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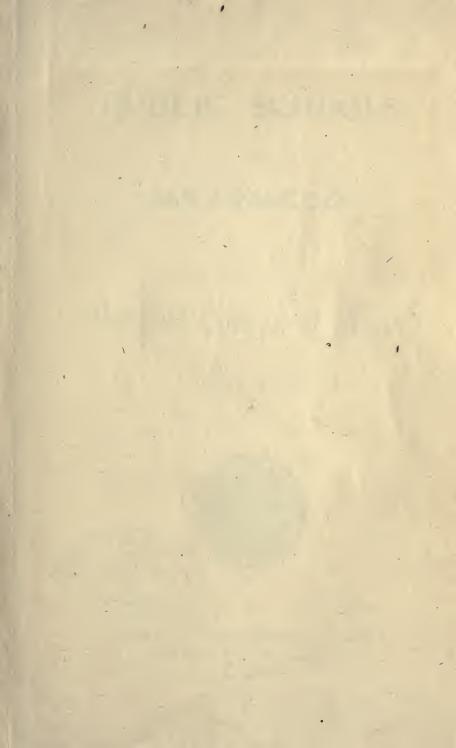
OF THE

UNIVERSITY OF CALIFORNIA.

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PUBLIC SCHOOLS

OF

SAN FRANCISCO

Revised Course of Study

June, 1892



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PUBLIC SCHOOLS

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Revised Course of Study

FOR THE

PUBLIC SCHOOLS

June, 1892

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COURSE OF STUDY

PRIMARY GRADES

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TIME OF PUPILS IN THESE GRADES FROM 4 TO 5 YEARS

RECEIVING CLASS

GENERAL DIRECTIONS:

Children are admitted to the Receiving Class at 5 years of age, at any time during the year.

If most of the children in a receiving class are under 6 years of age, they will be required to take in arithmetic only Step I, and the simple parts of the course in other things.

In classes where most of the pupils are from 6 to 7 years of age, the entire course may be completed in one year or even less. The work in these classes must be adapted to the evident capacities of pupils.

SEC. I. READING, WRITING, LANGUAGE AND SPELLING

Principles

- I. In teaching reading, the order of development is: (1) the idea, (2) the spoken word, (3) the printed word, (4) the written word, (5) utterance.
- II. Children should be trained to read in an easy, natural tone of voice, very much as they talk, only a little more distinctly.

- III. Beginners should be taught by a judicious combination of the word method, letter or spelling method, and the phonic method.
- IV. When children begin to use a book, train them to stand erect and hold the book in the left hand.

I. GENERAL OUTLINES

Time, 12 hours a week

- 1. ORAL LESSONS: Purpose—to accustom pupils to express their thoughts in simple and correct forms of speech. Material—reading and observation lessons, pictures or whatever the ingenuity of the teacher may suggest.
- 2. Reading: (a) From the blackboard, short sentences, expressing in the pupils' own words, thoughts suggested to them through observation and conversation; such sentences being taken as will easily lead to a gradual recognition of words. Later, the acquaintance with words must lead to the analysis of the spoken word into its elementary sounds, and of the corresponding written word into the letters, or combination of letters, representing those sounds. (b) From a chart. (c) From authorized first readers, and from the supplementary books of corresponding grade. (d) A few pieces of suitable poetry must be studied and learned for recitation.
- 3. Pupils must be so guided as gradually to gain the power for themselves of making out the words of a sentence, and of getting its thought. Distinct articulation, good tones, and expression must be the aim from the beginning. After the first four months, the early lessons in the first readers of the circulating sets can be used with advantage.
- 4. Writing. (a) Copying words and sentences from the blackboard and from slips. (b) The forms and names of letters learned. (c) Simple sentences written from dictation.

II. SPECIFIC DIRECTIONS

- 1. The teacher will study carefully the suggestions on the first pages of the State First Reader.
 - 2. Beginners must be taught from blackboards and charts.
- 3. Put words on the blackboard both in print and in script, side by side.
- 4. Select from any good Primer or First Reader, 50 or more easy words.
- 5. In beginning writing, let one-half the class practice on the blackboards and the other half on slates.
- 6. After the first five months, let pupils occasionally take a lesson with pens and paper.
 - 7. In spelling, use both the oral and the written method.
- 8. Teach pupils to spell suitable words selected from their reading lessons. They should not be required to spell from memory all the words they find in their lessons, because their ability to read and pronounce words runs far ahead of their memory to spell them.
- 9. The words which children are most interested in spelling are the names of common objects at home or at school; the names of things they eat or wear; the names of boys and girls; of animals. For groups of words teachers are referred to the first month's work in Swinton's Word Primer.
- 10. Do not be afraid of letting children spell easy words of two syllables; they are no harder than monosyllables.
- 11. In blackboard writing, see that your pupils form the habit of holding a crayon properly.
- 12. Give an occasional drill-exercise in making large ovals in order to secure freedom of arm movement.
- 13. Teach children to write both capital and small letters from the beginning.
- 14. In slate-writing, use only long pencils, and train your pupils to hold them as a pen is held.

- 15. Give an occasional drill-movement in making running m's and ovals, in order to secure freedom of arm-movement and an easy way of holding pencils or pens.
 - 16. Use ruled spaces on blackboards and slates.
- 17. After the first few months let the children buy and use a State First Reader, taking the first 20 or 30 lessons. Or take from the library once a week a set of Supplementary First Readers, and interest pupils in something new.
- 18. During the last month of the school year, ask your pupils to take home their First Reader and read aloud a few lessons to their fathers and mothers.
- 19. For suggestive methods in teaching reading, teachers are referred to Partridge's "Quincy Methods."

LANGUAGE LESSONS

- 1. Lead children to talk by asking them to tell what they know about common things, such as cats, dogs, dolls, goats; about things they eat or wear; about what they saw in coming to school.
- 2. Ask them to tell their name and age, using a sentence thus:
 - (1). My name is ———
 - (2). I am years old.
 - (3). I live on street.
- 3. Teach every child, as soon as possible, to write his own name.
- 4. Ask children to tell the names of their cats, dogs, and dolls, and let them write the names as soon as they learn to write.
- 5. Tell children some short, simple story, and ask them to tell it back to you.
- 6. A teacher who can tell a story well holds the key to the hearts of children.
- 7. For further suggestions about conversation lessons, teachers are referred to Calkin's Object Lessons, pages 39 to 47, and Partridge's "Quincy Methods."

SEC. II. NUMBER LESSONS

Principles

- 1. The first lessons in counting must be taken with "counters," such as shells, sticks, buttons, etc., on the desks of the pupils, or counting-tables.
- 2. The first comparisons of small numbers must be made by means of objects handled by the children themselves.
- 3. Every lesson in numbers must also be a lesson in language. The teacher must require the pupil to speak as much as possible.

I. GENERAL OUTLINE

(2 hours a week)

DEVELOPING, NAMING AND WRITING NUMBERS TO TEN

- (1.) Without figures.
- (2.) With figures.

II. SPECIFIC DIRECTIONS

- 1. During first five months take up numbers to five.

 During second five months take up numbers to ten.
- 2. At the outset, let the children actually handle whatever objects are used as "counters," and make the different combinations before they are asked to express them by figures.
- 3. Children must be trained to make correctly the figures from 1 to 10 on blackboards and slates. See that they make them in the right way from the beginning.
- 4. Pass around the class the following coins and train pupils to *observe* them closely; the five cent piece or nickel; the dime; the quarter-dollar; the half-dollar; the dollar.

SEC. III. OBSERVATION LESSONS

On Plants, Animals and the Human Body.

- 1. Flower, leaf, stem, root, bud, fruit, seed.
- 2. Domestic and other common animals.

- 3. In connection with these lessons, let pupils draw leaves, roots, fruit, flowers, animals and other objects in outline.
- 4. The parts of the human body, and their uses and movements.
 - 5. The care of the body and of health.

Note.—Teachers are referred to Partridge's "Quincy Methods" as an invaluable aid in such exercises, and to Sheldon's Elementary Instruction.

SEC. IV. TRAINING IN POLITENESS

- 1. The State School Law, Section 1667, reads as follows:—
 "Instruction must be given in all grades of schools and in all classes, during the entire school course, in manners and morals, and upon the nature of alcoholic drinks and narcotics, and their effects upon the human system."
- 2. In the beginning of school-life, teachers must bear in mind that the home surroundings of some children are such that they have little or no training in good manners except at school. Many children need to be taught the language of courtesy and politeness.
- 3. It is a good plan for the teacher of even a receiving class to have a set time of five or ten minutes, say once a week, on Monday morning, for little motherly talks on good manners. Teachers must bear in mind that their own manner is imitated by pupils; that they themselves must be careful of their own personal habits; of their tones of voice, and expression of countenance.
- 4. Teachers should lead children to offer them any little services and any such attention should be promptly acknowledged.
- 5. The older children should be made to understand their duty in aiding the younger ones.
- 6. Even the little children should be trained how to answer the bell, say good-morning to visitors at school, and politely

ask them to enter. Train children to this by allowing other pupils to play the part of visitors.

7. Train children to use, in their intercourse with the teacher and one another, the polite forms of good society.

8. For suggestions as to talks on politeness, teachers are referred to a little book entitled "How to Teach Manners," by Julia M. Dewey. Every teacher who once sees this book will have it on her school desk.

SEC. V. PHYSICAL TRAINING

Twice a day

Note.—Physical training, including free play under the direction of the teacher, is a necessity in the Primary School. The time set apart for physical training and recesses must be so used as to meet the physical needs of the pupils. Consequently, recesses shall be given for withdrawals from the room, for the ventilation of class-rooms and for recreation. If for any reason recesses are shortened and omitted, the time for the same must be given to physical training.

- 1. Daily exercise in free-arm movements.
- 2. Kindergarten motion songs.
- 3. Exercises in rapid changes of position for training pupils to habits of promptness, obedience and quietness.
 - 4. Arm, leg, trunk, hand and feet exercises.
 - 5. Keeping step in marching.
- 6. Very simple directions to children about cleanliness of hands and face, and care of the hair and teeth.

SEC. VI. MORAL TRAINING

Thirty Minutes a Week

1. Teachers are directed to give instruction for a few minutes in good manners and good morals at the opening of school in the morning and at other favorable opportunities. In giving this instruction, teachers should keep strictly within the bounds

of manners and morals, and thus avoid all occasions for treat-

ing of or alluding to sectarian subjects.

2. Teachers will seek to plant in the minds of their pupils the principles of right living, especially of temperance; and thus, in spirit and in letter, to carry out the law that requires teachers to explain to their pupils the effects of the use of narcotics and alcoholic stimulants on body and mind.

3. For outlines of lessons teachers are referred to Sheldon's

Elementary Instruction.

SEC. VII. BOOKS FOR TEACHERS

Teachers of this grade are recommended to study the following Manuals:—

"Education by Doing."—Anna Johnson.

"Securing and Retaining Attention."—Hughes.

"Chats with Young Teachers."—Anna B. Badlam.

SEC. VIII. KINDERGARTEN WORK

Receiving Class—First Quarter

1. Gift work. In colored worsted balls.

Purpose of exercises:

To stimulate observation.

To lead children to express clearly the impression received through sight and touch.

To classify familiar things under certain essential qualities, as form, color, etc.

Points to be brought out:

- 1. Form. Ball: (round in every way, round all over) see Kindergarten Notes. Have children find and name things of this form seen in the room. Have them recall objects of this form found elsewhere.
- 2. Color. Red, yellow, blue, orange, green and purple, (see Kindergarten Notes, color exercises.) Show by simple devices

the formation of orange, green and purple. Use gelatine films, dyes, paints, etc., etc. Busy work. Assort colors; use sticks and tablets. Review. Test children in various ways to see if they are perfectly familiar with color and color-names. Tell story, "Color Fairies." Repeat or sing, "We the Primary Colors Are." Show colors, if possible, with prism to recall rainbow. Have an imaginary rainbow party, having children name the flower or fruit they would contribute. Have all the six colors represented. Name and indicate colors with strings of wooden beads.

3. Motion, direction, position.

Action of ball shown—roll, stand, bounce. Through the movements of ball, free or suspended by string, arrive at the terms: Side to side, right—left, front—back, up—down, over—under, across, etc. Have children name things which move in these directions—e. g.—window, curtain, elevator, etc., up and down. Give various exercises to bring out these terms, as children should have a clear understanding of them in order to follow directions in later work. Have ball placed in center of desk at right side, left, etc. (Distribute all the balls; those not having one, indicate with hand). Name and indicate right side of body, right shoulder, etc., right side of room, picture, blackboard, etc., then left side, etc.

Lead up to vertical and horizontal, using, at first, the terms standing or upright; lying down or level.

Name things in these positions.

4. Material. Worsted; lead up to wool, from what obtained, quality, etc. Repeat, "This is the Meadow."

Note.—In all the exercises, be ready with timely suggestions in order to keep the children's interest excited and their curiosity aroused. Use stories as a means. Play "The Thought" game, having the children name what you describe. Excellent suggestions can be obtained from Partridge's "Quincy Methods." Encourage children to look for things which bear upon the subject under discussion, outside of

school hours, and repeat at next exercise. Give short exercises, and often. When they cannot recall some point, or do not seem to know what you have repeatedly hinted at, ask them to inquire of some one at home.

5. Occupation work to supplement, and accompany work with the gift.

Exact clean hands and neat work.

Receiving Class-Second Quarter

I. SECOND GIFT—(See Kindergarten Notes)

- 1. Comparison of worsted ball and wooden sphere:
 - (a) Resemblances.
 - (b) Differences, found by pupils handling, grasping and viewing objects.
 - 2. Comparison of sphere and cube:
 - (a) Resemblances.
 - (b) Differences with regard to action and form.
- 3. Comparison of sphere, cube and cylinder, in regard to action. Wooden heads used to distinguish the *three* forms. Objects noted and recalled of like form.
- 4. Stress laid upon *cube*, its action and number of faces, corners and edges. Let children make *shape* of face in air, on blackboard or slate, and with sticks.

Stick work:

- (a) Dictation with one long stick, vertical, horizontal and slanting positions. Objects in like positions noted and recalled. Attention called to place of ends in each position.
- (b) Two sticks (of two colors) placed in different positions with regard to each other—touching, apart, end to end, etc.
- (c) Three sticks, combined positions.
- (d) Four sticks, combined positions.

Refer to color in all exercises.

Busy work for any number of sticks:

Sticks (1 or 2) in. placed vertically in rows, apart, equal spaces.

Sticks (1 or 2 in.) placed horizontally, in rows, apart, equal

spaces.

Sticks (2 in.) placed end to end, in rows, forming square corners.

Sticks (4 in.) placed end to end, in rows, forming squares.

5. Free work allowed at end of exercises.

Note.—For convenience in distributing and collecting, sticks should be kept in small boxes, or else strapped with a rubber band.

Receiving Class-Third Quarter

II. OCCUPATION WORK

1. Cylinder, special study.

Comparison with sphere in regard to faces (round, curved.) Comparison with cube in regard, first, to flat sides, square, round, like circle.

Comparison with cube in regard, second, to edges: (straight, curved).

Find and recall objects with curved sides; with side *like* a circle; with square sides; with straight edges; curved edges. Have various exercises to bring out clearly the distinguishing characteristics of the three forms.

Form study, interspersed with appropriate stories and songs.

2. Ring and half rings.

Rings—Relation of rings to sphere and cylinder noted.

Characteristics observed and noted.

Objects like ring named and recalled.

Note.—Draw from the children the facts about the material *iron*, and add in simple words to their store of knowledge.

Half rings—Two halves given in connection with whole ring to bring out the name.

Comparison with sticks and characteristics observed and noted. Objects like half ring named.

Position exercises—Half ring placed in four positions. Name for position developed in connection with whole ring, as placed to look like upper part of ring, lower part of ring, right side, left side.

- (a) Place of ends noted in each position, i. e., up, down, etc.
- (b) Compare with curving objects in like positions.
- (c) Develop terms, curving, upward, downward, etc.
- (d) Dictate positions two halves can assume to each other.
- (e) Dictation of simple symmetrical figures.
- (f) Simple forms of life outline.
- 3. Stick exercises continued:
 - (a) Dictation of symmetrical figures and forms of life.
 - (b) Busy work to bear upon work at hand.

Receiving Class-Fourth Quarter

III. OCCUPATION

- 1. Gift Work.
 - (a) Work of the three quarters reviewed.
 - (b) Ring and stick work combined.

FIRST GRADE PRIMARY

Second School Year

SEC. I. READING, WRITING, LANGUAGE AND SPELLING.

Directions.

- I. Train pupils to stand erect and hold the book in the left hand.
 - II. Train them to read clearly and distinctly.
- III. Train pupils to use their lips and open the mouth when they read or speak.

I. GENERAL OUTLINES.

11 hours a Week.

- 1. Oral and Written Exercises: (a) The oral expression of the substance of passages read from the regular and supplementary readers. (b) Short stories told or read to the pupils, and reproduced by them orally. (c) Simple thoughts suggested by pictures or by the observation lessons, to be expressed in writing.
- 2. Reading: (a) From the State First Reader. (b) From the supplementary books furnished. (c) At sight, from the circulating sets of first readers. (d) Maxims and appropriate selections of poetry, to be learned and recited.

- 3. The object of reading—getting the thought—should be kept constantly in view. Correct pronunciation, good tone, and right expression are to be insisted upon. The "sounding" of known words is generally a waste of time and effort. Unknown words, when phonetic or nearly phonetic, should be made out, by "sounding" them. Practice on the elementary sounds and on consonant combinations helps to distinct articulation and to pure tone.
- 4. Writing: (a) Copying exercises from the blackboard and from slips. (b) Writing selections from the reading book. (c) Sentences, and names of individuals with their residences, to be written from dictation.

II. SPECIFIC DIRECTIONS

- 1. State First Reader to lesson 60, three lessons a week. Teachers are requested to read the Preface to the State First Reader.
- 2. At least twice a week let the class take a set of Supplementary Readers, or leaflets from the school library, and read at sight supplementary selected lessons somewhat easier than those in their regular reader.
- 3. Instead of endless reviews of old lessons, let your pupils have new matter that will awaken interest and excite thought.
- 4. By suitable questions, lead pupils to think about the meaning of what they read.
- 5. Give phonic concert drill on the words placed at the head of each reading lesson for that purpose. Train pupils to use their lips and tongue in articulation.
- 6. While one division of the class is reading, let the other section copy the whole or a part of the lesson on slates or paper.
- 7. Train pupils in spelling suitable words selected from reading lessons, omitting unsuitable ones. Children ought

not to be required to memorize the spelling of all the words they learn to pronounce.

- 8. Make out for your class short lists of names of common things, and of words which children use in daily speech, put them on the blackboard, and have them copied. For assistance in this grouping of words, teachers are referred to Swinton's Word Primer, first five months' work.
- 9. Combine oral spelling with written work on slate, paper or blackboard.
- 10. An oral spelling match is a good thing to stir up a class that has become weary of writing.
- 11. Take occasional exercises, both written and oral, in spelling the names of things that are good to eat; of articles of home or school use; of names of animals; of household words.
- 12. In writing, train children to sit correctly at the desk, and to hold the pen easily and properly.
- 13. Teachers who desire to do so can use a copy-book in this grade, but it is better to teach writing from the blackboard.
- 14. During the last two months of the year, ask your pupils to carry home their First Reader and read a few lessons aloud to their father and mother, to show them how well they can read.
- 15. For further suggestions, teachers are referred to Partridge's "Quincy Methods," and Sheldon's Elementary Instruction.

SEC. II. LANGUAGE LESSONS

Principles

- I. Speech is acquired mainly by imitation.
- II. Imitation precedes originality.

III. Language precedes arithmetic.

IV. The purpose of language lessons is to add to the child's stock of words, and to secure a correct use of those words in speaking and writing.

SPECIFIC DIRECTIONS

1. Short talks with children for the purpose of developing expression are very effective, but such exercises depend for success largely on the tact, skill and ingenuity of the teacher.

2. Tell children a short, simple story, and ask them to tell

it back to you.

- 3. You can do almost anything with children if you will only tell them interesting stories.
- 4. Let one section of the class copy on slates or paper a part of a reading lesson while the others are reading. This is an exercise in punctuation, spelling, and the use of capital letters.
- 5. Take occasional exercises in the oral spelling of such words as eyes, nose, ears, mouth, lips, teeth, hair, head, etc. Short written sentences using such words as:
 - 1. "I have two eyes."
 - 2. "My eyes are blue."
 - 3. "I see with my eyes."
- 6. Conversations about the use of the five senses; on domestic animals; on common objects.
- 7. Use of capital letters in writing the names of men and women, boys and girls; of names of cities, towns, states, and the United States.
- 8. Let the class pick out the words in a reading lesson that begin with a capital letter, omitting the words at the beginning of a sentence. (Exercise on nouns.)
 - 9. Let pupils select out of reading lessons the names of objects. (Exercise on nouns.)

- 10. Use of capital letters in writing the names of days and months.
- 11. Use of the period and question mark. Call attention to their use in three or four reading lessons.
 - 12. The word I always to be a capital.
- 13. Correct use in short sentences of is, are; was, were; see, saw; has, have; go, went; do, did; etc.
- 14. Teachers must give patient and persistent attention to the correction of vulgarisms, provincialisms, and current blunders in speech, without waiting for any grammatical knowledge whatever.
- 15. Teachers will write a short story on the blackboard to be copied by pupils.
- 16. Require pupils to make up a short composition on such subjects as "My Doll," "My Dog," "My School," "My Vacation." etc.
- 17. Sentence Making: Make a sentence with each of the following nouns by adding one word to tell what animals do.

Rule.—Begin every sentence with a capital, and end it with a period.

Model Sentences.—Bees buzz, dogs bark.

- 1. Bees 4. Dogs 7. Mice 2. Bears 5. Ducks 8. Parrots —
- 3. Cats 6. Hens 9. Birds —

For further examples the teacher is referred to "Methods of Teaching," pp. 262 and 263.

- 18. Composition-writing: Let pupils write all they can remember about any one of the following stories: Little Red Riding Hood, Jack the Giant Killer, Cinderella.
- 19. Require every pupil to write his own name and address, also the names of his brothers and sisters, of his father and mother, of his teacher, of five of his classmates.
- 20. For other suggestive exercises the teacher is referred to the following books: Hackett and Kennedy's "Common

School English," "Swinton's Word Primer," "Methods of Teaching," pp. 258 to 265, "State Lessons in Language," first ten lessons, Partridge's "Quincy Methods," and "Sheldon's Elementary Instruction."

SEC. III. NUMBER LESSONS

General Principles

- I. The two main things to be considered in these lessons are: 1. Accuracy. 2. Clearness of conception.
- II. New combinations must be illustrated at first by objects.
- III. For young children, arithmetic is not easy, but rightly taught, it is interesting.

I. GENERAL OUTLINES

Time, 40 minutes a day.

Step I. Numbers from I to 10, inclusive

- 1. Adding, subtracting, multiplying, and dividing with objects (1), without figures and (2) with figures—no multiplier or divisor greater than ten required.
 - 2. Coins. Pint, quart, gallon. Inch, foot, yard.

Step II. Numbers from 1 to 20, inclusive

- 1. Adding and subtracting, from 1 to 20, inclusive, with figures.
 - 2. Day, week; month, year. Dozen.

II. SPECIFIC DIRECTIONS

- 1. Exercises in adding, subtracting, multiplying and dividing numbers by the Grube method. For illustrations of methods see "Swett's Methods of Teaching."
- 2. Make sure that your pupils can count objects, not abstract numbers, to 50. Use shells, buttons, sticks, grains of wheat or barley, etc., kept in small boxes and actually handled by pupils in counting on their desks. Show them how to keep tally by marks on the blackboard, thus: [N], [N], [N], [N] = 20.
 - 3. Teach the use of the signs $+, -, \times, \div, =$
 - 4. Teach the reading and writing of numbers to 100.
- 5. Teach with small numbers the customary forms of addition, subtraction, multiplication and division, such as are used in working with larger numbers.
- 6. Make a game of counting, by letting pupils stand in line around the room and requiring those that miss their count to take their seats. Exercises—Count forward and backward to 50; (1) by 2's; (2) by 4's; (3) by 5's; (4) by 10's. Also by ½'s, as ½, 1, 1½, 2, 2½, 3, etc.
- 7. Teach pupils to write the fractions, $\frac{1}{2}$ and $\frac{1}{4}$; then, to add them on slates or blackboards, thus:

(1)	(2)	(4)	(5)
$\cdot \frac{1}{2}$	1/4	$1\frac{1}{2}$	$\frac{1}{2}$
1/2 1/2 1/2	1 1	$1\frac{1}{2}$ $1\frac{1}{2}$	
$\frac{1}{2}$	1 1 1	$1\frac{1}{2}$	1
2	1	6	3 4

Of course, the teacher will illustrate such fractions by cutting up apples, or by breaking up crayons, or sticks, or pencils. Say nothing about numerator or denominator. An example like the 4th or 5th will be worked by many children if teachers only give them a chance to think it out before telling them how to do it.

- 8. Pass around the class each of the following small coins: The half-dime, or "nickel," the dime, the quarter-dollar, the half-dollar, the dollar. Ask your pupils to examine them very closely, and then question them. Make up easy questions in reckoning, such as: How many dimes are equal to a half-dollar? To a dollar? How many quarter-dollars are equal to a half-dollar? To a dollar? etc.
- 9. Teach pupils how to write dollars and cents, as \$1.00, \$1.25, \$1.50, etc.
 - 10. Drill on multiplication table to 5's.
- 11. For further suggestions, teachers are referred to Partridge's "Quincy Methods," "Methods of Teaching," and for a practical hand-book of simple examples to Ginn's "Number Lessons." Also, to "Baldwin's Industrial Arithmetic" and to Dunton's "Arithmetic in Primary Schools."

SEC. IV. OBSERVATION LESSONS

I. CONVERSATION LESSONS ON ANIMALS

- 1. Ask questions like the following:
 - (1.) What is the dog good for?
 - (2.) What does the dog eat?
 - (3.) What is the color of your dog?
 - (4.) What does a dog know? etc.

Animals.—Dog, cat, goat, horse, rabbit, donkey, cow, hog, hen, pigeon, sparrow, frog, butterfly, house-fly.

Note.—Teachers will draw upon the blackboard rough outlines of these animals from Little's or Augsburg's "Outlines," and require pupils to copy on slates or blackboards.

II. ORAL INSTRUCTION LESSONS

- (1.) Objects.—Leather, wool, fur, cotton, wheat, bread, butter, potato. Objects to be brought into the classroom.
- (2.) Fruits.—Apple, peach, pear, apricot, grape, cherry (in season).
 - (3.) Plants.—Flower, leaf, stem, root, bud, fruit, seed.

Allow children to draw rough sketches on slates or practice paper, of stem and leaves from actual objects on the desk, followed by drawing some simple wild flower.

- (4.) Colors.—Primary colors from charts.
- (5.) Direction.—Right, left; east, west, north, south.
- (6.) QUALITIES OF OBJECTS.—Soft, hard; sweet, sour; bitter, salt; tough, brittle; rough, smooth, etc.
- (7.) NATURAL PHENOMENA.—Sky, clouds, rain; sun, moon, stars; land, water, plants, seeds sown in schoolyard garden, in window boxes or at home.
 - (8.) Place.—Model of a "School-room Lesson."
 - 1. What is the part of the room over your head called?
 - 2. What is the part of the room on which you stand called?
 - 3. How many sides has this room; how many ends?
 - 4. How many walls?
 - 5. Point out the right wall, the left, the front, the back.
 - 6. How many windows are there?
 - 7. How many doors?
 - 8. How many desks on the floor?
 - 9. What hang on the walls?
 - 10. Point to where the sun rises; sets.
 - 11. Face, north; south; east; west.
 - 12. Point to where the sun is at noon.

Note.—For further suggestions, teachers are referred to Partridge's "Quincy Methods," Calkins' Object Lessons, or Sheldon's Elementary Instruction.

DRAWING

- 1. No drawing book will be used. Teachers will allow pupils to use practice paper, slates and blackboards. The work in drawing in this grade is left largely to the skill, tact, ingenuity and good sense of the teacher.
- 2. Bring into the class a collection of leaves, put a leaf on each desk, and let each child try to draw it.
- 3. Make use of Little's Blackboard Outlines and Augsburg's "Easy Things to Draw" selecting the simplest and most attractive exercises. Teachers are recommended to make use of the "Teachers' Assistant in the Use of the Prong Models."
- 4. The order of a series of elementary drawing lessons is about as follows:
- (a) The representation of common objects bounded by straight lines, such as a post, a stool, a bench, a box, a ladder, a comb, a bed, a clothes-horse, a table.
- (b) The duplication of straight lines as seen in various common objects, such as the preceding series.
- (c) The representation of common objects in which curves appear, such as a clock, an arched window, a kite, a jug, etc.
- (d) The representation of symmetrically divided objects needing measurement with the eye, such as a window showing panes, a door showing panels, a Maltese cross, the front of a house, etc.
- (e) As soon as children have acquired some facility in drawing from the flat they should draw from models.
- (f) The teacher should always show young pupils where to begin in drawing an object, and should draw it herself a part at a time, on the blackboard, taking care that they keep pace with her. A complex-looking object frightens a child, but if it be decomposed and presented a line at a time, he is encour-

aged to attack it. There is this further advantage in this method: the children are kept well together and are prevented from wasting their time in needless use of the India-rubber.

SEC. V. HEALTH, MORALS AND POLITENESS

"Section 1667. Instruction must be given in all grades of schools and all classes during the entire school course, in manners and morals, and upon the nature of alcoholic drinks and narcotics and their effects upon the human system."

—School Law of California.

"Section 1702. It shall be the duty of all teachers to endeavor to impress upon the minds of the pupils the principles of morality, truth, justice and patriotism; to teach them to avoid idleness, profanity and falsehood; and to instruct them in the principles of a free government, and to train them up to a true comprehension of the rights, duties and dignity of American citizenship."

