction in citizenship and a new course of study in citizenship has been placed in the hands of the teachers. The plan of co-operation with the United States Bureau of Naturalization for giving the needed instruction to applicants for naturalization has been continued, and throughout the system an attempt has been made to give greater prominence to the work our evening schools have always done in leading our foreign-born pupils

into a better knowledge of American ideals and institutions, to the end that with a sympathetic understanding of their own environment and with a fuller appreciation not only of their rights and privileges but also of their duties and obligations, they may contribute their full share to the welfare of the community.

Our evening schools, however, not in Boston alone, but throughout the nation, have failed to reach immigrants in sufficiently large numbers. Evening school officials and teachers are the first to acknowledge this fact. It should, however, be stated that this failure is in very large part due to conditions over which the schools have little control, and is in no sense a reflection on the earnestness, or the efficiency, or the devotion of evening school workers. The workers themselves realize the limitations in this field and appreciate the necessity of a more comprehensive program of immigrant education. Reference to this matter will be made later in connection with the development and outlook of classes for adults in the Day School for Immigrants.

Besides the classes for young persons who leave day school before graduation and the classes for immigrants who receive instruction in English and citizenship, the evening elementary schools also include classes which offer instruction to women in cookery, dressmaking, embroidery, millinery and home nursing. These classes are called home-making classes or practical arts classes, and under the provisions of chapter 106, Acts of 1912, the city is reimbursed by the Commonwealth for one-half the cost of their maintenance.

War conditions have given a decided impetus to classes of this character. The shortage of food, for instance, and the necessity of thrift are primarily responsible for the canning classes established within recent years. As an extension it is planned to conduct during the summer certain of these classes in the daytime in conjunction with the gardening activities of the Manual Arts Department. The influenza epidemic brought home to many the desirability of receiving instruction in the rudiments of the care of the sick at home, and classes in home nursing were established. The emphasis placed on thrift and the excessively high cost of labor and materials induced many to join classes in dressmaking and millinery. During the year an extension of this work was authorized and one class in millinery was conducted in an elementary school during day school

hours. It is probable that many women find it more convenient to leave their households during the afternoon than during the evening, and I would respectfully recommend that practical arts classes be established during day school hours in such sections of the city as the demand would seem to warrant.

Quite a unique innovation in the evening elementary schools was the establishment of classes in lip reading in 1917. These classes are attended by persons who are either totally or partially deaf and who receive excellent instruction from our Horace Mann School teachers, under whose guidance the eye is trained to associate certain movements of the lips and tongue with certain sounds, and pupils acquire the power to interpret these motions of the mouth into words and sentences. These classes accomplish an incalculable amount of good for persons whose hearing is impaired, and help to overcome the greatest loss deaf persons suffer, namely, the loss of understanding speech.

DAY SCHOOL FOR IMMIGRANTS.

Classes for non-English speaking persons have been conducted in the daytime since 1911. Originally these classes were grouped with the other classes of what was then the Voluntary Continuation School, and formed part of the Department of Evening and Continuation Schools. In 1917, with the reorganization of that department, these classes, which had been greatly augmented were transferred to the Evening School Department, and a separate school designated as the Day School for Immigrants was established in this department. These classes, which were first housed in rented quarters at 48 Boylston street, were conducted both morning and afternoons for hotel employees and others whose hours of employment precluded the possibility of attendance at evening schools. Similar classes in the same quarters have been since maintained, and in addition other classes have been organized and conducted. Since 1915 classes for mothers have been conducted in school buildings. Classes for employees have been conducted with the co-operation of employers in mercantile and commercial establishments. Classes for adult immigrants have likewise been conducted in community centers and in the headquarters of social organizations. Certain classes have been conducted during the evenings when evening schools were not in session,

and this year summer classes have been authorized. In fine, the evening school department has been given authority to open classes for instruction in English and in citizenship for residents of Boston wherever the demand warrants, in any section of the city, in any suitable accommodations, school buildings, factories, stores or elsewhere, at any hour of the day or evening.

Of the classes maintained under this authorization those for mothers are especially successful and especially necessary. The immigrant boy is compelled to attend day schools and the immigrant men attend evening schools under the stress of the necessity for learning English, while the mother remains at home to care for her family and to attend to her household duties. As a consequence, her husband and her children soon outstrip her in their knowledge of the English language and of American ways and customs. No facilities had existed previous to this time for enabling mothers to keep abreast of their children, and the consequent handicap made itself felt both in school life and in home life. The children, with the superior knowledge of English, have taken advantage of their mothers, and the mothers have been unable to do their full share in the training of our future citizens, for the home, of course, must contribute the most to such training. The family life itself was threatened by the pseudo-Americanization of the children, for the children felt themselves superior to their parents and especially to their mothers, and the schools were blamed for fostering contempt for parental control and were accused of menacing the family life.

The purpose of these classes is to enable mothers to keep abreast of the progress of their children and to afford an opportunity for them to learn English at the only time at which they can be spared from their home duties. The classes are held during the hours when the day schools are in session and when the children of school age are in school. Volunteer kindergartners care for the younger children in a room provided for this purpose and thus the mothers are relieved of home duties and are enabled to get away for their instruction in the afternoon. The mothers have been most enthusiastic and rarely miss a day from the classes, and this innovation has proved an unqualified success.

In view of the assurance that suffrage for women will be an accepted fact perhaps before the opening of the next school

term, these classes and classes in citizenship for women will continue to answer a pressing need, and will undoubtedly grow in number and in importance.

The Day School for Immigrants had this year an enrollment of 1,312, a number, it is interesting to note, which exceeded the number of adult immigrants who registered at the evening elementary schools. Fifty-two different classes were conducted in various sections of the city.

The remarkable growth and the successful accomplishments of the classes of the Day School for Immigrants are the more gratifying because of the numerous difficulties and handicaps which militate against progress.

In the matter of accommodations in school buildings, classes have been handicapped by lack of suitable rooms and in certain districts it has been impossible to establish classes. While nothing has been allowed to interfere with the advancement of the day schools, day school principals have been keenly interested and largely instrumental in the organization and maintenance of classes for immigrants in their respective districts, and much of the success of these classes is due to the assistance and co-operation of the day school principals, whose counsel and advice have at all times been most beneficial to the director.

In the selection of teachers the department has been seriously handicapped. Classes are generally in session on only two afternoons each week and most of them on the same afternoons, and teachers are necessarily employed on a part-time basis. Teachers available for substitute service have been greatly in demand for full-time employment in our regular day schools, and as a consequence our selection of teachers has been largely confined to those formerly in the permanent service who could devote two afternoons each week to this work, or to those without sufficient experience in classes of this character. In the classes for mothers, for example, kindergarten teachers acquainted with the needs of the mothers in their districts were often selected despite the fact that they were comparatively unfamiliar with the instruction of immigrants. A course of training for such teachers was established and weekly conferences were held for the purpose of discussing problems and difficulties as they presented themselves, and of offering practical suggestions as to method and procedure at the time when such suggestions contributed most to the development of a successful

technique in teaching, for, after all, the training of the worker on the job is the most effective type of training.

In the matter of supervision no slight difficulties presented themselves. The number of classes exceeded that of most regular day schools. These classes were scattered throughout the entire city. Many of them assembled at the same time. It would be physically impossible for any one person to attempt anything approaching adequate professionally helpful supervision of these classes, so widely separated, and so often conducted simultaneously.

During the last two years Miss Ethel D. Hodson and Miss Caroline A. Shay have been assigned by the Superintendent on part-time to assist the director in the organization and supervision of these classes. It is but simple justice to state that the credit for whatever educational advancement the Day School for Immigrants has achieved is due to the inspiration, the judgment, the tact, and the invaluable practical suggestions and assistance of these two eminently superior instructors.

There is every likelihood that the number of classes in the Day School for Immigrants will be greatly augmented with the coming of new immigrants, and port officials are authority for the statement that the number of immigrants is now limited only by the capacity of the boats. I should respectfully recommend, therefore, that consideration be given to the appointment of a permanent supervisor of immigrant education, whose duties should include the supervision of instruction in classes for immigrants both in the Day School for Immigrants and in the evening elementary schools, the formulation of courses of study in co-operation with trained teachers, and the conduct of practical training courses for inexperienced teachers. Classes for immigrants who are over twenty-one years of age are now subject to state aid and to state supervision and it is only reasonable to expect that the State Department of Education will adopt in classes for immigrants the same procedure that has been followed in state-aided practical arts classes, one of the requirements of which is the appointment of a local supervisor. In this connection I should like to suggest also the desirability of authorizing as part of the curriculum of the Boston Normal School special courses for teachers of immigrants similar in scope and character to the courses now offered for other specialized types of teaching.

The need of a permanent supervisor and of suitable training

courses for teachers will be felt in both day and evening classes, if the work of immigrant education is to be properly developed and if Boston is to maintain its present successful leadership in this work. Should immigrants arrive in the numbers that now seem probable, a still greater improvement would be feasible, namely, the appointment of a permanent corps of teachers of immigrants at an adequate annual salary. There are objections to the present policy of employing day school teachers for evening school work, but under present conditions such a policy is the only one possible. I am confident that the future policy will be the appointment of permanent teachers of immigrants, some of whom will serve mornings and afternoons, some, mornings and evenings, and some, afternoons and evenings.

I do not urge the immediate adoption of such a policy. I do not believe that such a policy would be practicable except as an experiment until immigrants have arrived in much greater numbers and until the Day School for Immigrants is securely established and its needs and accomplishments are generally recognized. Such a policy is, however, one of the future steps in the growth of a comprehensive system of immigrant education. It should naturally follow the appointment of a permanent supervisor and the establishment of a professional training course, both of which innovations I strongly recommend as necessary at the present time.

Respectfully submitted,

M. J. DOWNEY,

Director of Evening Schools.

APPENDIX D.

REPORT OF THE DIRECTOR OF THE EXTENDED
USE OF THE PUBLIC SCHOOLS.

MR. FRANK V. THOMPSON,

Superintendent of Public Schools, Boston, Mass.:

DEAR SIR,— This past year has been one of greater service, prosperity and expansion for the Department of the Extended Use of Public Schools.

The wider use of the school plant has been pushed with much vigor this past season with the result that the citizens of Boston, heretofore conservative in recognizing and grasping the many privileges that awaited them in the community use of school property, have finally awakened to their opportunities and are now using the public school buildings in rapidly increasing numbers.

Some idea of how largely our city schoolhouses have been utilized for the leisure-time activities of the people this past season may be gleaned from a study of the season's statistics bearing on this point, which show that in all eighty-three school buildings have been open, afternoon and evening, for various purposes; seventy for meetings of citizens, parent-teachers, alumni associations and similar groups, and thirteen for the larger, more regular club and recreational work conducted in the school buildings, known as "School Centers," "The Community Service Stations of Boston."

While the number of buildings might serve as a criterion, still the number of persons attending offers a better basis from which to judge the success that has marked our year. In this respect it is a most gratifying thing to note that in non-school center buildings about 68,000 persons have attended, while in the school centers themselves almost one-half million people have entered to participate in and enjoy the many varied privileges and activities offered and carried on therein. Most of our time and attention has been devoted, of course, to the promotion of the school centers, for it is here that the

most telling community service is rendered and school property put to its greatest usefulness. "Something for Everybody — Everybody Welcome" is the slogan under which the school centers operate. So popular have the centers become that it was found necessary this past season to open up branch centers in which to accommodate the overflow work of the main buildings. In one instance a branch center prospered and grew so well that we were obliged to organize and assign a separate staff, independent of the parent center, to properly conduct the work there.

A shortage of funds prevented the proposed establishment of additional centers in the outlying districts from which calls have come, but it is hoped that another year will see a larger appropriation with which to expand in those directions.

The practice, started a year ago, of having some program or other in the auditorium every regular night a center was open, was followed again this year with the logical outcome — greater serviceableness and larger patronage. Concerts, lectures and entertainments, motion pictures, church and charity benefits, district nursing, health and baby hygiene rallies and mass meetings of various kinds drew capacity audiences. Time and again a crowded house was present. These hall programs in most cases included community singing, for nothing it seems draws folks into a feeling of neighborliness and friendliness toward one another quicker than does mass singing. Taught last year by song leaders to sing old familiar melodies and songs of Americanism, audiences were left to themselves this year night after night to sing, unled, the words of the songs being thrown on the screen.

A thrift program was presented in the various centers which did much to further that worthy campaign.

The unexcelled facilities of our spacious, well-equipped gymnasiums attracted to the centers social and fraternal organizations seeking clean, wholesome accommodations for basketball games and dances. The returning service men, members of the American Legion particularly, flocked to our centers where every effort was made to welcome and help assimilate them into the community through the medium of these active gymnasium games and assemblies.

That vital, constructive and interesting work of the centers, namely the housing, organizing and conducting of clubs and groups in the class rooms made big gains this year, too. More

clubs, bigger clubs and better clubs have met this year — at times some of the centers did not have rooms enough for the groups that wished to meet there. Self-government and self-support featured this phase of center life; volunteer leadership and unpaid service contributed much to the success of these groups as they always have done to the centers generally.

The Trade Union College of the Central Labor Union was conducted for the second year under center auspices, a transfer of the classes being made, however, early in April from the High School of Practical Arts to the Abraham Lincoln School in town, the latter a much more accessible place for the students than the former location in Roxbury had been. The Trade Union College is conducted "in the belief that the development of the unlimited resources of organized labor will be fundamental in the reconstruction of the social era. It desires to instruct by means of discussion as well as to inform by imparting knowledge." The courses included English composition, practice in discussion, philosophy, history and government, law, economics, labor and physical science. To these were added at the beginning of the spring term a recreation class and a class in gymnastics and aesthetic dancing, together with other social activities arranged by the students. All trade unionists and members of their families were eligible to the courses and others were admitted with the approval of the Trade Union College committee.

The great work of Americanization — the breaking down of racial, religious and social barriers, and the blending of the best ideals of the old world and the new — continued to be the impelling motive, as usual, behind everything the centers conducted throughout the year. The following examples, however, illustrate special lines followed toward that end.

During the fall months managers and associates assisted the State Bureau of Immigration, Department of Alien Education, in arranging and directing lectures and musical programs for foreign-born people in center halls. Later on in the year the State Department of Education, Division of University Extension, Visual Instruction, was accorded similar courtesies.

In conjunction with the Service Unit of Boston, a constructive series of "Building a Nation" programs, or "Selling America to Americans" was devised and presented in the different centers throughout the winter months. This series consisted of motion pictures and slides of events that have contributed

to the making of this country, mass singing by the audiences of songs in harmony with the program, "silent talks" on the screen conveying constructive comments and information relative to the national problems of the day by means of slides and other suggestive patriotic features. Each program covered a separate period in the national development of the United States as follows: Program A.—"The Founding of America," to help us renew our knowledge of the foundations of American citizenship. Period, from the discovery of this continent to the establishment of the United States government. Program B.—"American National Development," to show the advance of the United States towards national unity. Period, from the first president, through the Civil War and to the World War. Program C.—"The Problems and Glories of American Democracy," presenting constructive features of the United States from which to gain a renewed appreciation of the advantages of being Americans. Period, from 1914 to the reconstruction period of today.

"Make Friends with an Alien" Week, conducted in February by the Suffolk County Americanization Committee of the American Legion, owes some of its success to the aid and assistance rendered by the centers. The Knights of Columbus and the Foresters of America were similarly helped in their Americanization programs. Likewise the Mayor's Committee on Americanization found the centers to be sources of no little support and helpfulness at different times, as did the Americanization Committee of the Boston Chamber of Commerce.

Receptions to foreign-born women were held in different sections of the city under the auspices of the women's clubs of the centers; these receptions doing much, no doubt, to bring together into a feeling of friendship and equality the American and foreign-born folks of our city.

In step with the times and to afford a hearing to all sides on public questions as well as to provide expression for the deep feelings and emotions of the people to the advantage of the community rather than to its detriment, open forums were established and maintained in the centers during the year. These forums were organized and managed by committees of representative men and women in each district and presided over by safe and sane leaders. The names of some of the speakers and the topics discussed follow:

Senator David I. Walsh.—“What Congress is Doing to Aid the Americanization Movement.”

David Goldstein.—“The Right and Wrong of Trade Unions.”

Lieut. Bruno Rosselli.—“Behind the Scenes in the Italy Jugo-Slav Drama.”

Mrs. Mary Church Terrell.—“Uncle Sam and the Sons of Ham.”

Dr. Moissaye J. Olgin.—“Main Trend of Russian Political and Social Movements.”

Rabbi Harry Levi.—“The Heritage of the War.”

You Chan Yang.—“The Shantung Question.”

Rev. Abraham M. Rihbany.—“Western Asia.”

Talcott Williams.—“The American Solution of the Labor Problem.”

Rev. William Harmon van Allen.—“America and the Red Peril.”

In an endeavor to build up the centers by united effort, a series of joint meetings and conferences of the advisory boards, managers, associate managers and center workers was introduced with much success toward the end of the season. In fact, so fruitful did these meetings and conferences turn out to be that they will undoubtedly become a fixture in the annual program of the department.

An event of considerable interest in this year's calendar was the championship debate on the question “Resolved, That the President of the United States Should be Elected by Popular Vote.” The two teams that competed in the final debate were selected after a series of trial debates and the center whose team earned the decision of the judges was awarded a suitable trophy donated by the centers through joint contributions.

Co-operation and reciprocation characterized relations between this department and the regular teaching force again this year. The evening school staff particularly have been very helpful, for it was through their hospitality that center groups which could not be accommodated on regular center nights have been able to jointly occupy buildings along with evening school classes.

In closing, I desire to acknowledge and thank the School Committee, Superintendent Thompson and Assistant Superintendent Brodhead for their active support and co-operation throughout the year.

Respectfully submitted,

JAMES T. MULROY,
Director.

APPENDIX E.

REPORT OF THE DIRECTOR OF HOUSEHOLD
SCIENCE AND ARTS.

MR. FRANK V. THOMPSON,
Superintendent of Public Schools, Boston, Mass.:

DEAR SIR,— During this school year the teachers of the Household Science and Arts Department have taken up some new projects and have extended and developed others within the last year or two. The high cost of food materials and textiles has been a great hindrance to the extension of our work, nevertheless a good showing has been made.

During the last week of March an exhibit of art work was held at the Wentworth Institute in connection with the convention of the Eastern Arts Association, to which the Department of Household Science and Arts was asked to contribute, together with other departments of the Boston schools. Having, as they thought, so little of what was really new to show, the teachers of this department did not accept the invitation as gladly as they might have done in other years. However, many phases of work were exhibited and received much praise for their excellence.

The teachers of domestic art in high schools and the sewing teachers of the elementary schools were asked to send in six pieces of work then on hand — actual representative class work and not prepared for the occasion. A great variety of dressmaking and millinery came from the High School of Practical Arts and from the Dorchester and Hyde Park High Schools, where this work is taught. The dresses and hats exhibited, all designed, drafted and made by the girls of these classes for their own use as well as for the mothers and sisters at home, were greatly admired. Demonstrations of dress drafting and hat making were also given by classes during the exhibit. It should be added that some of the hats and dresses exhibited were made by the girls for wear at their own class day or graduating exercises. Dresses and hats range in price

from \$2 to \$6. The cost of all materials was estimated and the bill for findings pinned to each garment exhibited. In many cases it was hard to believe they had been made by amateurs, they were so well done.

The simple white graduation dresses, the cost of which individually was hardly more than \$3, attracted much attention, and a wish was expressed by many that a movement toward simplicity in graduation dresses such as these, might extend to all graduates.

The hats were planned to carry out the color scheme of the dresses, and were equally well made and inexpensive. In many cases old materials were cleansed and dyed for use in making and trimming these hats, thereby saving the expense of high priced, new materials.

From the grade schools simple garments of all kinds were exhibited, as well as home mending, darning, patching and the making of practical household articles. One new feature of the work in school this year was the emphasis placed on thrift lessons or household economy. A variety of articles useful in the home were made from worn garments. A great deal of credit is due the teachers for planning and carrying out ideas along these lines.

Incidentally, it may be said that it is a pity sewing must be dropped in the sixth grade to make way for cookery in the seventh and eighth grades. The ideal condition would be to carry this work through each grade even in connection with cookery work, if there were time to give to it. Many of the masters have expressed this opinion.

HOUSEHOLD SCIENCE AND COOKERY.

The high school household science work and the elementary cookery work were principally represented at the exhibit during the Eastern Arts Association convention by printed charts telling of the plans and projects that are being tried out in these classes. It was out of the question to send cooked food from all parts of the city and have it reach the exhibit in good condition. The High School of Practical Arts, however, sent some cooked food and also gave a demonstration for the benefit of the visitors.

Cards explaining the different plans of work in the household science classes of high schools were shown. These included menus for a family of six, which were planned and worked

out in class. The pupils reported on the food value, cost of all materials used, and the price per person for each meal. Work on household accounts, family budgets, etc., which these girls are expected to do since they are to be the future homemakers, was also shown in full. Special stress is placed on this work during the year as it is quite necessary for them to know how to plan and spend the family income to the best advantage.

The exhibit also included ideas on the planning and decoration of the modern house, as well as class work on home sanitation and household chemistry.

Home Cookery.

An extension of home cookery in the grades during the past year was reported on at the exhibit. Girls are now permitted to cook a family quantity in the school kitchen, with the provision that the food so cooked must be in accord with the course of study or the day's lesson. The school kitchens having only a limited number of large cooking utensils and a limited baking equipment, only about eight girls are allowed to cook a family quantity at each lesson. However, each girl is given her turn, which comes about once in three lessons. The girls bring their own food materials and the cooked food is taken home for the noon or the evening meal. From September, 1919, to April 1, 1920, about 4,000 family quantities were cooked in addition to the regular day's lesson.

This work has helped the homes very much, especially in districts where the mothers are obliged to work and the school girl has to prepare the noon or evening meal. The children at home are fortunate if sister is a member of the cooking class, because they have a well-prepared hot dish for their meal. The arrangement also saves the mother's time and strength, economizes on the family fuel and promotes the health and well-being of the family generally.

The parents in one district reported on the home work cheerfully done by the girls, and on the extended use of milk. Some of these reports were exhibited and proved very interesting to the visitors. (Report on milk follows, page 66.)

Special Work for Foreign Children.

Another feature of this year's school program brought out of the exhibit was the special work planned for the homes of

Hebrew and Italian children. In the districts where girls of these families attend, they are allowed to make up their own menus which are used for class discussion as to food values and cost. The best menus are then cooked. Costs are estimated for a family of six, and the cost per person worked out. The same plan of menu work is carried on in other districts for our American families.

Intermediate Classes.

One new feature of work in the practical arts course of the intermediate schools was correlation of cookery with geography, arithmetic, science and hygiene. This was also shown at the exhibit. Clippings from the daily papers relating to sugar shipments and movements of other products were brought into class and commented upon, and questions were asked as to the location of sources of supply. Food chemistry, the care of perishable foods, substitutes, etc., was also discussed.

Two very interesting cards were exhibited which attracted much attention; one on the advanced cost of some food materials since 1914, and the other on small economies. See pages 64, 65, 66.

Specimen cards from the federal and state agricultural departments on thrift, health, home gardens, etc., which had been distributed to the teachers from time to time, were also shown. These had been used and commented upon in class during the year so that the pupils might instruct the family regarding the matters with which they dealt.

Laundry Work.

The laundry work done by the girls in one of the schools furnished an interesting feature of the exhibit. It was explained that the pupils bring from home shirt waists, cotton dresses, shirts, table cloths, napkins and towels, and that these are washed, starched and ironed under the supervision of the teacher and then taken home.

The Feeding of Anæmic Children.

So many children of the schools were anæmic after the influenza epidemic that it was found necessary to feed them in order to build them up and re-establish their health. Highly nutritious food was cooked and served in two school districts.

This food was given for a recess luncheon. In a short time these children showed a marked improvement in weight and strength. About 11,500 children were fed during the school year. This work has now been given up in the school kitchens of these two districts as it interfered with class work. Then, too, it was unnecessary for us to carry it on longer, as the Food Economy Kitchen on North street now furnishes recess luncheons in all districts where the master requests. As the materials used in the kitchen are purchased direct from the large markets, and as the equipment is large enough to cook for hundreds at a time, the food can be sold cheaper than we could sell it and the school work is not interfered with. This work was also shown at the exhibit.

Prevocational Work for Girls.

In September, 1919, a new project was introduced into this department, namely, the prevocational work for girls. Plans and specimens of work of various kinds done by the girls of prevocational classes were displayed at the exhibit. For more than seven years we had a form of prevocational work which, both in industrial and homemaking directions, showed excellent results, but it did not seem to fit closely enough into the academic subjects. For this reason, the assistant superintendent in charge of the department recommended that the work be placed on a different basis, or planned so that the special work could dovetail better with the academic work.

The pupils of these classes are principally those who find it hard to grasp academic work but who seem to have a natural aptitude for hand work, and also girls who must leave school early to go to work. The prevocational academic teacher has a six-hour school day, with forty-five pupils divided into three sections of fifteen pupils to a section. She plans to keep two sections in her room for academic work while the third section goes out for special work. Each section has two hours of special and four of academic work each day, the work in the special classes being related to the academic work as closely as possible. The special work consists of renovating, dyeing and making over all kinds of worn garments into children's clothing or household articles. Special stress is placed on home economic work. Instruction is also given in the study of commercial patterns and power machine work; the girls are taught

how to make dresses for themselves as well as for other members of the family. They are also instructed how to prepare, dye and weave rag rugs, as well as how to prepare, cook and serve simple family meals.

The rugmaking at the exhibit was an attractive feature. The rugs made were for home and hospital use. The Red Cross had sent new rags left over from the many garments made in their rooms. These were dyed by the girls so that they might have harmony of color and variety of shades. They were then stripped into the desired width and rolled into balls all ready for weaving.

A demonstration of the work at the exhibit showed the different steps taken in the preparation and weaving of the rugs. When the rug was finished it was left for examination.

During the past school year thirty-nine rugs have been made and garments to the number of 2,450 have been either made outright or mended and remodelled.

In connection with the special work given to these girls during the year, they have also had lectures on mother-craft, first aid and home nursing given by the assistant director of the department. These lectures have proved to be of much interest to the girls, as the compositions written on these subjects show.

The academic teachers in these classes have correlated the lessons in arithmetic, geography, drawing, dictation, spelling, language, composition, science, hygiene, etc., with the work of the special teacher. They have also given lessons on how home conditions could be improved; for example, on the destruction of household pests, the making of home gardens, etc. In all phases of this work excellent results have been shown. Specimens of all kinds of work, both industrial and academic, were shown at the exhibit.

Masters who have had these classes in their districts have spoken of the marked improvement in the girls. The pupils have been happier in school this year than ever before. They have seemed to grasp the academic work better as it was presented in connection with the industrial work. It is the opinion of the masters that this work should be extended as it not only helps the girls themselves, but benefits the homes.

We who are especially interested in girls' work would also be glad to see this work of prevocational classes extended, so that every master who desires it might have the opportunity

of introducing it. While we are desirous of helping all girls so that they may be able to keep well-ordered homes and take care of the family cooking and sewing, we want to do much more for those girls especially who are only to remain in school for a short time. If they are less fortunate than the majority of girls in not being able to continue on into the high school, then it seems as if we who are connected with a great school system should find some means of giving them all the advantages possible for the few years that they remain in school. Girls going on to high school, Normal School or college receive a great deal of attention from our system. Sometimes it almost appears as if it were planned for them exclusively. We should remember those other girls who are going to furnish such a large part of the mothers and women workers of the future, and do all we can for them while they are with us.

Small Economies.

Measure accurately! Measuring is a valuable aid to economy, besides you get better results.

Turn gas off even if you are going to use it soon again. Matches are cheaper than gas.

Save gas! Use a fireless cooker made from a wooden box and newspapers to do boiling and stewing.

Save matches by using partly burned ones again.

Save coal! Never have the fire come above top of lining. Do not dump coal on fire from hod, shovel it on.

Be careful of the water supply. Heat only what water you need and thus save water and gas; in replenishing kettle draw only what you think will fill it.

Use the water from boiled potatoes, rice or macaroni for mixing bread or making soup.

There is no waste or food material in steaming cereals; there is a saving of time and trouble if you steam them, as you need not stir them, and they cannot burn.

Pare apples and potatoes thinly; or cook potatoes unpared and peel when done.

Make jelly from apple parings, or if allowed to remain in cold water until fermented you will get excellent vinegar.

Dry bits of bread and save to use in pudding, stuffing, crumbing fish and oysters, in griddle cakes, muffins and bread; also for layers in scalloped dishes.

Dry celery tops and keep to flavor soups and stews.

Use only a dusting of flour on board when kneading dough.

Brush sides of empty flour barrel with a clean, stiff brush and measure the flour which might have been wasted.

Drain egg shells well! A dozen undrained shells hold what would equal one whole egg.

Get what you pay for! Take the trimmings of fat or meat; the claws and tips of wings of fowl; the head of fish.

Use the head of the fish to make stock for chowder.

Save utensils! Measure dry things first.

Save yourselves! Don't slop; don't drop crumbs, etc., on the floor. Wipe utensils that held flour or other dry materials.

Try out scraps of fat and use for frying, shortening, greasing pans, and soap.

Don't waste soap by allowing to remain in the water; don't make more lather than is necessary.

Save fat by rubbing pan with raw potato when frying griddle cakes.

Spread butter evenly and thinly on bread and not in extravagant lumps.

Much butter is saved by scraping all butter from the paper in which it comes wrapped, or the thorough scraping of butter dishes.

Great waste of food occurs when cooking utensils are not well scraped; it prevents a clogged waste pipe to scrape them.

Scrape all dough from bread pan; it is wasteful and slovenly to put it to soak covered with dough.

In sweetening beverages use only enough sugar to sweeten and avoid the waste of sugar represented by the layer so often found in the bottom of cups, which took no part in the sweetening.

Use little or no sugar on cereals; our bodies do not need nearly as much sugar as we use. Help your own stomach by saving sugar.

Exposure of food to heat and dust causes waste.

Do economic justice to your foods! By proper mastication we eat less and yet satisfy our appetites.

It saves food as well as doctors' and dentists' bills to use the teeth for the purpose for which they were given us.

Use left-over squash, potatoes, rice, in griddle cakes, muffins, bread.

Scald milk to keep it sweet for a day or two.

To spend five cents a day unwisely is to throw twenty dollars a year out of the window.

Save mother!

COMPARISON OF PRICES OF VARIOUS ARTICLES OF FOOD.

	1914.	1920.
Butter, per pound	\$0 36	\$0 76
Best eggs per dozen	65	1 00
Milk, per quart	07	16
Crisco, per can	25	37
Molasses, per gallon	60	1 40
Rice, per pound	10	16
Flour, per bag	85	2 25
Potatoes, per peck	40	1 20
Granulated sugar, per pound	06	28

RESULTS OF CAMPAIGN FOR THE EXTENDED USE OF MILK,
CARRIED ON BY THE TEACHERS OF THE HOUSEHOLD
SCIENCE AND ARTS DEPARTMENT.

In a class of 300 girls:

104 drink one pint of milk a day.	8 reported no headaches.
31 drink one quart of milk a day.	4 get up earlier.
57 require less sweets.	1 no pains after exercise.
34 improved in report marks.	1 requires less pastry.
29 gained in weight.	61 feel better.
4 not so nervous.	7 sleep better.
6 not tired in morning.	

Respectfully submitted,

JOSEPHINE MORRIS,

Director of Household Science and Arts.



THE CHILDREN'S GARDEN. — HILLSIDE KINDERGARTEN



APPENDIX F.

REPORT OF THE DIRECTOR OF KINDERGARTENS.

MR. FRANK V. THOMPSON,

Superintendent of Public Schools, Boston, Mass.:

DEAR SIR,—In compliance with your request for a report on the work of the Kindergarten Department during the past year, I respectfully submit the following:

A casual observer in a kindergarten once said, "This does not look like a school, but the children are living their lives to the full."

We have endeavored to give the children in the Boston kindergartens opportunity to "live their lives to the full" by providing experiences, materials, and as much freedom as seemed wise, which should satisfy their instinctive eagerness to know, to do, and to find an outlet for self-expression.

The past year we have tried some experiments with a freer type of work and I quote here from reports sent me by some of the teachers interested in these experiments:

I. EXPERIMENTS IN FREE WORK, WILLIAM LLOYD GARRISON
KINDERGARTEN.

When we began the free work, we noticed at once three striking contrasts to the work of the former method. First, the large quantity of material with which the children eagerly supplied themselves; second, the natural forming of groups for work; third, the sustained interest with which each child applied himself to the task of his own choosing. The children gathered up the materials, as though hungry for as much as they could take. They used many blocks, and decorated their buildings with rings, adding sticks for flag poles, etc. They seemed to desire a large amount of material regardless of any plan for its use. This phase soon passed, however, so that, although they continue to build with many blocks, they take them from the shelves only as needed. They build with a very evident plan, although often the result is a much cruder form of building than the neat, finished little forms which we formerly suggested. They have much to tell about their work,—the placing of each block has been with a purpose. "Here is a hospital," says one of a group of three; "this is the piazza, where you sit out in the fresh air; here are the chairs, here is a Red Cross, here is the sidewalk and street lights;

this is a Red Cross automobile that brings the sick people; at the back are the back steps, and this is an auto truck that brings food to the hospital."

These larger plans are usually worked out by groups of three or four. There is conversation among the children in each group, but accompanying activity, not idleness. Yet individuals occupy themselves for as long as thirty minutes, often entirely oblivious of their companions.

Through the freedom the children have developed a great deal of self-reliance and delight in helping themselves, as do all children when given a reasonable opportunity. They get their own napkins, crackers, etc., for lunch, pour their milk from the bottles and at the end, clear away and put back their tables.

During the periods of free self-expression the kindergartner finds her points of departure for organized group work. An interesting point in the work is that if the material interests the child sufficiently he will overcome the difficulties of handling it in order to accomplish his end. We seldom hear a child say, "I can't." One child wanted to sew a card like the one she saw her neighbor doing, "I can't thread my needle," she said smilingly, being a pleasant, though lazy little girl. "That's too bad," said the kindergartner, "because you can't sew your card, can you, unless your needle is threaded." She threaded the needle.

The children are such a great help to each other, the slower ones often being inspired by the accomplishments of their quicker companions to a degree of effort which the kindergartner finds it difficult to arouse.

The children recognize their own names on snappers for rubbers, put the snappers on the rubbers and later return them to the place where they were found. Many of the children in the older class also print their own names and recognize the other children's as well.

This all grew from the discovery of a small boy that he could pick out his own snapper. The others wanted to, so they did. Little help from the kindergartner was necessary as the interest was so great. The next step followed in the same way. One child learned at home to print his name. The others were eager to learn. The kindergartner provided each with a paper with his name in large letters on it. He went over them with colored crayons and copied them below. This was also done on the board. When a few were able to print their own names on their cards, it proved a great incentive to the others. We feel that this is reaching forward to the first grade work. The children are going to the first grade with definite habits of industry — ability to concentrate on their work — to express ideas with materials and to meet new problems with delight.

In conclusion, I must add that my assistant and I feel that we have gained infinitely more in this year's experimental work than in any previous period in our teaching experience.

II. EXPERIMENTS WITH THE PROJECT PLAN, SARAH GREENWOOD KINDERGARTEN.

When we first started this work it was necessary to change our program every week to see if we could improve on our plan. We tried it without



ROUND TABLE GROUP.—WILLIAM BACON KINDERGARTEN

the morning circle and the children were at first surprised and then grieved. As one child expressed it, "No clapping, no singing, no nothing." So we have clung to our morning circle. We then decided to have free work on three days a week, the other two days being entirely organized days. That, too, seemed unsatisfactory. If they started something one day and got very much interested in it they wanted to continue it the next day. So we have finally decided to have free work for three quarters of an hour every day. We alternate our organized period, having one day a gift lesson and the next day an occupation lesson. In this way each child is brought in contact with all the different materials. At the end of the morning all the work done during the free period is looked over and criticized by the children. If not up to the standard the work is not taken home. Work at the sand tables is commented on and suggestions made for improvements. The clay work that is considered worth while is kept and they are allowed to paint it the next day. This "judging period" I consider very important. It keeps the standard of the work higher and teaches the children to differentiate between the good and the poor work.

In the beginning the boys were more interested in the blocks, and as a whole the girls showed more interest in pasting, sewing, weaving, cutting, etc. Of course some of the girls enjoyed the blocks and some of the boys occasionally decided to do a little pasting or cutting, but as a rule they divided themselves into a group of boys and a group of girls.

After watching free work of this type for a time I realized that other material was needed. So weaving frames were introduced on which small mats may be woven, and a doll's tam o'shanter loom. One of the girls cut a doll's dress from paper and using that as a pattern, cut a dress out of a paper napkin and sewed it with worsted. Several others then did the same thing and suggested real dresses. So some cloth was brought from home and an experiment in making "real" dresses for their dolls was started.

They then thought of a doll's house. I told them to look in the store-room and see if they could find anything suitable there. They brought forth a large pasteboard box and immediately started to plan the outside of the house. They found some red brick crepe paper and pasted that on to make it look like a brick house. Then the number had to be cut out and pasted on. They wanted a pointed roof and this taxed them sorely. They painted some cardboard black and then with the aid of glue, slats and pasteboard we got our pointed roof. A magazine was brought to school by one of the children and the furniture advertisements cut out and a prop pasted on the back to make them stand up. Then pictures were pasted on the walls and chairs and benches made out of our folding papers. This work on the doll's house was done almost entirely by the girls, the boys occasionally coming over to look at it and offer suggestions. The boys meantime were left in almost undisputed sway at the sand table. From making isolated and unrelated forms they gradually began to plan the use of the table as a whole. This began to develop strongly during the knight talks. They made the knight's castle and the child's house and used blocks to represent the knights on horseback. Our large knight flags were used but were criticized by the

children as being too large, so the next day smaller ones were made by the boys more in proportion to the size of the castle. The blacksmith talk gave them many new ideas. A hill with a hole in it represented a mine. A ladder was said to be needed to get down into the mine, so one of the boys cut strips of paper which he pasted on two slats; that was the ladder.

The children visited an exhibit of sewing done by grammar school classes and immediately wanted to make something for themselves, aprons appealing strongly to them. So I said after our April vacation they could make aprons. Much to my surprise the subject was brought up the very first day of school and it seemed to be a unanimous decision to make aprons. A note to each mother asking for half a yard of any kind of suitable material brought prompt returns. Patterns were provided, the children folding their cloth in halves, and pinning the pattern carefully in place, used the top of the sand table as a cutting table and each child cut out his own apron. For three days interest was maintained in this project. *One thing upon which I have insisted is that anything started must be finished. A thing cannot be left half done and something else started.* If a child starts to work with clay it is not necessary that he work with clay during the entire period, but he must have made something with the clay before he can turn to any other work. This rather checks the tendency shown by some to flit from one thing to another.

I felt now that something more was needed by the boys, so I produced some boxes, some loose wood, a saw, a hammer and some nails. The boys hesitated not a second. The second day found it necessary to add another saw, more hammers and a plane. The boxes immediately suggested various things to them. One box must be a barn. So someone nailed in two partitions, making three stalls. Another box without a cover was having slats nailed across the top. This was a chicken house. A door was cut and it was suggested that some wire netting was needed to put over the top. Another boy took three boards, nailed them together, resembling a T; this was an aeroplane. One of the large boxes with one partition was set aside to be used as a doll's house. Their attitude toward the tools showed beyond a doubt that the children were ready for them. There was no aimless sawing and hammering. They were full of ideas and suggestions and every one went to work with a definite purpose. The doll house with two rooms was talked over and planned. The need of wall paper and the difficulties of the children in obtaining any, led me to bring several pieces. A class council was held before any papering was done to decide on what the rooms should be. It was necessary finally to take a vote and the majority were in favor of a dining room and kitchen. Paper was selected by the class for both rooms and two girls did the papering. Oil cloth was measured and cut for the kitchen and nailed in place by one of the girls. Later, furniture was made for the rooms.

I feel that the children have developed a power of initiative, an ability to carry out their ideas which no other class of mine has ever had. They have thought up new games and revised old ones. "Comparisons are odious," but nevertheless when this class enters primary school next year



A FARM YARD PROJECT.—WILLIAM BACON KINDERGARTEN



I shall follow their progress carefully, comparing them with the classes of former years. In that way it seems to me we shall know whether or not we have taken a step forward in this freer work of the children.

III. FREE WORK IN THE WILLIAM BACON KINDERGARTEN.

On the ninth of September, 1918, I made my first experiment with the project method. Since then I have devoted a part of each morning to it. As a rule the project does not hold over from day to day, although the play of "school," initiated and worked out wholly by the children, absorbed a small group for four successive mornings. The school organization consisted of "teacher," "doctor," "nurse," and "pupils," with appropriate duties performed by each one. The "pupils" were allowed to choose their work which they carried out carefully and seriously, the "teacher" offering criticisms of the work. The whole play was perfectly well regulated and orderly, a most interesting fact being the complete absence of the "naughty child."

Many of the children arrive as early as half-past eight and make straight for the occupation of their choice, often working for an hour or more without change. Others with a lesser degree of perseverance or concentration will try first one thing, then another. And it is just here that the teacher finds her greater opportunity to observe and study the individual child; to recognize his shortcomings and help him overcome them. It may be that some child shows an utter lack of co-operation, as was the case of Eddie. His home conditions were deplorable — no mother, left through the day in the care of an older brother. When he entered kindergarten he was so sure of the doctrine that "might makes right" that no child was safe within his reach. Anything that he saw and wanted he took the speediest means of getting. After a day or two trying this sort of bullying, a small table was set apart for his special use. He could choose the toys he wanted, but must abide by his choice. He was not to interfere with any other child, and no child was to interfere with him,—an injunction wholly unnecessary — they gave him a wide berth.

For several weeks he was content to isolate himself in this way. Perhaps it was the first feeling of protection and peace that he had known in his belligerent little life. One day another child made a barn — Eddie looked at it and decided that it was just the thing to put his horse into; so a partnership was formed, the horse was installed, and the two boys played harmoniously together the remainder of the period. Somehow there had crept into his little consciousness during that temporary banishment from the group a comprehension of the rights of others, and a realization that those rights must be respected. The first lesson in community living had begun, and Eddie never went back to his separate table.

The blocks have always faithful followers, but the merit of the work is apt to fluctuate. If a good organizer takes the lead there may be a fine barn with several stalls on the ground floor, and a loft for hay above, with roof and pigeon house topping the whole. Teams are in the yard and a well built fence generally incloses it. Horses are taken out, fed,

watered and put into the teams. The cows are milked, put out in the yard and the milk carried to the city; and so the play goes on.

The girls build houses, and with the small blocks make their furniture. A yard or garden is added and small dolls are insisted upon as a necessary accompaniment, proving again that "play is not merely a copy of life, but during the period of childhood is life itself at its highest potency."

I have found that the project method with its opportunity for free experimentation has greatly increased initiative, quickened perception, and given rich stimulation to creative energy. This is very apparent in class work. The children use material with easy familiarity, eager to work out problems for themselves. It has taught them to think and act independently, created a spirit of helpfulness and developed self-control. It has reduced the problem of discipline to a minimum. A happy, busy child has little time or incentive for wrongdoing.

IV. LARGE DRAWING IN KINDERGARTEN, MARGARET FULLER KINDERGARTEN.

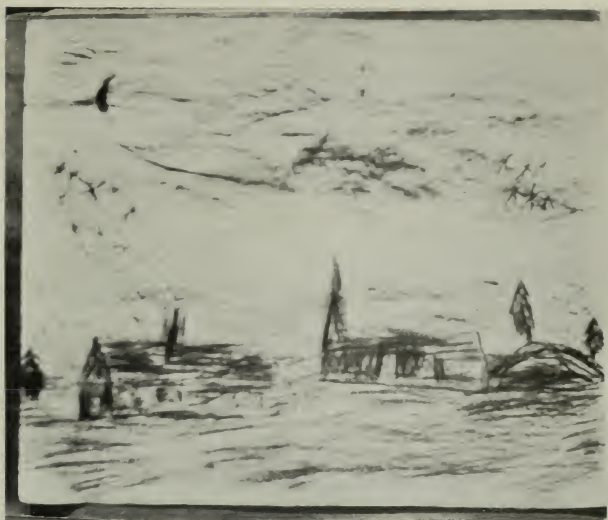
The opportunities for truly creative drawing in the kindergarten have always seemed to me too limited. I have, of course, with my children endeavored to do all that was possible to encourage better work by keeping before them good pictures full of suggestion, by showing them beautiful and interesting things to give them new ideas and incentive, and by trying to stir their imagination. But although good results came as a result of definite problems in drawing, the original work was always very disappointing. If a child started with an interesting idea the paper was inadequate in size, with the result that interest flagged and the idea was given up, or that in attempting to crowd it all into the small space the drawing became cramped, and the details were tucked into any vacant spot regardless of their true relation to the picture. I used the largest block paper available but I was so dissatisfied that I decided to use the blackboard for practically all original drawing, for there alone had the children ever seemed to find proper scope for their ideas.

Help came, however, in the way of an exhibit of color work done on a large scale by little children of New York. Having no easels and no overalls for the children, and not caring to have liquid paint spattered over the floor, I decided to cling to crayons, and to try drawing with the paper on the floor. I gathered together all the large heavy wrapping paper I could find and started in.

I was amazed by the almost immediate response and by the eagerness of the children to draw. It is most interesting to observe the difference in their attitude toward the work. Seldom does a child draw without an idea, and he clings to it with absorbing interest to the end. Moreover when the sketch is done he appreciates that fact and has no desire to keep on adding to it just because of a little unused room on the paper. Also the children's crayon strokes grow larger with the size of the paper. They learn much more readily the variety of effects obtainable from different uses of the crayon to produce mass and outline, and light and shade. They have so clear an appreciation of the size that if a child copies a smaller picture on the larger paper he never fails to enlarge his



FREE DRAWING DONE BY CHILDREN IN THE MARGARET FULLER KINDERGARTEN.



FREE DRAWING DONE BY CHILDREN IN THE MARGARET FULLER KINDERGARTEN.

drawing to correspond to the larger space. This happens frequently as it is not possible for a large class to be all at the same time on the floor with paper two to four feet long.

I have found it so desirable a thing to have this opportunity for enlarged work that it is sufficient punishment for a careless worker to be restricted to the small paper until he proves his ambition to work carefully and thoughtfully.

The children have never been so discriminating in the use of color as this year. The crayons are all kept in one tray, sorted in compartments according to color. There is much pondering over this box, and careful choosing of the two or three desired colors. These colors are changed for different ones as the need arises. This process serves two purposes — it avoids haphazard laying on of color and gives the child a chance to get up and walk about in the course of his work, thus preventing over-tiring his eyes and cramping his muscles.

The variety of drawings has been very satisfying with this method. There have been landscapes, seascapes, night scenes, snow scenes, sky scenes, houses of all kinds with their settings, animals with or without their habitats, beautiful gardens, children and adults in all forms of activities, portraits and illustrations of stories and fanciful ideas. Many of these are suggested by talks in the kindergarten, many by experiences outside of kindergarten, and many by pictures we constantly show the children. I have a variety of large colored pictures of great interest to them. These not merely suggest ideas, but use of color, light and shade, and good arrangement. I also have a large scrapbook of pictures suggesting these same elements. Many suggestions come also from the work of the children themselves which is always exhibited, if good, for a number of days.

This work is all done with little help from me. Some drawings I keep away from entirely until they are completed. Sometimes it is necessary to help a child in the observation of certain facts, *e. g.*, that the horizon line serves to limit both sky and land or sea; that things behind other things can't be seen and therefore can't be drawn; that daytime shows color with its true value, and that night time changes things; that objects nearby are larger than those far away, and many other things that a child does not see readily of his own accord. Many times I show them the ways of using their crayons. But generally speaking, the children are working out their own ideas in their own way.

The year has been most satisfactory in the results found in the drawings, and in the larger comprehension I now have of the latent possibilities in children of four and five years in this particular sort of self-expression.

CONFERENCES.

Weekly conferences with the kindergarten teachers have been held as usual, for the discussion of educational problems and methods. We have also studied Doctor Kilpatrick's writings on the project method, and other articles on the subject have been reviewed by the teachers. We have also studied "Interest and Effort," by Doctor Dewey. Our discussions have led us

to appreciate more fully the value of the free or project work even with the children of four and five years of age, and at the same time to recognize clearly the necessity and value of organization in public school kindergartens.

MOTHERS' MEETINGS.

It is important that the kindergarten should articulate with the school as a whole, and it is likewise important that it should articulate with the home and other agencies for child-betterment in the community. When the campaign for weighing babies was being conducted the kindergarten teachers were asked to assist, and rightly so. When the Child Welfare Association of New York sent a speaker to Boston recently, the Kindergarten Department was requested to arrange an opportunity to address the body of kindergarten teachers. These instances are cited to illustrate the fact that the kindergarten, by reason of her training and opportunity, is expected to have a vital interest in all matters of community and child welfare.

Mothers' meetings have been held each month in the kindergartens. In some districts there is a flourishing mothers' club, with an evening meeting occasionally, so the fathers may attend. The purpose of such groups is to discuss common problems of child training under the leadership of one who shares the parents' interest in the individual child.

The total attendance at mothers' meetings from October, 1919, to June, 1920, has been 15,700 mothers and 801 children.

HOME VISITING.

The kindergarten has been called "a great civilizer" and sociologists have said that "there is no agency at work in our cities which has greater value to the immigrant family than the kindergarten, because it lays such stress upon the family as a whole, and relates the family to the school in such a definite way."

The kindergarten teachers of Boston have during 1919-20 made 24,885 visits in the homes of kindergarten children. This community work might easily be made of more value to the district by extending it to include homes of the children of the early elementary grades as well as of the kindergarten.

AMERICANIZATION.

A creditable number of kindergarten teachers have been teaching classes of foreign born mothers two afternoons a week during the year, under the direction of the Department of Evening Schools. Some of these teachers have taken courses in Americanization work at Harvard and elsewhere. If this work is to continue and increase in efficiency some training for the work should be required and perhaps provided by the School Department.

VOLUNTEER WORK.

In response to an urgent request from the social service department of the City Hospital, a group of kindergartners volunteered to go to the hospital two afternoons each week to organize some occupational work for the children. One of the group writes as follows:

We plan to begin our work just before three o'clock, and have gone from bed to bed carrying with us several different kinds of work in order that the children may have a choice. Three o'clock is the hour when parents and visiting friends are leaving, the hour when little hearts are full and eyes are teary, and when voices are often lifted up in real distress. The sight of the interesting and attractive materials and the prospect of "making something to show mother tomorrow," is a great help toward letting mother go today. A simple little cardboard rocking horse proved so diverting to one baby girl that her screaming ceased and father and mother slipped away unnoticed.

The wide difference in the ages of the children in a ward necessitated the preparation of work of varying degrees of appeal and difficulty. The ages have ranged from two, or under, to thirteen or fourteen. Joe was neither well enough nor old enough to make anything for himself, so the kindergartner sat by his crib and pasted little pictures in a miniature scrapbook. His part consisted in saying, "Now paste *this* one. Paste it *here*." When the few leaves were filled he sat contentedly turning them over and over.

A thirteen-year old girl is keenly interested in having the kindergartner read "Alice in Wonderland" to her, and as she will be at the hospital for several weeks she hopes to hear it all. She asked eagerly if they could "finish it next Monday."

Some who are not able to work at present like to hear stories, and the little ones enjoy the Finger Plays and Nursery Rhymes. The children are most appreciative and have been very spontaneous in expressing their gratitude. Often the kindergartners are met with eager cries of "Oh, goody! you've come again!" "What are we going to make today?" "Look, Emma, look Charlie, here's the teacher lady!"

The equipment for this work is simple; paper and scissors, crayons,

cards, worsted and the like, but these suggest endless possibilities. When the time comes for us to gather up our materials the regret of the children is very genuine; even the fact that supper is to be served seems to them an inadequate excuse for our leaving.

AFTERNOON KINDERGARTENS.

The afternoon kindergarten has seemed to be the only way of meeting the needs of the children in our congested districts — but a two hour day is inadequate from several standpoints. I believe the time has come for us to consider the adoption of a plan similar to that in effect in the city of St. Louis, namely, the employment of some kindergartners who will teach both morning and afternoon sessions with two different groups of children. Obviously, the teachers thus employed should receive a salary equal to that of the elementary teachers.

SALARIES OF KINDERGARTEN TEACHERS.

Following the lead of other large cities, for example, New York, Buffalo, Pittsburgh, Chicago and Cincinnati, the next forward step for Boston should be to place the kindergarten teachers on the same salary basis as the elementary teachers. Some of the arguments in favor of such a plan are:

1. The academic requirements for entering the Boston Normal School are the same for the Kindergarten-Primary Course as for the Elementary Course.
2. Students preparing to teach in the kindergarten are required to take a three-year course at the Boston Normal School as are those preparing for elementary teachers.
3. It costs a kindergartner just as much to live as a teacher in other elementary grades.

NOTE. Those kindergartners who receive their training in a private normal training school have a two years' course only, but must teach one year after graduation before they are eligible to take examinations for a kindergarten certificate. The weakness in the present requirement lies in the fact that this year of experience is oftentimes with so small a group of children that limited opportunity is given for the development of those qualifications which one looks for as a result of experience.

Without question the same salary schedule should involve as many hours of work for the kindergartner as for the elementary teacher.

TYPE OF AFTERNOON WORK.

The type of work for the extra two hours should depend upon local conditions:

1. In congested districts where we now have both morning and afternoon kindergartens, there should be two teachers in charge of a group of children in the morning and another group in the afternoon.

2. In localities where mothers work all day and are away from home, another type of organization might well be considered, namely, a morning session for the children, those same children to return in the afternoon for supervised play out of doors in clement weather and in the kindergarten room on stormy days.

One of the principals, in discussing the needs of his district, writes as follows:

A somewhat careful examination of my district shows that two hundred and fifty-one mothers are pretty regularly at work. Many absences are recorded because of girls staying at home to care for younger children while the mother is at work. For this difficulty I want to suggest a possible partial solution. I would like to have children too young for the first grade, whose mothers are at work, and who would either be on the street or would force the absence of an older sister from school to care for them, invited to our school yards afternoons throughout the school year. On stormy days the kindergarten room should be open to them. I would not ask for any definite work, except that the children should be taught to respect the rights and wishes of others with whom they associate in their play. I should urge free play, with possibly an occasional suggestion from the teacher in charge. But just as far as it could be safely done, the children should be left to settle their own problems. Most afternoons through the winter they would be able to play in the yard, as our yards are well-sheltered, but on very stormy or cold days I see no objection to inviting them into the kindergarten room where a collection of toys might easily be in readiness for them.

While I would in nowise advocate day nurseries conducted by the kindergartners under the auspices of the city, this plan on the other hand is in its idea and scope a playground for children of kindergarten age, open only during the afternoon session of the school. To carry out such a plan effectively a sand pile, low swings and some simple apparatus should be available.

3. In neighborhoods where the children have sufficiently

good homes and play space, the following plan for afternoon work for the kindergartners is suggested:

- 2 afternoons each week, visiting in homes.
- 1 afternoon each week, conference with director.
- 2 afternoons each week, conducting Americanization classes or assisting in lower grades.
- 1 afternoon each month, mothers' meetings.

Careful reports on prepared blanks of home visiting and mothers meetings are now sent each month to the office of the director, and this practice should be continued. I believe that conscientious kindergartners have always given at least two hours a day to their work in addition to the definite three hours with the children; many I know are giving to the work much more than this. To these teachers, a reorganization of time on a specific basis will be no hardship — indeed many I know will welcome it since it would remove the criticism sometimes made that “the kindergartner is a privileged person and works only half a day.”

The kindergarten has long since passed the stage of philanthropy — its educational value is recognized and affirmed by educators. We require of kindergarten teachers high standards of culture and training, and the future of the kindergarten as a profession demands a salary schedule equal to that of the elementary teacher. Otherwise we will revive the old pernicious idea that inferior teachers are good enough for little children; young women of ability will seek the higher salary of the grades, and the beginnings of education will be in the hands of inefficient teachers.

Respectfully submitted,

CAROLINE D. ABORN,
Director of Kindergartens.

APPENDIX G.

REPORT OF THE SUPERVISOR OF LICENSED
MINORS.

MR. FRANK V. THOMPSON, *Superintendent of Public Schools,
Boston, Mass.:*

DEAR SIR,— I herewith submit to you the annual report on the supervision of licensed minors for the school term closing June 30, 1920.

The control of minors and the licensing of them to practise street trades is vested in two departments in the City of Boston, namely, the Mayor and City Council and the School Committee. Boys and young men between the ages of sixteen and twenty-one years are licensed by the former, while minors between twelve years of age and the compulsory school attendance age of sixteen years, are licensed by the latter.

The Massachusetts Legislature empowers the school committee, in any city having a population of over fifty thousand inhabitants, to make regulations relative to the exercise of street trades by minors between the ages of twelve and sixteen years and designates the superintendent of schools, or a person authorized by him in writing, to grant a badge which shall be worn conspicuously exposed at all times by the minor while so engaged.

In the City of Boston the person so authorized by the Superintendent of Schools is designated as the Supervisor of Licensed Minors.

The purpose of the School Committee of the City of Boston in granting licenses to sell newspapers and practise street trades, to boys of the compulsory school attendance age, is to enable such boys to assist their parents in defraying the expenses of their education and by such earnings to provide for higher education.

Economic conditions, the family circumstances, together with the omnipresent high cost of living serve as barometers governing the number of boys entering upon street trade activities.

That street newspaper selling in a large city is a lucrative occupation for boys and young men is not the general opinion, but the ambitious boy of twelve to fourteen years may earn from eight to twelve dollars per week as newsboy and at the same time attend the elementary school.

The youth attending high school will earn, by close application, from ten to fifteen dollars per week plus his high school education, while young men and adults whose sole occupation is that of "newsboy," vary in earnings from twenty five to fifty dollars per week. In several locations these latter "own corners" and supply the passing public at public squares, railroad stations, elevated railway and subway entrances, with the magazines and newspapers of the day, and have an earning average of from fifty dollars to one hundred dollars per week.

This large money return serves as a magnet to our school boys and results in disadvantages as well as benefits, unless properly governed and controlled. Too often the small boy, through his earnings, buys his independence at home and later attempts its success at school, and when there he is curbed he lays his plans to leave school contrary to the wishes of his parents. By constant supervision and patrol of the city by the Supervisor of Licensed Minors, together with the co-operation of the schoolmaster, teacher and parent, he is immediately brought within his proper channel, as boys under the age of sixteen years are not permitted to leave school to engage in a street trade unless they have complied with all the educational requirements and school attendance laws of the State of Massachusetts.

All violations of the regulations of the School Committee governing licensed minors, whether discovered upon the street or on complaint made by the boy's teacher and master at school, are investigated and disposed of at the Boston Newsboys' Trial Board, where the boy reports with his parent upon summons.

During the school year just closed 433 cases were heard and disposed of by the Trial Board as follows:

VIOLATIONS.

Selling newspapers without a license	182
(Of whom 33 have become licensed.)	
Blackening boots without a license	37
(Of whom 5 have become licensed.)	

Peddling without a license	30
(Of whom 4 have become licensed.)	
Selling newspapers without wearing badge	25
Blacking boots without wearing badge	1
Peddling without wearing badge	6
Selling newspapers on cars	3
Selling newspapers before 6 a. m.	14
(Of whom 10 were selling near 1 a. m.)	
Selling newspapers after 8 p. m.	33
(October 15 to April 15.)	
Selling newspapers after 9 p. m.	15
(April 15 to October 15.)	
Selling newspapers during schools hours	20
Truancy	5
Poor conduct and attendance at school	5
Assisted by unlicensed minors	31
Begging money	7
Miscellaneous	19
Total	<u>433</u>

DISPOSITION AND PENALTY.

Boy and parent instructed in the law.	
Cases placed on file	356
1 week's probation with rules to learn and recite	22
2 weeks' probation with rules to learn and recite	31
3 weeks' probation with rules to learn and recite	7
4 weeks' probation with rules to learn and recite	1
Badge surrendered	3
Badge suspended	4
Case dismissed	9
Total	<u>433</u>

Frequently investigation of cases result in showing that the family is in serious or strained circumstances and requires the attention of local church and community organizations or our public charitable boards.

Cases referred to	
Church and community organizations	5
State Board of Charities	1
Overseers of the Poor	1

When boys who have appeared before the Trial Board do not improve under its guardianship, or upon recurrences of violations or in aggravated cases, complaint is then presented to the juvenile court where the boy is obliged to attend with

his father or mother. This, however, is held over the boy as the last recourse and that our newsboys have respect for the juvenile court is shown by the following number of complaints presented and disposed of during the present school year.

Juvenile court cases	3
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Disposition:

Costs assessed \$2 and \$5 costs suspended	1
Committed to Lyman School for Boys	2
	<hr/>
	3

(A review of the contributing facts is presented herewith.*)

Municipal Court complaints	5
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(Involving persons seventeen years of age or over and adults causing the school boy's violation.)

Disposition:

Fine imposed, \$20; suspended upon promise to discontinue.
 Fine imposed, \$20; suspended upon promise to discontinue.
 Fine imposed, \$10; suspended upon promise to discontinue.
 Fine imposed, \$10; suspended upon promise to discontinue.
 Fine imposed, \$5; paid.

* John S——, age twelve years, residence Silver street, South Boston, was found on Boston Common, 10 a. m., October 14, 1919, not attending school. He had been selling newspapers together with John C—— and they had in their mutual possession \$1.83 received from the selling of newspapers. John S—— had not been home to eat or sleep since October 7, and had, during that time, been truant from school and "bunking out," sleeping under stairs in an alley running from Washington street.

Recently he had been complained of by the attendance officer of the Lawrence School District as a truant from that school and was placed in the Disciplinary Day School class in the Sarah J. Baker School on January 30, 1919.

This boy appeared before the Boston Juvenile Court on February 28, 1919, on another complaint and was placed by the court in the care of the State Board of Charities until March 7, 1919. He was again before the court in May, 1919, and once more placed in care of the State Board of Charities. He re-entered the Disciplinary Day School on September 8 of the present school year and was absent and truant during eight sessions.

On October 15, 1919, John S—— was complained of by the Supervisor of Licensed Minors before Judge Cabot of the Boston Juvenile Court as being a "runaway from home and school" and on that date, in the presence of the boy's mother, he was found delinquent. As John had been before the Juvenile Court on previous charges, and a probation period not proving effective, he was committed to the Lyman School for Boys at Westboro.

