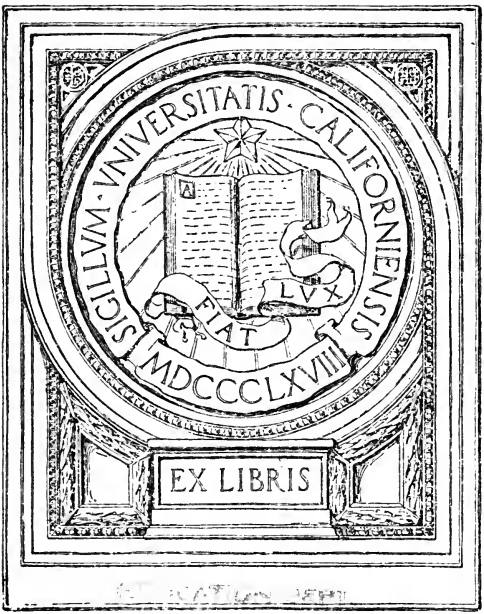
School-Education.

Methods.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# THE THEORY

—OF—

# THE SCHOOL.

-BY-

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The demand of the age, in education, is the "practical." The most practical education that a child can receive is that education which sends him forth with a skilled mind, trained to think accurately. It is a matter of comparative indifference whether the Period of Preparation—that of the Family, Kindergarten and School—gives *amount of knowledge*, i.e., a *full* mind.

**Third Edition.**

REVISED AND ENLARGED.

C. W. BROWN, PRINTER AND BINDER, TERRE HAUTE, IND.
1886.

## *SOURCES AND REFERENCES.*

Prominent among the sources and references considered, are pamphlets and school reports by W. T. Harris; the principal American and English kindergarten works; Notes on Theory, by Wm. A. Jones (first President of the Indiana State Normal School); Murison on Language; Geography, by Morell; The Cyclopedia of Education; the educational works of Laurie, Bain, Currie, Quick, Thring and Fitch; Notes of Talks on Teaching, by L. E. Patridge; the Practical Teacher, a paper edited by F. W. Parker; Rousseau's Emile; Teaching Methods, by J. H. Hoose; The Training System, by D. Stow; Porter's Elements of Intellectual Science; Everett's Science of Thought, and Hegel's Philosophy of History.

## *PREFACE TO THIRD EDITION.*

Originality, except in certain features, is not claimed for the theory as set forth in the following pages. The work is in part written by the author, and to a degree, arranged and compiled; the thought being in a certain sense the joint product of a study of some of the leading works on education, experience in teaching, supervising, and preparing students for work in the common schools.

Selections from other works that are substantially unmodified, are indicated by quotation marks, or by smaller type; those that have been modified to a degree, by half quotations. In many cases, the thought and the language are largely those of another, but both have been recast, and to some extent newly applied. This is indicated by the name at the foot of the page. In many unindicated places the thought and the language were not originally the writer's, but from long consideration and usage have become a part of his thought and mode of expression.

There is no claim to fullness of treatment. The book contains merely an outline that may form the basis for a discussion of the theory of the school.

A comprehension of the *external structure* of the work will be assisted by the following statements:—

1. In the co-ordination and subordination of topics the Roman symbol indicates the main heading; subordinate to that is the Arabic symbol: next is the letter; subordinate to that is the Arabic symbol in parenthesis; subordinate to that, the letter in parenthesis; then the Arabic symbol prime; the letter prime; the Arabic symbol prime in parenthesis, etc; appearing thus:—

I.
1.
a.
(1)
(a)
1′.
a′.
(1′)
(a′)

2. The work, being a *text-book*, has three features:—

a. Thoughts presented so as to require but slight elaboration.

b. Thoughts presented in such a way as to require considerable elaboration.

c. Thoughts suggested in a manner that necessitates an almost independent working out by the student or reader.

3. The various methods that are presented in Reading and in Writing are given in order to show the growth as to method in those subjects and also to furnish ground for comparison. The different methods are given in Reading for the additional purpose of submitting them to the test of the principles given.