—School Law of California.

I. PHYSICAL TRAINING

- 1. Calisthenic drill at least twice a day.
- 2. Kindergarten motion songs.
- 3. Breathing exercise once a day.
- 4. Cleanliness of face and hands.
- 5. Tidiness of dress.
- 6. Five rules of Health.

RULES TO BE MEMORIZED

- 1. Go to bed early and sleep from nine to ten hours every night.
- 2. Do not drink strong tea or strong coffee.
- 3. Brush your teeth every day.
- 4. Do not hold your book too near your eyes.
- 5. Keep your feet dry and warm.

Note.—Teachers are requested to make use of "Health Lessons," by Jerome Walker.

II. TRAINING IN POLITENESS

Note.—Teachers are requested to read the suggestions made to teachers of Receiving Classes.

- 1. "Politeness is to do and say the kindest thing in the kindest way."
- 2. Let children understand that, to be polite, is merely to be thoughtful and unselfish.
- 3. Moral precepts are best enforced by familiar talks that present the highest aim and *encourage* rather than *forbid*.
- 4. Always bear in mind that children of all ages remember what they take part in, longer than what is told them; and let your energy be given to drawing rules of conduct from them, rather than to the rehearing of words of wisdom.

TOPICS FOR LESSONS

- (1.) Kind treatment of schoolmates.
 - (2.) Care in not interrupting teachers.
- (3.) The impoliteness of whispering in company or in school.

- (4.) Respectful treatment of visitors.
- (5.) Respectful treatment of school officials.
- (6.) Respectful treatment of janitors.
- (7.) Manners at the table.
- (8.) Politeness at home to father, mother, brothers and sisters.

Note.—"How to Teach Manners in the School-Room," by Julia M. Dewey, is a little book that teachers ought to have always at hand on their desks.

III. MORAL TRAINING

Opening Exercise, 30 Minutes a Week.

- I. Teachers are directed to give instruction for a few minutes in good morals at the opening of school in the morning and at other favorable opportunities. In giving this instruction, teachers should keep strictly within the bounds of manners and morals, and thus avoid all occasions for treating of or alluding to sectarian subjects.
- II. Teachers will seek to plant in the minds and hearts of their pupils the principles of right living, especially of temperance; and thus, in spirit and in letter, to carry out the law that requires teachers to explain to their pupils the effects of the use of narcotics and alcoholic stimulants on body and mind.

SPECIFIC DIRECTIONS

1. Talk to children about their duties to their parents.

2. Talk to your pupils about kindness to animals, particularly to dogs, cats and birds.

- 3. Teach boys not to fight, except in self-defense.
- 4. Teach pupils to tell the truth.
- 5. Train them not to be selfish.
- 6. Explain to boys the danger of smoking cigarettes.
- 7. Read or tell to pupils short anecdotes, or stories to illustrate any good moral qualities.

SEC. VI. BOOKS FOR TEACHERS

Teachers in this grade are requested to read the following manuals:

"Education by Doing."—Anna Johnson.

"Securing and Retaining Attention."—Hughes. Dunton's "Arithmetic in Primary Schools."

SECOND GRADE PRIMARY

Third School Year

- 1. In this grade, children can begin to learn a variety of things without being forced or crowded, if principals and teachers take a common-sense view of the Course of Study and keep within reasonable limits.
- II. "Teachers shall assign no lessons whatever for home study to pupils in the first, second and third grades."

-Rules of the Board of Education.

SEC. I. READING, WRITING, LANGUAGE AND SPELLING

Principles

- I. "The intellectual training to be given in the elementary schools must, of course, in the first place, consist in learning to use the means of acquiring knowledge, or reading, writing and arithmetic; and it will be a great matter to teach reading so completely that the act shall have become easy and pleasant."

 —Huxley.
- II. In this grade, children begin to think about the meaning of what they read, and to read for information, or for the pleasure of getting new ideas.
- III. Stimulate their curiosity by encouraging children to read story-books at home, just for the sake of the new stories.

I. GENERAL OUTLINES

Time, 10 Hours a Week

- 1. ORAL AND WRITTEN EXERCISES: Purpose and material as in the First Grade. (a) The substance of reading lessons to be expressed orally. (b) Short stories read silently, and then reproduced orally and in writing. (c) Stories written from pictures. (d) Letter-writing begun.
- 2. READING.—(a) From the State Reader. (b) From the supplementary books furnished. (c) At sight, from the circulating second readers. (d) Appropriate selections of poetry are to be learned and recited.
- 3. There should be no merely mechanical reading. The mind should take in the thought, and the reading should express that thought. The silent reading of passages—the result to be tested by oral or written reproduction—will be found a valuable exercise. Concentrate the attention of the whole class upon every exercise. The greater the interest, the surer and the more abiding the result. The reading of poetry should not be omitted because of the "sing-song." Train your pupils to avoid "sing-song."
- 4. Writing: (a) Copying from the blackboard and from slips. (b) Writing selections from the reading book. (c) Words, phrases, sentences and short letters and stories, written from dictation.

II. SPECIFIC DIRECTIONS

- 1. State First Reader completed. Take two lessons a week. Teachers will read the preface to the First Reader.
- 2. Take two exercises a week in reading, at sight, new lessons from sets of supplementary readers in the school library.

- 3. Occasionally, while one section is reading, let the other division copy several paragraphs from the Reader as an exercise in spelling, punctuation and capitals.
- 4. Let pupils memorize Lesson 83, and afterwards write it out from memory, on paper, as an exercise in capitals and spelling.
- 5. In taking up the lessons in the State Reader, pursue the following course:
 - (a.) Read the lessons to the class.
 - (b.) Explain any difficult words.
 - (c.) Then allow five minutes for pupils to study it silently.
 - (d.) Require pupils to read singly.
 - (e.) Close the book and ask questions.
- (6.) Train pupils to read loud enough to be heard distinctly by every member of the class or division.
- 7. Train them to stand erect and hold the book in the left hand.
- 8. Occasionally take a concert drill in breathing exercises, and in giving the vowel sounds a, e, i, o, u, as long as they can be continued in one breath.
- 9. Select for spelling suitable lists of words from reading lessons, leaving out the unsuitable ones.
- 10. Make out lists of grouped words, such as names of animals, things on the table, articles of food, names of common flowers, etc.
- 11. For additional groups of words for oral or written spelling, teachers are referred to "Swinton's Word Primer," first year's work. Once a week ask your pupils to take home their First Reader and read aloud to their fathers and mothers.

SEC. II. LANGUAGE LESSONS

General Principles.

- I. Ideas before words.
- II. Thought before expression.
- III. Expression before scientific rules.

SPECIFIC DIRECTIONS

- 1. Once a week read or tell to the class the best short story you can find or make up, and require pupils to reproduce it in their own language.
- 2. Once in two weeks let pupils write a very short, simple letter. At first, let pupils copy from a letter put on the blackboard.
- 3. Let pupils memorize a choice stanza of poetry and then write it out from memory, as an exercise in capitals, spelling and punctuation.
- 4. Occasionally, let pupils copy a short paragraph from the Reader with open book. Then let them exchange slates or paper, and correct one another's work by comparing with the book.
- 5. Occasionally, have pupils make up short compositions from pictures.
- 6. Train each pupil to write: (1) His own name; (2) the name of his father and mother; (3) the name of the place in which he lives; (4) the name of his teacher; (5) the name of his school; (6) the name of one of his schoolmates. (All examples of proper names.)

- 7. Occasionally, let the class select from a reading lesson names of persons or places that begin with a capital letter. (Proper nouns.)
- 8. The spelling and correct use of the name of days and months, with their abbreviations. (Proper nouns.)
- 9. Exercises in writing short, simple sentences beginning with a capital letter, and ending with a period. Teachers will make use of the first 20 lessons of the "State Lessons in Language."
 - 10. Exercises in writing short questions.
- 11. Exercises in writing nouns that denote ownership. (Apostrophe and s.)
- 12. Examples in sentences of the correct use of the pronouns, he, she, and I.
- 13. Teach pupils how to use initial letters in writing names of persons.
- 14. Exercises in selecting from a given reading lesson: (1) The nouns; (2) The proper nouns; (3) The verbs; (4) The articles.
- 15. Teachers are referred for additional exercises in sentence-making to the first 50 lessons in the "State Lessons in Language," Swinton's Language Primer, First Year's Work, Hackett & Kennedy's Common School English "Methods of Teaching," pp. 258 to 268, Partridge's "Quincy Methods."

SEC. III. ARITHMETIC

Principles.

I. Every lesson in numbers should be also a lesson in language.

- II. In beginning a new form of operation, use only small numbers.
- III. Accurate results are vastly more important than rapid work.
- IV. Give slow pupils a chance by allowing plenty of time for them to do their work.

I. GENERAL OUTLINES

3 1-2 Hours a Week.

- 1. Adding, subtracting, multiplying, and dividing numbers from one to one hundred, inclusive—no multiplier or divisor greater than ten required.
- 2. Simple relations of numbers from one to one hundred, inclusive.
- 3. Adding and subtracting numbers from 1 to 100, inclusive.
- 4. Second, minute; minute, hour; hour, day, week; week, year; day, year.
 - 5. The writing of a few business common fractions.

SPECIFIC DIRECTIONS

- 1. State Primary Number Lessons, in the hands of pupils. Take to Lesson 69.
 - 2. Reading and writing numbers to 1,000.
 - 3. Many short examples in adding columns of units, the

sum not to exceed 50. The object should be to have every pupil get the correct answer.

- 4. Short slate and blackboard exercises in addition, subtraction, multiplication and division, using only small numbers. Large numbers only confuse and fatigue young children.
- 5. Easy examples in adding or subtracting decimal fractions, limited to *tenths* and *hundredths*. Multiplying and dividing easy decimals by divisors less than 5.

MO	D	EL	3
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.2	.5	.15	\$1.25	$.2 \times 4 = .8$
.3	.4	.20	2.75	$.2 \times 7 = 1.4$
.4	.6	.12	4.50	$.3 \times 9 = 2.7$
				$.2 \times 5 = 1.$
.9	1.5	.47	\$8.50	

For further examples teachers are referred to "Methods of Teaching," pp. 211, 212, 213.

- 6. Pass around the class the following coins of the United States: the nickel, or five-cent piece, the dime, quarter-dollar, half-dollar, dollar, quarter-eagle, half-eagle, eagle.
- 7. Reading, writing and adding dollars and cents. Multiplying dollars and cents by unit figures.

For model exercises, teachers are referred to "Methods of Teaching," p. 213.

- 8. Easy examples in adding and subtracting concrete numbers, such as pints, quarts, inches, feet, pounds, etc.
 - 9. Multiplication Table to 10 times 5.
- 10. Find $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, of numbers not to exceed a maximum of 50.

- 11. Easy examples in adding such fractions as $\frac{1}{2}$ and $\frac{1}{4}$; $\frac{1}{4}$ and $\frac{1}{8}$; also in adding columns of halves, thirds, fourths, fifths, eighths and tenths.
- 12. Drill in counting to 100, and then backward from 100, by 2's, 3's, 4's, 5's. Occasionally make a game of this by requiring every pupil that makes a mistake to be seated.
- 13. Counting by ½'s to 20, and backward, counting by ¼'s; counting by 1-5's; by 1-10's.
- 14. Exercises: Inch, foot, yard; pint, quart, gallon; day, week, month; dozen.
 - 15. Easy examples in common and decimal fractions.

MODELS

$\frac{1}{2}$ = .5 $\frac{1}{2}$ = .5 ·	$2\frac{1}{2} = 2.5$ $3\frac{1}{2} = 3.5$	$1\frac{1}{4} = 1.25$ $1\frac{1}{2} = 1.50$
$\frac{1}{2}$.5	$4\frac{1}{2} = 4.5$	$$2\frac{1}{2}=2.50$
$1\frac{1}{2} = 1.5$	$10\frac{1}{2} = 10.5$	$$5\frac{1}{5}=5.25$

For further examples for beginners see "Methods of Teaching," pp. 209 to 213.

- 16. In all the operations in this grade teachers will exercise their common-sense, and keep their work within reasonable limits. They will allow their pupils to learn how to make a beginning with small numbers and short examples.
- 17. Teachers are referred to Seymour Eaton's "Easy Problems for Young Thinkers;" to Dunton's Arithmetic in Primary Schools.

SEC. IV. GEOGRAPHY

I. The best lesson that teachers can give to a class of beginners in geography in this city is to take the children to the top of the nearest hill and call their attention to whatever natural features of land and water are within the field of view. Then connect the knowledge acquired by actually *seeing* things with a picture or map.

II. Any teachers who will give this best of all lessons to their classes are given permission to take their classes out for a half or a whole day, once a year, for an observation lesson.

SPECIFIC DIRECTIONS

- 1. Teachers will make use of the first sixteen pages of the State Elementary Geography.
- 2. Give a few short lessons on the school globe to show the shape of the earth, the grand divisions, and the Atlantic and Pacific Oceans.
 - 3. Exercises on a Map of the Bay Counties.
- 4. Easy lessons in local geography, asking questions like the following:
 - (1). Have you ever seen a bay? If so, what one?
 - (2). Have you ever seen an island? What is it called?
 - (3). What mountain have you seen?
 - (4.) Name all the hills you know of.
 - (5). Have you ever been to the top of Telegraph Hill?

 If so, what did you see from the summit?
 - (6). For further suggestions teachers are referred to Col. Parker's "How to Study Geography."

SEC. V. OBSERVATION LESSONS

I. "The first teaching a child wants is an object-lesson of one sort or another; and as soon as it is fit for systematic instruction it is fit for a modicum of science." —Huxley.

I. GENERAL OUTLINES

3 Hours a Week

1. Observation Lessons on Nature, on Plants, on Animals, and on the Human Body: (a) Air, wind; rain, the natural features of the vicinity; sunrise and sunset; the seasons. (b) Trees, shrubs, vegetables. (c) Grass-eaters; flesheaters; animals with hoofs, claws, wings; animals that live on the land; in the water; fly through the air. (d) Lessons on how we move, and why we take exercise; how and why we eat; what drinks we should avoid; the use of the blood; how we breathe and why we need pure air; why we should bathe; why we should keep regular hours and why we should have plenty of sleep.

SPECIFIC DIRECTIONS

I. Conversation Lessons on Animals

Animals: (1) Lion, tiger, camel, elephant. (2) Bees, butterflies, birds, ants. (3) Animals included in the First Grade reviewed.

Use the charts if there are any in school. Let your pupils make rough sketches of any animal they think they can draw.

Teachers will draw on the blackboard rough outlines of animals from Little's or Augsburg's Outlines.

11. ORAL INSTRUCTION LESSONS

- (1.) Plants: Flower, leaf, stem, root, bud, blossom, fruit, seed. Examined and talked about. Rough sketches of leaves, stems, or flowers, on slate, blackboard, or practice paper. Let pupils bring the leaves, plants or flowers into the schoolroom. Teachers will put on the blackboard outlines from Little or Augsburg and allow pupils to copy them on slates or blackboards.
- (2.) NATURAL PHENOMENA: Day and night; air, wind; fog and dew.
- (3.) Color: (1) Grouping flowers by colors, as scarlet, crimson, pink. (2) Grouping by contrast, as red, white, blue.
- (4.) Place and Distance: Pupils required actually to measure in inches and feet the length of blackboards, desks, tables, etc., in the schoolroom. Map of schoolroom to be drawn.

Note.—For further suggestions, teachers are referred to Partridge's "Quincy Methods," Calkin's "Object Lessons," Sheldon's Elementary Instruction.

SEC. VI. HEALTH, MORALS AND POLITENESS

"1667. Instruction must be given in all grades of schools and in all classes during the entire school course, in manners and morals, and upon the nature of alcoholic drinks and narcotics, and their effects upon the human system."

School Law of California.

"1702. It shall be the duty of all teachers to endeavor to impress upon the minds of the pupils the principles of morality, truth, justice and patriotism, to teach them to avoid idleness, profanity, and falsehood, and to instruct them in the principles of a free government, and to train them up to a true comprehension of the rights, duties and dignity of American citizenship."

—School Law of California.

I. TRAINING IN POLITENESS

- I. Topics for Short Talks: Take at least one short talk every week on Monday morning.
 - 1. Manners at school.
 - 2. Manners at home.
 - 3. Manners on the street.
 - 4. Manners at the table.
 - 5. Manners toward the aged.
 - 6. Manners in street-cars.

SPECIFIC DIRECTIONS

- 1. Train children to be polite to their teachers and school-mates.
- 2. Talk to them about being particularly respectful and polite at home to their fathers and mothers, brothers and sisters.
- 3. Talk to them about kindness to animals, such as dogs, cats, birds and horses. Teach them that kindness to animals is only another form of politeness. Read to them extracts

from "Black Beauty." Impress on the mind of every boy that his mother is, for him, the first lady in the land.

Note.—For suggestive exercises, teachers are referred to Dewey's "How to Teach Manners."

II. MORAL TRAINING

Opening Exercise, Half Hour a Week.

- 1 Teachers are directed to give instruction for a few minutes in good manners and good morals at the opening of school in the morning and at other favorable opportunities. In giving this instruction, teachers should keep strictly within the bounds of manners and morals, and thus avoid all occasions for treating of or alluding to sectarian subjects.
- 2. Teachers will seek to plant in the minds and hearts of their pupils the principles of right living, especially of temperance; and thus, in spirit and in letter, to carry out the law that requires teachers to explain to their pupils the effects of the use of narcotics and alcoholic stimulants on body and mind.

SPECIFIC DIRECTIONS

- 1. Show boys why it is wrong to play truant.
- 2. Why it is wrong for them to fight.
- 3. Show children why they ought to tell the truth.
- 4. Caution boys against smoking cigarettes.
- 5. Read to your class the story of "Patsy," by Kate Douglas Wiggin.
 - 6. Lead children to avoid thoughtless cruelty to animals,

such as dogs, cats, and horses; to insects and to birds.

- 7. Lead them to consider kind treatment of animals one form of politeness.
 - 8. Let every pupil commit to memory the following stanza:

"He prayeth best who loveth best
All things both great and small,
For the great God who loveth us,
He made and loveth all."
—Coleridge.

- 9. The formation of a "Band of Mercy" has proved in many schools a most efficient means of moral training. The following is the pledge used in one school, signed by over 1,000 names:
- "We, the undersigned, do solemnly promise that we will NOT FIGHT, and that we will do all in our power to prevent others from fighting.
- "We do solemnly promise not to STONE CHINAMEN, and to try to prevent others from doing it.

"We do solemnly promise not to ABUSE ANIMALS, and to do all we can to protect them from the abuse of others."

III. PHYSICAL TRAINING

- 1. Free gymnastic drill.
- 2. Kindergarten motion songs.
- 3. Breathing exercises and vocal drill.
- 4. Care of the hands, face, teeth and hair.
- 5. Tidiness of dress.

Note.—Teachers are requested to make use of Dr. Walker's "Health Lessons," a book full of excellent suggestions.

SEC. VII. BOOKS FOR TEACHERS

Teachers are requested to read the following books: "Chats with Young Teachers."—Anna B. Badlam.
Allen's "Mind Studies for Young Teachers."
Gordy's Psychology.

SEC. VIII. DRAWING

- I. Sketching and outlining objects, such as leaves, flowers, and plants, in connection with observation lessons.
- II. Copying outlines drawn upon the blackboard by teachers, of animals, birds, insects, etc., from Augsburg's or Little's Book of Outlines.
 - III. Rough drawings of domestic utensils and implements.
- IV. The supplementary use of any drawing-book adopted by the Board of Education.

THIRD GRADE PRIMARY

[Fourth School Year.]

No Home Lessons

"Teachers shall assign no lessons whatever for home study to pupils in the first, second and third grades."

-Rules of the Board of Education.

General Principles.

I. "The aim of all intellectual training for the mass of the people should be to cultivate common sense."

—John Stuart Mill.

II. "Worth belongs to any subject of study if it conveys. methods that are useful far beyond itself."

-Bain.

SEC. I. READING, WRITING, LANGUAGE, AND SPELLING.

- I. The real secret of having children learn to read, is to furnish them with an abundant supply of interesting matter to read.
- II. When a child begins to read books from a love of them, he begins to educate himself.

I. GENERAL OUTLINES

9 Hours a Week.

Oral and written expression, including writing, 5 hours; reading, 4 hours.

- 1. Oral and written exercises in the use of language as an expression of thought. Special attention to be given to correct forms of speech.—Material: (a) Elementary Science lessons. (b) Supplementary reading. (c) Pictures.—Work: (a) Oral reproduction of the reading lessons. (b) Oral and written reproduction of what has been read or told to the pupils, or silently read by them. (c) Reproduction of lessons in Elementary Science and Geography. (d) Studies of pictures; stories told and written from them. (e) Conversations on good manners and good morals. (f) Letter-writing. (g) The correct pronunciation and use of words frequently mispronounced and misused. (h) Vowels and consonants. (i) Uses of the apostrophe. (j) Syllabication. (k) Common abbreviations. (l) Quotations. (m) Frequent dictation exercises for spelling, punctuation, and forms used in letter-writing.
- 2. Writing: (a) Practice in the various movements of arm, hand, and fingers, with pen held correctly. (b) Copying from the blackboard. (c) Writing selections and dictated exercises in blank-books.
- 3. Reading: (a) From the authorized text-book. (b) From the permanent, or collateral supplementary books; and (c) from the circulating sets of supplementary books suitable for this grade. (d) A few choice selections of appropriate poetry are to be studied, committed to memory, and recited.

Note.—Teachers should keep in mind the great object both of oral and of silent reading: viz., to understand and acquire

the thoughts and sentiments expressed in script or print. It is also the object of oral reading to express aloud or to communicate to others these thoughts and sentiments in the words of the author. To do this with clearness and force demands of the reader a complete mastery of the words, distinct articulation, just emphasis, and right inflection. Frequent exercises to secure these essentials of good oral reading are especially desirable in the lower classes.

The supplementary reading, permanent and circulating, may be made of great educational value. Rightly used, it will inform the mind, awaken thought, and improve expression; moreover, it will lead to the formation of good mental habits and to greater facility in reading. Every exercise in reading should be so conducted as to hold the close attention of all engaged in it.

11. SPECIFIC DIRECTIONS

- 1. State Second Reader to Lesson 31. Two lessons a week. Teachers are instructed to carry out the suggestions in the "Preface." In addition, the teachers will take two exercises a week in sets of supplementary reading from the library.
- 2. Teachers are instructed to take all written exercises required at the end of the reading lesson.
- 3. Train pupils to think about the meaning of what they read.
- 4. Occasionally, take short lessons of one or two minutes in phonic drill to aid in securing distinct articulation.
- 5. Pay reasonable attention to diacritical marks, omitting some of the most difficult.
 - 6. Poetry to be memorized by the class during the year:

- 1. Always Speak the Truth, p. 13.
- 2. Suppose, p. 93.
- 3. The Bluebird's Song, p. 174.
- 7. State Speller, in the hands of pupils, to Lesson 48. Spelling, partly oral and partly written.
- 8. Once in two weeks make up a spelling match by letting pupils choose sides. Dictate review words both from reader and speller.
- 9. Occasionally, take a "spelling game." For a variety of such games, see "Methods of Teaching," pp. 134, 135, 136.
- 10. Occasionally, have a concert drill in pronouncing columns of words from the speller to aid in securing distinct articulation and correct pronunciation.
- 11. Occasionally, give a drill in concert phonic spelling from some lesson in the speller.
- 12. The following methods will be found useful, and will enable teachers to vary the monotony of routine lessons:
 - (1.) Write the names of all the objects in the school room.
 - (2.) Let each pupil in turn name and spell orally the name of some article of food.
 - (3.) Write a list of articles sold in a grocery store; a list of the names of flowers, fishes, birds, insects, trees, etc.
- 13. For books from which to select good lists of words for additional lessons, teachers are referred to Swinton's Word Primer.
- 14. Once a week ask your pupils to take home their Second Readers and read aloud to their parents the best lesson of the week, in order to show how well they can read.
 - 15. In this grade teachers are expected to find out what

kind of books their pupils are reading at home, and to recommend suitable books for them to read.

Teachers will tell their pupils how to draw books from the Free Library or the Mechanics' Institute Library or the Mercantile Library, and will give a list of at least five suitable books to be read.

- 16. The best way to teach children to read, after they are once started, is to get into their hands a good story book.
- 17. For further suggestions about methods in reading, teachers are referred to "Methods of Teaching," pp. 189 to 195; pp. 123 to 131.

SEC. II. LANGUAGE LESSONS

General Principles.

- I. Ideas before words.
- II. Thought before expression.
- III. Practice before scientific rules.

I. GENERAL OUTLINES

- 1. "Lessons in Language," State Series in the hands of pupils to Lesson 52. Teachers will carefully study the directions and suggestions in the preface of this book, and then carry them into practice.
- 2. Learning to distinguish Declarative, Interrogative, and Exclamatory sentences. Constructing sentences and distinguishing nouns, verbs, and adjectives, and selecting such words from the reading lessons. Constructing sentences to express present, past, and future time. Modifiers of verbs to tell when, where, and how. Correcting common blunders and

errors in the use of was, were; did, done; saw, seen; go, went, etc. Analysis of simple sentences extending to subject and predicate. Once in two weeks, composition exercises consisting of letter-writing, abstracts of easy reading lessons, transposing easy poetry into prose, reports of oral lessons, and simple descriptions of objects.

II. SPECIFIC DIRECTIONS

- 1. Develop the idea of a telling sentence. (Declarative.)
- 2. Lead pupils to arrive at an idea of an asking sentence (interrogative), and to learn the rule for closing such a sentence.
 - 3. The same exercise with an exclamatory sentence.
- 4. Definition of a noun, and exercises in finding nouns in a reading lesson; making numerous lists of ten names of common objects.
 - 5. Nouns that begin with a capital letter.
- 6. The words I and O should always be capitals—hunt for them in reading lessons.
- 7. Singular and plural forms of nouns. Lead pupils, by example, to find out the rule for forming plurals.
- 8. The possessive forms of nouns in the singular number. Hunt for examples in the reading lessons.
- 9. Use of quotation marks. Find illustrations in the reading lessons.
 - 10. Contracted words; use of the apostrophe.
- 11. Use of the comma in a succession of particulars when and is omitted.
- 12. Have pupils learn the use of a hyphen in a word divided at the end of a line; in compound words.

- 13. Let pupils find as many adjectives as they can in some selected lesson.
 - 14. Let pupils hunt for verbs in some selected lesson.
 - 15. Let pupils write a list of all the verbs they can think of.
- 16. For additional exercises in language, teachers are referred to "Swinton's Language Primer" and "Language Lessons" and "Methods of Teaching," pp. 279 to 287.
 - 17. Once in two weeks give an exercise in letter-writing.
- 18. Once in two weeks an exercise in composition-writing. Teachers are referred for exercises to "Methods of Teaching," pp. 258 to 267.

SEC. III. ARITHMETIC.

Principles

- I. The teacher must keep clearly in mind the two leading objects of the study of arithmetic; (1) for practical business in life; (2) for mental discipline in habits of attention, and in simple processes of reasoning.
- II. More than any other elementary study, arithmetic enables the teacher to estimate the exact amount of work actually done by pupils.
- III. Teachers must bear in mind that for many children arithmetic is a difficult study, especially at an early age. It is not wise to assume that pupils who are slow in learning arithmetic are dull.

I. GENERAL OUTLINES

4 1-2 Hours a Week

Oral exercises with simple numbers, and arithmetic at sight, to precede, accompany and follow each subject in written arithmetic.

- 1. (a) Combinations of hundreds, and of hundreds with smaller numbers. (b) Writing and reading integers.
- 2. (a) Addition and subtraction in integers—sums and minuends not to exceed one thousand. (b) Multiplication and division in integers—products and dividends not to exceed one thousand.
- 3. (a) Simple concrete illustrations of fractions. (b) Writing and reading decimals to and including thousandths. (c) The units of United States money, with their relation to one another.
- 4. (a) Addition and subtraction of decimals to and including thousandths; and (b) of United States money.
- 5. (a) The units of long, of liquid and of dry measure, with their relations. (b) Measuring distances and length, width and height or depth.

II. GENERAL PRINCIPLES

- I. Train pupils to do their work slowly and accurately.
- II. In this grade omit useless verbiage in explanations, definitions and analysis; keep down to business numbers.
- III. Remember that a method or principle is most quickly perceived in working with small numbers.
- IV. Some of your pupils will not remain in school after this year; try to fit them for simple business calculations.
- V. Omit complicated problems and avoid long operations with large numbers.

III. SPECIFIC DIRECTIONS

1. State "Primary Number Lessons" to Lesson 69. Book in the hands of pupils. Teachers will carefully study the

suggestions in the preface of the Text-book, and then carry them into practice.

- 2. The reading and writing of numbers to one thousand.
- 3. Drill in addition and subtraction; numbers used not exceeding hundreds. Multiplication of numbers, the product not to exceed 1,000. Division, using dividends not exceeding 1,000. Divisors not exceeding 10. Multiplication of small numbers by two figures.
 - 4. Drill on tables.
 - 5. Multiplication table to 10 times 10.
- 6. Adding and subtracting decimals not exceeding hundredths. Multiplying decimals and mixed numbers by whole numbers, not exceeding 10.
- 7. Slate and blackboard drill in adding dollars and cents; amount not to exceed \$100. Fractions of cents to be written in business forms.