John C——, age ten years, residence E street, South Boston, was found on Boston Common, 10 a. m., October 14, 1919, not attending school. He had been selling newspapers together with John S—— and, in addition to money received from the sale of newspapers, contributions were solicited and received from the public after John C—— had given exhibitions of the prevalent "body and muscular dances" on the public streets.

John had not been home to eat or sleep for one week and during that time was truant from school, "bunking out" and sleeping under stairs in a yard on F street, South Boston.

John C—— formerly attended the Clinch School of the Shurtleff School District and was complained of by the attendance officer of that school district as a truant, being placed in the Disciplinary Day School in the Sarah J. Baker School on February 3, 1919.

He was before the Boston Juvenile Court on February 28, 1919, and placed in care of the State Board of Charities until June 26, 1919. He returned to the Disciplinary Day School on September 8, 1919. Since that date he has been absent and truant during nineteen full day sessions.

On October 15, 1919, John C—— was complained of before Judge Cabot of the Boston Juvenile Court by the Supervisor of Licensed Minors as being a "runaway from home and school." He was found delinquent and committed to the Lyman School for Boys.

The money found in the possession of both boys was ordered turned over to the court by the judge as the costs of the court.

The attention of the Supervisor of Licensed Minors is not confined to public schools alone but to pupils of the parochial and private schools as well. Boys who are truant from outside cities and towns seek adventure in the City of Boston, trusting that their misdoings will be covered up or lost in the din and

travel of business. Such boys receive their share of attention, report being sent to their parents and schoolmaster.

Number of boys truant from surrounding cities and towns . . . 10

Again, boy, parents and employer from out of town feel that violations against the Massachusetts Child Labor Laws can be committed in a distant large city without discovery, while such violation would be immediately recognized in their own city or town. During the past winter a boy of fourteen years was employed as helper on a milk wagon from Revere, with delivery route in Boston. This boy lived in Revere and attended the elementary school of that city. In addition to his school attendance he worked on the milk wagon delivering milk from eleven o'clock at night to and including seven o'clock in the morning, seven days each week, receiving a compensation of \$7 per week. Investigation at his school showed that frequently he fell asleep in his class. Upon discovery of this violation the facts were presented to the State Board of Labor and Industries by the Supervisor of Licensed Minors, which resulted in the violation being stopped immediately upon a visit by a state inspector to the employer as well as the boy's parent, who instructed both employer and parent in the laws governing the employment of children.

Cases reported to State Board of Labor and Industries . . . 8

During the period of the World War many young men of the draft age engaged as newsboys enlisted in the service. They were substituted in their street trade activities by their younger brothers, therefore a larger number of badges were issued to boys of school age during this time than was ordinarily demanded.

After the close of the war, and continuing during the past school year, the demand in the commercial world for child labor has been extraordinary, the law of supply and demand governing the wages paid, which, in ordinary business, amounted to ten and twelve dollars per week for positions of errand and office boys.

In keeping with these facts we find a much younger class of children as newsboys; in many instances they stand ready with the toes on the mark awaiting the arrival of their twelfth birthday in order to comply with the legal requirements of

age, ready to start upon their earning career as newsboys. When the badge is granted it is found that this youngster supplants his fourteen-year old newsboy brother on "his corner," as the older boy has found a position in the business world after high school hours, he now being old enough to comply with the child labor laws and present himself to receive a "not-to-be-discharged-from-school" employment certificate. The younger brother now has a well-paying newspaper business, which was developed by the older, while the "former newsboy" is now office or errand boy for a business establishment, and in both instances each child is still attending school and depositing in the family reserve bank approximately \$20 per week.

During the past school year, from September 1, 1919, to July 1, 1920, there have been

842 Badges granted.
196 Badges re-issued.
58 Badges repaired.

Money receipts for badges during ten months' period, said amounts having been deposited with the Business Agent of the School Committee of the City of Boston:

September, 1919	\$29 00
October	35 25
November	26 75
December	20 00
January, 1920	15 75
February	12 75
March	29 50
April	27 50
May	30 75
June	32 25
Total receipts for badges	<u>\$259 50</u>

During the school year just closed Senate Bill No. 182, entitled "An Act to Authorize the Sale of Newspapers and Magazines in Boston by High School Pupils from Other Cities and Towns," was presented to the Massachusetts Legislature for enactment.

The bill was designed and framed by one of the assistants in the circulation department of one of the evening newspaper publications in Boston. He was the petitioner for the Roosevelt Newsboys' Association, an organization composed of nineteen newsboys of the outlying cities and towns from the City of

Boston, who were to be newsboys employed by the publishers to work specifically for them in keeping that newspaper on sale in Boston's streets with a purpose of increasing the circulation.

The bill was aimed to wrest from the School Committee of the City of Boston the power and authority granted to that body by the Massachusetts Legislature of 1913, and permit boys from cities and towns within a radius of twelve miles to practice street trades within the limits of the City of Boston, notwithstanding the fact that the School Committee of the City of Boston would have no jurisdiction over their school attendance or education.

The Supervisor of Licensed Minors, with the approval of the Superintendent of Schools, appeared in opposition to the bill, setting forth before the Legislative Committee on Education, where the bill was open for hearing, statements and facts to prove the bill as follows:

1. Unfair to the Boston newsboys who are obeying the compulsory school attendance laws.
2. Destructive:
 - (a) It offers opportunity for truancy and delinquency.
 - (b) It keeps the boy from his home and family.
 - (c) It does away with opportunity for home study and preparation of home lessons, having a tendency to cause the boy to leave high school for failure in his school work.
 - (d) It is contrary to "law and order," as it defies observance of the "municipal ordinance, rule or regulation." (Boys so licensed are not obliged to recognize newspaper selling laws of the City of Boston.)
3. Incomplete:
 - (a) No provision for parental approval in application.
 - (b) No provision for its enforcement.
 - (c) No provision for school co-operation.
 - (d) No penalty for violation.

The bill dealt with a serious problem and from my view of practical experience was designed and framed for business gain. The petitioner was given leave to withdraw.

Respectfully submitted,

TIMOTHY F. REGAN,

Supervisor of Licensed Minors.

APPENDIX H.

REPORT OF THE DIRECTOR OF MEDICAL
INSPECTION.

MR. FRANK V. THOMPSON,

Superintendent of Public Schools, Boston, Mass.:

DEAR SIR,—The following is a report of the Department of Medical Inspection for the school year 1919-20:

The department consists of one Director of Medical Inspection, one supervising nurse, one medical inspector of special classes, forty-seven school physicians, and forty-seven school nurses.

There are nineteen open-air classes as follows:

Abraham Lincoln District	1
Bowditch District	1
Bowdoin District	2
Dwight District	1
Hancock District	4
Norcross District	3
Quincy District	3
Washington District	2
Wells District	2

The establishment of five additional classes has been recommended for the school year 1920-21, as follows:

Bowdoin District	2
Lowell District	1
Norcross District	1
Wells District	1

The Director of Medical Inspection and the supervising nurse, ably assisted by Miss Mary E. Durgin, who served as temporary supervisor of open-air classes from January 5, 1920, to March 31, 1920, devoted much time and energy to the improvement of open-air classes. In November, 1919, the rules and regulations for the conduct of open-air classes and the schedule were revised and a detailed report transmitted to the superintendent. Principals, teachers, physicians and nurses in districts having open-air classes are enthusiastic in their statements of beneficial results from these classes. In order to

approach the ideal there is much to be desired, but earnest effort will be continued to attain perfection.

Comparative Statistics on Physical Examinations of Pupils of the Boston Public Schools from December 1, 1915, to June 30, 1920.

	1915-16.	1916-17.	1917-18.	1918-19.	1919-20.
Total number pupils examined.....	99,862	104,287	104,762	100,564	105,193
Total number without defects.....	30,781	38,318	43,128	43,328	46,065
Total number with defects....	69,081	65,969	61,634	57,226	59,128
DEFECTS AS FOLLOWS:					
Defective nasal breathing:					
Anterior.....	1,292	1,297	1,108	826	633
Posterior.....	5,966	5,282	4,975	5,338	6,158
Hypertrophied tonsils.....	18,444	14,806	14,037	12,734	14,015
Defective palate.....	351	169	121	65	48
Cervical glands.....	18,841	7,746	7,201	4,777	3,351
Pulmonary disease:					
Tuberculous.....	44	22	28	15	13
Arrested tuberculous.....			5		
Question.....		1			
Nontuberculous.....	683	453	456	516	473
Cardiac disease:					
Organic.....	1,330	1,406	1,624	1,572	1,502
Functional.....	1,668	1,716	1,864	2,209	2,215
Nervous disease:					
Organic.....	74	48	46	26	54
Functional.....	221	179	138	149	174
Chorea.....	43	23	33	14	16
Orthopedic defects:					
Tuberculous.....	88	76	63	51	37
Nontuberculous.....	1,698	1,770	1,774	2,221	2,131
Skin.....	3,071	2,978	2,308	2,007	1,716
Rickets.....	383	326	284	132	146
Malnutrition.....	2,110	1,712	2,087	2,359	2,353
Mental deficiency.....	431	448	627	558	721
Totals.....	56,738	40,458	38,779	35,599	35,756
Defective teeth.....	56,750*	55,638*	50,507	44,531	45,567
Grand totals.....	113,488	96,096	89,286	80,130	82,323

* During the year 1915-16, and from October 1, 1916, to January 1, 1917, defective teeth were classed as primary and secondary. In some instances, if a pupil had defective primary and defective secondary teeth, it was recorded as two defects instead of one. In order to avoid duplication of defects it was thought advisable to record defective teeth as one defect without regard to whether they were primary or secondary. This method was adopted commencing January 1, 1917, and precludes comparison for the two years.

The steady decrease in cervical glands continues, and as stated last year, this is partly due to the fact that school physicians have been instructed not to report slightly palpable cervical glands when secondary to adenoids, tonsils, carious teeth, pediculosis, or other allied condition. These cases are kept under observation and only the primary causes reported.

Pulmonary tuberculosis shows a steady decrease.

Cardiac disease remains practically the same for reasons which have been stated in previous reports.

The principal causes of malnutrition in school children are: Insufficient and improperly prepared food; impaired digestion due to imperfect mastication, bolting of food, use of tea and coffee, over-indulgence in ice cream and candy; late hours, lack of fresh air and proper exercise.

The first, insufficient food, is a social problem, the others medical. The latter should be corrected by training the child to take the properly balanced diet, or substitutes; to masticate the food thoroughly by instructing mothers on the selection and preparation of food, the value of exercise, fresh air, and other hygienic measures.

The public schools of Boston are doing much to combat malnutrition. Commencing in 1909, the pupils in the first grades were weighed and measured. These children were weighed and measured annually until 1919. The data from these records are in the hands of Dr. William T. Porter of Harvard Medical School. It is expected that his deductions will be published at an early date.

The present status of weighing and measuring is as follows: Nurses weigh and measure the children in open-air classes every month. All cases of malnutrition are weighed and measured every month. To this is the added requirement that all children in the following districts be weighed and measured annually by nurses. Blackinton-John Cheverus, Washington, Thomas Gardner, and John A. Andrew.

Beginning September, 1920, all children will be weighed and measured at the time of physical examination. These data will be recorded on physical examination record cards.

All open-air class pupils, and malnourished children not in open-air classes, are re-examined physically in January of each year. They receive proper hygienic instruction from physicians and follow-up visits to homes are made by nurses.

Commencing five years ago (1915-16) statistics show that

2.12 per cent, or one in every 47, was malnourished; in 1916-17, 1.64 per cent, or one in every 61; in 1917-18, 1.99 per cent, or one in every 50; in 1918-19, 2.34 per cent, or one in every 43; and for the present year 2.23 per cent, or one in every 44.

It is encouraging to note that the percentage has dropped from 2.34 to 2.23. This is not surprising when the vast amount of work done by the Medical Inspection Department in combating this condition is considered.

There are statistics on malnutrition from many sources that savor of the sensational, but the above figures from the Boston Public Schools may be considered fairly accurate, inasmuch as they were taken under practically the same conditions each year, by the same corps of medical inspectors, and the same children examined.

The following statistics are quoted from other cities:

CITY.	Number Examined.	Number Malnutrition.	Per Cent.	One in Every
New York, N. Y.....	300,000	14,000	4.8	21
Cincinnati, O.....	36,438	1,619	4.6	22
Cleveland, O.....	61,578	671	1.1	91
Newark, N. J.....	27,971	940	3.3	30
Rochester, N. Y.....	18,497	945	5.0	20
Worcester, Mass.....	18,432	389	2.18	47

Lunches are prepared in Boston schools for open-air classes and other malnourished groups at cost price, about two cents; in some cases three cents, according to the nature of the lunch. Some of the children bring lunch from home, while a number of schools distribute soup prepared by the Food Economy Kitchen. In this connection, I desire to state that the Food Economy Kitchen has rendered great assistance in furnishing the school children with a uniform and economical food at cost price. During the present school year this organization furnished about 500 quarts of soup daily, which means feeding about 2,500 children per day. The Boston School Committee has co-operated with and has indorsed every movement for the betterment of lunch service.

The lunches prepared in school consist chiefly of cocoa and crackers, milk and crackers or bread and butter, or soup or chowder in variety.

Children bringing lunch from home are advised to select plain, nourishing food, bread, fruit, etc.

A report compiled in December, 1919, showed that approximately 4,721 children in the elementary schools, exclusive of open-air classes, were served with lunches, and that approximately 23,370 children brought lunches from home. Thirty-five thousand is a safe estimate for the present number of pupils receiving luncheon or bringing same from home. The number of children in open-air classes is about 700. Every child in the open-air class receives a luncheon. If he cannot afford to pay for it, means are supplied from a private fund. In addition to this, about 8,000 lunches are served at the various high schools each day by the Women's Educational and Industrial Union.

There may be children in the elementary schools who do not need the recess lunch: a sturdy child who has a substantial breakfast at 8 or 8.30 a. m. and dinner at noon. There are children apparently normal who do not have a substantial breakfast. Teachers and nurses will bear me out in the statement that there are many pupils in the elementary schools who have no breakfast or who have exceedingly light ones. It would appear that recess lunch is needed by most children.

As many people favor public feeding it may be interesting to quote the law on the subject. The matter rests with the people.

Chapter 575, Acts of 1913:

SECTION 1. The city council of a city or the selectmen of a town may provide meals or lunches free or at such a price, not exceeding the cost as they may fix, for children attending its public schools, and cities and towns may appropriate money for this purpose.

SECT. 2. This act shall be submitted to the voters of any city or town at the municipal election in any year if a petition to that effect, signed by not less than five per cent. of the voters, is filed with the city clerk or town clerk, as the case may be, not less than one month before said election; and, if accepted by a majority of the voters voting thereon, it shall take effect in such city or town. Otherwise this act shall not take effect.

Commencing in January, 1920, influenza was epidemic in this community. Many cases were complicated with bronchitis and pneumonia which added to the seriousness of the prognosis. The following table compiled from cases reported to the Health Department indicates that school children were not susceptible to influenza in this epidemic as in that of September, 1918.

DATE.	Number Cases Influenza.	Number Cases School Age.
January 27.....	184	18
January 28.....	343	15
January 29.....	318	18
January 30.....	287	29
January 31.....	77	9
February 2.....	144	12
February 3.....	238	17
February 4.....	216	28
February 5.....	377	33
February 6.....	429	46
February 7.....	299	22
February 8.....	147	33
February 9.....	429	22
Totals.....	3,488	302

For the past four years the Director of Medical Inspection has given instruction to the senior class of the Boston Normal School on relation of teachers to medical inspection department, hygiene of class rooms, open-air classes, and other subjects pertaining to school hygiene. The co-operation of the teachers is an important factor in the progress of school medicine and the Director of Medical Inspection appreciates the progressive spirit of the principal of the Normal School in encouraging the pupils to attain efficiency in this branch.

During the past school year eight teachers, applicants for retirement on pension, have been referred to this office for examination. They were examined by the Director of Medical Inspection and all recommended for retirement.

The state law (Chapter 181, Acts of 1908), requiring that tuberculosis and its prevention be taught in all grades of the public schools in which instruction is given in the subjects of physiology and hygiene, has been complied with. The Director

of Medical Inspection has, as in past years, notified school physicians and nurses that instructions should be given by them on this subject.

New adjustable furniture is greatly needed in many schools, and it is recommended that the old desks and chairs be replaced by modern furniture as soon as practicable. A detailed report of seating conditions was submitted in December, 1919.

Several lectures on dental hygiene were given in various schools by members of the Massachusetts Dental Hygiene Council. The lectures were illustrated by lantern slides. It is recommended that principals avail themselves of this opportunity for the instruction of children on this subject.

Much literature has been distributed to school physicians, nurses, teachers and pupils on subjects pertaining to general hygiene, prevention of disease, value of food, value of fresh air, etc.

Two temporary school physicians have been assigned to duty in the summer review schools (June 28 to August 13, 1920). Their work is very similar to that of recent years, inspection of pupils, exclusions and re-admissions, reports on sanitation, etc.

Respectfully submitted,

WILLIAM H. DEVINE,
Director of Medical Inspection.

APPENDIX I.

REPORT OF THE DIRECTOR OF MUSIC.

MR. FRANK V. THOMPSON,

Superintendent of Public Schools, Boston, Mass.:

DEAR SIR,—Inclosed herewith please find report for the year ending 1920.

The system of credit for outside study of music has progressed favorably during the last year. The accompanying table of figures giving the comparative number of examinations for the last four years shows that added interest is being taken in the privilege by the pupils.

	Piano.	Violin.	Cello.	Cornet.	Drum and Bells.	Trombone.	Trumpet.	Total.
1917.....	238	61	2	8	4	.....	.....	313
1918.....	280	101	1	7	3	2	1	* 396
1919.....	381	83	2	8	3	2	.....	† 480
1920.....	381	90	1	12	5	1	1	‡ 499

* Also 1 viola.

† Also 1 clarinet.

‡ Also 3 clarinets, 2 horns, 1 saxophone, 2 flutes.

The one outstanding handicap, as might be expected, is the carelessness with which the outside teachers are sometimes selected. The public is not yet sufficiently awake to the fact that there are wide differences in the ability of various teachers. Many are assuming the responsibility of teaching who would be unable to qualify if required to pass examinations before being allowed to teach.

I would suggest, in this respect, that the Superintendent cause to be issued, through the newspapers, just before the reopening of the schools, a statement advising and warning parents to be more careful in selecting competent teachers for their children.

It is interesting to note that the largest number of pupils select the violin, after the piano, for study rather than the other orchestral instruments. More interest might be encouraged in the other instruments by the purchase of some of these neglected instruments by the several schools as school property. The use of these could then be given to the pupils and an arrangement for a small fee to be paid by them for lessons given by teachers selected by the School Department. The pupil might also be required to play in the school orchestra. These lessons could be given on Saturday mornings in some centrally located schools. This arrangement would enable many who are anxious or desirous of studying, but who are unable financially to buy instruments or pay the usual fee for lessons, to take up and follow out their interest in music.

The school session should open with the singing of a verse or so from selected and approved hymns, patriotic and folk songs. This practice or custom is less common today than it has been in the past. There is no doubt of the physical benefit of such a custom. The pupil is aroused physically and mentally and a keener interest in the work to follow will result. At the same time the ever necessary effort for increased Americanization and morale is given an impetus that is of more benefit because it is unsuspected.

It is not unnecessary to repeat the statement that assembly singing should be required and should be provided for for all grades above the fifth. Time for this cannot be taken out of the already too short regular music period. It is of immeasurable benefit, as is evidenced by the much increased interest in music created in all the seventh and eighth grades which rehearsed for and sang with the large chorus at the Memorial Day exercises at Tremont Temple. The interest taken in and the importance placed upon assembly singing in the cantonments, etc., by the Government during the late war testifies to the benefits derived in many ways from it. The schools should recognize its value equally as well.

The boys' schools are showing more interest in music than ever before. The High School of Commerce has requested choral practice for the four-year course rather than for only one year as now. The Trade School for Boys has also requested choral practice. The Music Department is unable to meet these requests as its program, already crowded, allows no further extension.

Assembly song books are needed to enable the classes to continue singing songs learned in previous years. A great many of these songs are desirable, as well as necessary, to retain in use at all times.

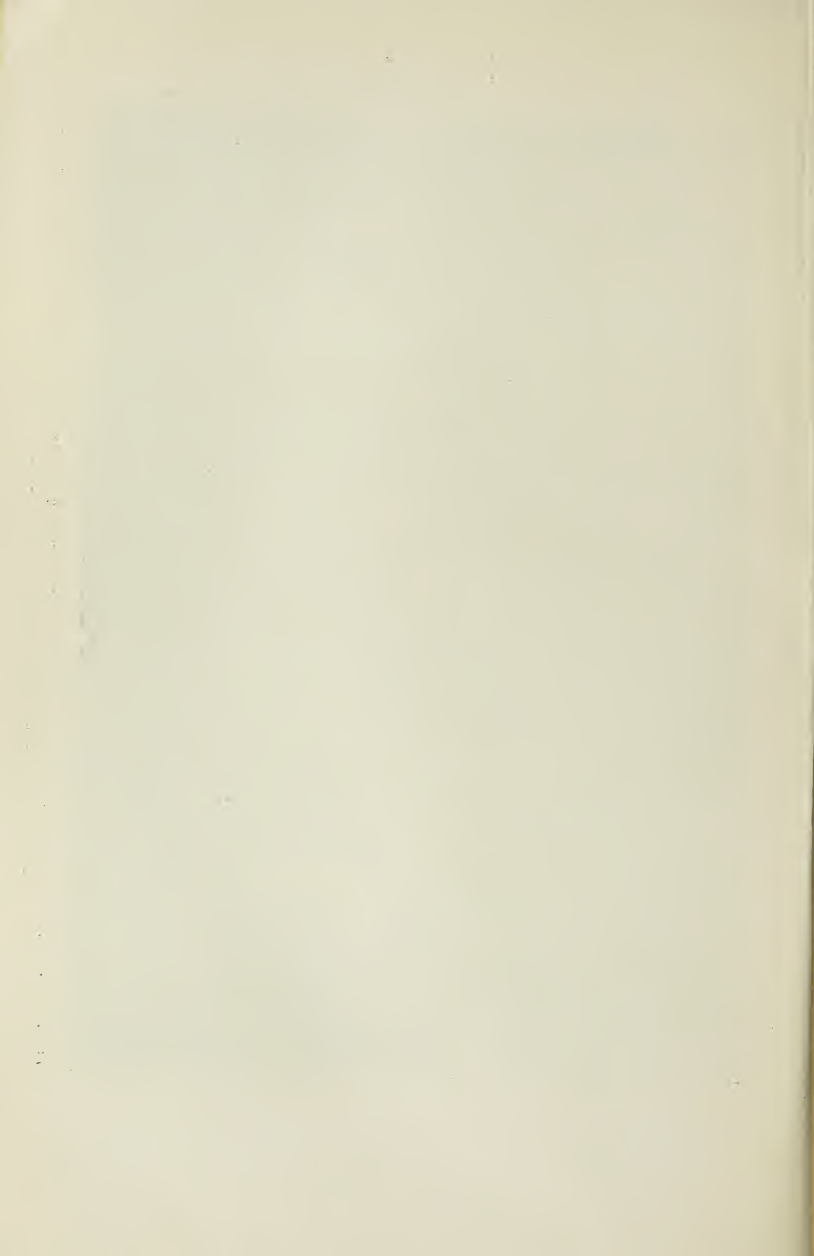
The work of the Music Department was hardest hit in previous years because of the many necessary interruptions. The practically uninterrupted term last year has enabled us to show a more decided advance in the study of music than in the years just previous.

Very truly yours,

JOHN A. O'SHEA,
Director of Music.



GRADE VIII.—DEARBORN SCHOOL.—FAULTY POSTURES ASSUMED BY THIS CLASS TO SHOW TYPES OF POSTURES COMMON TO CLASSROOMS WHERE FINGER MOTION WRITING IS USED IN APPLIED WORK.



APPENDIX J.

REPORT OF THE DIRECTOR OF PENMANSHIP.

MR. FRANK V. THOMPSON,
Superintendent of Public Schools, Boston, Mass.:

DEAR SIR,—In compliance with your request I submit herewith this report of the Department of Penmanship for the school year 1919–20.

At the opening of this school year the director took up for the first time since the establishment of this office in September, 1918, the work in penmanship with the grades above the third.

There was at that time among teachers of these grades throughout the city obvious need of training in three phases of this subject; namely, the pedagogy of muscular movement penmanship, the carrying over of muscular movement writing into the applied written work in all subjects, and the correct evaluation of the muscular movement writing product in its various stages of development.

Early in September a meeting of teachers of Grades IV, V, and VI, and a meeting of teachers of Grades VII, VIII, and IX, were held in the Abraham Lincoln School auditorium. At these meetings the director explained the pedagogic principles of muscular movement penmanship in these grades, set forth the hygienic and economic importance of the development of correct muscular movement writing habits and urged the teachers to a uniformity of procedure according to directions that success might result with least resistance.

Late in September the teachers of these grades were requested to have their pupils write a given selection, to note the time consumed in this writing and to set the papers aside for later reference.

In October a second meeting of teachers of Grades IV, V, and VI, VII, VIII, and IX was held. The director outlined the presentation of instruction in letter and figure formation, explained the count, rhythm and salient features of all letters and figures, and conducted with the teachers an oral concert

drill in rhythmic counting at correct speed to emphasize the functioning power of correct counting.

During September, October, and November the director gave demonstration lessons with the pupils in the class rooms in each of the seventy-two school districts of the city, the teachers observing. The aim of this work was to demonstrate to teachers by actual class room procedure the methods of developing good writing posture, correct use of writing materials, the muscular movement drill exercises and the application of this movement to the writing of simple letters and words, and to discuss the work with the teachers.

In November the office of examiner in penmanship was established and an examiner appointed, the function of this office being to examine, criticize, and evaluate under the direction and guidance of the director the work submitted by teachers and pupils.

Late in November teachers of Grades VII, VIII, and IX were requested to send in to the office of the examiner in penmanship written composition papers from their pupils for the purpose of having the examiner place upon these papers criticisms as to merits and faults, with added suggestions for correction. The object was to train teachers to distinguish in the writing product of their pupils, evidences of right and wrong writing process and resultant correct or incorrect letter formation; also to discover how to correct errors of process, and, in cases where process was correct, how to advance their pupils in control of letter formation. These papers were then returned to the teachers for their perusal and study.

In January teachers of Grades IV, V, and VI were requested to send to the office of the examiner written spelling papers from their pupils. The object of having these papers sent was the same as that explained for Grades VII, VIII, and IX.

At an appointed meeting the director explained what should be the accomplishments of the several grades in the subject at this time, outlined the presentation of instruction in word and sentence writing, and set forth the means by which this writing could be carried over into all applied written work. The director also interpreted for the teachers the criticisms placed by the examiner upon the pupils' papers. Notice was given at this meeting that the awards in penmanship this year were to be given solely for muscular movement applied writing.



GRADE VIII. — DEARBORN SCHOOL. — SHOWING CORRECT POSTURE AND MANAGEMENT OF MATERIAL FOR MUSCULAR MOVEMENT WRITING IN APPLIED WORK.



During December, January, February, and March the director gave a second series of demonstration lessons with the pupils and teachers in the class rooms. The aim of this second series of lessons was to demonstrate to teachers the methods of presenting advanced instruction in word and sentence writing, how to make this muscular movement writing carry over in an applied lesson, and what the appearance of the writing product should be in its various stages of development, and to discuss the work with the teachers.

Early in the present year a questionnaire relative to the economic value of good writing was submitted by the director to a widely inclusive list of business concerns in and about Boston. The replies so strongly emphasized the need of rapid, legible handwriting in business and the interest of business men in this subject that the Board of Superintendents assembled and printed these replies in an official school document and distributed it to all teachers throughout the city as evidence of "a clear, distinct unmistakable reason why penmanship as an economic utilitarian tool should be at the command of all pupils who leave our schools."

In March, at a meeting of Grades I, II, and III, the director reviewed and commented upon the work in penmanship accomplished in these grades, explained the presentation of instruction in advanced work in word, sentence and figure writing and the means by which muscular movement is carried over into applied writing in these grades. The wide variety of ingenious and pedagogic objective seatwork observed in use throughout the city was outlined by the director.

In April a meeting of the district directors of penmanship was held in the Everett School auditorium. At this meeting the director outlined the duties relative to the work in this subject which the district directors in penmanship were requested to perform in co-operation with the director.

Early in April announcement was made that the penmanship awards to be given this year for applied writing would be in the form of honor rolls bearing the names of pupils who acquired the ability to use muscular movement writing in all applied work. Teachers of Grade VII and VIII were accordingly requested to have their pupils write a page of composition and a page of arithmetic work and to select from these the papers of those pupils who, in the teachers' judgment, had

acquired ability to use muscular movement writing in all applied work. These papers were asked to be sent to the office of the examiner in penmanship.

Several weeks later a similar request was made to the teachers of Grades IV, V, and VI.

This applied written work submitted from all grades above the third throughout the city was examined under the direct supervision of the director and those papers showing evidences of muscular movement writing were accepted. The names of the pupils whose papers were accepted were placed on the honor rolls, an honor roll being made out for each teacher whose pupils' work was submitted and accepted.

A week before the closing of school 1,420 honor rolls, one for each class room, with the names of the successful pupils written thereon, were distributed to the schools throughout the city. In many of the schools masters made a formal occasion of the granting of these honor rolls, some incorporating it into the graduating exercises.

The object of these honor rolls was twofold: first, to train teachers in the correct evaluation of the muscular movement writing product, and second, to emphasize to pupils the importance of performing all applied written work with muscular movement penmanship.

During May and June the director visited 310 primary class rooms and observed the teacher of each while she gave a penmanship lesson to her class. The manner of carrying on the work of visiting primary classes was similar to that described in the penmanship report of last year. The object of these visits was to appraise the work done by the teachers and to give assistance and encouragement where needed.

In June a meeting of the first assistants in charge was held in the Everett School auditorium. At this meeting the director discussed the evaluation of the primary writing product, the pedagogy of objective seatwork, extended use of the blackboard for writing busy work, devices for stimulating interest in writing progress and the monitor plan, and outlined the organization of the penmanship work in these grades for the coming year.

During the second week in June the teachers of Grades I, II, and III were requested to have their pupils write a designated selection from the writing textbook and to send the papers to the office of the director.

Late in June the teachers of grades above the third were requested to have their pupils again write the given selection which they wrote in September, to note the time consumed in this writing, to place together the two papers written by each pupil and to send the sets to the office of the examiner to be filed. The object of having these papers written in September and June was to provide both teachers and pupils with graphic evidence of their accomplishment in this work during the year and to place on file this evidence of progress in this subject of all schools of the city. Throughout the city the advancement evidenced by these papers has been astonishingly great. The general comment of teachers and pupils alike has been that they did not realize until comparing the papers how marked had been their progress.

There has been a very noticeable change during the year in the attitudes of upper grade teachers toward the teaching of muscular movement writing and in their understanding of its general importance. Last September many teachers expressed the belief that it was impossible to obtain muscular movement writing in applied work, and a number doubted the importance to school graduates of good writing ability as an asset in obtaining and holding business positions.

Another outstanding feature of this year's work has been the acquirement on the part of teachers of the power to present in a purely pedagogic manner instruction in all phases of muscular movement penmanship. The acquirement of this power has stimulated interest and enthusiasm in the teaching of writing. The effect upon the pupils has been so forceful and effective as to cause them, within this remarkably short space of time, to overcome, in a great measure, their long-standing habits of poor sitting posture and cramped finger motion writing, and to manifest great interest and ability in the acquirement of the power to perform healthful, rapid, legible writing. The graphic proof of this is shown in the papers on which the given selection already referred to was written and timed by the pupils last September and again in June of this year. These papers, showing the year's progress of each pupil, on file in the office of the director, give conclusive evidence of the progress developed throughout the city. The change in handwriting ability shown by the pupils whose papers are attached to this report is typical of that common to the majority of pupils throughout the city this year.

A third prominent feature in the development of this work is the acquirement on the part of teachers of the ability to evaluate correctly muscular movement writing in its various stages of development. This ability was shown by teachers in their selection of pupils' papers to be submitted for the honor roll. Past years of experience with finger motion writing have habited teachers in aiming for and evaluating highly, slowly drawn letter formation without regard to process. The pedagogy of muscular movement writing aims first at the establishing of correct writing process with subsequent development of well-controlled, rapid letter formation. It was not expected, therefore, that the more or less erratic appearance of the muscular movement writing product during the course of its development would be immediately understood and correctly evaluated by teachers until they had had more training and experience in all phases of the pedagogical development of this subject.

The work of the primary classes this year has shown great progress. Teachers have acquired increased skill and ease in conducting the writing lesson. They have developed also an improved understanding of the importance of writing process and of the degree of control in the writing product consistent with primary grades, and gained greatly in the application of the laws of child psychology and primary pedagogy by the employment of objective and pedagogic seatwork with their classes. There is probably no other procedure in primary education which makes so directly and continuously for the promotion of health and the general welfare of children as does the employment of well directed objective and projective seatwork in primary grades.

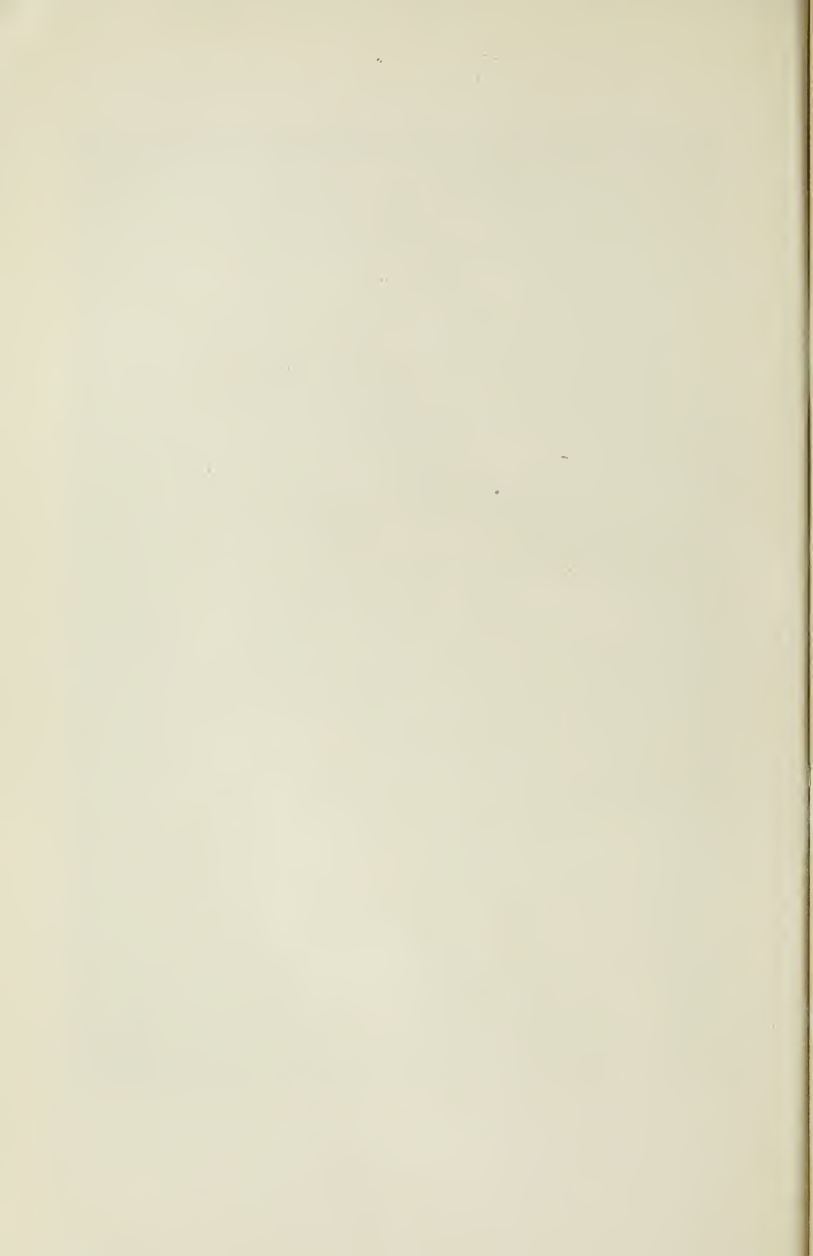
The written papers sent in by these grades in June to the office of the director have been placed on file there as evidence of the excellent writing habits which are being established in the primary grades.

The professional spirit, superior teaching ability and the marked success of the entire corps of teachers in this work deserve great commendation.

The performance of all applied written work with muscular movement penmanship has made not only for the development of good writing ability and economy of time, but also has had a distinct effect upon the conservation of health and eyesight of pupils. Muscular movement writing superinduces good



GRADE IV.—DEARBORN SCHOOL.—SHOWING CORRECT ADJUSTMENT OF THE PAPER AT THE END OF A WRITTEN SPELLING LESSON.



posture. The accompanying illustrations, except No. 1, show the postures of pupils at the beginning and ending of a written task correctly performed. The muscular movement writing posture and the correct management of the writing materials make it possible and easy for pupils to sit erect with the weight evenly distributed throughout the body and the eyes a correct distance from the paper for ocular safety throughout the written task. Illustration No. 1 shows pupils in postures common to all class rooms where finger motion is used in applied writing. The perniciousness of these postures is as appalling as it is certain. Defective eyesight, anæmia, lateral curvature of the spine, tubercular tendencies and other physical defects and diseases can be traced directly as resulting from pupils' stooped, cramped writing postures throughout many lesson periods each day. Therefore it can be seen that emphasis made to assist pupils to form the habit of performing all written tasks with muscular movement writing cannot be out of proportion to its importance from a health as well as a utilitarian viewpoint.

What has been accomplished in this subject this year has been made possible by the generous faith and co-operation of masters, teachers and school officers with the Director of Penmanship.

Throughout the city the co-operation of the masters with the director has been ideal and has greatly facilitated the arrangements for presenting this work to the teachers. Their attitudes of interest and enthusiasm in this work have been most effective in advancing teachers' progress.

In such an atmosphere of faith, interest and appreciation, effort has its best setting and progress is the natural result.

Recommendation is earnestly made by the director for an increased allotment of time in the upper grades for the teaching of this subject. The present allotment is inadequate.

Respectfully submitted,

BERTHA A. CONNOR.

Director of Penmanship.

APPENDIX K.

REPORT OF THE DIRECTOR OF PHYSICAL
TRAINING.

MR. FRANK V. THOMPSON,
Superintendent of Schools, Boston, Mass.:

DEAR SIR,—In compliance with request as outlined in your circular letter of May 11, 1920, to directors and assistant superintendents, I am sending herewith a report of the activities of the Department of Physical Training.

PHYSICAL TRAINING AND MILITARY DRILL.

Under the caption of physical training are included several departments: Gymnastics in the Boston Normal School, high school and elementary school gymnastics, military drill, elementary school athletics, and playgrounds. All of these activities have in common aims that are educational, disciplinary, hygienic, corrective, and recreational, but they differ in that for each, one of these aims becomes the most significant.

PHYSICAL TRAINING.

In the Normal School, physical training for the first two years has two periods a week of forty minutes each allotted to it, each period being followed by a shower, a still further help in promoting the good health so much desired in those about to become teachers. The importance of good posture for themselves and their future pupils is also emphasized.

In the third year, one gymnastic lesson a week, and one lesson on the theory of physical education and the methods of teaching it is required from each girl, supplemented by teaching classes in the Model School. Good posture is still further emphasized and insisted upon.

Courses in playground work and organization are also given during the three years. Frequently all the classes come together for inter-class games and meets which help to develop in the pupils the power of self-control and the spirit of fair play and co-operation.

During the four years of the Latin and day high school course, and in the ninth grade of the intermediate school, two full periods a week of physical training are required. This course includes free standing exercises, dumb bell, wand, and Indian club drills, folk and æsthetic dancing, games and athletics graded progressively from freshman to senior year. A ten-minute per day setting-up drill is given throughout the year in every room between the second and third periods. Seven points are awarded for gymnastic work, without which no girl may graduate unless she is exempted because of physical disability. In addition, every girl before graduation may gain one point toward the diploma for passing the swimming test.

Physical training is required of every girl unless she be exempted because of physical inability to perform the work. The school physician is the final judge in all cases as to whether a girl shall be excused from physical training. If he approves of her excuse, an exemption certificate signed by the assistant superintendent of the district, by the head master, by the school physician, and by the physical training instructor, is filed in the school office, and the girl is required to take some other subject in which she may make up the points lost by her exemption from physical training.

The high school course is given by a corps of trained teachers, all graduates from recognized schools of physical education, who are appointed from a certified list prepared by the Boston School Board after examination of the candidates. In addition to their work in the high schools, these teachers supervise physical training in the elementary schools, each supervisor having a special group of schools under her direction. The physical training course in the elementary grades is given by the grade teacher and comprises, in the first three grades, story plays, games, rhythmic exercises and dances, and, in the upper grades, formal gymnastics, dances and games. A definite lesson is planned for every grade for every month and the teacher is required to follow the prescribed course. Short periods totalling from twelve to fifteen minutes per day are assigned to physical training.

At the beginning of the present school year an instructor was appointed to supervise the physical training work in the intermediate schools.

ATHLETIC BADGE TESTS.

An increasing interest has been manifested in the schools during the year in getting boys and girls of the elementary schools, and girls of the Latin and day high schools, to qualify for the athletic tests that are being given all over the country and for which certain definite standards have been set up. In elementary schools two tests are given to boys and two to girls. In the first test for boys bronze pins are given to those who succeed in chinning the bar four times, jump five feet nine inches, and run sixty yards in eight and three-fifths seconds. Silver pins are given to those who chin the bar six times, jump six feet six inches and run sixty yards in eight seconds.

The first test for girls of the Latin and day high and elementary schools is successfully passed if they finish the all up Indian club race in thirty seconds, succeed twice in six trials at basket ball throwing at a regulation goal, and do the balancing properly on a regulation twelve-foot rail. The second test requires the all up Indian club race to be finished in twenty-eight seconds, calls for three goals out of six tries with a basket ball and more difficult balancing on the rail in that a bean bag must be carried on the head without allowing it to fall off.

It has seemed to the Director of Physical Training that the athletic badge tests at present conducted set a standard of efficiency too difficult of attainment below the seventh and eighth grades. How to give pupils of the fourth, fifth, and sixth grades opportunities and incentives equal to those now enjoyed by pupils of the seventh and eighth grades has given the department much concern. An interesting experiment is now being carried on by one of the supervisors of playgrounds under observation of the department, which promises to give a classification into five grades, A, B, C, D, and E, with specific standards for each grade. Proficiency in each grade may be rewarded by a grade badge with appropriate letter as above. Progress upward through the athletic grades would depend upon a pupil's own efforts.

These grades might easily correspond with the marks A, B, C, etc., that indicate scholastic attainment. The experiment has progressed far enough to indicate that it is possible to grade a pupil as closely in physical training as it is in arithmetic, geography, history, or any of the subjects in the curriculum.

The data now being collected and placed on file in the office of the director will enable him to evaluate the work in physical training of a school district, and any given school may determine for itself how its work compares with that of other schools in the Boston system.

MILITARY DRILL.

Military drill has existed in the Boston public high schools since 1864, and has been compulsory for the greater part of that time. Last year boys of the ninth grade of the intermediate schools were permitted to take military drill, going, in the majority of cases, to a neighboring high school for the work. Each boy has two periods of forty minutes each per week during the school year and he must qualify in this subject with as much care as in academic lines of work. Though it belongs to the department of physical training, it is disciplinary in character to such a great extent that any failure must of necessity imply some laxity in conduct. It has, therefore, been made mandatory for a boy to have his credits for the drill in order to graduate, unless he belongs to the group who are excused for physical disability. All the high school boys are obliged to take the drill except those who are excused on the certificate of the school physician.

The school cadets are organized into a division of eight cadet regiments, which number about eight hundred each. Two of the large schools have two regiments each. Two other schools have one apiece, while the other two regiments are composed of battalions which come from the smaller district high schools. These boys are under the instruction of a picked corps of veteran officers of the army who also hold positions as regular certified teachers in the schools. Under the department of physical training they are assigned to their schools. The bands of the regiments which are organized, as are the companies from among the boys themselves, are under the special instruction of an experienced army band leader.

The course includes instruction in the school of the soldier, squad, company, battalion and regiment, by practical drill. The physical drill is emphasized throughout the year's work, and while the organizations progress through the higher spheres of group drills, the set-up drills are never suspended, but always have a portion of time devoted to them.

At the beginning of each school year the cadets are organized

into groups no larger than the company. Under the training of the instructor the organization proceeds on this basis until the following spring. Through September and October nothing is undertaken beyond the school of the soldier. Then the manual of arms is taken up and company drill begins in November or December. By the spring when strong companies have been trained the annual competitions are held under the direction of the School Department. From these competitions the regimental organizations are built, the captain in each regiment whose company has won first place becoming the cadet colonel, while the other captains in order get the lieutenant-colonel's rank and the three battalion majorities, etc. For the remainder of the school year the drill is in the maneuvers of the larger groups, the battalion and the regiment, some time being devoted to ceremonies.

In the annual competitions rewards are given not only to the cadet officers whose companies are winners but also to the members of the companies who gain the privilege of wearing on the left sleeve of their uniform coat, near the cuff, a short "galon" or stripe in color which indicates that they have been in a winning company. The colors of these stripes are as follows: First place, dark blue; and the others in order, red, yellow, purple and forest green.

Promotions are graded so that the cadet officers are appointed from the senior classes and these boys are given military diplomas upon graduation which show the cadet rank which they have held. These are in addition to the certificates which they may have won for excellence in winning increased rank at the annual competitive drills.

ATHLETIC COACHES — ATHLETICS.

This year the School Committee has changed its policy and substituted full control of school athletics for the partial control of former years.

A corps of twelve teacher coaches conducts athletics in eleven high schools and in the Boston Trade School. This system has proved superior to that of the professional coach. These men, as their name implies, serve the School Department in a dual capacity. Being in close touch with the whole school during school hours, they have excellent opportunity to interest large groups of boys in athletics, and their responsible control

has resulted in a distinctly higher tone and quality of competitive sport. The reports for the past year show that with over 3,000 boys in games only minor accidents have occurred.

Boys may obtain three points towards a high school diploma by "membership, good conduct, and regular training" in a recognized athletic squad for three years, or by showing progress during the second, third and fourth years over the records made in the year preceding in dashes, jumps, shot puts, pull-ups, push-ups, and posture. They may obtain an optional swimming point during any one of the four years. The three athletic points, plus the four points for military drill and setting up exercises, are necessary to obtain a high school diploma.

ATHLETICS IN ELEMENTARY SCHOOLS.

Athletics have been carried on on forty municipal playgrounds between the hours of 4 and 5.30 during school days of the spring and fall. Twenty thousand children have been given opportunity for rational play and have not been obliged to play in the streets. Sixty play teachers, submasters in elementary schools, have been regularly employed under the direction of three supervisors, who in turn are responsible to the Director of Physical Training.

Experience has shown that a greater number of boys may be made to interest themselves in play by having inter-room contests of the same grade, in the same school, rather than to have contests between picked teams of different schools. Games organized in the schools themselves have filled the playgrounds with soccer players in the fall and with baseball players in the spring. The problem at no time has been to find boys enough to fill the grounds, but to find ground enough to accommodate the boys desiring to play.

On some of the grounds it has been necessary to make use of a part time plan, allowing one set of boys to use the soccer fields or baseball diamonds for half the time and then give way to another set who play for the remainder of the time. Certain play teachers have been successful in getting boys while waiting for a chance to play to interest themselves in track and field activities. The result is seen in the high scores these boys have made in athletic badge tests and at the track and field meet held each year by the elementary schools in competition with each other.

During the month of June a relay carnival and a track and field meet were held on successive Saturdays. A gratifying number of schools took part. An age restriction gave lower grade boys an opportunity of competing, never before enjoyed by them. Intermediate ninth grade classes were removed from competition with seventh and eighth grade classes and allowed to have field and track events of their own.

No effort was spared by submasters to bring out full quotas of boys and the participants came neatly uniformed and wearing their own school colors. The orderly and expeditious method of conducting the meet, and the sportsmanlike spirit of the boys deeply impressed the spectators who witnessed the events.

PLAYGROUNDS.

During the summer, when nearly all school activities are suspended, the playgrounds care for the interests of the children of Boston.

In park corners and school yards in all parts of the city the seventy-five playgrounds are established and a definite program of directed play is carried out, and the free play of the children is supervised. The directed play consists of games, story-telling, dramatics, and dancing. Added interest is given to the games by the institution of interplayground leagues in which the girls' and boys' baseball, squash ball, bean bag, and checker teams compete during the summer for a place in the finals which decide the winning teams of the city. The story-telling and dramatics this year have been conducted in conjunction with the Pilgrim Tercentenary Movement; in fact, during the last week in July the playgrounds had a tercentenary celebration of their own. The folk dancing and the story-telling and dramatic exercises come on alternate afternoons during the summer.

During the war, war relief work — sewing and knitting — formed an integral part of the playground program. This year there has been substituted for it the dressing of dolls for the French children. The program is varied by frequent excursions to beaches and picnic grounds arranged by the teachers for groups of children varying from 50 to 300 in number.

In the spring and fall months, April, May, June, September, and October, the playgrounds are open after school and all day Saturday. The hours in summer and on Saturdays in

spring and fall, are from 9.45 a. m. to 5 p. m.; the after-school sessions are from 4 to 5.30 p. m. The attendance on the playground varies, according to its size and location, from 150 to 500 children per day. All the playgrounds are open to all children. Attendance is voluntary.

The playground teachers are appointed from a merit list. They are Boston Normal School graduates and students who are rated as "first assistants," "assistants," and "sand garden assistants," according to length of service.

Some hint of the scope of the work of the department of physical training may be obtained from the following figures:

GYMNASTICS (FOR GIRLS).

Boston Normal School, 1 teacher, 237 pupils.

Latin and day high schools, 23 teachers, 8,000 pupils.

Elementary schools, 24 supervisors of gymnastics, 2,500 teachers.

MILITARY DRILL.

4 military instructors, 5,000 boys.

1 drum corps leader, 600 boys.

HIGH SCHOOL ATHLETICS.

12 teacher coaches.

12 teacher managers.

Students participating in major sports, 1919-20:

Baseball, 1,131; football, 943; track, 1,800.

ELEMENTARY SCHOOL ATHLETICS.

61 play teachers (spring and fall), (submasters in elementary schools).

Participating in baseball, soccer, and track, 20,000 boys.

PLAYGROUNDS.

300 teachers, 40,000 children.

Added stimulus is given to the work of the various branches of physical training by such events as the six regimental drills which this year were made free to the public, the annual street parade of the entire eight regiments, representing all the high schools of Boston save Mechanic Arts High; the Latin, day high, and industrial schools annual track and field events with one thousand boys competing in the armory; the annual outdoor track and field meet, with eight hundred boys competing; the elementary school meet and relay carnival with eighteen hundred entries; the Interplayground League finals at Braves Field.

In spite of this tremendous work there are opportunities for even more extensive service. It is to be hoped that in the future the system will include more and better playgrounds and a stadium for athletics, and that the appropriation of a sufficient sum to cover the extension of the work in the department be arranged for by the School Committee.

Yours very truly,

NATHANIEL J. YOUNG,

Director of Physical Training.

APPENDIX L.

REPORT OF THE DIRECTOR OF SPECIAL CLASSES.

MR. FRANK V. THOMPSON,

Superintendent of Public Schools, Boston, Mass.:

DEAR SIR,— In accordance with your request, I herewith submit my annual report on the department of which I am director.

The first special class in Boston was established in January, 1899, and twelve years later the classes numbered nine. Since September, 1911, seventy have been formed and now over fourteen hundred children in forty-eight districts are being cared for in seventy-nine classes. The organization of the work is as follows:

The masters and grade teachers of the district suggest candidates for such a class. These pupils are examined by Dr. Jelly, who selects fifteen of the improvable type and preferably those between seven and ten years of age. Emphasis is laid upon discovering these retarded children in the first three grades before they have been discouraged by repeated failure or become truants because of lack of interest, or hopelessly dulled because of failure to develop such talents and powers as they possess. Special classes should be clearing houses for the primary grades if the best results are to be obtained. Children over twelve when admitted prove not able to make good and are too old to train or to profit by the work.

In order to overcome the natural reluctance of parents to place their children in such classes it is necessary to use the utmost tact and consideration. Some masters have a personal interview with the parent and in one district a class was established without the least objection as the result of sending the following letter to the parent:

We are forming in our district a class for children who through sickness, absence or slow development have spent two or more years in one grade, or who are not up to standard. Our object is to give these pupils an opportunity to advance more rapidly than they would in regular grade work. The class will be limited to fifteen. We plan to give your child a trial in this class and trust that it will meet with your approval.

Very truly yours,

Principal.

The suggestion made in the following letter has been tried with excellent results:

DEAR MADAM,— This year, once a week, I am going to send to the homes of the children of the special class a set of papers showing the work that they are doing in the different grades there. I am doing this in order to let you see that the work your child is doing in this class, such as arithmetic, reading, writing, spelling, etc., is exactly the same as the work that the other children are doing in the other grades.

I know that you will be glad to receive these papers because it will keep you more closely in touch with the work of the school and will show you that the child is promoted into the next grade just as soon as he is prepared, and will make it clear that the child does not stay in the same grade year after year. In other words, a child may complete and very often does complete the first three grades in the special class and enters the fourth grade of the grammar school much better prepared than if he had been in the regular classes of the primary school.

I think your child is very fortunate to be selected to enjoy the advantages offered in the special class. I shall be glad indeed to have you call at any time on any day except Friday afternoon, to visit the class and see the splendid work that Miss — is doing with the children.

Very truly yours,

Master.

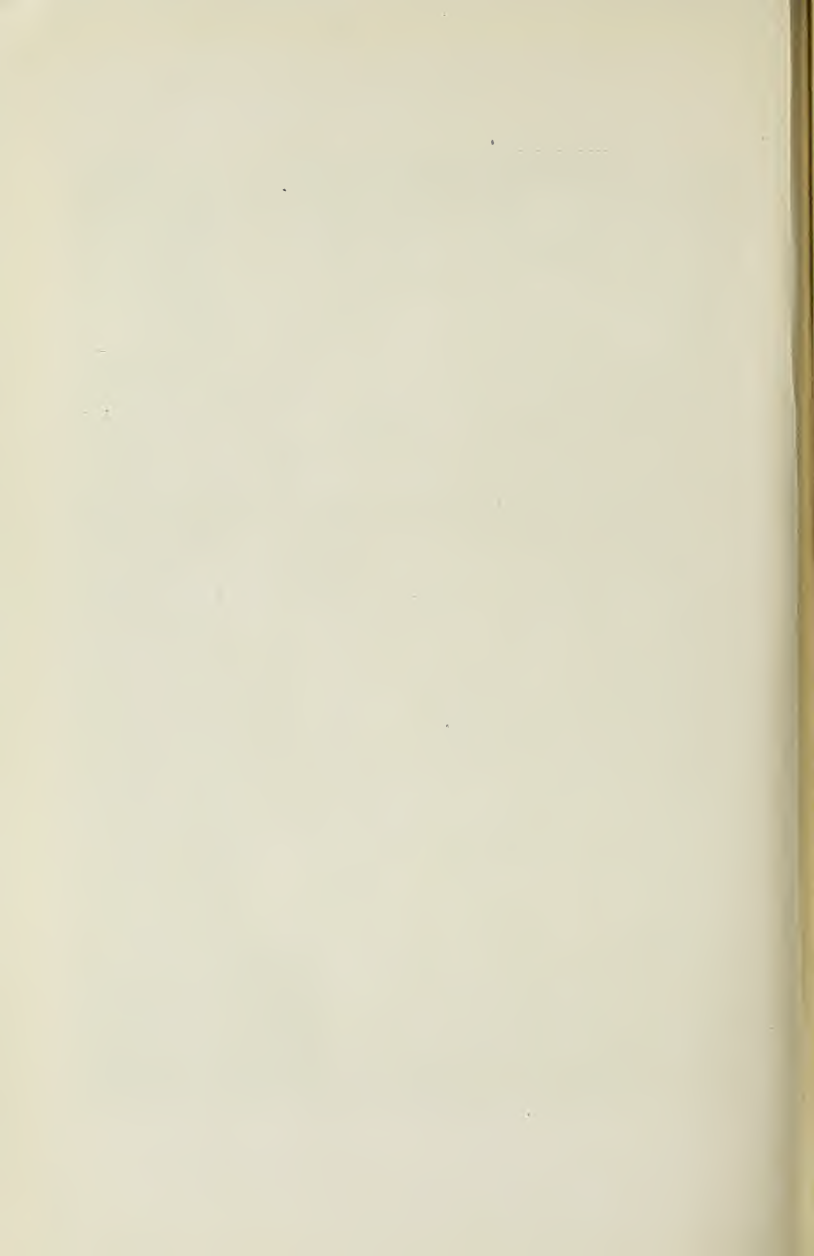
The successful special class is formed by a specialist skilled in the recognition of remedial mental defect. The successful teacher is one who can "link her strength to her pupil's weakness; her knowledge to his ignorance; her skill to his lack of skill." Under her training the sullen, resentful, discouraged child becomes a happy, helpful member of his group.

A fourth grade teacher asked a special class teacher to take a certain boy, saying, "I can't do anything with him. He cannot do any work in arithmetic involving the simplest reasoning process, and his work in English is poor. He is only interested in the cardboard work we do, so perhaps in your room he can do something with his hands."

The special class teacher took him. The arithmetic was slow, but by going back to the things he had never understood, and starting with first principles, it progressed gradually and he became encouraged and interested. Hand work appealed to him strongly; he started chair caning and was soon able to do a creditable job. But his ability in woodwork soon got beyond that of his teacher, so she called upon the regular manual training instructor to help, with the result that while doing third grade arithmetic and English, this boy was working with seventh grade boys in the manual training room, standing near the head of the class.



ARTICLES MADE BY THE GIRLS OF THE FRANCES E. WILLARD SCHOOL.



After three years in the special class, the boy was doing simple work in fractions and had improved much in English. The teacher placed him in a prevocational class where he is at the present time. Here he is having advanced training in woodwork and can get some knowledge of metal work and electricity. His mother tells the special class teacher that the special class "made over" her boy. From the time he entered he was happy and busy, where formerly he was discontented and idle. He is delighted with his new school, his marks are excellent, and he hopes to become a cabinetmaker. In his spare time at home he has caned chairs for the neighbors and has earned enough money to buy clothing for himself.

From the start the work is adapted to the needs of the child and the training is along academic, mental and physical lines suited to his capacity.

One interesting feature of comparatively recent development in the department is the center. As the children in the individual classes reach twelve or thirteen years of age they require more advanced work than is possible in the single class. To meet this need a suitable building is set apart for the use of special classes only and in this center are gathered the oldest and largest pupils selected from the individual classes all over the city. This arrangement makes it possible to grade the pupils as well as segregate the sexes. Such groups are interested in the same sports, projects and occupations. Promotion from single classes to such a center is something that corresponds to promotion to a high school from the grades and is a distinction much coveted by the pupils. There are now three such centers: the Frances E. Willard School for girls, the George T. Angell School and the Somerset Street School for boys.

Miss Powers reports for the girls' center as follows:

The Frances E. Willard School has functioned in two ways — as a clearing house for grade and older special class psychological problem cases and as a pre-industrial school for older special class girls.

Most of the problem cases presented have been studied and profitably employed and trained while here, and are placed elsewhere.

The industrial work has been of exceptionally high standard, so that many of the products of sewing, crocheting, bead work, millinery, card-board work and domestic science classes compare favorably with results of Prevocational School, Practical Arts High School and Trade School work.

In academic work only exceptional cases have improved beyond the standards of Grade V.

The girls are healthier, better fed, cleaner, more neatly and sensibly dressed than ever before. This may be partially due to the higher wages of the breadwinners of some families, but much is due to the increased knowledge of such matters and to the better discrimination of the girls themselves.

The girls have generally made rapid improvement in manners upon entering the center. Their powers of attention and concentration are developed much. They are willing to undertake longer and more difficult tasks, and are fast growing away from the desire to make trifles that are quickly finished. They stick to tasks better and longer. They are learning that there is a place for everything, and improve in ability to keep things in proper places. There is much less waste of material because of this.

The girls are more reliable than ever before. A premium has been placed upon trustworthiness. So much so that upon three occasions when no substitute was available an older girl has been placed in charge of the youngest class for a whole day at a time.

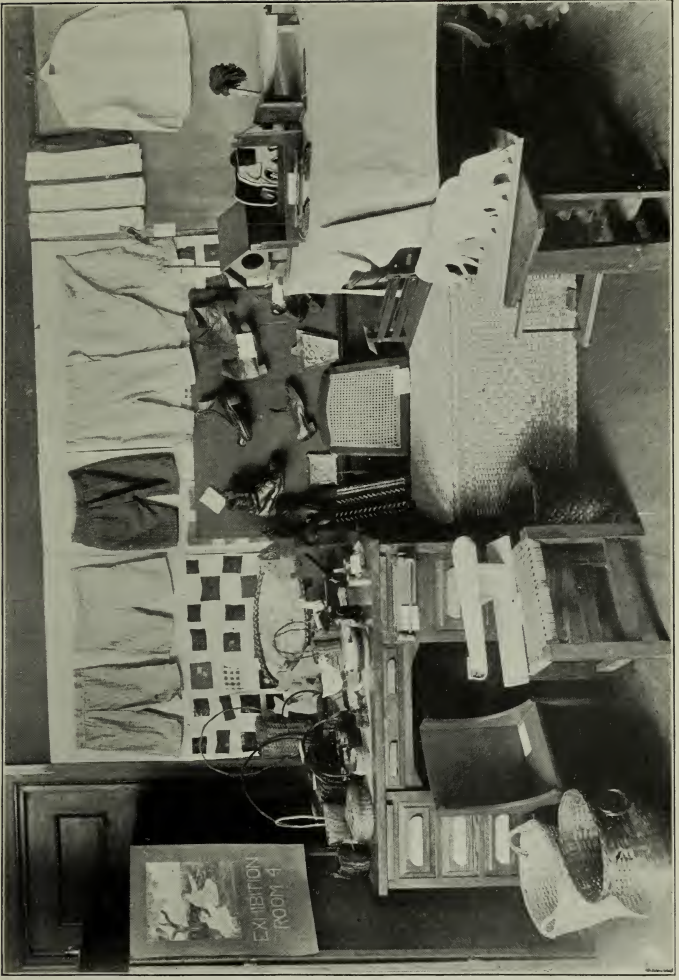
About one-third of the pupils can be trusted to buy, prepare, serve and clear up a lunch for sixty pupils and teachers without a teacher's direction. This includes the selling of lunch tickets, the making of change up to twenty-five cents and the rendering of proper accounts; the balancing of bills, cash, etc.