In the case of each subject, the last method that is presented, is the one recommended. It is needless to say that the thought to be held by the one who studies these methods should be not their *adoption* but their *adaptation to the needs and peculiarities of his particular school.*

To obtain an adequate insight into the *internal or thought structure*, the following thoughts must be grasped:—

1. The individual mind with its inherited habits and tendencies is the true *subject* of education.

2. The *condition* of education is the SELF-ACTIVITY of the mind, and the *goal* of education is SELF-DIRECTION.

3. In the educational process of leading the mind from *self-activity to self-direction*, the various subjects, as geography, grammar, etc., are INSTRUMENTS, not *ends*, or, *if ends*, subordinate ones; i.e., the main aim of a course of study is development; a subject is taught, not for the knowledge that it contains (except incidentally) but mainly for the development it affords the mind; the true question in regard to each thought or idea dealt with is not How can the child be led to most clearly see this thought or idea? but HOW CAN THIS THOUGHT OR IDEA BE PRESENTED SO AS TO CONFER THE HIGHEST DEGREE OF TRAINING THAT IT IS FITTED TO GIVE?

4. The main defect of the schools is the placing of stress upon MERE EXPRESSION, instead of upon *thought* and *thinking*. The different manuals and outlines of courses of study are unconscious witnesses of the truth of this proposition in all such directions as:—

*First Year—Number.* Take the addition of 1's, 2's, 3's and 4's; Arabic figures—(*above* 4, *mere verbalism*); Roman numerals—(*Above IV, mere verbalism*). Or the following:

*First Year—Number.* Take numbers to 5 by the Grube method; Roman numerals—(*above V, mere expression*); the Arabic figures; count to one hundred. (*Both the latter mere form above* 5.)

Such work tends to cultivate the habit "always prevalent in civilized life, of talking fluently without having anything to say."

Goethe saw the presence of this defect in the German Universities, and made Mephistopheles the strong advocate of it:—

*Mephistopheles.*—To sum up all—To *words* hold fast!
Then the safe gate securely passed,
You'll reach the fane of certainty at last.

*Student.*—But then some *meaning* must the words convey.

*Meph.*—*Right!* but o'er-anxious *thought* you'll find of no avail,
For there precisely where *ideas* fail,
A *word* comes opportunely into play.
Most admirable weapons *words* are found,
On *words* a system we securely ground.
In *words* we can conveniently believe,
Nor of a single jot can we a *word* bereave.

5. The true reform that seems requisite in the educational process, is the turning from this too exclusive consideration of EXPRESSION—WORDS, PHRASES, DEFINITIONS, RULES, ETC., to that kind of work that will truly EDUCATE the child's mind, by leading it to penetrate the "the hardened crust of verbalism" and touch and be touched by THE ESSENCE, THE THOUGHT, THE REALITY.

## *SUMMARY OF CONTENTS.*

itself, (a) in the general work, (b) in the recitation; preparation of the teacher preparatory to school work and to the recitation —a knowledge of the principles of education, of the history of the growth of educational ideas, and of the principles of selecting materials and of planning lessons; illustration of written plan—subject, design, condition of training, exercise-ground, the basis, steps, method; agencies of the recitation—stimuli, interest and attention, their nature, attention in the recitation, interest in the subjects, interest in general mental growth; questioning—nature, purpose, kinds, illustrations from Socrates, structure of questions, sequence in questioning; explanation —explanation proper, illustration—objective illustration, verbal illustration, pictorial illustration; repetition; the main principles of the recitation.

# The Theory of the School.

## *CHAPTER I.*

### *THE SUBJECT OF EDUCATION.*

#### *INFERENCES.*

ARIADNE furnished him with a sword, with which to encounter the Minotaur, and with a clew of thread by which he might find his way out of the labyrinth.—BULFINCH'S *Age of Fable.*

THE root thought of a correct theory of the school is that mind, endowed with *self-activity* and the capacity for *self-direction* is the real subject of education. The mind is a spiritual organism, possessing three distinct capacities—the capacities of knowing, of feeling, and of willing. This organism, with its several functions, is the subject of the educational process.

1. Consideration and definition of *organism.*
2. Illustration of self-activity, self-direction and organism.

That which is distinctively *human* in man is the emotional and volitional nature. This is the true life of a

human being. This truer or higher life, as distinguished from the bodily and the intellectual, is provided with two instruments or servants—the intellect and the body.

More specifically, then, mind as emotion and will, is the subject of education in the higher sense, and body and intellect in the lower or instrumental sense.