MODELS					
\$ 1.25	$\$ 8.16\frac{2}{3}$	\$ 1.061			
$2.37\frac{1}{2}$	$5.33\frac{1}{3}$	$2.24\frac{3}{4}$			
$4.87\frac{1}{2}$	$8.24\frac{2}{3}$	$5.17\frac{1}{2}$			
$5.16\frac{1}{4}$	4.25	$2.87\frac{1}{2}$			
$$13.66\frac{1}{4}$	$$25.99\frac{2}{3}$	\$11.36			

- 8. Call the class in line around the room and let pupils count by 2's, 3's, 4's and 5's to 100; then reverse the counting from 100 to 0. Any pupil that makes a miscount must be seated.
 - 9. Same drill in counting by $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$ and 1-5
 - 10. Same drill in adding and subtracting by 5.
- 11. Teach first the form of long division, using small dividends, the divisors less than 10. If pupils are capable of more work let them use a divisor not exceeding 25.

- 12. Train pupils to make up questions in mental arithmetic to be given to the class.
- 13. Short business examples such as might occur in buying things at a grocery store. Simplest form of a bill.
 - 14. Exercises in making change.
- 15. Combine mental and written arithmetic. Lead pupils by easy questions from simple examples worked mentally to longer ones worked on the slate.
 - 16. Tables to be learned:
 - 1. Inches, feet.
 - 2. Avoirdupois Weight-Ounces, pounds.
 - 3. United States money.
 - 4. Liquid Measure.—Gills, pints, quarts, gallons.
- 17. For aid in mental arithmetic teachers are referred to "Easy Problems for Young Thinkers," by Seymour Eaton; Dunton's "Arithmetic in Primary School;" and "Baldwin's Industrial Arithmetic."

SEC. IV. GEOGRAPHY

General Principles

- I. Lay some kind of a basis of conception by calling the attention of pupils to whatever natural features of land and water are within the limited field of their observation.
- II. If possible take the whole class out to some hill-top near your school, and show them how to observe everything that can be seen.
- III. The method of beginning with outlines and afterward filling in with details must to a certain extent be carried along with that of laying a foundation of correct notions based upon a knowledge of local geography.

I. GENERAL OUTLINES

2 hours a week

First Stage of the Study of Geography

- 1. The earth as a whole: Its shape, surface and general conditions, as studied with a school globe.
- 2. (a) Study of natural features by observation of real geographical forms: San Francisco and vicinity. (b) Drawing a plan of the school-room. (c) Use of the compass; direction, distance, position. (d) Study of a map of San Francisco and vicinity. (e) Observation lessons on a map of the State of California, or of the bay counties.
- 3. General study from globe and maps: (a) The hemispheres, continents, grand divisions, and oceans. One mountain range in each grand division; two large cities; one large river; two or three important counties.
- 4. For supplementary reading, use Baker's Geography for Young Folks.

Note.—The class are to read books treating of geographical subjects, and are to make collections of specimens of the materials and products mentioned in the reading and characteristic of the countries and places studied. Oral reproduction of the lessons should follow.

II. SPECIFIC DIRECTIONS

- 1. Teachers will give the exercises included in the first ten lessons of the State Elementary Geography.
- 2. Common-sense exercises in the local geography of San Francisco and vicinity. Direction of Market Street, Montgomery Street, California Street, and other parallel streets.

All the natural divisions of land and water that pupils can see with their own eyes.

- 3. Common-sense lessons from Bancroft's Map of the Coast Counties.
- 4. Use the school globe. Ask questions like the following, sending each pupil in turn to the globe:

I.

- 1. Point out with your finger the parts that represent land; water.
- 2. Which is the larger, the land surface or the water surface?
 - 3. Turn the globe round once: On what does it turn?
- 4. In what time does the real earth turn round or *rotate* once? On what does it turn?
 - 5. Find the most northerly point of the globe.
 - 6. Place your finger on the most southerly point.
- 7. Put your finger on the black line half-way between the two poles and follow it around the globe; what is it called?
 - 8. Find the Pacific ocean; the Atlantic ocean.
 - 9. Find the Indian ocean.
 - 10. Point out North America; South America.
 - 11. Find Europe, Asia, Africa.
- 12. Turn the Eastern Hemisphere toward the class; the Western.
 - 13. Which is the larger?
 - 14. Find five islands and tell their names.

SEC. V. ELEMENTARY SCIENCE

1 1-2 hours a week

General Principles

- I. The main purpose of elementary lessons in natural science is, not to crowd the memory with facts and names, but to train pupils to *observe* and to *tell* what they are able to find out about things.
- II. "Observation is the absolute basis of all knowledge. The first object, then, in education, must be to lead a child to observe with accuracy; and second to express with correctness the result of his observation." —Pestalazzi.
- III. Begin with things that most of your pupils know something about, adhering strictly to the principles of examing real objects whenever possible, and when not, of using pictures.
- 1. Lessons on the Human Body, with special reference to Hygiene.
- (a) The head, trunk and extremities. (b) How to train the body so as to make and keep it healthful, strong and graceful. (c) Simple study of the special senses; their use and abuse.

Note 1.—Each year of the Grammar-School course of study teachers must give to their pupils instruction upon proper food and clothing, suitable exercise and rest, pure air, sufficient light, and temperance in eating and drinking. The attention of teachers is especially called to the requirements of the following law of this State. Sec. 1665. "Instruction must be given in the * * elements of physiology and hygiene with special instruction as to the nature of alcoholic drinks and narcotics, and their effects upon the human system."

- 2. Observation lessons, as far as the time assigned will allow, on:
- (a) Plants, September to January: Common seed-vessels (lupine, berries); fruits (apple, grape); vegetables (squash, carrot); grains (wheat, corn).—January to April: Common trees (oak, willow, pine); shrubs (arbor vitæ); woods (pine, oak, redwood).—April to June: Growth of seedlings (beans, peas, morning-glory); buds, leaves, flowers, roots—their shape, parts, uses and relations to the life of the plant.—Class collection of grains, woods, pressed leaves and wild flowers. Specimens mounted, labeled and arranged; woods cut in regular shapes, with one polished surface.

In all observation lessons, make free use of exercises in drawing on paper, slates and blackboards.

- Note 2.—Other familiar and available specimens may be substituted for those mentioned in any department of Elementary Science.
- Note 3.—The study of plant life should be carried on in connection with window-gardening or a school-garden. The detailed study of plants may be outlined as follows, one topic being placed before pupils at a time, as the observations are made or the information is given:—
- 1. The fundamental forms of organs—stem, root, leaves and hairs.
 - 2. Functions of these organs.
 - 3. Growth of stems, outer and inner.
 - 4. Underground stems.
 - 5. Above-ground stems.
 - 6. Length of life of stem.
- 7. Buds—growth, kinds, covering, position, unfolding, development, service to the plant.
 - 8. Growth of root.
 - 9. Kinds of roots.

- 10. Duration of root.
- 11. Leaves, kinds, etc.
- 12. Development of leaves.
- 13. Forms of leaves.
- 14. Situation of leaves.
- 15. Blossoms.
- 16. Corolla.
- 17. Forms of blossoms.
- 18. Structure and use of blossoms.
- 19. Structure and use of petals.
- 20. Fertilization.
- 21. The Fruit.
- 22. Seed—Structure and germination.
- (b) MINERALS: Common rocks, such as granite, basalt, sandstone, marble.
- (c) PHENOMEMA OF NATURE: Air, wind, moisture, rain, steam, frost, hail, ice.

OBSERVATION LESSONS

- 1. Objects:—Bread, butter, coffee, tea, etc.
- 2. Form:—Plain figures, lines and angles. Exercises in measuring inch, foot, yard.
 - 3. Review of primary and secondary colors.
- 4. Animals:—Some study of insects from specimens in hands of pupils—house-fly, butterfly, ant, shrimp, and crab. Use small magnifying glasses if the children can get them. Let pupils observe the development of a tadpole by putting one into a glass jar in the school room.

Let pupils copy or draw the outlines on paper, slate or blackboard.

PLANTS:—Ask your pupils to plant at home in the garden or in a box, a bean, a pea, a grain of corn, and a grain of wheat. Tell them to watch the growth and write something about it. The teacher also will plant a few beans or peas, and a few grains of corn at school, and show the growth of the seed before it comes up out of the earth.

Ask pupils to make rough sketches of the appearance of plants at different stages of growth.

5. Botany: Teach the names of five California wildflowers, and bring specimens into the hands of pupils. Also at least five garden flowers. Kinds of trees that grow in San Francisco and vicinity. Study of specimens of woods.

SYLLABUS FOR GENERAL LESSONS

- 1. Parts of a plant—root, stems, leaves.
- 2. Use of each part.
- 3. Uses of Plants: (1) Food. (2) Medicine. (3) Clothing. (4) Shade. (5) Beauty. (6) Shelter. (7) Lumber.
 - 4. Name plants, illustrating each use.
 - 5. Name all the kinds of trees you can think of.
- 6. Indirect care of shade trees. (1) Do not cut or break. (2) Do not hitch horses near. (3) Do not kill birds. Why?
 - 7. Parts of a flower. Learned with the flower in hand.

Note.—For suggestive exercises teachers are referred to Partridge's "Quincy Methods."

SEC. VI. HEALTH, MORALS AND POLITENESS

"Section 1667. Instruction must be given in all grades of schools and in all classes during the entire school course, in manners and morals, and upon the nature of alcoholic drinks and narcotics and their effects upon the human system."

—School Law of California.

"Section 1702. It shall be the duty of all teachers to endeavor to impress upon the minds of the pupils the principles of morality, truth, justice and patriotism; to teach them to avoid idleness, profanity and falsehood; and to instruct them in the principles of a free government, and to train them up to a true comprehension of the rights, duties, and dignity of American citizenship."

-School Law of California.

I. PHYSICAL TRAINING

Time, 1 1-2 hours a week.

Note.—In giving the general lessons specified in the following outlines, teachers are referred to the "Smith's Primer of Physiology and Hygiene," and to Dr. Walker's "Health Lessons."

- 1. Lessons on the Human Body, with special reference to Hygiene:
- (a) The trunk, head and extremities. (b) How to train the body so as to make and keep it healthful, strong, and graceful. (c) Simple study of special senses; their use and abuse.

Note 1.—Each year teachers must give to their pupils instruction upon proper food and clothing, suitable exercise and rest, pure air, sufficient light, and temperance in eating and drinking. The attention of teachers is especially called to the requirements of the following law of this State:

"Section 1665. Instruction must be given in the elements of physiology and hygiene with special instruction as to the

nature of alcoholic drinks and narcotics, and their effects upon the human system."

II. TRAINING IN POLITENESS

Children are supposed to learn manners at home and to take them on unconsciously from intercourse with others. So they do to a certain extent; but it is exceedingly desirable that, superadded to this unconscious influence, good manners should be made the subject of definite instruction in each grade of every school.

(a) TOPICS FOR SHORT TALKS

- 1. Manners at home.
- 2. Manners in school.
- 3. Manners in society.
- 4. Manners at places of amusement.

(b) TOPICS FOR SHORT TALKS

- 1. Always be polite to your parents. Why?
- 2. Always obey your parents cheerfully. Why?
- 3. Do all your duties cheerfully. Why?
- 4. An ungrateful child is always despised by everybody. Why?
 - 5. Duties at school.

(c) MINOR RULES OF POLITENESS

Note.—Teachers will read these rules to pupils, discuss them in class, and then require them to be copied:

- 1. Do not fail to say "Good morning, Miss ——," to your teacher, and "Good evening, Miss ——," when you leave her.
- 2. When you pass directly in front of your teacher, say, "Excuse me."
- 3. Never fail to say "Thank you," (not "Thanks,") for the smallest favors.
- 4. When a schoolmate is reading, or is answering a question, do not raise your hand to correct a mistake until after he has finished.
- 5. When you pass directly in front of a schoolmate, say "Excuse me."
 - 6. Do not stare at visitors who enter the school-room.
- 7. When you stand to recite, stand erect, like a little well-bred gentleman or lady.
- 8. In handing a pointer, pen, or pencil, hand the blunt end towards the person to whom you wish to pass it.
 - 9. It is impolite to chew gum in school.
 - 10. It is not good manners to eat candy in school.

Note.—The preceding rules are adapted from Miss Dewey's "How to teach Manners," a book that should find a place on every teacher's desk.

III. MORAL TRAINING

Opening Exercise, 1-2 hour a week

1. Teachers are directed to give instruction for a few minutes in good morals at the opening of school in the morning and at other favorable opportunities. In giving this instruction, teachers should keep strictly within the bounds of manners and morals, and thus avoid all occasion for treating of or alluding to sectarian subjects.

I. OUTLINES OF LESSONS

- 1. Kindness to Others.—(a) to parents; (b) to the aged and infirm; (c) to the unfortunate and erring; (d) to enemies;—the Golden Rule.
- 2. Kindness to Animals.—(a) to those that serve us; (b) to those that do not harm us—the killing of birds; (c) the killing of those that do us harm; (d) cruelty to any animal wrong.
- 3. Love. (a) for parents and friends; (b) for one's neighbor; (c) for enemies.
- 4. RESPECT AND REVERENCE.—(a) for parents; (b) for the aged; (c) for those in authority.
- 5. Obedience—(a) to parents; (b) to teachers; (c) to those in authority; (d) to conscience.
- 6. Punctuality.—(Blackboard Lesson). (a) it saves trouble; (b) it saves time; (c) it prevents duties from being forgotten; (d) it forms a good habit.

Note.—Teachers are requested to use as an aid in these lessons, Dewey's "Ethics, or Stories of Home and School."

SEC. VII. HISTORY AND PATRIOTISM

- 1. Reading short sketches of the lives of persons famous in American history, such as Washington, Franklin, Jefferson, Lincoln, Grant, Webster, etc.
 - 2. The reading of stories from American history.
- 3. Visits to historic places and monuments in and about San Francisco.
- 4. The books used for reading may be permanent or circulating supplementary books or leaflets, and the time spent in reading should be a part of that given to supplementary reading.
- 5. For a hand-book from which good short extracts may be read to the class, teachers are referred to Swinton's "Primary History of the United States."

SEC. VIII. BOOKS ON TEACHING

Teachers are requested to read Gordy's Psychology and Swett's "Methods of Teaching."

SEC. IX. DRAWING

- I. Outlines and sketches in connection with all kinds of observation lessons in elementary science.
 - II. Copying outlines put upon the blackboards by teachers.
- III. Allowing pupils that show marked talent for drawing to take advanced or special work.
- IV. Supplementary use of the text-book in drawing adopted by the Board of Education.

FOURTH GRADE PRIMARY

General Principles

- 1. Bear in mind that many boys and girls in your class will not attend school after this year. Take the essentials of the grade work, but find time to teach them the main things they ought to know, in the grade or out of it. Every intelligent teacher is allowed some scope for the exercise of common sense.
- II. The essential things that pupils ought to be trained to do well are: (1) To read, write and spell their mother-tongue correctly as far as they use it in everyday life. (2) To work accurately short examples in the "four rules;" to work short business examples in common and decimal fractions; to reckon simple interest on small sums of money; to make out bills, to write out a receipt, and to write a letter. (3) To know something of geography. (4) To know something of the rules of polite behavior, and of the precepts of morality.

GENERAL DIRECTIONS

- 1. "The lessons assigned for home study to pupils in the fourth and fifth grades shall be such as to require not more than one hour's study, and in these grades no lessons whatever in arithmetic shall be assigned for home work." Rule of the Board of Education.
 - 2. Read carefully the Course of Study for the Third Grade

in order to understand how the directions are connected with those of your own grade.

3. Study attentively the course for the Fifth Grade to know how your own work ought to connect with that.

SEC. I. READING, WRITING, LANGUAGE AND SPELLING

I. GENERAL OUTLINES

10 hours a Week

Oral and Written Expression, including Writing, 5 hours. Reading, 4 hours.

- 1. Oral and Written Exercises in the use of language as an expression of thought. Special attention to be given to correct forms of speech.—Material: (a) Elementary Science lessons. (b) Supplementary reading. (c) Pictures.—Work: (a) Oral reproduction of the reading lessons. (b) Oral and written reproduction of what has been read or told to the pupils, or silently read by them. (c) Reproductions of lessons in Elementary Science and Geography. (d) Studies of pictures; stories told and written from them. (e) Conversations on good manners and good morals. (f) Letter-writing. (g) The correct pronunciation and use of words frequently mispronounced and misused. (h) Uses of the apostrophe. (i) Syllabication. (j) Abbreviations. (k) Quotations. (l) Frequent dictation exercises for spelling, punctuation, and forms used in letter-writing. (m) Spelling the plural of nouns.
- 2. Writing: (a) Practice in free movements. (b) One writing-book completed each year, or its equivalent. (c) Copying from the blackboard. (d) Writing in blank-books, selections and original and dictated exercises.

- 3. Reading: (a) From the authorized text-book; (b) from the permanent, or collateral, supplementary books; and (c) from the circulating sets of supplementary books suitable for this grade. (d) A few choice poems or selections from longer poems are to be studied, committed to memory, and recited.
- 4. Although the great aim of reading should be the comprehension and acquisition of the author's thoughts and sentiments, yet the mechanical part of oral reading should not be neglected. Judicious exercise of the organs of speech for two or three minutes each day, in order to give them more flexibility and greater precision in their action, will avail much.

In selecting poetry to be committed to memory, it should be kept in mind that the object of the exercise is not merely to cultivate the verbal memory—important as that is—but also to lead to the appreciation of the beauty of thought and expression, and to leave in the mind and heart sentiments that will enrich the life.

II. SPECIFIC DIRECTIONS

- 1. State Second Reader to Lesson 71. Two lessons a week. Teachers will read the preface and carry into effect the directions there given.
- 2. Reading at sight, two lessons a week, from sets of Supplementary Readers; from "Black Beauty," and from other selected matter.
- 3. Teachers are instructed to find out what kind of books their pupils are reading at home, and to suggest suitable books to be read. They will tell them how to choose books from the Free Library, and other libraries, and will give their pupils a list of half a dozen books to be read. The best way to culti-

vate a taste for reading is to get a good book into the hands of the child.

- 4. Take the State Speller to Lesson 51. Book in the hands of pupils. Combine written with oral spelling.
- 5. Supplement the work in the State Speller by selected groups of words in common use, often misspelled; by words from reading lessons; by "spelling games," and any other variations to relieve the monotony of work on the State Speller.
- 6. For a variety of word exercises, teachers are referred to "Swinton's Word Book;" "Methods of Teaching," pp. 132 to 136; "Quincy Methods."
- 7. Special Suggestion.—If you wish to have your pupils make rapid progress in reading, ask them, once a week, to read aloud to their parents or their older brothers or sisters.

SEC. II. LANGUAGE LESSONS

I. GENERAL SUGGESTIONS

- I. One of the best ways in which children acquire a knowledge of language is by reading interesting books.
- II. In this grade teachers should begin to find out what kind of books their pupils are reading at home, and advise them what to read by giving them a short list of the very best instructive story books.

II. SPECIFIC DIRECTIONS

1. State "Lessons in Language" in the hands of pupils.

- 2. Carefully observe the directions and suggestions given in the "preface" of the text-book.
 - 3. Once in two weeks take an exercise in letter-writing.
- 4. Language. Naming parts of speech from reading lessons.

Analysis of simple sentences: subject; predicate; modifiers of subject; modifiers of predicate.

- 5. For additional exercises, teachers are referred to Swinton's "Language Primer" and "Language Lessons," Josephine Simpson's "Composition Subjects," and Giffin's "Suggestive Dictative Exercises in Language."
- 6. For exercises in composition-writing, teachers are referred to "Methods of Teaching," pp. 248 to 278.

SEC. III. ARITHMETIC

General Principles

- I. In teaching arithmetic in this grade teachers must use simple, sensible and thorough methods.
- II. The main things upon which the attention of pupils must be concentrated are: (1) Readiness and accuracy in the "four rules," limited to short computations with small numbers; (2) business examples involving common and decimal fractions; (3) the common business tables of weights and measures; the ability to reckon simple interest on small sums of money for one year at six per cent, and for 30, 60 or 90 days; (4) to write a promissory note, a receipt, and a bill.
- III. In parts of this work teachers must be content with a beginning, without attempting to exhaust the subject by long logical demonstrations or complete forms of analysis. Your

pupils in this grade have no time to spend fooling over complicated arithmetical puzzles.

I. GENERAL OUTLINES

4 1-2 hours a week

Oral exercises with simple numbers, and arithmetic at sight, to precede, accompany and follow each subject in written arithmetic.

- 1. Addition and subtraction of integers, of decimals, and of United States money, continued.
- 2. (a) Multiplication and division of integers, continued. (b) Multiplication and division of decimals to and including thousandths, and of United States money, continued.
- 3. (a) The tables of Long Measure; Square Measure; of Avoirdupois Weight, and of Time. (b) Measuring the dimensions and finding the areas of squares and other rectangles.
- 4. Operations in common fractions generally limited to small fractions, such as halves, thirds, fourths, fifths, sixths, eighths and twelfths. Long and complicated questions must neither be taken from the text-book nor given by teachers.
- 5. Mental Arithmetic in connection with written, the same topic in both kinds being taught at the same time.

II. SPECIFIC DIRECTIONS

1. State "Lessons in Numbers," in the hands of pupils, completed.

- 2. Give your pupils business examples which will give elementary ideas of trade and household economy.
- 3. Train pupils to make up questions in mental arithmetic to be given to one another.
- 4. Call pupils in line around the room and conduct drill lessons in adding and subtracting by 2's, 3's, 4's, 5's, etc.; by $\frac{1}{2}$, $\frac{1}{8}$; by the decimals, .2, .4, .5, etc.; by $1\frac{1}{2}$, $2\frac{1}{2}$, etc. Pupils that fail to be seated.
- 5. Train pupils to habits of thought, reason, and judgment in solving problems, and in giving short, exact, common-sense explanations.
- 6. Improbable examples, such as never occur in business, and fractional expressions of large and unusual terms which require much time and wear of brain to handle, are not profitable work for children. In ordinary business, nearly all the fractions, except decimals, used in business, are halves, quarters, eighths, thirds, sixths, and twelfths. Business operations, except in interest, rarely require decimals exceeding hundredths.
- 7. Instead of teaching the tables by merely requiring pupils to memorize and recite them, put the *real measures* of every kind before them, until hand and eye are familiar with their use. Train your pupils in actual measurements in long, square, and cubic measure: borrow from some grocery store the ounce, half-ounce, and pound weights, the pint and quart measures, and experiment with them until your pupils know the reality as well as the words and numbers.

Tables to be taught: (1) Long Measure; (2) Avoirdupois Weight; (3) Time; (4) Cubic inch and cubic foot.

For methods of handling tables, teachers are referred to "Methods of Teaching," pp. 227 to 230.

8. For suitable questions in mental arithmetic, teachers

are referred to "Easy Lessons for Young Beginners," by Seymour Eaton, and to "Colburn's Mental Arithmetic."

- 9. Require each pupil in turn to make up and give to the class some short question in mental arithmetic.
- 10. Occasionally, match one class or one division with another, by submitting five short business questions to be worked in a given time on slates.
- 11. Drill-work on fractions limited mainly to such fractions as are used in business, namely, halves, quarters, eighths, thirds, sixths, twelfths. Turn to the detailed directions in the Third Grade Course, and continue work in the same line.
- 12. Drill on decimals, addition, subtraction, multiplication and division, limited to small numbers. For illustration of method, teachers are referred to "Methods of Teaching," pp. 209 to 227.
 - 13. Review drill on the multiplication table to 12 times 12.

SEC. IV. GEOGRAPHY

I. Teachers will require only essentials to be memorized for recitation. The greater part of the text-book must be read aloud in class, and talked about.

I. GENERAL OUTLINES

2 Hours a Week

FIRST STAGE OF THE STUDY OF GEOGRAPHY, CONTINUED AND COMPLETED

1. (a) Study of our own country from the map. (b) Gen-

eral study of its different sections from maps of sections. (c) Imaginary travels in it; oral or written descriptions of these. (d) Class collection and mounting of specimens of the industries of our country.

- 2. Simple study of two or three of the most *important* countries in each grand division.
- 3. Call attention to two or three great ocean commercial routes.

Note.—The class are to read books treating of geographical subjects, and are to make collections of specimens of the products mentioned in the reading and characteristic of the countries and places studied. Oral reproduction of the lessons should follow.

. II. SPECIFIC DIRECTIONS

1. State Elementary Geography in the hands of pupils. Take the first 27 pages and the following pages, 62, 63, 64, 65, 69, 70, 71, 76, 77, 80, 81, 84, to be read and recited with open book.

Only the leading statements are to be memorized, as pages 62 to 66; pages 76, 77, 78.

Teachers will carefully read the preface to this text-book, headed, "Methods of Awakening Interest," and then carry out suggestions.

The method of beginning with outlines and afterwards filling in with details must, to a certain extent, be carried on pari passu with that of laying a foundation of correct notions based upon a knowledge of local geography. The extent of local lessons, however, is limited; and beyond the limit of personal observation by pupils, it seems to be the better plan to begin with the grand outlines.

Unless children have traveled a great deal, they can no more form any correct idea of the size of California than they can of the United States, or Africa, or Asia. A great deal of elementary work necessarily consists in getting familiar with maps and names. It must, moreover, be borne in mind, that generalizations, in order to be of any value, must be based on a knowledge of particulars.

- 2. Take three or four review exercises on Bancroft's Map of the Bay Counties.
- 3. Pupils to draw on blackboards and slates a rough outline map: (1.) Of the Bay Counties from Bancroft's Map; (2.) Of California from the open book.
- 4. Short lessons on the school globe. For suggestive questions and exercises see "Methods of Teaching," pp. 235 to 239.
- 5. Exercises in pointing out continents, oceans and grand divisions on outline maps.
- 6. In using the book, let the advance lesson be read aloud in the class. Direct pupils to mark with a pencil a few things to be memorized.
- 7. Let map questions be read aloud in class and answered with open map in the hands of pupils; then mark a few leading questions and require the class to recite them from memory at the next lesson.
- 8. Do not expect your pupils to know more of a lesson than the teacher can remember without looking at a text-book.
- 9. Having determined the chief things to be learned, fix them in the memory by repeated review questions.
 - 10. Use the outline maps.
- 11. Blackboard drawing in the rough is better than labored drawings with pen or pencil.
 - 12. Relieve the monotony of daily lessons by exercises

intended to stimulate curiosity. Show to pupils pictures from illustrated magazines or papers of cities, of beautiful scenery, or of great natural curiosity.

Take an occasional lesson on the school globe. For suggestive questions see "Methods of Teaching," pp. 233 to 239.

13. Geography-games or matches:-

Directions.—Every pupil that fails to give a name, or that repeats a name given before, must be seated.

- 1. Name a city in California.
- 2. Name a city anywhere on the globe and tell in what country it is.
- 3. Name any State in the United States.
- 4. Name some useful vegetable production, and tell in what part of the world it grows.
- 5. Name some cabinet curiosity and tell where it came from.
- 6. For further exercises teachers are referred to "Methods of Teaching," pp. 161, 162, 163.
- 14. For further suggestions teachers are referred to Col. Parker's "How to Teach Geography," pp. 143 to 148.
- 15. For supplementary reading, King's Picturesque Geographical Reader, First Book.
 - 16. Observation Lessons in Geography:—
- 1. Name the months in which it rains in this city and State.
 - 2. Name the months in which it seldom rains.
- 3. In what season do we have the longest days? In what month? When the shortest days?
 - 4. When is the weather hottest? Coldest?

- 5. During the short days in summer where does the sun rise? Point towards the place.
- 6. In the longest days in summer where does the sun set? Point.
- 7. About what time does the sun rise and set in the longest days? The shortest?
- 8. How many hours does the sun shine during the longest days? The shortest?
- 9. At noon, where do you see the sun in the long days of summer? In the short days in winter?
- 10. When does the sun shine the hottest, at morning, noon or evening? Why?
- 11. For additional questions in this direction, teachers who have a copy of "Methods of Teaching" are referred to pages 244 to 246.
- 12. For further suggestions teachers are referred to Col. Parker's "How to Study Geography," pp. 141, 142.

SEC. V. ELEMENTARY SCIENCE

1. General Statements

1. The purpose and method of the grammar grade work in elementary science is largely coincident with the purpose and method of the observation lessons in the primary grades. The purpose is to train the senses and the intellectual faculties in their natural order of development; to form scientific habits of study, and to acquire such knowledge as will incite to further and more systematic study of the natural sciences; to build up the moral nature; and to lay the foundation of a well-rounded

and practical education. The method from first to last is observation, experiment and induction, with some form of expression—oral, graphic or constructive—which shall complete and communicate the results of the work.

The right study of elementary science, at every stage of its process, trains the mind by exercising the faculties of analysis, comparison, judgment and taste, as well as the other mental activities. This study should nourish the moral nature by creating a habit of sympathy and communion with nature; by arousing a love for beauty and symmetry of form, and by revealing the design and adaption of structure in plant and animal life; by instilling a tenderness for lower forms and reverence for higher forms of being; by leading to a recognition of responsibility to law as manifested in natural phenomena, and of the power of habit as displayed in the structural growth of plant and animal life; by applying the laws of physical growth to mental and moral growth; by fostering an appreciation of the mutual helpfulness of all departments of nature and an apprehension of the providence and fatherhood of the Creator as shown in the life of nature.

II. GENERAL DIRECTIONS

I. Begin with things that most of your pupils already know something about; adhering strictly to the principle of examining real objects when they are procurable; and, when not, of using pictures. Agassiz, having been asked to give some instruction on insects at a teacher's institute, says: "I thought the best way to proceed would be to place the objects in the hands of the teachers, for I knew that mere 'verbal instruction would not be transformed into actual knowledge. I therefore went out and collected several hundred grasshoppers,

brought them in, and gave one into the hands of every one present. It created universal laughter; yet the examination of these objects had not been carried on long before every one was interested, and, instead of looking at me, looked at the thing. And they began to examine, and to appreciate what it was to see, and see carefully. At first I pointed out the things which no one could see. 'We can't see them,' they said. 'But look again,' said I, 'for I can see things ten times smaller than these;' and they finally discerned them."