In many such simple, homely ways the older pupils are as capable, if not more so, than the average normal girls of like age today. Perhaps their shortcomings are more noticeable but their abilities in certain lines can be relied upon more than those of their normal sisters. When a good habit becomes an integral part of the special class girl it is difficult to eradicate.

The girls are learning to live and to help others to live honest, decent lives.

The following table summarizes the placing of the forty who have left during the year:

At work	14
These are earning from \$10 to \$18 a week.	
Returned to grade	9
Of these, 4 were at parent's request. Five of our placing are holding their own.	
Working well in their own homes	7
Placed in institutions	3
Placed in penal institutions	3
Excluded	2
In parochial school, "not advancing"	1
At home, ill	1
Total	40



ARTICLES MADE BY THE BOYS OF THE GEORGE T. ANGELL SCHOOL.



Miss Coveney of the George T. Angell center suggests a very real need for the future of that school:

A shop is much needed. It should be in the neighborhood and should be in charge of an able worker. We have many boys of twelve and thirteen who have been with us nearly all their lives and who will stay with us until they are sixteen. What have we to offer them later? Very little. They will practically have exhausted our resources and will only be marking time unless something else is provided for them. Marking time will cost the city money and bring no results. The shop, too, will cost money but its results will be invaluable to those men of tomorrow.

Dr. Jelly says:

For several years I have been getting more and more evidence that the department needs more centers. They are especially useful because it is practicable for teachers who are specialists in certain lines to develop the older child's capacity and estimate fairly accurately his ability to follow a certain sort of employment and probably become a productive worker in the community. When such selection can be combined with help in securing a place to work it seems reasonable to assume that the number of so-called "floaters" or "drifters" will be diminished materially.

The latest development in the organization of special classes is the after-care work. Three years ago a teacher was assigned to follow up the pupils after they left the classes. Miss Mead, because of her years of experience in grade and special class work, and because of her great tact and good judgment, was particularly well fitted to do this work. Three years of experience has shown conclusively that the work is of inestimable value. When a boy or girl reaches the age when he or she may legally leave school, all assistance desired is given in finding suitable employment. They are guided to the lines of work for which they are adapted and so far as possible steered away from undesirable employment and blind alleys. Miss Mead is known to many employers of unskilled labor who take these pupils with full understanding of their limitations. She keeps track of them when they change employment and they come repeatedly for guidance and advice. She becomes acquainted with the families of these boys and girls and knows their home conditions. She is respected and consulted by court officials and child welfare agencies. A mother said of her recently: "She is a humanity worker. I feel she is a friend and I want to thank her."

Probably no other phase of special class work is of more importance than this social and after-care work. No state or city can afford to take calmly the loss arising from the social and economic submergence of these children (for they are always children) who yearly pass beyond the control of the schools. Many are in constant need of a friend to advise, suggest, encourage and assist their efforts toward partial or entire self-support.

In view of the new state law requiring special classes for all children three or more years retarded, and looking forward to the development of the department, provision in the near future should be made for an increase in the number of classes, the organization of a center in each section of the city and an opportunity for more vocational training suited to the needs of the older pupils.

In closing, I wish to acknowledge the helpful co-operation which has existed between the supervising and teaching force of the regular classes of the school system and the Department of Special Classes. This, with the devoted and faithful service of the special class teachers, is responsible for the rapid growth of the department.

Respectfully submitted,

ADA M. FITTS,
Director Special Classes.

APPENDIX M.

REPORT OF THE PRINCIPAL OF THE HORACE
MANN SCHOOL FOR THE DEAF.

MR. FRANK V. THOMPSON,
Superintendent of Public Schools, Boston, Mass.:

DEAR SIR,—The Horace Mann School completed its fiftieth year of service to the community on November 10, 1919. It began with seven pupils in two rooms in Pemberton square, in 1869, under Miss Sarah Fuller, who remained its principal until June, 1910, a period of forty-one years. She was succeeded as principal by her niece, Miss Ella Celynda Jordan, who had been connected with the school as teacher and assistant principal during nearly its whole history. Miss Jordan resigned on account of ill health on November 10, 1919, the actual fiftieth anniversary of the foundation of the school, and Miss Mabel Ellery Adams, the assistant principal, was appointed principal on the same date.

On account of the illness of the beloved principal, who died in January, there was no public celebration of the anniversary, but appropriate exercises were held for the pupils and each one was given a brief printed history of the school.

The graduation exercises also, on June 25, were centered about the history and accomplishment of the school.

The oral teaching of the deaf was just beginning in the United States in 1869 and all honor should be rendered to the Boston School Committee of that day, and particularly to Rev. Dexter S. King, for the farsightedness which recognized the need in the community for a school where deaf children could be taught to talk and read the lips without leaving their homes to go to an institution.

The Horace Mann School was the first successful day school for the deaf in the country, and probably in the world. Two other attempts undoubtedly preceded it, but in both cases the schools were soon changed to residential institutions. The school has never been large,—1,147 different pupils have

attended it — and the largest number at any one time was about 160. During the past year the largest number in attendance was 148. Even for this number the school accommodations are inadequate. The present building was intended for only a hundred pupils, and consequently it is necessary to use for class rooms attics which are too hot in summer and too cold in winter. There is no proper hall for physical exercises or assembly purposes. The lunches have to be eaten in small scattered rooms, entailing such an amount of supervising duties for the teachers as to deprive them of any proper recess period; and, worst of all, there is absolutely no playground. The school day is exceptionally hard for our deaf children. Many of them travel long distances to reach school and the constant, attentive *looking* which the substitution of sight for hearing compels, is fatiguing and nerve straining. It would seem that, so far as possible, physical conditions should be made comfortable and hygienic for them to alleviate this strain to the utmost. In spite of inadequate accommodations, however, the Horace Mann School asserts with pride that in the fifty years of its history it has never refused admission to a child who was legally eligible to enter.

The past year has been fortunate in having very little illness among the teachers; but the severe weather and much illness wrought havoc with the attendance of the pupils during the winter months. This is not strange, as they come from twenty-nine towns and cities, as well as every district in Boston.

Aside from the attendance the work of the school has gone forward successfully. All boys over eleven years of age have been instructed in woodwork and five in printing at the Prince School, where they work under better conditions than in the small room available at the Horace Mann. Mr. Amerigo Ventura, the instructor, is most enthusiastic in his praise of the concentration and powers of accomplishment of the deaf boys. As he describes it, "They simply eat up the work. I have to jump to keep them busy and my greatest trouble is obtaining lumber enough." Miss Grace D. Bachelder and Miss M. Lillian McCormick, teachers of cookery and sewing, make similar reports. They say that any extra difficulty in teaching is compensated for by superior powers of attention and extreme diligence. When it is remembered that manual training and domestic science are done mostly after the five hours of school work, these reports are especially significant,

and seem to point to the wisdom and advisability of enlarging the scope of the manual and industrial training and domestic science, and offering to the pupils of the Horace Mann opportunities similar to those to be obtained in the prevocational classes in Boston, with an appropriate equivalent course for the girls.

The academic work of the school has progressed well, except that the teachers report all grades to be behind their usual attainments on account of the loss of time in previous years due to epidemics, coal shortage, war holidays and the like. It is appropriate here to say a word about the Horace Mann teachers. To teach deaf children requires a vocation just as truly as does dedication to a religious life, and every one of our teachers has this vocation. They live their lives with the children, they give their lives to the children; nothing is too hard if it will benefit the children. They come early and stay late to do extra work for their charges. It is no wonder that scarcely a week passes which does not see a past pupil returning to visit the school and report as to his present fortunes. As the school usually obtains employment for its pupils and keeps a card catalogue of their whereabouts, this constant visiting is welcomed for other than social reasons, as it facilitates the follow-up records.

The school was fortunate this year in obtaining the services of special assistants who had been trained in teaching the deaf and so were able to carry forward the work without the inevitable loss to the pupils, which must result for a time when teachers, however able, who are wholly unaccustomed to the deaf, begin to teach in the school. These special assistants were available for different personal reasons, which made them willing to accept small pay temporarily. The ethics of such a proceeding is doubtful, however.

The Horace Mann School aims to give to its graduates an equivalent to the eight grade course of study in the hearing schools. It is obvious that the courses of study cannot be identical in time or subject-matter. Deaf children need a minimum of three years in school before they can hope to begin an approximation to first grade work. All along the line their acquisition of speech and language is behind that of hearing children of the same grades, and as at best even a bright, deaf child is normally retarded three or four years in comparison with his hearing intellectual peer, the age of gradua-

tion is necessarily much advanced. Results obtained with private pupils lead educators of the deaf to the belief that a more generous assignment of teachers during the first years of school would materially reduce this difference between the deaf and the hearing, but the present rule of ten pupils to a teacher is probably all that can be hoped for.

SECONDARY EDUCATION.

Beginning in 1911 the Horace Mann has offered its graduates an opportunity to return to the school for a year of advanced study, but beyond this one year Boston offers no secondary education to the deaf. Every year parents are making more and more insistent demands that their deaf children, just as well as their hearing ones, shall be given a chance to continue their education under expert teaching.

What is needed is a new school building large enough to provide adequate industrial and manual training facilities, an assembly room, a gymnasium, and class rooms enough to allow all pupils who wish to obtain a secondary education to do so; and above all, there should be a playground.

SPECIAL PROVISION FOR THE HARD-OF-HEARING.

There are to be found in every public school system hard-of-hearing pupils who are not deaf enough to need to attend a school for the deaf, but yet need special help in lip-reading. Such pupils are almost sure to become deafer as they grow older and a habit of lip-reading, formed in their youth, would be of incalculable value to them in later life. A step toward meeting this need has already been taken. At the suggestion of Miss Lillian M. Towne, master of the Bowdoin School, Assistant Superintendent Rafter detailed Miss Stella E. Weaver of the Horace Mann to go one afternoon in the week to the Bowdoin and instruct a class in lip-reading, with such good results that one of the pupils, an eighth grade girl, said to Miss Towne, "Just think, Miss Weaver has taught me how to hear again." Of course, Miss Weaver had done nothing of the sort, but in teaching the girl's eyes to do part of the work, she had relieved the nervous strain of the constant effort to hear and so supplemented the remaining hearing that it seemed normal to the girl. The city of Lynn has recently appointed a teacher for similar work but we believe Miss Weaver's work in the Bowdoin antedated the Lynn experiment by some months.

AURICULAR TRAINING.

Children who are born deaf or become deaf in early childhood have no speech standards, and therefore speak in tones which are often harsh and disagreeable. Most of these children, however, have some slight degree of hearing, and educators are finding it possible so to awaken, foster, and develop this hearing as to cause a marked improvement in the quality of the speaking tones. To aid this work a victrola and a set of Montessori bells were purchased this year from the Horace Mann Fund, and the results of practice with these under Miss Henderson have been most encouraging.

GARDENS.

Although our pupils live in all parts of Boston and in so many other towns and cities, the garden instructor, Miss Elsa L. Hobart, has managed to visit and supervise ten gardens within city limits and sixteen in other cities and towns, and to organize a most creditable harvest exhibit in the fall.

VISITING STUDENTS.

A feature of the year has been the constant visits of students in education from neighboring training schools and colleges. They come singly, in small groups, and in very large ones, with and without instructors, from Radcliffe, Wellesley, Boston University, Boston Normal, Miss Wheelock's Training School, and many other institutions, in search of help for their courses in psychology, social welfare, and methods of teaching. The principal of the Horace Mann lectured before Boston University and the Wheelock Training School classes to prepare them to understand what they were to see in their visit, but in other instances questions had to be answered during the actual visiting. The lack of an assembly hall makes such work unnecessarily difficult.

DR. BELL'S VISIT.

Dr. Alexander Graham Bell, the inventor of the telephone, was present at the regular monthly teachers' meeting of December 1, and addressed the teachers for an hour on matters pertaining to the education of the deaf and on his own recent inventions.

Dr. Bell first came to this country by invitation of the Boston School Committee to teach visible speech to the teachers of the Horace Mann School.

HOME VISITING.

Cordial and friendly relations between the home and the school are especially essential when pupils are deaf and the parents more or less at a loss in their efforts to deal with their own children.

To bring about these desired relations, and to give the parents actual instruction in methods of teaching the deaf, our parents' association — The Boston Education Association for Deaf Children — has made it possible for our teachers to do extensive and intensive home visiting. Calls are made in the late afternoon, Saturdays, Sundays, and in vacation. The parents and family are shown what the child has learned and how much it is right to expect of him, and above all the child and his parents are made to feel that the school's friendship and loving care extend to his whole life.

This visiting has been under the care of Miss Sarah Fuller, Principal Emeritus, acting as a director of the Boston Education Association for Deaf Children, and has been carried out by Miss Mary B. Adams, Miss Jane J. Wood, and Miss Jennie M. Henderson. It is hoped that the scope of this work may be broadened during the coming year and that more teachers may take part in it.

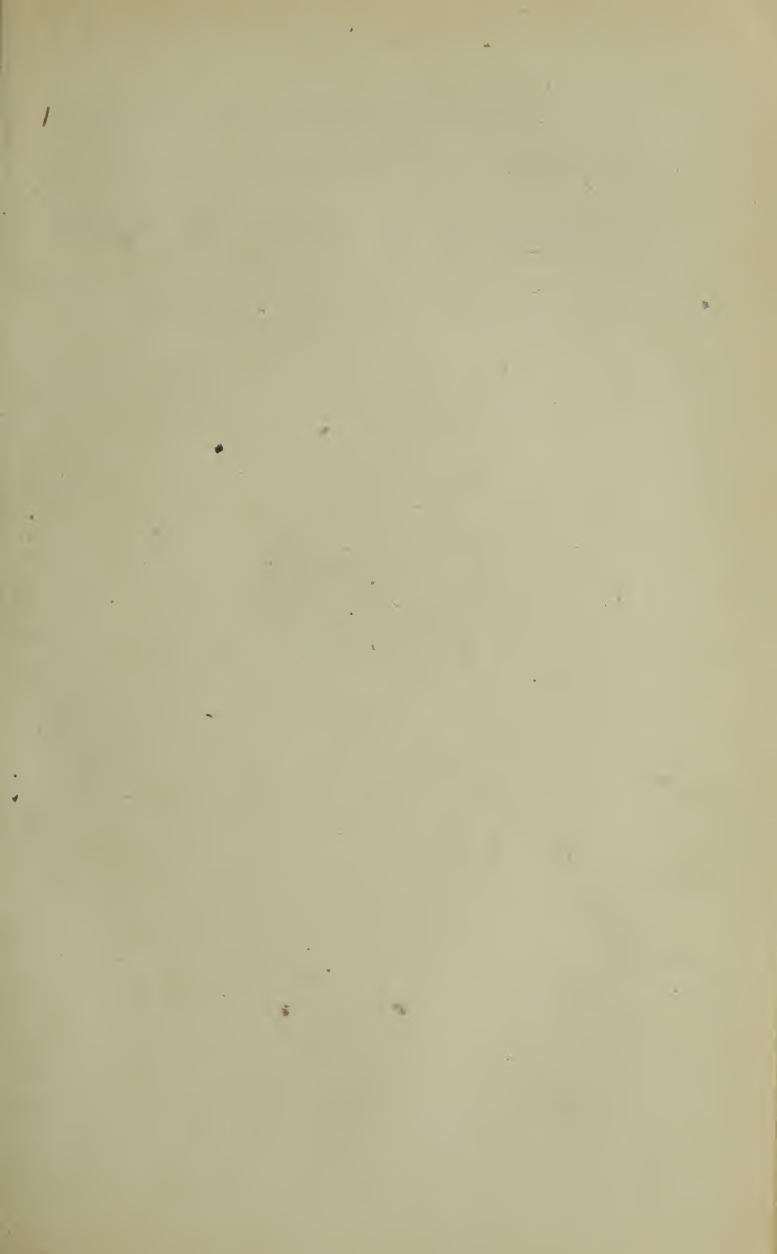
There is one service which the Horace Mann School renders to the community at large which is worthy of mention although not within the field of the Boston public school system. The school acts as a bureau of information for all matters concerning the deaf, adults as well as children, vocational as well as educational, for persons all over the United States and sometimes in foreign countries. Questions are constantly coming by mail and by telephone, questions which often involve the whole future of the asker, and these questions must be answered with care, discrimination, and a due sense of their importance. This service, while not strictly a school duty, yet, nevertheless, meets such a vital need in the community that it is gladly accepted as a duty by the principal and attended to out of school hours.

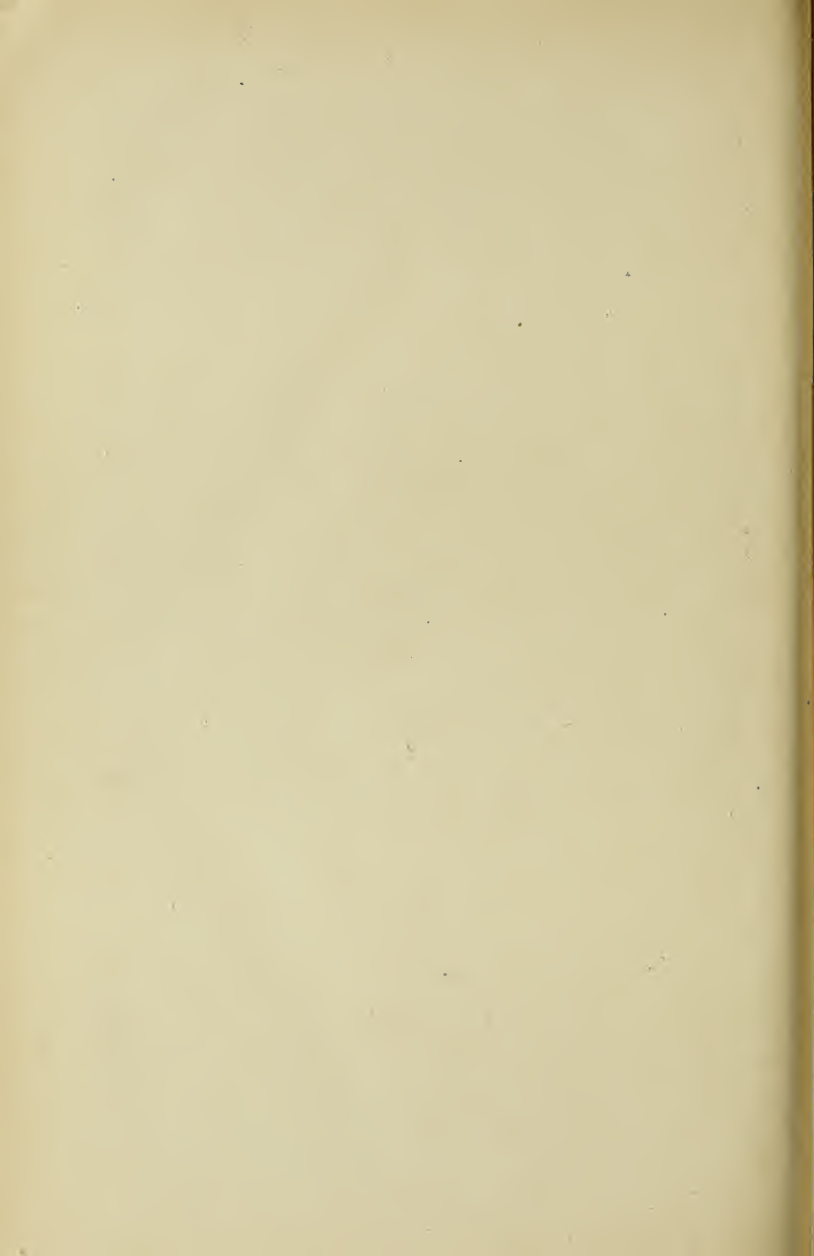
Respectfully submitted,

MABEL E. ADAMS,
Principal.









SCHOOL DOCUMENT NO. 14—1920
BOSTON PUBLIC SCHOOLS
COURSE OF STUDY IN MATHEMATICS

FIRST UNIT—FOR SEVENTH AND EIGHTH GRADES
OF INTERMEDIATE SCHOOLS AND CLASSES

SECOND UNIT—FOR NINTH GRADE OF INTER-
MEDIATE SCHOOLS OR FOR FIRST YEAR CLASSES
IN HIGH SCHOOLS



BOSTON
PRINTING DEPARTMENT
1920

IN SCHOOL COMMITTEE, BOSTON, October 18, 1920.

Ordered, That the Course of Study in Mathematics, First Unit: For Seventh and Eighth Grades of Intermediate Schools and Classes; Second Unit: For Ninth Grade of Intermediate Schools, or for First Year Classes in High Schools, is hereby authorized as a school document, and that twenty-five hundred (2,500) be printed.

Attest:

THORNTON D. APOLLONIO,
Secretary.

OUTLINE OF WORK IN MATHEMATICS FOR INTERMEDIATE SCHOOLS.

COUNCIL ON MATHEMATICS FOR INTERMEDIATE
SCHOOLS AS REORGANIZED MARCH 12, 1920.

REPRESENTING THE HIGH SCHOOLS.

WILLIAM L. VOSBURGH	Normal.
JOSEPH L. POWERS	Public Latin.
JOHN E. DENHAM	Girls' Latin.
JOSEPH A. LEARY	Brighton.
JOHN W. REGAN	Charlestown.
MILFORD S. POWER	Dorchester.
GRACIA E. READ	East Boston.
PARNELL S. MURRAY	Girls' High.
NEWTON D. CLARKE	High School of Commerce.
HAROLD F. STEVENS	Hyde Park.
EUGENE R. VINAL	Roxbury.
ANNIE M. MULCAHY	South Boston.
GEORGE F. PARTRIDGE	West Roxbury.
HENRY M. WRIGHT, <i>Chairman</i>	English High School.

REPRESENTING THE INTERMEDIATE SCHOOLS.

JOHN J. MALONEY	Abraham Lincoln.
EDWARD J. MULDOON	Emerson.
E. JOSEPH GOULART	George Putnam.
ISABELLA J. RAY	Hancock.
J. ELLIS AMES	Henry L. Pierce.
JOSEPHINE F. HANNON	John Winthrop.
M. GENEVIEVE KIELY	Lewis.
FRANCIS A. DUFFEY	Mary Hemenway.
ROGER A. POWERS	Oliver Wendell Holmes.
LEROY K. HOUGHTON	Robert G. Shaw.
FREDERICK J. MURPHY	Ulysses S. Grant.

This council regards the intermediate school as a new type of school, a type of school which, in the past, has had no parallel, and which today is to be thought of neither as an elementary school nor as a high school; as its name implies, it is a school designed to bridge the

gap between these two schools; and to minister to the fullest extent possible to the varying needs and individual aptitudes of boys and girls during the adolescent period.

Therefore, in formulating a program of mathematics for this new type of school, this council has endeavored to include features of the work which, while to some extent a novelty with us, have met with the approval of progressive teachers both in this country and in Europe. The council has not hesitated to depart, where it seemed wise to do so, from those traditions of the past which have obtained in regard to either the arithmetic as taught in grades 7 and 8 or the algebra as taught in the high school.

It is the opinion of this council that the work in mathematics in the three years of the intermediate school should be in itself a unit. It should aim to give all pupils a knowledge of and facility in those topics of mathematics which are within their powers of comprehension and which, at the same time, are likely to be most useful to them later, whatever their careers may be. The purpose is not merely the completion of arithmetic and certainly not primarily the preparation for more abstract mathematics which may or may not be taken later.

This council is presenting, therefore, a program of correlated mathematics in which the arithmetic of computation has rightfully the most prominent place during the earlier years; the solution of problems forms an important part of the work of the later years; the equation is presented and used when it will serve a useful purpose, the graph is used to aid in the interpretation of number values, and informal geometry as a means of getting accurate spatial concepts.

The council believes that there are certain fundamental principles upon the basis of which this work in mathematics should be carried on and with which it hopes that all teachers will agree. Some of these are the following: the importance of constant checking or proving mathematical work; the value of a round number

estimate as a means of checking the reasonableness of the result; the importance of systematic arrangement of work in mathematics; the importance of developing the powers of reasoning and of self-reliance.

GRADE VII.

- I. Arithmetic Review: integers, common and decimal fractions.
 1. Reading and writing of numbers.
 2. Addition and subtraction with check.
 3. Multiplication and division with preliminary round number estimate and accurate check.
- II. Mensuration — measurement.
 1. Measurement of straight lines, angles, and perimeters of plane rectilinear figures.
 2. Drawing to scale.
 3. Straight line graphs.
 4. Construction of figures, paper cutting, folding and tracing.

Use squared paper, ruled in inches and tenths; ruler with three scales, inches and eighths; inches and tenths; foot, tenths and hundredths; protractor.
- III. Mensuration — computation.
 1. Informal development of perimeter and area of parallelograms and triangles.
 2. Computation of perimeter and area of parallelograms and triangles.
 - a. Data obtained from actual measurement.
 - b. Assigned data.
 3. Ratio of lines, angles, and areas.
- IV. Formulas.
 1. $S = ab$ (rectangle).
 2. $S = bh$ (parallelogram).
 3. $S = \frac{1}{2}bh$ (triangle).
- V. Percentage.
 1. Finding what part one number is of another.
 2. Finding percents of given amounts.
 3. Application of 1 and 2.
 - a. Monetary — profit and loss; single discount; simple interest; commission.
 - b. Non-monetary — school and class attendance; games and scores; lines and areas; concrete problems.
- VI. Equations.
 1. $bx = c$.
 2. $\frac{x}{a} = b$.
 3. $\frac{x}{a} = \frac{b}{c}$.

Examples in proportion should be treated without the name and method of proportion.

GRADE VIII.

- I. Arithmetic Review.
 1. Addition and subtraction with check.
 2. Multiplication and division with preliminary round number estimate and accurate check.
 3. Practice in the fundamental processes of fractions sufficient to maintain the standard of the grade.
- II. Percentage.
 1. Reviews.
 2. Finding base, percentage and rate given; use of formula.
 3. Trade discount.
 4. Interest applied to notes, liberty bonds; bankers' 60-day method.
- III. Arithmetic of the home and of civic life; taxes; insurance.
- IV. Mensuration — measurement.
 1. Distinction between a number obtained by counting and a number obtained by measurement.
 2. Construction of lines, angles, triangles, quadrilaterals, and circles. Use compasses in these constructions.
 3. Graphical representation of statistics by lines or areas.
- V. Mensuration — computation.
 1. Informal development of perimeter and area of trapezoid and circle.
 2. Computation of perimeter and area of parallelogram, triangle, trapezoid, and circle.
 - a. Data obtained from actual measurement.
 - b. Assigned data.
 - c. In computation with numbers obtained by measurement do not write the footings of incomplete columns at the right.
 3. Informal development of surface and volume of rectangular block, cube, right prism, and right circular cylinder.
 4. Square root by trial method or by formula.
 5. Pythagorean theorem.
- VI. Formulas.
 1. $S = \frac{1}{2} h (b_1 + b_2)$ (trapezoid).
 2. $C = 2\pi r$ (circle).
 3. $S = \pi r^2$ (circle).
 4. $V = abc$ (block).
 5. $V = a^3$ (cube).
 6. $V = Bh$ (right prism).
 7. $V = \pi r^2 h$ (cylinder).
- VII. Equations with one unknown.
 1. $ax \pm b = c$.
 2. $ax \pm b = cx \pm d$.

GRADE IX.

- I. Problems leading to easy equations.
1. From general sources.
 2. From geometrical sources.
 - a. Complementary angles.
 - b. Supplementary angles.
 - c. Sum of the angles of a triangle.
 - d. Angles of a stripe (a pair of parallels with transversal).
 - e. Ratios of line segment, of areas, of volumes.
 (The use of the protractor in constructing and measuring angles is recommended.)
- II. Approximate Computation.
1. Significant figures.
 2. Four fundamental operations with measured number.
 3. Square root. (a) By trial method or by formula. (b) By table.
- Round number estimate and accurate check in 2 and 3.
- III. Evaluation.
1. Formulas: triangles, rectangles, rhomboids, trapezoids, circles. Construct figures and study their properties. Informal proofs.
 2. Formulas from other sources: industry, science, solid geometry.
- IV. Algebraic expressions and processes.
1. Positive and negative numbers.
 2. Addition and subtraction.
 3. Parentheses.
 - a. Equations involving parentheses.
 - b. Problems from I and III.
 4. Multiplication and division.
- V. Problems.
1. Problems leading to fractional equations with monomial denominators.
 2. Standard types.
 3. Further problems from sources I and III.
- VI. Special products and factors.
1. Distributive factoring: $am + bm + cm$.
 2. $(a \pm b)^2$.
 3. Quadratic products. $a^2 \pm 2ab + b^2$.
 4. $(a + b)(a - b)$.
 5. Difference of two squares.
 - a. $a^2 - b^2$.
 - b. $a^2 \pm 2ab + b^2 - c^2$.
 6. $(x \pm a)(x \pm b)$.
 7. Quadratic products.
 - a. $x^2 \pm ax \pm b$.
 - b. $ax^2 \pm bx \pm c$.

- VII. Quadratic equations.
1. Solution by factoring.
 2. Solution by completing the square.
 3. Problems.
- VIII. Simultaneous equations.
1. Linear pair.
 - a. Solution by graph.
 - b. Solution by addition or subtraction.
 - c. Problems.
 2. Linear quadratic pair.
 - a. Solution by graph.
 - b. Solution by substitution.
 - c. Problems.

SCHOOL DOCUMENT NO. 15—1920
BOSTON PUBLIC SCHOOLS
**COURSES OF STUDY IN FRENCH
AND SPANISH**

FIRST UNIT—FOR SEVENTH AND EIGHTH GRADES
OF INTERMEDIATE SCHOOLS AND CLASSES OR
FIRST YEAR CLASSES IN HIGH SCHOOLS

SECOND UNIT—FOR NINTH GRADE OF INTER-
MEDIATE SCHOOLS OR SECOND YEAR CLASSES
IN HIGH SCHOOLS



BOSTON
PRINTING DEPARTMENT
1920

IN SCHOOL COMMITTEE, BOSTON, OCTOBER 18, 1920.

Ordered, That the Courses of Study in French and Spanish, First Unit: For Seventh and Eighth Grades of Intermediate Schools and Classes, or First Year Classes in High Schools; Second Unit: For Ninth Grade of Intermediate Schools, or Second Year Classes in High Schools, is hereby authorized as a school document, and that twenty-five hundred (2,500) copies be printed.

Attest:

THORNTON D. APOLLONIO,
Secretary.

OUTLINES OF WORK IN FRENCH AND SPANISH
FOR INTERMEDIATE SCHOOLS AND FOR
FIRST AND SECOND YEAR CLASSES IN
HIGH SCHOOLS.

COUNCIL ON MODERN FOREIGN LANGUAGES FOR INTER-
MEDIATE SCHOOLS AS REORGANIZED FEBRUARY 11,
1920.

WILLIAM B. SNOW, *Chairman* . English High School.
LEON C. COLMAN, *Secretary* . English High School.

REPRESENTING THE HIGH SCHOOLS.

WILLIAM P. HENDERSON . . . Public Latin.
HELEN A. STUART . . . Girls' Latin.
MARIAN A. HAWES . . . Brighton.
HARRIET E. HUTCHINSON . . . Charlestown.
KATHERINE K. MARLOW . . . Dorchester.
LUCY R. BEADLE . . . East Boston.
CHARLES W. FRENCH . . . English High.
ALICE M. TWIGG . . . Girls' High.
EDWARD BERGÉ-SOLER . . . High School of Commerce.
ALICE E. FISHER . . . Hyde Park.
HARRIET E. BIRD . . . Mechanic Arts.
MARY T. LOUGHLIN . . . Roxbury.
BERTHA VOGEL . . . South Boston.
FRANCES B. WILSON . . . West Roxbury.
WALTER I. CHAPMAN . . . English High School.
JOEL HATHEWAY . . . Chief Examiner.

REPRESENTING THE INTERMEDIATE SCHOOLS.

MARIE A. SOLANO . . . Normal School.
GABRIELLE ABBOT . . . Abraham Lincoln.
MARION CHESLEY . . . Emerson.
GRACE A. CUNNINGHAM . . . George Putnam.
ELEANOR M. COLLETON . . . Hancock.
CLARA B. CUTLER . . . Henry L. Pierce.
KATHERINE E. BARR . . . John Winthrop.
CLARA E. OAKMAN . . . Lewis.

MARY POLK	Mary Hemenway.
ANNA A. MAGUIRE	Oliver Wendell Holmes.
VIOLA M. ALLEN	Robert G. Shaw.
ESTHER E. LARSON	Ulysses S. Grant.

REPRESENTING THE ELEMENTARY SCHOOLS (WITH MODERN
FOREIGN LANGUAGES).

ELLEN C. HOY	Phillips Brooks (French).
JAMES T. DONOVAN	Warren (Spanish).

The purpose of the reorganized Council was to establish a basis for co-ordinating the work in intermediate and high schools. The general plan followed in the intermediate schools was recognized as wise, and it was felt that the work of reorganizing the courses would consist in making the work in the first year of high school and in the seventh and eighth grade of the intermediate schools, substantially equivalent.

It is apparent that ordinarily intermediate school pupils will have modern language work in the seventh and eighth grades. The work of these two years taken together constitutes the First Unit. In rare cases, intermediate pupils may have this work in the eighth and ninth grades. The work of these two years would likewise constitute the First Unit. In either case the study would demand five half-hour periods of instruction weekly for two years, in other words, 300 minutes a week for one year.

It may further happen that the intermediate school pupil will not take up a modern language until the ninth grade. The Council feels that this plan is inferior to either of the preceding, for the earlier the pupil begins a foreign language the better. If the work is taken only in the ninth grade, a minimum of seven half-hour periods per week, or 210 minutes weekly, per year, must be devoted to it. This work must be equivalent to the work of grades VII. and VIII. together, and, therefore, likewise constitutes the First Unit. The average first-year foreign language course in high schools consists

of five forty-minute periods per week, or 200 minutes weekly, the whole year. This also constitutes the First Unit.

Ninth grade foreign language, preceded by language work of grades VII. and VIII., constitutes the Second Unit. This is equivalent to second year language work in the high school, which also constitutes the Second Unit.

The allotment of time for each grade or each unit was carefully considered on the basis of the degree of maturity of the pupils, and of the methods followed in intermediate schools and high schools respectively. The plan as described above was accepted by the council and two subcommittees were appointed to draw up outlines of work in French and Spanish respectively.

The membership of the subcommittees is as follows:

FOR FRENCH.

Miss MARIE A. SOLANO, <i>Chairman</i> ,	Normal School.
Miss CLARA B. CUTLER . . .	Henry L. Pierce School.
Mr. CHARLES W. FRENCH . . .	English High School.
Miss ELLEN HOY	Phillips Brooks School.
Miss KATHERINE K. MARLOW . . .	Dorchester High School.
Miss MARY POLK	Mary Hemenway School.
Miss ALICE M. TWIGG	Girls' High School.

FOR SPANISH.

Miss MARIE A. SOLANO, <i>Chairman</i> ,	Normal School.
Miss KATHARINE E. BARR . . .	John Winthrop School.
Mr. WALTER I. CHAPMAN . . .	English High School.
Mr. JAMES T. DONOVAN	Warren School.
Mr. JOEL HATHEWAY	Chief Examiner.

The reports of the subcommittees were presented to the entire council at a series of meetings. The reports were thoroughly discussed, somewhat amended and finally approved by the entire council.

The reports, as accepted, are submitted herewith.

FRENCH.

OUTLINE OF WORK FOR THE FIRST UNIT.

NOTE.—According to the new plan, the First Unit comprises the work of grades seven and eight of intermediate schools and classes, or of the first year in high school.

METHOD.

I. Teach the sounds of the language alone and in words before attempting to do anything else. Mere imitation on the part of the pupils will not be enough. They must be taught how to produce the sounds consciously. As soon as possible the letters should be given their French names. The use of the phonetic signs is not recommended, as it tends to increase the difficulties of spelling, but the different spellings represented by one sound such as: *ai, ei, etc.*, or *im, in, etc.*, should be grouped and kept constantly before the eyes of the class. Lists of common words chosen for the illustration of the phonetics should be practiced in concert. Pronouncing one or two short words at a time in unison, after the teacher, is recommended. This concert work must be so carefully done, it must be so clear and distinct, that the slightest mistake may be detected, just as false notes in concert singing may be detected by the trained musician.

II. The teaching of vocabulary should be objective. The objects in the classroom make an excellent beginning, but the teacher is at liberty to choose other familiar interesting objects. When the object is shown, its name should be repeated many times by teacher and pupils, singly and in concert, the pronunciation receiving especial attention. All through the first half of this unit the use of objects, pictures, charts, etc., is of the greatest help and interest to the pupils in aiding them to acquire the vocabulary.

III. Each new word or sentence should be written on the blackboard by the teacher. As no printed textbooks are to be used during the first three months in the intermediate grades, or the first month in high schools, pupils should have note books in which all new words and sentences should be copied, after having been thoroughly learned, both orally and aurally. When copying, the class may be often drilled in spelling the words, using the French names of the letters.

IV. It is absolutely necessary in teaching nouns that the article, generally the definite, be given. This is the most practical way of learning and remembering the gender of nouns.

V. Almost from the first day the teacher can make up easy sentences and frame easy questions in French, and at the same time teach the pupils to give their answers in sentences; for it must always be borne in mind that the sentence rather than the isolated word of the vocabulary is the unit of the work. These questions must not call for any forms, or words that have not already been given in the lessons; in other words, the answers must contain only what has previously been taught and learned. At this stage of the work the pupils must not be allowed to use unfamiliar words, or constructions. They must hear, speak and write only correct forms. Consequently socializing the recitation is not recommended, for a procedure which may be admissible in the teaching of subjects, which have for basis the native tongue, becomes dangerous when teaching a foreign language, especially during the first two years of instruction.

VI. It is suggested that whenever possible a few easy songs be taught, and that a few very simple poems be memorized, provided that they do not contain too many purely poetic or archaic phrases. Short, easy dialogues, or a few lines of simple narrative prose, are very useful. Here are some suggestions for songs, games and dialogues:

SONGS.

“Savez-vous planter les choux?”

“Quand trois poules s'en vont aux champs.”

“Sur le pont d'Avignon” (game and song).

“Il était une bergère.”

“Au clair de la lune.”

“C'est la mère Michel.”

“Il court, il court, le furet.”

“Au jardin.”

VOCABULARY GAMES.

Je pense à quelque chose. Qu'est-ce que c'est? Est-ce le crayon? Non, ce n'est pas le crayon, or: Oui, c'est le crayon.

This is a very good way to review the vocabulary. Games may vary, using different verbs, such as *acheter*, *avoir*, *regarder*, etc. Children and even older pupils are very enthusiastic when they are allowed to learn parts in a little play, or in stories arranged in dialogue form. Frazer's "Scenes of Familiar Life" is excellent for this purpose and it goes side by side with the vocabulary that is being learned; also two or three of the easiest of the "Fifteen French Plays" by François might well be used. The rest of the plays in this book, as well as the very fine collection contained in "Le Chevalier de Blanchefleur," may be used in the latter part of the second half of this Unit, as well as in the Second Unit. These plays, or others similar, learned by heart and well recited, constitute interesting and useful oral practice.

VII. *Reading Aloud*.—Reading aloud should be done in connection with the preparation of new lessons, to be sure that the pupils are pronouncing correctly the words that they are to learn.

VIII. *Reading*.—About seventy-five fairly well filled pages would be a satisfactory amount. The reading should be very easy and should form a basis for oral practice. This Unit calls for very little, if any, formal translation. The new words have been explained, and,

in the majority of cases, the translation in class would be unnecessary. Still, this is left to the judgment of the teacher, who may wish to have a lesson in translation once in a while.

IX. As soon as possible dictation should begin. It may be given twice a week for five or six minutes at the start, increasing the time to ten minutes as the pupils advance. The dictation should consist of short and easy sentences, the words of which are familiar to the pupils, or of the words of a song they are learning. Later, longer sentences and connected familiar stories may be given to train the ear and to give material for oral practice.

X. Translation from English into French should be limited to a few very easy sentences based on the lesson. Such work forms a foundation for composition work in a more advanced Unit.

GRAMMAR.

Points to be Developed.

- I. Article.
 - (A) Definite and indefinite.
 - (B) Gender and number.
 - (C) Partitive constructions.
- II. Noun.
 - (A) Gender and number.
- III. Adjective.
 - (A) Gender and number.
 - (B) Agreement.
 - (C) Position.
 - (D) Comparison.
 - (E) Possessive.
 - (F) Demonstrative.
 - (G) Numeral,— cardinal and ordinal.
- IV. Pronoun.
 - (A) Personal.
 1. As subject of verb.
 2. As object of verb (one object in this Unit).
 3. Object of preposition.
 4. *En* in connection with partitive.
 - (B) Interrogative (see vocabulary).

V. Verb.

- (A) Present indicative.
- (B) Past indefinite.
- (C) Imperfect.
- (D) Future.

Teach the above tenses of *avoir* and *être*, of the three regular conjugations, and of the following irregular verbs:

Aller, dire, faire, mettre, prendre.

Teach the present indicative only of:

Écrire, savoir, venir, voir, vouloir.

Avoir and *être* are listed at the beginning to call attention to the importance of these verbs.

Such useful imperatives as "Asseyez-vous" should be taught as part of the vocabulary. Thus the use of the reflexive may begin by giving commands. Later, in the second half of the Unit, the pupils may be drilled in the use of the reflexive, in connection with the teaching of the object pronoun.

For list of verbs see vocabulary. The teacher may add any regular verbs considered necessary in the work. Those given in the vocabulary are the ones most commonly used.

For the other parts of speech, see vocabulary under proper heading.

NOTE.—For the convenience and guidance of the teacher, the points of grammar to be taught in this Unit have been placed together. This does not mean that the teacher must teach them in the order given, but that the work of the Unit must cover those points. These grammatical points must always be taught in a practical way, as a part of the conversation, rather than as grammar. The teaching of formal grammar in this Unit is to be avoided. The tenses of the verbs should be conjugated, not as isolated verb forms, but in complete sentences, *e. g.*, *J'ai un livre noir, Il a un livre noir, Nous avons un livre noir, etc.* When the pupil knows the verb fairly well, it will quicken the mind and stimulate vocabulary review to require him to change the complement in each person of the verb, *e. g.*, *Je vais à l'église. Il va à l'école, Nous allons chez nous, etc.*

FRENCH VOCABULARY INTENDED PRIMARILY FOR THE FIRST UNIT.

In arranging this vocabulary objects have not been grouped alphabetically. Instead, those things that bear resemblance, or relation to each other, are grouped together.

LA SALLE DE CLASSE.

le livre	l'élève	le tableau noir
la page	le pupitre	la brosse
la ligne	la place	la craie
la leçon	la chaise	l'armoire
le papier	la table	le bureau
la feuille de papier	le tiroir	la sonnette
la plume	l'école	l'horloge
le porte-plume	la salle	la pendule
l'encre	le plafond	le dictionnaire
l'encrier	le plancher	la carte
le buvard	la porte	le téléphone
le crayon	le clé	le calendrier
la règle .	la fenêtre	le drapeau
le canif	le rideau	le drapeau des États
le maître	le mur	Unis, <i>ou</i> le drapeau
le professeur	le coin	américain
l'institutrice	le tableau	le drapeau français

LA FAMILLE, LES PERSONNES, ETC.

l'homme	l'ami	Guillaume
la femme	l'amie	Henri
les parents	le monsieur	Jacques
le père	la dame	Jean
la mère	le garçon	Joseph
le grand-père	le roi	Jules
la grand-mère	la reine	Louis
le fils	la princesse	Moise
la fille	Monsieur	Paul
le frère	Madame	Pierre
la sœur	Mademoiselle	René
le cousin	Alexandre	Geneviève
la cousine	Charles	Isabelle
l'oncle	Edouard	Louise
la tante	Edmond	Marie
le neveu	François	Renée
la nièce	Georges	Sophie

LA GRAMMAIRE.

le nom	la lettre	le point
l'adjectif	l'accent	la virgule
le pronom	l'accent aigu	le point-virgule
le verbe	l'accent grave	les deux points
le devoir	l'accent circonflexe	le trait d'union
la phrase	l'apostrophe	le tiret
le mot	la cédille	

LES PROFESSIONS ET LES MÉTIERS.

l'agent de police	le facteur	la cuisinière
l'avocat	le jardinier	l'infirmière
le boulanger	le maçon	la boucherie
le boucher	le marchand	la boulangerie
le charpentier	le maréchal	le bureau de poste
le commis	le médecin	l'épicerie
le confiseur	le menuisier	l'hôpital
le coiffeur	le pompier	le magasin
le cordonnier	le soldat	le marché
le cuisinier	la blanchisseuse	la boutique
l'épicier	la couturière	

LES SAISONS, LE TEMPS, ETC.

le printemps	le mois	le soir
l'été	la semaine	la soirée
l'automne	le jour	(le) minuit
l'hiver	la journée	la fête
	l'heure	le jour de congé
le nord	la minute	le ciel
le sud	la seconde	la terre
l'est	la montre	le soleil
l'ouest	l'horloge	la lune
	la pendule	les nuages
la date	le matin	la pluie
l'an	(le) midi	la neige
l'année	l'après-midi	le vent
		la glace
lundi	janvier	juillet
mardi	février	août
mercredi	mars	septembre
jeudi	avril	octobre
vendredi	mai	novembre
samedi	juin	décembre
dimanche		

LE CORPS HUMAIN.

la tête	la joue	l'ongle
les cheveux	l'oreille	le dos
la figure	le cou	la poitrine
le front	la gorge	le cœur
l'œil (les yeux)	l'épaule	l'estomac
le nez	le bras	la ceinture
la bouche	le coude	la genou
la lèvre	la main	la jambe
la langue	le doigt	le pied
le menton		

LES VÊTEMENTS.

le chapeau	le mouchoir	le manteau
la casquette	le pantalon	le tablier
la chemise	le bas	le ruban
la blouse	le soulier	l'épingle
le col	le pardessus	l'aiguille
la cravate	le parapluie	le fil
le gilet	la robe	le bouton
l'habit	la jupe	le dé
la jaquette	le jupon	les ciseaux
la poche		

LES REPAS.

la nappe	la fourchette	la carafe
la serviette	la cuillère	le déjeuner
l'assiette	le verre	le diner
le couvert	la tasse	le souper
le couteau	la soucoupe	

LES ALIMENTS.

le pain	le gâteau	les légumes
le beurre	le sel	les choux
le fromage	le poivre	les haricots
le lait	la soupe	les pommes de terre
la crème	la viande	la carotte
le café	la volaille	le navet
le thé	le poulet	les petits pois
le chocolat	l'œuf	la salade
le sucre	le dindon	la laitue
le dessert		

LES FRUITS.

la banane	l'orange	la pomme
la cerise	la pêche	la prune
le citron	la poire	le raisin
la fraise		

LA MAISON.

le vestibule	la cheminée	les draps
l'escalier	la lumière électrique	l'oreiller
le salon	la chambre	la salle de bain
les meubles	la chambre à coucher	la salle à manger
le tapis	le lit	la cuisine
le piano	le matelas	le canapé
le fauteuil		

LE JARDIN ET LES FLEURS.

l'arbre	la marguerite	la pensée
l'herbe	le muguet	la rose
le lis	l'œillet	la violette

LES ANIMAUX.

l'agneau	le lapin	le rat
l'aigle	le lion	le renard
le bœuf	le loup	le singe
le canard	le moineau	le tigre
le chat	le mouton	la colombe
le cheval	l'oiseau	la mouche
le chien	l'ours	la poule
l'éléphant	le perroquet	la souris

NOMS DES CONTRÉES.

l'Amérique du Nord	les Etats Unis	l'Espagne
l'Amérique du Sud	la France	l'Italie
l'Afrique	la Suisse	la Russie
l'Asie	le Canada	la Chine
l'Australie	l'Allemagne	le Japon
l'Europe	l'Angleterre	

américain	anglais	chinois
européen	italien	japonais
français	espagnol	russe
allemand	canadien	

QUELQUES NOMS UTILES.

la ville	le théâtre	l'argent
le train	la campagne	le franc
la gare	le chemin	le sou
la rue	les champs	la lettre
le parc	le bois	la carte-postale
l'église	la forêt	le timbre-poste
		le journal

LES PRÉPOSITIONS.

à	depuis	pour
après	derrière	près
avant	devant	près de
avec	entre	sans
chez	jusqu'à	sous
dans	par	sur
de	pendant	vers

LES CONJUNCTIONS.

car	mais	parce que	si
et	ou	que	

LES ADVERBES.

à droite	comment	moins	sculement
à gauche	demain	ne jamais	souvent
assez	en	ne pas	toujours
aujourd'hui	encore	ne plus	très
aussi	ensemble	non	trop
beaucoup	ici	où	un peu
bien	jamais	oui	vite
bientôt	là	point	voici
certainement	lentement	pourquoi	voilà
combien	maintenant	quand	y

LES VERBES.

acheter	corriger	fermer	porter
aimer	se coucher	finir	préférer
aller	couper	jouer	prendre
apporter	demander	se lever	préparer
apprendre	demeurer	lire	regarder
arriver	désirer	manger	remercier
s'asseoir	dire	marcher	répondre
avoir	donner	montrer	savoir
boire	dormir	mettre	trouver
chanter	écouter	oublier	venir
chercher	écrire	ouvrir	voir
commencer	entendre	parler	vouloir
comprendre	être	partir	
compter	faire	penser	

L'ARTICLE.

	<i>Défini.</i>			<i>Indéfini.</i>
le	la	les	un	une

LES ADJECTIFS.

agréable	désagréable	jaune	petit
bas	difficile	jeune	poli
beau	facile	joli	riche
blanc	froid	laid	rose
bleu	gentil	long	rouge
bon	grand	mauvais	tout
brun	gris	méchant	triste
charmant	haut	mécontent	utile
chaud	heureux	noir	vert
cher	impoli	nouveau	vieux
content	inutile	pauvre	violet
court			

L'ADJECTIF POSSESSIF.

mon	notre
ton	votre
son	leur

L'ADJECTIF DÉMONSTRATIF.

ce	cette
cet	ces

LE PRONOM.

Personnel.

(A) Sujet.

je	vous
tu	ils
il	elles
elle	on (indéfini)
nous	

(B) Disjonctif.

moi	nous
toi	vous
lui	eux
elle	elles

(C) Complément Direct.

me	nous
te	vous
le	les
la	se

(D) Complément Indirect.

me	leur
te	se
lui	en
nous	y
vous	

Interrogatif.

(A)

qui	que	quel
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OUTLINE OF WORK FOR THE SECOND UNIT.

NOTE.—This Unit comprises the work of the ninth grade in the intermediate school when preceded by two years of the study of French, or the work of the second year in high schools.

METHOD.

I. *Review*.—The first six or eight weeks of the Second Unit should be spent largely in a thorough and complete review of the work of the First Unit. All weak points should be strengthened, but at the same time that the review is taking place, some new material should be given to add interest and variety to the work. The class should be conducted wholly in French, except for brief explanations which may require the use of English.

II. *Composition*.—In a very easy way composition was begun in the First Unit; now the work must be made broader in its scope. No formal book of composition is advised. The exercises contained in the grammars often give good drill in composition, and the teacher might well have the pupils write some stories that have been read and used in conversation in class. This form of composition, under careful guidance, both stimulates the imagination of the pupils and tests their knowledge of the foreign language. Composition should always furnish drill on the most necessary points in grammar.

III. *Dictation*.—Dictation is such a valuable aid in learning a language that the work in this line should be continued. Twenty minutes of actual dictation per week is the minimum requirement. It is advisable that these twenty minutes be divided into two ten-minute periods.

IV. *Reading Aloud*.—Reading aloud should be an important feature of the work of this Unit. In gen-

eral, it will form a part of each reading lesson. Ordinarily it is desirable, except in review work, that the teacher should first read aloud phrase by phrase, sentence by sentence, or paragraph by paragraph. The portion read should then be re-read by the pupils.

V. *Reading.*—In general, the amount of reading done in this Unit should be not less than one hundred pages and not more than two hundred. The amount is left to the judgment of the teacher, who will decide according to the ability of the class. The amount is purposely made small, so that there may be time to learn new forms and new words, also that part of the reading lesson may form the basis of oral practice.

VI. *Translation.*—In this Unit, also, formal translation should be reduced to the minimum. Again this is left to the common sense of the teacher, who knows how well the class understands the material being read. In general the reading in this Unit will be easy, so there will be little need of formal translation, which may be left for the Third and Fourth Units of the study of the language.

VII. *Memorizing.*—It is always desirable to learn a few short selections in prose or poetry. The pupils enjoy learning and reciting poems that they can understand, and taking part in short plays. It appeals to the dramatic instinct of young people and it gives variety to the work. A few of the plays in two of the books mentioned in the First Unit are well adapted to this Unit. Any other plays similar to these can be used to the great advantage and pleasure of the class. Four or five of the easier fables of La Fontaine are excellent material.

NOTE.—The requirements for the Second Unit have been made very simple in order that pupils may have time and opportunity to do the work thoroughly and thus be prepared to undertake with comparative ease the more difficult work of the Third Unit, and especially in order that they may have time and opportunity for the greatest possible amount of oral practice.

The points to be strengthened in the review and the new grammar points to be taught follow in the succeeding pages. All grammatical points will be treated more fully in this Unit and the definitions, although simple, must be more formal. Rules should be well learned, (preferably in French), fully illustrated and drilled upon. Armand's French Grammar (the Complete Course) is a good text for the purpose.

I. Review.

- (A) General drill in pronunciation, including a review of syllabication.
- (B) Inflection of article, noun, adjective, pronoun, and verb, as learned in First Unit.
- (C) Rules of agreement.
- (D) A thorough review of the vocabulary of the First Unit, using it in sentences and oral practice.

II. Grammar.

- (A) Noun.
 - 1. Irregular plurals.
- (B) Adjective.
 - 1. Review positive and comparative and teach superlative.
 - 2. Adjectives having irregular plurals and irregular feminines. (Teach only the most common.)
- (C) Pronoun,
 - 1. Personal.
 - a. Review thoroughly the single object, then teach the use of two object pronouns. (No drill or pronouns of the second person singular.)
 - b. Reflexive pronoun with the verb.
 - 2. Possessive.
 - a. Forms and agreement.
 - b. Contrast with the possessive adjective.
 - 3. Demonstrative.
 - a. Contrast with the demonstrative adjective.
 - 4. Relative.
 - 5. Interrogative.
 - 6. Indefinite.
- (D) Verb.
 - 1. Review regular verbs. In connection with the first conjugation teach verbs having orthographical changes.
 - 2. Teach all the simple and compound tenses of the Indicative with the exception of the Past Anterior; teach the Conditional, Present and Past, and the Imperative.

NOTE.—The Subjunctive Present should be recognized and

explained as it occurs in reading, but the systematic study of the Subjunctive should be left for the Third Unit. Here is a list of irregular verbs which should be taught in this Unit, as directed in the preceding paragraph:

avoir	devoir	lire	recevoir
aller	dire	mettre	savoir
s'asseoir	dormir	mourir	sortir
boire	écrire	ouvrir	venir
connaître	envoyer	partir	vivre
courir	être	pouvoir	voir
croire	faire	prendre	vouloir

All the verb forms should be thoroughly learned and drilled upon.

(E) Adverb.

1. Review adverbs taught in First Unit.
2. Teach the formation of adverbs in *ment*.
3. Review besides all forms of negation: *ne pas*, *ne point*, *ne plus*, *ne que*, etc., and their position.
4. Use of *ni . . . ni*.

(F) Prepositions and conjunctions as they occur in reading should be given recognition. The more useful ones were taught in the First Unit.

SPANISH.

OUTLINE OF WORK FOR THE FIRST UNIT.

According to the new plan the First Unit comprises the work of Grades VII and VIII of intermediate schools or classes, or of the first year in high schools.

METHOD.

Spanish is a language of vowels, and one of the most essential things in speaking the language pleasingly is the correct pronunciation of these letters. The first step, therefore, should be to teach the proper value and sound of each vowel. These sounds are full, round and single. The Spanish vowels never have the diphthongal sound of the long vowels in English.

A is neither flat nor broad, but between the two; it is a single, natural sound resembling *ah*.

E has a sound somewhat similar to *eh* properly pronounced without trailing off into an English *e*.

I is always pronounced like the double *ee* in English, and so is *Y* when used as a vowel.

O is round and full similar to the *o* in *border*. It is a single sound. Do not make it too long and do not finish the sound with *oo*.

U is always like the *oo* in moon.

Make a large chart or write the vowels on the blackboard, where they may remain permanently. The letters should be large enough to be seen easily from every part of the room. During the first part of the First Unit begin every lesson with concert drill on the sounds and combinations of syllables. There is no better method for the improvement of pronunciation than reading and pronouncing in concert for six or seven minutes each day, especially in the case of new words or short sentences. The teacher should pro-

nounce first clearly and slowly one or two words at a time; then all the pupils should repeat in unison. As they pronounce the same syllable at the same time, a trained ear will quickly detect any slight mistake.

NOTE.—For drill on vowel sounds the following and other similar words will be found useful. The lists are not intended to be complete. The teacher will have to supplement them and form other lists for other sounds.

A — la, cara, carta, manta, pata, plata, rata, santa, Salamanca.

E — en, entre, mente, pez, rece, sed, vez.

EI — seis, veinte, treinta, reina.

I — mi, sí, fin, sin, cinta, tinta, violín.

IE — siete, tiene, viento, tiempo, bien.

Y — soy, estoy, voy, muy, rey, ley.

O — codo, gozo, lobo, loco, pongo, otro, solo, Dolores.

U — uno, su, mundo, luna, cuna, suyo, uso, útil.

When the consonants are taken up, tables like the following may be of use.

K sound G sound (as in go) W sound (approximately)

ca	ga	gua
que	gue	güe
qui	gui	güi
co	go	guo
cu	gu	

NOTE.—Explain the silent *u* after *q* and between *g* and *e* or *i*.

H sound (approximately) Th sound R (trilled)

ja	za	ra
je, ge	ce	re
ji, gi	ci	ri
jo	zo	ro
ju	zu	ru

When beginning to teach vocabulary, it is desirable to make use of the objects in the class room. The use of pictures, charts, etc., is recommended. In teaching gender it might simplify matters, if at first only masculine nouns were taken, then feminine.

Objects should be shown plainly and the names pronounced clearly and distinctly two or three times by the teacher, after which they should be repeated by several individual pupils. Then they should be written on the board and copied by the pupils in their note books.

Nouns should always be accompanied by the article, generally the definite.

Short sentences should be introduced, such as: *¿Cómo se llama esto?* or *¿Qué es esto?* and their answers, "*Eso se llama*" "*Eso es,*" and others of the same kind, so that the pupil may, almost from the start, answer by statements rather than by a single word; for the sentence, rather than the separate word of the vocabulary, must be the unit of the work.

As the Spanish plural is easy, it may be taught after a few lessons.

Numerals are to be taught as soon as possible, and also the present of *ser*, *estar* and *tener*. The forms corresponding to *yo*, *Vd*, *él*, *ella*, *nosotros*, *Vds*, *ellos*, and *ellas* are the only ones to be taught. *Tú* and *vosotros* are merely to be explained as they occur in reading texts. Explain that *estar* means position, location, and condition of health; and that *ser* means what a person or thing is. Make the explanation as simple and as brief as possible. The teacher will have to correct the misuse of these two verbs constantly.

It adds very much to the enjoyment of the class if, when the work is far enough advanced, the pupils are allowed to ask easy questions of each other, but if mistakes are made in the questions or in the answers, they should be immediately corrected, and the pupils should repeat the sentences in the corrected form. The socialization of the language recitation, is not recommended as the rules which apply to other subjects would not work equally well in teaching a foreign tongue.

Pupils should learn the use of the Spanish names of the letters in spelling Spanish words. Such work may be begun as soon as the class has become somewhat accustomed to the sounds of the foreign language. Teachers

should write the word on the board, spell it in Spanish, and have the pupils repeat, in unison, the name of each letter.

In the first half of this Unit, no formal rules of grammar should be given. About the second month little stories should be told, such as:

Anita tiene una muñeca.

La muñeca de Anita tiene pelo negro.

La muñeca de Anita tiene ojos azules.

La muñeca de Anita tiene zapatos rojos.

La muñeca de Anita tiene un sombrero verde.

La muñeca de Anita se llama Lolita.

or

Juanito tiene un perro.

El perro de Juanito tiene una cabeza grande.

El perro de Juanito tiene una cola larga.

El perro de Juanito tiene cuatro patas.

El perro de Juanito se llama Brinco.

As the class learns the present indicative of the verbs of the three conjugations, another game may be played something like this: "*José compra un objeto para la escuela. Adivinen Vds lo que es. "¿Es un libro? No, no es un libro"* or, "*Si, es un libro.*" The object may be for the house, or an article of clothing or something to eat, and the verbs may be *mirar, ver, comer*, etc. Encourage variety as it constitutes an excellent way of reviewing the vocabulary and the verbs.

The preceding suggestions in regard to oral composition and games are intended especially for the work of the seventh grade. Similar material but adapted to the needs of maturer pupils, should be provided for the First Unit classes in the high school.

DICTATION.

As soon as coordinate sentences and little stories have been taught, very simple dictation exercises may be begun. At first such exercises should consist exclusively of material well known to the pupils. In the course

of time and with added knowledge on the part of the pupils, the work will become more difficult. Dictation serves a threefold purpose. First, it trains the ear; second, it accustoms the pupil to record rapidly in his mind the foreign words and to write them accurately; third, it serves as a basis for oral practice. A minimum of ten minutes twice a week is desirable.

READING.

A minimum of seventy-five pages of reading is suggested. The easiest material available should be chosen and easy reading only should be given throughout the First Unit.

MEMORY WORK.