1. Distinguish and give examples of acts of intellect, sensibility and will.

2. Show the organic relation of such acts.

Education confers upon the mind no absolutely new capacities. All the powers that are found in the mind at maturity existed, then, in embryo in the mind at birth. Before the mind can apply itself successfully to the varied problems of active life it requires, like the body, a period of preparation. But a period of preparation is, impliedly, a time of development. It may be stated, then, that the subject of education is a spiritual being, the essential principle of which is *growth*. Growth thus becomes the fundamental principle of education, and the two marked stages of mind are:

1. Development or training. (Through use).

2. Use. (Resulting in additional development).

That mind, with these two distinct stages is the subject of education, is the most significant truth that the teacher will encounter. If he absorbs this thought so as to make it a part of his very being, he is possessed at once of the sword of Ariadne.

Several things are manifest, obviously, (from all the foregoing):

1. That knowledge, i. e., the different branches of study, is not the subject of education.

2. That a course of study by pages is inconsistent with the true theory of education.

3. That real education is self-education; the child being his own educator under the guidance of the teacher, who is merely a formal educator having both a negative and a positive function.

The negative function consists in removing impediments, so as to allow free scope to the child's self-development. The positive function is to stimulate the child to the exercise of his powers, to furnish materials and occasions for their exercise, and to maintain and train the action of the mental powers.

4. That the subject-matter or instrument of education is thought, since to think is the function of the mind.

5. That the essence of education lies in determining the best method of furnishing the faculties of the mind with material for exercise, of awakening and exercising the dormant faculties, of giving them strength and of training them into higher life.

6. That education is a life-long process, the exercise-ground of mind being the institutions known as the family, school, church, business society, and state.

7. That the family and the school form the exercise-ground of mind during its period of development and the other institutions during the period of use.

While all teachers who have studied mind understand it to be an organism, and know and base their work upon the thought that the intellect is the avenue to the sensibilities, that other truth, that the heart is also the avenue to the intellect is either not known, or but little

acted upon if known. To make this essential thought, that *the heart is the real avenue to the intellect*, a vital part of one's teaching character, is the only guarantee of success in dealing with mind, as otherwise the intellect may remain closed to all efforts to address it.

If mind as an organism is the subject of education, this inter-relation of sensibilities and intellect must be understood and acted upon.

> Every gate is closed to hate,
> But open wide to love.
> —WHITTIER.

A loving heart is the beginning of all knowledge. This it is that opens the whole mind, and quickens every faculty of the intellect to do its fit work.
—CARLYLE.

But to present mind as the subject of education is not sufficiently definite, since mind may be viewed in several ways:

1. Mind may be understood as the "universal substrate of all things."
2. Mind in general, as presented in works on mental science.
3. Mind as embodied in the teacher.
4. The minds of the pupils.

The question becomes pertinent, In which of these views is mind the subject of education?

No doubt the general answer would be, mind in neither of the first three senses is the subject, although that answer would by no means satisfy all, that systems of schools, studies, methods, and means, have not frequently been adapted to mind in general, or to the teacher's own, instead of to the pupils' minds. Is it to be accepted, however, that the minds of the pupils form the sub-

ject of the educational process? If so, in what sense? "The minds of the pupils" is a very comprehensive term. In a school of thirty pupils what does it mean?

It means in one case a young John Stuart Mill, in mind.

It means in another case a mind from the depths, the very opposite of the perfection of child-nature found in the first.

It means in a third case the average child-mind from the average home.

Again, it means a boy who has had generations of vice and ignorance behind him.

In another instance it means some child from a home of idleness and frivolity.

It means, perhaps, some child from the environment of stupidity and stunted life.

It may mean a child with years of wrong methods behind him.

In that room, beside the quick, intelligent child may sit a dull, contented nature, satisfied with dullness, neither wanting to know nor ashamed of not knowing. Each mind is different from the others. Each has its idiocracy, its special traits. The degrees of capacity are different. The degrees of apathy are different. The causes of apathy are different. All of these are included in "the minds of the pupils."

What, then, is the subject in teaching?

The best minds of the pupils? Then the average and the poorest are wronged.

The average minds of the school? Then the best and the worst are deprived of their due.

The poorest minds that are found in the room? This would be manifest injustice to the others.