- II. What is seen is easily remembered, but what is only told goes in at one ear and out at the other.
- III. Do not be over-scientific. Avoid technical terms when common names will serve your purpose. What we want here is simple truth; not pretentious science buried under classical nomenclature.

III. GENERAL OUTLINE

1 1-2 hours a week

- 1. Lessons on the Human Body, with special reference to Hygiene: (a) The bones as a framework and protection. (b) Their composition and structure. (c) Joints, ligaments and cartilages. (d) The growth and health of bones; injury to and repair of bones, joints and ligaments. (e) How exercise, rest, posture, clothing, food, alcoholic and other stimulants affect directly or indirectly the bones.
- 2. Observation lessons as far as the time assigned will allow, on:
- (a) Animals: Structure and habits of familiar insects and vertebrates (crab, spider, fly, butterfly, grasshopper, frog, fish, hen, cat, dog, pig, rabbit, horse, cow); with special reference

to the relation of structure to conditions and modes of life.—Kindness to animals: anecdotes and stories read and told.—Class collection of insects and of animal products (wood, silk, fur, feathers, hide, bone, horn, ivory, nests, eggs, marine or land shells, sponge, coral).—Written reproduction of lessons on specimens.

- (b) Lessons on plants continued from work in the Third Grade. Drawing exercises in connection with these lessons. For details, teachers are referred to the Third Grade Course. Rough outlines of insects and animals to be shown on paper, slates and blackboards.
- (c) Phenomena of Nature: Hills, valleys, rivers, lakes, seas.

IV. SPECIFIC DIRECTIONS

- 1. Make use of "Smith's Primer of Physiology" and Dr. Walker's "Health Lessons."
- 2. For suggestive methods of conducting exercises teachers are referred to "Quincy's Methods."
- 3. In lessons on animals teachers will find Colton's "Practical Zoology" an invaluable assistant.

SEC. VI. HEALTH, MORALS AND POLITENESS

"Section 1667. Instruction must be given in all grades of schools and in all classes during the entire school course, in manners and morals, and upon the nature of alcoholic drinks and narcotics and their effects upon the human system."

—School Law of California.



"Section 1702. It shall be the duty of all teachers to endeavor to impress upon the minds of the pupils the principles of morality, truth, justice and patriotism; to teach them to avoid idleness, profanity, and falsehood; and to instruct them in the principles of a free government, and to train them up to a true comprehension of the rights, duties and dignity of American citizenship."

—School Law of California.

I. TRAINING IN POLITENESS

"A beautiful behavior is the finest of fine arts."
—Ralph Waldo Emerson.

TOPICS FOR SHORT TALKS

Teachers must prepare themselves to give special instructions at stated times to their pupils on the following topics:

(A) MANNERS

- 1. Manners in society.
- 2. Manners at home.
- 3. Manners at the table.
- 4. Respect to the aged.
- 5. The general rules of politeness.
- 6. For additional topics refer to those in the third grade, and take them up more fully than they could be treated in that grade.

(B) COURTESY

Short talks in the class about the following precepts:

- 1. When you do a favor do it cheerfully. Why?
- 2. It is not discourteous to refuse to do wrong. Why?
- 3. A cheerful countenance is always welcome.
- 4. In conversation avoid blunt contradictions.
- 5. When you have slighted or wronged any one do not be afraid to apologize.

Note.—Teachers are referred to Gow's "Primer of Politeness."

(C) FIVE RULES TO BE MEMORIZED

- 1. Be as polite to your mother as you would to a queen.
- 2. True politeness consists in a kind regard for the feelings and rights of others.
- 3. Look persons in the eye when they speak to you, or when you address them.
- 4. Be as polite to your brothers, sisters and schoolmates as you are to strangers.
- 5. Whispering or laughing at lectures or places of amusement is both rude and vulgar.
- 6. Every boy should bear in mind that, for him his mother is the highest lady in the land.

II. MORAL TRAINING

1. "The vital part of human culture is not that which makes man what he is intellectually, but that which makes him what he is in heart, life and character."

-William Russell.

2. Teachers are directed to give instruction in morals and good manners at the opening of school on Monday morning of each week, taking from 15 to 30 minutes for such lessons. In giving such instruction, teachers should keep strictly within the bounds of manners and morals, and thus avoid all occasion for treating of or alluding to sectarian subjects.

SHORT TALKS ON MAXIMS

(A) INDUSTRY

- 1. A young man idle is an old man needy.
- 2. Idleness is the mother of vice.

(B) ECONOMY

- 1. Spend less than you earn.
- 2. Do not spend your money in buying useless things.
- 3. Be saving but not stingy.

(C) ORDER

- 1. Put everything in its right place.
- 2. Keep appointments punctually.
- 3. Have a regular time for home study.
- 4. Try not to be tardy.

(D) TOPICS

- I. TRUTHFULNESS.—(a) in thought, word and act; (b) deceit and falsehood; (c) keeping one's word.
- II. COURAGE.—(a) true and false; (b) dare to do right; (c) courage in duty.
- III. Honesty.—(a) in word and deed; (b) in little things; (c) dishonesty.
- IV. Honor.—(a) one's parents; (b) one's self; (c) home and country.
- V. Good Name.—(a) when young; (b) keeping it; (c) reputation and character; (d) keeping good company.
- VI. Self-Control.—(a) control of temper; (b) anger, when right; (c) wrong desires.
- VII. Confession of Wrong.—(a) when manly and noble; (b) denial of faults.

5. SCHOOL DUTIES OF PUPILS

- I. Duties towards teachers. Question your pupils to find out what their ideas of school duties are. At the close of your conversation sum up your statements into directions somewhat like the following, and have pupils copy them into their blankbooks:
 - 1. Be orderly and quiet.
 - 2. Be punctual and diligent.
 - 3. Try to form good habits.
 - 4. Be respectful and polite to your teacher.

- 5. Learn your lessons as well as you can.
- 6. You must study your lessons for your own good; not because your teacher tells you to study them.
- 7. You cheat yourself, not your teacher, when you are idle and neglect your lessons.

6. TALKS ON HOME DUTIES OF CHILDREN

Stories.—Have short extracts read from "Little Lord Fauntleroy," and other suitable books. Use for Supplementary reading a set of "Gow's Primer of Politeness" from the school library; and Dewey's "Ethics, or Stories of Home and School."

SEC. VII. HISTORY AND PATRIOTISM

Time 1 1-2 hours a week

- 1. The reading of short sketches of the lives of persons famous in American history, such as Washington, Franklin, John Adams, Jefferson, Lincoln, Grant, Webster, Sherman, etc. The sketches should include striking anecdotes and prominent events, not dry outlines of dates.
 - 2. The reading of stories from American history.
- 3. The reading of short sketches of American inventors, such as Fulton, Whitney, Howe, Morse, Ericson and Edison.
- 4. Visits to historic places and monuments in and about San Francisco.
- 5. Teachers will read to their classes the following patriotic poems:

- (a) Paul Revere's Ride.
- (b) Sheridan's Ride.
- (c) Grandmother's Story of the Battle of Bunker Hill.
- 6. The books used for reading may be permanent or circulating supplementary books, or leaflets, and the time spent in reading should be a part of that given to supplementary reading.
- 7. For a handbook from which good, short extracts may be made, teachers are referred to "Swinton's Primary History," and "Eggleston's History of the United States."

The sets of Swinton's or Eggleston's Primary Histories in the School Library should be used for Supplementary Reading.

8. For suggestive exercises, teachers are referred to Partridge's "Quincy Methods."

SEC. VIII. DRAWING

- I. Free hand outlines and sketches of objects.
- II. Copying outlines and sketches drawn on the black-boards by teachers.
 - III. Drawing as applied to Elementary Science Lessons.
- IV. Supplementary use of the Drawing Book adopted by the Board of Education.

FIFTH GRADE GRAMMAR

Home Study

1. "The lessons assigned for home study to pupils in the fourth and fifth grades shall be such as to require not more than one hour's study; and, in these grades, no lessons whatever for home study shall be assigned in arithmetic."

-Rules of the Board of Education.

SEC. I. READING, WRITING AND LANGUAGE.

9 hours a Week.

I. GENERAL OUTLINES

Oral and Writing Expression, including Writing, 5 hours.

Reading, 4 hours

1. ORAL AND WRITTEN EXERCISES in the use of language as an expression of thought. Special attention to be given to correct forms of speech.—Material: (a) Elementary Science lesson. (b) Supplementary reading. (c) Pictures.—Work: (a) Oral reproductions of the reading lessons. (b) Oral and written reproduction of what has been read or told to the pupils, or silently read by them. (c) Reproduction of lessons in Elementary Science and Geography. (d) Studies of pictures; stories told and written from them. (e) Conversations on good manners and good morals. (f) Letter-writing. (g) The correct

pronunciation and use of words frequently mispronounced and misused. (h) Use of the dictionary for definitions and pronunciation. (i) Dictation exercises. (j) Some of the changes in the forms of nouns (inflection), and the purpose of such change (e. g., tooth, teeth, lady, lady's, ladies, ladies'). (k) A few prefixes and suffixes.

- 2. Writing: (a) Practice in free movements. (b) One writing book completed each half-year, or its equivalent. (c) Copying from the blackboard. (d) Writing, in blank books, original and dictated exercises, poetry from memory and choice extracts.
- 3. READING: (a) From the authorized text-book. (b) From the permanent, or collateral, supplementary book. (c) From the circulating sets of supplementary books suitable for the grade. (d) Choice poems or selections from longer poems are to be studied, committed to memory, and recited.

Note.—Read the notes under Third and Fourth Grades. Work in the directions there indicated. The pupils are now able to understand and apply the essential principles of emphasis and inflection. Silent reading for the purpose of testing and increasing the ability to gather thoughts from the printed page will be found a valuable exercise. It will reveal the workings of the pupils' minds, and will prepare the way for a more useful study of text-books. The reading may sometimes be from a single book passed from pupil to pupil, all but the reader being listeners. Good listening helps to good reading, and emphasizes its importance.

Writing from memory poems that have been carefully studied, will give the mind a firmer hold on them, and will prove in other ways a useful exercise.

II. SPECIFIC DIRECTIONS

1. Second Reader completed. Supplementary reading from the school library.

- 2. Let the class memorize the following selections of poetry:
 - 1. Lament of Mother Robin. Lesson 74.
 - 2. The Fairy Artist. "87.
 - 3. Beautiful Things. "98.
 - 4. Buttercups and Daisies. " 102.
- 3. Give your pupils short lists of books suitable for them to draw from the Free Library or other libraries.
 - 4. State Speller. Lessons 50 to 101.
- 5. Supplement the work in the Speller by suitable words selected from the Reader; by groups of words often misspelled and by any other devices to awaken interest, such as spelling-matches, spelling-games, etc. For suggestive supplementary work, teachers are referred to "Methods of Teaching," pp. 132 to 136, and Swinton's Word-Book.
- 6. Take a few easy elementary exercises in English prefixes and suffixes; take 14 prefixes found on page 171 of the State Speller, English suffixes, page 175, of the State Speller, take 10 of the most important. For examples of methods see Swinton's Word Primer and Word-Book; "Methods of Teaching," p. 138; "Word-Matches."

SEC. II. LANGUAGE AND GRAMMAR

I. GENERAL SUGGESTIONS

- I. Teachers must give patient and persistent attention to the correction of vulgarisms, provincialisms, and current errors in speech.
- II. The necessity of a progressive and graduated course of training in the mother-tongue, extending over some years, and beginning in practice and ending in theory, is now generally recognized and acted upon.

William Swinton.

11. SPECIFIC DIRECTIONS

- 1. State Lessons in Language completed. For supplementary exercises, teachers are referred to Swinton's Language Lessons; Reed and Kellogg's Language Lessons.
- 2. For suggestions in sentence-making and composition work, teachers are referred to "Methods of Teaching," pp. 258 to 275.
- 3. Pupils should be able to define the parts of speech and select them from reading lessons.
 - 4. A letter must be written once in four weeks.
- 5. The naming of parts of speech from reading lessons. Declension of personal pronouns; number and case of nouns; comparison of adjectives; composition once in two weeks; letters, abstracts of reading lessons, transposition, descriptions of excursions, visits, travels, or vacations, etc.
- 6. For suggestive exercises in language, teachers are referred to Powell's "How to Write."

SEC. III. ARITHMETIC

I. GENERAL OUTLINES

4 hours a week

Oral exercise with simple numbers, and arithmetic at sight, to precede, accompany, and follow each subject in written arithmetic.

- 1. Drill in accurate addition.
- 2. Common fractions as applied in business.

- 3. (a) The units of Solid Measure, with their relations. (b) Measuring the dimensions, and finding the volumes of cubes and other rectangular solids.
- 4. Decimal fractions, to and including millionths; dollars and cents.

II. SPECIFIC DIRECTIONS

- 1. State Advanced Arithmetic in the hands of pupils to page 122.
- 2. In taking up the text-book treatment in fractions, it will be desirable to simplify the work somewhat. The greater part of the text-book examples involve uncommonly cumbersome operations, which consume time and result in nothing useful. Substitute questions that involve some principles, but have business fractions such as halves, quarters, eights, twelfths, thirds, sixths and tenths. The same statement holds true with regard to the treatment of decimals.

Omit the text-book work on factoring, Least Common Multiple, Greatest Common Divisor, etc.

Omit from the text-book, pages 63 to 71 inclusive, and substitute a few simple exercises on the topics mentioned.

Also omit from the text book the following in full: Complex Fractions, p. 91: Oral Review in Fraction-Exercises, 141, pp. 94, 95, 96. Written Review in Fraction-Exercises, 142, pp. 97, 98, 99, 100, 101. Contracted Division of Decimals, pp. 112, 113; Practical Work in Decimals, Exercise 168, pp. 113, 114, 115. Short Methods in Multiplication, pp. 115, 116, 117, 118.

3. Take the following tables and give short, simple drill exercises of your own under each:

- 1. Avoirdupois Weight.
- 2. Liquid Measure.
- 3. Long Measure.
- 4. Cubic Measure.
- 4. United States money. Text-book Lessons on pp. 168, 169, 170.
- 5. Train pupils to write a promissory note and to make out a bill and a receipt.
- 6. Teach pupils the simplest elements of percentage, and the reckoning of simple interest on small sums of money for one year and fractions of a year.
 - 7. Take Ward's Business Forms, No. 1.

III. GENERAL DRILL EXERCISES

- 8. Take once or twice a week, short, sharp class drills in adding short columns of units, the amount not to exceed 50. Accuracy, not rapidity, is the main thing. The aim is to have every member of the class get the exact answer.
- 9. Similar drill in adding dollars and cents, the amount not to exceed \$50. Give ample time; but expect every pupil to have the exact answer.
- 10. Drill in counting with the class standing in line, by 2's, 4's, 5's; by $\frac{1}{4}$, $\frac{1}{8}$; by $1\frac{1}{2}$, $2\frac{1}{2}$, etc.
- 11. Train pupils to make up short business questions in mental arithmetic; particularly such examples as might occur in buying articles at a grocery store.
 - 12. For aid in mental arithmetic teachers are referred to

"Easy Problems for Beginners," by Seymour Eaton, and Warren Colburn's "Mental Arithmetic."

SEC. IV. GEOGRAPHY

GENERAL SUGGESTIONS

- 1. Only essentials are to be memorized.
- 2. In general, omit statistics, latitude and longitude of cities, areas, and heights of mountains.
- 3. Having settled on a few main things worth remembering, fix them in the memory of your pupils by review upon review.
- 4. Do not require your pupils to waste their time in drawing elaborate maps.

I. GENERAL OUTLINES

2 1-2 Hours a Week

Second Stage of the Study of Geography

- 1. Study of the earth as a globe: Simple illustrations and statements with reference to form, size, meridians and parallels, with their use; motions and their effects; zones and their characteristics.
 - 2. Physical features of North America and South America.
- 3. Observation lessons to accompany the study of geography:
 (a) Apparent movements of the sun, moon and stars, and varying times of their rising and setting. (b) Difference in

heat of the sun's rays at different hours of the day. (c) Change in direction of the sun's rays coming through a school-room window at the same hour during the year. (d) Varying length of the noonday shadows. (e) Changes of seasons.

II. SPECIFIC DIRECTIONS

- 1. State Elementary Geography, pp. 30 to 88.
- 2. Special Geography of California, pp. 62 to 88.
- 3. General lessons on British America, Mexico and Central America.
- 4. Call the attention of your class to the situation of the following cities, and explain our commercial relations with them:

London	Chicago	Hong Kong
Liverpool	Paris	Melbourne
New.York	Havre	Honolulu
Boston	Hamburg	Rio Janeiro

5. For Supplementary Reading use "King's Picturesque Geographical Readers, Second Book, This Continent of Ours."

III. OBSERVATION LESSONS IN GEOGRAPHY

- 1. Difference in the heat of the sun's rays at morning, mid-day and evening.
- 2. Change in the direction of the sun's rays coming through a school-room window at the same hour during the year.
- 3. Varying length of noonday shadows in winter and in summer.

- 4. Change of weather, wind and seasons.
- 5. Difference in points of the horizon at which the sun rises and sets in summer and winter.
- 6. For suggestive questions teachers are referred to "Methods of Teaching," pp. 243, 244. Also to Col. Parker's "How to Teach Geography."

SEC. V. ELEMENTS OF NATURAL SCIENCE

General Directions

- 1. Do not be over-scientific. Avoid technical terms when common names will serve your purpose. "It is not science that we want here," says Superintendent Eliot; "much less is it the lion's skin sometimes wrapped around the pretense of science, but the simple truth."
- 2. Endeavor to train your scholars to observe accurately, to be sure of facts, to think for themselves, to reason correctly, and not to make up their minds until they have reflected carefully upon all the facts.
- 3. Train your pupils to write out on slates or paper what they can remember about their oral lessons. Writing leads to habits of attention, serves to fix ideas in the memory, and leads to a ready and correct use of language.
- 4. The uses of the object lesson may be summed up as follows:
 - (1.) They constitute the first efforts in gaining an empirical knowledge of *things*.
 - (2.) They train the mind to habits of connected thought.

- (3.) They stimulate *curiosity*, the motive power of the youthful mind.
- 5. "The teacher," says Bain, "can make anything he pleases out of the object lesson; it may aid the conceiving faculty or it may not. The first good effect of it is to waken up observation to things within the pupil's ken; by asking such questions as will send them back to re-examine what they have been in the habit of slurring over, or by questioning them on objects actually present."
- 6. "The predominant aspect of the object lesson," says Currie, "is the mental exercises it gives; it is meant to awaken the intelligence, and to cultivate the different phases of observation, conception, and taste, without which little satisfactory progress can be made in education. It is a disciplining, not a utilitarian process; the information it gives is a means, not an end.
- "The range of this department of instruction is exceedingly comprehensive. It draws its materials from all the branches of knowledge, dealing with things which can interest the child or exercise his mind. Thus, it is natural history for children; for it directs their attention to animals of all classes, domestic and others, their qualities, habits, and uses; to trees and plants and flowers; to the metals, and other minerals which, from their properties, are in constant use. It is physical science for children; for it leads them to observe the phenomena of the heavens-sun, moon, and stars; the seasons, with the light and heat which make the changes of the weather; and the properties of the bodies which form the mass of matter around us. It is domestic economy for children; for it exhibits to them the things and processes daily used in their homes, and the ways to use them rightly. It is industrial and social economy for children; for it describes the various trades, processes in different walks of art, and the arrangements as to the division of labor which society has sanctioned for carrying these on in harmony

and mutual dependence. It is physiology for children; for it tells them of their own bodies, and the uses of the various members for physical and mental ends, with the way to use them best and to avoid their abuse. It is the science of common things for children; for it disregards nothing which can come under their notice in their intercourse with their fellows or their superiors. And, finally, it is geography for children; since it has favorite subjects of illustration in mountain and river, forest, plain, and desert, the different climates of the earth, with their productions and the habits of their people, the populous city, and the scattered wigwams of the savage."

I. GENERAL OUTLINES

1 1-2 Hours a Week

- 1. Lessons on the Human Body, with special reference to Hygiere: (a) The muscles as a motor apparatus. (b) The structure, kinds, action, and uses of the muscles. (c) How muscles are developed. (d) The effects of exercise and rest, and of the use of narcotics and alcoholic stimulants upon the muscles.
- 2. Lessons on the Human Body continued: (a) The skin as a covering. (b) Its layers and structure; the hair and nails. (c) The perspiratory and sebaceous glands. (d) The functions of the skin and their relation to the health of the body; the effects of bathing, and of proper clothing. Teachers will use Smith's "Physiology Primer."
- 3. Observation lessons, as far as the time assigned will allow, on:
- (a) Animals: Typical and familiar specimens of radiates and mollusks (sponge, coral, star-fish, oyster, snail, jelly-fish.)

Animals as related to arts, industries, trade and commerce (elephant, whale, seal, cochineal, ostrich.)

(b) Plants used for food, clothing, shelter, fuel and medicine (grains, vegetables, fruits; cotton, flax; pine, oak)—Plants as related to manufactures, trade and commerce (manila, caoutchouc; cotton, coffee, tea.)—Class collection of typical specimens. Drawing in connection with all observation lessons on plants and animals.

SPECIAL LESSONS ON PLANTS

- 1. Fruits, seeds, roots and useful woods observed and compared; objects being placed on the desks of pupils.
 - 2. Growth from buds, branches, bulbs and slips.
- 3. Simple study in season of a few fruit-tree blossoms, such as apple, pear, peach and plum.
- 4. Simply study of a few common flowers, such as violet, lilac, buttercup, poppy and eschscholtzia.
- 5. Pupils should be encouraged to illustrate their observation by drawing on slates, blackboard and paper.

ELEMENTARY SCIENCE

- (a) MINERALS: Systematic observations of common rocks and minerals; such as granite, quartz, feldspar, mica, hornblende, syenite, marble. Collection and labeling of specimens.
- (b) PHENOMENA OF NATURE: The sun, moon and stars; their rising and setting; sun's mark at noon, altitude of the sun, length of days; phases of the moon; planets visible; polar and circumpolar stars.

SEC. VI. HEALTH, MORALS, POLITENESS, PATRIOTISM.

"1667. Instruction must be given in all grades of schools and in all classes during the entire school course, in manners and morals, and upon the nature of alcoholic drinks and narcotics and their effects upon the human system."

—School Law of California.

"1702. It shall be the duty of all teachers to endeavor to impress upon the minds of the pupils the principles of morality, truth, justice and patriotism; to teach them to avoid idleness, profanity and falsehood; and to instruct them in the principles of a free government, and to train them up to a true comprehension of the rights, duties and dignity of American citizenship."

—School Law of California.

I. TRAINING IN POLITENESS

- I. "Give a boy address and accomplishments, and you give him the mastery of palaces and fortunes where he goes."

 —Ralph Waldo Emerson.
- II. "I wish good behavior might enter into the curriculum of every school in our country. Under this head should be taught such things as how to gracefully enter a room, meet with the person upon whom the pupil is supposed to be calling, pass the compliments of the day, and politely leave the room."

 —J. H. French.

SHORT TALKS ON TOPICS

1. Common rules of politeness.

- 2. Regard for the feelings of others.
- 3. The habit of whining, complaining and fault-finding.
- 4. Cheerfulness.
- 5. Anger.
- 6. Backbiting and tattling.

Teachers are referred to "Gow's Primer of Politeness," and Dewey's "How to Teach Manners."

II. MORAL TRAINING

General Principles

I. "If moral training consisted merely in telling children what is right and what is wrong, and in dealing out ethical maxims and proverbs; if it were enough merely to tell children it is wicked to lie, steal or swear; if it would make boys truthful and honest merely to learn commandments by rote—then the teacher's task would be an easy one."

—Herbert Spencer.

- II. "Do not attempt to force children into precocious moral goodness. Be content with moderate measures and moderate results."

 —Herbert Spencer.
- III. "Do not regret the exhibition of considerable self-will on the part of children. The independent boy is the father of the independent man."

 —Herbert Spencer.
- IV. Teachers are directed to give instructions in good manners and morals, at the opening of school on Monday morning of each week, taking from 15 to 30 minutes for each lesson. In giving such instructions teachers must keep strictly within the bounds of manners and morals, and thus avoid all occasion for treating of or alluding to sectarian subjects.

SHORT CLASS TALK ON TOPICS

- 1. Fighting and quarreling.
- 2. Calling nicknames.
- 3. Truthfulness.
- 4. Honesty.
- 5. Cheating.
- 6. Slang, vulgarity and profanity.
- 7. Cruelty to animals.
- 8. Honor.
- 9. Regard for public property, such as school buildings, parks, monuments, etc.

ADDITIONAL TOPICS

- I. Forgiveness—(a) of those who have injured us; (b) of enemies.
- II. Good Manners—(a) at home; (b) in school; (c) in company; (d) in public places.
- III. INDUSTRY—(a) labor, a duty and privilege; (b) right use of time; (c) self-reliance.
- IV. EVIL Speaking—(a) slander; (b) tale-bearing; (c) faults of others—charity; (d) kind words.
- V. Bad Language—(a) profanity, foolish and wicked; (b) slang, vulgar and impolite; (c) obscene language.
- VI. BAD HABITS—(a) that destroy health; (b) that destroy reputation; (c) that waste money; (d) that dishonor one's self

and family; (e) that take away self-control; (f) that are offensive.

Note—Teachers are referred to Dewey's Ethics, or Stories of Home and School, and Everett's Ethics for Young People.

SEC. VII. HISTORY AND PATRIOTISM

- 1. The reading of short sketches of the lives of persons famous in American history, such as Washington, Franklin, John Adams, Jefferson, Jackson, Lincoln, Grant, Garfield, Jackson, Farragut, etc.
- 2. An account of the battle of Bunker Hill, and the Declaration of Independence. Teachers will read to their classes the poem by Oliver Wendel Holmes, entitled: "Grandmother's Story of the Battle of Bunker Hill."
 - 3. The reading of stories from American history.
- 4. The reading of short sketches of American inventors, such as Fulton, Whitney, Howe, Morse, Edison.
- 5. The discovery of gold in California, and a few other landmarks in the history of our State.
- 6. Call attention to a few American authors, such as Longfellow, Whittier, Holmes and Miss Alcott.
- 7. Teachers will require the boys of their class to memorize two paragraphs of Daniel Webster's speech—" Liberty and Union."
- 8. For Supplementary Reading, a class set of "Egglestones' First Lessons in History" from the library.

SEC. VIII. DRAWING

- I. Drawing in connection with all lessons in Elementary Science.
- II. Drawing from outlines and sketches put upon the blackboard by teachers.
 - III. Free-hand Sketches.
- IV. Supplementary use of the text-book adopted by the Board of Education.
 - V. Time for drawing, $1\frac{1}{2}$ to 2 hours a week.

SIXTH GRADE GRAMMAR

HOME LESSONS

"The lessons assigned for home study to pupils in the sixth and seventh grades shall be such as to require not more than one hour and a half."

-Rules of the Board of Education.

LANGUAGE AND GRAMMAR

8 hours a week

I. GENERAL OUTLINES

Oral and Written Expressions, including Writing, 4 hours.

Reading, 4 hours.

- 1. ORAL AND WRITTEN EXERCISES: (a) Oral reproduction of the reading lessons. (b) Oral and written reproduction of supplementary reading matter. (c) Descriptions of scenes, real and imaginary. (d) The thoughts and sentiments, in some simple poems expressed, or the story of them told, in the pupils' own words. (e) Conversations and written exercises on good manners and good morals. (f) Conversations on geographical and historical subjects, in preparation for letters and other forms of composition. (g) Composition-writing, including the may be written; paragraphing. (h) The correct pronunciation and use of words frequently mispronounced and misused. (i) Use of the dictionary.
- 2. Grammar.—The Study of Easy Sentences. (a) The subject and the predicate. (b) Declarative, Interrogative,

imperative, and exclamatory sentences. (c) The uses of words in forming sentences—preparatory to classifying words as parts of speech. (d) Nouns, pronouns, verbs, adjectives, adverbs, conjunctions and interjections. (e) Adjective and adverbial phrases and clauses. (f) Prepositions.

- 3. Writing: (a) Practice in free movements. (b) One writing-book completed each year or its equivalent. (c) Copying short letters or notes, written in correct form. (d) Writing, in blankbooks, original and dictated exercises, poetry from memory, and choice extracts.
- 4. READING: (a) From the authorized text-book; (b) from the permanent, or collateral supplementary books; and (c) from the circulating sets of supplementary books suitable for this grade. (d) Choice poems and selections from prose are to be studied, committed to memory, and recited.

Note.—Read the notes under the Third and Fourth Grades. The text-book in reading becomes of less importance as pupils reach the higher classes. Sections from it for class use should be worth studying, should create an interest in the works from which they are taken, or should give good practice in different styles of oral reading. The great object of reading can now be accomplished by means of supplementary books. The right use of these in the class-room will lead pupils to read books elsewhere to the best advantage. Excite such an interest as will cause pupils to read with minds alert, and to seize upon the author's thoughts and sentiments with a grasp that holds. Suggest to your pupils interesting books that may be taken from the Public Library or its branches; and find out the results of the reading.

II. SPECIFIC DIRECTIONS

1. State Third Reader to Lesson 60, two lessons a week. Supplementary reading, two lessons a week.

- 2. In marking words in the reading lessons to be studied for spelling, omit words not clearly within the range of the pupil's knowledge. Require no sentence-making with words selected from reading lessons.
- 3. In using the spelling-book, take an occasional exercise in sentence-writing.
 - 4. Require the class to memorize the following selections.
 - 1. America.
 - 2. The Village Blacksmith.
 - 3. The Old Oaken Bucket.
 - 4. One short poem from Bryant and one from Whittier.
- 5. Question your pupils about what books they read at home, and give them short lists of library-books suitable for them to read.
 - 6. State Speller, Lesson 101 to 201.
- 7. Supplementary exercises, both oral and written, in spelling lists of common words often misspelled; spelling-matches and spelling-games. Teachers are referred to Swinton's Word Book, and to "Methods of Teaching, pp." 132 to 140.