The memorizing of some lines of easy prose is recommended; also the memorizing of very easy poetry, free from words meaningless in English, from hard idioms, from dialectical or incorrect forms, or from archaic or antiquated forms of expression. Trueba's "Cantos de Pájaros" is a good selection for memory work, as it contains easy constructions and useful words.

Tengo yo un pajarillo
Que el día pasa
Cantando entre las flores
De mi ventana, etc.

A few easy songs add much to the interest of the work and are a valuable aid in teaching pronunciation.

GRAMMAR.

Points to be Developed.

I. Article.

- (A) Definite and indefinite.
- (B) Gender and number.
- (C) Agreement with noun.
- (D) Use of definite article with *de* and *a*.

II. Noun.

- (A) Gender and number.
- (B) Formation of feminine nouns from masculine.
- (C) Formation of plural.

III. Adjectives.

- (A) Gender and number.
- (B) Agreement.
- (C) Position (emphasize position of adjectives of color and nationality).
- (D) Comparison (no forms in *ismo* to be taught).
- (E) Possessive.
- (F) Demonstrative.
- (G) Numeral,— cardinal, ordinal to twelfth, inclusive.
- (H) Indefinites.

IV. Pronoun.

- (A) Personal.
 1. As subject of verb (see vocabulary).
 2. As object of verb (one object in this Unit).
 3. As object of preposition (see vocabulary for list).
- (B) Interrogative (see vocabulary).
- (C) Indefinite (as given in vocabulary).

NOTE.—The possessive and relative pronouns may be taken up informally by the teacher, if desired. They should not be extensively used in the first unit of work and are not listed in the vocabulary. The same rule may be applied more or less to the demonstrative and indefinite pronouns.

V. Verb. (See notes and lists in the vocabulary.)

For the other parts of speech, see vocabulary under proper heading.

NOTE.—In the vocabulary that follows words have not been listed in alphabetical order. So far as seems advisable, words are grouped according to the resemblance or relation which they bear to one another.

VOCABULARY INTENDED PRIMARILY FOR THE FIRST UNIT.

LA ESCUELA.

el libro	el armario	la regla
el lápiz	el reloj	la llave
el papel	el cuadro	la ventana
el papel secante	el calendario	la cortina
el tintero	el español	la luz eléctrica
el escritorio	el inglés	la gramática
el maestro	la maestra	la lección
el profesor	la profesora	la página
el niño	la muchacha	la línea
el muchacho	la niña	la frase
el discípulo	la pluma	la palabra
el cepillo	la tinta	la letra

LA PUNTUACION.

el acento	punto y coma	la coma
el punto	dos puntos	admiraación
		interrogación

LAS PERSONAS Y LOS NOMBRES PROPIOS.

el hombre	el padre	el sobrino
la mujer	la madre	la sobrina
el señor (el caballero)	el hijo	el primo
la señora	la hija	la prima
la señorita	el hermano	el amigo
el rey	la hermana	la amiga
la reina	el abuelo	el compañero
el príncipe	la abuela	la compañera
la princesa	el nieto	el presidente
el esposo	la nieta	el gobernador
el marido	el tío	
la esposa	la tía	
Antonio	Moisés	Francisca (Paquita)
Carlos	Pablo	Josefa (Pepita)
Eduardo	Pedro (Perico)	Luisa (Luisita)
Enrique	Ramón	Magdalena
Felipe	Santiago (Diego, Jaime)	María (Mariquita)
Fernando	Tomás	Mercedes
Francisco (Paco)	Anita	Ramona
Guillermo	Carmelita (Carmencita)	Rosario
Jorge	Catalina	Ruz
José (Pepe)	Consuelo	Sofía
Juan	Dolores (Lola, Lolita)	Soledad (Solita)
Luis	Elena	Teresa
Manuel	Estela	
Miguel	Felisa	

EL CUERPO HUMANO.

El cabello (el pelo)	la lengua	el pecho
la cabeza	la barba	la espalda
la cara	la oreja	el corazón
la frente	el cuello	el estómago
el ojo	el hombro	la cintura
la nariz	el brazo	la pierna
la mejilla	la mano	la rodilla
la boca	el dedo	el pie
el labio	la uña	el dedo del pie
el diente		

LOS VESTIDOS, ETC.

El sombrero	el abrigo	la falda
la gorra (el gorro)	el pantalón	las enaguas
el cuello	el bolsillo	la media
el puño	el pañuelo	la ropa
el guante	el calcetín	el botón
el zapato	la camisa	el dedal
el traje	la corbata	el hilo
el chaleco	la chaqueta	la aguja
el sobretodo (el gabán)	la blusa	el alfiler

LA CASA Y LOS MUEBLES.

La puerta de calle	la silla	la sábana
el vestíbulo	el sillón <i>or</i>	la cobija (S. A.)
el zaguán	la butaca	la frazada <i>or</i>
la escalera	la chimenea	la manta
el patio	la habitación	el cuarto
el despacho	la alcoba	el cuarto de baño
la sala de recibo	la cama	el cuarto de dormir
la alfombra	el colchón	el comedor
el piano	la almohada	la cocina

LA MESA Y LAS COMIDAS.

El desayuno	la taza	la patata
el almuerzo	el vaso	la tortilla
la comida	el pan	la torta
la cena	la mantequilla	el postre
la mesa	el queso	el pastel
el mantel	el huevo	la leche
la servilleta	el jamón	el té
el cubierto	el tocino	el café
el tenedor	la carne	el chocolate
la cuchara	la sal	el azúcar
la cucharita	la pimienta	el cereal
el plato	la ensalada	la crema
el platito	la sopa	

EL JARDIN LAS FRUTAS Y LAS FLORES.

el árbol	la fresa	la planta
el álamo	la manzana	la hierba
el cerezo	la naranja	la flor
el manzano	el melocotón	la rosa
el olmo	el linón	la violeta
el peral	la uva	el clavel
la fruta	el plátano	el lirio
la cereza	la piña (<i>or</i> el ananás)	el pensamiento

LOS ANIMALES.

el caballo	el mono	el tigre
el carnero	el oso	la abeja
el cordero	el pájaro	la avispa
el elefante	el pato	la cabra
el gallo	el pavo	la gallina
el gato	el perro	la mosca
el león	el pollo	la oveja
el lobo	el puerco	la paloma
el loro	el ratón	la vaca

LA HORA, EL TIEMPO Y LA TEMPERATURA.

el año	el invierno	domingo
el mes	el frío	
la semana	el calor	enero
el día	el hielo	febrero
la mañana	el viento	marzo
la tarde	la nube	abril
la noche	la lluvia	mayo
el mediodía	la nieve	junio
la medianoche		julio
la hora	lunes	agosto
el minuto	martes	septiembre
la estación	miércoles	octubre
la primavera	jueves	noviembre
el verano	viernes	diciembre
el otoño	sábado	

NOMBRES DE OTRAS COSAS.

el sol	la estación	el carruaje
la tierra	la ciudad	la iglesia
la luna	la calle	el campo
la estrella	la avenida	el río
el tren <i>or</i>	la acera	el lago
el ferrocarril	la esquina	el mar

TIENDAS Y OCUPACIONES, ETC.

el boticario	la botica	el jardinero	el jardín
el carnicero	la carnicería	el lechero	la lechería
el carpintero	la carpintería	el marinero	el buque
el carretero	el carro	el panadero	la panadería
el cartero	la carta (la casa de correos)	el peluquero	la peluquería
		el sastre	la sastrería
el cocinero		el soldado	el ejército
la cocinera	la cocina	el tenedor de	
el confitero	la confitería	libros.	
el comerciante		el zapatero	la zapatería
el tendero	la tienda	la enfermera	el hospital
el dependiente			
el abogado	el médico		la costurera
el bombero	el pintor		la lavandera
el juez	la criada		la taquígrafa

PAISES Y NACIONALIDADES.

Norte América	el Perú	cubano
Sud América	Puerto Rico	mejicano
Centro América	Venezuela	peruano
África	España	portorriqueño
Asia	Francia	español
Europa	Inglaterra	francés
Australia	Alemania	inglés
Los Estados Unidos	Italia	alemán
La Argentina	Rusia	italiano
el Brasil	la China	ruso
Chile	el Japón	chino
Colombia	americano	japonés
Cuba	argentino	judío
el Ecuador	brasileño	indio
las Islas Filipinas	chileno	filipino
Méjico (México)	colombiano	

ADJETIVOS.

alto	contento	inútil
bajo	descontento	
grande	alegre	blanco
pequeño	triste	negro
largo	agradable	amarillo
corto	desagradable	azul
ancho	frío	café
estrecho	caliente	pardo
bueno	nuevo	colorado
malo	joven	rojo
bonito	viejo	encarnado
hermoso	rico	rosado
feo	pobre	gris
fácil	útil	verde
difícil		

ADJETIVOS DEMOSTRATIVOS.

PRONOMBRES DEMOSTRATIVOS.

este	} Teach feminine and plurals of each adjective and pronoun.	}	éste
ese			ése
aquel			aqué

ADJETIVOS INDEFINIDOS

PRONOMBRES INDEFINIDOS.

alguno, etc.	alguien	algo
ninguno, etc.	nadie	nada

Teach two or three others that may be found necessary.

PRONOMBRES PERSONALES.

yo	me	nos	mí	nosotros (as)
él, ella	le	les	él	ellos
Vd	lo	los	ella	ellas
nosotros (as)	la	las	Vd	Vds
ellos (as)	se	se	conmigo	
Vds				

PRONOMBRES INTERROGATIVOS.

qué	quién	cuál
-----	-------	------

NOTE.— In the verb list that follows, *ser*, *estar*, and *tener* are placed by themselves at the head of the list, in order to call especial attention to their importance. There is no need of teaching any imperative forms of the verbs starred. With this exception, pupils should be taught the present indicative, both simple form and progressive; the preterit, imperfect, present perfect and future tenses of the indicative only, and the polite forms (3d person singular and 3d person plural, present subjective) of the imperative. In no case are the familiar forms of the imperative to be used. Make use of other regular verbs that may be found necessary for conversation.

VERBS.

<i>ser</i>	<i>estar</i>	<i>tener.</i>
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PRIMERA CONJUGACION.

acabar	entrar	llamar	pasar
caminar *	enviar	llegar *	principiar
cantar	escuchar	llevar	terminar
comprar	hablar	mandar	tomar
cortar	hallar *	nadar *	dar
desear *	levantar	olvidar	

SEGUNDA CONJUGACION.

aprender	comprender *	leer	poner
beber	vender	poder *	saber *
comer	hacer		

* Do not teach imperative of verbs starred.

TERCERA CONJUGACIÓN.

abrir	partir *	vivir *	venir
escribir	subir	decir	ir

Teach the present indicative, and if necessary, the present perfect of the following verbs. Teach imperative except as noted below.

andar *	tocar	haber (1) *	saber *
buscar	sentarse	querer (2) *	traer
jugar *	conocer *		

PREPOSICIONES.

a	después de	entre	para
antes de	detrás de	con	por
de	desde	contra	sin
delante de	encima de	hacia	sobre
debajo de	en	hasta	

ADVERBIOS.

aquí	tarde	mucho	cuando
allí	temprano	poco	cuanto
arriba	ahora	bastante	muy
abajo	siempre	bien	más
ayer	nunca	mal	no . . . sí
hoy	todavía	como	solamente
mañana			

* Do not teach imperative of verbs starred.

(1) Teach use of this verb only as auxiliary and impersonal: *hay*, etc.

(2) Teach also the form *quisiera*.

OUTLINE OF WORK FOR THE SECOND UNIT.

This Unit comprises the work of the ninth grade in intermediate schools or classes when preceded by two years of the study of Spanish, or the work of the second year in high schools.

METHOD.

I. *Review*.—The first six or eight weeks of the Second Unit should be spent largely in a thorough and complete review of the work of the First Unit. All weak points should be strengthened, but at the same time that the review is taking place, some new material should be given to add interest and variety to the work. The class should be conducted in Spanish, except for brief explanations which may require the use of English.

II. *Dictation*.—Dictation should be given at least twice a week through the year. Probably most teachers will prefer to give it oftener.

III. *Composition*.—No formal book of composition is advised. The exercises contained in the grammar often give good drill in composition, and the teacher might have the pupils write some of the easy stories that have been read and used in conversation in class. This form of composition, under careful guidance, is very useful. Composition should always furnish drill in the most important points of grammar.

IV. *Reading Aloud*.—The entire reading lesson, sentence by sentence or paragraph by paragraph, should be read aloud by the teacher. Pupils should read individually after the teacher. Concert work should always be preceded by reading by the teacher and by individual pupils.

V. *Reading*.—Not less than one hundred nor in general more than two hundred pages. The amount is left to the judgment of the teacher who will decide according to the type and character of the class. The

amount required is purposely made small in order that there may be time to learn forms thoroughly, and to so conduct the oral practice that it may be worth while.

VI. *Oral Practice*.— This should be large in amount and should form an important and essential part of every lesson.

VII. *Translation*.— Formal translation should be reduced to the minimum, such minimum to be determined by the common sense of the teacher. In general the reading in this Unit will be very easy, so there will be little need of formal translation, which may be left for the third and fourth units of the study of the language.

VIII. *Memorizing*.— It is always desirable to learn a few good, short selections in prose or poetry, although no specific recommendations are made. Care should be taken not to choose selections which contain archaic or unusual words or excessively difficult or idiomatic expressions. Proverbs are not recommended for memorization, as too often they contain idioms which will be of no further use, and serve only to clutter the memory.

The requirements for the Second Unit have been made very simple: In order to fix some definite standard of attainment, in order that pupils may have time and opportunity to do the work thoroughly, so that they may not have to spend the Third Unit learning what they failed to understand in the Second, and, in order that the pupils may have *time* and *opportunity* for the greatest possible amount of oral practice.

The points to be strengthened in the review, and the new grammar points to be taught, follow in the succeeding pages:

I. REVIEW.

(A) Careful drill in pronunciation.

1. Rules of accentuation.
2. Syllable division.
3. Easy dictation.

(B) Inflection of noun, article, adjective, pronoun and verb as learned in First Unit.

(C) Rules of agreement as learned and practiced in First Unit.

(D) Vocabulary used in sentences and oral practice.

II. GRAMMAR.

(A) Noun.

1. Rules for determining gender.
2. Method of forming plural.

(B) Adjectives (including demonstratives and necessary indefinites).

1. Declension and agreement.
2. Position.
3. Comparison.
4. Numerals, including fractions.

(C) Pronoun.

1. Personal. Teach all subject pronouns, but do not drill with *tú* or *vosotros*.
 - a. Object pronouns both conjunctive and disjunctive.
 - b. One pronoun as object (position).
 - c. Two pronouns as objects (position).
 - d. Use of *se* both as a reflexive and as substitute for other forms.
2. Possessive.
 - a. Form and agreement.
 - b. Contrast with the possessive adjectives.
3. Demonstrative. Contrast with demonstrative adjectives.
4. Indefinites (the most commonly used).
5. Interrogatives.
6. Relatives (only the most common).
Declension and use.

(D) Verb.

1. Regular.
2. Irregular.
3. Radical changing.
Teach all simple and compound tenses of the indicative, except past anterior.
5. Present subjunctive. No drill upon the familiar forms.

Here follows a list of verbs which should be thoroughly learned in the Second Unit, as they are in constant use:
ser, estar, haber, tener.

andar, cerrar, contar, dar, pensar.

caer, conocer, hacer, poder, poner, querer,
saber, traer, ver.

decir, dormir, ir, oír, sentir, servir, venir.

Teach also one or two necessary forms of the impersonals *llover* and *nevar*.

All the above forms are to be thoroughly learned and drilled upon.

(E) Adverb.

1. Review of adverbs taught in the First Unit.
2. Teach the formation of adverbs in mente.
3. Teach the use of *ni . . ni*.

Prepositions and conjunctions

The more useful ones were learned in the First Unit. Others may be explained as they occur in reading.

All grammatical forms should be thoroughly learned. Rules for the position and use of the object pronouns should be based on numerous drill sentences. Uses of the subjunctive may be studied to a limited extent in the grammar, but the work of this Unit should be limited mainly to identifying and explaining such forms as they occur in the reading texts. Systematic study of the subjunctive belongs to the Third Unit.

CONCLUSION.

Although the matter has been touched upon in the special reports, the council wishes once more to remind teachers of classes of beginners, that the grammar outline for the First Unit of work has been constructed for the sole purpose of furnishing a concise, compact and systematic outline of those facts of grammar which may appropriately be taken up during the course of the First Unit work. It is not expected that the grammar will be taught in a formal way, nor that the teacher will follow the order of presentation given here. The order, method of actual presentation, etc., are left to the judgment of the teacher. It is not expected, however, that the limits here noted will be exceeded. The same consideration applies to the Second Unit, with the understanding that the grammatical work of this Unit will be more systematic and complete.

SCHOOL DOCUMENT NO. 16—1920
BOSTON PUBLIC SCHOOLS
REGULATIONS FOR JANITORS AND MATRONS
OF THE SCHOOLS AND REGULATIONS FOR THE
USE OF SCHOOL PREMISES



BOSTON
PRINTING DEPARTMENT
1920

IN SCHOOL COMMITTEE, BOSTON, November 29, 1920.

Ordered, That the accompanying Regulations for Janitors and Matrons of the Schools and Regulations for the Use of School Premises are hereby adopted, to take effect January 1, 1921, and to continue until otherwise ordered.

Attest:

THORNTON D. APOLLONIO,
Secretary.

December 6, 1920.

Ordered, That fifteen hundred (1,500) copies of the Regulations for Janitors and Matrons of the Schools and Regulations for the use of School Premises, School Document No. 16, 1920, be printed.

Attest:

THORNTON D. APOLLONIO,
Secretary.

REGULATIONS FOR JANITORS AND MATRONS OF THE PUBLIC SCHOOLS OF THE CITY OF BOSTON.

JANITORS.

SECTION 1. 1. Janitors shall have general General supervision. supervision of the school premises under their charge, and shall prevent any unauthorized person from entering or remaining thereon.

2. Janitors are required to be present to receive Attendance. supplies, etc., or to meet mechanics or other authorized persons whenever notified, and to remain, or to have one of their assistants remain, upon the premises whenever any person, other than the principal or teacher in charge, is present.

SECT. 2. 1. Janitors shall open and close their Opening and closing of school premises. buildings every school day throughout the year. They shall open gates leading from the street to the yards at 8.30 o'clock A. M., or earlier if required by their respective principals, and the doors to the buildings at 8.45 o'clock A. M.; *provided*, that upon cold or stormy days throughout the year, pupils shall be admitted to the several school-houses one-half hour before the beginning of each session.

2. They shall sound an alarm on all gongs in Closing signal. school buildings five minutes before locking the buildings and gates at the close of school sessions.

3. They shall visit every room, toilet accommo- Inspection of premises. dation, passage, stairway, yard, etc., on the premises, and shall securely lock or fasten all windows, doors, gates or other exits, after the completion of their work each day.

SECT. 3. 1. Janitors shall have the general Protection of school property. supervision and be responsible for the protection and preservation of the school property committed to their charge.

Protection of
portable
articles.

2. They are particularly enjoined to prevent the loss or removal by unauthorized persons of any portable articles; and whenever a vacation of a week or more occurs, shall see that all property such as books, maps, globes, charts, etc., is securely locked up.

Use of
intoxicants.

3. The use of intoxicants, or being under the influence of intoxicants, while on duty or on school premises, or their habitual use, or the frequenting of places where they are sold, is prohibited, and is sufficient cause for dismissal.

Assistants.

4. They shall be responsible for all acts or omissions of their assistants.

Precautions
against fire.
No smoking.

SECT. 4. 1. Janitors shall use extraordinary precautions against fire, and shall allow no smoking on the premises under their charge. They shall see that fire escapes are clear and in good order at all times, make themselves familiar with the use of fire-extinguishers and keep fire pails filled with water.

Recharging of
fire extinguish-
ers.

2. They shall play out and recharge all fire extinguishers annually, during the first week in September, under the supervision of a member of the Fire Department, and shall attach a tag to each extinguisher showing the date upon which it has been recharged.

Attendance on
steam-heating
apparatus.

SECT. 5. 1. Janitors in charge of steam-heating apparatus shall remain upon the premises, or have a regularly licensed engineer or fireman in charge thereof, during school hours and when the building is otherwise occupied.

Length of
daily attend-
ance.

SECT. 6. 1. Janitors receiving a salary of \$15 or more per week shall, in addition to the time required for the performance of their duties, remain in or about their buildings from 8.30 o'clock A. M. until one-half hour after the close of the day's session, or until the building shall have been vacated by teachers and pupils, with the exception of one hour's intermission for lunch, which hour shall be

approved by the principal of the school or district. Buildings shall be vacated by 5 o'clock P. M., except when a permit for longer occupancy has been granted.

2. Janitors receiving a salary of less than \$15 and more than \$6 per week shall, in addition to the time required for the performance of their duties, be in attendance from 8.30 to 9 o'clock A. M., during the recess period, and from fifteen minutes before the close of each session until fifteen minutes after the close thereof, or until the building shall have been vacated by teachers and pupils. Buildings shall be vacated by 5 o'clock P. M., except when a permit for longer occupancy has been granted.

3. Janitors receiving a salary of \$6 or less per week shall, in addition to the time required for the performance of their duties, report at the building at some stated time, to be approved by the principal of the district, or by the teacher in charge of the building, during each school day.

SECT. 7. 1. Janitors shall not permit occupancy of premises for other purposes than the work of the schools, except as otherwise provided in the general regulations of the Board, in the regulations for the use of school premises, or for repairs and alterations authorized by the Board of School-house Commissioners.

Schools not
to be occupied
except on
school days.

SECT. 8. 1. Janitors shall be permitted to begin sweeping the first room not later than five minutes after the close of the day session in the elementary and intermediate schools; and not later than 3.30 o'clock P. M. in the Normal, Latin and high schools, notice of the time at which such rooms shall be vacated shall be given by the janitor by placing a card in said room not later than 2 o'clock P. M.; *provided*, that a schedule regulating the vacating of class rooms for this purpose shall be approved by the respective principals or teachers in charge.

Teachers to
vacate rooms.

Sweeping of
floors.

SECT. 9. 1. When sweeping, janitors shall use sawdust dampened with water and disinfectant.

Sweeping of
basements.

2. Basement shall be swept once each week, or as often as may be necessary to keep them in good condition.

Sweeping
of other
accommoda-
tions.

3. Staircases, corridors and rooms occupied by manual training or evening classes, or for lectures, shall be swept daily; kindergartens shall be swept after each session; other rooms, including closets, dressing rooms, gymnasiums and assembly halls, twice each week, once by Wednesday night and again on Saturday.

Washing of
floors.

4. Floors paved with marble, slate, or terrazzo shall be washed as frequently as may be necessary to keep them clean.

Dusting.

SECT. 10. 1. Wainscoting, dadoes, window sills, window shades, mouldings, hand-rails, furniture, and radiators shall be dusted every morning before the opening of school.

2. Pictures, casts, shelves, walls and ceilings shall be dusted as often as may be necessary to keep them in good order.

3. Cloths shall be used for dusting in preference to feather dusters.

Gas and
electric lights.

SECT. 11. 1. Janitors shall keep gas and electric fixtures clean, replace burned out lamps promptly, see that lights are not used unnecessarily or to excess, and shall report to the principal or teacher in charge, and to the Schoolhouse Custodian, any evidence of waste.

2. Whenever electricity is used in the evening for lighting rooms occupied for assembly or class purposes that are also equipped with gas, one gas jet shall also be lighted.

Waste paper.

SECT. 12. 1. Waste paper shall not be allowed to accumulate, but must be burned daily.

Yards, walks,
and out-houses.

SECT. 13. 1. Yards, walks, and out-houses shall be examined daily and kept clean and in good order.

SECT. 14. 1. Chalk receptacles shall be cleaned Chalk recep-
tacles. once each week, and oftener if necessary.

SECT. 15. 1. Ink-wells shall be cleaned at least Ink-wells. once every three months.

SECT. 16. 1. When buildings are occupied for Summer re-
view school,
playground,
and extended
use occupancy. summer review school or playground activities, or for the extended use of the public schools, all of the preceding sections shall apply.

SECT. 17. 1. All furniture shall be washed Chairs and
desks. once a year, and desks occupied by pupils who have contracted a contagious disease shall immediately be thoroughly washed with disinfectant.

2. Door knobs and hand rails shall be washed Door-knobs
and rails. at least once each month with disinfectant.

SECT. 18. 1. All painted and varnished wood- Woodwork,
walls, etc. work, oil-painted walls, dadoes and wainscoting shall be thoroughly washed annually during the summer vacation.

SECT. 19. 1. Windows shall be cleaned on both Window
cleaning. sides twice each year, once during the April vacation, and again during the last week of the summer vacation. Windows shall also be cleaned on the inside during the last two weeks in November, and again during the first two weeks in February in each year.

SECT. 20. 1. Sanitariums shall be flushed with Sanitariums and
urinals. water at least once each day, and kept thoroughly clean and disinfected. Urinals shall be washed with soda, potash, or diluted muriatic acid.

SECT. 21. 1. Lawns shall be watered, grass cut, Grounds. and planted ground weeded regularly during the entire season. Yards and sidewalks shall be kept free from weeds and grounds generally kept neat and clean. Rubbish shall not be allowed to accumulate, but shall be destroyed or removed from the premises. Animals shall not be allowed to trespass on school lands.

Snow.

SECT. 22. 1. Snow shall be removed from the sidewalks, and paths made in the yards so as to provide access to the several entrances of buildings, including out-houses. Between the hours of 6 o'clock A. M. and 9 o'clock P. M. sidewalks shall be cleared, and the paths opened as soon as practicable after the time the snow ceases; should it stop snowing during the night, the work shall be done before 8 o'clock A. M. Sand or ashes shall be sprinkled upon sidewalks and paths when they are in a slippery condition.

Protection of heating apparatus.

SECT. 23. 1. Janitors will be held responsible for any damage to steam pipes or plumbing apparatus by freezing. In extremely cold weather they shall take unusual precautions by remaining during the night, or until satisfied that no such damage will occur.

Thawing frozen pipes.

SECT. 24. 1. In thawing steam or water pipes, should any be found frozen, hot water only shall be used.

Care of steam-heating apparatus.

SECT. 25. 1. Steam heating apparatus shall be kept clean and in good order. Boilers shall be blown clean as often as once each month and the tubes and sections shall be cleaned not less than once each week; the safety valve should be tried each day, and all other valves looked after and kept properly lubricated and packed. Draft dampers and regulators shall be adjusted so as to prevent waste in fuel. Ashes shall not be permitted to accumulate under the grates.

Discontinuance of heating apparatus on warm days.

SECT. 26. 1. On days when the opening of windows and doors will not reduce the inside temperature below 66 degrees Fahrenheit the operation of all heating and ventilating apparatus shall be discontinued.

Annual inspection of heating apparatus.

SECT. 27. 1. When the weather has become sufficiently warm to permit discontinuing the use of heating and ventilating apparatus for the season, janitors shall prepare their boilers for inspection,

thoroughly clean them, remove handhole and manhole plates from same, clean out fire boxes, back connections, flues, up-takes, and chimneys and shall notify the Schoolhouse Custodian, in writing, of the exact condition of all apparatus throughout the building, and recommend such repairs as, in their opinion, are necessary.

SECT. 28. 1. Where furnaces are used, janitors shall remain by them while the draft doors are open. They shall keep the water-pots full. Where stoves are used, fuel sufficient for the day must be carried to the several rooms before the opening of the session.

Furnaces and stoves.

SECT. 29. 1. It is not required that fires be kept up on holidays, or during vacations, unless necessary to protect the apparatus from freezing.

Heating during holidays and vacations and protection of apparatus.

2. Whenever the use of heating apparatus is discontinued during cold weather, all pipes and traps of every description shall be properly drained to prevent freezing.

SECT. 30. 1. Janitors shall have the temperature of every room occupied for school purposes at not less than 60 degrees Fahrenheit at 8.30 o'clock A. M., each school day, and shall maintain the temperature in such rooms as near 67 degrees Fahrenheit as possible during the hours of session, except during periods allotted to physical exercises and recesses.

Temperature to be maintained.

2. Janitors shall bank their fires at as early an hour as will result in the temperature of the buildings being maintained at not less than 66 degrees Fahrenheit during the time of occupancy.

Fires to be banked.

SECT. 31. 1. Janitors shall have the ventilating apparatus in full and complete operation as early as 8.30 o'clock A. M., and shall run the same to its full capacity during the hours of sessions, except during the periods allotted to physical exercises and recesses, during which periods the windows are to be opened top and bottom.

Ventilating apparatus.

Ventilation
of rooms.

SECT. 32. 1. Janitors shall thoroughly air out all buildings by opening the windows and doors of class-rooms at the close of the afternoon session, and also at the close of the evening session, if any be held.

2. They shall thoroughly air each room or basement used as a lunch room by the opening of windows for a period of not less than five minutes, terminating ten minutes before the beginning of the regular lunch period.

Defects to
be reported.

SECT. 33. 1. Janitors shall promptly report to their respective principals and to the Schoolhouse Custodian any defects in the heating, plumbing, gas-fitting, or electric systems of buildings under their charge.

Fuel
and other
supplies.

SECT. 34. 1. Janitors are required to be careful and economical in the use of fuel and other supplies; and shall make a monthly report to the Schoolhouse Custodian of the quantity of fuel on hand in their respective buildings, and an estimate of the amount which will probably be consumed during the six weeks following. They are reminded, however, that the Board does not desire the saving of fuel at the expense of the health of pupils by failure to provide a sufficient amount of heat and of fresh air in class-rooms.

Annual
report of
supplies.

2. Janitors shall annually in the month of August report to the Schoolhouse Custodian, on forms provided for the purpose, the number and condition of all janitors' supplies in their possession, and the approximate date on which each article was furnished.

Minor
repairs.

SECT. 35. 1. Janitors are expected to make minor repairs to locks, doors, furniture, etc., without incurring expense, and to adjust adjustable furniture when requested so to do by principals or teachers, as a part of their regular duties.

Display of
flag.

SECT. 36. 1. Janitors shall see that the United States flag is displayed on the buildings or grounds

under their charge every school day when the weather permits, and on the inside of the school-houses on other school days. They shall also see that such flags are displayed on other days designated by the School Committee.

2. Janitors shall regularly wind the clocks Clocks. throughout the buildings, and report to the principal, or teacher in charge, if any be out of order.

SECT. 37. 1. Janitors shall receive, if required, Mail matter. all mail matter for the principals and teachers in their respective buildings, and shall promptly and personally deliver the same to the respective persons to whom such matter may be addressed.

SECT. 38. 1. Janitors are not required to perform messenger service for principals or teachers, Messenger service. but are expected to be obliging in rendering such service so far as their regular duties will permit. (Attention is called to Section 5, with regard to janitors having charge of steam-heating apparatus.)

SECT. 39. 1. Janitors shall notify their respective principals, the Schoolhouse Custodian, and the Business Agent, in writing, immediately, of any change in residence. Change in residence.

SECT. 40. 1. Janitors shall file with the Schoolhouse Custodian a complete list of the full names and addresses of persons employed by or assisting them in the discharge of their duties; and shall inform the Custodian, in writing, immediately of any changes among such assistants. Assistants to janitors.

SECT. 41. 1. Janitors shall file with the Schoolhouse Custodian a full description of any licenses issued to them by the boiler inspection department of the district police, with the date thereof, within three days after receiving same. Licenses.

SECT. 42. 1. No janitor shall absent himself from duty unless on leave of absence or on vacation, in accordance with these regulations, except because of some unforeseen emergency, in which Unauthorized absence.

event he shall immediately notify the Schoolhouse Custodian, and the principal or teacher in charge.

Leave of absence without loss of pay.

2. Janitors may be granted leave of absence by the Schoolhouse Custodian for a period not exceeding five calendar days, and without loss of pay, on account of critical illness or death in the immediate family.

Leave of absence.

3. Applications for leaves of absence for longer periods or for other causes shall be made in writing to the Schoolhouse Custodian and be by him reported to the Board with his recommendation for action, such recommendation to include the amount of compensation which the absent janitor is to receive.

Employment and compensation of substitute janitors.

4. The Schoolhouse Custodian shall have full authority to and shall appoint a substitute for a janitor absent from duty, and the substitute so appointed shall be paid such compensation as the Board shall determine, upon recommendation of the Schoolhouse Custodian. In addition to such compensation the substitute janitor shall be allowed by the Board upon recommendation of the Schoolhouse Custodian an additional sum for such additional assistance as the Schoolhouse Custodian may deem necessary, which sum shall be fixed by the Board upon recommendation of the Schoolhouse Custodian.

Vacation.

SECT. 43. 1. Janitors shall be allowed a vacation of two weeks during the summer, the time thereof to be approved by the Schoolhouse Custodian; *provided, however*, that during such absence the school building shall be under the care of another janitor assigned thereto by the Schoolhouse Custodian, or of a responsible person employed and paid by the janitor.

Afternoon occupancy for instruction work.

SECT. 44. 1. When school premises are used during the afternoon for the instruction of public school pupils or classes, outside of regular school hours, the janitor shall not be allowed any extra compensation on account of such occupancy.

SECT. 45. 1. Janitors of playgrounds during the summer term shall report for duty at 9.40 o'clock A. M. and remain in attendance on the playground until 5 o'clock P. M., with a noon intermission for lunch of one hour, and an additional hour one day per week for the purpose of collecting their pay. Janitors of playgrounds, spring and fall terms, shall report for duty fifteen minutes after the close of school and remain in attendance on the playground until 5.30 o'clock P. M., provided, that during the fall term the session may be ended by the direction of the teacher in charge at an earlier hour on account of darkness.

Hours of duty
on playgrounds.

2. They shall keep their playgrounds in a clean and orderly condition, and sprinkle them in hot weather when requested so to do by the teachers in charge.

Care of
playgrounds.

3. They shall co-operate with the teachers in charge in maintaining discipline on the playgrounds, and shall keep from the premises all troublesome persons, and boys thirteen years of age and over.

Co-operation
with teachers
in charge of
playgrounds.

4. They shall be responsible for the proper care of playground apparatus, and shall inspect the same daily. Defective apparatus shall not be put into use until properly repaired.

Responsibility
for playground
apparatus.

5. They shall make minor repairs of apparatus, including replacing and tightening of bolts and repair of marline. The purchase of material for making repairs shall first be authorized by the Director of Physical Training.

Minor repairs
of playground
apparatus.

6. Playground apparatus shall be placed in position upon the arrival of the teacher assigned to the playground, in accordance with her instructions, and shall be removed and properly housed at the close of the daily session. It shall not be dragged across playgrounds, but shall be carried in such a manner as to prevent damage to the apparatus.

Care of
playground
apparatus.

7. Janitors shall be required to sign inventories, at the close of the season, for playground apparatus

Inventories
of playground
apparatus.

and other material placed in their charge and shall be held responsible for the care and storage thereof, and shall properly account for it at the opening of the following season. They shall not loan apparatus or other playground material.

General
duties and
responsi-
bilities.

SECT. 46. 1. The duties and responsibilities of janitors are not limited to those hereinbefore specified, except in so far as the regulations expressly limit work of a certain kind, but are, in general, to render faithful and efficient service at all times, to be courteous and obliging, and to keep the buildings and grounds under their charge neat and clean in every respect, the rooms properly warmed, and those occupied by pupils well ventilated, to be ready at all times to respond to any call for their attendance at the buildings, and to execute with promptness and intelligence the orders of the School Committee, and of the Schoolhouse Custodian.

MATRONS.

Supervision
and control.

SECTION 1. 1. Matrons shall discharge their duties under the supervision of the principals of the respective schools to which they are assigned, subject to the general control of the Schoolhouse Custodian.

Days of re-
quired attend-
ance.

SECT. 2. 1. They shall be on duty each school day throughout the year, and on such days immediately preceding and following the beginning and close of the school term, as may be required by their respective principals.

Hours of
duty.

2. They shall report for duty at least twenty minutes before the opening of each session, and shall remain at least thirty minutes after the close of the session or until their duties are over for the day; and shall, before leaving the building, inspect the girls' locker rooms and toilets.

SECT. 3. 1. They shall have charge of and exercise supervision over the cleanliness and proper use of all toilets, washrooms, baths, closets, lockers, reception and other rooms intended for the exclusive use of female teachers and pupils, and shall report to the janitor any neglect on the part of those employed to clean these apartments. In the event of the janitor failing to give proper attention to any reasonable complaint, the matron shall then report such failure to the principal. •

General
duties.

SECT. 4. 1. They shall render to girl pupils any necessary assistance in the use of their lockers, and see that the same are kept in proper order, reporting to the principal, if necessary, the loss of keys, or improper condition of lockers.

Care of
lockers.

SECT. 5. 1. They shall have charge of the emergency rooms and the supplies provided therefor, and render assistance to female teachers or pupils when required.

Emergency
rooms.

SECT. 6. 1. They shall exercise such oversight of accommodations which are for the exclusive use of the female teachers and pupils as prudence and propriety may dictate.

General
oversight.

SECT. 7. 1. They shall, so far as their other duties will permit, receive visitors and give them assistance and information.

Reception
of visitors.

SECT. 8. 1. They shall give such further assistance to teachers and pupils, and perform such other duties as the principals may require, except messenger, waitress, or maid service for teachers, and scrubbing or sweeping for janitors.

Assistance
to teachers
and pupils.

SECT. 9. 1. Matrons of elementary schools in which bathing accommodations are installed shall, in addition to the foregoing duties, assume the full charge of such facilities, the bathing of pupils of Grades I., II. and III., and of all female pupils.

Bathing
facilities.

SECT. 10. 1. No matron shall absent herself from duty unless on leave of absence, except because of some unforeseen emergency, in which

Unauthorized
absence.

event she shall immediately notify the Schoolhouse Custodian and the principal or teacher in charge.

Leave of absence without loss of pay.

2. Matrons may be granted leave of absence by the Schoolhouse Custodian for a period not exceeding five calendar days, and without loss of pay, on account of critical illness or death in the immediate family. Applications for leave of absence for longer periods or for other causes shall be made in writing to the Schoolhouse Custodian, and be by him reported to the Board, with his recommendation, for action.

Deductions for leave of absence.

3. Except for leave of absence, without loss of pay, granted by order of the Board, or in accordance with the provisions of this regulation deductions shall be made at the following fractional parts of the weekly salary of the absentee for each day of absence:

Deduction for absence without pay or without leave, one fourth part of the weekly salary.

Deduction for absence on leave granted, one eighth part of the weekly salary.

EXTRACTS FROM GENERAL RULES AND REGULATIONS OF THE SCHOOL COMMITTEE RELATING TO JANITOR SERVICE.

Schoolhouse Custodian executive officer.

SECTION 115. 1. The Schoolhouse Custodian shall be the executive officer of the Board in all matters relating to the care and custody of land and buildings used for school purposes, except the school committee building.

Authority to remove janitors and matrons.

2. He shall exercise general supervision and control over the janitors and their assistants, and matrons employed in the several school buildings, except the school committee building; see that the rules and regulations for their government

are enforced, and report to the Board, in writing, cases of negligence or inefficiency on the part of such employees.

SECT. 116. 1. He shall, subject to the approval of the Board, appoint, transfer and remove janitors and matrons, and may make temporary appointments of such employees for a period not exceeding ten days, which shall be reported to the Board.

Appoint, transfer, and remove janitors and matrons.

SECT. 117. 1. He may reprimand or suspend with or without pay, for a period not exceeding fifteen days, any janitor or matron, and shall immediately report such action to the Board in writing, with the reasons therefor.

Suspend janitors and matrons.

SECT. 118. 1. He shall visit and inspect the school buildings from time to time, and as frequently as circumstances shall permit, and shall advise and instruct janitors and matrons in the performance of their duties.

Inspect buildings, and instruct janitors and matrons.

SECT. 119. 1. He shall countersign requisitions for fuel and janitors' supplies required for use in the several schools.

Countersign requisitions.

SECT. 224. 1. They (principals or teachers in charge of buildings) shall see that the rules and regulations for the government of janitors and matrons, their assistants and other employees, are enforced; and principals shall immediately notify the Schoolhouse Custodian, in writing, of any neglect of duty or improper conduct on the part of janitors or their assistants, and matrons.

General authority of principals.

REGULATIONS FOR THE USE OF SCHOOL PREMISES.

Supervision
of buildings
and property.

SECTION 1. 1. School buildings, not including the Mason Street Building, and their contents, except books and other scholastic materials and supplies, are under the general supervision and control of the Schoolhouse Custodian.

Opening, vacat-
ing and clean-
ing of buildings.

SECT. 2. 1. School buildings shall be open to teachers on all school days for school purposes from 8 o'clock A. M. until one hour after the close of the afternoon session; on not to exceed one evening in each school term from 7 to 11 o'clock P. M. for graduation exercises; and on not to exceed two Saturdays in each school term, from 9 o'clock A. M. until 12 o'clock noon, on the request of the Assistant Superintendent in charge. On sweeping days class rooms shall be vacated in accordance with a schedule regulating the vacating of class rooms approved by the respective principals or teachers in charge; janitors shall be permitted to begin sweeping the first room not later than five minutes after the close of the day session in the elementary and intermediate schools; and not later than 3.30 o'clock P. M. in the normal, Latin and day high schools; notice of the time at which such rooms shall be vacated shall be given by the janitor by placing a card in said room not later than 2 o'clock P. M.

2. School buildings shall be open to managers and associate managers of school centers at such times as may be designated by the Director of the Extended Use of Public Schools. Other workers in school centers shall be admitted to their respective buildings fifteen minutes before the hour set

for the beginning of their several activities; but not at other times in the absence of the janitor, except during the regular sessions of school centers.

SECT. 3. 1. The various buildings and property contained therein are in the custody of the respective janitors, who are responsible for the care and safety of the same, except during school hours when such responsibility shall rest upon the principal of the school or district, who shall not, however, be charged with any responsibility with regard to the heating or ventilating apparatus, which shall at all times be under the exclusive charge of the janitor. The phrase "school hours" shall be construed to mean the hours when the schools are in actual session, and one-half hour before and one-half hour after the close of each session.

Responsibility
of janitors.

SECT. 4. 1. Principals are expected to advise janitors concerning the results to be obtained from the heating and ventilating apparatus, but they are not to adjust, manipulate, or in any way interfere with the operation of such apparatus. When, however, the apparatus is so constructed that the temperature of the air in any room is controlled by a cord or chain in such room the teacher, or other person in charge of such room, may by such means regulate the temperature without recourse to the janitor.

Operation of
heating
apparatus.

SECT. 5. 1. In cases where the principal has reason to believe that proper results are not obtained from the heating and ventilating apparatus, he shall notify the janitor to that effect; and if the janitor fails, after a reasonable time, to remedy the conditions complained of, the principal shall immediately notify the Schoolhouse Custodian.

Results to be
obtained from
heating.
apparatus.

SECT. 6. 1. The powers and authority imposed upon principals by these regulations may be delegated by them to the teacher in charge of any building.

Delegation of
authority.

Defacing of
walls or
woodwork.

SECT. 7. 1. It is not permitted to drive nails, screws, brads, or tacks into plaster or woodwork, or in any way to fasten upon the walls or woodwork, pictures, samples of pupils' work, or other material, or in any other way cause the walls or woodwork to become defaced. It is permissible to hang from the picture mouldings on the walls framed pictures or a cloth-covered frame upon which may be fastened pictures or samples of pupils' work.

Installation
of furniture,
fittings or lights.

SECT. 8. 1. No person or persons shall be permitted to install, or cause to be installed, in any building any additional or special furniture, fittings, or lights, whether temporary or permanent, except by permission of the Board of Schoolhouse Commissioners, or of the School Committee.

Use of gas or
electricity.

SECT. 9. 1. The use of gas or electricity for the convenience of teachers after school hours is prohibited, and artificial light may be used during school hours only when absolutely required for the benefit of pupils.

Requisitions for
repairs and
alterations.

SECT. 10. 1. Requisitions for repairs, alterations, or improvements in the school plant of every description should be forwarded by the respective principals directly to the Board of Schoolhouse Commissioners.

Ordering of
repairs.

SECT. 11. 1. Under no circumstances are principals, teachers, or janitors permitted to order repairs at an expense to the city without the permission of the Board of Schoolhouse Commissioners.

Egresses to be
kept open.

SECT. 12. 1. Doors to class and dressing rooms shall be unlocked during school hours, and all corridors, stairways, or other means of egress kept free from obstructions, and in readiness for immediate use. The outside doors of buildings shall be kept locked from without and unlocked from within during school hours.

Keys.

SECT. 13. 1. There shall be three keys to each school building, one of which shall be held by

the principal, one by a teacher designated by the principal, and the third by the janitor. If, in the opinion of the Schoolhouse Custodian, it is necessary for the proper janitor service in any building, he may authorize the issue of an additional key to the janitor of such building, which may be held by such assistant to the janitor as the Schoolhouse Custodian may approve, and for the proper use of which the janitor shall be responsible. In buildings properly equipped therefor, teachers may provide themselves with additional keys, usable only during the noon intermission.

2. Teachers of science in the high schools shall be severally allowed to have keys to their respective buildings.

3. The Schoolhouse Custodian may, upon application of a principal of an evening school or of the manager of a school center, issue to such principal or manager a key to the building which his school or center occupies. Keys thus issued shall be collected by the Schoolhouse Custodian at the close of each term of the evening schools or of the school centers, and be retained by him until the beginning of the following term when they may again be issued in accordance with the provisions of this paragraph.

4. All keys of school buildings, except those usable only during the noon intermission, shall be the property of the city, and no such key shall be permitted to leave the possession of the person entitled to the same, nor shall the holder thereof allow a duplicate to be made of any such key.

SECT. 14. 1. No person unless by authority of the Board or an officer of the Board or of the Board of Schoolhouse Commissioners, shall be permitted to enter or to remain in a building outside of school hours in the absence of the principal, or a teacher designated by the principal, or the janitor except as provided in the general regulations of the Board, in the regulations for the use of school premises,

Occupancy of
buildings out-
side of school
hours.

or for repairs and alterations authorized by the Board of Schoolhouse Commissioners.

Persons doing
or inspecting
work.

SECT. 15. 1. No person shall be permitted to enter or remain upon school premises for the purpose of performing any work, or inspecting work in progress or completed, except by direction or permission of an officer of the School Committee or of the Schoolhouse Commission.

Visitors.

2. Visitors desiring to witness school work should be directed to the office of the principal or teacher in charge.

Advertisements
on school
premises.

SECT. 16. 1. No advertisements shall be read to teachers or pupils, or distributed on school premises, or be posted on the walls or fences of school estates.

Agents on
school prem-
ises.

SECT. 17. 1. No agent or other person shall be permitted to enter school premises for the purpose of exhibiting either to teachers or pupils, books or articles offered for sale, or for any commercial purpose; *provided*, that publishers of books and manufacturers of educational materials who shall obtain a permit from the office of the Superintendent, may visit principals in their respective schools at such times as will not interfere with the regular work of the schools.

Display of
United States
flag.

SECT. 18. 1. Each school-house shall be provided with a United States flag, not less than four feet in length, and with suitable apparatus whereby such flag shall be displayed on the school-house building or grounds every school day when the weather permits, and on the inside of the school-house on other school days. Such flags shall also be displayed on other days designated by the Board.

Use of school
premises for
other than
school work.

SECT. 19. 1. No school building or part of a school building, or school yard, shall be used for other purposes than the regular work of the schools, except by order of the Board, or upon the written application of a responsible person stating the purpose for which such use is desired. Such

applications shall be filed with the Secretary of the School Committee who may issue permits in accordance with such applications as he may approve, and may cancel such permits at his discretion; and no janitor shall open a school building for other than school use, except by order of the Board, unless such permit shall have been issued.

SECT. 20. 1. Applications for the use of accommodations in school buildings or on school premises, for other than the regular work of the schools or departments, shall be made upon forms to be obtained from the Secretary of the School Committee, and filed at his office with the required fee, if any, at least forty-eight hours in advance of the time when the use of such accommodations is desired.

Applications for use of school premises.

SECT. 21. 1. Permits are not required for the use of accommodations in school buildings for activities closely related to and essentially extensions of the regular work of the school which are approved by the principal of the school, who shall assume full responsibility therefor; *provided*, that such occupancy shall terminate within one hour of the close of the regular school session, or, in the case of class or similar rooms, not later than 5 o'clock P. M.; and *provided, further*, that such use shall not impose extra service upon the janitor.

Permits not required for certain purposes.

SECT. 22. 1. School premises shall not be occupied on Sundays, on Saturdays, on legal holidays, on the Seventeenth of June, or during school vacation periods, except by order of the Board or by permit issued by the Secretary of the School Committee in each particular case; *provided*; that the Director of the Extended Use of Public Schools shall have authority to authorize occupancy on Saturdays which are not legal holidays.

Occupancy on Sundays, Saturdays, legal holidays, the Seventeenth of June, and school vacation periods.

SECT. 23. 1. No permit to use school buildings or grounds shall be issued for occupancy later than 11.30 o'clock P. M., nor shall such premises be occupied later than that hour. Premises shall be

Limitation of evening occupancy, and vacating of premises.

vacated not later than fifteen minutes after the closing hour for which the permit has been issued, whether day or evening.

Use of school premises when occupied for evening school or school center purposes.

SECT. 24. 1. No permit shall be granted for the use of accommodations in school buildings when occupied for evening school or school center purposes, except with the approval of the Director of Evening Schools or the Director of the Extended Use of Public Schools respectively in each case; *provided*, that this restriction shall not apply to regular monthly meetings of parents' associations.

Basket ball games.

SECT. 25. 1. No basket ball game shall continue later than 10 o'clock P. M.

Moving picture exhibitions.

SECT. 26. 1. No moving picture exhibitions shall be permitted in any school building which has not been equipped by the School Committee or by the Board of Schoolhouse Commissioners for such purpose.

2. Applications for the use of moving picture apparatus must be approved by the Director of the Extended Use of Public Schools, and such apparatus shall be operated only by a person designated by said Director, for whose services the person to whom the permit may be issued shall pay the schedule rate.

Moving of pianos.

SECT. 27. 1. Pianos shall not be moved from platforms or floors, except with the approval of the Schoolhouse Custodian, and at such cost as he may determine.

Washing of floors.

SECT. 28. 1. If the Schoolhouse Custodian shall decide that it is necessary to wash the floor of any part of a building in consequence of its occupancy under a permit, he shall fix the price to be paid therefor by the person or persons to whom the permit has been issued, and no further permit shall be issued to such person or persons until such charge shall have been paid.

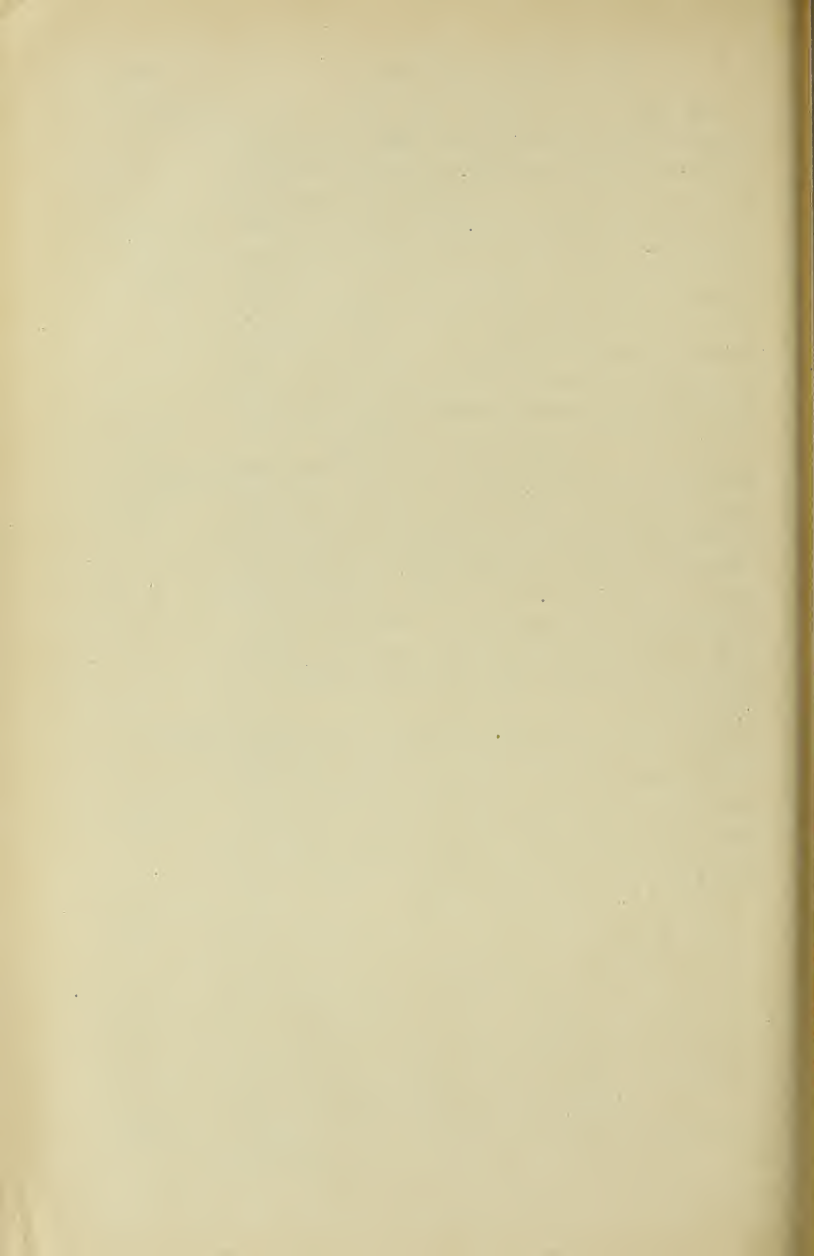
Smoking.

SECT. 29. 1. Smoking on school premises is forbidden.

SECT. 30. 1. In every case when a school building shall be occupied in whole or in part, outside of school hours, sufficient police attendance must be provided by the person or persons to whom the use of such accommodations is granted whenever the Secretary of the School Committee deems such police attendance necessary. If, in the opinion of the person in charge assigned by the Director of the Extended Use of Public Schools, police attendance is necessary and has not been provided by the person or persons to whom the permit has been issued, he may cancel the permit and exclude all persons from the building.

SECT. 31. 1. Whenever, in the opinion of the Director of the Extended Use of Public Schools it may be necessary, a person or persons of the rank or ranks designated by him shall be in attendance whenever a school building shall be occupied in whole or in part for other than the regular work of the schools, and payment for such attendance shall be made in advance of the issue of the permit in the same manner as the payment for janitor or other service.

SECT. 32. 1. At all meetings of whatsoever character attended exclusively or in part by pupils of the public schools, a teacher detailed by the principal of the school or district shall be in attendance and be responsible for the preservation of good order, and shall remain in charge until all the pupils shall have left the building.





SCHOOL DOCUMENT NO. 17—1920
BOSTON PUBLIC SCHOOLS

**SCHEDULE OF EXTRA COMPENSATION
FOR JANITOR SERVICE**

INCLUDING

EVENING SCHOOLS, SUMMER REVIEW SCHOOLS,
DAY SCHOOL FOR IMMIGRANTS, KINDER-
GARTENS, PLAYGROUNDS, SCHOOL GARDENS,
SCHOOL CENTERS, AND ADDITIONAL USE OF
SCHOOL PREMISES

ALSO

**SCHEDULE OF CHARGES FOR ADDITIONAL
USE OF SCHOOL PREMISES**



BOSTON
PRINTING DEPARTMENT
1920

IN SCHOOL COMMITTEE, BOSTON, November 29, 1920.

Ordered, That the accompanying schedule of extra compensation for janitor service, including evening schools, summer review schools, Day School for Immigrants, kindergartens, playgrounds, school gardens, school centers, and additional use of school premises is hereby adopted, to take effect January 1, 1921, and to continue until otherwise ordered.

Attest:

THORNTON D. APOLLONIO,
Secretary.

December 6, 1920.

Ordered, That fifteen hundred (1,500) copies of the schedule of extra compensation for janitor service, including evening schools, summer review schools, Day School for Immigrants, kindergartens, playgrounds, school gardens, school centers, and additional use of school premises; also schedule of charges for additional use of school premises, School Document No. 17, 1920, be printed.

Attest:

THORNTON D. APOLLONIO,
Secretary.

DEFINITIONS OF MORNING, AFTERNOON, AND EVENING OCCUPANCY OF SCHOOL BUILDINGS.

1. Morning occupancy shall be construed as terminating not later than 12 o'clock M.

2. Afternoon occupancy shall be construed as terminating not later than 6 o'clock P. M.

3. Evening occupancy shall be construed as beginning not earlier than 7 o'clock P. M.

4. Provision for the compensation of janitors and assistants between the hours of 6 and 7 o'clock P. M., in the event of the occupancy of the building during that period, is made in section 2, paragraphs 1 and 2.

SECTION 1.—COMPENSATION FOR JANITOR SERVICE ON ACCOUNT OF EVENING SCHOOLS, EVENING OCCUPANCY OF SCHOOL CENTERS, AND ADDITIONAL EVENING USE OF SCHOOL ACCOMMODATIONS.

1! The janitor shall be paid for his attendance, supervision of the building, and operation of the heating and ventilating plant at the following rates:

For occupancy up to 9.30 P. M.	\$3 00
For occupancy up to 10.30 P. M.....	4 00
For occupancy up to 11.30 P. M.....	6 00

2. The janitor of each building where one or more assistants is authorized, as set forth in paragraph 10 of this section, shall be allowed and paid for each such assistant so authorized and actually employed at the following rates:

For occupancy up to 9.30 P. M.....	\$2 00
For occupancy up to 10.30 P. M.....	3 00
For occupancy up to 11.30 P. M.....	4 50

3. It is to be understood that the above compensation is for the services rendered for occupancy of the accommodations used up to the time set forth above, but that fifteen minutes are allowed for vacating the premises after the close of such activities, and that such time is not to be taken into consideration in the above compensation, and that neither the janitor nor his assistant is to receive any additional compensation for such time.

4. When a permit has been issued for the occupancy of accommodations in a school building and such accommodations are not used up to 9.30 o'clock P. M., and the person to whom the permit has been issued has not notified the janitor or the Schoolhouse Custodian before 5 o'clock P. M. of his intention not to use such premises, the janitor shall be paid \$3 for attendance, provided he was actually in attendance and had prepared the building for occupancy; and he shall be allowed and paid \$2 for each assistant authorized under paragraph 10 of this section and actually employed.

5. The janitor shall be paid for cleaning each class room, lecture room, study room, principal's office, or similar room occupied, each such room including the adjoining coat-room, if there be one (except the Mechanic Arts High School), at the following rates:

Sunday, Monday, Tuesday, Thursday, and Saturday evenings.....	30 cents
Wednesday evenings.....	10 cents
Friday evenings.....	No compensation for cleaning.

6. When a basement is occupied it shall be considered equivalent to one classroom.

7. When the stage only of a hall is used it shall be considered equivalent to one half the hall.

8. Wherever the word "Cleaning" occurs in this section it is intended to mean sweeping and dusting.

9. (a.) The janitor of the Mechanic Arts High School shall be paid for cleaning each class room, each such room including a coat room, but exclusive of the principal's office or room used for that purpose, at the following rates:

Sunday, Monday, Tuesday, Thursday, and Saturday evenings.....	52 cents
Wednesday evenings.....	17 cents
Friday evenings.....	No compensation for cleaning.

(b.) He shall be paid for cleaning the forge shop at the following rates:

Sunday, Monday, Tuesday, Wednesday, Thursday, and Saturday evenings.....	\$1 04
Friday evening.....	No compensation for cleaning.

(c.) He shall be paid for cleaning the machine or carpenter shops at the following rates:

Sunday, Monday, Tuesday, Wednesday, Thursday, and Saturday evenings.....	30 cents
Friday evenings.....	No compensation for cleaning.

10. Janitors shall be paid for cleaning halls, gymnasias, and appurtenant baths, locker rooms, and lunch rooms at the rates set forth below, and shall be allowed, when the heating apparatus is in operation only, the number of assistants shown in the table on following pages.