Is not the fundamental truth this—that each particular mind with its special traits and idiosyncracies is the true subject of the educating process—the subject to which teacher, methods, and means, are to be adapted?

The *individual mind*, then, with its two stages of development and use, is the subject of education in its full sense.

The teacher who is thoroughly imbued with this thought is possessed of both the sword and the thread of Ariadne.

If the individual minds are the subject, several inferences present themselves:

1. That the teacher must study mind.
2. That the sources of the study of mind are three:

*a*. From books, Porter, Hopkins, Hickok, Carpenter, etc., giving a knowledge of mind in general—*the true basis for a study of the individual minds.*

*b*. The acts and phenomena of the teacher's own mind, to which he always has immediate access.

*c*. The activity of the pupils' minds, to which he always has mediate access through their outward acts and words.

The two cardinal truths which need, more than any others, to be impressed upon the mind of each teacher are, first, that *each individual mind* under his charge is the true subject of his educational efforts; second, that he cannot obtain the best results in teaching, indeed, that he *cannot be a real teacher*, unless he understands

the mind with which he must deal. What kind of a blacksmith is he who does not understand iron? What kind of a foreman in a wool factory is a person who cannot judge of wool? What kind of a teacher is that one who cannot judge of mind and mind action?

'It is true that there are teachers endowed with the power of sympathizing so earnestly with children that in their case this sympathy does the work of knowledge, or rather it is knowledge unconsciously exercising the power proverbially attributed to it. The intense interest they feel in their work almost instinctively leads them to adopt the right way of doing it. They are artists without knowing that they are artists. They are acting upon the principle that the feelings are the avenue to the intellect, that interest is the basis of attention, and attention the basis of intellectual power, without being conscious of it. But considering the large number of teachers, such examples are rare, and as a general proposition it will be found to be true that the only truly efficient director of moral and intellectual action is the one who understands the true nature of the mind he is guiding. It is this knowledge that makes teaching a psychological art. One who does not possess it is attempting to guide an organism of exquisite capabilities which he does not comprehend. The fact that there is so large a number of persons in positions as school trustees and as teachers without understanding even the most fundamental facts concerning the minds with which their work has to do, explains the courses of study by pages, the telling, cramming, the endless explaining, the unnecessary assisting, the rote-learning, the frequent examinations that

are mere tests of memory, and not of power, the fierce struggle for per cents by teachers for their rooms and by pupils for themselves, and all that kind of work which regards mere knowledge to be the subject of education, and which enfeebles and deadens the native powers of the child. True teaching has but little in common with that system of telling and cramming which so generally usurps its name, and which results not merely in comparatively empty minds, but in closed minds, minds indifferent and stolid as to education and its value. Unteachable minds is the usual result of the work of those who do not understand the subject of their work.'*

3. If each individual mind is the teacher's subject, the third inference is obvious—that the number of pupils under the charge of one teacher should be small enough for the teacher to become thoroughly acquainted with the capacities and defects of each mind, while it should not be so small as to deprive the pupils of the advantage which comes from the contact of mind with various different minds.

It may, perhaps, be safely held that the suitable number of pupils for a teacher vibrates between twenty and thirty, owing to the teacher's penetration in comprehending character and its needs. It is a serious, not to say irreparable injury to a community, when a school board, under the idea that it is a stroke of economy and a gain to the people, place one hundred children in charge of two teachers at an annual expense to the taxpayers of one thousand dollars, instead of employing to

* JOSEPH PAYNE,

*educate* them, four teachers, with twenty-five to a room, at an annual expense of two thousand dollars.

If it is true, as is held, that numbers higher than about thirty shut off attention to individual minds, then a little reflection makes it obvious that the second procedure would be far more economical to the community.