SHORT EXERCISES IN WORD ANALYSIS

- I. English Prefixes and Suffixes from the State Speller.
- II. Exercises on the following Latin Prefixes:—Ante, circum, con, extra, post, pre, semi, sub, vice.
- III. Exercises on the following Latin Suffixes:—or, ist, able, ible, ble, fy, ate.

- IV. Exercises on the following Latin roots:—facere, plicare mittere, tendere.
- V. For methods and suggestions in word-exercises on the above, teachers are referred to "Swinton's Word Analysis," and to "Methods of Teaching."

LANGUAGE AND GRAMMAR

- 1. State Grammar in the hands of pupils, for the purpose of taking up a few selected sections:
 - (1) Formation of plurals. Lessons 57, 58, 60 and 61.
 - (2) Possessive Forms. Lessons 74 to 76.
 - (3) Pronouns. Lesson 77.
- 2. Easy parsing, using the simplest abbreviated forms to show the relation of the word parsed to other words in the sentence.
- 3. Verbs.—Lesson 168. Require pupils to learn the principal parts of the following verbs:—Be, begin, bite, blow, bring, buy, do, draw, drink, drive, eat, fly, freeze, go, grow, know, lay, lie, ride, ring, rise, say, see, sing, sit, speak, stay, stuck, swim, take, teach, throw, wake, wear, work, write.
 - 4. Conjugation of the verb to be in the Indicative Mood.
- 5. Uses of participles and infinitives; the Parts of Speech with the analysis of sentences and parsing; Conjugation of Verbs in the Indicative Mood. Parsing from the Reader. Special Study of "The Old Oaken Bucket" for parsing and meaning. Composition, once in two weeks; letter-writing; reports of oral lessons; transposition; abstracts of lessons in reading and geography.
- 6. Once a month require every pupil to write a letter. For forms see State Grammar, pp. 275 to 278.

SEC. II. ARITHMETIC

General Principles

There are two main things to be kept in view in teaching arithmetic. (1) Business Methods for practical use. (2) Mental training in habits of thought.

I. GENERAL OUTLINES

3 1-2 hours a week

Oral exercises with simple numbers, and arithmetic at sight, to precede, accompany, and follow each subject in written arithmetic.

- 1. Decimal and common fractions continued, and used in solving problems that involve the units of money, measures, weight and time previously studied; in measuring distances and dimensions; and in finding the areas of rectangles and the volumes of rectangular solids.
 - 2. Percentage; and its applications to-
 - (a) Commission and other simple subjects.
 - (b) Simple interest.

II. SPECIFIC DIRECTIONS

- 1. State Arithmetic, pp. 126 to 171; also Percentage, pp. 181 to 185.
 - 2. Omit the following: Pages 124, 125, 126; all of Metric

System except the meter; Surveyors' Surface Measure; Plastering; all of Cubic Measure except the first ten examples; Stone and Brick Work; Lumber Measure, take only the first ten examples; Liquid Measure, take only the first ten examples; omit all of Troy Weight except the table; omit Weight, Metric System; Circular Measure, take only the first seven examples; Time, take only the first ten examples: omit Longitude and Time; omit all examples from p. 158 to 167, inclusive, and substitute a few short, simple, practical questions upon the tables. It exists only in a few antiquated arithmetics.

GENERAL

- 3. Take one lesson a week for drill in accuracy in addition of small numbers; and of dollars, cents and fractional cents.
- 4. Exercises in mental arithmetic, including a review of tables of long measure, pounds, ounces and centals, etc.
 - 5. Use Ward's Letter-Writing Business Forms, No. 2.
- 6. For supplemental examples, teachers are referred to the "New Arithmetic," by 300 authors, edited by Seymour Eaton.

SEC. III. GEOGRAPHY

Note.—"As travel broadens ideas, so will the study of geography, if rightly pursued; and pupils may increase the value of their lessons by reading books of travel and stories of great explorers. The teacher can afford to deal sparingly in statistics, latitudes, longitudes, areas and heights, and to avoid dry definitions and detailed map questions that lead only to a recital of names of places destitute of associations.

Such knowledge is not worth the time it takes to acquire it, though it may secure rapid and accurate recitations.".

SPECIFIC DIRECTIONS

- 1. State Elementary Geography completed and reviewed.
- 2. Special study of Europe, particularly of Great Britain, France and Germany. Our commercial relations with those countries. Important cities to be taken in detail: London, Liverpool, Sheffield, Birmingham, Paris, Havre, Bordeaux, Berlin, Hamburg, Bremen, Rome.
 - 3. Special Geography of California.
- 4. South America. Striking features of Physical Geography. Important countries: Brazil, Chili. Our commercial relations with those countries.
- 5. For detailed suggestions, teachers are referred to "Methods of Teaching," pp. 156 to 163, and pp. 244 to 248; to Col. Parker's "How to Study Geography," and to Frye's "Geography Teaching."
- 6. For supplementary reading, use King's "This Continent of Ours."

SEC. IV. HISTORY AND PATRIOTISM

2 hours a week

- 1. Story of the settlement of Massachusetts, Virginia, Pennsylvania and New York.
 - 2. A few leading events in the history of California.
- 3. Reading from Swinton's Primary History of the United States, or Eggleston's First Lessons in History.

4. Require pupils to learn by heart one patriotic poem.

SEC. V. ELEMENTS OF NATURAL SCIENCE

1 1-2 Hours a Week

- 1. Anatomy, Physiology and Hygiene of the Human Body:
 - (a) The bones, muscles and skin.
 - (b) The growth, waste and renewal of the body; the kinds and need of food and drink.—The organs and processes of digestion.—The relation of food, drink and digestion to health.
 - (c) The composition and uses of the blood.—The organs of the circulation of the blood and their functions. The relation of the blood and its circulation to health.
- (d) The effects of the use of narcotics and of alcoholic and other stimulants upon the organs and processes of digestion and circulation. Smith's Physiology Primer for use by teachers.
- 2. Observation lessons, as far as the time assigned will allow, on:
- (a) MINERALS: Metals,—iron, lead, tin; gold, silver, copper.—Class collection and labeling of minerals.—Abstracts of observation lessons.
- (b) On plants and flowers, supplementary to the work in previous grade. An important part of these lessons will consist of the free use of drawing paper and pencil. Teachers will refer to the instructions in the work for the Fourth and Fifth Grades.

SEC. VI. HEALTH, MORALS AND POLITENESS

"1667. Instruction must be given in all grades of schools and in all classes during the entire school course, in manners and morals, and upon the nature of alcoholic drinks and narcotics and their effects upon the human system."

—School Law of California.

"1702. It shall be the duty of all teachers to endeavor to impress upon the minds of the pupils the principles of morality, truth, justice and patriotism; to teach them to avoid idleness, profanity and falsehood; and to instruct them in the principles of a free government, and to train them up to a true comprehension of the rights, duties and dignity of American citizenship."

—School Law of California.

I. TRAINING IN POLITENESS

- 1. True politeness consists in having and showing due regard for the feelings, comfort and convenience of others.
 - 2. Take up topics mentioned in the two preceding grades.
- 3. Read to your pupils the rules and customs of good society, from the best book on the subject that you can find.

II. MORAL TRAINING

1. "There are in all children tendencies to good feelings and actions, and also tendencies and impulses to wrong-doing.

These tendencies, whether good or bad, are the result of hereditary transmissions and surrounding circumstances."

—Herbert Spencer.

2. "The aim of your discipline should be to produce a self-governing being, not to produce a being to be governed by others.

—Herbert Spencer.

3. "Whatever moral benefit can be effected by education must be effected by an education that is emotional rather than perceptive. If, in place of making a child understand that this thing is right and the other wrong, you make him feel that they are; if you make virtue loved and vice loathed—you may do some good."

—Herbert Spencer.

4. Teachers are directed to give instruction in good morals and good manners at the opening of school on Monday morning of each week, taking from 15 to 30 minutes for each lesson. In giving such instruction, teachers must keep strictly within the bounds of morals and manners, and thus avoid all occasion for treating of or alluding to sectarian subjects.

TOPICS FOR SHORT TALKS

- 1. Promises.
- 2. Betting.
- 3. Stealing.
- 4. Profanity.
- 5. Courage and cowardice.
- 6. Word of Honor.
- 7. Kindness to animals.

Note.—Teachers are referred to "The Virtues and Their Reasons," by Bierblower, and "Ethics for Young People by Everett."

SEC. VII. DRAWING

- I. Drawing in connection with Elementary Science Lessons.
 - II. Conventional designs of flowers.
- III. Freehand artistic sketches selected by teachers. Objects in groups.
- IV. Supplementary use of the text-book in drawing, adopted by the Board of Education.
 - V. Time for drawing $1\frac{1}{2}$ to 2 hours a week.

SEVENTH GRADE GRAMMAR

HOME STUDIES

"The lessons assigned for home study to pupils in the Sixth and Seventh Grades shall be such as to require not more than one hour and a half.

—Rules of the Board.

SEC. I. READING, LANGUAGE AND GRAMMAR

I. GENERAL OUTLINES

8 hours a week

Oral and Written Expression, including Writing, 4½ hours.

1. Oral and Written Exercises: (a) Reproduction of such supplementary reading matter as may be used. (b) Abstracts and summaries of lessons, of stories, and of other kinds of composition. (c) Conversations and written exercises on good manners and good morals. (d) Outlines prepared for original compositions. (e) Narratives; description of real or imaginary objects, scenes and experiences. (f) Letter-writing upon geographical, historical and other subjects; also, business letters, notes of invitation, of recommendation, etc. (g) Oral and written exercises on poems carefully studied; and also on beautiful pictures, statuary, etc., studied where opportunity offers. (h) Dictation exercises. (i) A few roots, prefixes and suffixes.

2. Grammar.—The Study of Simple, Compound and Complex Sentences: (a) Analysis. (b) All the parts of speech including their properties—special attention to be given to such changes of form as indicate properties, and also the uses of auxiliaries. (c) Principles of syntax illustrated by familiar examples. (d) Punctuation. (e) Special study of selected pieces of Prose and Poetry.

NOTE 1.—The scope of the work in Grammar for Grade VII is the same as for Grade VIII; but easier sentences should be selected for Grade VII, and only the most common uses should be studied.

II. SPECIFIC DIRECTIONS

1. State Third Reader, Lesson 60 to 128, two lessons a week.

Supplementary reading, two lessons a week.

- 2. For class concert reading. Lessons 65, 77, 99.
- 3. To be memorized for concert recitation.
 - (1.) Our Country, p. 195.
 - (2.) What I Live For, p. 211.
 - (3.) Patrick Henry's Address (for Boys), paragraphs 7, 8 and 9, p. 242.
- 4. Independence (for Boys), p. 278.
- 5. State Speller, Lesson 201 to 301. Use the speller in a common-sense way, taking only an occasional exercise in sentence-making or defining.
 - 6. Exercises in word analysis:-
 - I. Latin Roots:—dicere, ducere, mittere, plicare, scribere vestere, videre.
 - II. Latin Prefixes:—ad, dis, ob, pro, re.

III. Latin Suffixes.—Noun.—ate, ite, ary, ence, cle, ess. Adjective.—ous, ent. Verb.—fy, ise, ize.

For suggestions as to methods, teachers are referred to Swinton's Word-Analysis, "Methods of Teaching," pp. 137 to 140.

- 7. Question your pupils about the books they read at home, and suggest suitable books for them to draw from the Free Library.
 - 8. Once a month require every pupil to write a letter.

GRAMMAR

- 1. State English Grammar.
- 2. Take the simpler parts of sentence work in Part I. The use of diagrams optional with teachers.
- 3. In Part II, take to Lesson 125.
- 4. Conjugation of Verbs in the Indicative Mood.
- 5. Principal parts of the first 100 irregular verbs from the list in the State Grammar.
- 6. For study and parsing, take the following selections from the Third Reader.
 - (1.) Thanatopsis.
 - (2.) Battle of Waterloo.
 - (3.) What I Live For.
 - (4.) Brutus's Address.

SEC. II. ARITHMETIC

I. GENERAL OUTLINES

3 1-2 hours a week.

Oral exercises with simple numbers, and arithmetic at sight, to precede, accompany, and follow each subject in written arithmetic.

- 1. Percentage, continued; its applications to:
 - (a) Profit and loss.
 - (b) Simple interest.
- 2. Review of compound numbers with simple practical problems. Mensuration of straight lines, of rectangles and rectangular solids. Review of common and decimal fractions limited strictly to simple business forms and examples, omitting all schoolmasterisms.
- 3. Mental arithmetic, carried along in connection with written, the same topics in both kinds being taught at the same time.

II. SPECIFIC DIRECTIONS

- 1. Use Ward's Letter-Writing and Business Forms, No. 3.
- 2. State Arithmetic.
- 3. Business drill on common and decimal fractions.
- 4. For supplementary examples, teachers are referred to the "New Arithmetic," by Seymour Eaton.

SEC. III. GEOGRAPHY

Note 1.—As the new State Geography will soon be published, pupils will make use of the State Primary Geography until the Advanced State Geography is supplied.

Note 2.—To vary the monotony of text-book lessons, occasionally take a geography-match or game. For suggestions, see "Methods of Teaching," pp. 161, 162, and pp. 243 to 257. Col. Parker's "How to Study Geography" will prove a useful aid, and Frye's "Geography Teaching" will be very suggestive of good methods.

TOPICAL OUTLINES

- 1. Main points in the Geography of the United States.
- 2. General outlines of the Physical Geography of the United States.
- 3. Simple lessons on winds, ocean currents and change of season.
- 4. Short lessons on the great mountain chains of the globe, great plains and plateaus.
 - 5. Point out five great commercial routes.
- 6. Special study of the map of the British Isles; the cities of London, Liverpool, Manchester, Glasgow, Birmingham and Sheffield.
 - 7. (a) Review of Mathematical Geography.
- (b) Motions of the earth, causes of the change of seasons, etc.
- 8. A good hand-book for the teacher's use will be found in "Monteith's New Physical Geography."
 - 9. Time given to Geography 3 lessons a week.

SEC. IV. HISTORY OF THE UNITED STATES

- I. Whoever undertakes to instruct youth in history must regard equally the memory, the understanding and the feelings.

 —Niemeyer.
- II. There is no one "patent method" for teaching history. Teachers, by skill, tact and stories of information, must clothe the skeleton of facts with the flesh of imagination and vitalize the whole with the breath of life.

SPECIFIC DIRECTIONS

Time, 3 hours a week

- 1. State History of the United States, in the hands of pupils.
- 2. The study of United States History, through the American Revolution.
- 3. The study of English and other European History, so far as it is connected with American History.
- 4. Let the advance lesson be read aloud in the class. Call attention to the very few important facts to be memorized for recitation, and let pupils mark them with a pencil. The greater part of the book is intended not to be learned by heart, but only to be attentively read.
- 5. Of the early discoveries, single out three or four to be stamped on the memory, and let the others severely alone after reading about them once.
 - 6. In the period of settlement, select the four great centers:

Virginia, Massachusetts, New York and Pennsylvania. The remainder belong to *local State* History.

- 7. Out of the numerous details of Colonial and Indian Wars, select the three or four main facts of the French and Indian Wars, and have them well understood.
- 8. Of the Revolutionary War, single out the causes that led to it, and not more than half a dozen of the battles. Impress on your pupils the character and services of Washington.
- 9. Chronological tables of dates are valuable only for references. Fix in the minds of your pupils, by frequent reviews, the dates of a very few, not exceeding a dozen, great events.
- 10. If the school library contains a set of Eggleston's "First Lessons," make use of for supplementary reading.

SEC. V. ELEMENTS OF NATURAL SCIENCE

1 1-2 hours a week

- 1. Anatomy, Physiology and Hygiene of the Human Body, continued. Text-book, State Physiology, to the Nervous System.
- (a) The composition and purity of the air.—The organs of respiration and their functions.—The structure of the lungs.—The effect of respiration upon the air and blood in the lungs, and upon the air in the room.—The relation of respiration to health, with special reference to ventilation, disinfectants, exercise and clothing.
 - (b) The vocal organs and their functions.
- (c) The nervous system as a directive power.—Its organs and their functions.—The relation of the nervous system to

health, with special reference to exercise, work and study, rest and sleep, food and drink.

- (d) The special senses; the organs and their functions—How to keep the organs of sense in health, and how to train them.
- (e) The effects of the use of narcotics and stimulants upon respiration and the nervous system, and upon mental activity.
 - (f) Reviews.

Continue the course on plants and plant forms, mainly as an exercise in practical and artistic drawing.

COMMON METALS, MINERALS AND ROCKS:

- (a) Simple mineral substances—characters of: (1)
 Metals that are native minerals (gold, silver,
 copper). (2) Metals from ores (lead, tin,
 iron). (3) Non-metals (sulphur, carbon).
- (b) Compounds: Quartz, salt, limestone, gypsum, feldspar, mica, hornblende, granite, marble, slate and other common rocks.

PLANTS AND FLOWERS

- (a) Lessons continued from the work in the Fourth and Fifth and Sixth Grades.
 - (b) Drawing in connection with these lessons.

Special Note.—Teachers are requested to read the directions and suggestions under the head of Elementary Science in the Eighth Grade course.

SEC. VI. HEALTH, MORALS, POLITENESS AND PATRIOTISM

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and in all classes during the entire school course, in manners and morals, and upon the nature of alcoholic drinks and narcotics and their effects upon the human system."

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"1702. It shall be the duty of all teachers to endeavor to impress upon the minds of the pupils the principles of morality, truth, justice and patriotism; to teach them to avoid idleness, profanity and falsehood; and to instruct them in the principles of a free government, and to train them up to a true comprehension of the rights, duties and dignity of American citizenship."

-School Law of California.

I. TRAINING IN POLITENESS

1. "A noble and attractive every-day bearing comes of goodness, of sincerity, of refinement, and these are bred in years, not moments."

—Huntington.

2. "If one is centrally true, kind, honorable, delicate and considerate, he will almost, without fail, have manners that will take him into any circle where culture and taste prevail over folly."

-Munger.

3. "True politeness consists in having and showing due regard for the feelings, comfort and convenience of others."

TOPICS FOR TALKS

- 1. The usages of good society.
- 2. Politeness on the street.

- 3. Politeness in traveling.
- 4. Politeness at home.
- 5. Politeness to servants and employes.

II. MORAL TRAINING

General Principles

- 1. Children must not only be taught what is right, but they must also do what is right. It is possible for teachers to breathe into a school a spirit of honor, usefulness, and honesty that shall control every new pupil that enters the school. This spirit will put down vulgarity, slang, profanity, impurity, slander, tattling, lying and meanness.
- 2. Character is formed by training rather than by teaching. Teachers cannot lecture pupils into good manners, nor change bad habits by long speeches. Bad habits can be changed only by a repetition of doings, and it is in these doings that training consists.

TOPICS FOR SHORT TALKS

- 1. Care of health a duty.
- 2. Earning a living.
- 3. Perseverance.
- 4. Temperance.
- 5. Gluttony.
- 6. Reading good books.
- 7. Civil Duties—(a) love of country; (b) respect for

rulers; (c) obedience to law; (d) fidelity in office—bribery; (e) oaths—perjury; (f) the ballot—buying or selling votes; (g) dignity and honor of citizenship.

Note.—Teachers are referred to Comegy's "Primer of Ethics," and "The Virtues and their Reasons," by Bierblower. Everett's "Ethics for Young People," should be used for supplementary reading.

SEC. VII. DRAWING

- I. Drawing to illustrate lessons in Elementary Science.
- II. Artistic sketches selected by teachers.
- III. Designs selected by teachers, from any text-book.
- IV. First lessons in Perspective.
- V. The Adopted Drawing Book.
- VI. Time, two lessons a week.

EIGHTH GRADE GRAMMAR

General Principles

I. "The lessons assigned for home study to pupils in the Eighth Grade shall be such as to require not more than two hours."

-Rules of the Board of Education.

' II. "The aim of all intellectual training for the mass of the people should be to cultivate common-sense."

-John Stuart Mill.

III. As at least one-half of the pupils in this grade will close their school life when they graduate, it is the duty of both principals, teachers, superintendent and school officials to secure for them that kind of training and instruction which will give them the best possible school outfit for the duties of life.

SPECIAL NOTE FOR PRINCIPALS

- 1. In schools having two Eighth Grade classes, Principals are authorized to arrange an exchange of work so that one teacher may teach arithmetic in both classes and the other teacher take charge of Grammar. Or, if a satisfactory arrangement can be made with teachers, the teacher of the Eighth Grade may exchange work in Arithmetic or Grammar with the teacher of a Seventh Grade.
- 2. If any teacher excels in giving lessons in Elementary Science or Drawing, Principals are authorized to order some exchange of work with other teachers.

SEC. I. LANGUAGE AND GRAMMAR

I. GENERAL OUTLINES

8 hours a week

Oral and Written Expression, including Writing.

- 1. Oral and Written Exercises: (a) Reproduction of such supplementary reading matter as may be used. (b) Abstracts and summaries of lessons, of stories, and other kinds of composition. (c) Conversations and written exercises on good manners and good morals. (d) Outlines prepared for original composition. (e) Narratives; descriptions of real or imaginary objects, scenes and experiences. (f) Letter-writing on geographical, historical, and other subjects; also, business letters, notes of invitation, of recommendation, etc. (g) Oral and written exercises on poems carefully studied; and also on beautiful pictures, statuary, etc., studied where opportunity offers. (h) Paragraphing. (i) Common roots, prefixes and suffixes.
- 2. Grammar.—The Study of Compound and Complex Sentences: (a) Analysis of more difficult sentences. (b) Review of all the parts of speech, including a careful study of the properties and inflections of words. (c) Principles of syntax. (d) Punctuation. (e) Special study of selected extracts of prose and poetry.
- 3. Writing: (a) Practice in free movements. (b) A part of the exercises in writing to be connected with book-keeping. (c) Writing, in blank-books, compositions and dictated exercises, commercial forms, business letters and telegrams.
- 4. Reading: (a) From text-books and from such books as are supplied for collateral reading or for general culture.

(b) Choice poems and prose selections are to be studied and recited.

Note.—Read the notes under Grades VI and VII. The conditions are now more favorable for accomplishing the best results of reading. In the recitation of pieces, attention should be given to elocutionary effects. Moreover, in order to gain an understanding of meter and an appreciation of rhythm, pupils should now more directly study the forms of verse. They should be trained to give the sense, and yet to preserve the rhythm of the verse.

The more difficult reading matter, used by this class, will increase the mental grasp of the pupils and their ability to read well at sight. But chief emphasis, must be laid on the highest object of all reading, viz.: An acquaintance with literature for the truth it contains, for the ennobling sentiments it inculcates, and for the high ideals it presents.

II. SPECIFIC DIRECTIONS

1. State Third Reader completed from Lesson 120. Two lessons a week.

Drill mainly as an exercise in reading aloud. Take but few lessons in spelling from the Reader.

Supplementary reading to any extent that teachers can find time.

- 2. State Speller completed from Lesson 301, including the entire work in Word Analysis. Begin work on prefixes, suffixes and roots at the beginning of the year, taking two short lessons a week in connection with spelling. As an aid to this work, teachers are referred to Swinton's "Word Analysis," or Swett's "Normal Word Book."
- 3. Review and apply five rules for spelling in the State Speller.

- 5. Thorough concert drill on the lists of "words often mispronounced," at the head of each reading lesson.
- 6. Definitions of words as required at the head of each reading lesson.
- 7. Articulation drill at the head of reading lessons taken by the class in concert drill.
- 8. In every reading lesson, whenever a sentence affords some marked illustration of an important rule in grammar, call the attention of pupils to it.
- 9. Teachers will question their classes about the kind of books pupils are reading at home, and will give them short lists of suitable library books for home reading, particularly in Biography and History.
- 10. Teachers must direct pupils how to obtain books from the Free Library, and must endeavor in every way possible to stimulate and cultivate a taste for good books.
 - 11. Read and study Longfellow's "Evangeline."

GRAMMAR

I. General Principles

I. "Grammar is more difficult than arithmetic, and is probably on a par with the beginnings of algebra and geometry."

-Bain.

II. "I hold that the proper study of language is an intellectual discipline of the highest kind. The piercing through the involved and inverted sentences of 'Paradise Lost;' the linking of the verb to its often distant nominative, of the relative to its often distant antecedent, of the agent to the object

of the transitive verb, of the preposition to the noun or pronoun which is governed; the study of the variations in mood and tense; the transformation often necessary to bring out the true grammatical structure of a sentence—all this was to my young mind a discipline of the highest value, and, indeed, a source of unflagging delight."

-Tyndall.

SPECIFIC DIRECTIONS

- 1. State Grammar completed. Teachers will bear in mind that the main object of the study of grammar is not so much to enable pupils to speak and write correctly as to enable them better to understand what they read. A knowledge of grammar is essential to a right appreciation of the masterpieces of literature. With pupils of the highest grade in the Grammar School, the right study of grammar is a means of mental discipline fully equal to that of mathematics.
- 2. Teachers will require their classes to take up the following selections for a thorough analytical study in parsing, structure of sentences, and figures of speech:
 - (1.) Gray's Elegy, State Reader, p. 353.
 - (2.) Apostrophe to the Ocean, p. 293.
 - (3.) Bunker Hill Monument, p. 411.
- 3. The use of diagrams in analyzing sentences is optional with teachers. Special attention to be given to verbs, participles, infinitives, and relative pronouns.
 - 4. Once a month give an exercise in letter-writing.
- 5. Occasionally give out a list of subjects for a studied composition, to be written out of school. Give out a list of half a dozen subjects and allow each pupil to select the one

that suits him best. For suggestions in this direction, teachers are referred to "Methods of Teaching," pp. 268 to 278.

SEC. II. ARITHMETIC

General Principles

I. "Life is not long enough to spend so large a proportion of it on arithmetic as is spent in the modern method of teaching it; and arithmetic is too valuable an art to have our children neglect to acquire facility in it."

—Thomas Hill.

II. The ruling principle in the work of this grade should be to give the chief attention to accuracy in working the common sense examples of actual business in a business way. Slur over very lightly the schoolmasterisms that fill up the greater part of the school text-books.

I. GENERAL OUTLINES

(a) Simple and compound interest; (b) partial payments; (c) profits and loss; (d) square root; (e) Commercial Discount, omitting altogether "True Discount."

II. SPECIFIC DIRECTIONS

- 1. Text-book completed from p. 206.
- 2. Omit "Problems in Interest," pp. 210, 211, 212, 213. Omit "Exchange," pp. 228, 229, 230, 231, 232. Omit "Average of payments," pp. 233, 234. "Average," 235, 236. Omit Cube Root, pp. 241 to 245 inclusive. Omit all of solids

except prisms, pp. 252 to 256 inclusive. Omit all of Miscellaneous Problems, pp. 257 to 261 inclusive, and substitute short, practical business examples, involving a review of everything in the book except what has been omitted in the several grades below the Eighth Grade.

- 3. Use Ward's Letter Writing and Business Forms, No. 4.
- 4. Give a thorough and practical review on business operations with common and decimal fractions.
- 5. Carry on Mental and Written Arithmetic together. Introduce principles by mental operations with small numbers; then, having fixed the principle, apply the rule to larger numbers on the slate or blackboard.
- 6. An excellent class drill in mental arithmetic is as follows: Make up a set of ten short business questions; read a question and allow from a quarter to a half-minute for the mental work, and require the answers to be written on slates or paper; so continue with the set. Then let pupils exchange papers and credit the correct answer as given by the teacher. Aside from practical business training, the disciplinary value of the exercise is that it trains to a habit of fixed attention. For model exercises, teachers are referred to "Methods of Teaching," pp. 224 to 230.

Three lessons a week for the first half year, and two lessons a week for the last half year is ample time for the arithmetic work of this grade.

7. For supplementary examples teachers are referred to the "New Arithmetic," by Seymour Eaton.

SEC. III. GEOMETRY (OPTIONAL)

Time, two hours a week during the last half year.

An elementary course in the practical applications of

Geometry. Teachers are referred to Spencer's "Inventional Geometry," Hill's "Lessons in Geometry."

SEC. IV. GEOGRAPHY

Note for Teachers.—Two lessons a week will be ample time for the work here outlined.

- 1. Use the adopted text-book for reference only.
- 2. Special Geography of the Pacific Coast in connection with the study of Central America, Mexico, Chile and Brazil, and our commercial relations with these countries.
- 3. Special study of Australia, the Sandwich Islands, China and Japan, and our commercial relations with these countries.
- 4. A review of the cardinal points in the geography of our own country and of Europe, and of our commercial relations with Great Britain, France and Germany.
- 5. Relieve the monotony of daily book lessons by exercises intended to stimulate and amuse. Show pupils the pictures from illustrated magazines or papers, or books, of beautiful or grand scenery, of cities, of great natural curiosities. Read to them interesting descriptions by travelers.
- 6. Enliven the text-book work by geography-matches or geography games. See "Methods of Teaching," pp. 161 and 162.
- 7. For suggestive exercises and reviews of essential facts, teachers are referred to "Methods of Teaching," pp. 246 to 257; also to Col. Parker's "How to Study Geography," and King's "Methods and Aids in Geography," Swinton's "Complete Course in Geography"—general review of the world at the end of the book; and Fry's "Geography Teaching."

SEC. V. HISTORY OF THE UNITED STATES

- I. "Whoever undertakes to instruct youth in history must regard equally the memory, the understanding and the feelings."

 —Niemeyer.
- II. "All history resolves itself very easily into the biography of a few stout and earnest persons.

-Ralph Waldo Emerson.

- III. "To the youthful spirit, the great attraction of history lies in the pictures of life and action, and in the sympathies which these evoke." William Russell.
- IV. Of all departments of early teaching, none is so unmanageable as history.