	Sunday, Monday, Tuesday, Thursday and Saturday.	Wednesday.	Number of Assistants Authorized.
Normal:			
Assembly hall.....	\$1 59	\$0 53	1
Gymnasium, bath and locker rooms.....	2 43	81	
Lunchroom.....	51	17	
Girl's Latin:			
Assembly hall.....	1 35	45	1
Lunchroom.....	66	22	
Patrick A. Collins:			
Assembly hall.....	96	32	1
Lunchroom.....	66	22	
Brighton High:			
Assembly hall.....	1 68	56	1
Gymnasium, bath and locker rooms.....	1 77	59	
Lunchroom.....	33	11	
Charlestown High:			
Assembly hall.....	93	31	1
Gymnasium, bath and locker rooms.....	1 71	57	
Lunchroom.....	72	24	
Dorchester High:			
Assembly hall.....	1 92	64	1
Gymnasium, bath and locker rooms.....	2 49	83	
Lunchroom.....	78	26	
East Boston High:			
Assembly hall.....	1 53	51	1
Gymnasium, bath and locker rooms.....	1 62	54	
Lunchroom.....	51	17	
English High:			
Assembly hall.....	1 53	51	1
Drill hall.....	2 64	88	
Gymnasium, bath and locker rooms.....	2 01	67	
Lunchroom.....	96	33	
Public Latin:			
Assembly hall.....	1 53	51	1
Lunchroom.....	96	32	
Girls' High:			
Assembly hall.....	1 29	43	1
Gymnasium, bath and locker rooms.....	1 71	57	
Lunchroom.....	1 02	34	
High School of Commerce:			
Assembly hall.....	1 23	41	1
Gymnasium, bath and locker rooms.....	1 98	66	
Lunchroom.....	81	27	

	Sunday, Monday, Tuesday, Thursday and Saturday.	Wednesday.	Number of Assistants Authorized.
High School of Practical Arts:			
Assembly hall.....	\$2 01	\$0 67	1
Gymnasium, bath and locker rooms.....	3 00	1 00	
Lunchroom.....	78	26	
Hyde Park High:			
Assembly hall.....	1 11	37	1
Drill hall.....	72	24	
Mechanic Arts High:			
Assembly hall.....	1 59	53	2
Lunchroom.....	99	33	
Roxbury High:			
Assembly hall.....	3 21	1 07	1
Room 16.....	81	27	
South Boston High:			
Assembly hall.....	1 59	53	1
Gymnasium, bath and locker rooms.....	2 25	75	
Lunchroom.....	96	32	
West Roxbury High:			
Assembly hall.....	1 59	53	1
Gymnasium, bath and locker rooms.....	2 25	75	
Lunchroom.....	48	16	
Boston Trade:			
Assembly hall.....	1 35	45	2
Gymnasium, bath and locker rooms.....	1 50	50	
Lunchroom.....	93	31	
Trade School for Girls:			
Assembly hall.....	54	18	1
Gymnasium, bath and locker rooms.....	54	18	
Lunchroom.....	54	18	
Abraham Lincoln:			
Assembly hall.....	1 89	63	1
Agassiz:			
Assembly hall.....	1 02	34	1
Bennett:			
Assembly hall.....	81	27	—
Bigelow:			
Assembly hall.....	81	27	1
Gymnasium, bath and locker rooms.....	72	24	

	Sunday, Monday, Tuesday, Thursday and Saturday.	Wednesday.	Number of Assistants Authorized.
Blackinton: Assembly hall.....	\$0 63	\$0 21	—
Bowditch: Assembly hall.....	87	29	—
Bowdoin: Assembly hall.....	99	33	1
Bunker Hill: Assembly hall.....	57	19	—
Chapman: Assembly hall.....	1 47	49	1
Charles Sumner: Assembly hall.....	90	30	—
Christopher Columbus. (<i>See Eliot.</i>)			
Christopher Gibson: Assembly hall.....	1 29	43	1
Comins: Assembly hall.....	72	24	—
Continuation (Brimmer): Assembly hall.....	63	21	—
Machine or woodworking shops.....	48	16	
Cushman. (<i>See Hancock.</i>)			
Dearborn and Annex: Assembly hall.....	2 10	70	1
Dillaway: Assembly hall.....	96	32	—
Dudley: Assembly hall.....	1 98	66	—
Dwight: Assembly hall.....	66	22	—
Edmund P. Tileston: Assembly hall.....	1 29	43	—
Edward Everett: Assembly hall.....	51	17	1

	Sunday, Monday, Tuesday, Thursday and Saturday.	Wednesday.	Number of Assistants Authorized.
Elihu Greenwood: Assembly hall.....	\$1 05	\$0 35	—
Eliot and Christopher Columbus: Assembly hall.....	78	26	1
Emerson: Assembly hall.....	1 26	42	—
Everett: Assembly hall.....	1 11	37	—
Fairmount: Assembly hall.....	72	24	—
Francis Parkman: Assembly hall.....	84	28	—
Franklin: Assembly hall.....	78	26	—
Frederic W. Lincoln: Assembly hall.....	81	27	1
Frothingham: Assembly hall.....	96	32	—
Gaston: Assembly hall.....	1 65	55	—
George Putnam: Assembly hall.....	81	27	—
Gilbert Stuart: Assembly hall.....	81	27	1
Hancock and Cushman: Assembly hall.....	1 08	36	—
Harvard: Assembly hall.....	51	17	—
Henry Grew: Assembly hall.....	96	32	—
Henry L. Pierce: Assembly hall.....	1 44	48	—
Horace Mann: Assembly hall.....	42	14	—

	Sunday, Monday, Tuesday, Thursday and Saturday.	Wednesday.	Number of Assistants Authorized.
Hugh O'Brien: Assembly hall	\$1 80	80 60	—
Hyde: Assembly hall	96	32	—
James A. McDonald (and Prescott): Assembly hall	78	26	1
Jefferson: Assembly hall	1 32	44	—
John A. Andrew: Assembly hall	1 20	40	—
John Cheverus: Assembly hall	81	27	—
John D. Philbrick: Assembly hall	69	23	—
John Marshall: Assembly hall	1 17	39	—
John Winthrop: Assembly hall	78	26	1
Lawrence: Assembly hall	69	23	—
Lewis: Assembly hall	1 20	40	1
Longfellow: Assembly hall	81	27	1
Lowell: Assembly hall	1 80	60	—
Martin: Assembly hall	84	28	—
Mary Hemenway: Assembly hall	96	32	—
Mather: Assembly hall	1 80	60	1
Michael Angelo: Assembly hall	90	30	—

	Sunday, Monday, Tuesday, Thursday and Saturday.	Wednesday.	Number of Assistants Authorized.
Minot:			
Assembly hall	\$0 63	\$0 21	—
Norcross:			
Assembly hall	69	23	—
Oliver Hazard Perry:			
Assembly hall	81	27	—
Oliver Wendell Holmes:			
Assembly hall	1 41	47	1
Paul Revere:			
No hall	—	—	1
Phillips Brooks:			
Assembly hall	72	24	1
Prescott. (<i>See James A. McDonald.</i>)			
Prince:			
Assembly hall	75	25	—
Quincy:			
Assembly hall	72	24	—
Rice:			
Assembly hall	1 29	43	—
Richard C. Humphreys:			
Assembly hall	84	28	—
Richard Olney:			
No hall	—	—	1
Robert G. Shaw:			
Assembly hall	90	30	—
Roger Wolcott:			
Assembly hall	1 43	41	1
Samuel Adams:			
Assembly hall	1 20	40	1
Sarah Greenwood:			
Assembly hall	1 50	50	—
Sarah J. Baker:			
No hall	—	—	1

	Sunday, Monday, Tuesday, Thursday and Saturday.	Wednesday.	Number of Assistants Authorized.
Sherwin: Assembly hall.....	\$1 20	\$0 40	—
Shurtleff: Assembly hall.....	1 02	34	—
Theodore Lyman: Assembly hall.....	1 08	36	—
Thomas Gardner: Assembly hall.....	1 02	34	1
Thomas N. Hart: Assembly hall.....	1 26	42	—
Trescott: Assembly hall.....	72	24	—
Ulysses S. Grant: Assembly hall.....	1 20	40	1
Warren: Assembly hall.....	1 08	36	—
Washington: Assembly hall.....	1 68	56	1
Washington Allston: Assembly hall.....	63	21	—
Wells (and Annex): Assembly hall.....	1 41	47	1
Wendell Phillips: Assembly hall.....	90	30	—
William Blackstone: Assembly hall.....	1 11	37	1
William E. Russell: Assembly hall.....	1 62	54	—
William Wirt Warren: No hall.....	—	—	1

11. For Sundays, legal holidays, and the Seventeenth of June the janitor shall be paid for cleaning at the rates provided in paragraphs 5, 6, 7, 9 and 10, and he shall be paid for

his attendance and that of his assistants at double the rates provided in paragraphs 1 and 2.

12. For moving furniture janitors shall be paid in accordance with the provisions of Section 7.

SECTION 2.—COMPENSATION FOR JANITOR SERVICE ON ACCOUNT OF DAY OCCUPANCY BY SUMMER REVIEW SCHOOLS, DAY OCCUPANCY BY SCHOOL CENTERS, DAY OCCUPANCY BY PLAYGROUND CLASSES, AND ADDITIONAL DAY USE OF SCHOOL PREMISES.

APPLICABLE ONLY TO BUILDINGS ON DAYS ON WHICH THE REGULAR SCHOOLS ARE NOT IN SESSION, OR ON REGULAR SCHOOL DAYS DURING HOURS WHEN THE SCHOOLS ARE NOT IN SESSION.

1. The janitor shall be paid for his attendance, supervision of the building, and operation of the heating and ventilating plant, at the rate of \$1 per hour up to 7 o'clock P. M.

2. The janitor of each building where one or more assistants are authorized, as set forth in paragraph 10 of Section 1, shall be allowed and paid for each such assistant so authorized and actually employed at the rate of 70 cents per hour up to 7 o'clock P. M.

3. It is to be understood that the above compensation is for the services rendered for occupancy of the accommodations used up to the time set forth above, but that fifteen minutes are allowed for vacating the premises after the close of such activities, and that such time is not to be taken into consideration in the above compensation, and that neither the janitor nor his assistant is to receive any additional compensation for such time. Compensation for the janitor and his assistants at the above rates will be allowed for the actual time the accommodations are used (exclusive of the fifteen minutes allowed for vacating the premises), but no fraction of an hour smaller than one quarter shall be reported or paid for.

4. When a permit has been issued for the occupancy of accommodations in a school building on a day on which the regular schools are not in session, and such accommodations are not used within two hours of the time of the beginning of the period authorized in the permit, and the person to whom

the permit has been issued has not notified the janitor one hour before the building was to be opened of his intention not to use such premises, the janitor shall be paid \$3 for attendance, provided he was actually in attendance and had prepared the school for occupancy; and he shall be allowed and paid \$2 for each assistant authorized under paragraph 10 of Section 1 and actually employed.

5. The janitor shall be paid for cleaning each class room, lecture room, study room, principal's office, or similar room occupied, each such room including the adjoining coat room if there be one, twenty cents (\$.20) for each time such accommodations are cleaned, in accordance with the regulations, during occupancy.

6. When a basement is occupied it shall be considered equivalent to one class room.

7. When the stage only of a hall is used it shall be considered equivalent to one half the hall.

8. The janitor shall be paid for cleaning halls, gymnasias, and appurtenant baths, locker rooms, and lunchrooms at the rates set forth below:

	Sunday, Monday, Tuesday, Wednesday, Thursday, Friday and Saturday.
Normal:	
Assembly hall.....	\$1 06
Gymnasias, bath and locker rooms.....	1 62
Lunchroom.....	34
Girls' Latin:	
Assembly hall.....	90
Lunchroom.....	44
Patrick A. Collins:	
Assembly hall.....	64
Lunchroom.....	44
Brighton High:	
Assembly hall.....	1 12
Gymnasias, bath and locker rooms.....	1 18
Lunchroom.....	22
Charlestown High:	
Assembly hall.....	62
Gymnasias, bath and locker rooms.....	1 14
Lunchroom.....	48

	Sunday, Monday, Tuesday, Wednesday, Thursday, Friday and Saturday.
Dorchester High:	
Assembly hall.....	\$1 28
Gymnasia, bath and locker rooms.....	1 66
Lunchroom.....	52
East Boston High:	
Assembly hall.....	1 02
Gymnasia, bath and locker rooms.....	1 08
Lunchroom.....	34
English High:	
Assembly hall.....	1 02
Drill hall.....	1 76
Gymnasia, bath and locker rooms.....	1 34
Lunchroom.....	66
Public Latin:	
Assembly hall.....	1 02
Lunchroom.....	64
Girls' High:	
Assembly hall.....	86
Gymnasia, bath and locker rooms.....	1 14
Lunchroom.....	68
High School of Commerce:	
Assembly hall.....	82
Gymnasia, bath and locker rooms.....	1 32
Lunchroom.....	54
High School of Practical Arts:	
Assembly hall.....	1 34
Gymnasia, bath and locker rooms.....	2 00
Lunchroom.....	52
Hyde Park High:	
Assembly hall.....	74
Drill hall.....	48
Mechanic Arts High:	
Assembly hall.....	1 06
Lunchroom.....	66
Roxbury High:	
Assembly hall.....	2 14
Room 16.....	54
South Boston High:	
Assembly hall.....	1 06
Gymnasia, bath and locker rooms.....	1 50
Lunchroom.....	64

	Sunday, Monday, Tuesday, Wednesday, Thursday, Friday and Saturday.
West Roxbury High:	
Assembly hall.....	\$1 06
Gymnasia, bath and locker rooms.....	1 50
Lunchroom.....	32
Boston Trade:	
Assembly hall.....	90
Gymnasia, bath and locker rooms.....	1 00
Lunchroom.....	62
Trade School for Girls:	
Assembly hall.....	36
Gymnasia, bath and locker rooms.....	36
Lunchroom.....	36
Abraham Lincoln:	
Assembly hall.....	1 26
Agassiz:	
Assembly hall.....	68
Bennett:	
Assembly hall.....	54
Bigelow:	
Assembly hall.....	54
Gymnasia, bath and locker rooms.....	48
Blackinton:	
Assembly hall.....	42
Bowditch:	
Assembly hall.....	58
Bowdoin:	
Assembly hall.....	66
Bunker Hill:	
Assembly hall.....	38
Chapman:	
Assembly hall.....	98
Charles Sumner:	
Assembly hall.....	60
Christopher Columbus. (See Eliot.)	
Christopher Gibson:	
Assembly hall.....	86

	Sunday, Monday, Tuesday, Wednesday, Thursday, Friday and Saturday.
Comins:	
Assembly hall.....	\$0 48
Continuation (Brimmer):	
Assembly hall.....	42
Machine or woodworking shops.....	32
Cushman. (<i>See Hancock.</i>)	
Dearborn (and Annex):	
Assembly hall.....	1 40
Dillaway:	
Assembly hall.....	64
Dudley:	
Assembly hall.....	1 32
Dwight:	
Assembly hall.....	44
Edmund P. Tileston:	
Assembly hall.....	86
Edward Everett:	
Assembly hall.....	34
Elihu Greenwood:	
Assembly hall.....	70
Eliot (and Christopher Columbus):	
Assembly hall.....	52
Emerson:	
Assembly hall.....	84
Everett:	
Assembly hall.....	74
Fairmount:	
Assembly hall.....	48
Francis Parkman:	
Assembly hall.....	56
Franklin:	
Assembly hall.....	52
Frederic W. Lincoln:	
Assembly hall.....	54

	Sunday, Monday, Tuesday, Wednesday, Thursday, Friday and Saturday.
Frothingham: Assembly hall.....	\$0 64
Gaston: Assembly hall.....	1 10
George Putnam: Assembly hall.....	54
Gilbert Stuart: Assembly hall.....	54
Hancock (and Cushman): Assembly hall.....	72
Harvard: Assembly hall.....	34
Henry Grew: Assembly hall.....	64
Henry L. Pierce: Assembly hall.....	96
Horace Mann: Assembly hall.....	28
Hugh O'Brien: Assembly hall.....	1 20
Hyde: Assembly hall.....	64
James A. McDonald (and Prescott): Assembly hall.....	52
Jefferson: Assembly hall.....	88
John A. Andrew: Assembly hall.....	80
John Cheverus: Assembly hall.....	54
John D. Philbrick: Assembly hall.....	46
John Marshall: Assembly hall.....	78
John Winthrop: Assembly hall.....	52

	Sunday, Monday, Tuesday, Wednesday, Thursday, Friday and Saturday.
Lawrence: Assembly hall.....	\$0 46
Lewis: Assembly hall.....	80
Longfellow: Assembly hall.....	54
Lowell: Assembly hall.....	1 20
Martin: Assembly hall.....	56
Mary Hemenway: Assembly hall.....	64
Mather: Assembly hall.....	1 20
Michael Angelo: Assembly hall.....	60
Minot: Assembly hall.....	42
Norcross: Assembly hall.....	46
Oliver Hazard Perry: Assembly hall.....	54
Oliver Wendell Holmes: Assembly hall.....	94
Phillips Brooks: Assembly hall.....	48
Prescott. (<i>See James A. McDonald.</i>)	
Prince: Assembly hall.....	50
Quincy: Assembly hall.....	48
Rice: Assembly hall.....	86
Richard C. Humphreys: Assembly hall.....	56

	Sunday, Monday, Tuesday, Wednesday, Thursday, Friday and Saturday.
Robert G. Shaw: Assembly hall.....	\$0 60
Roger Wolcott: Assembly hall.....	82
Samuel Adams: Assembly hall.....	80
Sarah Greenwood: Assembly hall.....	1 00
Sherwin: Assembly hall.....	80
Shurtleff: Assembly hall.....	68
Theodore Lyman: Assembly hall.....	72
Thomas Gardner: Assembly hall.....	68
Thomas N. Hart: Assembly hall.....	84
Trescott: Assembly hall.....	48
Ulysses S. Grant: Assembly hall.....	80
Warren: Assembly hall.....	72
Washington: Assembly hall.....	1 12
Washington Allston: Assembly hall.....	42
Wells (and Annex): Assembly hall.....	94
Wendell Phillips: Assembly hall.....	60
William Blackstone: Assembly hall.....	74
William E. Russell: Assembly hall.....	1 08

9. For Sundays, legal holidays and the Seventeenth of June the janitor shall be paid for cleaning at the rates set forth in paragraphs 5, 6, 7 and 8, and he shall be paid for his attendance and that of his assistants at double the rates provided in paragraphs 1 and 2.

10. For moving furniture janitors shall be paid in accordance with the provisions of Section 7.

11. When school premises are used during the afternoon for the instruction of public school pupils or classes, outside of regular school hours, the janitor shall not be allowed any extra compensation on account of such occupancy.

SECTION 3.—COMPENSATION FOR JANITOR SERVICE OF BUILDINGS OCCUPIED BY CLASSES OF THE DAY SCHOOL FOR IMMIGRANTS.

1. The compensation for janitor service of buildings occupied by classes of the Day School for Immigrants shall be fixed in each case by order of the School Committee.

SECTION 4—COMPENSATION FOR JANITOR SERVICE OF KINDERGARTENS ON ACCOUNT OF THEIR USE TWO SESSIONS PER DAY.

1. Janitors of school buildings containing kindergarten rooms which are used both morning and afternoon shall be allowed and paid additional compensation at the rate of twenty cents (20 cents) per day during such occupancy.

SECTION 5.—COMPENSATION FOR JANITOR SERVICE OF PLAYGROUNDS.

1. The compensation of janitors employed in playgrounds shall be fixed at the following rates:

(a.) Janitors of school buildings, the yards of which are used for playgrounds, in which permanent apparatus is regularly used, during vacation periods, including one room and basement and sanitariums, per session.....	\$1 50
(b.) Janitors of school buildings, the yards of which are used for playgrounds, in which there is no permanent apparatus, during vacation periods, including one room and basement and sanitariums, per session.....	75
(c.) Janitors of school buildings, the yards of which are used for playgrounds, in which permanent apparatus is regularly used, during the regular school term, per session.....	1 50

(d.) Janitors of school buildings, the yards of which are used for playgrounds, in which there is no permanent apparatus, during the regular school term, per session \$0 75

(e.) Janitors of school buildings used for giving instruction in dancing to pupils in playgrounds when the yards of such buildings are not used for playgrounds, for the use of halls, gymnasias, classrooms, basements, or kindergarten rooms and sanitariums, *see* Section 2, paragraphs 5, 6, 7 and 8.

2. When playgrounds are used Saturdays after 1 o'clock P. M., the janitor shall be paid in addition to the above sums \$1 for each such Saturday afternoon.

3. The term "session" in this section shall mean from the close of school on afternoons, and Saturday mornings during school weeks, and one half day during the summer season.

4. Janitors of school buildings, the yards of which are used for playgrounds, shall be paid at the rates provided in the foregoing paragraphs for the first yard so used, and for each additional yard used for such purposes in charge of the same janitor, additional compensation shall be allowed at the rate of eighty per centum (80 per cent) of the schedule rate.

SECTION 6.—COMPENSATION FOR JANITOR SERVICE OF SCHOOL GARDENS.

1. The compensation of janitors employed in school gardens shall be fixed at the following rates:

(a.) Janitors of school buildings, the yards of which are used for school gardens, during vacation periods, including one room and basement and sanitariums, per session \$0 75

(b.) Janitors of school buildings, the yards of which are used for school gardens, during the regular school term, per session 75

SECTION 7.—COMPENSATION FOR JANITOR SERVICE FOR MOVING OF FURNITURE.

1. There will be no compensation for moving twenty-five pieces of furniture or less from one place to another on the same floor of a building, and replacing the same.

2. For additional moving of furniture required, the compensation shall be as follows:

(a.) For each settee moved from one room to another, or to a corridor on the same floor, or from one floor to another, 5 cents, and for each additional flight, 5 cents extra.

(b.) For each settee moved or stacked within the same room, 3 cents.

3. Portable desks or chairs, separate or connected, folding chairs in sets of five or less, tables, portable blackboards and similar pieces of furniture, shall each be reckoned as equivalent to one settee.

SECTION 8.—COMPENSATION FOR JANITOR SERVICE FOR WASHING OF FLOORS.

1. Whenever the floor of any part of a building has been washed, in compliance with the instructions of the Schoolhouse Custodian, in consequence of its occupancy by a school center activity or under a permit, the Schoolhouse Custodian shall fix the compensation of the janitor for such service.

SCHEDULE OF CHARGES FOR ADDITIONAL
USE OF SCHOOL PREMISES.

IN SCHOOL COMMITTEE, BOSTON, November 29, 1920.

Ordered, That the accompanying Schedule of Charges for Additional Use of School Premises is hereby adopted, to take effect January 1, 1921, and to continue until otherwise ordered.

Attest:

THORNTON D. APOLLONIO,
Secretary.

CHARGES FOR LIGHT, HEAT, JANITOR AND OTHER SERVICE.

The charge for light and heat is intended merely to cover the actual cost thereof to the city.

The charge for janitor service is to compensate the janitors for extra service required of them, and which is not included in the regulations prescribing their duties, in accordance with which their regular compensation is determined. This charge does not include the checking of garments or the collection of tickets of admission.

The charge for other service is for service performed by persons of various ranks assigned by the Director of the Extended Use of Public Schools when, in his opinion, the attendance of such persons is necessary. The charge therefor is paid directly to the persons rendering such service.

SECTION 1.

1. Wherever reference is made to the Schedule of Extra Compensation for Janitor Service, the schedule referred to is the "Schedule of Extra Compensation for Janitor Service, including Evening Schools, Summer Review Schools, Day School for Immigrants, Kindergartens, Playgrounds, School Gardens, School Centers, and Additional Use of School Premises," as set forth in School Document No. 17, 1920.

SECTION 2.—PURPOSES FOR WHICH CHARGES ARE ABATED IN FULL OR IN PART.

1. Meetings of school alumni associations held not oftener than twice in each school year in any school or district; minimum attendance required, 75 persons.

2. Meetings of parents and of parents' associations held by or with the co-operation of principals of schools or districts, not oftener than once a month in any one school or district; minimum attendance required, 75 persons.

3. Meetings of responsible citizens or of local improvement associations, each such association to be limited to one meeting a month in any one school or district, in the interests of civic or municipal improvements; minimum attendance required, 75 persons.

4. Municipal concerts, lectures and addresses.
5. Educational purposes, approved by the Secretary of the Board or by the Director of the Extended Use of Public Schools, but not including political meetings or rallies.
6. Local prize drills, not exceeding one in each school year in each high school in which military drill forms a part of the course of instruction.
7. High school cadet officers' parties and school or class parties the total number not to exceed two in each school year in any one building.
8. Meetings of boy scouts or of girl scouts, each troop to be limited to not more than one meeting per week, but not including entertainments to which an admission fee is charged; minimum attendance required, twenty boys or girls.
9. Meetings of Posts of American Legion, each Post to be limited to not more than two meetings per month, but not including entertainments to which an admission fee is charged; minimum attendance required, fifty persons.
10. Such other purposes as the Board shall approve.

SECTION 3.—PURPOSES FOR WHICH NO CHARGE IS MADE FOR LIGHT OR HEAT.

1. Vacation schools or playgrounds conducted by individuals or associations:

(a.) There will be no charge for light or heat.

(b.) A charge will be made for the compensation of the janitor, who will be paid in accordance with the Schedule of Extra Compensation for Janitor Service, the amount of such charge to be paid to the secretary of the School Committee.

SECTION 4.—CHARGES FOR LIGHT, HEAT AND JANITOR OR OTHER SERVICES.

CHARGE FOR LIGHT AND HEAT.

	November to April, Inclusive.	May to October, Inclusive.
1. Assembly hall or drill hall or gymnasium, including two coat rooms or one reception room and one coat room:		
Morning or afternoon	\$11 25	\$5 00
Evening	14 50	6 75
Afternoon and evening	25 75	11 75

	November to April, Inclusive.	May to October, Inclusive.
2. Assembly hall and drill hall or gymnasium, including two coat rooms or one reception room and one coat room	*	*
3. Class or lecture rooms, when hall or gymnasium is also used — each: Morning, afternoon, or evening	\$1 25	\$1 00
4. Class or lecture rooms or principal's office, when hall, gymnasium or basement is not used: For the first room: Morning or afternoon	8 75	2 50
Evening	12 00	4 25
Afternoon and evening	20 75	6 75
For each additional room: Morning, afternoon, or evening	1 25	1 00
5. Basements, with or without lunchroom, when used alone: Morning or afternoon	8 75	2 50
Evening	12 00	4 25
Afternoon and evening	20 75	6 75
6. Basements, when hall or gymnasium, class or lecture room, or principal's office is used: Morning, or afternoon, or evening	†	†
7. Lunchroom, when used alone: Morning or afternoon	8 75	2 50
Evening	12 00	4 25
Afternoon and evening	20 75	6 75
8. Lunchroom, when used in connection with hall or gymnasium: Morning, afternoon, or evening	†	†

* 25 per cent additional to the charges set forth in paragraph 1.

† No charge.

9. When a permit has been issued for the evening occupancy of accommodations in a school building, and such accommodations are not used up to 9.30 o'clock P. M., and the person to whom the permit has been issued has

not notified the janitor or the Schoolhouse Custodian before 5 o'clock P. M. of his intention not to use such premises, the charge will be 90 per cent of the foregoing rates.

10. When a permit has been issued for morning or afternoon occupancy of accommodations in a school building on a day on which the regular schools are not in session, or on a regular school day during hours when the schools are not in session, and such accommodations are not used within two hours of the time of the beginning of the period authorized in the permit, and the person to whom the permit has been issued has not notified the janitor or the Schoolhouse Custodian one hour before the building was to be opened of his intention not to use such premises, the charge will be 90 per cent of the foregoing rates.
11. When organizations affiliated with school centers are granted the use of school accommodations for entertainments to which an admission fee is to be charged in buildings occupied by school centers, on regular meeting nights, the charges shall be at schedule rates except that the charge for light, heat, and attendance of the janitor and of his assistants, if any, shall be 50 per cent of the schedule rates. This concession is to be limited to clubs holding at least four meetings each year.
12. Where accommodations are used to which the schedule does not apply, the charge shall be determined by the Secretary.

CHARGE FOR MOVING OF PIANOS.

13. When pianos are moved from platforms or floors with the approval of the Schoolhouse Custodian, in accordance with the regulations, a charge shall be made for such service at a rate to be determined in each case by the Schoolhouse Custodian.

CHARGE FOR WASHING OF FLOORS.

14. When floors are washed by direction of the Schoolhouse Custodian in consequence of the occupancy of the building under a permit, a charge shall be made to cover the cost thereof as fixed by the Schoolhouse Custodian.

CHARGE FOR JANITOR SERVICE.

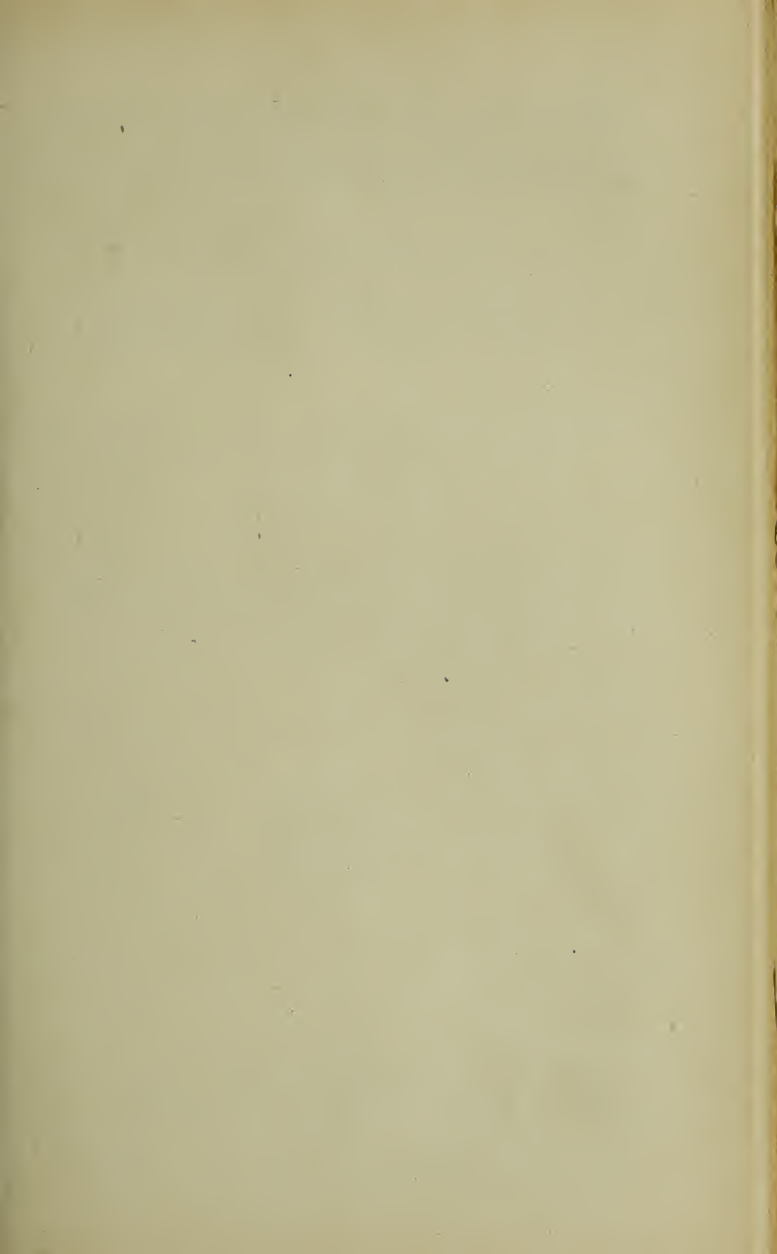
15. Charges for janitor service will be made in accordance with the Schedule of Extra Compensation for Janitor Service wherever such schedule is applicable.
16. Where accommodations are used to which the schedule does not apply, the charge shall be determined by the Secretary.

CHARGE FOR OTHER SERVICE.

Employees Required by the Director of the Extended Use of Public Schools.

17. General leaders	\$5 50
Orchestra leaders	4 50
Song leaders	4 00
Head operators	4 00
Club leaders	3 50
General helpers	3 50
Auditorium leaders	3 50
Floor directors	3 50
Operators	3 50
Gymnasium leaders	3 00
General pianists	3 00
Assistant floor directors	2 50
Assistant operators	2 50
Stage managers	2 50
Doormen	2 50
Matrons	2 50
Helpers	2 50
Pianists	2 00
Assistant club leaders	2 00
Assistant auditorium leaders	2 00
Coat room attendants	2 00
Assistant gymnasium leaders	1 50
Assistant stage managers	1 50

18. The foregoing charges are for services rendered either during afternoons or evenings for the sessions of school centers, or for the time specified in the permit authorizing occupancy; also for fifteen additional minutes preceding and following such sessions or time of occupancy authorized by the permit.



SCHOOL DOCUMENT NO. 18—1920
BOSTON PUBLIC SCHOOLS

Course of Study in
CLERICAL PRACTICE

FIRST UNIT—FOR SEVENTH AND EIGHTH
GRADES OF INTERMEDIATE SCHOOLS
AND CLASSES

SECOND UNIT—FOR NINTH GRADE OF IN-
TERMEDIATE SCHOOLS OR FOR FIRST
YEAR CLASSES IN HIGH SCHOOLS



CITY OF BOSTON
PRINTING DEPARTMENT
1921

IN SCHOOL COMMITTEE, BOSTON, January 17, 1921.

Ordered, That the Course of Study, First Unit: For Seventh and Eighth Grades of Intermediate Schools and Classes; Second Unit: For Ninth Grades of Intermediate Schools, or for First Year Classes in High Schools, is hereby authorized as a school document, and that twenty-five hundred (2,500) be printed.

OUTLINES OF WORK IN CLERICAL PRACTICE
FOR INTERMEDIATE SCHOOLS AND
CLASSES AND FOR FIRST YEAR
CLASSES IN HIGH SCHOOLS.

*Council on Clerical Practice for Intermediate Schools
as Reorganized March 12, 1920.*

Representing the high schools:

WILLIAM L. ANDERSON, <i>Chairman</i> ,	Dorchester High School.
ERNEST V. PAGE	Brighton High School.
ARTHUR S. WELLS	Charlestown High School.
ELIZABETH J. FITZGERALD, <i>Sec'y</i>	East Boston High School.
DANIEL FOLEY	English High School.
C. ROSS APPLER	Girls' High School.
ARTHUR F. O'MALLEY	High School of Commerce
WARREN W. PETRIE	Hyde Park High School.
CHESTER M. GROVER	Roxbury High School.
JOHN E. J. KELLEY	South Boston High School.
HAROLD C. SPENCER	West Roxbury High School.

Representing the intermediate schools:

ELLEN G. HAYDEN	Abraham Lincoln School.
CHARLOTTE G. RAY	Emerson School.
ELLEN M. FORD	George Putnam School.
ELLA A. CURTIS	Hancock School.
ELIZABETH HISCOCK	Henry L. Pierce School.
JULIA S. DOLAN	John Winthrop School.
ALLAN L. SEDLEY	Lewis School.
ELLEN L. ROCHE	Mary Hemenway School.
ANGELA M. PEARCE	Oliver Wendell Holmes School.
F. HELEN MAYO	Robert G. Shaw School.
FREDERICK J. MURPHY	Ulysses S. Grant School.

The Council on Clerical Practice for Intermediate Schools, comprising teachers of commercial subjects in the high and intermediate schools, having prepared School Document No. 7, 1918, during its first year of work, has during its second year of existence been able to observe the application of that work to actual class-room conditions, and has decided to recommend certain modifications.

In the early part of this school year (1918-1919), the chairman of the Council on Clerical Practice was asked to meet with the Conference Committee on Problems Affecting High and Intermediate Schools, and the outcome was the suggestion that this Council should prepare some supplementary drill work for grades VII and VIII similar to that presented in School Document No. 7, 1918, for Grade IX. Furthermore, it was suggested that this Council be requested to adopt, in so far as such adoption would not interfere with work already prepared, as many elements as possible of the course prepared by the Council on Mathematics for intermediate schools.

Accordingly, three sub-committees, composed respectively of teachers in grades VII, VIII, and IX who are actually engaged in this clerical practice work, were appointed, and their reports are presented herewith.

GRADE VII.

The subject Mathematics and Clerical Practice for Grade VII should consist of (1) commercial arithmetic and (2) practice involving the application of arithmetic and penmanship.

In planning this work, the "Outline of Work in Mathematics for Intermediate Classes in the Elementary Grades" (School Document No. 12, 1916) was given careful consideration. There was selected from the Mathematics, Grade VII (School Document No. 12, 1916, pp. 5, 6, 7), such material as could well be used in Mathematics and Clerical Practice for Grade VII. Some deductions were made so that the arithmetic drills and essential material of a clerical nature could be introduced.

The outline of work recommended by this Council is as follows:

- I. Arithmetic drills for Grade VII prepared by this Council (School Document No. 7, 1918, pp. 7 to 17).
- II. Percentage (omitting indirect case).
Profit and Loss.
- III. Mensuration.
Tables of measure thoroughly reviewed.
- IV. Perimeters and areas of parallelogram and triangle.
- V. Formulæ.

$$S \text{ (rectangle)} = bh$$

$$S \text{ (parallelogram)} = bh$$

$$S \text{ (triangle)} = \frac{1}{2} bh$$
- VI. Ratio.
Proportion examples treated without the name and method of proportion. (Estimate of result and accurate check in all computations.)
- VII. Horizontal addition and subtraction.

VIII. Bills.

1. Copying.

The object is to familiarize pupils with the form of a bill and, at the same time, furnish practice in penmanship and accurate copying. Completed bills (eight varieties) of not more than six items each and with single money column, are to be copied by pupils on blank bill forms. (These eight bills and blank bill forms will be found in Clerical Practice Envelope No. 1 for Grade VII.) These bills are for groceries, dry goods, coal, milk, rent, labor, doctors' services, and repairs.

2. Addressing envelopes to enclose the bills written by pupils.

3. Folding bills.

4. Placing bills in envelopes.

IX. Practical Work on Sales Slips.

Filling out sales slips such as are used by a grocer, fifty slips to each pupil. (Clerical Practice Envelope No. 1 for Grade VII.) Accompanying the pad is a price list of groceries. Using this suggested list of prices, much original work is possible. The teacher may dictate the items, omitting price; pupils may dictate items from books or elsewhere; pupils may originate the items, etc. After gathering the items, each pupil will then consult his price list and complete the work on the sales slip.

Since penmanship is required of every pupil of Grade VII, whatever his choice of course may be (School Document No. 2, 1919, p. 11), and one diploma point is allowed for sixty minutes per week in penmanship, this Council has omitted any suggestions for work in penmanship as a part of Clerical Practice, Grade VII. It is planned that the 180 minutes allotted to Grade VII Mathematics and Clerical Practice be spent in (1) commercial arithmetic and (2) application of penmanship and commercial arithmetic in bills, sales slips, etc., as above outlined.

At least one thirty-minute period per week should be used for the application work; that is, practice on bills, sales slips, etc.

GRADE VIII.

I. Percentage.

a. Simple interest.

Based on a 360-day year. Bankers' Method.

Based on exact time (optional) Formula $i = prt$. (See School Document No. 7, 1918, "Course of Study in Clerical Practice," pages 17-28.)

b. Applications of Percentage.

Profit and Loss.

Commission.

Insurance.

Trade Discount.

II. Mensuration.

a. Experimental Determination of π .

b. Circumference and area of circle.

- c. Volume of surface of rectangular block, cube, right prism, right circular cylinder.
- d. Formulæ (1) $C = 2\pi R$; (2) $S = \pi R^2$; (3) $V = abc$ (block); (4) $V = a^3$ (cube); (5) $V = Bh$ (right prism); (6) $V = \pi R^2 h$ (right cylinder).

III. Drills.

Practice in fundamental processes of fractions sufficient to maintain the standards of the grade.

IV. Personal and Family Accounts.

Drills should be given by having pupils keep their own, or family cash accounts if permitted, for a week, following models A and B. (Blank forms will be found in Clerical Practice Envelope No. 2 for Grade VIII.)

MODEL A.

PERSONAL CASH ACCOUNT.

April 14-21, 1919.

		Received	Paid	
April	14	Received pay from store.	1 75	
	14	Paid for bat.	25	
	15	Paid for car fare.	16	
	16	Paid for soda.	10	
	16	Received for rags.	30	
	16	Received for errand.	10	
	17	Paid for glove.	50	
	17	Received errands.	15	
	18	Received from Father.	2 25	
	18	Paid for cap.	50	
	20	Paid for sneakers.	1 50	
		Balance	1 54	
			4 55	4 55
	April	21	Balance on hand.	1 54
21		Received pay from store.	1 75	

MODEL B.

FAMILY CASH ACCOUNT.

March 8-15, 1919.

			Received	Paid
March	8	Received wages from Father.	40 00	
	8	Received wages from Henry.	12 00	
	8	Paid for groceries.		15 75
	9	Paid for church.		60
	10	Paid for laundry.		94
	10	Paid for meat.		6 45
	11	Paid for gas.		2 90
	12	Paid for milk.		1 35
	13	Paid for insurance.		1 75
	14	Paid for theatre.		44
		Balance.		21 82
				<hr/>
			52 00	52 00
March	15	Balance on hand.	21 82	
	15	Received wages from Father.	40 00	
	15	Received wages from Henry.	10 00	

VI. Bills

Considerable practice in dictated bills for rapid mental work, involving fractions and aliquot parts, should be given to classes, following models C and D.

MODEL C.

BOSTON, MASS., June 10, 1921.

Mr. JOHN WILSON

Bought of HENRY W. BATES,
235 Walnut Street.

June	3	2 lbs. butter at. . . . .	.68	1 36	
	4	2 $\frac{3}{4}$ lbs. tea at. . . . .	.40	1 10	
	5	$\frac{1}{2}$ lb. cream tartar at. . . . .	.64	16	
	6	2 pks. potatoes at. . . . .	.55	1 10	
	7	3 pks. onions at. . . . .	.40	1 20	
	10	1 bu. beans at.	1 96	1 96	
					<hr/>
					6 88

Received payment,

HENRY W. BATES.

June 20, 1921.

MODELS D.

Name

Feb.	1	48 lbs. nails at.	12½e				
		16½ lbs. tea at.	72e				
		305 lbs. beans at.	9e				
		63 lbs. coffee at.	37½e				

Name

Feb.	2	7½ lbs. flour at.	12e				
		16 lbs. oatmeal at.	8¼e				
		78 lbs. cornmeal at.	9e				
		409 lbs. cocoa at.	33½e				
		9 lbs. gelatine at.	1.19				
		33½ lbs. rice at.	10e				

Name

Feb.	3	87½ yds. cheesecloth at.	8e				
		56 yds. calico at.	8¼e				
		33½ yds. silk at.	3.60				
		66½ yds. print cloth at.	15e				
		75 yds. lawn at.	24e				

In connection with the work on bills, fifteen blank bill forms will be furnished each pupil. These may be used for bills of domestic application, similar to model C. (Clerical Practice Envelope No. 2.) Envelopes are to be addressed to the debtors of these bills.

VII. Checks.

Practice in making and writing checks and stubs. Only very simple work should be attempted. Pupils should cut along the lines of ruled paper to make slips the size of a check and stub, ruling vertical lines to set off the stubs. The wording of a check should be given them by blackboard demonstration.

GRADE IX.

The committee appointed to make suggestions for modifications of the course of Grade IX recommended that the course in Clerical Practice be standardized for Grade IX, whether found in the intermediate or high school, in order that the work in Bookkeeping I in the high schools may have the same foundations on which to build.

TIME ALLOTMENT FOR CLERICAL PRACTICE,
GRADE IX.

UNTIL CHRISTMAS VACATION.

High School	Minutes (Approximate)	Intermediate School	Minutes
2 Periods Penmanship.	80	3 Periods Penmanship.	90
2 Periods Arithmetic.	80	2 Periods Arithmetic.	60
1 Period Business Forms.	40	2 Periods Business Forms.	60

UNTIL FEBRUARY VACATION.

2 Periods Penmanship.	80	3 Periods Penmanship.	90
1 Period Arithmetic.	40	2 Periods Arithmetic.	60
2 Periods Business Forms.	80	2 Periods Business Forms.	60

UNTIL APRIL VACATION.

1 Period Penmanship.	40	1 Period Penmanship.	30
1 Period Arithmetic.	40	2 Periods Arithmetic.	60
1 Period Business Forms.	40	1 Period Business Forms.	30
2 Periods Bookkeeping.	80	3 Periods Bookkeeping.	90

UNTIL CLOSE OF SCHOOL YEAR.

1 Period Penmanship.	40	1 Period Penmanship.	30
1 Period Arithmetic.	40	2 Periods Arithmetic.	60
3 Periods Bookkeeping.	120	4 Periods Bookkeeping.	120

The forms for clerical practice work will be found in Clerical Practice Envelope No. 3, for Grade IX, and the necessary material for the work will be furnished in a separate pamphlet, to be known as "Exercises for Clerical Practice, Grade IX," which, in the judgment of this Council, should be furnished on requisition through the Business Agent's Office, being placed in Clerical Practice Envelope No. 3, for Grade IX.

It is believed that with these modifications the courses in Clerical Practice will be improved

COURSE OF STUDY IN PENMANSHIP AS RELATED TO CLERICAL PRACTICE.

Instruction in Penmanship in clerical practice classes should aim to:

(a) Continue the development of the correct muscular movement writing habits established in previous grades.

(b) Give complete and detailed understanding of letter and figure formation.

(c) Develop the power to perform well-formed muscular movement writing at commercial speed.

(d) Establish the habit of the use of muscular movement writing in all applied written work.

(e) Evolve a fineness of control in letter and figure formation adaptable to all business requirements.

The High School Edition of the Palmer Method of Business Writing is the text-book to be used. In this text-book are included all of the varieties of drills necessary to the accomplishment of the aims of this work. For uniformity and highest success in this subject it is necessary that the letter forms, counts, and instructions in this text-book be adhered to without deviation or the introduction of innovations.

Lesson Plan for the presentation of instruction in each drill:

Study of drill and reading of text by class.

Blackboard demonstration by teacher of count, rhythm, and salient features of formation of drill.

Demonstration by teacher of actual writing performance of drill in correct size at correct speed on paper before class.

Practice of drill by class with dry pens for application of movement with correct rhythm and speed in performance of drill.

Practice of drill by class with ink. Practice continued until class masters ability to use movement with correct rhythm and speed in performance of the drill.

Comparison of writing produced by class with standard in text-book and judgment expressed.

Explanation by teacher, through repeated instruction and further blackboard demonstration, of methods of correcting erroneous formation.

Further practice by class with attention centered on correction of errors.

Individual attention by teacher and competent pupils to those unable to progress with class.

Lesson Plan for the presentation of instruction in applied writing:

Dictation of matter by teacher at correct speed.

Attention to preliminary motion and correct management of writing material.

Appraisal by teacher of those using correct movement at correct speed.

Comparison of appearance of writing performed with muscular movement and that performed with finger motion.

Discussion of appearance of the muscular movement work:

- (a) Comparative heights of letters.
- (b) Beginning and ending strokes.
- (c) Spacing.
- (d) Individual letter formation.

Selection of letter, combination of letters, or figures, in the execution of which the class is found to be in general at fault.

Intensive drill on this phase of the work.

NOTE: Fineness of control in letter and figure formation can be accomplished only after pupils have acquired the ability to write automatically and well with muscular movement. Therefore it is important that emphasis on this phase of the work be made only after pupils have acquired the understanding of and the ability to perform well-controlled muscular movement writing at commercial speed.

DRILL WORK IN ARITHMETIC FOR GRADES VII, VIII AND IX.

GRADE VII.

Subject matter: drill on common fractions down to $\frac{1}{12}$ and on decimal fractions, with application to United States money.

I. Common Fractions.

- A. Reduction to lowest terms.
 B. Reduction to common denominator.
 C. Reduction of improper fractions to integers and mixed numbers.
 D. Changing mixed numbers to improper fractions.
 E. Addition, subtraction, multiplication, and division of common fractions.

1. ADDITION OF COMMON FRACTIONS.

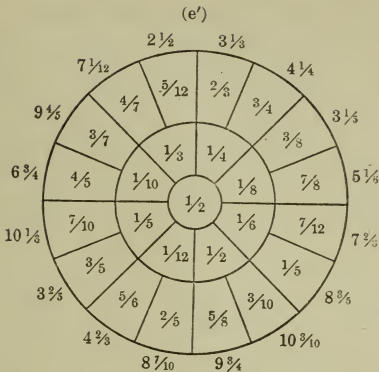
Add fractions arranged in horizontal lines as well as in columns.

A. Sight Drills.

(a') $\frac{1}{2} +$	(b') $2\frac{5}{8} +$	(c') $1\frac{3}{8} +$	(d') $15\frac{1}{2} +$	(e') $\frac{1}{2} + \frac{2}{8} + \frac{1}{4} = ?$
$\frac{3}{4}$	$\frac{1}{4}$	$3\frac{1}{6}$	$10\frac{1}{2}$	(f') $3\frac{3}{8} + \frac{1}{4} + \frac{3}{4} = ?$
$\frac{1}{8}$	$\frac{3}{4}$	$\frac{1}{3}$	$9\frac{3}{10}$	(g') $2\frac{1}{6} + 4\frac{3}{8} + \frac{1}{3} = ?$
			(h') $5\frac{1}{5} + 2\frac{1}{2} + 3\frac{2}{10} = ?$	

B. Add at Sight.

(a')	(b')	(c')	(d')
$\frac{1}{2}, \frac{1}{4}$	$2\frac{1}{2}, \frac{1}{4}$	$2\frac{1}{2}, 3\frac{5}{8}$	$\frac{1}{2}, \frac{1}{3}, \frac{1}{4}$
$\frac{1}{2}, \frac{3}{4}$	$3\frac{1}{2}, \frac{3}{4}$	$2\frac{3}{4}, 7\frac{7}{8}$	$\frac{2}{3}, \frac{1}{2}, \frac{1}{6}$
$\frac{1}{2}, \frac{1}{8}$	$5\frac{1}{2}, 1\frac{1}{8}$	$4\frac{1}{6}, 6\frac{5}{8}$	$\frac{1}{12}, \frac{5}{6}, \frac{1}{2}$
$\frac{1}{2}, \frac{5}{8}$	$3\frac{1}{2}, \frac{5}{8}$	$3\frac{1}{2}, 5\frac{1}{3}$	$\frac{2}{3}, \frac{3}{4}, \frac{7}{8}$
$\frac{1}{2}, \frac{7}{8}$	$8\frac{1}{2}, \frac{7}{8}$	$4\frac{1}{2}, 6\frac{2}{3}$	$\frac{5}{12}, \frac{1}{3}, \frac{3}{4}$
$\frac{1}{4}, \frac{7}{8}$	$8\frac{1}{4}, \frac{7}{8}$	$5\frac{1}{4}, 7\frac{1}{3}$	$\frac{3}{5}, \frac{3}{4}, \frac{1}{2}$
$\frac{1}{4}, \frac{5}{8}$	$7\frac{1}{4}, \frac{3}{8}$	$8\frac{3}{4}, 5\frac{1}{3}$	$\frac{3}{8}, \frac{5}{12}, \frac{1}{4}$
$\frac{3}{4}, \frac{3}{8}$	$9\frac{3}{4}, \frac{3}{8}$	$6\frac{3}{4}, 8\frac{2}{3}$	$\frac{1}{3}, \frac{2}{4}, \frac{5}{12}$
$\frac{1}{3}, \frac{3}{4}$	$5\frac{1}{3}, \frac{3}{4}$	$2\frac{1}{3}, 7\frac{1}{8}$	$\frac{1}{2}, \frac{1}{4}, \frac{1}{8}, \frac{1}{12}$
$\frac{5}{8}, \frac{2}{3}$	$8\frac{5}{8}, \frac{2}{3}$	$6\frac{1}{3}, 9\frac{5}{8}$	$\frac{2}{3}, \frac{3}{4}, \frac{5}{12}, \frac{1}{2}$



By changing the fraction in the center of e', this device can be used many times and in many different ways for addition at sight.

C. *Written Drills.* (Estimate Answer Before Figuring.)

(a')	$48\frac{2}{3} +$	(b')	$103\frac{3}{8} +$	(c')	$\$47\frac{1}{2} +$
	$17\frac{5}{6}$		$46\frac{5}{8}$		$96\frac{3}{4}$
	$19\frac{3}{4}$		$9\frac{5}{6}$		$83\frac{1}{8}$
	$48\frac{1}{12}$		$28\frac{3}{4}$		$55\frac{5}{8}$
	<hr/>		$1,000$		<hr/>

Check results of written work.

2. SUBTRACTION OF COMMON FRACTIONS.

A. *Sight Drills.*

(a')	(b')	(c')	(d')	(e')
$\frac{1}{2} -$	$1\frac{1}{2} -$	$4 -$	$14\frac{1}{2} -$	$4\frac{2}{3} -$
$\frac{1}{8}$	$\frac{3}{8}$	$2\frac{3}{8}$	$12\frac{3}{8}$	$3\frac{3}{4}$

(f')

$\frac{3}{8} + ? = \frac{1}{2}$
$\frac{3}{8} + ? = \frac{3}{4}$
$\frac{3}{4} + ? = \frac{3}{8}$
$\frac{1}{2} + ? = \frac{7}{8}$
$\frac{1}{4} + ? = \frac{5}{8}$
$\frac{1}{2} + ? = \frac{1}{2}$
$\frac{1}{3} + ? = \frac{1}{2}$
$\frac{2}{3} + ? = 1$
$\frac{3}{4} + ? = 1\frac{1}{2}$
$\frac{2}{3} + ? = \frac{5}{6}$

(g')

$\frac{3}{8} + ? = 1\frac{1}{2}$
$\frac{3}{8} + ? = 2\frac{3}{4}$
$\frac{3}{4} + ? = 5\frac{7}{8}$
$\frac{1}{2} + ? = 3\frac{7}{8}$
$\frac{1}{4} + ? = 2\frac{5}{8}$
$\frac{5}{12} + ? = 3\frac{1}{2}$
$\frac{1}{3} + ? = 4\frac{1}{2}$
$\frac{2}{3} + ? = 4$
$\frac{3}{4} + ? = 3\frac{1}{2}$
$\frac{2}{3} + ? = 3\frac{5}{6}$

(h')

$\frac{1}{2} + \frac{3}{4} - \frac{1}{3} = ?$
$\frac{2}{3} + \frac{3}{5} - \frac{1}{2} = ?$
$\frac{3}{4} + \frac{7}{8} - \frac{3}{8} = ?$
$\frac{4}{5} + \frac{5}{8} - \frac{3}{4} = ?$
$\frac{1}{2} - \frac{1}{4} + \frac{7}{8} - 1 = ?$
$\frac{7}{8} - \frac{1}{2} + \frac{3}{4} - 1 = ?$
$\frac{3}{5} + \frac{1}{6} - \frac{1}{2} + 5\frac{1}{2} = ?$
$\frac{3}{4} + \frac{5}{6} - \frac{2}{3} + 1 = ?$
$\frac{5}{6} + \frac{1}{3} - 1 + \frac{1}{2} = ?$
$\frac{1}{2} - \frac{1}{6} + \frac{2}{3} - \frac{1}{2} = ?$

Further drill in subtraction, using device e' of addition.

(i')	(j')	(k')	(l')	(m')
$24\frac{1}{2}$ —	32 —	$21\frac{1}{2}$ —	$16\frac{1}{4}$ —	$11\frac{3}{4}$ —
18	$19\frac{3}{4}$	$9\frac{1}{4}$	$14\frac{3}{4}$	$8\frac{3}{4}$

B. *Written Drills.* (Estimate Result Before Figuring.)

(a')	(b')	(c')
$429\frac{2}{3}$ —	$832\frac{1}{4}$ —	532—
396	$516\frac{1}{4}$	$215\frac{3}{4}$
(d')	(e')	(f')
$821\frac{1}{4}$ —	$725\frac{1}{2}$ —	$922\frac{3}{4}$ —
$725\frac{3}{4}$	$689\frac{1}{4}$	$584\frac{3}{4}$

Check results of written work.

3. MULTIPLICATION OF COMMON FRACTIONS.

A. *Sight Drills.*

(a')	(b')	(c')	(d')			
$3 \times \frac{1}{2} = ?$	$\frac{7}{9} \times 3 = ?$	$1\frac{1}{8} \times 8 = ?$	$6 \times 2\frac{1}{2} = ?$			
$4 \times \frac{5}{7} = ?$	$\frac{5}{8} \times 4 = ?$	$1\frac{1}{6} \times 6 = ?$	$8 \times 3\frac{1}{4} = ?$			
$5 \times \frac{3}{8} = ?$	$\frac{3}{5} \times 9 = ?$	$1\frac{5}{10} \times 2 = ?$	$3 \times 7\frac{3}{8} = ?$			
$8 \times \frac{9}{10} = ?$	$\frac{3}{10} \times 7 = ?$	$1\frac{4}{5} \times 3 = ?$	$3 \times 8\frac{1}{4} = ?$			
$7 \times \frac{5}{6} = ?$	$1\frac{1}{2} \times 6 = ?$	$4\frac{1}{2} \times 6 = ?$	$5 \times 7\frac{2}{3} = ?$			
$9 \times \frac{2}{8} = ?$	$\frac{4}{7} \times 9 = ?$	$2\frac{2}{3} \times 9 = ?$	$6 \times 8\frac{3}{4} = ?$			
(e')	(f')	(g')				
$\frac{1}{2}$ of $\frac{2}{3} = ?$	$\frac{5}{9}$ of $1\frac{1}{2} = ?$	$1\frac{1}{2} \times 1\frac{1}{2} = ?$				
$\frac{3}{4}$ of $\frac{1}{2} = ?$	$\frac{3}{4}$ of $1\frac{2}{3} = ?$	$1\frac{1}{2} \times 1\frac{1}{3} = ?$				
$\frac{2}{3}$ of $\frac{5}{6} = ?$	$\frac{1}{6}$ of $3\frac{1}{2} = ?$	$2\frac{2}{3} \times 4\frac{1}{2} = ?$				
$\frac{4}{9}$ of $\frac{2}{3} = ?$	$\frac{3}{4}$ of $1\frac{1}{2} = ?$	$2\frac{1}{2} \times 3\frac{1}{3} = ?$				
$\frac{3}{5}$ of $\frac{4}{5} = ?$	$\frac{2}{3}$ of $2\frac{1}{2} = ?$	$5\frac{1}{2} \times 1\frac{2}{3} = ?$				
$\frac{4}{5}$ of $\frac{2}{3} = ?$	$\frac{3}{4}$ of $1\frac{7}{8} = ?$	$3\frac{1}{2} \times 1\frac{2}{3} = ?$				
(h')	(i')	(j')	(k')	(l')	(m')	(n')
$3 \times \frac{1}{2}$	$\frac{5}{9} \times 3$	$1\frac{1}{8} \times 8$	$6 \times \frac{1}{2}$	$\frac{1}{2} \times \frac{5}{9}$	$\frac{5}{9} \times 3$	$1\frac{1}{2} \times 1\frac{1}{2}$
$\frac{1}{2}$	3	8	$2\frac{1}{2}$	$\frac{2}{3}$	$1\frac{1}{2}$	$1\frac{1}{2}$

Further drill in multiplication by using device e' of addition.

B. *Written Drills.* (Estimate Result Before Figuring.)

(a')	(b')	(c')	(d')
$428\frac{1}{2} \times$	629 \times	$64\frac{1}{2} \times$	$36\frac{3}{4} \times$
19	$37\frac{3}{4}$	$84\frac{1}{3}$	$24\frac{2}{3}$

Check results of written work.

4. DIVISION OF COMMON FRACTIONS.

A. *Sight Drills.*

(a')	(b')	(c')	(d')
$\frac{1}{2} \div 3 = ?$	$\frac{1}{2} \div 2 = ?$	$12 \div \frac{2}{3} = ?$	$1\frac{2}{3} \div 5 = ?$
$\frac{7}{8} \div 4 = ?$	$\frac{6}{7} \div 3 = ?$	$7 \div \frac{2}{3} = ?$	$1\frac{2}{3} \div 6 = ?$
$\frac{3}{11} \div 4 = ?$	$\frac{9}{10} \div 5 = ?$	$9 \div \frac{3}{8} = ?$	$2\frac{3}{8} \div 4 = ?$
$\frac{1}{12} \div 3 = ?$	$\frac{8}{9} \div 4 = ?$	$7 \div \frac{7}{10} = ?$	$4\frac{3}{8} \div 12 = ?$
$\frac{5}{9} \div 3 = ?$	$\frac{1}{16} \div 3 = ?$	$8 \div \frac{4}{5} = ?$	$6\frac{5}{8} \div 2 = ?$
$\frac{2}{3} \div 5 = ?$	$\frac{1}{16} \div 5 = ?$	$9 \div \frac{7}{8} = ?$	$4\frac{3}{8} \div 3 = ?$
	(e')	(f')	
	$\frac{1}{2} \div \frac{3}{8} = ?$	$1\frac{1}{2} \div 1\frac{1}{3} = ?$	
	$\frac{3}{4} \div \frac{2}{9} = ?$	$2\frac{1}{3} \div 1\frac{1}{4} = ?$	
	$\frac{3}{8} \div \frac{5}{6} = ?$	$2\frac{1}{2} \div 1\frac{1}{3} = ?$	
	$\frac{5}{8} \div \frac{2}{3} = ?$	$2\frac{1}{3} \div 1\frac{1}{2} = ?$	
	$\frac{3}{4} \div \frac{3}{5} = ?$	$2\frac{1}{2} \div 2\frac{1}{4} = ?$	
	$\frac{5}{6} \div \frac{2}{3} = ?$	$4\frac{1}{2} \div 2\frac{1}{4} = ?$	

Further drill in division by using device e' of addition.

B. *Simplify.*

(a')	(b')	(c')	(d')
$1\frac{1}{2}$	3	$2\frac{1}{2}$	$3\frac{1}{6}$
<hr/>	<hr/>	<hr/>	<hr/>
2	$4\frac{1}{4}$	$3\frac{1}{2}$	$1\frac{1}{4}$

C. *Written Drills.* (Estimate Result.)

- (a') $125 \div \frac{3}{4}$ (b') $\frac{3}{4} \div 15$ (c') $\frac{1}{11} \div \frac{5}{9}$ (d') $125\frac{1}{2} \div 12$ (e') $112 \div 12\frac{1}{2}$
 (f') $62\frac{1}{2} \div 1\frac{1}{8}$.

Check results of written work.

D. *Ratio. Sight Drills.*

What is the ratio of:

(a')	(b')	(c')	(d')
2 to 4?	3 to 8?	4 to 2?	8 to 3?
3 to 6?	5 to 8?	6 to 3?	8 to 5?
3 to 9?	7 to 8?	9 to 3?	8 to 7?
4 to 16?	9 to 10?	16 to 4?	10 to 9?
5 to 20?	11 to 12?	20 to 5?	12 to 11?
6 to 18?	3 to 7?	18 to 6?	7 to 3?
8 to 24?	4 to 11?	24 to 8?	11 to 4?
12 to 36?	7 to 9?	36 to 12?	9 to 7?

Application of Ratio Drills in Practical Problems

Illustrations:

- 2 handkerchiefs cost 25c., 8 handkerchiefs cost?
 4 erasers for 11c., how many erasers for 44c.? For 77c.
 7 inches is what part of a foot?
 11 inches is what part of a foot?
 5 inches is what part of a foot?
 9 oz. is what part of a pound?
 11 oz. is what part of a pound?
 13 oz. is what part of a pound?

Change to a fraction of a day: 6 hrs., 4 hrs., 12 hrs., 9 hrs.

Change to a fraction of a pound: 2 oz., 11 oz., 5 oz., 7 oz.

Change to a fraction of a ton: 500 lbs., 250 lbs., 300 lbs.

What is the ratio of:

25 to 125?

27 to 81?

15 to 525?

18 to 252?

$12\frac{1}{2}$ to $87\frac{1}{2}$?

II. Decimal Fractions.

A. ADDITION OF DECIMALS.

Add decimals arranged in horizontal lines as well as in columns.