In the first place, the attempt of the teacher to deal with fifty children makes it impossible to give that attention to the peculiar nature and needs of each child that the parent has a right to demand when he hands him over to the care of the schools and pays for that care. The problem is to reach and teach the mind of *each* child. Anything other than this would be manifest injustice to some families of those represented by the fifty children. With fifty children one teacher cannot understand the individual minds and needs well enough to teach to each mind each branch of study well and neglect no one of them; and this is not taking into account the subject of discipline and moral culture, which is very much complicated by numbers. The teacher has neither the knowledge of the minds nor the time to adapt herself and her work to each mind, and she is, therefore, compelled to address the minds as a mass, to pour out knowledge before them and let those who can, adapt themselves to it, and the others remain without even this kind of help. The result is an attempt to inform to a given extent, each month, and not to educate, because *to educate* requires that each mind shall be understood. In this way but little interest is aroused in the pupils, and the process of cramming is received at first with protest, then with indiffer-

ence, and at last the hundred pupils of the two teachers pass out of school, none of them educated in the sense that education is development; some few, those who needed it least, well instructed perhaps; others but fairly instructed; and still others, perhaps fifty out of the hundred, and they the ones who needed training most, with little or nothing in the way of intellectual and moral power, and worse than this, indifferent to education and its value, the effect of the schools having been to make them contented in their ignorance and lack of power.

The question naturally arises, In which case has the school board done most good to the community? Which course would be true economy? Would the community have been richer in having expended only one thousand dollars, and in having received the children back into the active walks of life as above described, which is no untrue picture, or in having spent two thousand dollars, thus insuring a sufficient number of teachers to give attention to the individual needs of the children, and receiving them at last from the schools with their moral and intellectual powers well trained, with minds active, skilful and capable; with new longings, and new capacities for satisfying those longings; with minds as receptive and skilled as each individual case is capable of being made? Which is worth more to a neighborhood, one thousand dollars or one hundred children morally and intellectually strong?

If individual minds are the subject of education, is it not a proper inference that school boards should see to it that the number in charge of each teacher is small

enough to enable the teacher to read each mind and then adapt herself and her work to each mind?

4. If it be admitted that the individual mind is the subject of the teacher's work, then a fourth inference is that the teacher should remain long enough with the pupils to be able to see into their peculiarities of disposition and environment. This can not be well accomplished in six months, nor in one year, and the thought that arises is that the teachers of the country schools should not be changed so often, and that the teachers in the city schools should be promoted with their classes. Viewing this principle alone—that time gives the teacher the opportunity to know the minds of the pupils—the thought would be that the pupil should have but one teacher during school life. But another principle—that the pupil's mind gains greater breadth and power by coming into contact with different minds—seems to require variety in teachers. With the two principles in consideration it may be held that there should be two or three changes of teachers during the school course. It is obvious, of course, that if the teacher is inefficient, the sooner a change is made the better; on the supposition, however, that the school boards and superintendents do not complicate the selection of teachers by geographical, family, and other arbitrary considerations, but make moral and intellectual fitness the sole test—a supposition which in a work on theory may be permitted—a greater length of time with a given class than is now allowed would be a gain, inasmuch as it would necessarily result in the teacher's gaining a more inti-

mate acquaintance with the individual minds of the pupils.

5. It is also held by some, and by many not, that if individual mind with its peculiarities is the subject, the regular studies of the course should not be so many as to engross all the time and strength of the pupils; enough extra studies being provided to satisfy their various natures and peculiarities. This requirement is met, to a certain degree by the general lessons, readings, and conversations of the lower grades, and by the elective studies in the higher schools. (Reasons for and against elective studies.)

Mind being the real subject in education, the importance of its study, as before suggested, at once becomes manifest. The study of mind in general, as presented in Porter, Hickok, Carpenter, and others, will give the teacher a comprehensive knowledge of the various faculties, their order of development and inter-dependence, the laws of their action, their processes and products—knowledge of great advantage to the educator. But many object, and truly, that they have neither time nor opportunity for such study. It is essential, nevertheless, to the fully equipped teacher.

Mind and its action are, however, accessible to these. As was before observed, each teacher has direct access to the phenomena of his own mind and indirect access to the minds of his pupils through their actions and words. Systematic, patient study in these two lines will make plain many things concerning the mental faculties and their growth.