I. GENERAL OUTLINES

3 hours a week

- 1. Short lessons on the Civil Government of the United States, California and of San Francisco.
- 2. United States History, and also of its connection with English and other European History.
- 3. Reading the lives of persons famous in American and English History.
- 4. The study of Civil Government should be connected with the study of the history of the State and of the United States; and the actual workings of the City and the State Government should be observed.

II. SPECIFIC OUTLINES

- 1. The formation of the Constitution.
- 2. Condition of our country at the end of Washington's administration.
 - 3. The purchase of Louisiana.
- 4. The causes that led to the War of 1812.—Battle of New Orleans.
 - 5. The Missouri compromise.
- 6. The three great issues of Jackson's administration. Literature and inventions.
 - 7. Causes and results of the war with Mexico.
 - 8. Discovery of gold in California and results.
 - 9. The leading statesman of this period.
 - 10. The causes that led to the War of Secession.
 - 11. Abraham Lincoln.
- 12. Great battles.—Seven Days' Fight. Antietam. Gettysburg. Monitor and Merrimac. Capture of New Orleans. Vicksburg. Lookout Mountain. Sherman's March. Wilderness. Five Forks. Lee's Surrender.
 - 13. Reconstruction.
 - 14. President Grant.
 - 15. Territorial Map.
 - 16. Resumption of specie payments.
- 17. Chinese immigration.
 - 18. Civil service reform.
 - 19. Early settlement of California.
 - 20. The gold period.
- 21. Review of the great events included in the work of the Seventh Grade.

SEC. VI. ELEMENTS OF NATURAL SCIENCE

- 1. Begin at once the collection of a school cabinet, and invite your pupils to bring in specimens. Encourage them to make collections for home cabinet, of minerals, shells, wood, etc. Take them on collecting tours into the fields and forests. "The elements of botany, zoology and mineralogy," says Russell, "affords a delightful and effective means of training to habits of observing, comparing and classifying."
- 2. By wisely put questions, set your pupils to observing the habits of animals and birds, of ants, bees, wasps, flies and butterflies. Encourage them to make collections of butterflies and beetles. Persuade your pupils to buy a magnifying glass or a cheap microscope, and begin examining things for themselves. "For many years," says Carlysle, "it has been one of my constant regrets that no schoolmaster of mine had a knowledge of natural history, so far, at least, as to have taught me the grasses that grow by the wayside, and the little winged and wingless neighbors that are continually meeting me with a salutation which I cannot answer as things are. Why didn't somebody teach me the constellations, too, and make me at home in the starry heavens, which are always overhead, and which I don't half know to this day?"
- 3. If you wish to succeed, you must do the actual work of the naturalist, and must make your pupils do it. You must fit yourself to do this work by taking an interest in it. It is not at all necessary that you should be a specialist in botany, zoology, or natural philosophy; but it is necessary that you should know something about the true methods of the specialist. Taken up in the right spirit, instruction in natural sciences can be made one of the most effective means of education. "No subjects," says Professor Barnard, "are

better suited than botany, zoology and mineralogy to gratify the eager curiosity of the growing mind; to satisfy its cravings after positive knowledge; to keep alive the activity of the perceptive powers; to illustrate the beauty and value of method, and to lead to the formation of methodical habits of thought."

- 4. In physics, make your experiments with the simplest kind of improvised apparatus. Whenever you make an experiment, however simple, make it with great care and exactness, telling your pupils in advance what to expect and what to observe. Encourage them to make simple experiments at home by themselves. Set them to observing natural phenomena, such as rain, hail, snow, dew, frost, changes of season, etc. "The elements of physics," says Hotze, "are no more difficult for pupils than are the elements of arithmetic." "As a means of intellectual culture," says Tyndall, "the study of physics exercises and sharpens observation."
- 5. In giving the outlines of physiology, make use of real objects as far as practicable. The heart and lungs of a sheep or an ox can easily be obtained, and are always better than models or charts or pictures. If human bones cannot be obtained, take the bones of animals and make a lesson in comparative anatomy. Dissect the eye of an ox, the brain of a sheep, or calf or rabbit, and exhibit the skull of any domestic or wild animal. The chief object of lessons in anatomy and physiology is to make them the means of imparting a knowledge of the laws of health. Reiterate practical directions about cleanliness, ventilation, food, work, rest, play, sleep and regular habits. Preach short sermons against idleness, gluttony, intemperance and impurity. Teach your pupils that without health life is a failure, and make them realize as fully as possible that they must themselves take care of their own health.
 - 6. In botany, begin with collecting and examining plants,

and end in classifying and naming them by referring to textbooks. "Now, to learn to classify," says Bain, "is itself an education. In these natural history branches, the art has been of necessity attended to, and is shown in the highest state of advancement. Botany is the most complete in its method, which is one of the recommendations of the science in early education. Mineralogy and zoology have greater difficulties to contend with, so that where they succeed, their success is all the greater."

- 7. First in the order of nature comes empirical knowledge; afterwards, scientific knowledge. Therefore, the younger the children, the less methodical should be their instruction. Beginners store up facts by items, often in an indirect and desultory manner.
- 8. Mere text-book study of natural science, without observation and experiment by the pupil, is not knowledge. The real guide to true knowledge is a habit of observing. "Learn to make a right use of your eyes," says Hugh Miller; "the commonest things are worth looking at, even stones and weeds and the most familiar animals. Agassiz says, "the difficult art of thinking, of comparing, of discriminating, can be more readily acquired by examining natural objects for ourselves than in any other way."
- 9. Skillful questioning by the teacher is the chief means of awakening thought, and of inducing pupils to observe for themselves. Superintendent Eliot says: "We teach best when we seem to teach least. Tell the child a fact, and it is all your telling. Lead him to find it himself, and it seems to him all his finding. Because it seems so, he is interested in it, and his interest secures his mastery of it."
- 10. Stimulate and encourage curiosity. Faraday says, "I am indebted to curiosity for whatever progress I have made in science. There are common experiments which I perform

now with as much glee at the result as when I was a boy." Lead your pupils into the practice of proposing questions in the class. "If not snubbed and stunted," says Huxley, "by being told not to ask foolish questions, there is no limit to the intellectual craving of a young child, nor any bounds to the slow but solid accretion of knowledge, and the development of the thinking faculty in this way."

11. As to methods in specific lessons, the following directions by Superintendent Harris are to the point: "Prepare yourself beforehand on the subject of the lesson of the week, fixing in your mind exactly what subjects you will bring up, just what definitions and illustrations you will give or draw out of the class. All must be marked and written down in the The blackboard is the most valuable form of a synopsis. appliance in oral lessons; on it should be written the technical words discussed, the classification of the knowledge brought out in the recitation, and whenever possible, illustrative drawings. Pains should be taken to select passages from the reference books, or from other books illustrative of the subject under discussion, to be read to the class with explanation and conver-Wherever the subject is of such a nature as to allow of sation. it, the teacher should bring in real objects, illustrative of it, and encourage the children to do the same. But more stress should be laid on a direct appeal to their experience, encouraging them to describe what they have seen and heard, and arousing habits of reflection, and enabling the pupil to acquire a good command of language. Great care must be taken by the teacher not to burden the pupil with too many new technical phrases at a time, nor to fall into the opposite error of using only the loose, common vocabulary of ordinary life, which lacks scientific precision."

I. GENERAL OUTLINES ON ELEMENTARY SCIENCE

Time from 2 to 3 hours a week

- 1. Occasional lectures and conversations on Hygienic Duties.
- 2. Common facts in Physics learned from observations and experiment, in regard to as many of the following topics as the assigned time will allow:
 - '(a) Matter; its properties, its three states.
 - (b) Motion and force; laws of motion.
 - (c) Gravitation; equilibrium, pendulum.
- (d) Lever, wheel and axle, pulley, inclined plane, wedge, screw.
 - (e) Liquid pressure; specific gravity.
 - (f) Atmospheric pressure; barometer, pumps, siphon.
- (g) Electricity, frictional and current; conductors, magnetism, compass, magnetic telegraph.
 - (h) Sound : echoes.
 - (i) Heat; diffusion, effects, thermometer.
- (j) Light; reflection, refraction, lenses, solar spectrum color.
- 3. Continuation of lessons in the preceding grades on plants. Let pupils make free use of drawing paper and pencil.

Note.—The greater part of the time assigned this year to Elementary Science must be given to Physics. If the teacher have not time to present to his class all the topics mentioned above, he will select such as he believes can be studied by his pupils with most advantage. He should, however, keep in mind the needs of such pupils as will finish their school training with the Grammar-School course of study.



Whatever topics be selected for study, it must be kept in mind that the method of studying them is all important. Pupils should observe and express the facts and should make their own inferences. Thus a keen interest may be excited and the best of mental training secured—a training in the practice of close observation, in careful thinking, and in accurate description. Instruction in Elements of Natural Science shall be given by the principal. The aim of teachers in the following lessons should be:

- 1. To let facts speak for themselves.
- 2. To supply suitable experiments and specimens for the establishment of general laws.
- 3. To secure accuracy and solidity in the knowledge acquired.
- 4. To connect scientific principles with their practical applications.
 - 5. To sharpen the observing powers.
- 6. To cultivate the imagination in the apprehension of theories where proof is not available.
 - 7. To exercise the reasoning powers.
 - 8. To form good intellectual habits.

For suggestions teachers are referred to "Woodhull's Simple Experiments."

II. BOOK-KEEPING

A short course in book-keeping. In schools having two or more Eighth Grades book-keeping may be taught by Vice-Principals. In schools for girls exclusively, book-keeping may be made quite elementary.

SEC. VII. HEALTH, MORALS, POLITENESS, AND PATRIOTISM

"1667. Instruction must be given in all grades of schools and in all classes during the entire school course, in manners and morals, and upon the nature of alcoholic drinks and narcotics and their effects upon the human system."

School Law of California.

"1702. It shall be the duty of all teachers to endeavor to impress upon the minds of the pupils the principles of morality, truth, justice, and patriotism; to teach them to avoid idleness, profanity, and falsehood; and to instruct them in the principles of a free government, and to train them up to a true comprehension of the rights, duties and dignity of American citizenship."

-School Law of California.

I. PHYSIOLOGY

The text-book used is the State Physiology.

II. TRAINING IN POLITENESS

I. "A noble and attractive everyday bearing comes of goodness, of sincerity, of refinement; and these are bred in years, not moments. The principle that rules your life is the sure posture-master."

-Bishop Huntington.

III. MORAL TRAINING

1. "To hear about good men is equivalent to living among them. For children there is absolutely no other morality than example either seen or narrated."

--Richter.

2. "Let a child read and understand such stories as the friendship of Damon and Pythias, the integrity of Aristotles, the fidelity of Regulus, the purity of Washington, the invincible perseverance of Franklin, and he will think differently and act differently all the days of his remaining life."

-Horace Mann

3. "The use of the fable, the parable, and the example, is evidently meant to avoid direct lecturing, and to reach the mind by insinuation and circumvention."

-Bain.

4. "Do but gain a boy's trust, you will readily enough guide him. Not by *authority* is your sway obtained; neither by *reasoning*; but by *inducement*."

—Herbert Spencer.

- 5. "Teachers will keep steadily in mind the great central fact of life that *character* outweighs mere *intellect*; that high percentages in school examinations are but as dust in the balance compared with the moral qualities that constitute manhood and womanhood.
- 6. "The divine method of moral instruction in a common school is that a cultivated and consecrated man or woman should rise upon it at nine o'clock in the morning and lead it through light and shadow, breeze and calm, tempest and tranquillity, to the end. All special methods flow out of him, as the hours of the day mark the course of the sun."

 —Mayo.

TOPICS FOR SHORT TALKS

(1) Truth; (2) obedience; (3) industry; (4) honesty; (5) fidelity; (6) justice; (7) politeness; (8) duties at school; (9) duties to playmates; (10) benevolence; (11) duties to dumb creatures; (12) treatment of enemies; (13) conscience; (14) conscientiousness; (15) duties to parents; (16) forgiveness; (17) gratitude; (18) purity.

Note.—As a valuable hand-book for these lessons, teachers are referred to Comegy's "Primer of Ethics."

For supplementary reading, use Everett's "Ethics for Young People."

SEC. VIII. DRAWING

Time, two lessons a week

- I. Drawing in connection with Lessons in Elementary Science.
 - II. Easy lesson in Perspective.
 - III. Designs.
 - IV. Use of the adopted text-book.

COURSE IN DRAWING

I. GENERAL OUTLINES

In the receiving class, teachers will use the simplest exercises in kindergarten drawing.

In first-grade classes, teachers will act under the general suggestions made in the Course of Study for the first grades.

Until further action of the Board of Education, the same drawing blank-books that were used last year will be continued.

A wide latitude will be allowed both to Principals and Teachers who can improve on the specified work.

In any schools where there are teachers that excel in drawing, principals are authorized to assign such teachers to take charge of drawing classes.

Two lessons each week must be given in drawing, and two in penmanship.

SPECIFIC SUGGESTIONS

- 1. For slate, blackboard and pencil drawing exercises in Primary Grades, make use of Little's "Book of Outlines" and Augsburg's "Easy Things to Draw."
- 2. In all Elementary Science lessons, require pupils to make a free use of drawing paper and pencil.
 - 3. Exercises in Free-Hand Drawing should include leaves,

plants, flowers, fruit, insects, such as bees, butterflies, spiders, beetles, grasshoppers, etc., birds, animals, etc.

- 4. Teachers are requested to make use of the "Teacher's Manual for Prang's Shorter Course in Form Study and Drawing" as a reference book for exercises.
- 5. Every school library should have at least one set of "Prang's Complete Course in Form Study and Drawing," for reference by teachers; also, one set of the "Eclectic Industrial Drawing;" also, Augsburg's "Easy Things to Draw;" Little's "Blackboard Outlines;" Hooper's "How to Teach Drawing."

COURSE IN PENMANSHIP

In the receiving classes and the first-grade classes, no copybook is required.

In the second grade, if a copy-book is used, it must be the Spencerian, No. 2; in the third grade, No. 3, and so on, up to the sixth grade, in which No. 6 must be used.

In the seventh and eighth grades, no copy-book need be used, unless the class teacher should find it necessary to use one.

At least two lessons in penmanship must be given each week, and two lessons in drawing.

COURSE IN MUSIC

GENERAL DIRECTIONS

No "Music Readers" have been adopted by the Board of Education, and pupils must not be required to buy any. The books already purchased and in the hands of pupils may be used for the present school year.

Principals are authorized to buy, with a part of their School Library money, such song-books or sets of song-books or sheet music, like the "Coda," as they think best suited to the needs of their schools.

Principals are authorized to arrange any exchanges of work so that any teacher or teachers that have special skill or tact may take charge of the singing in two or more classes.

In grammar grades, principals are authorized to allow pupils inexpensive leaflet or sheet music, like the "Coda," the amount so expended not to exceed 15 cents per pupil.

RECEIVING CLASS

Kindergarten motion songs at least twice each day.

Careful attention given to the pitch, rhythm, quality of tone, and position of the body.

All songs and exercises are to be kept within range of pupils' voices.

Frequently change the key in order to rest the voice and secure uniformity.

FIRST GRADE

Singing at least half an hour a week.

Motion songs and other easy and pleasing rote songs.

Scale: forward and backward, using syllables and numerals, and beginning with full breath.

Frequently change the key in order to rest the voice, omitting such sounds as may in the least strain pupils' voices.

SECOND GRADE

Singing at least half an hour a week.

Careful attention given to time, rhythm, quality of tone, and position of body.

Teach four new primary songs and one patriotic song.

Songs selected by the teacher.

THIRD GRADE

Singing at least half an hour a week.

Exercises in sight reading from blackboard.

Teach two patriotic songs and three other selections.

For supplementary songs teachers are authorized to use selections from "The Coda," or other forms of inexpensive music.

FOURTH GRADE

Singing at least half an hour a week.

Supplementary new songs selected from "The Coda," or other cheap forms of sheet music.

Three new songs selected by the teacher and three patriotic songs.

Exercises in sight reading from blackboard.

FIFTH GRADE

Singing at least half an hour weekly.

Continue scale exercises.

Simple exercises in trio-part music.

Three patriotic songs, and three appropriate songs, selected by the teacher.

SIXTH GRADE

Singing at least half an hour a week.

Supplementary songs from "The Coda."

Three patriotic songs, and three other appropriate songs, selected by the teacher.

SEVENTH GRADE

Singing at least half an hour a week.

Exercises in two-part music, with frequent changes of part.

Three patriotic songs, and three appropriate songs, selected by the teacher.

EIGHTH GRADE

Singing at least half an hour a week.

Songs selected from "The Coda," or song books from the Library.

At least three patriotic songs and three appropriate selections by teacher.

COURSE IN SEWING

In schools for girls exclusively, the full course of sewing must be pursued.

In schools for boys exclusively, no sewing is required.

In mixed schools of boys and girls, sewing is left optional with the Principal and teachers.

FIRST GRADE

One lesson, one hour per week, or two lessons, one-half hour each per week, devoted to cutting, basting, overhand sewing and turning hems.

Explain the difference between selvedge and torn edge, and what a seam is.

MATERIALS FOR PUPILS.—Thimble, scissors, No. 8 needles, No. 50 thread, both red and white.

Suggestions—Pupils should learn to cut squares different dimensions accurately. This may be done by following the kindergarten folding, measuring with a ruler, or by following drawn threads.

Fold the cloth back from the right side to the wrong side, having the fold uniformly one-fourth of an inch in width. Place the right sides together, having the folded edges even. Baste from right to left, through the middle of the folds, in unequal stitches, the long stiches being on the side next the sewer. After pupils are able to cut and fold accurately, commence to sew from right to left, by holding the cloth between the thumb and the first finger of the left hand, never using a knot, but leaving an end of the thread one-half of an inch in length to be turned back on the seam and sewed under by overhand stitches. At the end of the seam make no knot, but sew directly back four stitches and cut the thread. Smooth the seam with the back of the thumb nail or the thimble.

Squares of the same dimensions should be sewed together; first two squares, then four squares, then six, and then eight squares, being careful to place the corners of the squares together so that the diagonals of the squares will form one continuous line.

In overhanding stripes or plaids, they must match to a thread. At first sew a white and a colored square together. When more than two squares are sewed together, white squares should be placed corner to corner, and colored squares corner to corner.

SECOND GRADE

One hour or two half-hours per week

Cutting work bias and overhanding the same, running plain seams and overcasting.

Explain the difference between warp and woof.

Suggestions—Cut work with greatest care, as in previous year.

Cutting bias is cutting on the diagonal of a square directly across the warp and woof or filling.

Allow one-half inch on two sides of a square for the diagonal seam. Sew four squares with diagonal or bias seams to form one larger square.

In running, place the edges evenly together, and baste on the line of the desired seam.

Run the seam close to the casting thread, on the side next the sewer, commencing on the right-hand side, keeping the needle parallel with the cloth, taking up three and omitting two threads.

In overcasting, take stitches one-half the width of the seam, over and over loosely, to confine the torn edge of the cloth. In overcasting, when there is a difference in the width of the ends, always commence at the wider end.

THIRD GRADE

Turning hems, hemming, to wit: Narrow, wide and bias.

Suggestions—Turn a fold one-eighth of an inch, as in over-

handing. Give the cloth a second fold the desired width of the hem. Narrow hems should be made as narrow as possible without fraying by use.

Measure wide hems with a card to keep them of uniform width.

Avoid stretching and puckering of hems. Always lay the hem with the thumb and finger. Avoid pinching the goods. In starting to hem, make no knot; point the needle toward the right side, bringing the end of the thread not drawn through under the hem.

FOURTH GRADE

Back stitching, running, felling and sewing in cords and binding.

Suggestions—In back-stitching, bring the needle through the goods three threads from the beginning of the seam, put the needle back three threads and under the cloth six threads forward, continuing in the same movement. Seams for felling should be sewed with one back-stitch and two running stitches. In felling, commence at the wide end, having the edge of the cloth farther from the sewer the widest. Turn over the wide edge of the hem, as in narrow hemming, making a flat seam.

Cords should first be basted in a bias fold before being sewed.

Always bind with a bias piece running on one side of the seam, and hemming on the other.

FIFTH GRADE

Gathering and laying of gathers. Patching square, triangular and circular patches.

Suggestions—In gathering, the seam should be one-fourth of an inch from the edge.

Divide the cloth into halves, and if the cloth is a long strip divide it into quarters. Always use a double thread with a small knot at the end, and having the thread longer than the piece to be sewed. To gather take up three stitches and skip five. Draw the thread through the material, pushing it tightly against the knot, and fasten the thread by winding it without knots around a pin placed in the material to be gathered. Lay each gather, using a coarse needle and holding the cloth between the thumb and first finger of the left hand.

Gathers may be hemmed, back-stitched or over-handed to the garment. If over-handed the edge must be turned down before gathering, and the cloth gathered close to the edge of the fold.

Patches may be put in by overhanding, hemming or running.

SIXTH GRADE

Making button-holes, eyelets, thread eyes, and sewing on all kinds of buttons.

Suggestions—Cut the button-hole the width of the button. Button-holes should be barred and overcast. In cutting button-holes, cut away from the folded edge. Commence to work the button-hole at the end farthest from the folded edge, placing the needle through the cloth, looping the thread over the needle and drawing the needle so as to bring the twist on the edge of

the button-hole. In sewing on buttons put the knot on the upper side. Eyelets may be worked as button-holes or over-handed.

SEVENTH GRADE

Hemstitching, drawn work, in simple form, darning of all kinds.

EIGHTH GRADE

Sewing optional.

GENERAL DIRECTIONS TO PRINCIPALS

- I. You are instructed to co-operate cheerfully with the Superintendent and the Class-Teachers in carrying into effect the detailed requirements of the Course of Study.
- II. Before making out examination questions for any particular grade, read attentively the directions to the teachers of that grade, and make your questions according to the spirit of those instructions.
- III. While it is desirable that in essentials there should be a central thread of uniformity in method throughout your school, it is not desirable that your assistants should be reduced to a Chinese system of doing everything in only one way. The life of all good teaching is the individuality and personality of the class teacher.

Put yourself in the place of your assistants, and allow them the freedom you would want for yourself. It is quite probable that all assistants together know as much about teaching as any one Principal knows. Uniformity in essentials, but diversity in particulars, should be the rule.

IV. It is your specific duty to see that assistants make use of the school globe, maps, charts and other appliances; that supplementary reading matter is properly distributed and used and that pupils are not overburdened with home lessons.

GENERAL INSTRUCTIONS TO ASSISTANTS

- I. You are required to observe the Course of Study to conform to the general regulations of the Principal, and to carry into effect the general directions of the Superintendent.
- II. Stand ready to give a fair consideration to new methods of teaching, even if they differ from your preconceived ideas, or from the methods you have previously pursued.
- III. Your chief work, beyond importing a small stock of specific knowledge, is to teach pupils the right way to learn for themselves.
- IV. Assign but few lessons to be learned at home. Children ought to be allowed some time to work, play, eat, sleep and grow. Show your pupils how to study home lessons so that they may not be obliged to ask assistance from parents.
- V. Review often, and always on essentials. Repetition is absolutely essential to habit, skill, readiness, accuracy and thoroughness.
- VI. Make special efforts to prepare for the lessons in physical training, moral training, and training in politeness. These lessons must be given with as much regularity and

thoroughness as the arithmetic or geography lesson. They are second in importance to nothing else in the course.

- VII. A foundation principle in School government is that every pupil shall be allowed the largest liberty possible without infringing on the rights, interests or convenience of others.
- VIII. It should be the aim of teachers to govern without corporal punishment. But as most parents are compelled at times to resort to it in the home government of their children, so most teachers must sometimes resort to it in school.
- IX. Corporal punishment should give place to punishments affecting the sense of *honor*, as soon as this sense is sufficiently developed.
- X. Do not become the slave of routine or of one inflexible, mechanical, automatic system.
- XI. Assign reasonable lessons suited to the capacity, not of the best, but of the average pupils.
- XII. "Always remember that to educate rightly is not a simple and easy thing; but a complex and extremely difficult thing, the hardest task upon adult life."

-Herbert Spencer.

I. GENERAL INSTRUCTIONS TO PRINCIPALS AND TEACHERS

In the course of study, detailed methods are left to the individual tact and skill of the teacher. Certain results are required; but it is not expected that all will reach those results in exactly the same way. The text-books are an aid to teachers, but are subordinate to skillful teaching.

II. DIVISIONS, CLASSES AND RECITATIONS

Each class may be advantageously divided into two sections for the purpose of recitation; but the discretion of the teacher must be exercised as to what recitations this division shall include. In memorized lessons, such as geography, history and word analysis, a class can, sometimes, with advantage be divided into sections of ten or twenty each, thus allowing most of the class to study while the few are reciting. In other lessons, as arithmetic and grammar, the undivided attention of the entire class is needed.

Every teacher should have an established order of exercises, which may be changed during the year, according to the circumstances of the class. No uniform rule can be established respecting the frequency or length of recitations.

Some part of the time each day must be allowed for study; but the amount to be given depends upon the character of the recitation. When a class is not divided into sections, the entire class must be allowed time for study, and taught how to study.

III. RECITATIONS AND USE OF TEXT-BOOKS

The aim of teachers in conducting recitations should be to ascertain if their pupils have given reasonable attention to lessons assigned for study, and to supplement the text-book lessons with such illustrations and explanations as are necessary to a clear understanding of the subject.

The arrangement of lessons in text-books is far from perfect, and the teacher must constantly exercise a wise discrimination, both in assigning lessons and in omitting unimportant matter. In geography, while the whole may be read with open book, not more than a small fraction at most, of the matter in each one of the text-books used, ought to be memorized. The important points should be marked in every advanced lesson assigned for study; otherwise the mind of the child is burdened with too many details. In history while the whole should be read in the class, but very little should be marked for memorizing. In grammar, as a general rule, the notes and exceptions in fine print should be read, and not memorized. The Readers should be used as most valuable aids in composition, grammar and spelling. Recitation records may be kept; but it is by no means desirable that every recitation should be recorded.

Frequently the recitation of an assigned lesson should be brief, the principal part of the time being devoted to explanations and illustrations by the teacher. A written review, on Friday, will frequently afford the best standard of work during the week. It is not desirable that teachers be made recording clerks for pupils.

While recitations in history, geography and grammar may sometimes be conducted in writing, teachers are cautioned against a neglect of oral recitations.

Teachers are expected to explain each new lesson assigned, so that each pupil may know what he is expected to do at the next recitation, and how it is to be done. Rules and definitions should be plain, simple and concise; and if deduced by pupils and teachers from the exercises, are more valuable than if memorized from the book. Teachers should never proceed with a recitation without the attention of the whole class. Simultaneous recitation should not be resorted to,

except for the purpose of giving occasional variety to exercises, of arousing and exciting the class when dull and drowsy, of aiding to fix in the mind important definitions, tables, etc., and also in certain spelling and elocutionary exercises.

IV. ARITHMETIC

One great object of the study of arithmetic is mental discipline. To secure this, it is better that the class should work under the immediate direction of the teacher. Hence the regulations forbidding teachers in certain grades to assign any arithmetic lesson to be learned at home.

One hour a day will be sufficient to complete the course in each grade. The blackboards should be kept in constant use both by teachers and pupils.

Accuracy, rather than quickness, should be the rule. The pupil should be taught the principle underlying every process in the fundamental rules of arithmetic. It is easier for the time to teach the child to place the units under units and tens under tens; but the principle that obtains everywhere, in simple and compound numbers and decimals, is to place numbers of the same denomination under each other for addition.

V. GRAMMAR

The study of language, though it is the most difficult of all the school studies, ought to be the most interesting. A skillful teacher can make it so. The omission of many of the technical formulas of the text-books, now almost obsolete; the practical application of principles in composition; the continued use of reading lessons, supplemented by the living teacher, will make grammar both useful and interesting.

VI. GEOGRAPHY

The Elementary Geography is a book to be read and studied with open book in the class, rather than to be memorized. The mere pronunciation of names is a difficult task for young pupils. When teachers consider that the book contains more of detail than most adult heads can carry, they will perceive the necessity of exercising common sense in the use of the book.

VII. WRITING

In writing lessons, teachers should make use of the black-board, all the members of the class attending to the same thing at the same time. Important letters and principles of the copy should be written on the board, both correctly and incorrectly, to illustrate errors and excellencies.

In the first lessons on the slate, the teacher should begin with easy words, including the simpler small letters and easy capitals. The teacher will find that children can learn to make easy capital letters quite as readily as small letters. Attention should constantly be called to the relative proportions of letters. When pupils begin to write with a pen, especial attention must be given to the manner of holding it, as a bad habit formed in the first year is corrected afterwards with great difficulty. The skillful teacher will not be confined to the order of copies in the several numbers of the author-

ized copy-books. In the grammar grades, specimens of writing should be required and credited monthly.

VIII. SPELLING

Good spelling is an unmistakable sign of culture, and bad spelling of the lack of it.

The orthography of the English language is so difficult that it must receive a large share of the time and practice in any course of instruction and in every grade. The spelling book is only an aid to good spelling; the main reliance for forming a habit of correct spelling must be on the reading lessons, compositions and other written exercises as provided throughout the course. Written spelling is more valuable than oral, yet the former must not be used exclusively. Both the eye and the ear must lend their aid.

In oral spelling permit but one trial on a word. No assistance whatever should be given to pupils by pronouncing syllables or by mispronouncing words to indicate the spelling, Pupils should be required to pronounce each word distinctly. after it is dictated by the teacher. Pronounce every word distinctly, in a natural tone of voice. The thundering volume of the old-fashioned "spelling-tone" adds nothing to the effect of a lesson in orthography.

IX. COMPOSITION

Exercises in writing compositions constitute the most practical part of grammar.

Copying reading lessons from the open book will be found a

valuable aid as an exercise in spelling, punctuation, the use of capitals and divisions of paragraphs. These should be followed by written abstracts of easy reading lessons from memory.