1. Sight Drills.

Illustrations:

$$\begin{aligned} & \text{(a)} \\ & .8 + .4 + .3 + .9 + .6 = ? \\ & 1.2 + 3.1 + 4.3 + 5. = ? \\ & .09 + .07 + .05 + .03 = ? \\ & \$5.03 + 6.01 + 7.02 + 4.07 = ? \end{aligned}$$

$$\begin{array}{r} \text{(b)} \\ \begin{array}{r} .8 + \\ .4 \\ .3 \\ .2 \\ .3 \\ .4 \end{array} \quad \begin{array}{r} 1.2 + \\ 2.4 \\ 3.7 \\ 1.1 \\ 2. \end{array} \quad \begin{array}{r} .07 + \\ .09 \\ .01 \\ .08 \\ .09 \end{array} \quad \begin{array}{r} \$4.07 + \\ 3.04 \\ 2.02 \\ 3.01 \\ 5.01 \end{array} \end{array}$$

Considerable drill in addition of columns of U. S. money.

2. Written Drills. (Estimate Results.)

(a)	(b)	(c)
29.643 +	490.49 +	\$400.19 +
8.96	16.9	1214.08
4.0963	8.49	396.84
3.4139	27.08	964.15
8.409	1000.	4000.62
49.	.96	783.96
		723.16
		839.14

\$

Arrange in columns and add. (Estimate results.)

(d) 29.009, 14.92, 723.013, 746.893.

(e) 4.0009, 3.92, 200.01, 1000.

(f) \$29.56, \$98.47, \$78.59, \$321.17, \$832.25.

(g) \$1.08, \$0.17, \$292.15, \$25, \$118.16.

Check the results of written work.

B. SUBTRACTION OF DECIMALS.

Just as in the drills in addition of decimals, the arrangement should frequently be horizontal.

1. *Sight Drills.*

(a)	.8—	.11—	.15—	1.2—	\$25.16—
	.4	.07	.09	.4	\$5.08

(b)	.8 —	.4?		(c)	.4 +?	.8
	.9 —	.3?			.3 +?	.9
	.11—	.06?			.06+?	.11
	\$0.14—	\$0.09?			\$0.09+?	\$0.14
	\$0.25—	\$0.13?			\$0.13+?	\$0.25

2. *Considerable Drill in Subtraction of U. S. Money.*

Illustrations:

		\$10.90—	\$5.70?	
		\$8.14—	\$5.07?	
	(a)	\$6.03—	\$4.02?	
		\$7.25—	\$4.25?	
	(b)	\$8.25—	\$9.24—	\$55.10—
		\$7.25	\$8.08	\$54.03
				\$492.91—
				\$340.00

Making Change.

\$0.04 +? = \$0.10	\$0.08 +? = \$0.25	\$0.36 +? = \$0.50
\$0.88 +? = \$2.00		\$0.73 +? = \$1.00

Sales Received—Count the Change.

\$0.24	\$2.77	\$0.50
\$0.37	\$3.81	\$2.00
\$1.23	\$1.00	\$5.00
	\$10.00	

3. *Written Drills.* (Estimate Results.)

(a)	496.4—	100.—	893.75—
	89.696	96.093	.096
(b)	Subtract 175.169 from 302.14.		
(c)	Subtract \$79.58 from \$160.00.		
(d)	\$924.16—	\$400.16—	\$501.16—
	\$784.96	\$394.59	\$483.92

Check results of written work.

C. ADDITION AND SUBTRACTION OF DECIMAL AND COMMON FRACTIONS COMBINED.

1. *Sight Drills.*

Illustrations:

(a)	4.5 +	(b)	3.15 +	(c)	4 $\frac{1}{8}$ +	(d)	3.9—	(e)	8.875—
	2 $\frac{1}{2}$ +		4 $\frac{1}{4}$		3.625		2 $\frac{1}{2}$		4 $\frac{1}{8}$
	1 $\frac{1}{2}$								

2. *Written Drills.* (Estimate Results.)

(a) $455\frac{1}{2} +$ 396.375 49.863 $59\frac{3}{4}$	(b) $59\frac{1}{4} +$ 85.399 $18\frac{2}{3}$ 15.875	(c) $\$15.96 +$ $8\frac{3}{4}$ $9\frac{3}{8}$ 7.23
(d) $89.743 +$ 75.809 $55\frac{5}{8}$ $75\frac{3}{4}$	(e) $1000.15 -$ $459\frac{3}{4}$	(f) $\$72.15 -$ $29\frac{5}{8}$

Check results of written work.

D. MULTIPLICATION OF DECIMALS.

1. Multiply decimals by 10, 100, 1000.
2. Multiply decimals by multiples of 10, 100, 1000.
Illustrations: 7.4×20 ; 6.2×300 ; 8.1×4000 .
3. Multiply integers and mixed decimals by tenths, hundredths, thousandths.
Illustrations: $4 \times .3$; $4 \times .03$; $4 \times .003$;
 $1.2 \times .4$; $1.2 \times .04$; $1.1 \times .003$.
4. Have a large amount of drill in finding hundredths of numbers, especially U. S. money. This gives a firm foundation for percentage and interest.

5. *Sight Drills.*

Find:	(a)	(b)
	3 hundredths of 12.	$12 \times .03 = ?$
	4 hundredths of 15.	$15 \times .04 = ?$
	5 hundredths of 10.	$10 \times .05 = ?$
	3 hundredths of 32.	$32 \times .03 = ?$
	4 hundredths of 41.	$41 \times .04 = ?$
	8 hundredths of 11.	$11 \times .08 = ?$
	9 hundredths of 22.	$22 \times .09 = ?$

6. Multiply mixed decimals by mixed decimals. This work will be written. (Estimate results.)

Illustrations: $4.1 \times 2.3 = ?$ $24.3 \times 92.09 = ?$ $29.04 \times 32.58 = ?$

Check results of written work.

7. Apply 1, 2, 3, and 6 to U. S. money.

Application of 1 to U. S. money.

Write answers or give orally.

$10 \times$	(a) $\left\{ \begin{array}{l} \$4.81 \\ 2.41 \\ 3.06 \\ 5.25 \\ 11.05 \\ 9.46 \\ 100.00 \\ 92.15 \\ 88.173 \\ 14.096 \end{array} \right.$	$100 \times$	(b) $\left\{ \begin{array}{l} \$9.64 \\ 16.15 \\ 23.16 \\ 30.92 \\ 83.15 \\ 90.63 \\ 84.91 \\ 75.56 \\ 60.09 \\ 59.96 \end{array} \right.$	$1000 \times$	(c) $\left\{ \begin{array}{l} 80.009 \\ .159 \\ 29.15 \\ 84.021 \\ 29.16 \\ 58.27 \\ 40.91 \\ 80.17 \\ 5.963 \\ 8.001 \end{array} \right.$
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8. Application of §2 to U. S. money.

(a) *Sight Drills.*

	(a')		(b')		(c')
20 ×	\$0.04 \$0.03 \$0.05 \$0.12 \$0.02 \$2.03 \$4.04 \$3.04 \$4.10 \$6.04	300 ×	\$1.11 \$1.22 \$3.10 \$3.12 \$2.13 \$2.03 \$4.12 \$3.03 \$4.09 \$5.01	4000 ×	\$0.01 \$0.22 \$0.03 \$0.11 \$0.12 \$0.02 \$0.06 \$0.08 \$0.21 \$0.15

In (a'), any other multiple of 10 than 20 may be used as multiplier.

In (b'), any other multiple of 100 than 300 may be used as multiplier.

In (c'), any other multiple of 1000 than 4000 may be used as multiplier.

(b) *Written Drills.*

Multiply the following by 40; by 80; by 320; 480; 6000.

\$4.16	\$19.29	\$84.53	\$178.94	\$541.91
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(Estimate Results.)

Check results of written work.

9. Application of §3 to U. S. money.

(a) *Sight Drills.*

Multiply the following by .2; by .3; by .02; by .03.

\$6	\$12	\$32	\$100	\$200
\$8	\$25	\$46	\$120	\$300

(b) *Written Drills.* (Estimate results.)

(a') Find .06 of each of the following amounts of money.

\$72	\$63	\$182	\$1000
\$59	\$125	\$922	\$2000

(b') Find .05, .04, .03½ of each of the following:

\$8.25	\$87.25	\$98.25	\$4000.00
\$72.15	\$78.29	\$834.93	\$793.01

(Estimate Results.)

10. Application of §6 to U. S. money.

\$1.25 × 2.4	\$100.92 × 42.09
\$12.62 × 2.09	\$962.35 × 47.02

(Estimate Results.)

Etc.

Check results of written work.

11. Review aliquot parts of a dollar.

25c. = \$¼.	66⅔c. = \$⅔.	62½c. = \$⅝.	8⅓c. = \$⅓.
50c. = \$½.	16⅔c. = \$⅕.	87½c. = \$⅞.	11⅓c. = \$⅙.
75c. = \$¾.	12½c. = \$⅛.	83⅓c. = \$⅚.	14⅔c. = \$⅙.
33⅓c. = \$⅓.	37½c. = \$⅜.	6¼c. = \$⅙.	5c. = \$⅒.
			20c. = \$⅕.

Review aliquot parts of a hundred.

Review aliquot parts of a ten.

5 is $\frac{1}{2}$ of 10.

$3\frac{1}{3}$ is $\frac{1}{3}$ of 10.

$2\frac{1}{2}$ is $\frac{1}{4}$ of 10.

12. Use aliquot parts in multiplication.

Illustrations: Give products at sight:



$$\$0.33\frac{1}{3} \times 18 = ? \quad \$33\frac{1}{3} \times 9 = ?$$

$$\$0.25 \times 40 = ? \quad \$75 \times 8 = ?$$

$$\$0.06\frac{1}{4} \times 32 = ? \quad \$66\frac{2}{3} \times 12 = ?$$

$$\$0.16\frac{2}{3} \times 8 = ? \quad \$87\frac{1}{2} \times 3 = ?$$

The figure in the center of diagram may be changed, thus making many different exercises.

13. Application of multiplication of aliquot parts in practical problems.

Illustrations: (a) Give at sight the cost of

21 lbs. coffee at $33\frac{1}{3}$ c.

48 lbs. tea at 75c.

9 chairs at $\$33\frac{1}{3}$.

etc.

(b) *Written Drills.* (Estimate Results.)

Find cost of:

524 lbs. — at $37\frac{1}{2}$ c.

256 lbs. — at 25c.

976 lbs. — at $12\frac{1}{2}$ c.

216 lbs. — at 75c.

840 lbs. — at $62\frac{1}{2}$ c.

176 lbs. — at $87\frac{1}{2}$ c.

112 lbs. — at $83\frac{1}{3}$ c.

164 yds. — at $66\frac{2}{3}$ c.

192 lbs. — at $12\frac{1}{2}$ c.

200 yds. — at $16\frac{2}{3}$ c.

etc.

Check results of written work.

E. DIVISION OF DECIMALS.

1. Division of decimals by 10, 100, 1000.

Illustrations: At sight divide the following by 10; by 100; by 1000:

216.	49.6	2.5	\$425.
352.	82.4	1.6	\$516.
815.	59.3	.24	\$392.
934.	84.2	81.6	\$189.
596.	40.7	2.3	\$25.10
86.	51.5	7.	\$89.16
92.	98.2	.9	\$78.53
73.	83.4	15.	\$1.92
59.	59.2	1.7	\$7.83
43.	75.3	24.	\$16.09

etc.

2. Division of decimals by multiples of 10, 100, 1000.

(a) *Sight Drills.*

2.6 ÷ 20	4.8 ÷ 80	28. ÷ 200
1.2 ÷ 60	.45 ÷ 90	4.8 ÷ 200
.06 ÷ 30	27.6 ÷ 30	22.5 ÷ 500

(b) *Written Drills.* (Estimate results.)

7831 ÷ 2700	\$4296.00 ÷ 1100
59641 ÷ 9300	\$1593.36 ÷ 2200
78593 ÷ 4900	\$92164.15 ÷ 6000
14964 ÷ 5200	\$87651.14 ÷ 3300
59641 ÷ 6100	\$75641.17 ÷ 2800

etc.

Check the results of written work.

3. Division of decimals by tenths, hundredths, thousandths.

Sight Drills.

.3 ÷ .1	.37 ÷ .01	.38 ÷ .001
.4 ÷ .2	.48 ÷ .02	.44 ÷ .002
.8 ÷ .4	.84 ÷ .04	.88 ÷ .004
.9 ÷ .3	.96 ÷ .03	.93 ÷ .003
.6 ÷ .2	.64 ÷ .02	.66 ÷ .002

etc.

etc.

etc.

4. Division of mixed decimals by tenths, hundredths, thousandths.

(a) *Sight Drills.*

4.2 ÷ .2	.49 ÷ .007
9.6 ÷ .03	6.3 ÷ .09
1.48 ÷ .02	59.2 ÷ .2
30.5 ÷ .06	5.05 ÷ .05
90.5 ÷ .5	28.07 ÷ .7
4.2 ÷ .007	.36 ÷ .012

etc.

(b) *Written Drills.* (Estimate results.)

783.30 ÷ .17	\$34.60 ÷ .175	\$8.64 ÷ .42
809.49 ÷ .25	\$89.30 ÷ .268	\$750.00 ÷ .015
783.92 ÷ .39	\$8.47 ÷ .36	\$1500.15 ÷ .039
593.89 ÷ .78	\$96.70 ÷ .017	\$924.57 ÷ .96
510.03 ÷ .013	\$435.50 ÷ .62	\$784.53 ÷ .841

etc.

It is not necessary to carry out the work beyond *three* places in the quotient. This applies to all decimal work in this grade.

Check results of written work.

5. Division of mixed decimals by mixed decimals.

Written Drills. (Estimate results.)

26.6 ÷ 1.6	34.6 ÷ 1.75
3.2 ÷ 6.25	89.3 ÷ 2.68
1.6 ÷ 6.25	8.47 ÷ 36.5
129.6 ÷ 3.6	96.7 ÷ 17.3
87.2 ÷ 1.2	36.8 ÷ 9.6

etc.

\$72.50 ÷ \$1.50	\$785.96 ÷ \$2.17	\$724.15 ÷ \$5.91
\$896.52 ÷ \$8.75	\$500.01 ÷ \$4.98	etc.

Check the results of written work.

6. Application of 1, 2, 3, 4, 5 to concrete problems involving U.S. money.

It is intended to have the drills given above serve as types. Additions to the exercises of each type may be made according to the needs of the class.

Attention is called to the importance of estimating roughly the answer before doing any written work. This work in estimating is a great help, dealing with all written problems, but is especially valuable in decimal work.

Illustration: $4962 \times$
23

99240

14886

114126

99240 is estimated result.

Illustration: $\$59.65 \times$
.18

$\$5.965$

4.7720

$\$10.7370$

$\$5.965$ is estimated result.

Illustration:

Problem.

Find the cost of 19.6 yds. of lace at $\$0.52$ a yard.

Page.	Ex.	Estimated Result.	Work.	Proof.	Accurate Result.
51	4	$\$9$ or $\$10$ (Think 20 $\times \$\frac{1}{2}$, $\$10$)	$\$.52$ 19.6 <hr/> 5.2 4.68 .312 <hr/> 10.192	$19.6 \times$ $\$.52$ <hr/> or division.	$\$10.19$

The solution of any written problem consists of four steps:

1. Estimate the result.
2. Perform the work.
3. Check the "accurate" result with the "estimate" to be sure the accurate result is reasonable.
4. Prove for accuracy.

GRADE VIII.

Subject matter: drill on addition, subtraction, multiplication and division; and on interest by the 360-day method, and from date to date.

Drill on.

- I. Four Processes.
- II. Interest.
 - A. Based on a 360-day year.
 - B. Based on exact time.

In the assembling of material for use in Grade VIII and in the explanation of method, considerable help was secured from "Essentials of Business Arithmetic," by George H. Van Tuyl, and from "Practical Exercises in Rapid Calculation," by Powers and Loker.

Four Processes

The present standards in addition, subtraction, multiplication and division are as follows:

TIME.	Speed or Attempts.	Per Cent of Accuracy.	Efficiency.
8 min.....	12	80	33.1
4 min.....	12	90	33.9
6 min.....	11	80	32.4
8 min.....	11	90	39.7

Types		
Addition	Subtraction	* Note
845	102,142,649	
372	70,428,396	
689		
835	Multiplication	
426	2549	
745	19	
813		
197		Division
686		59)34,869

Since it takes considerable time to copy exercises in the four processes, or to dictate them, it is desirable that for the ten-minute daily drill the pupils have printed exercises. Below is a list of the several systems for use in this work, authorized for schools. By having the pupils keep a record of their progress, those who need the most help can easily be found.

Exercises in Arithmetic.

1. Birch's Lessons in Rapid Calculation.
2. Cole's One Hundred Per Cent Number Tests.
3. Curtis' Practice Tests.
4. Fassett's Standardized Number Tests.
5. Hadley's Arithmetical Tables.
6. Hammett's Arithmetic Cards.
7. Lamprey's Practice Sheets.
8. Maxson's Practical Self-Keyed Fundamental Number Work.

* NOTE.—The standard in subtraction was derived from the type illustrated above. Usually subtraction of five or six figure numbers will be found practical.

9. Rice Drill Cards in Arithmetic.
 10. Studebaker Economy Practice Exercises in Arithmetic.
 11. Thompson's Minimum Essentials.
 12. Thorndike's Exercises in Arithmetic, No. 2.
- A. *Addition.*
1. Drill on the 45 primary combinations and their related combinations.
 2. Progression from one figure numbers to five or six figure numbers.
 3. Horizontal addition.
- B. *Subtraction.*
1. Progression from one figure numbers to five or six figure numbers.
 2. Vertical and horizontal subtraction by the additive method.
- C. *Multiplication.*
1. Estimation of answer.
 2. Progression in multiplier from one figure to four figures.
 3. Short methods.
E.g., Multiplying by 10 or a multiple of 10.
 Multiplying by 25, 50, 75, etc.
 Multiplying by $12\frac{1}{2}$, $6\frac{1}{2}$, etc.
- D. *Division.*
1. Estimation of answer.
 2. Progression in divisor from one figure to four figures.
 3. Short methods.
E.g., Dividing by 10, 100, 1,000, etc.
 Dividing by 25, 50, 75, etc.
 4. Division carried to three decimal places.

II. Interest.

- A. Finding time between dates.
- B. Dividing time into aliquot parts of 60 days and 6 days.
- C. Relation of other rates of interest to 6%.
- D. Method of finding interest.
- E. Types of interest exercises.
 - (1) Finding interest for days at 6%.
 - (2) Finding interest for days at various rates.
 - (3) Finding interest for days, months, years.
 - (4) Finding interest between dates.
 - (5) Finding amount.
 - (6) Problems.

A. FINDING TIME BETWEEN DATES.

1. Based on a 360-day year—12 months of 30 days each. One half a month is 15 days; one quarter of a year is three calendar months. A month from a given day in any month is the same day in the next month, except in those months in which there is no day to correspond with the given day in the month from which the time is reckoned; for instance, 1 month from Jan. 14 is Feb. 14, and 5 mo. from Feb. 1 is July 1; but 1 mo. from Jan. 29, 30, or 31 is Feb. 28 (29th in leap years), and 3 mo. from Aug. 31 is Nov. 30, etc.

2. Based on exact number of days between two dates. This way of finding time is used by many business men. A great many others, however, prefer the 360-day year, because of the facility in finding time.
3. Below are given three methods of finding time. Since business houses differ in method, it is advisable for pupils to have practice in each. In the exercises under "Exercises in Finding Interest," no one method is suggested, but it is expected that all three methods will be applied.

(a) *Compound time* is expressed in years, months and days. It is determined by the method of compound subtraction.

The time from Dec. 14, 1912, to Oct. 11, 1914, is reckoned thus:

1914-10-11 The compound time is 1 yr., 9 mo., 27 days.

1912-12-14 Compound time is used in the majority of business transactions, especially if the period is
 1-9-27 more than a year.

(b) Money is loaned on interest rarely longer than for a year. Most frequently it is less than six months.

(c) *Bankers' time* is expressed in days or months and days. It is reckoned by counting months for the whole months and exact days for any remaining part of a month. To illustrate: From Jan. 20 to June 15 are 4 mo. and 26 days. 4 mo. from Jan. 20 is May 20, and from May 20 to June 15 are 26 days.

(d) *Exact time* is expressed in days, or years and days. It is found by counting the exact time in days between two dates. In computing interest, bankers in Boston reckon the exact number of days between two dates.

The exact time from May 3 to Sept. 28 is reckoned thus:

May, 28 days remaining

June, 30 days

July, 31 days

Aug., 31 days

Sept., 28 days

—
 148 days

(e) Exercises.

Find the time in months and days.

(a') From June 4 to Sept. 5.

(b') From Jan. 9 to March 15.

(c') From March 16 to Aug. 19.

(d') From Oct. 2 to Dec. 23.

(e') From July 7 to Sept. 2.

(f') From April 20 to July 15.

(g') From Feb. 2, 1911, to Aug. 7, 1911.

(h') From Sept. 9, 1915, to Dec. 11, 1915.

(i') From June 7, 1914, to Oct. 2, 1914.

(j') From March 27, 1916, to Nov. 2, 1916.

(k') From Oct. 20, 1916, to Feb. 12, 1917.

(l') From Sept. 14, 1917, to March 16, 1918.

(m') From Aug. 6, 1917, to Jan. 3, 1918.

(f) Find the time.

No.	Date of Borrowing.	Date of Payment.	Time.
a'	Jan. 9	Mar. 13	
b'	Nov. 3	Dec. 9	
c'	Feb. 4	June 4	
d'	June 5	July 27	
e'	Aug. 15	Nov. 12	
f'	Sept. 25	Oct. 19	
g'	April 19	July 14	
h'	Feb. 14	June 21	
i'	Oct. 17	Dec. 1	
j'	Mar. 3	June 14	
k'	April 2	July 3	
l'	Oct. 9	Dec. 27	
m'	Nov. 24	Dec. 12	
n'	Sept. 17	Nov. 1	
o'	June 2	July 14	
p'	Mar. 9	June 28	
q'	Oct. 4	Nov. 12	
r'	July 8	Sept. 13	
s'	Nov. 2	Dec. 30	
t'	Aug. 30	Sept. 9	
u'	Feb. 27	June 21	
v'	April 7	Aug. 12	
w'	July 21	Sept. 14	
x'	Sept. 15	Dec. 20	

B. DIVIDING TIME INTO ALIQUOT PARTS OF 60 DAYS AND 6 DAYS.

(The basic time-elements in this method.)

1. 33 d. = 30 d. + 3 d. = $\frac{1}{2}$ of 60 d. + $\frac{1}{2}$ of 6 d.
2. 40 d. = 60 d. - 20 d. = 60 d. - $\frac{1}{3}$ of 60 d.
3. 22 d. = 20 d. + 2 d. = $\frac{2}{3}$ of 60 d. + $\frac{1}{3}$ of 6 d.
4. 45 d. = 60 d. - 15 d. = 60 d. - $\frac{1}{4}$ of 60 d.

5. 85 d. = 60 d. + 20 d. + 5 d. = 60 d. + $\frac{1}{3}$ of 60 d. + $\frac{1}{4}$ of 20 d.
6. 27 d. = 20 d. + 6 d. + 1 d. = $\frac{1}{3}$ of 60 d. + 6 d. + $\frac{1}{6}$ of 6 d.
7. 26 d. = 24 d. + 2 d. = 4 \times 6 d. + $\frac{1}{3}$ of 6 d.

Exercises.

Find combinations of 60 d. and 6 d. and aliquot parts of 60 d. and 6 d. that will best amount to:

84 d.	23 d.	120 d.	25 d.	34 d.
70 d.	37 d.	56 d.	55 d.	49 d.
45 d.	41 d.	81 d.	17 d.	29 d.
96 d.	39 d.	19 d.	14 d.	93 d.
104 d.	143 d.	99 d.	130 d.	140 d.

NOTE.—In many cases there is more than one way of dividing the time. 40 days could very well be taken as $2 \times \frac{1}{3}$ of 60 d., or as $\frac{1}{3}$ of 60 d. + $\frac{1}{3}$ of 60 d. The latter division of the time eliminates some computation.

C. RELATION OF OTHER RATES OF INTEREST TO SIX PER CENT.

The basic rate of this method.

As a general rule to find the interest at any rate, divide the interest at 6% by six and multiply by the given rate.

The following rates are found more easily.

- $3\% = 6\% \div 2$
- $2\% = 6\% \div 3$
- $4\% = 6\% - \frac{1}{3}$ of 6%
- $5\% = 6\% - \frac{1}{6}$ of 6%
- $8\% = 6\% + \frac{1}{3}$ of 6%
- $7\% = 6\% + \frac{1}{6}$ of 6%
- $4\frac{1}{2}\% = 6\% - \frac{1}{4}$ of 6%
- $5\frac{1}{2}\% = 6\% - \frac{1}{12}$ of 6%
- $6\frac{1}{2}\% = 6\% + \frac{1}{12}$ of 6%

D. METHOD OF FINDING INTEREST.

The following method, commonly called the Bankers' Method, is followed to a great extent in business circles.

The basic rate is 6%.

The basic time elements are 60 days and 6 days. Since the interest at 6% of any principal for 60 days is .01 of itself, and for 6 days is .001 of itself, interest for any given time can be reckoned by dividing said time into aliquot parts of 60 days and 6 days, and taking such parts of the interest of 60 days and 6 days.

Examples.

- (1.) Find the interest on \$150 for 79 days at 6%.

\$1 50 = int. for 60 days.

150 = int. for 6 days.

1 50 = int. for 60 days.

450 = int. for 18 days.

025 = int. for 1 day.

1 975 = int. for 79 days at 6%.

\$1 98

- (2.) Find the interest on \$200 for 5 months, 22 days at 3%.

\$2 00 = int. for 60 days.

20 = int. for 6 days.

4 00 = int. for 4 months.

1 00 = int. for 1 month.

666 = int. for 20 days.

066 = int. for 2 days.

5 732 = int. for 5 mos. 22 days at 6%.

2 866 = int. for 5 mos. 22 days at 3%.

\$2 87

- (3.) Find the interest on \$140 for 1 yr. 3 mos. 7 days at 2%.

\$1 40 int. for 60 d.

14 int. for 6 d.

8 40 int. for 1 yr.

1 40 int. for 2 mos.

70 int. for 1 mo.

14 int. for 6 d.

023 int. for 1 d.

10 663 int. for 1 yr. 3 mos. 7 d. at 6%.

3 554 int. for 1 yr. 3 mos. 7 d. at 2%.

\$3 55.

- (4.) Find the interest on \$64.50 from Jan., 24, 1916, to April 5, 1917, at 4%.

\$ 645 int. for 60 d.

1917-4-5

064 int. for 6 d.

1916-1-24

3 870 int. for 1 yr.

1-2-11

645 int. for 2 mos.

107 int. for 10 d.

0 010 int. for 1 d.

4 632 int. for 1 yr. 2 mos. 11 d. at 6%.

1 544 int. for 1 yr. 2 mos. 11 d. at 2%.

3 088 int. for 1 yr. 2 mos. 11 d. at 4%.

\$3 09.

E. TYPES OF INTEREST EXERCISES.

1. *Finding Interest for Days at 6 Per Cent.*

(a) Find the interest at 6%:

a'	\$140.00	for 120 days.
b'	210.00	for 60 days.
c'	360.00	for 35 days.
d'	125.00	for 105 days.
e'	195.00	for 72 days.
f'	305.00	for 62 days.
g'	450.00	for 39 days.
h'	216.00	for 47 days.
i'	199.00	for 48 days.
j'	437.00	for 75 days.
k'	152.00	for 45 days.
l'	650.00	for 15 days.
m'	115.00	for 87 days.
n'	392.50	for 69 days.
o'	140.75	for 32 days.
p'	200.75	for 18 days.
q'	415.50	for 27 days.
r'	412.75	for 43 days.
s'	165.75	for 39 days.
t'	391.30	for 41 days.

(b) Find the interest at 6%:

a'	\$40.75	for 10 days.
b'	91.00	for 9 days.
c'	14.50	for 27 days.
d'	37.50	for 31 days.
e'	45.00	for 41 days.
f'	29.75	for 96 days.
g'	16.40	for 12 days.
h'	375.00	for 78 days.
i'	405.45	for 57 days.
j'	37.40	for 23 days.
k'	112.00	for 25 days.
l'	431.75	for 19 days.
m'	49.00	for 43 days.
n'	50.00	for 14 days.
o'	9.75	for 23 days.
p'	14.50	for 64 days.
q'	50.45	for 91 days.
r'	100.50	for 37 days.
s'	91.75	for 27 days.
t'	116.97	for 16 days.

2. *Finding Interest for Days at Various Rates.*

- (a) Find the interest at 4%:
 (a') \$275.00 for 60 d.
 (b') 350.50 for 75 d.
 (c') 495.45 for 45 d.
 (d') 19.75 for 37 d.
 (e') 200.45 for 85 d.
- (b) Find the interest at 5%:
 (a') \$147.35 for 41 d.
 (b') 201.50 for 27 d.
 (c') 49.60 for 28 d.
 (d') 30.00 for 19 d.
 (e') 171.00 for 43 d.
- (c) Find the interest at $4\frac{1}{2}\%$:
 (a') \$401.75 for 59 d.
 (b') 29.65 for 85 d.
 (c') 403.30 for 76 d.
 (d') 229.00 for 14 d.
 (e') 114.75 for 25 d.

(d) Find the interest:

No.	Principal.	Days.	2%.	3%.	4%.	5%.	6%.	7%.
a'	\$140.00	36						
b'	360.00	60						
e'	400.00	75						
d'	144.00	45						
	Total.							

3. *Finding Interest for Days, Months, Years.*

Find the interest:

No.	Principal.	Time.	Rate.	Interest.
a	\$145.00	1 yr., 2 mo., 10 d.	6%	
b	200.00	1 yr., 2 mo., 15 d.	6%	
c	315.00	1 yr., 3 mo., 18 d.	3%	
d	195.40	1 yr., 6 mo., 20 d.	2%	
e	340.45	1 yr., 4 mo., 23 d.	3%	

4. *Finding Interest Between Dates.*

Find the interest:

No.	Principal.	Date.		Rate.	Interest.
		From	To		
a	\$400.00	Aug. 1, 1914,	Jan. 2, 1915.	6%	
b	40.90	June 1, 1915,	Sept. 9, 1915.	2%	
c	300.50	Nov. 7, 1916.	June 9, 1917.	5½%	
d	190.75	Dec. 21, 1915,	Jan. 19, 1916.	4%	
e	20.50	Sept. 30, 1917,	Feb. 9, 1918.	7%	
f	240.90	Oct. 9, 1917,	Dec. 19, 1917.	8%	
g	100.00	Nov. 11, 1916,	Jan. 1, 1917.	3½%	
h	90.00	Feb. 5, 1917,	Mar. 19, 1918.	2¼%	
i	40.50	Mar. 4, 1914,	June 2, 1915.	3½%	
j	39.75	June 3, 1915,	Oct. 31, 1916.	5%	
k	121.40	May 19, 1916,	Sept. 2, 1916.	4½%	
l	49.90	Apr. 30, 1914,	Jan. 1, 1916.	4%	
m	69.74	Jan. 21, 1917,	June 20, 1917.	2%	
n	371.35	Dec. 19, 1915,	Jan. 19, 1917.	6%	
o	20.43	Aug. 16, 1916,	Sept. 30, 1916.	8%	

5. *Finding Amount.*

Find the amount:

No.	Principal.	Time.	Rate.	Interest.	Amount.
a	\$120.00	36 d.	6%		
b	240.00	80 d.	6%		
c	100.00	49 d.	6%		
d	645.00	29 d.	6%		
e	45.00	125 d.	6%		
f	95.00	40 d.	4%		
g	64.00	96 d.	2%		
h	25.50	43 d.	3%		
i	100.50	87 d.	4%		
j	64.00	25 d.	2%		
k	95.75	5 mo., 16 d.	5%		
l	30.00	3 mo., 9 d.	7%		
m	20.90	66 d.	4½%		
n	45.00	2 mo., 20 d.	5%		
o	55.00	4 mo., 21 d.	2%		
p	600.00	1 yr., 9 mo.	3%		
q	110.00	1 yr., 10 d.	5%		
r	40.00	81 d.	6%		
s	75.00	3 mo., 2 d.	2%		
t	150.00	46 d.	3%		
u	300.00	1 yr., 7 mo.	4%		
v	10.00	63 d.	5½%		
w	43.00	41 d.	4%		

6. *Problems.*

Exercises.

- (a) Find the interest on \$410 from March 4, 1915, to April 9, 1916, at 4%.
- (b) Find the amount at 4½% on \$175 from Jan. 14, 1916, to June 19, 1917.
- (c) Aug. 1, 1914, a wholesaler sold a bill of goods amounting to \$459.50. If the bill was not paid until Sept. 4, 1915, what amount was due, interest being 6%?

- (d) What is the interest on \$495 from Sept. 19, 1917, to Dec. 14, 1917, at $3\frac{1}{2}\%$?
- (e) I borrowed \$75 on Dec. 3, 1917, and paid the same back on June 19, 1918, with interest at $5\frac{1}{2}\%$. How much did I pay back?

GRADE IX.

Subject matter: drill on percentage and interest, with review and continued practice on the drill work of Grades VII and VIII.

The "Essentials of Business Arithmetic" by George H. Van Tuyl (American Book Company) has been adopted as the text-book for the ninth grade arithmetic drill work. Since every teacher will be able to secure a desk copy, the following report refers to the pages and paragraphs of Van Tuyl's which should be covered.

The Council approves of the methods employed by Van Tuyl, and so does not give additional illustrations, except in a few cases, where notes are inserted. There should be drill on the pages recommended, and additional drill in similar exercises given by the teacher whenever it is needed.

I. PERCENTAGE.

It is suggested that in taking up the drill in percentage, the use of formulæ be emphasized. Have the pupils state definitely which number in the problem is the base, which is the percentage, and which term is the unknown quantity. Then all problems may be worked out from the original formula: $B \times R = P$.

Pages 145-149, paragraph 333; page 152, paragraph 339; page 155, paragraph 343; page 157, paragraph 345; and selected exercises on pages 159-165.

II. TRADE DISCOUNT.

Page 173, paragraph 368, and selected problems in paragraph 369.

III. PROFIT AND LOSS.

Page 176, paragraph 380; page 177, paragraphs 382 and 383; page 179, paragraph 386; page 181, paragraph 389; and selected problems on pages 183-185.

N. B.—The proper method of figuring profits causes considerable controversy among retailers, wholesalers and accountants. It makes no difference, however, whether the profit is based on 100% cost price or 100% selling price, so long as the same basis of figuring profits is used throughout the work. When it is desired to find the per cent of gain, it is important to know whether that gain is to be figured at a certain per cent of the invoice price, or a certain per cent of the selling price. Therefore, finding the per cent of gain or loss on the selling price, rather than on the cost, should be explained to the pupils as being peculiar to certain business conditions at the present time. They should understand that the gain or loss is always to be found on the cost as 100% , unless it is expressly stated in the problem that it is to be found on the selling price as the base or 100% .

IV. COMMISSION.

Page 192, paragraph 411.

V. INTEREST.

Begin the interest drill with paragraph 445 on page 209, so that interchanging principal and time may be applied throughout the work in interest.

Pages 202-210 (inclusive).

VI. REVIEW OF FUNDAMENTALS.

A. *Addition*.—Pages 33-41, omitting paragraphs 78-82 (inclusive).

B. *Subtraction*.—Pages 42-44 (inclusive).

C. *Multiplication*.—Page 48, paragraphs 102 and 103; page 52, paragraph 113.

N. B.—In multiplying use reverse method.

D. *Division*.—Page 56, and additional drill, carrying the quotient out 4 decimal places.

Plenty of drill in the fundamentals should be given to develop both speed and accuracy.

VII. ALIQUOT PARTS.

Pages 12-19 (inclusive), selecting only such exercises as contain the following:

$\frac{1}{2}, \frac{1}{3}, \frac{2}{3}, \frac{1}{4}, \frac{3}{4}, \frac{1}{5}, \frac{2}{5}, \frac{3}{5}, \frac{4}{5}, \frac{1}{6}, \frac{5}{6}, \frac{1}{7},$
 $\frac{1}{8}, \frac{3}{8}, \frac{5}{8}, \frac{7}{8}, \frac{1}{9},$ all 10th's, $\frac{1}{11}, \frac{1}{12}, \frac{1}{16}, \frac{1}{20}, \frac{1}{25}, \frac{1}{50}.$

GRADE IX—BUSINESS FORMS.

The work in business forms in the intermediate schools is to be a natural outgrowth of arithmetic and penmanship. By applying the work of the earlier part of the year to certain very ordinary forms used in business drill may be had on both arithmetic and penmanship. These forms in themselves lead imperceptibly, by exercises which require accurate, painstaking, and orderly tabulation and calculation, to the more formal study of the elementary principles of bookkeeping to follow at the end of the year.

In the exercises on receipts, drafts, notes, etc., it is recommended that the amounts of money be written with initial capitals, with the exception of compound numbers, where the units figure connected with a hyphen should be small; that the amount be placed to the extreme left of the line ("the sum of" in this case necessarily will be omitted); and that this work be done in ledger hand.

In arithmetic, meanwhile, threads have been gathering to form a network on which business forms may be based. Much material has been given in Powers and Loker's "Practical Exercises in Rapid Calculation" and in Van Tuyl's "Essentials of Business Arithmetic" that leads directly to the work to be undertaken with blank forms supplied by the city in an envelope under the name of "Clerical Practice Envelope."

The intermediate step between penmanship and bookkeeping is made by exercises on sale summaries and pay rolls in which excellent drill is offered both in penmanship and arithmetic. In the orderly arrangement of the work, in the summaries especially, an approximation to bookkeeping is made. Groups are arranged on the six-column summary sheets of the outfit. The drill is one in addition. It is excellent prac-

tice to take off on paper the weekly total for each clerk and the grand total, which furnishes a positive check on the whole problem.

As a preliminary to the short set, Business Set No. 1, eighteen bills are prepared from Powers and Loker's and sent to Teacher & Co. This allows the teacher to collect and to pass out the bills so that no pupil receives a bill to pay that he himself made out. The thirty-seven transactions which follow include the use of the check book, deposit slips, drafts, notes, and receipts, blank forms for all of which will be found in the outfit.

The checking point of the work, and perhaps its real aim, is to find, at three times, the balance in the bank. The work requires careful rulings "The School Flexible Ruler No. 789" is recommended.

To afford further material for drill, Business Set No. 2 is provided. It consists entirely of a series of checks and deposits, with the same idea as in the first set of getting the bank balance. In this set, however, a bank statement is furnished. The only difficulty here is that two checks—that to the S. S. Pierce Co. and that to the N. Y., N. H. & H. R. R.—are not returned with the statement. The student is required to reconcile his account with the statement.

Summary of Clerks' Daily Sales. January 1.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
Bates, Aurelia	\$26 72	\$31 78	\$27 36	\$42 99	\$86 72	\$101 79
Davis, Carroll	54 82	60 70	37 86	77 89	87 41	98 67
Fahey, Edward	37 87	94 76	38 72	118 71	27 63	201 69
Heavey, Grace	45 50	71 46	62 34	77 82	65 47	98 71
Jones, Isaac	73 82	26 42	87 98	62 41	47 32	72 65
Lauter, Karl	87 64	72 41	92 76	34 27	57 41	172 86
Nelson, Mary	96 25	73 26	69 74	82 71	92 46	235 49
Peterson, Olga	26 13	28 97	32 46	27 37	41 20	47 62
Rice, Quincy	65 82	71 47	82 65	71 46	62 14	86 70
Teal, Samuel	62 37	72 14	50 00	62 14	82 71	74 82
Vinal, Uriah	92 14	80 16	67 41	42 19	83 16	123 76
Xenophon, William	75 50	83 17	51 64	60 50	63 92	84 72
Zettner, Yates	84 19	94 18	36 15	51 72	80 73	126 50
Totals						

Summary of Clerks' Daily Sales. February 2.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
Calvin, Aaron.....	\$126 35	\$96 47	\$83 26	\$60 50	\$89 17	\$142 73
Davis, Bates.....	25 13	28 32	41 61	52 75	46 18	59 78
Flagg, Ella.....	38 42	26 13	40 78	49 67	45 00	68 13
Gorman, Harry....	61 72	18 16	27 41	32 73	28 82	49 72
Isaacs, John.....	17 86	92 42	30 17	18 21	32 47	45 86
Krouse, Laura.....	79 82	14 16	80 41	79 82	91 05	121 46
Morse, Nathan.....	24 13	116 41	91 02	76 42	74 86	92 04
Oliver, Pauline....	35 19	42 73	37 79	46 45	50 00	62 17
Quinn, Robert.....	41 04	52 16	49 41	28 37	51 29	64 86
Smith, Theresa....	50 32	48 17	62 17	39 47	52 16	71 07
Ulin, Vera.....	33 83	42 44	51 55	67 66	78 88	90 99
Xiques, William....	43 32	34 43	35 56	51 15	46 64	75 57
Young, Zebedee....	91 19	83 84	79 97	68 79	75 50	101 12
Totals.....						

Summary of Clerks' Daily Sales. March 3.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
Allison, Alice.....	\$1,602 73	\$876 21	\$1,101 17	\$678 43	\$932 41	\$1,347 82
Bates, Bertha.....	983 46	1,201 00	1,201 64	821 73	1,025 75	1,347 82
Cressey, Cora.....	721 32	679 81	532 81	976 45	827 67	873 45
Eilers, Ella.....	674 39	721 63	675 27	931 17	640 00	974 32
Fearing, Fanny....	1,142 70	962 17	876 71	935 43	920 71	1,267 89
Goode, Grace.....	936 27	727 67	676 82	323 67	796 81	936 43
Hazeb, Harriet....	237 48	325 05	254 72	329 99	391 42	491 90
Isaacs, Lola.....	135 91	262 17	217 17	329 98	277 84	367 55
Jessup, June.....	246 08	142 21	296 96	321 00	333 76	455 65
Kreisler, Kitty....	1,270 16	967 76	898 98	922 79	1,060 79	1,673 87
Labovitz, Lena....	987 65	1,010 72	989 89	1,097 79	996 69	1,241 77
McManus, May....	432 10	505 75	494 49	505 75	676 79	587 66
Totals.....						

Summary of Clerks' Daily Sales. April 4.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
Nulty, Nora	\$623 71	\$979 86	\$832 41	\$827 32	\$672 87	\$1,201 17
O'Connor, Olive	726 45	829 98	757 85	666 09	727 82	979 82
Peary, Patience	927 32	779 82	636 69	567 89	441 48	727 89
Quinn, Queenie	326 71	271 22	439 63	321 86	392 97	526 76
Ring, Rachel	427 86	989 27	568 73	476 74	523 56	827 77
Simmons, Sophie	367 41	427 29	404 41	389 98	363 67	525 50
Thomas, Theodora	623 41	523 67	521 18	426 93	514 71	728 88
Urquhart, Ursula	425 19	519 76	439 78	521 18	494 98	621 17
Vinal, Victoria	375 18	417 71	392 18	417 81	492 67	584 76
Welch, Winona	514 21	672 83	591 87	589 76	513 12	763 18
Zavier, Zalvia	421 73	489 66	402 77	396 46	580 70	826 98
Young, Yvonne	785 17	816 91	987 42	707 70	685 75	990 00
Zedabaum, Zita	826 00	728 50	642 51	555 67	724 76	897 72
Totals						

Summary of Clerks' Daily Sales. May 5.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
Calvin, Abel B.	\$1,267 23	\$972 31	\$721 00	\$658 75	\$1,421 70	\$1,200 00
Cote, Benjamin	372 15	487 20	392 64	348 71	666 66	722 41
Dolan, Fred E.	89 27	236 42	315 78	402 40	531 82	500 79
Fry, David E.	965 00	375 27	687 50	729 88	647 50	727 85
Gates, Harrie I.	345 72	365 17	333 33	1,371 81	426 62	945 82
Ide, Gertrude H.	723 00	478 63	942 76	816 00	714 75	426 25
Kaye, Leah J.	505 00	111 21	340 71	540 36	472 83	888 87
Long, James K.	2,715 00	1,602 70	827 00	565 75	927 50	922 42
Mooney, Neal O.	627 78	545 54	501 70	516 98	679 82	796 45
Orth, Michael N.	860 25	327 85	700 70	659 05	807 55	727 78
Pearl, Rena Q.	595 50	450 00	379 97	404 09	777 77	813 64
Riley, Prudence	795 35	615 00	556 50	550 00	726 78	896 43
Tobey, Stella U.	627 78	909 99	614 19	515 72	908 00	479 82
Uzzah, Saul T.	265 27	413 27	1,237 45	400 09	550 00	725 71
Wart, Volney X.	482 10	444 44	327 00	726 75	642 24	689 98
Wilson, Una V.	396 79	241 17	350 50	222 22	317 78	500 79
Zacks, Yarnall	346 17	450 71	361 17	555 55	420 01	821 72
Totals						

Monthly Summary of Departmental Sales. June.

	June 2.	June 9.	June 16.	June 23.	June 30.	Totals.
Clothing.....	\$2,146 17	\$941 18	\$1,267 13	\$989 14	\$2,645 18	
Dress goods.....	897 14	1,414 18	1,217 16	995 72	890 00	
Furniture.....	2,176 18	1,246 21	1,126 89	1,118 26	1,415 16	
Household.....	976 84	853 21	777 01	826 50	797 81	
Jewelry.....	1,645 10	918 71	1,201 12	2,112 12	982 16	
Millinery.....	345 18	416 71	281 79	426 82	510 10	
Men's hats.....	462 71	821 76	348 17	518 10	479 32	
Suits.....	1,082 16	982 71	1,265 13	1,011 18	789 14	
Shoes.....	546 82	721 84	652 75	786 41	976 32	
Underwear.....	726 84	491 82	679 13	826 42	535 83	
Totals.....						

Pay Roll for the Week Ending July 1, 1918.

Number.	NAME.	TIME IN HOURS.						Rate per Hour.	TOTAL.		Amount Deducted.	Net Amount.
		M.	T.	W.	T.	F.	S.		Time.	Amount.		
1	Bly, Cora A.....	8	8	8	7	8	8	16				
2	Day, Frank E.....	8	9	8	8	9	8	18				
3	Grant, Harry L...	8	9	8	8	9	8	17				
4	Jones, Robert J...	8	9	9	9	9	9	20½				
5	Lontz, Laura K...	8	8	6	8	9	8	19				
6	Nay, Mary O.....	8	7	9	8	8	8	15				
7	Roe, Pearl Z.....	8	8	8	8	8	10	20			\$5 00	
8	Shay, Tessie U....	8	9	9	9	8	8	16½				
9	Stacey, Allen.....	8	10	8	8	8	8	19½				
10	Thomas, Sara F...	8	6	8	8	8	8	21				
11	Webb, Varna K...	8	7	7	7	7	8	17½				
12	Young, Zila T.....	9	8	8	8	8	8	18½			1 00	

Pay Roll for the Week Ending August 2, 1918.

Number.	NAME.	TIME IN HOURS.						Rate per Hour.	TOTAL.		Amount Deducted.	Net Amount.
		M.	T.	W.	T.	F.	S.		Time.	Amount.		
1	Allon, Alice.....	9	8	9	8	8	8	21½			\$2 00	
2	Bly, Bertha.....	9	9	9	8	9	9	20				
3	Dooley, Daniel....	9	8	8	9	9	9	21				
4	Drake, Carrie.....	9	8	9	9	9	10	22				
5	Elmo, Ella.....	9	9	9	9	9	9	23½				
6	Fry, Frank.....	9	9	8	8	8	8	20½				
7	Grone, Grace.....	8	9	9	9	9	10	22½			2 50	
8	Hunt, Horace.....	9	9	9	9	9	10	23				
9	Isaacs, Irma.....	9	10	10	10	9	9	25½				
10	Jessup, Joseph....	9	9	9	10	9	9	25				
11	Kay, Katherine....	8	9	8	9	9	8	24½				
12	Latimer, Lucy....	9	9	9	9	8	8	24				

Pay Roll for the Week Ending September 3, 1918.

Number.	NAME.	TIME IN HOURS.						Rate per Hour.	TOTAL.		Amount Deducted.	Net Amount.
		M.	T.	W.	T.	F.	S.		Time.	Amount.		
1	Jones, Zenas.....	10	9	10	10	9	9	29½				
2	Mooney, Maria....	10	10	10	9	10	10	26			\$2 50	
3	Nolan, Nellie.....	10	9	8	7	10	10	28				
4	Olsen, Lola.....	10	10	9	8	7	10	26½				
5	Price, Peter.....	10	10	10	7	8	9	27				
6	Quinn, Quigley....	10	10	10	10	9	8	29				
7	Roster, Robert....	10	10	7	7	7	7	28½				
8	Smith, Sylvia.....	10	8	8	8	8	8	27½				
9	Tagg, Theresa....	9	8	8	8	8	8	30½			1 00	
10	Vane, Uriah.....	9	8	9	9	8	9	29½				
11	West, Wallace....	9	9	6	9	9	9	30				
12	Young, Yvonne....	9	5	7	9	9	9	31				

Pay Roll for the Week Ending October 4, 1918.

Number.	NAME.	TIME IN HOURS.						Rate per Hour.	TOTAL.		Amount Deducted.	Net Amount.
		M.	T.	W.	T.	F.	S.		Time.	Amount.		
1	Bernard, Arthur...	11	10	8	9	10	9	32				
2	Ferris, Felix.....	12	9	8	7	8	9	30				
3	Flanagan, Ben....	9	10	8	9	10	9	31				
4	Knox, Harold.....	9	8	9	10	11	10	32				
5	Long, George.....	12	9	8	7	9	10	31				
6	Manley, Wallace..	10	8	9	8	9	7	31				
7	Nugent, Sprague..	12	7	8	9	7	8	30				
8	Riley, Everett....	11	8	7	9	10	10	33			\$1 00	
9	Shelsey, Fred....	8	10	11	9	12	8	32				
10	Thackery, John...	10	9	6	8	7	9	32				
11	Watson, James....	10	12	9	8	7	9	30				
12	Wilson, William...	11	7	8	6	9	7	30			2 50	

Pay Roll for the Week Ending November 5, 1918.

Number.	NAME.	TIME IN HOURS.						Rate per Hour.	TOTAL.		Amount Deducted.	Net Amount.
		M.	T.	W.	T.	F.	S.		Time.	Amount.		
1	Barrett, Rollin...	12	9	12	9	8	9	38				
2	Bisbee, Albert....	10	11	9	10	9	11	38				
3	Doe, William.....	12	10	8	9	10	8	35				
4	Fry, Samuel.....	9	9	9	8	9	8	37				
5	Fisher, John.....	11	8	9	12	8	9	36				
6	Hawes, Harold....	9	10	9	11	9	12	37			\$2 00	
7	Jack, Milford....	10	12	11	9	8	9	36			2 00	
8	Jones, Harry.....	9	10	8	9	12	10	36				
9	Nutt, George.....	9	8	9	9	8	9	35				
10	Power, Frederic...	11	11	10	9	8	9	34				
11	Ross, Carleton....	11	9	8	9	10	11	37				
12	Staples, Arthur...	10	9	9	9	9	10	38			7 00	

Pay Roll for the Week Ending December 6, 1918.

Number.	NAME.	TIME IN HOURS.						Rate per Hour.	TOTAL.		Amount Deducted.	Net Amount.
		M.	T.	W.	T.	F.	S.		Time.	Amount.		
1	Adair, James.....	11	10	11	9	12	9	41				
2	Balfe, Joseph.....	9	12	6	7	9	10	40 $\frac{1}{2}$				
3	Grover, Thomas...	11	9	10	9	8	7	41				
4	Jones, Roland.....	12	6	9	8	7	10	40				
5	Knight, Chester...	12	9	8	9	7	9	42			\$2 00	
6	Moore, Nelson....	10	10	11	10	12	9	42				
7	O'Malley, John....	9	8	12	9	7	8	41 $\frac{1}{2}$				
8	Petrie, Harold....	12	9	8	12	9	8	42				
9	Slaight, Samuel...	9	10	12	11	9	10	42				
10	Spencer, Warren...	10	9	9	8	9	10	41 $\frac{1}{2}$				
11	Sumner, Arthur...	10	12	11	9	8	9	40 $\frac{1}{2}$			4 00	
12	Tully, Arthur.....	11	10	9	8	9	7	42			5 00	

BUSINESS SETS.

Read carefully the section pertaining to Business Forms on an earlier page in this report.

Business Set No. 1.

The business papers used in this set are based on eighteen bills in Powers and Loker's "Practical Exercises in Rapid Calculation," exercises 21, 22b, 23c, 24a, 35c, 45a, 53, 59, 65a, 67, 71, 84a, 86a, 90a, 94a, 97, 104, 120a. When completed to the satisfaction of the teacher, these exercises are laid aside to be given out later for work in business forms. To avoid having a pupil make out a bill and pay the same one, care should be taken to give each pupil one that another pupil has made out. Bills should be directed to Pupil, Teacher & Co., using the names in each case. No bookkeeping entries are to be made. A check book only is to be kept. When the papers are completed, they should be placed in an envelope, after they have been approved by the teacher. If envelopes are not available, pupils may make them. The bills should be numbered as follows:

1. 21 Swift, Pierce & Co., Chicago.
2. 22b S. S. Brown & Co., Boston.
3. 23c Crane Furniture Co., Boston.
4. 24a Fairbanks, Frye & Harwood Co.
5. 35c Brown Godfrey Co.
6. 45a Jones, Peterson & Co.
7. 53 J. M. Williams & Co.
8. 59 Harriman & Smith, Inc.
9. 65a The Carver, Mellen Co.
10. 67 J. B. Walker & Sons.
11. 71 Roscoe & White.
12. 84a Mitchell, Scully & Thompson.
13. 86a Hill, Thompson & Co.
14. 90a Kenerson Mfg. Co.
15. 94a Western Provision Co.
16. 97 U. S. Steam & Gas Supply Co.
17. 104 Adams, Chelsey & Thompson, Inc.
18. 120a Jones, Seagrave & Co.

It would be well for teachers to have an "O. K." or "Approved" stamp for use on satisfactory papers.

Pupil, Teacher & Co. begin a general mercantile business and invest \$4,480 in cash.

1. Deposit in the School Bank, \$4,480. When money is deposited, or checks are drawn, the pupil must not fail to make the necessary notations in the check book.
2. Pay bill No. 1 by check on the School Bank.

3. Pay bill No. 2 by check.
4. Write your ten-day note for bill No. 3.
5. Deposit \$265; \$260 in bills, \$5 in coin.
6. Give check for bill No. 4.
7. Draw a ten-day draft on Wells & Co., of Brockton, who owe you, in favor of Brown Godfrey Co., for bill No. 5.
8. Deposit \$6,642; \$4,500 in checks, \$2,000 in bills, \$142 in coin.
9. Pay bill No. 6 by check.
10. Deposit \$244; \$144 in checks, \$100 in bills.
11. Draw a ten-day draft on Swift & Co., of Lowell, Mass., in favor of J. M. Williams & Co., for the amount of bill No. 7.
12. Give your thirty-day note in favor of Harriman & Smith, Inc., for bill No. 8.
13. Deposit \$2,563; \$1,563 in checks, \$950 in bills, \$50 in coin.
14. Pay bill No. 9 by check.
15. Write your ten-day note in favor of J. V. Walker & Sons for bill No. 10.
16. Pay by check your ten-day note for the amount of bill No. 3.
17. Write a receipt for \$125.25 for William Jackson, who has just paid us his bill. This amount is included in deposits, transaction 19.
18. Pay bill No. 11 by check.

What is your bank balance at present?

19. Deposit \$1,587; \$87 in checks, \$1,410 in bills, \$90 in coin.
20. Write a receipt for \$235, which Joseph E. Eskin has just paid in full for his bill of merchandise. Amount included in transaction 28.
21. Write a thirty-day draft in favor of Mitchell, Scully & Thompson, drawn on Appleton & Co. for the amount of bill No. 12.
22. Write a check for the amount of bill No. 13.
23. Deposit \$56 in coin.
24. Pay by check bill No. 14.
25. Write a check for the amount of the thirty-day note, in payment for bill No. 8.
26. Draw a ten-day draft on Fairbanks & Co. in favor of Western Provision Co. for the amount of bill No. 15.
27. Give your thirty-day note in favor of the U. S. Steam & Gas Supply Co. for the amount of bill No. 16.
28. Deposit \$2,631; \$2,600 in checks, \$31 in coin.
29. Pay by check bill No. 17.
30. Pay by check your ten-day note in settlement of bill No. 10.
31. Write a check for bill No. 18.

What is the amount of your present bank balance?

32. Deposit \$1,931.76; \$1,930 in checks, \$1.76 in coin.
33. Write a check for the amount of your thirty-day note in favor of the U. S. Steam & Gas Supply Co. for bill No. 16.
34. Deposit \$9,672; \$9,010 in checks, \$600 in bills, \$62 in coin.
35. Give your note for ten days for \$9,000 in favor of Simons, Smith & Whitten for money which has been borrowed.
36. Write a receipt for \$413 paid on account by Henry Simpson. Deposit the money.
37. William Wilson has paid cash for merchandise. Write a receipt.
What is your final bank balance?

Business Set No. 2.

The object of this set is to provide supplementary material and a review. Checks, deposit slips, and pay roll memoranda are the only forms actually required; but from the material, practice may be had in work similar to that done in Set No. 1. Deposits must be made and record kept on the back of the stub in the check book. The only difficulty in Set No. 2 is Item 8. A bill of lading may be taught so that the pupil will understand it by referring to the receipt given at an express office when a package is sent away. Copies of the bill of lading may be obtained at any freight office. The sight draft may be developed from the drafts in Set No. 1.

1. Give checks for bills as follows: John H. Andrews & Co., \$125 for rent; Massachusetts Mutual Life Insurance Co. in payment of semi-annual premium, \$90.87.

2. Deposit coin, \$38.85; checks: First National Bank of Boston, \$117.50; State Street Trust Co., \$35; Cosmopolitan Trust Co., \$164.66. Make out deposit slip.

3. Pay by check bill for groceries to S. S. Pierce & Co., \$39.43.

4. Write a check for the total of this pay roll and make out the pay roll memorandum:

Crowell, Barnett.....	\$28 75
Evans, Arnold.....	27 30
Lally, Josephine.....	17 50
Lynch, Arthur.....	33 50
Morrell, William.....	27 35
Nee, Martha.....	18 00
Richmond, John.....	34 00

5. Pay by check freight bill from Boston & Maine R. R. amounting to \$133.25, less an overcharge of \$27.

6. Deposit checks: Dorehester Trust Co., \$85; Old Colony Trust Co., \$45; Paul Revere Trust Co., \$255; coin, \$3.75; bills, \$149. Make out deposit slip.

7. Pay by check to Dennison Co. for tags, \$3.85.

8. Make out checks necessary to cover the following transactions:

I ordered a marine motor from the Caille Perfection Motor Co., Detroit, Mich. To inspect it, I had it shipped with a sight draft attached to the bill of lading. The First National Bank notified me of the arrival of the draft. The motor cost \$135.75, f. o. b. Detroit. The N. Y., N. H. & H. R. R. charged \$1.85 for freight.

9. Paid by check to R. S. Brine \$8.95 for cartage.

10. Deposit checks: Exchange Trust Co., \$98.05; Fidelity Trust Co., \$2.80; Boylston National Bank, \$78 and \$78.75 coin, \$350 bills. Make out deposit slip.

11. Make out check, etc., as above, for this pay roll:

Crowell, Barnett.....	\$25 20
Evans, Arnold.....	32 10
Lally, Josephine.....	18 30
Lynch, Arthur.....	38 00
Morrell, William.....	21 33
Nee, Martha.....	16 37
Richmond, John.....	27 16

12. Deposit checks: People's National Bank, \$3.35; Second National Bank of Boston, \$37.04; Revere Trust Co., \$33; Mutual National Bank, \$160; Hanover Trust Co., \$240 and \$18.43 coin, \$275 bills. Make out deposit slip.

Have pupils make totals at the bottom of each page of the check book, and on the back rule columns for deposits. Return all checks but 17 and 22, and have the student reconcile his account with the following statement:

..... (Name)

in account with the

SCHOOL BANK.

DEPOSITS.		CHECKS.	
June Bal.	\$13,868 36	June.	
2.	356 01	15.	\$125 00
4.	537 75	16.	90 87
10.	607 60	18.	186 40
12.	766 82	19.	106 25
		20.	3 85
		21.	135 75
		23.	8 95
		24.	178 46
Total deposits	\$16,136 54	Total checks.	\$835 53
	835 53		
Bal.	\$15,301 01		

1. How does this compare with the account you kept in the check book?
2. How much money have you available now?
3. What would be a good way to indicate on this statement the present state of your account?

DOUBLE ENTRY BOOKKEEPING SUGGESTIONS.

The following outline provides directions and material for a six weeks' course of thirty minutes a day.

The material in Exercises I, II, and III presents typical transactions which may be added to indefinitely for drill purposes until correct reactions are obtained. These three exercises contain isolated transactions and present only a part, not the whole, of a month's business.

Exercise IV is a complete set in itself and presents all transactions for a month, including the proprietor's investment.

In bookkeeping, every transaction is entered first in a journal and then posted to a ledger. Exercise IV is to be written up in that way and in no other.

For introducing to pupils the principles of debit and credit which underlie both journal and ledger entries, however, the ledger lends itself more effectively than the journal and may be explained first. The pupil will then know his ultimate destination when he comes to use the journal; he will travel toward a goal and not blindly.

After the ledger has been utilized to develop mastery of ideas of debit and credit in connection with Exercises I, II, and III, these exercises may be used again for journalizing and posting to the ledger in the customary way.

Teachers are expected to consult standard bookkeeping texts for model forms of journal and ledger, for functions of accounts, for guidance in analysis of ledger records, and for general mastery of detail.

I. Cash and Merchandise accounts.

1. Use any paper. Rule \top and \perp .
2. Buy merchandise and pay cash.
3. Sell merchandise and receive cash.
4. Invent transactions, and drill thoroughly.
5. Use both accounts in every transaction.
6. Receipts of cash and merchandise are recorded on the left hand side, deliveries on the right hand side of these accounts, respectively.
7. Urge pupils to visualize transactions.
8. Gradually substitute "debit" for "left" and "credit" for "right."
9. Introduce ruled ledger paper.
10. Use Exercise I.

II. Expense account.

1. Use any paper. Rule \top and \perp , for Expense and Cash.
2. Buy postage stamps for cash.
3. Cash is credited. What is debited?