The intelligent observer will see among other things that the *imagination* and the *spontaneous memory* are active in the early years, and that the power to learn in an *abstract way* through the logical faculty is but feeble. It will appear that the power of *continuous attention* is not possessed, should not be expected, needs to be developed; that the *power to observe*, usually supposed to be acute in the child when he enters school, is by the third or fourth year of school, *practically dormant.* A brief notice of what these mental facts imply is due. Neglect in observing mind action has led to neglect in the cultivation of the *imagination.* It is, however, a faculty worthy of cultivation, and necessary alike to the intellectual, and to the moral education. This, while fully recognized in the kindergarten, has not been, in general, in the schools. Its central principle—the imagination creates no new material—is a confirmation, in one sense, of Jacotot's paradox "Tout est dans tout" (All is in all.) This faculty gives to the child the unknown in or from the known. 'It furnishes knowledge otherwise unattainable; it gives life, interest, and authority to the action of the understanding by the rich illustration which it suggests; and by its power of setting before the child scenes of other lands and distant times, past or future, it provides nourishment for the moral nature. It is, moreover, a constant source of happiness through the pleasant images with which it fills the mind. Observation is limited to very narrow boundaries of space and time; to whatever extent the child passes these it must be on the wings of the imagination. Accordingly, as already implied, descriptions of natural

scenery, and scenes from life, real or ideal, are the field in which this mode of intelligence is to be exercised, and both are very rich in materials. It is clear at once that the instruments available for the cultivation of this faculty are two—*language* and *pictorial illustration.*'* All these facts are obvious to the teacher who watches his own mind and the minds of children, and they suggest a problem, and indicate a line of work for the teacher's own improvement. The problem is, What is the method of using language, and pictorial illustration in the cultivation of the imagination? The line of work is —the mastery of *description* and *narration* as language forms for expressing and conveying thought.

*The spontaneous memory*, the form to be observed in childhood, like a sponge, absorbs everything that comes in contact with it. Unlike the power afterwards acquired of fixing in mind by conscious effort, whatever is judged worthy of being retained, it is a natural power by which the child receives and stores up, with little or no effort, whatever comes before the mind, whether it is worthy to be held or not. The fact that the child possesses this power in a high degree is of great significance in early education. It shows that the early years are pre-eminently years for gathering materials for thought and reflecting in the presence of them, because such reflection reacts upon the memory and tends to make it rational; and it furnishes also the ground for judicious selection and an organized series of impressions. It has been said, however, by Lord Lytton, that to attempt to systematize the child's impressions, at least

*CURRIE

in his most tender years, is to proceed as the man who thought that his bees would produce more honey, if instead of wandering from flower to flower, they were shut up in the hive and furnished with flowers.

The bees, however, are not endowed with an unguided power of selection which causes them to take honey from every flower, be it poisonous or otherwise, as the spontaneous memory of the children drinks in alike the good and bad, to have a marked influence on character not yet formed. Moreover, while the bees are possessed of a natural and fully developed power of selection, and the man who was to furnish them with flowers had no power of selection in that respect, in the case of children their power of selection and arrangement is undeveloped, but that of their educator is supposed to be developed and matured.

That the child possesses the power of spontaneous memory, drinking in and retaining all kinds of impressions seems to establish three thoughts in regard to early education:

First, that there should be a systematic selection and organization of the impressions that he is to receive. This is admirably accomplished in the kindergarten.

Second, that the first work in the primary schools should be to supplement the work already done in the kindergarten, or to partially fill its place if the child has not been under its influence, 'by opening to him as materials for thought, in connection with all necessary work, all that which will inspirit and interest; all that which is wonderful, weird, picturesque, beautiful, and noble, in connection with humanity, nature, and art,

and at the same time within his mental range; as, when he studies direction, connect with it some beautiful poem or song on sunset, or some pathetic narration of noble deeds in Arctic regions; some attractive description of that icy wonderland, and its inhabitants with their queer homes and customs.' Thus in every phase of work during these early years, so that this attractive, and also useful fund, may be stored by their active memories and render lighter in both senses, and more interesting all the work of future years. In education, a great deal depends upon the first impressions of the work.

The third thought is that in all phases of education, inaccuracies of pronunciation, of sentence construction, of facts, etc., should be rigidly excluded, as their tendency is to sink into the mind and remain there.

The undeveloped state in the child, of the *power to reason, except in the presence of things*, determines that in his early stages, and in the beginning of many kinds of work in more advanced stages, he is not to learn by any abstract logical process. The teacher, it is true, is to have clearly in mind a logical line of work and adhere to it, but his actual teaching will be fragmentary, changing apparently, and full of illustrations as required by the needs of individual minds.