No exercise is more important than that of letter-writing. Particular attention should be given to the form of beginning and ending; the date; paragraphs; margin; folding; superscription; sealing, etc.

If composition exercises are given frequently, it will be impossible for the teacher to perform the drudgery of correcting. Pupils should therefore be required to exchange exercises and correct them in the class, under the direction of the teacher. The exercise of criticism in correcting compositions is quite as valuable to the pupil as the original one of writing them. All corrected compositions should be re-copied in a small blankbook.

X. GOOD LANGUAGE

The correct use of language is a matter of *habit* rather than of technical study of the rules of grammar.

It will be one of the arduous duties of every teacher, whether in high or low grade classes, to correct, daily, the inaccuracies of speech resulting from bad habits of pronunciation and in the use of language. The teacher should use plain and pure English, and require pupils to do the same. No provincialisms, no slang, no careless or slovenly pronunciation, should be allowed to pass unnoticed. Questions should be direct; answers, concise.

XI. CHARACTER

The exercise of good principles confirmed into habit is the true means of forming a good character. The moral faculties, like the intellectual, need daily development from the feeble germs of childhood. Children do not learn arithmetic and grammar merely by repeating rules and formulas; neither will they appreciate and assimilate the foundation principles of right and wrong as rules of action merely by the process repeating mottoes and maxims. The moral faculties are of slow growth; they need daily culture and exercise until the habit of right thinking and right doing is formed. There are evil tendencies in the child's nature to be repressed; there are germs of good qualities to be warmed into life and quickened in their growth; and this is the work of skillful teachers during many years of school life.

The selfishness of children is the greatest obstacle to moral training. To teach self-denial and self-control must be the constant care of the teacher. Every case of quarreling, cruelty, fraud, profanity and vulgarity, should be made the occasion of a moral lesson.

XII. MANNER

Good manners are intimately connected with good morals, and teachers should improve every opportunity to teach civility and courtesy. In the Primary schools teachers should give particular instruction in the common rules of politeness. The manners of children in their intercourse with schoolmates should receive constant attention. The position of the pupil

in his seat, his movements in and out of the room, his manner of reciting, should all be carefully noticed.

No teacher can expect to make their pupils more civil or more courteous than they show themselves to be. In dress and in manner, they must be what they would have their pupils become.

COURSES OF STUDY

—OF THE—

HIGH SCHOOLS

Action of the Board of Education

At a meeting of the Board of Education, held June 22, 1892, the following orders were passed:

- "1. That book-keeping and music be stricken from the course of study of the High Schools.
- "2. That drawing in the High Schools be made elective by pupils instead of being compulsory upon all.
- "3. That the course in mathematics in the High Schools be limited to the requirements for admission to the State University of California.
- "4. That the text-book in algebra (Clark's) in the High Schools be changed to Wentworth's."

GEORGE BEANSTON, Secretary.

REQUIREMENTS IN MATHEMATICS FOR ADMISSION TO THE UNIVERSITY OF CALIFORNIA

[From the Register of the University, 1891.]

"1. ARITHMETIC—Including the metric system. The technical parts of Commercial Arithmetic, viz.: banking, profit and loss, commission, taxes, duties, stocks, insurance, exchange and average of payments, are not insisted on.

- "2. ALGEBRA.—(a) To Quadratic Equations, including the various methods of factoring, the theory of exponents, integral and fractional, positive and negative, the calculus of radicals, ratio and proportion.
- (b) Quadratic Equations, both single and simultaneous, their solution and their theory, including all the recognized methods of solution and all equations reducible to the quadratic form; formation of equations from given roots.
- "3. Plane Geometry.—(a) All of plane geometry, except the metrical properties of regular polygons and the measurement of the circle.
- (b) The general properties of regular polygons, their construction, perimeters and areas; and the measurement of the circle, including the different methods for determining the ratio of the circumference to the diameter.

BOYS' HIGH SCHOOL

JUNIOR YEAR

LATIN...... Inductive Primer. Cæsar's Gallic War, Book I. Grammar; Latin at sight; Latin composition.

ENGLISH Bulfinch's Age of Fable; Longfellow's Evangeline; Whittier's Snow Bound; Scott's Lady of the Lake; Grammar; Reading.

MATHEMATICS. Algebra. •

History.....Grecian History, seven months; Roman History, three months.

DRAWING....Freehand.

General exercises throughout the year.

MIDDLE YEAR

LATIN.	Cæsar's	Gallic	War,	Books	II,	III,	and	IV;
	Cicero,	six or	ations	; Sigh	t R	eadin	g;	Latin
	Composition.							

GREEK: Introductory Book and Grammar; Xenophon's Anabasis, Book I; Greek Composition.

English Alhambra; The Newcomes; Rhetoric.

MATHEMATICS . Plane Geometry.

HISTORY.....Roman History, five months; European Mediæval and Modern, five months.

Drawing.....Instrumental.

SENIOR YEAR

LATIN	(Elective with	h German) Virgil's	Æneid, six
	books; Latin	Prosody;	Sight Rea	ading; Latin
	Composition.			

GREEK......Xenophon's Anabasis, Books II, III and IV; Homer's Iliad, Books I and II; Greek Prosody; Sight Reading; Greek Composition.

ENGLISH Shakespeare's Julius Cæsar; Lowell's Vision of Sir Launfal; Addison's Sir Roger de Coverley; Review of Grammar.

MATHEMATICS. Geometry, limited to the requirements for admission to the University of California; Algebra to Quadratics.

HISTORY European Mediæval and Modern, five months; Civil Government, five months.

Drawing.....Instrumental.

LATIN SCIENTIFIC COURSE

JUNIOR YEAR

LATIN Inductive Primer. Cæsar's Gallic War, Book
I; Grammar; Sight Reading; Latin Composition.

English Bulfinch's Age of Fables; Evangeline; Snow Bound; Lady of the Lake; Grammar; Reading.

Mathematics. Algebra.

History.....Grecian History, seven months; Roman, three months.

DRAWING Freehand.

MIDDLE YEAR

LATIN. Cæsar's Gallic War, Books II, III and IV; Cicero, six orations; Sight Reading; Latin Composition.

Science..... Physics.

English Alhambra; Newcomes; Visions of Sir Launfal; Sir Roger de Coverley; Merchant of Venice; Rhetoric.

MATHEMATICS. Plane Geometry.

HISTORY Roman History, five months; European Mediæval and Modern, five months.

Drawing....Instrumental.

SENIOR YEAR

LATIN (Elective with German.) Virgil's Æneid, six books; Latin Prosody; Sight Reading; Latin Composition.

Science.....(Elective with German.) Chemistry.

English Shakespeare's Julius Cæsar; Hales' Longer English Poems; Burke's Speeches on America. and Macauley's Essay on Warren Hastings. Review of Grammar.

MATHEMATICS. Geometry limited to the requirements for admission to the University of California; Algebra through Quadratics, five months.

History European Mediæval and Modern, five months; Civil Government, five months.

Drawing.....Instrumental.

SCIENTIFIC COURSE

JUNIOR YEAR

English Bulfinch's Age of Fable; Longfellow's Evangeline; Whittier's Snow Bound; Scott's Lady of the Lake; Grammar; Reading.

MATHEMATICS. Algebra.

GERMAN.....Grammar and Reading; Conversation.

SCIENCE.....Biology.

History Grecian History, seven months; Roman, three Months.

Drawing....Freehand.

General Exercises throughout the year.

MIDDLE YEAR

ENGLISH Irving's Alhambra; Scott's Lay of the Last Minstrel; Thackery's Newcomes; Lowell's Vision of Sir Launfal; Addison's Sir Roger de Coverley; Shakespeare's Merchant of Venice; Rhetoric.

GERMAN..... Reading and Conversation.

Mathematics. Plane Geometry; Algebra through Logarithms.

Science.....Physics.

HISTORY Roman History, five months; European Mediæval and Modern, five months.

Drawing.....Instrumental.

SENIOR YEAR

English Shakespeare's Julius Cæsar; Hales' Longer English Poems; Burke's Speeches on America, and Macaulay's Essay on Warren Hastings; Rhetoric and Grammar.

Mathematics. Plane Geometry, limited to the requirements for admission to the University of California; Analytical Geometry.

Science.....Chemistry.

History..... European Mediæval and Modern, five months; Civil Government, five months.

Drawing.....Instrumental.

LIST OF TEXT-BOOKS FOR HIGH SCHOOL

English..... Whitney's Essentials of English Grammar; Kellogg's Rhetoric; Hales' Longer English Poems; Burke's Select Works by Payne, Vol. 1; Bulfinch's Age of Fable.

MATHEMATICS. Wentworth's Algebra.

GREEK. White's First Lesson in Greek; Goodwin's Greek Grammar; Goodwin's Anabasis; Johnson's Homer's Iliad with Blake's Lexicon; Jones' Greek Prose Composition.

Science.....Rattan's Botany; Colton's Zoology; Gage's Physics; Remsen's Chemistry.

HISTORY Myer's Eastern Nations and Greece; Allen's
History of the Roman People; Myer's Medieval and Modern History; Fiske's Civil Government of the United States.

ENGLISH

JUNIOR YEAR

- Grammar.... Logic of the simple sentence and development from it of the compound and the complex sentence. Study of the relations denoted by prepositions and conjunctions; special study of infinitives and participles.
- Expression. Transposition of words and explanation of passages. Anecdotes to be told from supplementary reading. Frequent papers on narrative and descriptive subjects chosen from the literature; monthly essays involving definite comparative study of portions of text. Paraphrasing, outlining and abstracting, both at sight and written. Careful attention paid to punctuation in all written work. Systematic study of personal and scenic description. Original sketches.
- WORD WORK. Use of dictionary taught, including diacritical marks and sounds of letters. Correct pronunciation insisted upon. An understanding of all terms in the text required; special attention given to words recurring with different meaning, and to discrimination between a word and its nearest synonym. In extending vocabulary, regard is had to grouping of words based on meaning and etymology.
- General Inculcate clearness, unity and directness in Directions. sentence-structure. Exposition of similes and

metaphors. Distinguish between poetry and prose in object, form and diction. The pupils should be introduced to the attractions of good literature; to accomplish this, choice selections from the literature are memorized, and encouragement is given to read more of the authors taken up, and to individuals to continue on favorite lines. The whole question of orderly and uniform arrangement of written work should be settled during this year.

MIDDLE YEAR

RHETORIC.... Review sentential analysis, and give attention to special constructions. The sentence considered as to arrangement, unity and variety. Study paragraphing and sequence of sentences. Figures of Speech, elements and qualities of style, as given in rhetoric.

Expression. Abstract of text, discussions in class of questions suggested by the literature, and five-minute talks on general subjects previously assigned. Review narrative and descriptive composition; introduce character sketches and exposition.

Give attention to business and social forms in letter-writing. Action or event suggested, pupils to supply motion; outline of plots. Argumentative essays upon subjects suggested by literature and current events.

WORD WORK Call attention to English, Latin, Greek and Norman-French elements in diction. Systematic word-analysis, and grouping of words from the same radical. Discrimination of synonyms. Development of different meanings in the word. In Sir Roger de Coverley call attention to those words that differ from their present meaning.

SENIOR YEAR

RHETORIC.... Varieties of discourse. Versification.

Grammar....Comprehensive review of structure and forms. Shakespearean syntax.

Expression . . Discussion of subjects in literature, and short talks upon matters of general interest.

Structural analysis of poems. Themes in different varieties of discourse; special attention to management of themes in argumentation and persuasion.

WORD WORK Careful study of the diction of an author. The derivation, changes in meaning, and the present use of important words.

GENERAL Throughout the course pupils are required to DIRECTIONS. keep a corrected list of words misspelled in written work. Regular exercises are had in orthography from list of words selected from the literature and words in common use.

Record of daily work to be kept in small note-book; larger book to contain specimens of each important kind of work.

A systematic course of reading, arranged to supplement the class work, and to awaken individual interest in good literature, accompanies the work of each year.

LATIN

JUNIOR YEAR

Cæsar's Gallic War, Book I.—Read critically the last three months. Book V, 20 pages at sight. In connection with the assigned lesson, daily work is given on the blackboard in review of forms, modifications, in fact, all the elementary work. This, with a short weekly written exercise on the class work, holds every pupil accountable for a certain amount of work. Position of words in relation to emphasis in the Latin sentence taught. Attention called to the difference in use of common synonymous words. Cæsar's campaigns closely followed on the map.

In Sight Reading pupils trained to gather the thought from the Latin order of words.

- Harkness' Latin Grammar is used as a basis for reference; but pupils are early trained to appreciate at once the power of connecting words and the relations of case-endings, and are expected to show grammatical construction in their translation, so far as it is compatible with good English.
- COLLAR'S LATIN PROSE taken up on the completion of the Beginner's Book, and carried on simultaneously with Cæsar. The Seven King's of Rome and Nepo's Miltiades are completed Junior Year.

Plan of the book followed as regards oral and written work, all oral work being given to the class with closed books. Special pains taken to have the Latin idioms distinguished, understood and imitated.

MIDDLE YEAR

- CÆSAR'S GALLIC WAR, Books II, III and IV; rest of Book V and Book VI at sight. (Portions of Nepo's may be substituted for the Cæsar in sight reading.) Continuation of other methods used in the Junior Year.
- CICERO—Six orations; one additional oration at sight, or sight reading from Sallust's Catiline. Usual critical work on text. Careful study of verb forms. Contemporaneous history; study of author's style of oratory and power in arrangement of words and sentences. Passages committed to memory and delivered in the original to show power of author. Accustom pupils to get the thought of the Latin sentence from a running survey. Have Latin discourse read to the class to cultivate this habit.
- COLLAR'S LATIN PROSE, Parts III and IV. Method of work same as in Junior Year.

SENIOR YEAR

VIRGIL'S ÆNEID—Six books. Translation at sight of two books of the Æneid, or all the Eclogue; or

1,000 lines of Ovid. Rules of scansion and quantity. Irregular forms. Grammatical rules thoroughly understood. Knowledge of reference in text. Power of accurate and elegant translation cultivated. Life of Virgil and contemporaneous history. Source of material with a good idea of mythology. Synonyms. Figures of speech. Etymology. Committing to memory passages of beauty and power, and cultivation of ability to recognize such passages.

Collar's Latin Prose completed; additional exercises from other Latin Prose Books; Reviews of important parts; Selections from various authors dictated in idiomatic English, to be translated into idiomatic Latin.

GREEK

White's Greek Lessons furnishes the material for elementary work in the study of the Greek language. The first term of Middle Year is devoted to a careful study of this text-book and to such supplementary practice as will insure a thorough knowledge of forms. The acquirement of a vocabulary and a study of the order of words by careful reference to the Greek itself, sufficient to enable the pupil to translate brief sentences from the Greek to English and vice versa, constitute a feature of this term's work. Simplified selections adopted from Xenophon are given near the close of the term, that the transition from the lessons to the text of the

Anabasis may be less difficult. During the second term of Middle Year the first book of the Anabasis is finished and Jones' Greek Prose Composition begun. Particular attention is now given to the syntax and structure of the sentence and to development of accuracy in translating the thought of the author into smooth, idiomatic English.

Xenophon is the author to be studied during the first term of Senior Year. The class will read the second, third and fourth books of the Anabasis and continue Jones' Composition. The conditional sentence and indirect discourse are now more critically studied. A constant study of the principal parts of verbs, peculiarities of declension and the syntax of the grammar is required. The last term of Senior Year is devoted to the study of the Iliad of Homer. The student is required to note carefully the forms peculiar to the Epic dialect, and to give Scansion is the corresponding Attic forms. studied and due attention given to all historical and mythological allusions and figures of speech. Exercises in sight reading are given throughout the course for the purpose developing ease and fluency in translating. is hoped that the study of the classics will not be viewed by the pupil as mere mechanical labor, but that such an interest will be awakened that "the brain and the heart will work with eye and ear, intelligence with memory, to develop that sense of power which is one of the chief sources of power itself."

MATHEMATICS

JUNIOR YEAR

ALGEBRA.—The aim of the work in the Junior Year is the acquirement of a thorough proficiency in dealing with the process of Elementary Algebra. The amount of work to be performed includes the usual fundamental rules, factoring, H. C. F., L. C. M., fractions, exponents including integral and fractional, positive and negative exponents; involution, evolution, radicals of the second, and of higher degrees, their transformation and the operations upon them; imaginary quantities of the second degree and equations of the first degree.

MIDDLE YEAR

Plane Geometry.—The object of the work in Plane Geometry during the Middle Year, is the study of plane figures, their properties, constructions and measurements, the development of the reasoning faculties, the unhesitating, accurate application of fundamental principles, the investigation and solution of supplementary theorems and problems, and to show the mutual dependence of different branches of mathematics.

The purely geometrical work is equivalent to the first five books of the usual text-books

on this subject, and together with the supplementary work in algebraic geometry will give the pupil a thorough and comprehensive working knowledge of this part of the subject.

In order that the pupil may acquire special skill in the solution of the original theorems, both the analytical and the synthetical methods of demonstration are constantly employed. The pupil is encouraged to use compasses and rule in order to establish for himself by means of observation such of the more important geometrical facts as are in constant use. The closest attention is paid to the enunciation of theorem, the hypothesis, and the conclusion, and to the statement of the converse. All means are adopted to impress upon the pupil the absolute necessity of strictly logical thought.

The thorough comprehension of a theorem is secured by the removal, if possible, of existing restrictions in the statement, or in the conditions assumed. The mutual dependence of different branches of mathematics, is made clear by the algebraic solution and discussion of carefully selected geometrical problems. Throughout the course careful attention is paid to practical applications of the subject in architecture, engineering and mechanics.

SCIENTIFIC COURSE

Algebra.—Aside from the mental discipline to be derived from the course, a solid foundation is laid for the subsequent mathematical work of the pupil;

special care being devoted to those who intend to pursue mathematical lines of study.

SENIOR YEAR

CLASSICAL AND LATIN SCIENTIFIC COURSES

ALGEBRA.—The purpose, amount and method of the work during the senior year are the same as indicated for the scientific students in the middle year.

REVIEW OF PLANE GEOMETRY.

SCIENCE

Biology.—The work in Biology consists of Zoology, including some comparative Physiology and Botany. The work of Zoology is entirely practical and intended to develop the power of close observation. Some of the smaller animals are put into the hands of the pupils, and under the direction of the teacher the pupils are required to make their own dissections and drawings, taking full notes of what they see themselves. not of what they can learn from other sources. These notes are afterwards expanded into a full description of the animal studied. The only assistance given by the teacher is in the way of systema-

tizing the work and furnishing such technical terms as may be necessary. No attempt is made to teach the classification of animals other than by resemblances and differences which the pupils themselves can recognize. For illustrations in Physiology, the school possesses White's Physiological Manikin and two sets of wall charts. In Botany no text-book is used, except for the purpose of classification, and no attempt made to teach structural botany, or any part of it, except as necessarily incidental to the classification of the plants studied. The object aimed at in the exercise is not to teach as much as practicable about plants, but to diminish the influence of the memorizing habit, change pupils' views of the purpose of text-books and increase the natural liking for direct methods of study.

The collection of plants is all done by the pupils. In the time allowed, about fifty species are studied.

Physics.—In Physics the pupils perform about two hundred and fifty of the experiments suggested in the text-book. An experiment is assigned to each scholar, and he is expected to make the necessary preparations out of school hours and to perform the experiment in recitation, making such explanations as may be necessary to show its purport. Each scholar also has an opportunity to perform a few simple experiments calling for quantitative results in the laboratory. These experiments have been shown to the class in recitation by some pupil. But most scholars need to do the work themselves in such subjects

as specific gravity, accelerated motion, the pendulum and heat.

Chemistry.—In chemistry the scholars perform in recitation about two hundred experiments suggested by the text-book. The place of assignment being like that used in Physics, about one-half of these are selected for laboratory work. These are divided into groups convenient for one day's work, and each scholar assigned days for performing them. In this part of the course two scholars work together, but are expected to write their notes independently of each other. After the conclusion of this part of the work the scholars analyze (qualitatively) as many solutions, etc., as the time remaining may allow—perhaps about twenty.

During school hours each pupil is required to work in the laboratory one hour and a half each week, and the laboratory is open two hours every school day, out of school hours, as the time allotted during session hours is found quite insufficient for the work.

HISTORY

OUTLINE OF WORK

JUNIOR YEAR.—For the first seven months the study of Greece from the earliest times to the break-up of the Alexandrian empire; for the last three months the history of Rome to the struggle with Hannibal. Methods of study are carefully perfected in this year. The leading features brought out

in the study of Greece are the position of Greece with respect to ancient civilization, enough work being done on Egypt, Phænicia and the East to give a background to Hellenic development; the qualities of Greek genius estimated through its great work in art, literature and in the defence of liberty; the character and influence of leading men; and the characteristics of domestic life. Careful study is made of the institutions that illustrate the Greek city-state in internal organization and outside relations. The beginning made in the history of Rome brings out the geographical features of Italy, the relative positions of the races competing for mastery, the advantage of the Roman city in position and organization leading to early supremacy, the development from the monarchy into the republican city and the extension of its dominion over peninsular Italy and the adjacent sea and islands.

MIDDLE YEAR—FIRST TERM.—Study of Rome to the dissolution of the Empire. The leading features brought out are the struggle with Carthage leading to the occupation of Spain, retaliation on eastern kingdoms and alliances with smaller states; contact of Romans with the Hellenic world, resulting in the translating of Greek ideas to Italy and the pacification of the Eastern region under Roman power; the development of the provincial system leading to new aristocractic elements and the decay of the peasant burgesses, disorder and civil strife; the changes in the military system; the collapse of the Republican administration and improvement

made through the intervention of Cæsar and the establishment of the empire. Thorough study of the empire is made as the outcome of previous organizations and the last and greatest work of antiquity. Attention is given to the productions of the Romans in literature, and relations to Greek literature are traced.

SECOND TERM.—Europe in the middle ages. This work includes inquiry into the condition and qualities of the Germanic tribes, mapping out of their great migration, their Christianizing and settlements within the empire; the alliance of the Franks with Rome; the extension of Mohammedanism and its defeat in the west; the careful study of the empire of Charles the Great; migration of Scandinavians leading to new elements in the growing kingdom; the rise of feudal organizations; the crusades leading to new activities, and the formation of distinctly national Governments in the West.

Senior Year—First Term.—Modern European history. As the field of study broadens, attention is centered on the leading national developments. The study includes the revival of learning closely observed; western advancement through geographical discovery and new avenues of commerce; the decline of feudal organization leading to centralized kingdoms; the ascendancy of Spain and the Empire of Charles the Fifth; the religious wars; the decline of the Germanic Empire completed with the Thirty Years' War; the leadership of France under

absolutism; the defeat of absolutism in England; the rivalry of Prussia and Austria; the political changes introduced by the French Revolution and some inquiry into the new problems set by the material advancement of the present century.

SECOND TERM.—Study of Government of the United States; commenced with the simplest local organizations and including City, County, State and Federal Institutions with a view towards origin, objects and mere practical relation. The forms and the scope of State law are studied, and also some features of the State Constitution. Thorough study is made of the Federal Constitution, and as much of its history taken up as the time may permit.

GENERAL PURPOSES

The aims of the department are to enable pupils to acquire sufficient information regarding the nations studied for an appreciation of their historic development; to give acquaintance with the main sources of historical knowledge and an idea of the field of historical literature in English; and to train pupils to reduce historical events to their underlying causes.

Метнорз.—A text-book is placed in the pupil's hands to supply the facts of information. Work is assigned by definite subjects or questions. Collateral references extend the view and correct impressions. Original material is introduced

through print and dictation, and is made the basis of individual judgment. Recitation tests the accuracy and fullness of the pupil's information and trains him in clearness of conception and thought. Periods are reviewed according to written form designed to help in power to generalize. A note-book is kept in which are preserved the most valuable papers of the pupils' own production, as typical views, maps showing special features and some of the results of collateral reading.

DRAWING

The work in drawing, besides furnishing an excellent course in itself, directly supplements the Mathematical work.

JUNIOR YEAR

Freehand Drawing.—One view, drawing of models.
Projections of simple objects.
Isometric projections of simple objects.

MIDDLE YEAR

Instrumental Drawing.—Geometrical problems. Projections, with paper developments. Drawings in architecture and machinery.

SENIOR YEAR

Instrumental Drawing.—Sketching in projections of structures. Making of plans and elevations from sketches. Working drawings of structures, buildings, machines, etc. Perspective.

GENERAL RULES

Study.—At least one hour a day shall be set apart for study in school.

"Sec. 133. In High Schools, Principals must direct the heads of departments, and other department teachers, to so assign lessons in their respective departments that the total time required for home study by pupils of average ability shall not exceed three and a half hours daily."

-Rules of the Board.

Drawing.—At least one hour a week shall be set apart for drawing in school, and more than that time may be taken if the Principal of the school can arrange to allow it.

> The course in drawing shall be under the direction of a special teacher in drawing. (Drawing elective by pupils.)

PHYSICAL CULTURE.—In the Boys' High School military drill shall be a part of the training in physical culture.

> · In the Girls' High School, instruction shall be given in light gymnastics by a special teacher in physical culture.

GENERAL EXERCISES throughout the year.

ELOCUTION in Girls' High School one lesson a month.

PER WEEK NUMBER OF RECITATIONS*

2d Term	4 N N W H 0	4 % W W W H 4	4 W W W W H U
Term	4 N N N H 0	4 % N N W H 4	4 6 5 5 5 1 A
CLASSICAL	Algebra English Latin History Drawing Gen. Exercises	Geometry English Latin Greek History Drawing Gen. Exercises	Mathematics English Latin Greek History Drawing Gen. Exercises
zd Term	4 m m m m m	4404610	4404619
Term Term	4 N N N H N	4454610	4454610
LATIN SCIENTIFIC	Algebra English. Latin History Drawing Gen. Exercises	Geometry English Latin Science History Drawing Gen. Exercises.	Mathematics English Latin Science History Drawing Gen, Exercises
rst zd Term Term	4 r0 4 r0 r0 H r0	n44n 00	νν4 ω u u
Term	4 2 4 2 2 H 2	N44 NUU	224200
SCIENTIFIC	Algebra English Science History German Drawing Gen. Exercises	Mathematics English Science History German Drawing Gen. Exercises	Mathematics
	JUNIOR	MIDDLE	SENIOR

* A Recitation Period is 45 Minutes. German may also be selected in place of Latin, or Science in the Senior Year of the Latin-Scientific and Classical Courses; provided, that the school program can be arranged for it, and the pupil's standing has been good in these subjects.

GIRLS' HIGH SCHOOL

CLASSICAL COURSE

JUNIOR YEAR

LATIN Inductive Primer, Cæsar's Gallic War Books 5 times a week III and IV, and Latin Composition. Also Sight Reading.

English..... Lady of the Lake, Snow Bound, Evangeline, 5 times a week Bulfinch's Age of Fable.

HISTORY.....Grecian during the first seven months, and 3 times a week Roman the last three months.

MATHEMATICS. Algebra to Fractional Equations. 4 times a week

Science (opt.). Botany, no home study. Twice a week

MIDDLE YEAR

LATIN..... Books I and II of Cæsar's Gallic War, Six Ora-5 times a week tions of Cicero, and Latin Composition. Reading.

GREEK...... Greek Lessons, Book I of Xenophon's Anabasis, 5 times a week and Greek Composition.

English Alhambra, Newcomes, Merchant of Venice, 3 times a week Rhetoric.

HISTORY..... Roman, first half, European Mediæval, last half. 3 times a week

MATHEMATICS. Plane Geometry. 2 books. Algebra to Quad-4times a week ratics.

SENIOR YEAR

LATIN..... Six Books of the Æneid with Prosody, and 5 times a week Latin Composition. Sight Reading.

GREEK......Books II, III and IV of the Anabasis, Books I 5 times a week and II of the Iliad, and Greek Composition. Sight Reading.

English......Julius Cæsar, Lowell's Vision of Sir Launfal, 3 times a week and Addison's Sir Roger de Coverley. Grammar Review.

HISTORY.....European Modern, first half; Civil Government, 3 times a week second half.

MATHEMATICS. Plane Geometry, 3d, 4th and 5th Books. Alge-4times a week bra completed.

LATIN SCIENTIFIC COURSE

JUNIOR YEAR

LATIN Inductive Primer, Books I and II of Cæsar's

194

5 times a week Gallic War and Latin Composition. Also Sight Reading.

MATHEMATICS. Algebra to Fractional Equations.

4 times a week

English Lady of the Lake, Lay of the Last Minstrel, 5 times a week Snow Bound, Evangeline, Bulfinch's Age of Fable. Grammar. Reading.

HISTORY.....Grecian during the first seven months, and 3 times a week Roman the last three months.

Science (opt.). Botany, no home study.

Twice a week

DRAWING....elective.

MIDDLE YEAR

LATIN Books I and II of Cæsar's Gallic War, Six Ora-5 times a week tions of Cicero and Latin Composition. Sight Reading.

Science.....Physics.

4 times a week

MATHEMATICS. Plane Geometry, 2 Books. Algebra to Quad-4 times a week ratics.

English Merchant of Venice, Newcomes, Sir Roger de 4times a week Coverley, Alhambra, and Julius Cæsar. Rhetoric.

HISTORY..... Roman, first half; European Mediæval, second 3 times a week half.

DRAWING.... Freehand elective.

Once a week

SENIOR YEAR

LATINSix books of the Æneid with Prosody, and

5 times a week. Latin Composition. Sight Reading one period a week.

Science.....Chemistry

4 times a week

MATHEMATICS. Plane Geometry 3d, 4th and 5th Books first 4times a week half; Algebra completed.

English Hales' Longer English poems, Vision of Sir 4 times a week. Launfal, Burke's Speeches on America, and Macaulay's Essay on Warren Hastings. Rhetoric and review of Grammar.