4. Merchandise includes those things which the business buys to sell again. What it buys for its own use is Expense.
 5. It may buy goods or services. Invent transactions involving stationery, postage, wages, light, heat, rent, and labor.
 6. Use ruled ledger paper for Exercise II.
- III. Personal accounts.
1. Sell A. G. Whipple merchandise on account.
 2. Merchandise is credited. What is debited?
 3. A. G. Whipple's account is debited. (The business receives a claim against him.)
 4. Buy of Thomas & Co. merchandise on account. (The business gives Thomas & Co. a claim against itself.)
 5. A. G. Whipple pays us what he owes.
 6. We pay Thomas & Co. what we owe.
 7. Invent similar transactions, and drill.
 8. Follow with Exercise III.
- IV. Proprietor's account.
1. Treat his account like that of any personal account. He is credited for whatever cash or merchandise the business receives from him, and debited for whatever he withdraws.
 2. Invent transactions, and drill.
- V. Trial Balances.
1. Let pupils discover equality of debit and credit totals in the Ledger for Exercise I.
 2. Show arrangement of trial balances—heading, date, and columns.
 3. Make trial balance for Exercise I.
 4. Make trial balance for Exercise II.
 5. Make trial balance for Exercise III.
- VI. Journal.
1. Explain need of books preliminary to the Ledger as a business grows.
 2. Show arrangement of debits and credits in first column.
 3. Use preposition "To" before credits.
 4. Emphasize need of full explanations.
 5. Journalize Exercise I.
 6. Journalize Exercise II.
 7. Journalize Exercise III.
- VII. Posting.
1. Number Journal pages 1, 2, 3, etc.; Ledger pages, 20, 21, 22, etc.
 2. Post in order of dates.
 3. Follow fixed order rigidly.
 - A. Entry in Ledger.
 - B. Journal page in Ledger.
 - C. Ledger page in Journal.
 4. Post Exercises I, II, III.
 5. Take three trial balances.
- VIII. Review.
1. Use Exercise IV.

Bookkeeping Exercise I.

- Feb. 11. Bought 20 bbls. flour at \$11.50, for cash.
 12. Bought 50 bu. wheat at \$2, for cash.
 13. Sold 8 bbls. flour at \$14, for cash.
 14. Sold 6 bbls. flour at \$14, for cash.
 15. Bought 40 bu. oats at \$1.50, for cash.
 16. Sold 25 bu. wheat at \$2.25, for cash.
 16. Sold 15 bu. oats at \$1.65, for cash.
 18. Bought 20 bbls. potatoes at \$6, for cash.
 19. Sold 12 bbls. potatoes at \$7, for cash.
 20. Sold 15 bu. oats at \$1.80, for cash.
 21. Sold 15 bu. wheat at \$2.30, for cash.
 21. Bought 22 bbls. flour at \$11.75, for cash.
 23. Sold 10 bbls. flour at \$14.50, for cash.
 23. Sold 10 bu. wheat at \$2.15, for cash.
 25. Sold 15 bbls. flour at \$14.75, for cash.
 26. Sold 8 bbls. potatoes at \$7.15, for cash.
 27. Bought 5 bu. wheat at \$2.25, for cash.

Find the total cost of merchandise bought.

Find the total price of merchandise sold.

Find the total amount of cash received.

Find the total amount of cash paid out.

Bookkeeping Exercise II.

- March 11. Bought 60 tons egg coal at \$7, for cash.
 12. Bought 90 tons stove coal at \$6.90, for cash.
 13. Sold 8 tons egg coal at \$8.50, for cash.
 13. Paid wages for one week, \$60.
 15. Sold 15 tons egg coal at \$8.50, for cash.
 16. Bought stationery for office use, \$5.
 17. Sold 20 tons stove coal at \$7.75, for cash.
 18. Bought 50 tons nut coal at \$7.25, for cash.
 19. Sold 15 tons stove coal at \$8, for cash.
 20. Paid for hay for horses' use, \$30.
 22. Sold 30 tons of nut coal at \$9, for cash.
 22. Sold 35 tons egg coal at \$8.75, for cash.
 23. Paid wages for one week, \$60.
 24. Paid for postage, \$4.50.
 25. Paid rent for March, \$50.
 26. Sold 20 tons nut coal at \$9, for cash.
 27. Sold 50 tons stove coal at \$8, for cash.

Find total cost of merchandise bought.

Find total amount of expenses.

Find total amount of cash paid out.

Bookkeeping Exercise III.

- April 14. Bought of Packer & Co. 11 bbls. beef at \$18, on account.
 15. Bought of Packer & Co. 80 bbls. salt at \$1.80, on account.
 17. Sold 20 bbls. beef at \$22, for cash.

17. Sold 25 bbls. salt at \$2.10, to Wilson Bros., on account.
18. Sold H. Brooks, on account, 15 bbls. beef at \$22 50.
19. Paid Paeker & Co., on account, \$200.
20. Bought of Paeker & Co., on account, 50 bbls. pork, at \$15.
21. Received of Wilson Bros., on account, \$50.
22. Paid rent for April, \$75.
22. Sold O. J. Lyman, on account, 50 bbls. beef at \$23.
24. Received of H. Brooks, in full of account, \$337.50.
25. Sold Miller & Co., on account, 50 bbls. salt at \$2.15.
26. O. J. Lyman pays us in full of account, \$1,150.
27. Paid Paeker & Co., on account, \$500.
28. Sold H. Brooks, on account, 5 bbls. pork at \$18.
29. Sold, for cash, 45 bbls. pork at \$18.
29. Miller & Co. pays us, on account, \$75.

Find total price of merchandise sold.

Find who owes us and how much.

Find whom we owe and how much.

Bookkeeping Exercise IV.

A SMALL RETAIL COAL BUSINESS.

Books to be used.— Journal and Ledger.

Accounts to be used.— Proprietor's, Merchandise, Expense, Personal, and Cash.

Emphasis.— After it has been made clear that journalizing is the separating of a transaction into its debits and credits and arranging them in a form convenient to transfer to the ledger accounts, emphasis should be placed on the following rules in journalizing the transactions.

Personal Accounts.

Debit the receiver.

Credit the giver.

Merchandise Account.

Debit it for goods bought.

Credit it for goods sold.

Expense Account.

Debit it for the cost of whatever is to be consumed in the business.

Cash.

Debit it when received.

Credit it when paid.

NOTE.— No attempt should be made to make one rule cover all kinds of transactions. A rule like "debit what comes into the business and credit what goes out," when applied to personal accounts causes confusion in the beginner's mind and is difficult of explanation, while the pupil will readily understand the rules given above.

TRANSACTIONS FOR A SMALL RETAIL COAL BUSINESS, JANUARY, 1918.

1. C. R. French began a coal business by investing cash, \$5,000.
2. Paid Nathan Stone for rent of office and yard for one month to February 1, \$50.
3. Bought of W. J. Holland, for cash, 100 tons hard coal at \$8.50.
4. Paid an advertising agency \$10 to place our advertising in the local papers.
5. Bought of A. L. Tripp, on account, 150 tons of soft coal at \$3.50.
7. Sold A. L. Morse, on account, 15 days, 30 tons soft coal at \$5.
8. Bought of John L. Sullivan, on account, 15 days, 300 tons of coke at \$6.
9. Paid for postage, bill heads, and letter heads, \$15.
10. Paid A. L. Tripp cash, on account, \$300.
11. Sold C. A. Dresser, for cash 30 tons soft coal at \$4.50.
12. Sold William Hoffman, on account, 40 tons coke at \$6.50.
14. Bought of A. L. Tripp, on account, 20 days, 75 tons soft coal at \$3.50.
15. Sold C. O. Oakes, on account, 60 tons coke at \$6.50.
16. Paid A. L. Tripp cash, on account, \$100.
17. Received cash of William Hoffman, on account, \$180.
18. Sold D. E. Masters, on account, 30 days, 20 tons hard coal at \$10.
19. Paid John L. Sullivan, on account, \$900.
22. Bought of W. J. Holland, for cash, 35 tons hard coal at \$8.50.
23. Received cash of D. E. Masters, on account, \$100.
23. Received cash, on account, from A. L. Morse, \$150.
24. Paid John L. Sullivan cash, on account, for balance of invoice of the 8th, \$900.
25. Received cash of C. O. Oakes, on account, \$300.
26. Sold William Hoffman, on account, 10 days, 20 tons soft coal at \$3.50, 35 tons hard coal at \$10.
28. Paid clerk's salary for two weeks, \$15.
28. Paid the City Teaming Co. \$75 for making deliveries for the business.
30. Paid rent for office and yard for the month of February, \$50.
31. C. R. French has withdrawn \$50 cash for his own personal use.
31. Paid bill for office repairs, including sign for the business placed on the front of the office, \$25.



SCHOOL DOCUMENT NO. 19—1920
BOSTON PUBLIC SCHOOLS

REPORT OR SURVEY ON
INTERMEDIATE SCHOOLS AND CLASSES

SUBMITTED TO THE SCHOOL COMMITTEE OF THE
CITY OF BOSTON BY THE BOARD
OF SUPERINTENDENTS



BOSTON
PRINTING DEPARTMENT

1921

IN SCHOOL COMMITTEE, BOSTON, February 1, 1921.

Ordered, That five thousand (5,000) copies of the Report or Survey of the Board of Superintendents on Intermediate Schools and Classes, as presented at the meeting of January 3, 1921, be hereby authorized to be printed as a school document.

Attest:

THORNTON D. APOLLONIO,
Secretary.

THE SCHOOL COMMITTEE OF THE CITY OF BOSTON,
OFFICES OF THE BOARD OF SUPERINTENDENTS,
MASON STREET, December 31, 1920.

To the School Committee of the City of Boston:

Under date of June 21, 1920, the following order was adopted by the School Committee:

Ordered, That the Board of Superintendents make a survey of the intermediate schools and report, on or before January 1, 1921, the changes needed therein, if any.

In compliance with the above order of the School Committee, the Board of Superintendents respectfully submits the following report:

NEED OF REORGANIZATION.

Educators have long been convinced that there is something fundamentally wrong with the organization of public elementary and secondary schools. They have come to recognize that the defects are inherent within the system and that the remedy is a complete readjustment of the work of the later elementary school grades and the early years of high school.

School men and women are coming more and more to believe that the old system, comprising two distinct and unrelated units, an elementary school of eight grades and a high school of four, should give place to a thoroughly unified system.

It may be stated as axiomatic, that a chief purpose of public instruction is to provide that form of training which will most efficiently prepare the entire school population to become contented, honorable, intelligent, and industrious citizens, imbued with a full sense not only of their rights and privileges, but likewise of their duties and responsibilities.

Although circumstances render mass instruction necessary, there must be the fullest possible recognition of

individual tastes, desires, and capacities, in order that each pupil may be prepared for a life of the greatest happiness and usefulness. School work must be so organized that each child shall receive the highest degree of training adapted to his peculiar needs, whether he remain throughout the entire school course, or whether he be forced by economic pressure or other necessity to leave school before the course is completed.

The organization of public instruction into two divisions of eight and four years, respectively, is fundamentally wrong in that it violates biological laws. It holds together pupils in the elementary school, under one constant plan of training and discipline from the age of six until the age of about fourteen. Thus it groups together both children and early adolescents. It takes little cognizance of the fact that, about the age of twelve, the physical nature and the mental outlook of pupils begin to change; that at the dawn of adolescence, there is a physical, intellectual, and social awakening. The docility of the child disappears. Self-consciousness is aroused. There ensues a period of desire for experimentation, for exploration, and for reaching out after new activities — a period of discovery and interpretation of individual inclinations and aptitudes. Nothing is so fatal to the pupil during these years as the reviews and repetitions which have been considered necessary for summing up and rounding off the work of the elementary school, and for preparing the pupil to enter the high school. The intermediate school, on the other hand, aims to meet these new-born needs through new subject-material presented by new methods. It plans to satisfy the individuality of pupils by offering a choice in their school work. It aims to produce unity where there has always been division, and to make the course of instruction continuous.

The elementary school of eight grades is not only objectionable in biological theory, but also too long for its own set task. In the opinion of educators, eight years constitute too long a period for acquiring that

elementary instruction — the so-called tools of education — that is needed by all pupils alike. The best educational thought and practice in other countries have long centered around the idea that the period of general preliminary instruction should terminate with the sixth grade. With the improvement in the technique of teaching in the earlier grades, educators are coming to the conclusion that elementary instruction should cover the period of childhood up to and including the sixth grade; to be followed by another type of instruction for the next three grades, the period of pre-adolescence.

There is a lack of adjustment, a lack of articulation between the elementary school and the high school. There is a great gap between them. In the interest of the pupils, the gap must be bridged. The enormous mortality of first and second year high school pupils is convincing proof of the present maladjustment and of the need for facilitating the transition from one type of school to the other. Our goal, unmistakably, should be an uninterrupted series of grades from one to twelve, thus enabling the pupil to progress from the first grade of the elementary school to the last year of the high school without suffering any interruption in the continuity of the course.

The existence of the gap was inevitable in the days of the old conception of the grammar school. At the time when only a few grammar school pupils went to the high school; when the grammar school was the sole source of academic education for the great mass of the people; when opportunity for further education was not generally afforded; the relation of the grade school to the high school was not so serious. The grade school developed its own course, both in method and content, and did its work well. Within the last few years high school registration has increased by leaps and bounds. The desire of young people for more education is very real. Living conditions have improved so that a constantly increasing number of families find it possible to send their children to high school.

No longer is there justification for maintaining artificial distinctions between high and elementary schools. True, changes and modifications of minor importance have been made in the organization of both types of schools, but in spite of all efforts at readjustment the break between elementary and high school has obstinately persisted. The transfer of pupils from the family atmosphere of the elementary school, where the instruction is given by one teacher, to the more impersonal organization of the high schools, where the instruction in various subjects is given departmentally by several teachers, involves a process of readjustment very difficult for the ordinary pupil.

To remove these barriers to the child's progress is of prime importance. The necessity of unifying the school system is obvious. The upper grades of the elementary school and the earlier grades of the high school should be made very similar in organization, subjects and methods. To accomplish this is the mission of the intermediate school.

"Intermediate" is the term chosen to designate the type of school in Boston because it describes the school most accurately. The intermediate school is a link which seeks to bind closely together the elementary and high schools. It is a means of establishing continuity in the whole process of education, a long step forward in the direction of unifying the system of public school instruction. It at last establishes some basis for the hope and belief that in time we may cease to think in terms of elementary and intermediate and high schools, and that eventually we may speak of the pupil, not as being promoted from one type of school to another, but as advancing steadily, step by step, from the first grade to the twelfth, each phase of his work being regarded as equal to any and every other phase, each being regarded as contributing its full share to the orderly training of our young people for their rights, responsibilities, and obligations as future citizens.

GENERAL CHARACTERISTICS OF THE INTERMEDIATE SCHOOL.

Generally speaking, the intermediate school may be regarded as occupying the time and taking the place of Grades VII and VIII of the elementary school and of the first year of the high (Grade IX). It is not an elementary school, for it is not concerned exclusively with the problems of childhood. It is not a high school for it does not deal solely with the problems of youth. It is exactly what its name indicates, a transition school, to deal with the period between childhood and early youth, the period of adolescence.

The intermediate school deals with one homogeneous group. Its curriculum and its methods are constructed, organized, and conducted to meet the needs of this one particular group. Its main characteristics may be summarized under the following heads:

I. DIFFERENTIATION OF COURSES OF STUDY.

A fundamental defect of the traditional school was its failure to recognize adequately the changing mental attitude and characteristics of early adolescent pupils in Grades VII and VIII. The same subjects continued to be taught by substantially the same method. Insufficient opportunity was afforded for personal initiative, self-discovery, and self-expression. On the other hand, the organization of the high school failed to adjust itself to the needs of pre-adolescent pupils.

The intermediate school, in addition to offering new material and new methods, recognizes that reasonable latitude should be allowed the pupil in the choice of a part of his work, so that he may satisfy his own inclinations, and discover, if possible, the range of activities for which he is best fitted; and it affords him assistance in making these self-discoveries. It safeguards him in this important transitional stage.

II. DEPARTMENTAL INSTRUCTION.

A necessary consequence of the differentiation of courses is the departmentalization of instruction. A teacher who has adequately equipped herself for some one special line of work cannot be expected to teach equally well all the subjects of the curriculum. Departmental instruction, therefore, becomes an essential and integral part of the organization of the intermediate school.

It may be stated further that the one-teacher plan of the traditional elementary school runs counter to the needs of pupils in the adolescent period. No matter how enthusiastic, faithful, and intelligent the teacher may be, it is well-nigh impossible to bring the same degree of enthusiasm into a wide range of subjects.

It is just this lack of enthusiasm with the consequent loss of interest which is stifling to the adolescent pupil. By nature he is restless; he craves for novelty, change, new environment. Subordination to a single teacher in a single room, day after day, fetters his imaginative, exploring spirit, or suppresses his newly awakened individuality. On the other hand, different instructors, with different methods, attitudes, and conceptions of teaching, furnish a variety of stimuli for exploration and self-expression; encourage pupils in determining preferences, developing initiative, and asserting their own individuality.

In order that there may be no break in the continuity of the public school system, in order that the intermediate school may not create two gaps where there was one before, and thus defeat its sole purpose, the departmental system is introduced gradually. In Grade VII it is intended that the friendly family atmosphere of the elementary school remain, and that a considerable part of the instruction be given by the room teacher. Departmental instruction, however, is begun, and the course of study to a limited extent is differentiated. The departmental system is extended in Grade VIII, and the work of Grade IX is organized purely upon a depart-

mental basis, corresponding to the first year of the high school. Thus the transition is effected easily and gradually.

III. PROMOTION BY SUBJECT.

Intimately related to differentiation of courses and departmental teaching is promotion by subject. Under this plan a pupil is promoted in every subject in which he obtains a passing grade, and is privileged to repeat a particular subject in which he is deficient. It is quite possible to effect this in a high school which offers a wide range of electives. In the intermediate school, still in the process of evolution, with a course necessarily more rigid than that of the high school, the practical accomplishment of subject promotion is hampered by administrative difficulties. It is almost impossible to arrange a program which will take care of all cases,—a difficult matter even in most high schools.

IV. SUPERVISED STUDY.

The period covered by the intermediate school is the ideal time for teaching pupils how to study. During the early grades children are imitative and more dependent upon teachers for what they acquire. With the more independent spirit of the adolescent period, however, comes the desire to find out things for one's self. To guide this impulse correctly, to inculcate right principles and to develop correct habits of study are among the fundamental duties of the intermediate school, and, accordingly, supervised study periods are provided, so far as possible, under the charge of the subject-teachers. That the intermediate school is the proper place for such guidance seems to be borne out by a recent report upon supervised study, prepared by the Head Masters' Association of Boston High Schools, in which the consensus of opinion of teachers and pupils concerned is that supervised study is of great value in the first year of high school, and of constantly decreasing value from that time onward.

V. VOCATIONAL GUIDANCE.

Another feature of the intermediate school is the opportunity it affords for vocational guidance. A school which is organized for the purpose of satisfying the varying tastes and inclinations of the pupils, and affording them the opportunity of discovering and determining to some extent that line of activity which will be most attractive and useful for them, should be of great service in assisting the pupil to make an intelligent choice of his future field of endeavor.

The intermediate school is not a trade school; nor an industrial, nor a commercial, nor a technical school. It is not a vocational school in any sense, but it performs a legitimate and useful function in furnishing the young pupil what he has seldom or never had in school, viz., an opportunity to experiment and explore in several fields of work, and to get worth-while training in the field which he ultimately chooses. It avoids any appearance of predetermining careers, but it does consciously aim to develop the power of intelligent choice on the part of every pupil. Thus it facilitates the transition to a general or a special high school, to a vocational school, or to the child's prospective field of industry. In any case, the gap is bridged.

DEVELOPMENT IN BOSTON.

The introduction of intermediate schools or classes in Boston has been gradual. The development has been evolutionary rather than revolutionary. The growth has been natural, logical, and unforced. It has been essentially a growth from within.

The introduction of the work has been voluntary. At the outset, there was very naturally a certain amount of doubt and apprehension in the minds of many principals. They realized that an adoption of the plan would mean widespread changes in the organization and administration of their schools and hesitated to accept the responsibility for departing from that system

which had been built up during so many years. They, as well as others, realized the difficulty of finding or of training teachers qualified for the new work. Their opinions were recognized as worthy of the utmost consideration, and, consequently, only those who were in favor of the new plan and who expressed a willingness to make the experiment were invited to undertake the new work. Once started, the work rapidly gained in favor. Those who had undertaken it became more enthusiastic as to its possibilities; others who had at first held aloof, asked opportunity to participate in the new movement. To the initiative and skill of these pioneers the success of the intermediate schools is largely due.

DIFFERENT TYPES OF SCHOOLS. DEFINITION OF TERMS.

The gradual introduction of the intermediate school into the Boston school system has brought about a variety of types of organization below the high school and some confusion in the nomenclature employed, all of which will disappear as the whole system becomes unified. These various types of schools may be enumerated and defined as follows:

(a.) *The Intermediate School.*

This is a unit of organization, comprising three grades, designated as VII, VIII, and IX. Grades VII and VIII correspond to Grades VII and VIII of the traditional elementary school, reconstructed and reorganized. Grade IX corresponds to the first year of the traditional high school. The work for this year has now been standardized so that ninth grade work wherever given may be the same.

The three upper classes of the traditional high school — the second, third, and fourth years — are sometimes named Grades X, XI, and XII, respectively. This is a simple and convenient practice which has the advantage of emphasizing the unification of the entire school system.

Pupils who pass from Grade IX of the intermediate school to the second year (Grade X) of the high school are sometimes termed "tenth grade intermediate pupils." The term is not strictly accurate, but is a convenient way of indicating both the grade and the origin of the pupil. In the same way, "second year high school pupil" indicates a pupil in the second year (Grade X) of the high school, who did the work of Grade IX in the first year of the high school.

There are twelve intermediate schools which have developed out of former elementary schools by retaining pupils of Grade IX. All other ninth grade pupils are enrolled in the high schools.

(b.) *The Elementary School With Intermediate Classes.*

This school consists of eight grades. The first six are the first six grades of the traditional elementary school. Grades VII and VIII are the partially or wholly reconstructed and reorganized Grades VII and VIII of the intermediate school. There are 27 schools of this type. These schools were originally designated as elementary schools with modern foreign languages. From Grade VIII of such schools a pupil passes to the high school of his choice for the work of Grade IX.

(c.) *The Traditional Elementary School.*

Whenever the term "elementary school" is used without explanation or modification, the traditional eight-grade elementary school is meant. There are 28 schools of this type. Pupils from these schools enter the high schools as in the case of (b.) above.

(d.) *The Six-Grade Elementary School.*

This new type of elementary school is the logical result of the establishment of the intermediate school. When the intermediate unit of organization shall have been established throughout the city, the typical elementary school will comprise the first six grades.

Under the new plan of organization the unified school system will eventually consist of twelve grades, distributed into:

A. The Elementary School — Grades I to VI, inclusive.

B. The Intermediate School — Grades VII to IX, inclusive.

C. The High School — Grades X to XII, inclusive.

RECONSTRUCTION OF SUBJECT MATTER.

One of the determining principles in the development of the intermediate school in Boston has been the *reconstruction of subject-content* of the curriculum of Grades VII, VIII, and IX — in order that the work of these grades may be sequential and uninterrupted, and that the work throughout may be adapted to the varying capacities and capabilities of pre-adolescent or adolescent pupils.

A modest beginning of an intermediate organization was made in 1913 when French and German were introduced as optional subjects in Grades VII and VIII of four elementary schools. The results appeared to justify an extension of this privilege of election, and in the following year similar work was begun in four additional elementary schools. Step by step the plan was developed. The work in English, in history and geography, in mathematics, and in science, was reconstructed. Work in clerical practice was outlined; work in mechanic arts for boys and in practical or domestic arts for girls was introduced. On March 22, 1917, the plan was extended to include Grade IX; not a ninth grade of the old type, which was abandoned years ago, before the establishment of intermediate schools was contemplated — but a reorganized ninth grade with the best features of both elementary and high schools. Intermediate schools, with Grades VII, VIII and IX, have been organized in twelve school districts.

With the reconstruction of subject-matter in con-

formity with newer conceptions and ideals of education, and with the introduction of newer subjects into the curriculum, there was developed as a logical sequence, differentiation of courses of study.

Consequently, a course including modern foreign language has been provided for those who intend to go to the high school, and perhaps eventually to college; a course including clerical practice for those who intend to pursue a commercial course in the high school or to go directly into business; a course with mechanic arts for boys and with practical or domestic arts for girls who intend to pursue mechanical, technical, or practical courses in high schools or in trade schools; or who will leave school early to enter the trades or to assist in the duties of the home. No premium is placed upon any one of the courses. All are optional. All are recognized as of equal value, of equal weight, worthy of equal respect. The school is made more democratic in that it affords better opportunities for satisfying the desires, needs and capacities of different types of pupils.

This differentiation is not gained at the expense of certain essential subjects — “constants” — which have been pursued in the first six grades and which must be continued. The time devoted to English, mathematics, history and geography, is not materially reduced. The work, however, is better organized, and the time better distributed. While the curriculum is slightly differentiated at the beginning of Grade VII, it is realized that this period is one of exploration and self-discovery. There cannot be and ought not to be any attempt to settle a pupil's vocation. The courses are so flexible and integrated that if a pupil makes an unwise choice and is found to be pursuing a course which is distasteful or unsuitable to him, he may be directed into other work without serious interruption.

In Grade VIII the same differentiation of work is maintained. By this time many pupils, with the advice of parents and teachers, may have definitely determined their courses of study. Still there are cases in which a

change is desirable. Here, again, provision is made for such change without materially retarding the pupil's progress.

In Grade IX the pupil is doing high school work and is pursuing one of the prescribed courses. At the end of this year he is fitted for regular second year work in one of the high schools. The transition has taken place naturally, and without friction or difficulty, without discouragement or dissatisfaction. There has been no break in the continuity of his work.

CURRICULUM RECONSTRUCTION IN DETAIL.

I. Modern Foreign Language.

Just as the adoption of the intermediate organization has been optional with elementary school principals, so there has been no attempt to force any officially cut-and-dried course of study upon the teachers. The work in modern foreign languages was the first step in the establishment of the intermediate school, and immediately a council, consisting of heads of departments of modern languages in the high schools and teachers of modern languages in the grades, was formed, and to it was given a free hand in laying out a plan of study for Grades VII and VIII. At first a syllabus was prepared for French and German only; later there was added an outline in Spanish. As it also seemed advisable to give the pupils in a few districts a chance to study Italian, an outline of work in that language likewise was prepared. The work in French, German, and Spanish was later extended to Grade IX, and the syllabus for each language was revised accordingly. The outline in Italian is now undergoing revision and similar extension in order to bring it into harmony with the others.

The amount of Italian is very limited. The great bulk of the work is in French and Spanish. Instruction in foreign language is authorized only after the most careful consideration and only when competent teachers can be obtained.

To those who are familiar with the best educational practice in foreign countries, and to those who believe that one of the legitimate functions of the public schools is to prepare pupils to continue their studies in higher institutions, the introduction of modern languages into the seventh and eighth grades needs no defence.

The following points may, however, be noted:

1. It is generally recognized that a good knowledge of at least one foreign language is desirable for anyone who is to continue his education beyond the most elementary stage.

2. If a pupil is to acquire a good command of a foreign language, he should whenever possible begin the study not later than the age of twelve, when the organs of speech are still responsive to the demands made upon them in the imitation and formation of new and strange sounds.

3. The careful study, even for a short period, of a foreign language, no matter by what method it may be taught, is bound to develop the phonetic sense of the child, leading to a better pronunciation and enunciation of English. It leads to a better understanding of the grammatical structure of English, to an increased and improved vocabulary in English; or, in general, to an increased power in speaking, reading, and writing English.

4. Those who continue their education in high school and college are enabled, through the introduction of foreign language work into the grades, to make their knowledge of the foreign language more thorough and practical, and instruction in language in intermediate schools is primarily intended for them. Those who do not continue the study, however, as well as those who do, benefit by their improved knowledge of English. All pupils alike should gain a higher degree of understanding and appreciation of the various racial elements of our cosmopolitan population, with a resultant decrease in racial antagonism. The language classes should be a means of teaching real Americanism.

The method employed in teaching modern foreign language in the intermediate schools is a direct method, based on experience, and adapted to the age and degree of maturity of the pupils; the content is carefully planned and distributed. The work of Grades VII and VIII constitutes one unit and corresponds to the work of the first year in the high school; that of Grade IX a second unit corresponding to the work of the second year in the high school. The work of the first year in high school has been modified in content, but not lessened in efficiency. Thus it is brought into harmony with the first unit in the intermediate school; the work of the second year in high school has similarly been brought into harmony with the second unit of intermediate school, thus providing a uniform, continuous, progressive plan of advancement. Pupils who so desire may now complete five units of modern language work as compared with four under the old plan, with a consequent increase in knowledge and efficiency. It may be repeated that no pupil is forced in the intermediate school to elect a foreign language. The study of a foreign language is limited to those who wish it, and who have demonstrated their ability to carry a foreign language in addition to their other studies. The time devoted to English is not decreased.*

The introduction of modern foreign language work into the intermediate classes revealed the need of especially trained teachers. Accordingly, various courses were provided to enable teachers to obtain the supplementary training required. A detailed statement of the courses will be presented later in this report. In addition to these means of teacher-improvement, several high school teachers regularly inspected the work of the intermediate classes for the first few years, talking over the situation frankly with teachers and principals, offering suggestions and advice. Teachers of the intermediate grades likewise visited their fellow-workers in high schools. From this acquaintance, sympathy in

* NOTE.—This entire subject will be further discussed later in this report.

one another's problems was aroused. Since September, 1917, the supervision of the language work in the intermediate schools and classes has been intrusted to the head of the modern language department in the Normal School. While it is too early to appraise ultimate results, and while there are still many points of contact to be established, yet statistics appear to show that in the main pupils from intermediate schools are holding their own in comparison with those who have received all of their modern foreign language instruction in the high schools. Considering the shortness of the time that the intermediate schools have been in operation, even a marked degree of inferiority — which, however, does not exist — might not unreasonably have been expected.

II. Mathematics.

During the past generation the practice was general of limiting the mathematics of the elementary school to arithmetic. On entering the high school, the pupil was confronted with algebra, an entirely unknown subject, and the percentage of mortality was appalling. The following year the survivors encountered geometry, with the same disheartening results.

During the last few years leading teachers of mathematics have been recommending that this subject be taught as a unit instead of as a series of unrelated fragments; that in the upper grades of the elementary school and the first years of the high school the work consist not solely of arithmetic or algebra or geometry, but of certain essential parts of all three.

In accordance with this newer conception of mathematics teaching, the work of the intermediate grades has been completely reconstructed. In determining the nature and the scope of the modifications to be made, the same procedure was followed as in the case of the reconstructed work in modern foreign languages. No preconceived program of study was thrust arbitrarily by the authorities, upon the teachers in the schools. At the very beginning, a council was formed, consisting

of the heads of departments of mathematics in the various high schools and of representative teachers in elementary and intermediate grades. The outlines of study in mathematics have been wholly the work of this council.

School Document No. 14, 1920, repeats the council's definition of the purpose of the work, as follows:

"The council has not hesitated to depart, where it seemed wise to do so, from those traditions of the past which have obtained in regard to either the arithmetic as taught in Grades VII and VIII or the algebra as taught in the high school.

"It is the opinion of this council that the work in mathematics in the three years of the intermediate school should be in itself a unit. It should aim to give all pupils a knowledge of and facility in those topics of mathematics which are within their powers of comprehension and which, at the same time, are likely to be most useful to them later, whatever their careers may be. The purpose is not merely the completion of arithmetic and certainly not primarily the preparation for more abstract mathematics which may or may not be taken later.

"This council is presenting, therefore, a program of correlated mathematics in which the arithmetic of computation has rightfully the most prominent place during the earlier years; the solution of problems forms an important part of the work of the later years; the equation is presented and used when it will serve a useful purpose; the graph is used to aid in the interpretation of number values, and informal geometry as a means of getting accurate spatial concepts."

By the increased variety of material and method suggested in the outline, the study of mathematics becomes more interesting to adolescent pupils. Through its practical nature the work becomes more valuable for pupils who terminate their school career with the ninth grade. By the common sense and modesty of its requirements and by its careful adaptation to the mental age of the pupils, it lays a substantial foundation for the work of later years.

During the past year the council in mathematics has revised its earlier course of study, defining the content

more clearly in harmony with the principles enumerated above. This revised course is the product of the best co-operative thought and effort of many of the ablest and most experienced teachers of mathematics in the city schools.

But the council at the same time performed another incomparable service. It standardized the work of Grade IX of the intermediate schools and the first year of high schools in order that this unit of work may be uniform wherever undertaken.

Thus a standard course has been provided, as in the case of modern languages, by which the work has been made continuous and uniform throughout Grades VII, VIII, and IX.

Gradually, then, the confusion and discouragement, due to maladjustment, are disappearing and the work of high and elementary schools is being integrated.

The service rendered by the council on mathematics did not end with the formulation of the outline of study. In order to secure permanent results, it became necessary to put into effect a plan of teacher training. This has been accomplished largely by means of numerous conferences held by the council. It has been supplemented by means of various improvement courses offered by the Board of Superintendents. A course of training for teachers of intermediate school mathematics has been incorporated into the curriculum of the Boston Normal School.

A few years ago a series of regional conferences was arranged in four sections of the city for the instruction of teachers in intermediate school mathematics. The leaders of these conferences were prominent members of the council. These conferences were so helpful that they have been revived, and are being held twice a month during the current year. In these conferences content of the course and methods of instruction are discussed with the utmost freedom, the background for deliberation being the detailed working-out of the program in the class rooms of the city.

III. Clerical Practice.

Many pupils are preparing for commercial pursuits. From Grade VII onward they are keenly interested in subject-matter that is preparatory to business. To satisfy the demands of this large group of pupils, outlines of work in clerical practice have been prepared by a council of teachers, representing high and elementary schools. The outline of work presented by this council embodies many of the essentials of the course in mathematics already described, but emphasis throughout is placed upon penmanship, drill in the fundamental operations, commercial arithmetic, and business forms.

The work, simpler and more elementary in Grades VII and VIII, prepares the pupils for the standardized work of Grade IX. This ninth grade work is uniform in high and intermediate schools, leading in either case directly to the second year of commercial work in the high school. It provides for a very large amount of drill and practice in fundamental operations, in order to ensure a higher degree of accuracy and a more rapid rate of progress in the later years. The work in clerical practice is designed to be, and is, eminently practical. It recognizes the importance of giving those pupils who must leave school early in order to enter the business world, such a knowledge and practical command of the elementary principles of business practice as shall enable them to enter upon their work with some fair prospect of success.

The ability to keep personal and family accounts, to make out a bill or a sales slip, to interpret ordinary business forms, to perform ordinary business calculations with accuracy, all are of practical value to the individual and enable him to enter upon business employment with better equipment, with increased wage earning capacity, and with better prospects of success. The pupil who continues the work in high or commercial school does so with increased attainment and power. Best of all, he finds that there is no break in the continuity of his work, but rather a gradual, steady, and definite progress.

The outline of work as prepared by the council was published in School Document No. 7, 1918. It has recently been revised by the council and will soon be ready for distribution. (See School Document No. 18, 1920.)

IV. Geography and History.

The preparation of the outline in geography and history was assigned to a council of experienced teachers from the Normal School and all other types of schools in the city. For the complete report of the council the reader is referred to School Document No. 10, 1917.

A. Geography.

As general geography is a study which is not continued beyond Grade VIII the work of the council was limited to preparing a revised standardized course for Grades VII and VIII.

The aim of the work of Grade VII as defined by the council is: "To gain an intelligent understanding of the human and physical factors which have influenced the territorial and industrial growth of the United States and have secured her leadership in the western world."

The work of Grade VIII has for its aim: "To stimulate, by the application of organized geography data to the solution of world trade problems, a sympathetic appreciation of the character and interdependence of the world's leading peoples — incidentally emphasizing the world standing of the home, city and nation, and providing a basis for the correct interpretation of the World Relations of History."

Certain suggestions for vitalizing the work of Grade VIII show so clearly the practical value of the course and its adaptation to the pupils that they are here repeated:

The work of this grade should be vitalized:

By the use of the problem method whenever the teacher finds that this method can be used to advantage.

By the use of pictures of all kinds.

- By the use of folders advertising railroad and steamship lines.
- By the use of illustrative material
 - Collected by the school;
 - Collected by the pupils.
- By the use of outline maps for locating areas of production, routes of transportation and important industrial and commercial cities.
-
- By the use of statistics, particularly in the form of graphs.
-
- By visits to wharves, freight sheds, mills and factories.
- By the assignment of special subjects to individuals or groups for study and report.
- By showing constantly the relation of each region to the United States, to New England and to Boston.

B. History.

The Council on History found it necessary to prepare an outline of work for the three grades, VII, VIII, and IX, and so to standardize the work of Grade IX as to make it uniform in the intermediate school or in the first year of high school.

The character of the work in history is well indicated in the statement of aims which prefaces the detailed outline prepared by the council.

Aims.

1. To make clear the story of America, so that the boys and girls will know about the country in which they are young citizens, and appreciate its wonderful growth and its ideals, seeing wherein it has succeeded and wherein it has failed.
2. To arouse, through interest in this story, a sense of responsible partnership in the government under which they are living, and a desire to help to make it honest and efficient continually.
3. To develop habits of clear thinking on historical events so that they may learn to form intelligent opinions on public questions.

4. To give a detailed knowledge of the City of Boston, its political, economic and social organization, as a particular preparation for intelligent citizenship.
5. To encourage an interest in historical reading and study which may continue after school days have passed.

The work of Grade IX comprises a detailed study of the City of Boston, its growth, present organization, relation to the state, the nation and the world. The statement of its purpose, as defined by the council, is as follows:

This course aims to give the pupil a practical knowledge of his home city. In studying its development the teacher should refer frequently to conditions as they were in the past, going back when possible to early times for the purpose of establishing standards of comparison. The relation of Boston to Massachusetts, to New England and to the nation as a whole should be emphasized and its relation to the world should be brought out by the study of its routes of commerce and of travel. The object of such study is to lead the pupil to realize his present responsibilities and what it means to be a citizen of Boston and of the world.

The study of present day Boston constitutes a thorough study of community civics, including not only a study of the city, its government, organizations, responsibilities, institutions and problems, but also a study of the state and national governments and their functions. The study of the state, national and world relations of Boston is taken up under two main headings, "Boston, the Industrial Center of New England," and "Boston, the Center for Steamship Lines and Railroads."

It is not for a moment claimed that all of the work outlined here is new. For a long time much of it has been well accomplished in the elementary schools. It is believed, however, that the establishment of the intermediate school, with its thorough-going recognition of the aptitudes and inclinations of adolescent pupils

has afforded opportunity for standardizing, enriching, and completing the courses given in history and geography, to an extent never hitherto realized. Furthermore the establishment of the course in history for Grade IX, consisting as it does largely in a practical study of community civics, has brought into the schools the organized study of a subject of the highest practical value for those who leave school at the end of Grade IX and for those who enter a higher institution of whatever type.

The bridging of the gap between elementary and high school may not be quite so apparent in this case as in those previously considered. Of great fundamental importance, however, is the fact that between school and citizenship a very definite relationship has been established.

V. *English.*

In 1916, a council of representative teachers from high schools and intermediate classes was appointed to prepare an outline of work in English. Its report was printed as School Document No. 9, 1916.

The council, bearing in mind the "romantic, inquisitive and impatient mental attitude of early adolescents . . . insists that emphasis be laid upon the individual child and his interests, rather than upon the subject-matter of literature and rhetoric as such." As a result of this attitude the council does not discuss methods of procedure. It states what a pupil who has completed the sixth grade may reasonably be expected to do, and bases the content of the course recommended upon such definition of the pupil's ability.

The council expresses its opinion of the value of different phases of the work in English as follows:

Instruction in English must meet personal and social needs. If it does not, it is foredoomed to failure. It (the council) sees in composition the means of making effective the child's attempt to communicate ideas, and in literature an opportunity for the child to discover his own interests and ideals and to interpret

his own experiences through his reaction to impressions from books. It views composition as the training for effective work, and literature as the means for self-discovery and the endowment for wholesome enjoyment.

The outline makes specific recommendations as to the reading material for each grade. It defines carefully the scope and content for each grade in oral and written composition, spelling, punctuation, and grammar. It presents a well-conceived, well-planned, well-organized, and continuous course of study for the three years. The outline of work for Grade IX presents a standardized course for that year, wherever given in intermediate or high schools.

VI. *General Science.*

The outline of work in general science was drawn up by a council of teachers representative of all types of schools in the city.

The following statement of principles underlying the work in science is quoted in part from School Document No. 7, 1917:

“It should not be a text book course but a course in observation.

“It should not follow the logical order of science but the child’s interest.

“It should aim to develop thought and a scientific attitude of mind rather than to impart facts.

“It should arouse curiosity and present many interesting problems for the child to consider.”

In following the outline teachers “should clearly distinguish between tentative and absolute conclusions and thus develop” in the pupil the power of “suspended judgment.”

Pupils should be encouraged to construct at home apparatus for classroom work; thus developing initiative in attacking problems.

“The purpose of general science teaching is to give the pupil some command of his environment, and to train him to understand the meaning of life, as interpreted by nature and the common arts. It is believed that this study will train the youth to an appreciation of nature and how to use it in the fulfillment of his life. To this end, in

these early years, he must learn to think *closely* about common things, and to do simple things accurately."

The work consists in general of a series of projects — of problems to be solved by the class. The study of building materials, of fuel, air, water; of insects, birds, bacteria, etc.; of simple machines, electricity, etc.; of flowers and fruits, needs no comment. Such work is well adapted to the age of the pupils; it awakens and holds their interest; it appeals to their explorative nature; it affords a valuable means of enabling them to discover and express their own preferences; it gives information of practical value to them in their homes; it supplements admirably the training in hygiene; and is easily correlated with the work in community civics. The work of Grades VII and VIII leads gradually to the work of Grade IX, which is intended to be identical with introductory science in the first year of the high school.

VII. *Mechanic and Domestic Arts.*

An outline of work in mechanic arts for boys and in practical arts for girls, extending through Grades VII, VIII, and IX, has been drawn up by the teachers of the Department of Manual Arts, in conference with the Assistant Superintendent in Charge. The mechanic arts for boys are woodworking, bookbinding, machine shop work, printing, electricity, sheet metal work, painting, and gardening. It is intended that each boy shall acquaint himself with at least four of these activities during Grades VII and VIII, in order that he may have the fullest possible opportunity to discover his own particular bent. In Grade IX he has intensive work in one line of activity. Upon completion of Grades VII and VIII, pupils may be transferred to the Mechanic Arts High School or to a co-operative course in a general high school, or, if they have reached fourteen years of age, to the Boston Trade School. From Grade IX they may enter the tenth year of an industrial business course in high schools, or the Boston Trade School; or they may go into industry with advanced standing.

In Grade IX these boys are given a course in "Industrial Boston and Civics"; they have an option of a course either in applied science or in related mathematics. The time devoted to English is not diminished.

By means of the work in mechanic arts the city recognizes the legitimate needs of those boys who wish further education along industrial lines, or who have to leave school and enter one of the trades at an early age. It takes a long step forward in the direction of fitting them for their future work, enabling them to enter it with adequate preliminary training. At the same time it does not deprive them of the fundamental general academic training which they in common with all others must have. The transition to a high or industrial school is facilitated.

The course in practical arts for girls comprises home-making, cooking, sewing, bookbinding, and gardening. It is intended that in Grades VII and VIII, wherever possible, each girl shall participate in at least two of these activities. The time ordinarily assigned to academic subjects in these grades has not been reduced. In Grade IX each girl will have advanced work in at least two activities. In Grade IX each girl elects two subjects from the following: Industrial Boston and civics; household mathematics; applied science; salesmanship.

At the end of Grade VIII these pupils may be transferred to the High School of Practical Arts, or, if they are fourteen years old, to the Trade School for Girls. From Grade IX, pupils may enter the Trade School for Girls, the second year of the High School of Practical Arts, or they may go into industry with advanced standing.

Thus the city aims to make suitable provision for those girls who wish to go into industrial life, either at the close of Grade IX, or after further training in the High School of Practical Arts or the Trade School for Girls; also for those who are especially interested in home-making.

Provision for the type of instruction described above

has been restricted owing to the lack of adequate housing facilities and the cost of equipment. The work as yet has been introduced into only a few schools. However, it is recognized as an inherent and essential part of every intermediate school program, and opportunity will be provided more generally for its extension as normal conditions are restored.

The work in mechanic arts and in practical arts should not be confused with pre-vocational courses. These latter are intended for elementary school pupils for whom instruction should be provided, but who for one reason or another are not able to pursue the regular academic work to the best advantage. The work in mechanical or practical arts is intended for pupils who profit by regular academic work and in addition take pleasure in and show aptitude for industrial activities. It has strong vocational value. It is not, however, provided primarily for distinct vocational training, but rather as a means of helping the pupil to discover his own abilities and preferences.

PREPARATION FOR CITIZENSHIP.

The inauguration of intermediate schools and classes involved a very thoroughgoing pedagogical and mechanical reorganization of the work of Grades VII, VIII, and IX. The performance of this function in itself was a distinct educational achievement. To the educator, however, the reorganization affords a welcome opportunity of providing for a larger social and democratic participation in the activities and conduct of the school, or in other words, for developing in the pupils the power of initiative and sense of responsibility. In this connection the following observations may be made.

1.— *The Socialized Program.*

Some subjects lend themselves readily to the socialized recitation; *e. g.*, history, geography, science, certain phases of English. Pupils collect material, perform experiments, ask questions, evaluate answers, and occa-

sionally conduct a class recitation under the guidance of the teacher. Greater interest is evoked, study becomes more thoughtful, the lesson more purposeful. Pupils learn to estimate more discriminatingly the value of the statements placed before them. They develop power of suspended judgment. A strong appeal is made to the spirit of fairness, the sense of justice.

II.— Pupil Government.

Pupil government has often been attempted under widely differing conditions and with varying degrees of success. It fails of its purpose when it is restricted to a few representative pupils who alone are concerned with the governmental machinery of the school. But when suitable provision is made, under the careful guidance of the teacher, for active participation of all the pupils in the conduct and control of the various school activities, when a constant attempt is made to develop in the pupil the power of initiative, the sense of responsibility, the spirit of fair play, and the sense of justice, then the experiment of pupil government has a more favorable prospect of success. Pupil government has not been made in any stereotyped form a feature of the intermediate school in Boston. Its introduction is optional with the individual school, on which its success always must depend. But its place for service in intermediate school organization is unquestioned. It is one of the unsolved problems in the life of the intermediate school that challenge immediate and intelligent solution.

III.— Social Responsibilities.

Through the socialized program and pupil government the way is opened for endowing the pupil with a larger sense of his social responsibilities. The reorganized curriculum, *e. g.*, the work in history, in geography, in general science, above all in community civics, contributes directly to this end. The work throughout is designed to give him the necessary information in

regard to the physical and social conditions under which he lives. The system of instruction and control is designed to develop the power of initiative, the capacity to do things for one's self, the ability to participate in and to control group activities.

As a result, the pupil has a broader conception of his social responsibilities. He learns to act co-operatively with others.

IV.—*Vocational Guidance.*

Lastly, a few words may be devoted to the matter of vocational guidance. The subject is one which is easily misunderstood. There is no desire on the part of school folk to direct the pupil at an early age into some particular trade or industry. There is, however, a strong desire on the part of educators to give the pupil the widest possible opportunity for exploration, in order that under proper guidance he may find himself. In this way the intermediate school renders a distinct service to the cause of vocational guidance.

TEACHER TRAINING.

I. Preparation of Teachers in the Normal School.

Beginning January 5, 1915, work in modern foreign language was offered to a small group of students in the second and third year classes of the Boston Normal School. The bases of selection of these students were proficiency in a foreign language as revealed by their high school records and an apparent peculiar aptitude for teaching the language. The courses were originally conducted by Miss Solano (South Boston High School) in Spanish, Mr. Snow (English High School) in French, and Mr. Hatheway (High School of Commerce) in German. During the school year 1915-16 work with these classes was resumed, Miss Solano assuming charge of the work in French when Mr. Snow became head master. During the succeeding year work in the three languages was continued, Miss Vogel (South Boston

High School) replacing Mr. Hatheway as teacher of German, when the latter became engrossed in other school activities.

In 1917 Miss Solano was appointed to the Normal School with the rank of head of the modern language department.

In the same year the Normal School extended its range of electives to include courses in the following intermediate school subjects: English, history, geography, mathematics, science, and hygiene. These courses are taken by small groups of students, the bases of selection being the same as those indicated above. This work is open to students of the third year with the exception of the courses in modern foreign languages, which are offered in both the second and the third years.

II. Improvement Courses.

The differentiation of courses, the reconstruction of subject-content, and the introduction of new methods of teaching, all of which are fundamental changes in the development of intermediate schools and classes, demanded a type of teachers with a newer, broader outlook upon educational problems, not merely sympathetic toward the newer departure, but desirous to co-operate intelligently therein through painstaking preparation. From the very outset, therefore, the Board of Superintendents has been stimulating preparation on the part of teachers who were desirous of undertaking intermediate school work. Various opportunities for improvement were afforded teachers, such as college courses and the conferences of the various intermediate school councils. In addition to these agencies, however, the Board of Superintendents instituted series of lectures in the subjects of the intermediate school curriculum for teachers of these subjects and others who were anticipating teaching them.

In most instances these lectures or conferences were under the leadership of chairmen of the councils who had formulated the reconstructed courses of study.

The instruction of all the lecturers was definite, concrete, practical, offering a clear and detailed exposition of the subject-matter and the methods of teaching prescribed in the courses of study. The attendance upon these courses (largely voluntary) has been most gratifying, and is another evidence of the eagerness for improvement exhibited by our more progressive teachers.

Following is a list of courses offered for the improvement of teachers in the different subjects indicated:

CLERICAL PRACTICE.

LECTURER.	Number of Lectures.	Date of Beginning.	Registration.
William L. Anderson.....	10	Sept. 26, 1917.	49
William L. Anderson.....	10	Oct. 30, 1918.	40

ENGLISH.

Oscar C. Gallagher.....	10	Oct. 4, 1917.	106
Katharine H. Shute.....	20	Feb. 10, 1920.	34

FRENCH.

William B. Snow.....	10	Jan. 10, 1917.	30
Marie A. Solano.....	10	Sept. 24, 1917.	40
Louis J. A. Mercier.....	60	Oct. 27, 1919.	30
Marie A. Solano.....	30	Oct. 6, 1920.	64
Louis J. A. Mercier.....	60	Nov. 2, 1920.	21

GEOGRAPHY.

Leonard O. Packard.....	10	Oct. 3, 1917.	117
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HISTORY—COMMUNITY CIVICS.

William H. H. Peirce.....	10	Sept. 27, 1917.	77
William H. H. Peirce.....	10	Oct. 29, 1918.	11
Lotta A. Clark.....	20	Sept. 27, 1920.	28

MATHEMATICS.

William L. Vosburgh.....	10	Sept. 25, 1917.	94
Henry M. Wright.....	10	Oct. 31, 1918.	36

SCIENCE.

LECTURER.	Number of Lectures.	Date of Beginning.	Registration.
Joseph R. Lunt.....	10	Oct. 2, 1917.	74
Joseph R. Lunt.....	10	Oct. 28, 1918.	55
Joseph R. Lunt.....	3	Mar. 10, 1919.	20
Joseph R. Lunt.....	20	Feb. 10, 1920.	16

SPANISH.

Marie A. Solano.....	10	Oct. 1, 1917.	31
Marie A. Solano.....	10	Oct. 29, 1918.	18
Marie A. Solano.....	20	Nov. 6, 1918.	48
Marie A. Solano.....	25	Sept. 30, 1919.	11
Marie A. Solano.....	31	Oct. 1, 1919.	21
Marie A. Solano.....	30	Oct. 5, 1920.	26
Marie A. Solano.....	30	Oct. 26, 1920.	14
Elizabeth Delgado.....	20	Feb. 12, 1918.	15
Walter I. Chapman.....	20	Feb. 13, 1918.	39

SUPERVISED STUDY.

Arthur L. Gould.....	20	Sept. 30, 1919.	47
George A. Mirick.....	20	Sept. 30, 1919.	39
George A. Mirick.....	20	Feb. 10, 1920.	23

VOCATIONAL AND EDUCATIONAL GUIDANCE.

John M. Brewer.....	20	Sept. 27, 1920.	33
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III. *Equipment of Teachers of Modern Foreign Languages in Intermediate Schools and Elementary Schools with Intermediate Classes.*

When the introduction of modern foreign languages was originally under discussion it was learned that there was an unexpectedly large group of teachers of elementary grades who for many years had been pursuing systematically the study of a modern foreign language. Many had taken the work for their own culture, others in the hope that some day they might qualify as teachers of these subjects. The introduction of modern foreign

language classes, therefore, became a means of capitalizing the latent resources of the teaching corps.

For the purposes of the present study, the Board of Superintendents, under date of November 15, 1920, addressed a letter to each teacher of modern foreign language in intermediate schools and elementary schools with modern foreign language classes, asking for the following information:

- A. *Preparation.*— Courses pursued in modern foreign languages before entering Boston service.
(Give length of each course.)
 - (a) In high school.
 - (b) In college.
 - (c) From other sources. (Indicate definitely.)
- B. *Improvement.*— Courses taken subsequent to appointment as a teacher of modern foreign language.
(Indicate definitely; give length.)
- C. *Travel.*— Travel and study undertaken with a view to better equipment as a teacher of modern foreign language.
- D. *Period of Service.*— Length of service (in years) as a teacher of modern foreign language.
- E.— Any additional statements supplementary to the above, relative to preparation, study, equipment, service, etc.

Below are submitted summaries of the replies received, grouped according to the letter designations above. Comment upon these reports is unnecessary. They reveal the extent to which these teachers have been pursuing courses, and are still continuing to equip themselves for the work they have undertaken so intelligently and enthusiastically.

TEACHERS OF FRENCH.

Teacher No. 1.

- A. (a) Two years. (c) Dartmouth College Summer School, two years; Sorbonne, Paris, one semester; courses by exchange professors; visits to relatives in France; French spoken at home.
- B. Course on methods, at Harvard, Professor Morize, ten lessons; occasional attendance at courses in Boston; private lessons at home.
- C. Seven trips to Europe; five times since teaching.
- D. Six years.
- E. Dartmouth College Summer School courses, Italian, one year; German, three years; private lessons; translation.

Teacher No. 2.

- A. (a) Four years. (c) Mr. Snow's course, one year; Miss Solano's course, one year; private lessons, four years, one hour a week.
- B. Two courses, Professor Mercier (sixty hours each), elementary and advanced.
- D. Two years.
- E. Now taking summer and extension courses to complete regular four years' work in French at Radcliffe.

Teacher No. 3.

- A. (a) Five years. (c) Harvard Summer School course, advanced French, six weeks.
- B. Columbia University Summer School course; Professor Mercier's courses, two years; four summer courses, Marycliff Academy.
- C. One summer in France and Italy.
- D. Three years.
- E. Courses in elementary and advanced Spanish, Harvard Summer School, six weeks each.

Teacher No. 4.

- A. (a) Four years. French, one year; German. (c) Miss Solano's course; courses at Berlitz School of Languages, four years; private lessons, three years, three a week.
- B. Three courses, Professor Mercier.
- C. Fourteen months abroad in France, Italy, Spain and Switzerland.
- D. Two years.
- E. Lowell Evening Courses in French, ten years; taught private classes five years; course in Spanish, Sr. Martinez (30 lessons); evening high school course. Course in Italian at Young Women's Christian Union, and private lessons in Italian, six months, three a week.

Teacher No. 5.

- A. (a) Four years, French; one year, German. (c) German courses at Berlitz School, two years; private lessons in German, two years, two a week.
- B. Six college extension courses in German (60 hours each), Professor Perrin, Boston University; private lessons in German, five months, one a week; lessons at Gosselin School in German, 100. Three college extension courses in French, Professor Geddes; one correspondence course in French.
- D. Six years, teacher of German; second year as teacher of French.
- E. One of teachers who started modern foreign language work in intermediate grade. Prepared for French when German was discontinued.

Teacher No. 6.

- A. (a) One year. (c) Darmouth College Summer School course; Evening high school, three years; Berlitz School, four years; course at Abraham Lincoln School; course at Continuation School; private lessons, five years.

- B. Miss Solano's course; Professor Mercier, two courses.
- C. Three trips to France (one summer and part of two others).
- D. Three years.
- E. Study of French for about twenty-five years, before beginning teaching.

Teacher No. 7.

- A. (a) Four years. (c) Miss Solano's courses, two years.
- B. Professor Mercier's courses, two years.
- D. Two years.
- E. Knowledge of speaking, reading, and writing Italian has facilitated study of French.

Teacher No. 8.

- A. (a) Four years. (b) Radcliffe College, French, two years; German, 1 year. (c) Course in French and course in Italian, Boston University.
- B. Miss Solano's course; Professor Mercier, two full courses; Lowell Institute courses; Columbia University Summer course; now taking Professor Mercier's course; private lessons, two years, two a week.
- C. Paris, five weeks; five weeks in French family in New York, while attending Columbia University.
- D. Three years.
- E. Two years' leave of absence were spent at Radcliffe College, studying languages listed under (a) above. Has full credit for A.A. degree. Member of Salon Français of Boston.

Teacher No. 9.*

- A. (a) Two years, French; three years, German. (b) French, four years, as major subject; German, two years; Spanish, two years. (c) French, Normal School, one year as major subject; Marycliff Academy, residence, one year, French spoken daily.
- D. Three years.
- E. Member of Salon Français. Harvard Summer School course in Spanish, six weeks; now taking Miss Solano's course in Spanish, and a correspondence course in Spanish, given by State Board of Education.

Teacher No. 10.

- A. (a) Three years. (c) Summer course at Modern School of Languages, thirty days, four hours a day; course in methods by Professor Nesbitt; private lessons, five years, one a week.
- B. Two-year course, Professor Mercier; now taking a third year with him (sixty lessons a year); course with Professor Morize, Harvard; Mr. Snow's course.
- C. Arranged to take several courses in Paris next summer.
- D. Seven years.
- E. Residence for part of four summers at convent where only French is spoken.

* Junior assistant (probationary teacher).

Teacher No. 11.

- A. (a) Four years, French and German; (b) Boston University graduate, A. B. degree, specialized in French and German. (c) French conversational courses at Sacred Heart Academy, one year; at Marycliff Academy, six months; and at Convent of Cenacle, six months.
- B. Professor Mercier's courses, two years (sixty lessons each).
- D. Four years.
- E. Member of Salon Français.

Teacher No. 12.

- A. (a) French, four years; German, one year. (c) private lessons, five years, one a week.
- B. Private lessons, two years, one a week.
- D. Four years.

Teacher No. 13.

- A. (a) Three years. (c) Studied French since high school days.
- B. Summer session, Middlebury College.
- C. A summer and one whole year in France, studying French.
- D. Seven years.
- E. One of the teachers who started modern foreign language work in elementary schools.

Teacher No. 14.

- A. (a) Four years.
- B. Miss Solano's course; private lessons, four years, one a week.
- D. Four years.
- E. Berlitz School, four years; evening school, one year; Tournier's course, twenty weeks; Continuation School, one year; private lessons, Professor D'Armand, five years. (These courses listed under E were taken since teaching, but before beginning the teaching of French.) Still taking lessons from Professor D'Armand and attending French class once a week.

Teacher No. 15.

- A. (a) Two years. (c) Followed course given at Massachusetts Institute of Technology, with her brother; private lessons, one winter.
- B. Course with Mme. Held; private lessons, one year before teaching and two years after, with Mlle. Jardel.
- C. Traveled in Belgium, Switzerland and France—two weeks in Paris.
- D. Four years.

Teacher No. 16.

- A. (a) Four years. (b) private lessons, one year, one a week.
- B. Correspondence course, one year, college credit, Professor David, Chicago University; private lessons, three years, one a week; study of French songs.
- D. Three and one half years.

Teacher No. 17.

- A. (a) German, three years; (b) Radcliffe, four years; (c) Harvard Summer School, teachers' course.
- B. Miss Solano's course; Professor Mercier's course; Boston University, one and one half teacher's course; private lessons at Berlitz, one third of a year; private lessons with Professor D'Armand, one half year; private and class lessons, one half year.
- C. Plans for study in France next summer.
- D. Four years.
- E. Preparation in German: Five courses in Radcliffe; one teacher's course at Boston University; two months' study in Berlin and Dresden.

Teacher No. 18. *

- A. (a) Four years. (b) Radcliffe, four years. (c) Mr. Snow's course, Normal School; Professor Mercier's course.
- B. Two university extension courses; private and class lessons, sixteen months, three a week.
- D. Four years.

Teacher No. 19.

- A. (a) Three years. (c) Professor Mercier's course; Tournier's course; Berlitz School, one year; private lessons, two years.
- B. University extension course; private lessons, one year, two a week.
- C. One summer in Canada among educated French people.
- D. Two years.
- E. Taking Tournier's advanced course.

Teacher No. 20.

- A. (a) Two years French, four years German. (c) Berlitz School, nineteen months, two one-hour lessons a week.
- B. Boston University Summer School, two courses, six weeks each, with Professor Waxman and Professor Geddes; 60 private lessons, Mlle. Jardel.
- D. Three years.

Teacher No. 21.

- A. (a) One year. (c) private lessons five years, one a week.
- B. Dartmouth Summer School, two sessions; private lessons, eight years, one a week.
- C. Private lessons in Paris, ten months, four a week, and daily attendance at public "cours" at Sorbonne.
- D. Seven years.

Teacher No. 22.

- A. (a) Two years French, one year German. (c) Summer course at Martha's Vineyard, six weeks; private lessons, 100 to 125.

* Junior assistant (probationary teacher).

- B. Mr. Snow's course; Miss Solano's course; two courses, Professor Geddes, Boston University; one course, Professor Waxman, Boston University, one year; two courses, Professor Mercier.
- C. Six weeks in French speaking countries of Europe, and some time in Quebec.
- D. Three years.
- E. Observed work in French in New York public schools, and at Columbia University.

Teacher No. 23.

- A. (a) One year French, one year German. (c) courses, Boston University, two years; Berlitz School, class lessons, three years; private lessons, three years.
- B. Professor Mercier's course.
- C. One summer in Paris, with occasional private lessons.
- D. One year.
- E. Taking second course with Professor Mercier, also private lessons. Preparation in German: Boston University courses, three years, with Professor Perrin; private lessons, three years.

Teacher No. 24.

- A. (a) Four years French, two years German.
- B. Miss Solano's course; Professor Mercier, two-year course; private lessons (50).
- C. Year abroad, with study of French, Italian, and Spanish; residence in France, Switzerland, Italy, and Spain.
- D. Five years.
- E. Continuing work with Professor Mercier. Have followed for several years courses of French lectures at Massachusetts Institute of Technology. Preparation in Italian: Two winter evening courses at Young Women's Christian Association, eighty lessons in all; private lessons.

Teacher No. 25.

- A. (a) Four years. (c) Berlitz School, two courses; Boston University, Professor Geddes, one year course; private lessons, one year.
- B. Miss Solano's course; Boston University course, one year; twenty Lowell Institute lectures; private lessons, two years.
- D. Four years.

Teacher No. 26.

- A. (a) Three years. (b) two years. (c) Normal School, one year.
- B. Mr. Snow's course; Miss Solano's course; Harvard Summer School course; Professor Mercier; private lessons, fifteen weeks, three a week.
- D. Six years.

Teacher No. 27.

- A. (a) Three years, preparatory school; five years, private school; (c) Professor Mercier's course, sixty lessons; Miss

Solano's course; Mr. Chapman's course; Boston University course, twelve weeks; Boston University summer session, six weeks; private lessons.

- B. Second year course, Professor Mercier.
- D. One year.

Teacher No. 28.

- A. (a) Three years. (c) Course with M. D'Armand, private lessons, eighteen weeks, five hours a week.
- B. Miss Solano's course; Boston University courses, three years.
- D. Three years.
- E. Boston University, two summer courses and a full course, three hours a week, in Spanish.

Teacher No. 29.

- A. (a) Four years. (c) Normal School, two years.
- B. Miss Solano's two courses.
- D. One year.

Teacher No. 30.

- A. (a) Two years French, one year German. (c) Boston University, three semesters; private lessons, four years.
- B. Professor Mercier, two courses; Professor Tournier, twenty lessons.
- C. Six months in France, private lessons and lectures at Sorbonne, living in a French family. One summer in French section of Canada. Boarded five years in a French family.
- D. One year, three months.
- E. Preparation in German, Boston University courses, Professor Perrin, three years.

Teacher No. 31.

- A. (a) Three years. (c) Salem Normal School, six months.
- B. Mr. Snow's course; Professor Morize's course; private lessons, weekly, four years.
- D. Seven years.
- E. Use of French language in her own home since childhood; read French literature with another teacher, once a week for past three years.

Teacher No. 32.

- A. (a) Three years. (b) Did not go to college, but followed college courses with friend who had outline of work there. (c) Began study of French at ten years of age, receiving private instruction, twice a week, until entering high school.
- B. Berlitz School courses, three years.
- C. One summer in southern countries of Europe, France, Italy, Belgium; year's leave of absence to study French in France, receiving teacher's certificate for work done.
- D. Six years.

Teacher No. 33.

- A. (a) Two years. (c) Berlitz School, class lessons; Boston University, one semester; study with French dictation records at home.
- B. Three summer courses (two with credit) at Middlebury College; two years' teachers' training course, with Professor Mercier; private lessons, weekly, three years.
- C. Four weeks at French convent at Quebec. Preparing for six months' residence in Paris for further study.
- D. Three years.
- E. Member of Salon Français.

TEACHERS OF GERMAN.

Teacher No. 34.

- A. (a) Four years. (c) Harvard Summer School course, private lessons.
- B. Private lessons, five months, two hours a week.
- D. Eight years.
- E. Private lessons in conversation, at different times, for ten years. Had life-long preparation for this language.

Teacher No. 35.

- A. (a) Two years. (c) Boston University courses, two years, two hours a week; private lessons, four months, one hour a week.
- B. Boston University courses, three years, two hours a week. At present taking two courses, Boston University, one hour each a week.
- D. Three years.

TEACHERS OF SPANISH.

Teacher No. 36.

- A. (a) French, four years; German, one year. (c) Two courses, Gordon Detwiler School (thirty hours each); one course, Martínez School (30 hours); Evening High School course; private lessons, Havana, one month.
- B. Miss Solano's courses, four years; two correspondence courses, University Extension, twenty lessons each; Lowell Institute course, Professor Ford.
- D. Three years.

Teacher No. 37.

- A. (a) French, four years; German, three years. (c) Boston University courses, two years.
- B. Miss Solano's courses, three years; private lessons, two years. Observation of teaching by Senora Orozco, two years.
- D. Two years.

Teacher No. 38.*

- A. (a) French, four years. (b) Radcliffe, Spanish, four years. (c) Normal School, one year; forty private lessons.

* Junior assistant (probationary teacher).

- B. Miss Solano's courses, three years.
- D. Three years.
- E. Preparation in French, Two Harvard Summer School courses; Professor Mercier's course; private lessons.

Teacher No. 39.

- A. (a) Two years, Spanish; four years, German. (c) Normal School, two years, Spanish; Miss Solano's courses, four years. University Extension course, twenty lessons, in Spanish.
- D. One year.

Teacher No. 40.

- A. (a) French, three years.
- B. University Extension courses, two years; correspondence courses, one year; Miss Solano's courses, three years; course, Señor Martínez, one year; private lessons, three years.
- D. Three years.
- E. At present taking private lessons with Señora Caracashian.

Teacher No. 41.

- A. (a) French, two years. (c) Twenty lessons in Spanish, class and private, from Porto Rican teacher; fifteen lessons in class with Miss Solano, at Young Men's Christian Association.
- B. Miss Solano's three courses; State University Extension course, one year; private lessons, two years, two a week, with Cuban teacher. One private lesson weekly now.
- D. Five years.
- E. French, Berlitz School, twenty lessons.

Teacher No. 42.

- A. (a) French, two years; German, one year. (c) Boston University, two semesters, Saturday course; course, Berlitz School, one year; Columbia University Summer School course, with residence in Spanish family; private lessons with Señora Delgado, four winters.
- B. Miss Solano, two courses; Boston University course, two semesters.
- D. Three years.
- E. Work at Berlitz School in French, Spanish and Italian. Seven months' residence in Italy, most of the time in non-English speaking family; private lessons in Italian while there.

Teacher No. 43.*

- A. (a) French, four years. (b) Radcliffe, Spanish, four years. (c) Normal School, one year, Spanish.
- B. Miss Solano's two courses; Berlitz School course, one year.
- D. Three years.
- E. Radcliffe, German, one year; French, three years; University Extension course in Italian.

* Junior assistant (probationary teacher).

Teacher No. 44.

- A. (a) French, four years. (b) Harvard, Spanish, three years.
(c) Berlitz School, one term, twenty lessons.
- B. Miss Solano's three courses,
- D. Four years.
- E. Member of Modern Language Association. Harvard, German, one year; French two courses; Italian, one year; Professor Mercier's course in French.

THE 100-POINT DIPLOMA AND PROMOTION BY SUBJECT.

With the establishment of the intermediate school and the consequent reconstruction of the work of Grades VII and VIII in the elementary school, as well as the standardization of Grade IX work wherever offered, it seemed advisable to revise the plan of granting the high school diploma. This principle seems sound; that wherever in the pupil's course adolescent or secondary education is begun, at that point such work should receive due recognition and credit toward a high school diploma.

Under the old plan the high school diploma was given to those pupils who had earned eighty points. One point indicates one 40-minute period of prepared work daily continued throughout the year. Twenty such periods, or twenty diploma points, constitute the average year's work.

This plan has now been extended downward to include intermediate Grades VII and VIII. These two grades, taken together, constitute one unit, for which normally twenty diploma points are granted. This assignment of points recognizes the fact that not all of the work of these two grades may be regarded as secondary in character, and the further fact that the work done by pupils of this age is not wholly comparable with that done by more mature pupils.

For the work of Grade IX and of each of the three succeeding years, a normal credit of twenty points is given, thus making up the one hundred points required for a diploma. Pupils who by their previous records have demonstrated their ability to carry an additional

subject are allowed to take up the study of a modern foreign language in Grade VII. This language is continued in Grade VIII. On the successful completion of this unit of work in modern foreign language a credit of five points is allowed, making a total of twenty-five points for the work of the two grades. If the exceptionally able pupil continues to earn twenty-five points each year instead of twenty, he is able to complete his secondary school course in five years instead of in six as at present. In this way it is possible to meet the needs of a relatively small group of accelerant pupils who present a problem in every school and for whom ordinarily no special provision is made. Under the intermediate school plan, therefore, it is possible to remedy a condition which has long been the source of severe criticism of the public school system.*

A word should be added in regard to the plan followed in making so radical a change in the granting of diplomas. The Board of Superintendents has carefully refrained from thrusting any central-office scheme upon the schools. During the year 1918, when the need of considering various administrative details growing out of the continued development of the intermediate schools had become apparent, a conference committee was formed, consisting of three intermediate school principals and three high school head masters, to consider and recommend such administrative measures and such additional legislation as might seem necessary. The Superintendent and the Assistant Superintendents in charge of high and intermediate schools, respectively, met regularly with the conference committee. The 100-point diploma plan and all other details connected with the organization and administration of intermediate schools have been conceived, elaborated and recommended by this conference committee. There has recently been appointed a co-ordi-

* The details of the present 100-point diploma plan are given in full with the necessary explanations in School Document No. 2, 1919, entitled, "Supplementary Report—Organization and Administration of Intermediate Schools in Boston."

nating committee, comprising four elementary school principals and one principal of a six-grade elementary school. In order that all points of view may be represented in the discussion of certain details of organization and administration, these two committees are now working jointly.

While promotion by subject has been adopted in principle, the machinery for its application is being constructed with great care by this unifying committee to which reference is made elsewhere. Whatever the machinery may be, however, it will closely resemble that of the high schools, in order that the methods of promotion in elementary and high schools may not be materially dissimilar.

It is confidently expected that the results of these deliberations will meet with the approval of the principals and teachers of the different types of schools represented.

RELIEF OF CONGESTION AND ECONOMY OF ADMINISTRATION.

At the time when intermediate schools and classes were established, the appropriations of the School Department were insufficient to meet the current needs of the schools. Full details of these conditions may be found recorded in recent reports of the Superintendent. Only by the most drastic retrenchment could the bare necessities of the schools be provided for. No provision could be made for future expansion.

In the high schools, especially, conditions were unfavorable. The vast increase in high school enrollment had resulted in overcrowded buildings, and in the occupation of annexes often far distant from the central building. In some instances pupils were required to attend in two or even three shifts. Owing to the congestion, unpleasant and unsuitable rooms were used for class-room purposes. There were no funds available for providing requisite housing facilities, and even if there had been the unfortunate conditions were bound to persist and be accentuated for several years.

The establishment of intermediate schools afforded substantial relief. Certain elementary schools were in a position to retain and accommodate their own ninth grade pupils, thus relieving the first year high school classes. The extent of the relief afforded by the establishment of the intermediate schools is indicated by the following tables:

TABLE I.

Pupils of Grade IX in Intermediate Schools, September.

SCHOOL.	1918-19.	1919-20.	1920-21.
Abraham Lincoln.....	96	95	123
Bigelow.....			61
Emerson.....	83	91	80
George Putnam.....	128	108	144
Hancock.....	46	52	34
Henry L. Pierce.....	103	120	108
John Winthrop.....	63	65	94
Lewis.....	175	155	196
Mary Hemenway.....	143	135	146
Oliver Wendell Holmes.....		236	245
Robert G. Shaw.....	86	69	58
Ulysses S. Grant.....	65	88	101
Totals.....	988	1,214	1,390

From the table it appears that in September, 1918, 988 pupils, in 1919, 1,214, and in 1920, 1,390 pupils, were able to do their ninth grade, or first year high school work, in their own school districts. The relief afforded the overcrowded high schools is apparent. At the same time it is probably true that a certain number of pupils who were enrolled in Grade IX in their own districts might not have been attracted to a Grade IX elsewhere. The relief to the high schools, therefore, is probably somewhat less than the figures would indicate. On the other hand, there has been a distinct gain to the individual pupils and to the community through the longer retention of these pupils in school.

Moreover, a considerable financial saving has resulted from the fact that the above-mentioned high school pupils have received their ninth grade instruction in their own intermediate school districts, under intermediate school teachers; whereas, otherwise, they would have been taught by teachers in the high school. The extent of this economy is revealed in the following table:

TABLE II.

	Cost per Elementary School Pupil.	Cost per High School Pupil.	Number of Ninth Grade Pupils.	Total Saving.
1918-19.....	\$47 45 52 88	\$92 92 100 71	988	\$44,924 36 47,256 04
1920-20.....	48 78 53 84	101 95 109 61	1,214	64,648 38 67,704 78
1920-21.....			1,390	* 70,000 00

* Approximated.

The cost of the entire school system per pupil may be reckoned on two bases. The first amount in the column headed, "Cost per Elementary School Pupil," is reckoned on the basis of average membership, the second on the basis of average attendance. The same is true of the second column. The saving on the 988 pupils of Grade IX in the year 1918-1919 is \$44,924.36 or \$47,256.04, respectively. For the 1,214 pupils in Grade IX in the year 1919-20, the saving is either \$64,548.38 or \$67,704.78. The figures for the present school year are not available. As 1,390 pupils are enrolled in Grade IX this year and the saving per pupil will probably in no event be less than \$50, a further economy of about \$70,000 may be anticipated. The figures need no further comment or interpretation.

The actual saving to the city is undoubtedly somewhat less than the figures indicate. A certain number of pupils who would ordinarily leave school at the end of Grade VIII have undoubtedly been encouraged to remain in school another year; *i. e.*, a certain number

have been retained in Grade IX of the intermediate school who would not have entered high school. Even taking this into consideration, there has been a very material saving.

It is not to be expected that such a saving can be made in the future, for intermediate school teachers should not be asked to do work of high school grade indefinitely and receive the salary of elementary school teachers. Nor should they continue to handle divisions of pupils of the present size, if they are to do successful work of secondary school grade. It is barely possible that in future years there will be no economy at all because of the intermediate school organization. There will continue to be, however, a distinct saving, in that less expensive and less ornate buildings will be erected for intermediate schools than for high schools, that they in a measure will replace. Be that as it may, the fact remains that at a very critical time, the coming of the intermediate schools furnished substantial relief and resulted in a very material reduction in the city's expenditures for secondary school education.

STATISTICS OF ORGANIZATION.

The statistics of organization of intermediate schools, compiled on October 15, 1920, are presented in the following tables, III (a), III (b), III (c).

Table III (a) shows for each school the actual number of classes grouped according to size, and the total number of pupil hours of instruction given in each group. The number of pupil hours is, generally speaking, the product obtained by multiplying the number of periods per week in any one class by the number of pupils in the class. Frequently, however, it will be noted that the total number of pupil hours is not an exact multiple of the number of periods. In such cases the number of periods per week represents the sum of the periods given with several classes of different size and the number of pupil hours per week is obtained by the addition of the several corresponding products.

Table III (*b*) shows for each school the relation borne by the number of classes of any given size to the total number of classes in the school. Thus in the Abraham Lincoln School 1 per cent of the classes, in the Bigelow 6 per cent, in the Emerson 9 per cent, consists of less than fifteen pupils each..

Table III (*c*) shows the relation borne by the number of pupil hours of instruction given in units of any given size to the total number of pupil hours given in the school. For example, in the Bigelow School 3 per cent of the pupil hours, in the Emerson 3 per cent, in the George Putnam 2 per cent, is given in class units of less than fifteen pupils each.

TABLE III (A).
Report on Organization of Intermediate Schools, October 15, 1920.

SCHOOL.	UNDER 15 PUPILS.		15-20 PUPILS.		21-25 PUPILS.		26-30 PUPILS.		31-35 PUPILS.		36-40 PUPILS.		OVER 40 PUPILS.		TOTALS.	
	Number Periods per Week.	Number Pupil Hours per Week.	Number Periods per Week.	Number Pupil Hours per Week.	Number Periods per Week.	Number Pupil Hours per Week.	Number Periods per Week.	Number Pupil Hours per Week.	Number Periods per Week.	Number Pupil Hours per Week.	Number Periods per Week.	Number Pupil Hours per Week.	Number Periods per Week.	Number Pupil Hours per Week.	Number Periods per Week.	Number Pupil Hours per Week.
Abraham Lincoln.....	3	42	40	734	28	631	21	585	2	64	127	4,862	292	13,629	513	20,547
Bigelow.....	21	280	21	348	28	594	88	2,494	85	2,728	61	2,321	32	1,354	336	10,124
Emerson.....	38	390	34	533	90	2,152	77	2,200	24	807	83	3,271	98	4,345	444	13,698
George Putnam.....	1	13	14	240	2	48	14	392	232	7,827	40	1,502	248	10,940	551	20,968
Hancock.....	96	832	85	1,442	43	985	34	1,020	81	2,688	116	4,247	2	263	457	11,478
Henry L. Pierce.....	44	534	83	1,498	12	280	90	2,524	91	2,974	70	2,714	172	7,920	562	18,444
John Winthrop.....	13	156	59	1,065	62	1,395	81	2,269	23	739	137	5,271	75	3,619	450	14,514
Lewis.....	.....	.....	14	252	14	336	.....	.....	132	4,520	195	7,501	268	12,250	623	24,859
Mary Hemenway.....	12	108	54	1,058	58	1,288	28	783	59	1,962	131	5,090	216	9,840	558	20,129
Oliver Wendell Holmes.....	21	276	36	650	19	442	50	1,481	204	6,655	325	12,522	341	15,049	996	37,075
Robert G. Shaw.....	42	412	46	854	49	1,055	111	3,074	66	2,160	33	1,204	146	6,203	493	14,962
Ulysses S. Grant.....	9	83	.....	.....	3	71	29	833	104	3,599	138	5,279	67	3,265	350	13,130
Totals.....	300	3,126	486	8,674	408	9,277	623	17,655	1,103	36,724	1,456	55,789	1,957	88,683	6,333	219,928

TABLE III (B).
 Organization of Intermediate Schools, October 15, 1920.
Per Cent of Classes in Particular Units.

SCHOOL.	Under 15.	15-20.	21-25.	26-30.	31-35.	36-40.	Over 40.	Total.
Abraham Lincoln.....	1	8	5	4	.....	25	57	100
Bigelow.....	6	6	9	26	25	18	10	100
Emerson.....	9	8	20	17	5	19	22	100
George Putnam.....	.....	3	.....	3	42	7	45	100
Hancock.....	21	19	9	7	18	25	1	100
Henry L. Pierce.....	8	15	2	16	16	12	31	100
John Winthrop.....	3	13	14	18	5	30	17	100
Lewis.....	.....	2	2	.....	21	32	43	100
Mary Hemenway.....	2	10	10	5	11	23	39	100
Oliver Wendell Holmes.....	2	4	2	5	20	33	34	100
Robert G. Shaw.....	9	9	10	22	13	7	30	100
Ulysses S. Grant.....	3	.....	1	8	30	39	19	100
Average.....	5	8	6	10	17	23	31	100

TABLE III (C).
 Organization of Intermediate Schools, October 15, 1920.
Per Cent of Pupil Hours in Particular Units.

SCHOOL.	Under 15.	15-20.	21-25.	26-30.	31-35.	36-40.	Over 40.	Total.
Abraham Lincoln.....	.....	4	3	3	.....	24	66	100
Bigelow.....	3	3	6	25	27	23	13	100
Emerson.....	3	4	15	16	6	24	32	100
George Putnam.....	.....	1	.....	2	38	7	52	100
Hancock.....	7	13	9	9	23	37	2	100
Henry L. Pierce.....	3	8	1	14	16	15	43	100
John Winthrop.....	1	7	10	16	5	36	25	100
Lewis.....	.....	1	1	.....	18	30	50	100
Mary Hemenway.....	1	5	6	4	10	25	49	100
Oliver Wendell Holmes.....	1	2	1	4	18	34	40	100
Robert G. Shaw.....	3	6	7	20	14	8	42	100
Ulysses S. Grant.....	1	.....	1	6	27	40	25	100
Average.....	2	4	4	8	17	25	40	100

In examining the statistics of organization as given in the tables, the attention is at once arrested by the very large proportion of small classes, those consisting of twenty-five pupils or less. These small classes are in some measure due to the development of the work in mechanic and domestic arts, but it must be kept in mind that the instruction in cookery, sewing, and wood-working which has long formed a part of the curriculum in these grades, is also given in small units. There are also small divisions, especially in Grade IX, in modern foreign language and in various other academic subjects. Evidently some of the principals, in their desire to afford their pupils the widest educational opportunity, have in some instances organized classes with insufficient numbers.

There is an equally striking preponderance of very large class units in most of the intermediate schools. Here it is only fair to state that in the totals for each school are included the large units in music, choral practice, and physical training. If these are omitted and placed under a separate heading, the number of large class units in the regular academic subjects will naturally be somewhat reduced.

It is, however, perfectly clear that economy of administration cannot tolerate so large a number of small units; also that efficiency of instruction demands that the number and size of the very large units be materially reduced.

Principals have been allowed a great deal of freedom in organizing the intermediate schools, and have recognized, perhaps to an extreme, the wisdom of satisfying local needs, demands, and conditions. One school for good and sufficient reasons may develop its industrial work to an unusually high degree; thus having a large number of small classes. On the other hand, it may be desirable in another school to emphasize the more purely cultural courses. This may lead to an increased proportion of large classes. Such variations from a norm are not to be regarded as wrong or indefensible.

However, taking all possible factors into consideration, it appears clear that the time to close the period of experimental organization has arrived, and that the Board of Superintendents should proceed at once, with the co-operation of the intermediate school principals, to draw up and put into effect a comprehensive plan of intermediate school organization, along the same lines as those followed in constructing the plan of reorganization of the high schools, which was put into effect in 1916, and published as Bulletin No. VIII of the Department of Educational Investigation and Measurement.

THE PERSISTENCE OF PUPILS OF INTERMEDIATE SCHOOLS.

It has been the hope of the advocates of intermediate schools that its introduction would reduce the mortality among ninth grade pupils and encourage them to remain longer in school. That these expectations are being realized appears to be borne out by the statistics presented in the following table:

TABLE IV (A).

Number of Pupils who Completed Grade VIII of Intermediate Schools in June, 1920, and are now Attending Grade IX.

SCHOOL.	Number of Pupils Who Completed Grade VIII in June, 1920.	Number of Such Pupils in Grade IX, October 15, 1920.	Number of Such Pupils Who were Attending First Year High Schools, October 15, 1920.
Abraham Lincoln.....	160	123	11
Bigelow.....	100	61	10
Emerson.....	94	80	4
George Putnam.....	208	144	58
Hancock.....	65	34	7
Henry L. Pierce.....	160	108	47
John Winthrop.....	130	94	19
Lewis.....	252	196	42
Mary Hemenway.....	188	146	17
Oliver Wendell Holmes.....	298	245	29
Robert G. Shaw.....	96	58	31
Ulysses S. Grant.....	117	101	1
	1,868	1,390	276

TABLE IV (B).

Number of Pupils who Completed Grade VIII of Elementary Schools in June, 1920, and now are Attending First Year of Boston Public High Schools.

SCHOOL.	Number of Pupils Who Completed Grade VIII in June, 1920.	Number of Such Pupils Who Were Attending Grade IX or First Year High School October 15, 1920.
Agassiz.....	91	70
Bennett.....	146	128
Blackinton-John Cheverus.....	135	105
Bowditch.....	80	55
Bowdoin.....	80	70
Bunker Hill.....	53	43
Chapman.....	99	81
Charles Sumner.....	123	109
Christopher Gibson.....	117	100
Dearborn.....	137	107
Dillaway.....	98	71
Dudley.....	114	83
Dwight.....	42	30
Edmund P. Tileston.....	71	55
* Edward Everett.....	122	127
Elihu Greenwood.....	115	100
Eliot.....	93	63
Everett.....	66	49
Francis Parkman.....	60	52
Franklin.....	47	38
Frederic W. Lincoln.....	56	42
Gaston.....	70	55
Gilbert Stuart.....	77	53
Harvard-Frothingham.....	115	87
Henry Grew.....	61	50
Hugh O'Brien.....	147	113
Hyde.....	69	51
Jefferson.....	95	67
John A. Andrew.....	63	48

* A relatively small number of first year high school pupils apparently have been counted more than once owing to transfers and changes of residence of pupils at the opening of the schools in September.

TABLE IV (B).

Number of Pupils who Completed Grade VIII of Elementary Schools in June, 1920 and now are Attending First Year of Boston Public High Schools.—Concluded.

SCHOOL.	Number of Pupils Who Completed Grade VIII in June, 1920.	Number of Such Pupils Who Were Attending Grade IX or First Year High School, October 15, 1920.
Lawrence.....	72	44
Longfellow.....	139	118
Lowell.....	102	68
Martin.....	72	55
Mather.....	240	197
Minot.....	57	42
Norcross.....	89	49
Oliver Hazard Perry.....	74	61
Phillips Brooks.....	108	95
Prescott.....	76	61
Prince.....	118	91
Quincy.....	75	50
Rice.....	97	71
Roger Wolcott.....	260	240
Samuel Adams.....	128	69
Sherwin.....	66	46
Shurtleff.....	70	47
Theodore Lyman.....	119	74
Thomas Gardner.....	82	67
Thomas N. Hart.....	89	71
Warren.....	69	58
Washington.....	73	49
Washington Allston.....	134	114
Wells.....	96	80
Wendell Phillips.....	176	147
William E. Russell.....	98	82
	5,421	4,248

From the above tables it appears that while the percentage of graduates of the elementary schools in June, 1920, who are now attending Boston high schools is .78,

the percentage of pupils who completed the work of the eighth grade in intermediate schools last June and are now attending the ninth grade or first year high is .89.

The Board of Superintendents does not submit the above statistics as conclusive evidence of the greater persistence among intermediate school pupils. It is true that in some instances intermediate schools have been organized in districts from which a large proportion of pupils naturally would remain in school. On the other hand, certain districts with intermediate schools will be recognized as those from which a relatively small number of pupils heretofore have advanced beyond the eighth grade.

On the whole, the statistics are very favorable to the intermediate school as an agency for holding the pupils in school.

COMPARISON OF RECORDS OF TENTH GRADE PUPILS
FROM HIGH SCHOOLS AND FROM INTERMEDIATE
SCHOOLS.

TABLE V (A).

Total Number of A's, B's, C's, and D, E, F's Earned in the Second Year of the High School by Pupils who Attended Grade IX of the Intermediate School during 1919-20, Based on First Bi-monthly Reports.

SCHOOL.	A's.	B's.	C's.	DEF's.	Total.
Abraham Lincoln.....	13	62	133	83	291
Bigelow.....					
Emerson.....	15	79	102	12	208
George Putnam.....	12	88	211	55	366
Hancock.....	1	16	38	27	82
Henry L. Pierce.....	44	135	193	50	422
John Winthrop.....	24	98	121	14	257
Lewis.....	31	129	259	124	543
Mary Hemenway.....	27	125	210	115	477
Oliver Wendell Holmes.....	99	307	377	124	907
Robert G. Shaw.....	7	74	105	28	214
Ulysses S. Grant.....	29	106	166	35	336
Total.....	302	1,219	1,915	667	4,103
Per cent.....	7	30	47	16	100

TABLE V (B).

Per Cent of A's, B's, C's, and D, E, F's Earned in the Second Year of the High School by Pupils who Attended Grade IX of the Intermediate School During 1919-20, Based on First Bi-monthly Reports.

SCHOOL	A's.	B's.	C's.	DEF's.
Abraham Lincoln.....	4	21	46	29
Bigelow.....				
Emerson.....	7	38	49	6
George Putnam.....	3	24	58	15
Hancock.....	1	20	46	33
Henry L. Pierce.....	10	32	46	12
John Winthrop.....	9	38	47	6
Lewis.....	6	24	47	23
Mary Hemenway.....	6	6	44	24
Oliver Wendell Holmes.....	11	34	41	14
Robert G. Shaw.....	4	24	49	13
Ulysses S. Grant.....	9	32	49	10
Average for high schools.....	9	30	47	14
Average for intermediate schools.....	7	30	47	16

TABLE V (C).

Total Number of A's, B's, C's, and D, E, F's Earned in the Second Year of the High School by Pupils who Attended the First Year in the High School During 1919-20, Based on First Bi-monthly Reports.

SCHOOL	A's.	B's.	C's.	DEF's.	Total.
Brighton High School.....	9	81	70	24	184
Dorchester High School.....	123	419	615	164	1,321
East Boston High School.....	98	228	313	61	700
English High School.....	91	457	1,250	245	2,043
Girls' High School.....	201	763	1,026	435	2,425
Girls' Latin School.....	41	133	224	97	495
High School of Commerce.....	111	491	1,345	276	2,223
High School of Practical Arts.....	183	489	408	107	1,187
Public Latin School.....	66	377	349	336	1,128
Roxbury High School.....	222	486	670	127	1,505
West Roxbury High School.....	135	457	444	155	1,191
Total.....	1,280	4,381	6,714	2,027	14,402
Per cent.....	9	30	47	14	100

TABLE V (D).

Per Cent of A's, B's, C's, and D, E, F's Earned in the Second Year of the High School by Pupils who Attended the First Year in the High School During 1919-20, Based on First Bi-monthly Reports.

SCHOOL.	A's.	B's.	C's.	DEF's.
Brighton High School.....	5	44	38	13
Dorchester High School.....	9	32	47	12
East Boston High School.....	14	32	45	9
English High School.....	5	22	61	12
Girls' High School.....	8	32	42	18
Girls' Latin School.....	8	27	45	20
High School of Commerce.....	5	22	61	12
High School of Practical Arts.....	16	41	34	9
Public Latin School.....	6	33	31	30
Roxbury High School.....	15	32	45	8
West Roxbury High School.....	11	39	37	13
Average.....	9	30	47	14

TABLE V (E).

Total Number of A's, B's, C's, and D, E, F's Earned in the Second Year of the High School by Pupils who Attended Grade IX of the Intermediate School During 1919-20, Distributed According to the High Schools to Which They Were Admitted.

SCHOOL.	A's.	B's.	C's.	DEF's.	Total.
Brighton High School.....	1	10	5	6	22
Dorchester High School.....	159	504	636	244	1,543
East Boston High School.....	44	173	247	44	508
English High School.....	16	135	317	89	557
Girls' High School.....	14	78	145	116	353
Girls' Latin School.....		3	1		4
High School of Commerce.....	7	41	120	37	205
High School of Practical Arts.....	4	20	30	5	59
Public Latin School.....		3	7	13	23
Roxbury High School.....	49	188	328	88	653
West Roxbury High School.....	8	64	79	25	176
Total.....	302	1,219	1,915	667	4,103
Per cent.....	7	30	47	16	100

TABLE V (F).

Per Cent of A's, B's, C's, and D, E, F's Earned in the Second Year of the High School by Pupils who Attended Grade IX of the Intermediate School During 1919-20, Distributed According to the High Schools to Which They Were Admitted.

SCHOOL	A's.	B's.	C's.	DEF's.
Brighton High School.....	5	45	23	27
Dorchester High School.....	10	33	41	16
East Boston High School.....	9	34	48	9
English High School.....	3	24	57	16
Girls' High School.....	4	22	41	33
Girls' Latin School.....		75	25	
High School of Commerce.....	3	20	59	18
High School of Practical Arts.....	7	34	51	8
Public Latin School.....		13	30	57
Roxbury High School.....	8	29	50	13
West Roxbury High School.....	5	36	45	14
Averages.....	7	30	47	16

A Summary of Preceding Tables Showing Comparative Percentage of Marks Earned by Tenth-Year Pupils from Intermediate Schools and Second-Year High School Pupils Based on First Bi-monthly Records, School Year 1920-21.

	A's.	B's.	C's.	DEF's.
Second-year high school pupils.....	9	30	47	14
Tenth-year intermediate school pupils.....	7	30	47	16

For Comparative Purposes the Same Information is Given for the School Year 1919-20.

	A's.	B's.	C's.	DEF's.
Second-year high school pupils.....	9	30	47	14
Tenth-year intermediate school pupils.....	7	27	48	18

For Comparative Purposes the Same Information is Given for the School Year 1918-19.

	A's.	B's.	C's.	DEF's.
Second-year high school pupils.....	10	30	46	14
Tenth-year intermediate school pupils.....	9	28	45	18

From an analysis of the foregoing tables it appears that:

1. There is very little difference between the marks of pupils in the tenth grade of the high schools, whether the work of the ninth grade was pursued in the intermediate or in the high school.

2. There is a slight difference in the marks in favor of the pupils who took ninth grade work in the high school. This is evidence that complete articulation between intermediate and high schools has not yet been effected. The statistics indicate, however, that there is a slight gain from year to year in the direction of uniformity in results.

It should be observed that the percentage of deficiencies indicated in the above tables is unduly unfavorable to the pupils from both types of schools. The percentages are based upon the first bi-monthly period of school work. Marks for this period are invariably lower than at any other period during the year. A large proportion of pupils marked "D, E, F," during the first two months will redeem themselves and secure a rating in the satisfactory column later in the year. The justification for selecting this period in preference to a more normal one lies in the fact that statistics covering this period have been secured from the high schools during the past two years, and thus a basis for comparison has been rendered possible.

COMPARISON OF RECORDS OF PUPILS IN MODERN FOREIGN LANGUAGE.

The following tables show the comparative standing of two groups of second-year high school pupils in their modern language work; first, those who did their first unit of modern language work in the first year of high school; second, those who completed the first unit of modern language work in the intermediate school.

The tables are based on the work of the pupils during the first bi-monthly period of the present school year. It is recognized that the work of the first bi-monthly

period does not afford a just basis for estimating the work of either group, for the work shows increased efficiency and higher ratings in the later periods of the year. This period has been chosen, however, because the statistics available from earlier years are based upon it and because the date set for the presentation of this survey precluded the choice of a later period. Whatever injustice there may be is especially to the disadvantage of the pupils entering the second year of high school from the ninth grade of intermediate school, for in their case alone should there be need for any process of readjustment.

COMPARISON OF RECORDS IN MODERN FOREIGN LANGUAGES OF PUPILS FROM HIGH SCHOOLS AND INTERMEDIATE SCHOOLS.

TABLE VI (A).

Total Number of A's, B's, C's, and D, E, F's Earned in the Second Year of the High School by Pupils Who Attended the First Year of the High School During 1919-20, Based on First Bi-monthly Reports.

Subject: French.

SCHOOL.	A's.	B's.	C's.	DEF's.	Total.
Brighton High School.....					
Dorchester High School.....	18	56	78	19	171
East Boston High School.....	15	20	24	10	69
English High School.....	15	87	201	31	334
Girls' High School*.....	43	158	165	103	469
Girls' Latin School.....	17	38	42	27	124
High School of Commerce.....	7	27	94	21	149
High School of Practical Arts.....					
Public Latin School.....	9	62	60	51	182
Roxbury High School.....	19	44	74	21	158
West Roxbury High School.....	14	43	61	32	150
Total.....	157	535	799	315	1,806
Per cent.....	9	30	44	17	100

* French II and III.

TABLE VI (B).

Per Cent of A's, B's, C's, and D, E, F's Earned in the Second Year of the High School by Pupils Who Attended the First Year of the High School During 1919-20, Based on First Bi-monthly Reports.

Subject: French.

SCHOOL.	A's	B's.	C's.	DEF's.
Brighton High School.....				
Dorchester High School.....	10	33	46	11
East Boston High School.....	22	29	35	14
English High School.....	5	26	60	9
Girls' High School*.....	9	34	35	22
Girls' Latin School.....	14	30	34	22
High School of Commerce.....	5	18	63	14
High School of Practical Arts.....				
Public Latin School.....	5	34	33	28
Roxbury High School.....	12	28	47	13
West Roxbury High School.....	9	29	41	21
Averages.....	9	30	44	17

* French II and III.

TABLE VI (C).

Total Number of A's, B's, C's, and D, E, F's Earned in the Second Year of the High School by Pupils Who Attended Grade IX of the Intermediate School During 1919-20, Based on First Bi-monthly Reports.

Subject: French.

SCHOOL.	A's.	B's.	C's.	DEF's.	Total.
Dorchester High School.....	21	61	86	28	196
East Boston High School.....	14	20	23	3	60
English High School.....	6	24	62	19	111
Girls' High School.....	1	11	12	28	52
Girls' Latin School.....	1				1
High School of Commerce.....	5	19	11		35
High School of Practical Arts.....					
Public Latin School.....			3		3
Roxbury High School.....	5	18	43	21	87
West Roxbury High School.....	3	7	10	6	26
Total.....	50	147	258	116	571
Per cent.....	9	26	45	20	100

TABLE VI (D).

Per Cent of A's, B's, C's, and D, E, F's Earned in the Second Year of the High School by Pupils Who Attended Grade IX of the Intermediate School During 1919-20, Based on First Bi-monthly Reports.

Subject: French.

SCHOOL.	A's.	B's.	C's.	DEF's.
Dorchester High School.....	11	31	44	14
East Boston High School.....	23	33	39	5
English High School.....	5	22	56	17
Girls' High School.....	2	21	23	54
Girls' Latin School.....		100		
High School of Commerce.....		14	54	32
High School of Practical Arts.....				
Public Latin School.....			100	
Roxbury High School.....	6	21	49	24
West Roxbury High School.....	12	27	38	23
Averages.....	9	26	45	20

TABLE VI (E).

Total Number of A's, B's, C's, and D, E, F's Earned in the Second Year of the High School by Pupils Who Attended the First Year of the High School During 1919-20, Based on First Bi-monthly Reports.

Subject: Spanish.

SCHOOL.	A's.	B's.	C's.	DEF's.	Total.
Brighton High School.....					
Dorchester High School.....	6	22	28	10	66
East Boston High School.....	8	8	10	2	28
English High School.....	1	16	82	21	120
Girls' High School.....					
Girls' Latin School.....					
High School of Commerce.....	13	61	180	49	303
High School of Practical Arts.....					
Public Latin School.....					
Roxbury High School.....	10	15	30	6	61
West Roxbury High School.....					
Total.....	38	122	330	88	578
Per cent.....	7	21	57	15	100

TABLE VI (F).

Per Cent of A's, B's, C's, and D, E, F's Earned in the Second Year of the High School by Pupils Who Attended the First Year of the High School During 1919-20, Based on First Bi-monthly Reports.

Subject: Spanish.

SCHOOL.	A's.	B's.	C's.	DEF's.
Brighton High School.....				
Dorchester High School.....	9	33	43	15
East Boston High School.....	29	29	35	7
English High School.....	1	13	68	18
Girls' High School.....				
Girls' Latin School.....				
High School of Commerce.....	4	20	60	16
High School of Practical Arts.....				
Public Latin School.....				
Roxbury High School.....	16	25	49	10
West Roxbury High School.....				
Averages.....	7	21	57	15

TABLE VI (G).

Total Number of A's, B's, C's, and D, E, F's Earned in the Second Year of the High School by Pupils Who Attended Grade IX of the Intermediate School During 1919-20, Based on First Bi-monthly Reports.

Subject: Spanish.

SCHOOL.	A's.	B's.	C's.	DEF's.	Total.
Dorchester High School.....	4	32	47	14	97
East Boston High School.....			9	2	11
English High School.....		7	13	4	24
Girls' High School.....		1		4	5
Girls' Latin School.....					
High School of Commerce.....	1	1	3	1	6
High School of Practical Arts.....					
Public Latin School.....					
Roxbury High School.....	2	3	4	3	12
West Roxbury High School.....					
Totals.....	7	44	76	28	155
Per cent.....	5	28	49	18	100

TABLE VI (H).

Per Cent of A's, B's, C's, and D, E, F's Earned in the Second Year of the High School by Pupils Who Attended Grade IX of the Intermediate School During 1919-20, Based on First Bi-monthly Reports.

Subject: Spanish.

SCHOOL.	A's.	B's.	C's.	DEF's.
Dorchester High School.....	4	33	49	14
East Boston High School.....			82	18
English High School.....		29	54	17
Girls' High School.....		20		80
Girls' Latin School.....				
High School of Commerce.....	17	17	50	16
High School of Practical Arts.....				
Public Latin School.....				
Roxbury High School.....	17	25	33	25
West Roxbury High School.....				
Averages.....	5	28	49	18

TABLE VI (I).

Total Number of A's, B's, C's, and D, E, F's Earned in the Second Year of the High School by Pupils Who Attended the First Year of the High School During 1919-20, Based on First Bi-monthly Reports.

Subject: German.

SCHOOL.	A's.	B's.	C's.	DEF's.	Total.
Brighton High School.....					
Dorchester High School.....	1	1			2
East Boston High School.....			1	2	3
English High School.....	15	23	103	10	151
Girls' High School.....					
Girls' Latin School.....	1	4	2		7
High School of Commerce.....					
High School of Practical Arts.....					
Public Latin School.....	11	36	28	36	111
Roxbury High School.....					
West Roxbury High School.....					
Totals.....	28	64	134	48	274
Per cent.....	10	23	49	18	100

TABLE VI (J).

Per Cent of A's, B's, C's, and D, E, F's Earned in the Second Year of the High School by Pupils Who Attended the First Year of the High School During 1919-20, Based on First Bi-monthly Reports.

Subject: German.

SCHOOL.	A's.	B's.	C's.	DEF's.
Brighton High School.....				
Dorchester High School.....	50	50		
East Boston High School.....	33	67		
English High School.....	10	15	68	7
Girls' High School.....				
Girls' Latin School.....	14	57	29	
High School of Commerce.....				
High School of Practical Arts.....				
Public Latin School.....	10	32	26	32
Roxbury High School.....				
West Roxbury High School.....				
Averages.....	10	23	49	18

TABLE VI (K).

Total Number of A's, B's, C's, and D, E, F's Earned in the Second Year of the High School by Pupils Who Attended Grade IX of the Intermediate School During 1919-20, Based on First Bi-monthly Reports.

Subject: German.

SCHOOL.	A's.	B's.	C's.	DEF's.	Total.
Dorchester High.....	1	2	4		7
East Boston High.....	7	5	13	2	27
English High.....	3	8	36	3	50
Girls' High.....					
Girls' Latin.....					
High School of Commerce.....					
High School of Practical Arts.....					
Public Latin.....			2	1	3
Roxbury High.....					
West Roxbury High.....					
Totals.....	11	15	55	6	87
Per cent.....	13	17	63	7	100

TABLE VI (L).

Per cent of A's, B's, C's, and D, E, F's Earned in the Second Year of the High School by Pupils Who Attended Grade IX of the Intermediate School During 1919-20, Based on First Bi-monthly Reports.

Subject: German.

SCHOOL.	A's.	B's.	C's.	DEF's.
Dorchester High.....	14	29	57	.....
East Boston High.....	26	19	48	7
English High.....	6	16	72	6
Girls' High.....				
Girls' Latin.....				
High School of Commerce.....				
High School of Practical Arts.....				
Public Latin.....			67	33
Roxbury High.....				
West Roxbury High.....				
Average.....	13	17	63	7

The figures of the preceding tables are summarized below:

TABLE VI (M).

Comparison of Per Cents of Marks Earned by Second Year High School Pupils Who Attended High School in 1919-20, and Second Year High School Pupils Who Attended Intermediate School in 1919-20, Based on Reports for First Bi-monthly Period 1920-21.

	A's.	B's.	C's.	DEF's.
FRENCH.				
Second year high school pupils.....	9	30	44	17
Tenth grade intermediate school pupils.....	9	26	45	20
SPANISH.				
Second year high school pupils.....	7	21	57	15
Tenth grade intermediate school pupils.....	5	28	49	18
GERMAN.				
Second year high school pupils.....	10	23	49	18
Tenth grade intermediate school pupils.....	13	17	63	7

The striking thing about the figures given for French in the above tables is the substantial equality shown by

the two groups of pupils; all the more striking because the divergences from the standard are likely to be much wider in a small group than in a large one. As the number of pupils who completed their first year of work in the high school is vastly greater than the number of those who entered the second year of high school from the ninth grade of intermediate school, the difference of 3 per cent of failures cannot be considered as indicating any serious inferiority on the part of the pupils from the intermediate schools.

In the case of Spanish the differences are greater. The pupils from the intermediate schools earned 33 per cent of A's and B's as compared with 28 per cent for the regular high school group. Their percentage of C's — the lowest mark which can be regarded as satisfactory — is materially lower than that number earned by the high school group. In all, the pupils from the intermediate school show 82 per cent of satisfactory marks; the high school pupils, 85 per cent. The percentage of failure on the part of pupils from the intermediate schools is 3 per cent greater than that shown for the regular high school pupils. Again, the difference cannot be regarded as significant.

The figures for German are included, but the smallness of the numbers in both groups renders it inadvisable to attempt to draw any definite conclusions. The figures show, however, a decided advantage on the part of the intermediate school pupils.

SOME CRITICISMS OF THE WORK.

The theory of the intermediate school is absolutely sound. The results already accomplished augur well for the future. There has been, however, more or less criticism of certain features of the work, some of it well founded. It has been impossible to foresee every difficulty that might arise or to lay down in advance a perfect code of rules and regulations which should provide an infallible guide for masters and teachers. Principals and teachers have co-operated with the school authori-

ties in establishing the broad principles of the reforms introduced and in working out many details of procedure. At no time has the Board of Superintendents failed to realize that while the intermediate school was still in the initial and experimental stage, the principals should not be hampered by a mass of legislation, much of which would undoubtedly have to be later rescinded.

Certain difficulties and perplexities in administration and organization were inevitable. These are, however, obstacles which may be overcome; and which, while justifying wholesome criticism, should not be interpreted as condemnatory of the schools as a whole. Abundant compensation is found in the thorough discussion which has been aroused and in the resultant increased ability to formulate a system of procedure, based upon experience, which shall be of lasting value.

The first step taken in the establishment of intermediate schools consisted in the introduction of modern language work into Grades VII and VIII. As might naturally be expected, this subject has been the chief object of criticism.

The criticism is, first, that the pupils who enter upon the second unit of modern foreign language instruction in the high school, after having completed the first unit in Grades VII and VIII, or in certain instances in Grade IX alone, are not adequately prepared and do not make so good a record as those pupils who began their modern foreign language work in the high school; second, that pupils who have accomplished two units (Grades VII and VIII, and IX) of modern language work in the intermediate schools are not qualified to do third year work in the high school. In other words, it is alleged that the modern language work of the intermediate schools is, all along the line, distinctly inferior to the work of the high schools.

The Board of Superintendents realizes that the situation as respects certain schools is not ideal, and aims at correction of the conditions. The Board of Superin-

tendents believes, however, that general criticism is unwarranted. It is to be expected that certain situations arise from time to time in both high and intermediate schools that call for study and correction. The Board of Superintendents has met these conditions with constructive suggestions whenever they have arisen. In all its work it has had the co-operation of the Council on Modern Foreign Languages.

As a specific illustration of the determination of the Board of Superintendents to remedy defects and improve the quality of modern foreign language instruction, the Council on Modern Foreign Language has been reorganized during the past year, for the purpose of revising the outline of work, and, more particularly, for the purpose of standardizing the work of the various units of instruction wherever given, whether in intermediate or in high schools.

This council as reorganized is made up of eighteen heads of departments or representative teachers from the high schools, twelve teachers from the intermediate schools, and two teachers from the elementary schools with intermediate classes. Their report, representing the consensus of opinion of expert teachers from the various types of schools in which modern foreign languages are taught, has been adopted by the School Committee as the approved outline of study, and has been printed as School Document No. 15, 1920. It has been placed in the hands of teachers and administrators in elementary, intermediate, and high schools, with the request that it be put into effect at once. With the adoption of this revised and standardized course as the basis of instruction in all the schools concerned, provision is made for properly articulating the work of intermediate schools and classes with that of the high schools. It is expected that the prescribed course will be carried out in spirit as well as in letter, and that temporary maladjustments will rapidly disappear.

One cause of the maladjustment has undoubtedly

been the difference in attitude and in methods of instruction between the high school and the intermediate. From the outset a conversational method has been followed in the intermediate schools. The high schools have demanded a larger amount of formal and written work. Many of the high schools, however, have already modified their methods of instruction in the first years, placing greater emphasis upon oral instruction. Some of the high schools, when numbers would warrant it, have organized additional classes for the pupils from intermediate schools. In such classes the work is somewhat different from that in the regular high school classes, but not inferior.

One point which the critics of the intermediate school sometimes forget is that difference is not necessarily inferiority. Intermediate school pupils, taught by a direct method, require a different kind of instruction than those taught in a more formal manner. But this does not mean that either group of pupils is inferior to the other. It does indicate that the different attitudes of the two schools must be harmonized; that their divergent conceptions of the work must be reconciled. By yielding something for the sake of harmony and of unified instruction, both schools gain. When the revised plan of study is in full operation, all pupils will be enabled to advance together with no loss of efficiency and with an eventual higher degree of attainment. Failure on the part of either group of pupils to maintain a proper standard in the future will have to be explained as due to the individual pupil or to the instruction as given in particular schools. The blame cannot be thrown upon either type of schools as a whole.

To say that the intermediate school is already functioning smoothly would be untrue; to expect such a result would be absurd. The intermediate school has been developed in this city under difficulties which no one could have foreseen. The peculiar conditions of

the last few years — which need not be analyzed here — have heavily taxed the resourcefulness of all teachers and administrators, but especially of those working in a type of school under process of organization and development.

In spite of the existence of certain difficulties and inequalities, which are fully admitted, the Board of Superintendents feels that the intermediate school is amply justifying itself. If the traditional schools, both elementary and high, with their long history of development and their splendid record of achievement, are even now far from the realization of their highest possibilities, no process of reconstruction can be blamed for not attaining perfection in six or eight years.

THE NUMBER OF PUPILS IN ALL SCHOOLS EXCEPT THE HIGH SCHOOLS DISTRIBUTED ACCORDING TO SUBJECTS.

In the following tables schools indicated with one star (*) are intermediate schools; those with two stars (**) are elementary schools of eight grades; those with three stars (***) are six-grade elementary schools; all others are elementary schools with intermediate classes, having certain characteristics of the intermediate school organization indicated below as (a) departmental instruction; (b) promotion by subject, and (c) the 100-point diploma plan. The program of work in all the subjects listed below (except manual training, cookery and sewing) is based upon the newly reconstructed outlines of study for intermediate schools and classes.

Principals of elementary schools have not been required to follow these outlines. Their adoption has been wholly optional. The extent to which they have been accepted, however, testifies to the progressive educational ideas they embody.

It is not extraordinary that nearly all the elementary schools should be found pursuing the reconstructed program of work in English, for in this outline there is

no very radical departure from the traditional. But it is a matter of comment that fifty-six of the sixty-seven original elementary districts of the city should have voluntarily abandoned the old outline of work in arithmetic and have substituted in its place one fundamentally different, whose aim is the teaching of mathematics as a unit, and which includes, together with arithmetic, introductory work in algebra and in intuitional geometry.

TABLE VII (A).
Number of Pupils in Grade IX of Intermediate Schools Arranged According to Subjects.

SCHOOL.	Latin.	French.	German.	Spanish.	Italian.	Manual Training.	Cookery.	Sewing.	Millinery.	Mathematics.	Clerical Practice.	Mechanic Arts.	Practical Arts.	Science.	English.	History.	Total Number of Different Pupils in Grade.
Abraham Lincoln.....	.....	123	.....	.....	.....	.....	.....	.....	.....	.....	122	.....	.....	.....	123	123	123
Bigelow.....	.....	29	.....	.....	.....	.....	.....	.....	.....	29	27	.....	.....	56	56	56	56
Emerson.....	15	46	.....	.....	.....	.....	.....	.....	.....	60	67	.....	.....	44	80	.....	80
George Putnam.....	17	129	.....	.....	.....	.....	.....	.....	.....	33	100	.....	.....	35	132	21	132
Hancock.....	.....	.....	.....	.....	25	.....	.....	9	.....	12	22	.....	9	25	34	.....	34
Henry L. Pierce.....	25	50	.....	.....	.....	.....	13	25	.....	44	56	15	.....	13	111	28	111
John Winthrop.....	.....	.....	.....	39	.....	.....	.....	.....	.....	39	63	.....	.....	56	93	13	97
Lewis.....	64	196	.....	.....	.....	.....	.....	.....	.....	196	132	.....	.....	.....	196	.....	196
Mary Hemenway.....	22	71	.....	.....	.....	.....	.....	57	.....	73	86	16	.....	41	145	75	145
Oliver Wendell Holmes.....	108	172	.....	.....	.....	.....	.....	.....	.....	108	145	.....	.....	37	253	37	253
Robert G. Shaw.....	14	35	.....	.....	.....	.....	.....	17	17	29	31	11	9	19	59	31	59
Ulysses S. Grant.....	35	77	.....	.....	.....	67	38	38	.....	35	66	.....	.....	66	101	101	101
Totals.....	300	928	.....	39	25	67	51	146	17	658	917	42	18	392	1,383	485	1,387

TABLE VII (B).
Number of Pupils in Grade VIII of All Schools Arranged According to Subjects.

Schools	Latin	French	German	Spanish	Italian	Manual Training	Cookery	Sewing	Millinery	Mathematics	Clerical Practice	Mechanic Arts	Practical Arts	Science	English	History	Geography	Total Number of Different Pupils in Grade
*Abraham Lincoln	95					87	94			105	100			134	176	176	176	176
**Agassiz						62				62				62	62	62	62	62
**Barnett						92	72							164	164	164	164	164
*Bigelow	34					69				96		27		69	96	96	96	96
Blackinton-J. Cheverus (a) (c)	78					54	54			117				117	117	117	117	117
**Bowditch							101			101				101	101	101	101	101
Bowdoin (a) (b) (c)							73	73		38	35			34	73	73	73	73
**Bunker Hill						20	28			48				48	48	48	48	48
Chapman (a) (b) (c)	32					66	57			56	67			70	123	123	123	123
**Charles Sumner						57	75							132	132	132	132	132
Christopher Gibson (a) (b) (c)	68					80	55			136				77	136	136	136	136
**Dorborn						65	76							115	115	115	115	115
Dillway (a) (b) (c)						41	117			117				10	117	117	117	117
**Dudley						78				78				78	78	78	78	78

TABLE VII (B).
Number of Pupils in Grade VIII of All Schools Arranged According to Subjects.—Concluded.

School.	Latin.	French.	German.	Spanish.	Italian.	Manual Training.	Cookery.	Sewing.	Millinery.	Mathematics.	Clerical Practice.	Mechanic Arts.	Practical Arts.	Science.	English.	History.	Geography.	Total Number of Different Pupils in Grade.
*John Windthrop.....				42		68	69			127				128	127	131	136	124
***John Ward Howe.....						43				43				43	43	43	43	43
**Lawrence.....		136				140	134			263				140	263	263	263	263
**Langfellow.....						63	62			125				125	125	125	125	125
Lowell (a) (b) (c).....		34		24		55	56	26		111		25	12	111	111	111	111	111
**Martin.....						31	29							60	60	60	60	60
*Mary Hennessey.....		83				100	85	14		131	88	20	13	141	219	219	219	219
Mather (a).....		118				88	144			232				232	232	232	232	232
**Mead.....						32	34							73	73	73	73	73
Necess (a) (b) (c).....				25			68	8		68				27	68	68	68	68
Oliver Hazard Perry (a) (b) (c).....				17		34	33			67				20	67	67	67	67
*Oliver Wendell Holmes.....		201				198	205	30		112	167	41	29		463	463	463	463
Phillips Brooks (a) (b) (c).....		115				75	84							159	159	159	159	159
**Prescott.....						28	31			59				59	59	59	59	59

TABLE VII (C).
Number of Pupils in Grade VII of All Schools Arranged According to Subjects.

School.	Latin.	French.	German.	Spanish.	Italian.	Manual Training.	Cookery.	Sewing.	Millinery.	Mathematics.	Clerical Practice.	Mechanic Arts.	Practical Arts.	Science.	English.	History.	Geography.	Total Number of Different Pupils in Grade.
*Abraham Lincoln.....	171					89	126				193			130	213	213	213	213
**Agassiz.....						72				72				72	72	72	72	72
**Bennett.....						96	84							180	180	180	180	180
*Bigelow.....	32					69				110				61	110	110	110	110
Blackinton-J. Cheverus (a) (c).....	86					97	72			169				169	169	169	169	169
**Bowditch.....							108			108				108	108	108	108	108
Bowdoin (a) (b) (c).....							61	61		32	29			31 130	61	61	61	61
**Bunker Hill.....						23	39			62				62	62	62	62	62
Chapman (a) (b) (c).....	36			33		52	84			56	81			63 163	137	137	137	137
**Charles Sumner.....						59	65							124	124	124	124	124
Christopher Gibson (a) (b) (c).....	83					79	70	11		159				87	159	159	159	159
**Dearborn.....						69	50							145	145	145	145	145
Dillaway (a) (b) (c).....				48			121			121				24	121	121	121	121
**Dudley.....						79				79				79	79	79	79	79
**Dwight.....						90								90	90	90	90	90
Edmund P. Tileston (a) (b) (c).....	28					42	37			79				79	79	79	79	79

Edward Everett (a) (b) (c).....	79	78	82	87	75	157	157	157	157
Elihu Greenwood (a) (b) (c).....	27	93	.....	.....	71	154	154	154	154
**Eliot.....	141	.....	.....	141	.....	141	141	141	141
*Emerson.....	63	55	.....	128	54	38	118	118	118
**Everett.....	.....	84	43	84	.....	84	84	84	84
**Francis Parkman.....	37	42	.....	.....	.....	79	79	79	79
**Franklin.....	.....	73	.....	.....	.....	73	73	73	73
**Frederic W. Lincoln.....	.....	80	.....	80	.....	80	80	80	80
Gaston (a) (b) (c).....	61	120	.....	120	.....	120	120	120	120
*George Putnam.....	122	120	14	245	18	16	245	245	245
Gilbert Stuart (a) (b) (c).....	37	56	.....	113	.....	113	113	113	113
*Hancock.....	.....	98	30	128	.....	30	128	128	128
**Harvard-Frothingham.....	68	67	.....	117	.....	117	117	117	117
**Henry Grew.....	.....	40	.....	80	.....	80	80	80	80
*Henry L. Pierce.....	93	101	.....	207	20	132	207	207	207
Hugh O'Brien (a) (b) (c).....	49	115	.....	192	.....	192	192	192	192
Hyde (a) (b) (c).....	.....	61	61	61	61	61	61	61	61
**Jefferson.....	.....	31	32	62	.....	62	62	62	62
**John A. Andrew.....	.....	53	59	.....	.....	112	112	112	112
***John Marshall.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
*John Winthrop.....	32	67	.....	150	.....	72	150	152	149
***Julia Ward Howe.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
**Lawrence.....	.....	73	.....	73	.....	73	73	73	73

1 Drawing.

TABLE VII (C).
Number of Pupils in Grade VII of All Schools Arranged According to Subjects.—Concluded.

SCHOOL.	Latin.	French.	German.	Spanish.	Italian.	Manual Training.	Cookery.	Sewing.	Millinery.	Mathematics.	Clerical Practice.	Mechanic Arts.	Practical Arts.	Science.	English.	History.	Geography.	Total Number of Different Pupils in Grade.	
*Lewis.....		124				125	123			264				124	264	264	264	264	264
**Longfellow.....						68	64			132					132	132	132	132	132
Lowell (a) (b) (c).....		38		32		58	66			124		23	15	1 124	124	124	124	124	124
**Martin.....						37	34							71	71	71	71	71	71
*Mary Hemenway.....	20	74				98	112			123	87	27	9	101	210	210	210	210	210
Mather (a).....		84				114	133			247				247	247	247	247	247	247
**Minot.....						39	36							68	68	68	68	68	68
Norcross (a) (b) (c).....				33			103			103				46	103	103	103	103	103
Oliver Hazard Perry (a) (b) (c).....				26		47	39			86				38	86	86	86	86	86
*Oliver Wendell Holmes.....		245				204	192	35		164	232	38	35	15	396	396	396	396	396
Phillips Brooks (a) (b) (c).....		86				68	98							166	166	166	166	166	166
**Prescott.....						28	33			61				61	61	61	61	61	61
**Prince.....						54	69							123	123	123	123	123	123
Quincy (a) (b) (c).....		28				56				71		11		{ 27 140 }	67	67	67	67	67
**Rice.....						66	50							116	116	116	116	116	116

*Robert G Shaw.....	84	.....	89	78	44	.....	167	.....	42	37	84	167	167	167
Roger Wolcott (a) (b) (c).....	138	.....	176	171	.....	.....	347	.....	36	.....	170	347	347	347
**Samuel Adams.....	.....	.....	101	121	.....	.....	222	.....	.....	.....	222	222	222	222
Sherwin (a) (b) (c).....	.....	.....	35	.....	.....	.....	35	.....	.....	.....	35	35	35	35
Shurtleff (a).....	33	.....	.....	74	.....	.....	74	.....	.....	.....	.....	74	74	74
Theodore Lyman (a) (b) (c).....	.....	41	46	32	.....	.....	79	.....	.....	.....	.....	79	79	79
**Thomas Gardner.....	.....	.....	74	62	.....	.....	.....	.....	.....	.....	136	136	136	136
Thomas N. Hart (a) (b) (c).....	.....	79	113	.....	.....	.....	85	28	.....	.....	28	113	113	113
*Ulysses S. Grant.....	87	.....	59	61	61	.....	121	.....	.....	.....	.....	121	121	121
Warren (a) (b) (c).....	.....	34	57	62	.....	.....	119	.....	.....	.....	63	119	119	119
Washington (a) (b) (c).....	.....	.....	65	74	.....	.....	139	.....	.....	.....	91	139	139	139
Washington Allston (a) (c).....	73	.....	55	76	.....	.....	131	.....	.....	.....	52 179	131	131	131
Wells (a) (b) (c).....	.....	.....	153	153	.....	.....	153	.....	.....	.....	153	153	153	153
**Wendell Phillips.....	.....	.....	211	.....	.....	.....	211	.....	.....	.....	211	211	211	211
***William E. Endicott.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
**William E. Russell.....	.....	.....	56	62	118	.....	.....	.....	.....	.....	118	118	118	118
***William Lloyd Garrison.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	52	1,982	68	4,354	4,416	631	6,368	852	231	162	5,376 1,336	8,856	8,856	8,856

1 Drawing.

Respectfully submitted,

THORNTON D. APOLLONIO,
Secretary.

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