HISTORY... European Modern, first half; Civil Government, 3 times a week second half.

SCIENTIFIC COURSE

JUNIOR YEAR

Science.....Zoology and Botany.

4 times a week

Mathematics. Algebra to Fractional Equations.

4 times a week

English.....Lady of the Lake and Lay of the Last Minstrel, 5 times a week Snow Bound, Evangeline, Bulfinch's Age of Fable.

HISTORY....Grecian, during first seven months; Roman, 3 times a week the last three months.

MIDDLE YEAR

Science.....Physics.

4 times a week

MATHEMATICS. Plane Geometry, 2 books; Algebra to Quadratic 5 times a week Equations.

English Merchant of Venice; Newcomes; Sir Roger de 5 times a week Coverley; Alhambra; Julius Cæsar; Vision of Sir Launfal; Rhetoric.

HISTORY Roman, first half; European Mediæval, last 4 times a week half.

SENIOR YEAR

Science..... Chemistry.

4 times a week

MATHEMATICS. Plane Geometry, 3d, 4th and 5th books, and 5 times a week Algebra, Completed.

English Hale's Longer English Poems, Vision of Sir 5 times a week Launfal, Burke's Speeches on America, and Macaulay's Essay on Warren Hastings. Rhetoric and Grammar.

HISTORY European Modern, first half; Civil Government, 4 times a week second half.

LIST OF TEXT-BOOKS FOR HIGH SCHOOL

English..... Whitney's Essentials of English Grammar; Kellogg's Rhetoric; Hales' Longer English Poems; Burke's Select Works by Payne, Vol. 1; Bulfinch's Age of Fable.

MATHEMATICS. Wentworth's Algebra.

Harkness' Grammar; Harkness' Cæsar; Harkness' Cicero; Allen and Greenough's Virgil; Collar's Latin Prose Composition.

GREEK...... White's First Lesson in Greek; Goodwin's Greek Grammar; Goodwin's Anabasis; Johnson's Homer's Iliad with Blake's Lexicon; Jones' Greek Prose Composition.

Science.....Rattan's Botany; Colton's Zoology; Gage's Physics; Remsen's Chemistry.

HISTORY Myer's Eastern Nations and Greece; Allen's History of the Roman People; Myer's Mediæval and Modern History; Fiske's Civil Government of the United States.

NORMAL DEPARTMENT

- I. Methods of Teaching.
- II. Elementary Science, including Entomology.
- III. Lessons on the San Francisco Course of Study.
- IV. Methods in Arithmetic, Grammar and Composition.
 - V. Freehand Drawing.
- VI. Kindergarten Work.
- VII. Light Gymnastics.
- VIII. Psychology—Gordy.
- IX. Practice in teaching as a student teacher in the public schools four months in the year.

METHODS OF INSTRUCTION ARRANGED BY DEPARTMENTS

SCIENCE

Biology.—The student is encouraged to apply what he has previously learned of the subject in the grammar school, in making and recording observations, not only upon his own eye, ear, mouth, etc., but also upon the brain, stomach and other internal organs of animals that can be obtained from the market in sufficient quantities for individual work. The relation of the various organs to each other is shown by means of an Auzoux manikin.

Zoology.—Specimens of sponge and corals, starfishes, sea urchins, earth worms, clams, oysters, mussels, abalone shells, shrimps, sand crabs, grasshoppers, flies, tree toads and sardines or smelts, were put into the hands of each of the students this year, and they were required to make drawings and write descriptions of what they had themselves observed while in the laboratory.

The observations and notes made upon the above typical animals under each group were employed in giving the students an idea of the whole animal kingdom. To acquaint the students with a greater variety of forms, visits are made to the museum of the Academy of Science from time to time.

BOTANY.—The students study leaves, stems, buds, roots,

flowers, etc., until they become fairly acquainted with the gross anatomy of the higher plants, and have acquired some power in the direction of observation, discrimination, comparison and botanical terminology. To encourage closer observation and to ascertain how much has been accomplished in this direction, much is made of drawing and something of coloring. Aside from the regular class work, each student undertakes the life history of some plant or some other botanical subject, the teacher putting such questions as will encourage her to investigate and experiment by herself. Thus far, the plants studied have been raised at home, but there will be sufficient space for a botanical garden in the grounds of our new high school. About ten weeks are given to the study of the plant relations, i. e., classification. Botanical excursions are made to material and to study the habitats of plants. The Phanerogamia receive most attention, but to give a more comprehensive view of the plant world, a chlorophyll and a non-chlorophyllbearing plant, under each of the six lower divisions, is selected for study. The pupils examine these under the microscope and learn their structure and peculiarities. In this connection, the teacher explains the minute anatomy and physiology and some of the simpler chemical and physical changes that take place in the process of growth.

Physics.—General aims. 1. To impart information regarding the fundamental principles of the subject and their familiar applications. 2. To lead

pupils to observe phenomena, to draw deductions and to express the results of their work clearly and accurately. The students work an hour and a half in the laboratory each week. The collective system of conducting laboratory work is generally found more satisfactory in that the teacher directs all at once. pupils work and write out about forty experiments, mainly on the subjects suggested in the pamphlet sent out by the Harvard University for the use of teachers preparing students for the entrance examination in Physics. experiments are somewhat modified, and the pupils are furnished with hektographic copies. Under each subject, the laboratory work precedes the text-book study, and this is made the basis of the introductory class work.

To encourage independence, the *separate* system is employed in doing many of the two hundred and fifty experiments laid down in the text-book, the pupils taking turns in presenting them before the class.

CHEMISTRY.—The pupils work in the laboratory an hour and a half each week.

In addition to the work in general chemistry, sufficient practice is given in qualitative analysis to enable the pupil to detect the metals and acids present in a simple unknown solution.

On account of their industrial importance in this State, several metals receive special attention, and the pupils visit the mining bureau to become acquainted with the ores of such metals. The pupils are also taken to the gas and chemical works that they may see how chemical operations are conducted on a large scale.

MATHEMATICS

The first object in the work in Mathematics is to give pupils who will be confined to elementary courses in Algebra and Geometry the mental discipline and the practical knowledge which these subjects afford.

The second object is to lay a solid foundation for advanced work in Mathematics.

JUNIOR YEAR

In connection with Algebra, the corresponding topics of Arithmetic are reviewed, to lead the pupils to see that Elementary Algebra is generalized Arithmetic.

Exercises in Mental Algebra are given to strengthen the power of attention, and to secure rapidity of mental work.

While such deductions and explanations are required as will enable the pupils to understand the different topics and to acquire methods of reasoning, the special aim of the course in Algebra in the Junior Class is to train the pupils in rapid and accurate work.

PLANE GEOMETRY.—The subject of Plane Geometry is commenced without the use of the text-book, by the development method, through which the pupil is led to state and demonstrate the first theorems.

While the text-book work cultivates habits of exact reasoning and precision and clearness

of expression, the greater and the more important part of the work of Plane Geometry is in the exercises for original demonstration, and in the impromptu exercises. These exercises cultivate the power of observation as well as that of sustained and independent reasoning.

The method of attacking the Exercises by Analysis is taught as early as possible.

Subjects are assigned for special investigation. Much work is done in discussion, in generalization, in the application of algebraic analysis to the solution of problems, and in the geometric construction of algebraic expressions.

ALGEBRA

A review of the work in Algebra of the Junior year, supplemented by discussions of the following subjects:

The laws of operation; factoring, especially as applied to the solution of equations; the theory of exponents; the binomial theorem; surds and imaginaries. Quadratic equations, both single and simultaneous; their solutions and properties. Composition of the quadratic equation. Equations reducible to the quadratic form. Ratio and proportion.

LATIN

JUNIOR YEAR

Collar's Latin Prose.—Twenty lessons devoted to reading the Seven Kings of Rome; accompanying

Dicenda given daily. Acquaintance with simple Latin prose desirable before attempting any written composition. Pupils taught to translate by phrases instead of by single words, and required to reproduce Latin idioms orally, English equivalents given.

Cæsar's Gallic War, Books III and IV, read carefully during the last four months. Thorough drill upon fundamental principles in syntax and constant review in inflections. Peculiarities of diction and sentence structure noted. Attention called to difference in use of synonyms. Occasional dictation exercises in Latin. Five to ten minutes given daily to review in reading without translation, for the purpose of understanding the spirit of the Latin language. In connection with review, exercises in written composition daily for practice in Latin construction, observing carefully order of words. As pupils advance, a great many selections in Collar's Latin Prose read at sight with comparative ease.

HARKNESS' LATIN GRAMMAR used as text-book in connection with Cæsar.

MIDDLE YEAR

Cæsar's Gallic War, Books I and II; Book V at sight. Plan commenced in Junior Year with regard to syntax continued. Drill in changing indirect to direct discourse and vice versa based on text of Cæsar.

CICERO.—Four Catilinian Orations, Manilian Law and Archias

studied on same lines laid down for Cæsar. Special attention to oratorical style and arrangement. Author's life and contemporaneous history. Passages committed to memory. One oration at sight. Frequent reading of the original.

COLLAR'S LATIN PROSE, Parts III and IV, with supplementary work from Daniell. Particular effort made to have pupils readily reproduce English sentences into idiomatic Latin. Constant drill in oral and written composition with attention to continuous discourse.

SENIOR YEAR

VIRGIL'S ÆNEID. First six books. Translation of the Eclogues at sight, also of miscellaneous prose selections.

Work continued in directions already indicated with special attention to irregular forms and etymology. Rules of quantity and scansion with constant reading of the Latin to accustom pupils to the classical rhythm. Poetical style studied and compared with prose style of Cicero and Cæsar with special reference to diction.

References and mythological allusions in text studied. Knowledge of Virgil's life and contemporaneous history. Striking passages committed to memory.

Collar's Latin Prose completed. Practice in the translation into Latin of continuous narratives from various authors and of sentences based on the

prose sight reading. Review of the reproduction of idiomatic English construction into idiomatic Latin, and of changing direct into indirect discourse.

GREEK

MIDDLE YEAR

WHITE'S FIRST LESSONS IN GREEK used during the first term.

The text is carefully studied and the acquiring of a complete knowledge of forms is emphasized. "Goodwin's Greek Grammar" is used in connection with the Lessons. Special attention is paid to the study of words, showing English words derived from the Greek. Constant drill in verb system and synopsis. The translation of short sentences from English to Greek and from Greek to English forms a part of the work. The first book of "Xenophon's Anabasis" is read during the second term of this year. syntax is particularly noticed with a review of forms and a continuation of the study in verbs. The author's style is noted and the power to make accurate translations is developed. To continue the work in composition, English sentences, based on the text of the Anabasis, are given to be translated into Greek. Greek Prose Composition" is begun during the latter part of this term.

SENIOR YEAR

Study of the "Anabasis" is continued during the first term of this year. Books II, III and IV are read on the same plan commenced in the Middle Year. Principal parts of verbs and irregularities in inflections receive attention. "Jones' Composition" is continued. Careful study of conditional and conditional relative clauses is made both in reading the Greek and in changing the English sentences into Greek; at this point also, more particular attention is given to indirect discourse. The first two books of "Homer's Iliad" are read during the second term of this year. Attic forms are reviewed before commencing Homer, in order that the pupils may be more ready to note the forms peculiar to the Epic dialect. The latter now receive attention, and the equivalent Attic forms are required. Scansion is studied with frequent drill in reading the original. An accurate knowledge of the meaning of words peculiar to Homer and of compound words is required. At the same time with Homer, exercises in sight reading from parts of the Anabasis not already read are given. This aids pupils to keep in mind prose style while they are reading poetry. The classic style, as presented in Homer, is noted and compared with that of Virgil. The attention of pupils, both in the study of the Epic of Virgil and in that of Homer, is called to a study of Epic poetry in general, and endeavor is made, from the study of the Classics, to cultivate a taste for sound reading and reflection.

HISTORY

The work in History extends throughout two years and a half of the High School course, the last term of the Senior Year being devoted to the study of United States Government. The main idea, and one that is carefully carried out throughout the course, is to give the students as broad and comprehensive a knowledge as possible. Such a knowledge is indispensable to the cultured woman. It is necessary for students to understand the civilizations of which our own is the outcome; to know what are the foundations upon which modern society is built. The constant aim is to awaken interest in the subject and to arouse and stimulate habits of investigation and discussion.

The course in Abstract Work is designed to train the student in proper methods of reading and assimilating knowledge, introducing her, as often as possible, to the original sources as well as to the best authorities within reach. Every two weeks an important topic in connection with the class work is assigned for abstract work. A list of the best references obtainable is furnished, and the student now attempts something like investigation, and learns to discriminate between important and unimportant statements. The abstracts are discussed in class and the principal points brought out, each student becomes desirous of expressing her opinion or giving her views, thus creating a pleasant rivalry which tends to increase the appreciation of the work.

Junior Year.—First seven months, Grecian History from earliest times to final conquest by Rome 146, A. D. Particular attention is paid to Greek institutions, government, religion, art, literature and philosophy. All the peculiar and distinctive features of Grecian life are discussed—games, manners, customs, dress. Character studies are made of the famous men. The text-book is used merely as a guide, each student pursuing independent investigations of assigned topics. The geography is carefully studied, the characteristics noticed, and each place mentioned is located on the map. The influence of Greece upon modern institutions is traced.

JUNIOR YEAR.—Last three months. Roman History. A study is made of the various tribes inhabiting Italy, the gradual triumph of one over the other, the rise of Rome, its gradual ascendancy over the other tribes, the development and changes in the government of Rome, and the final combination of Italy against a common foe. The general plan, as regards topics, abstracts, characterizations, pursued in the study of Grecian History, is carried on through the entire course.

MIDDLE YEAR—FIRST TERM.—Roman history to the downfall of the Empire. The political civilization of republican and imperial Rome, the contrast with Greece, Grecian influence upon Rome, are some of the topics taken up. The various causes and events that led to the rise of the

Empire, as well as those that caused its fall, are studied. Its manners, customs, institutions, great men, their bearing upon modern civilization are investigated.

SECOND TERM.—Europe in the Middle Ages. Germanic tribes, history of the rise of Christianity, over-throw of Rome, rise of Germanic kingdoms, Feudalism, Chivalry, Crusades, Renaissance in art, literature, learning, are some of the important topics brought up by the study of this period of the world's history.

Senior Year—First Term.—Modern European History.

The events that connect Modern and Mediæval
History are noted. The nation is now made
the chief theme—its growth, development and
characteristics in France, Germany, England
and Italy. The rise of Protestantism, the conflict between Church and State, the gradual
limit put upon imperial power, the development of a more democratic form of government,
in some countries the realization of a constitutional form, are points brought forcibly before
the students.

In Ancient, Mediæval and Modern History, time is devoted to the history of the development of institutions and to the social conditions as leading epochs in the country's history.

SECOND TERM.—Study of United States Government. Three divisions are made in the study of government—local, state and federal. The organization of each, their origin, duties and relation to each other, are taught and discussed. Comparisons are instituted between the different divisions and between our government and that of other

nations. The constitution is read and an endeavor is made to give the students some idea of the government under which they live, of its laws and methods of operation, of its officers and their duties, of its underlying principles.

ENGLISH

JUNIOR YEAR

GRAMMAR.... Constant review of points in structure. Special study of verbals, conjunctions and prepositions.

Brief grammatical analysis.

Expression . Main things aimed at in the study of literary selections are to understand clearly the meaning of the author, thus developing thought and expression, to paraphrase intelligntly, to outline systematically and to abstract understandingly.

In Composition, papers are submitted on narrative and descriptive subjects, chosen from literature, or on character in text pointing out growth and individual traits. Amplification of such lines descriptive of scenic effect as may be selected. Supplementary reading to furnish subject-matter for other papers. Students sometimes permitted to select subject in order to test power of original thought.

WORD WORK. . Dictionary, gazateer, encyclopedia and myth-

ology in constant use. Attention drawn to derivation—Skeats as authority. Careful study in pronunciation and drill on lists of selected words. Explanation of all terms illustrating manners, customs, history, geography, religion or mythology. Frequent comments on synonyms and on force and character of epithets. Thorough practice in transposition.

Full explanation of similes and metaphors required. Draw attention to metrical structure, and show contrast between prose and poetry. Demand increasing care in punctuation and in orderly and uniform arrangement of written work. Quote freely and accurately. Encourage students to read more of the selected authors, and to take up supplementary reading.

MIDDLE YEAR

LITERATURE.. The study of literature made comparative in a general way. The idea of a standard for criticism shifting from one age to another developed. Taste cultivated through development of critical powers. Pupils encouraged to read good biographical sketches of authors studied.

Rhetoric.... Sentence structure considered in its logica relation to thought. Paragraph structure and unity in sequence of paragraphs dwelt upon. Figures of speech and qualities of style discussed and studied as they present themselves in the course of reading.

Attention called to derivation of words and

to change from original meaning. Careful study of synonyms. Growth of language and change in application of words since Elizabethan Age discussed in connection with the Merchant of Venice.

GRAMMAR ... Daily attention given to grammatical structure, particularly to use of conjunctions, variable parts of speech, present participle, infinitive and harmony of tenses. Pupils requested to consult several standard grammars upon any point they do not readily comprehend.

SENIOR YEAR

LITERATURE. Critical analysis of these selections, free classroom discussion encouraged, finest passages
memorized. The aim in this entire department is, as far as possible, to teach students to
read carefully and to think for themselves, to
make them love literature so well that they
will eventually become familiar with "the best
that has been thought and said in the world."

One hour a week after school is given to those pupils who desire to read and discuss additional poems. This year the course includes the finest parts of Paradise Lost, Shelley's Skylark and Adonais, one of Chaucer's Canterbury Tales, Arnold's Thyrsis and select poems of Wordsworth.

RHETORIC . . . General review of work in Middle Year,
Special attention to versification. Frequent
exercises in extempore writing on simple sub-

jects. Papers prepared at home on work connected with the literature studied. Papers criticized privately with students.

Grammar General review. Attention called to difficult points. Correctness of speech insisted upon. Shakesperian syntax taken up in connection with Julius Cæsar.

GENERAL RULES

Study.—At least one hour a day shall be set apart for study in school.

"Sec. 133. In High Schools, Principals must direct the heads of departments, and other department teachers, to so assign lessons in their respective departments that the total time required for home study by pupils of average ability shall not exceed three and a half hours daily."

-Rules of the Board.

Drawing.—At least one hour a week shall be set apart for drawing in school, and more than that time may be taken if the Principal of the school can arrange to allow it.

The course in drawing shall be under the direction of a special teacher in drawing. (Drawing elective by pupils.)

Physical Culture.—In the Boys' High School military drill shall be a part of the training in physical

In the Girls' High School, instruction shall be given in light gymnastics by a special teacher in physical culture.

GENERAL EXERCISES throughout the year.

ELOCUTION in Girls' High School one lesson a month.

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COMMERCIAL HIGH SCHOOL

The work of this school includes a practical and theoretical training in Language, Science, Mathematics, Accounts and the Industrial Arts.

It is the aim of the school to prepare its students to enter intelligently upon the duties of the counting-room, to instruct them in the principles underlying the Industrial trades and to lay a sound foundation for an advanced course in technical work, should the student intend to pursue it.

The school offers two distinct courses of study, namely, a Commercial Course, whose practical feature is the work of the business department, and an Industrial or Scientific Course, which includes Free Hand and Industrial Drawing and Manual Training.

Students, if they so desire, may take an Elective Course, upon the completion of which they shall receive the diploma of the school. The choice of this course is subject to the approval of the Principal; provided, that the amount of home study, of practical work and the number of recitations in the course selected are equal to either of the two regular courses.

The work of the school is so arranged that the student must prepare, out of school, four lessons daily, the remaining time, aside from recitations, to be spent in practical work in the different departments. ENGLISH.—The object of this study is to teach the pupil to speak and write the English language with readiness and correctness. This is done by an intelligent criticism of his business correspondence, his compositions, by familiarizing him with the rules of English construction and by developing in the pupil a taste for good reading.

The theoretical work of the course consists of a study of Grammar and Rhetoric. The practical includes a study of American and English masterpieces, Compositions, Business Correspondence, Abstract of Lessons and Debates. It is the same for both courses.

- Modern Language.—Spanish is introduced because of its commercial importance. The object is not the critical study of this language, but its acquisition for practical use. Special attention is paid to use of the idiom in the schoolroom. Two years devoted to a careful study of this language will be sufficient to master it for all practical purposes.
- Science.—As far as possible this course is one of observation and experiment. In the acceptance of scientific truths, the student is taught to depend, not so much upon the words of the text-book as upon his own observation and the evidence deduced therefrom.
- Physics.—The course in Physics extends over a period of one year, and includes both recitation and laboratory work. Some experiments are performed before the class by pupils, but a thorough understanding of some subjects, such as Specific Gravity, Heat and Accelerated Motion, require

that the pupils do the work themselves. Scientific accuracy is the fundamental feature of this course. Physics is a part of the Industrial Course.

- ZOOLOGY.—A study of the Development of Animals, as shown by the relationship of their organs, from the ameeba to man—Homology and Analogy.

 Class work to consist of the study of specimens by the individual members—Dissection.
- MATHEMATICS.—The course in Mathematics is short and practical. It includes the study of Business Arithmetic, Algebra and Plane Geometry, and prepares the student to solve all ordinary problems of accounts and mechanics.
- ALGEBRA.—In Algebra, the work should be sufficient to enable the student to work problems in Simple Equations of one or more unknown quantities and to apply Algebraic formulas to Geometry.
- Geometry.—In Geometry, the work will be largely perceptive and practical. A certain amount of demonstrative work should be done by the pupil to give him the necessary mental discipline to make him a clear, logical reasoner. Business arithmetic is studied in the Commercial Course one and a half years, Algebra the last half year. In the Industrial Course, Algebra is studied the first year, Geometry the second year.
- HISTORY AND CIVIL GOVERNMENT, COMMERCIAL LAW AND COMMERCIAL GEOGRAPHY.—The work in history will be confined to that of the United States, to the study of the lives of its greatest statesmen, of the growth of political parties, of the development.

opment of our financial and industrial systems and such topics of general interest as the time will permit. It is intended to give the student a knowledge of the rights and duties of citizenship and of the laws governing trade. History and Civil Government are a part of the Industrial Course; Commercial Law and Commercial Geography, of the Commercial Course.

Industrial Arts.—The object of these courses is to train the observation and the imagination, and to enable the student to accurately express mental conceptions. They are also the means by which we make the direct connection between the activities of school and the activities of life.

The subjects under this head are Free Hand Drawing, Mechanical and Architectural Drawing, Designing and Wood Work.

Industrial Arts are taken up only in connection with Technical Course.

Accounts.—Accounts include a complete analysis of accounts in every department of business involving simple and clear methods for the entire system of Single and Double Entry Book-keeping. The theoretical work in this branch occupies the first year, the practical the second. Facilities for practical book-keeping consist of a school bank and of such materials as are necessary to conduct a General Merchandise, Brokerage, Commission, Importing and Jobbing and Banking Business.

Accounts are studied only in connection with the Commercial Course.

Shorthand and Typewriting.—Sufficient time is devoted to this study to prepare a pupil for a position in

any Mercantile house that may require a stenographer. In connection with Shorthand and Typewriting, Spelling and Punctuation receive much attention.

The school has thirty-five typewriting machines for the use of its pupils.

PENMANSHIP.—A professional penman superintends the work of this branch. Daily inspection is made of penmanship of pupils. The hand-writing and figuring of pupils in every study is subject to the criticism of the head of this department.

Shorthand and Typewriting are taken up only in connection with work of Commercial Course. Penmanship belongs to both courses.

COMMERCIAL COURSE

JUNIOR CLASS

Grammar, study of American authors, Essays, Debates, Business Correspondence.

Books to be studied: H. Sprague's edition of Irving's "Sketch Book," Whittier's "Snow Bound" and Scott's "Lady of the Lake," Whitney's Essentials.

SPANISH Read, write and speak Spanish; practical use and not a critical study the object.

MATHEMATICS. Business Arithmetic. Packard's Business Arithmetic, Bill Figuring.

COMMERCIAL GEOGRAPHY.—Careful study of such topics as will give the pupil an intelligent idea of the

commerce of the world. Special attention is paid to the products and industries of the United States and of South American countries.

Book to be studied: Tilden's Commercial Geography.

BOOK-KEEPING. Theoretical Book-keeping. Text-book, Rogers & Williams'.

SHORTHAND AND TYPEWRITING.—Clark's Eclectic system is used. The school has twenty Smith Premiers and fifteen Remington typewriting machines.

No text-books.

PENMANSHIP. In Penmanship, the pupil is taught to write a flowing, legible hand. The pupil is marked upon the efforts he puts forth to secure these results rather than upon the results themselves.

COMMERCIAL COURSE

SENIOR CLASS

English Study of English and American authors, Abstract of Lessons, Rhetoric, Debates, Business Correspondence, Essays.

Text-books: Cooper's "Last of the Mohican's," Shakespeare's "Julius Cæsar," Kellogg's Rhetoric.

Spanish Read, write and speak Spanish. Text-books:

De Torno's Spanish Grammar.

Mathematics Business Arithmetic first half year, Algebra second half year. Text-books: Packard's Business Arithmetic, Wentworth's Algebra.

COMMERCIAL LAW.—Careful study of the Law of Contracts.

Recitations and Lectures.

Text-book, Clark's Commercial Law.

BOOK-KEEPING, SHORTHAND AND TYPEWRITING. — Practical Book-keeping in business department. Shorthand and Typewriting work a continuation of that of first year.

No new Text-books required.

INDUSTRIAL COURSE

JUNIOR CLASS

English Same as in Commercial Course.

Mathematics. Algebra through equations of first degree. Text-book, Wentworth's.

ZOOLOGY Text-book, Coulter.

Spanish Read, write and speak Spanish.

INDUSTRIAL... Free Hand Drawing; Designing, using Natural, elements; Mechanical Drawing, including Geometrical problems, simple projections and isometric projections.

Wood Work, including care of tools and a comprehensive course in Constructive Carpentry.

INDUSTRIAL COURSE

SENIOR CLASS

English Same as in Commercial Course.

HISTORY United States History. Special attention paid to the prominent political, financial and industrial events of the century.

Text-books, Eggleston's History of the United States.

Spanish Read, write and speak Spanish.

Mathematics. Geometry, making application to surfaces, solids and machines.

NATURAL SCIENCE.—Physics, paying special attention to Mechanics, Heat and Electricity.

INDUSTRIAL.. Free Hand Drawing; Designing, using Natural, Egyptian, Greek and Roman elements; Mechanical Drawing, including Tinting and Shading, Lights and Shadows; Perspective, Architectural and Machine Drawings, showing construction of various parts for actual work.

Wood Work, completing Constructive Carpen-

try and beginning Pattern making.

COMMERCIAL COURSE

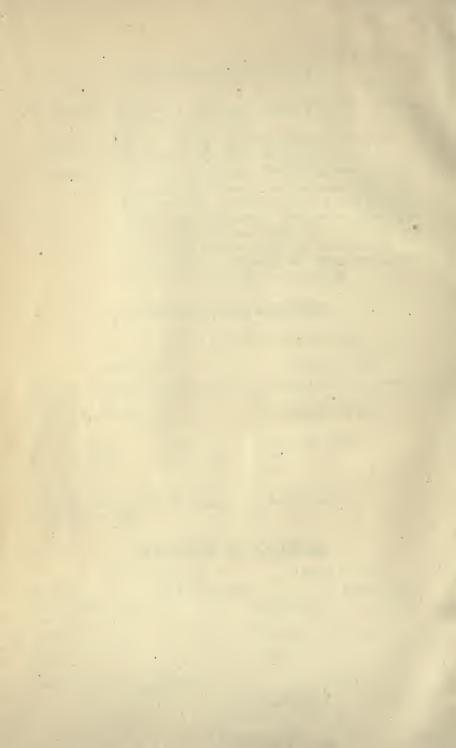
NO. OF RECITATIONS PER WEEK

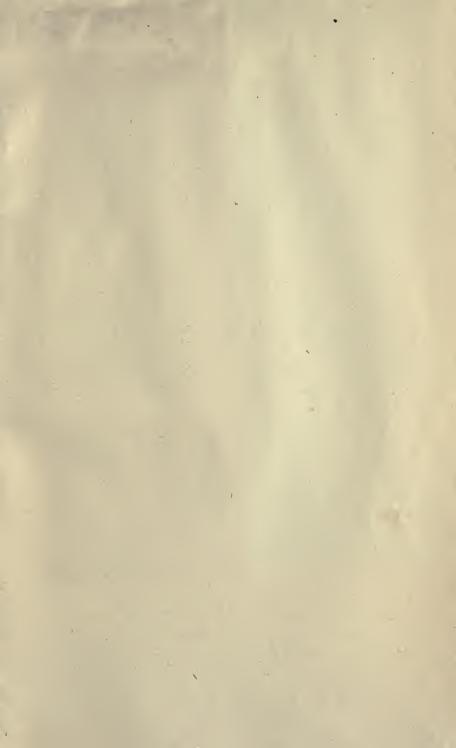
FIRST YEAR. SECOND YEAR Business Arithmetic, 5, home work 5, 1st half, 2d yr, home work English, 5, Com.Geog.&C.Gov. See Commercial Law. 4, Spanish, Book-keeping, 8, no 8, no home work. Penmanship, 66 Shorthand, 66 Typewriting, Algebra (second half 2d year), 5, home work. Commercial Law.

INDUSTRIAL COURSE

FIRST YEAR		SEC	SECOND YEAR	
English,	5, home wor	k	5, home work	
Mathematics, Alg		Geometry,	5, "	
Spanish,	4, "		4, "	
Science, Physics,	4, "	Zoology,	4, "	
Civil Govt.	4, "			
History,			5, "	
Industrial Drawing	g, 10, no "		7, no "	
" Wood Wor	k, 8, " "		8, " "	
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