The real subject is the individual mind, and the problem is how to call forth interest and active thought without making too great a demand upon the logical faculty. To accomplish this, two things are required, one negative and the other positive. The first is, that as a general rule, no attempt should be made to present to

the mind, at any given time, *that which is not needed and can not be used at that time*, under the thought that it may be useful hereafter. Usually, that which is presented under such conditions does not arouse interest and thought, but becomes useless encumbrance. Nothing should be taught which is not needed and capable of being used at the time, and which is not the best and most easy way of meeting the want.

> "Wouldst thou possess thy heritage, essay
> By *use* to render it thine own!
> What we employ not but impedes our way,
> That which the hour creates that can it use alone."
>
> —GOETHE'S *Faust*.

The second requirement is that all early work and in general the beginning stages of advanced work, should be as before intimated, presented to the senses, or 'pictured out' to the mind. The child under such circumstances is able to reason, to think; but his thinking will be in the presence of things, and his power of abstract thinking, when it does come, will be a natural development from his sensuous thinking. The usual mistake is to thrust an abstract process of learning upon the child by requiring him to think in the presence of nothing, or of mere words. 'Picture out' to the body's eye or to the mind's eye, is the first principle of early teaching if individual minds are to be made the real subject.

The general directions under this point are:

1. 'See; examine what you see; lastly, answer.

2. Make no attempt to remember anything you can not put before the eye, or picture to the mind's eye. Memory is not visible or mental sight; think in shape.

Examples may tend to set forth these thoughts more clearly.

The pupil is asked to describe an apple. The usual tendency is to close the eyes and evolve the answer from the inner consciousness; but the mind's development as it is, and as it is to be, requires that the pupil should picture to himself the thing to be described in as many aspects as possible, one by one, compare it with things most like it; and then present the peculiar points that make it different from other things.

The process is:

1. Picture an apple. Put one before the senses if possible; if not, picture it in the mind.

2. Analyze, i.e., note its shape, color, texture, parts—pips, core, skin, juice, etc.

3. Compare with other things.

All these things are seen, as soon as the apple is seen, and intelligent sight gives the description required. The untrained mind begins to try to *remember what it knows about an apple.*

The requirement may be to describe a field. This should bring forth the condition at a particular time. The untrained child would evolve from his inner consciousness. If the work is done according to the principle under discussion the process would be somewhat as follows:—

1. See or picture to the mind the field: as, time of year—autumn; time of day—afternoon; kind of day—clouds and sun; stubble; ground broken and uneven; bounded by hills on one side; trees, small lake, cattle; direction of view—west.

2. Reflect upon these elements.
3. Describe.

Again, the pupil may be asked to state the meaning of 'when.' According to the thought being considered, the first thing to be done is to see it in its relations. This may be done by constructing sentences that picture out the two meanings of 'when,' thus:

"When Ft. Sumter was fired upon, compromise was at an end."

"When he was in the army, he wrote for the press."

The word in the first sentence means the exact moment, but in the second it means at various indeterminate times. It thus appears that the sight of two well-selected sentences in which 'when' occurs, reveals that either a particular moment is meant, or any time in a given period—two very different thoughts.'*

9 is $\frac{3}{4}$ of what number? may be asked.

The absence in the child of the power to reason abstractly determines what in regard to such work? John Stuart Mill says: "*The fundamental truths of the science of number all rest upon the evidence of the senses;* they are proved by showing *to our eyes*, that any given number of objects—ten balls, for example—may by separation and re-arrangement, exhibit all the different sets of numbers, the sum of which is equal to ten.

All improved methods of teaching arithmetic to children proceed upon a knowledge of this fact. All who wish to carry the *child's mind* along with them in learning arithmetic—all who wish to teach *numbers* and

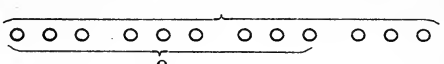
* E. THRING.

not mere cyphers—now teach it through the evidence of the senses."

One who does not hold to this view may attempt to have the child see the relations in the above problem by some such analysis as the following:

$\frac{1}{4}$ is $\frac{1}{3}$ of $\frac{3}{4}$. If 9 is $\frac{3}{4}$ of the number, $\frac{1}{4}$ of the number is $\frac{1}{3}$ of 9, which is 3. $\frac{4}{4}$ of the number equal the number. If $\frac{1}{4}$ of the number is 3, $\frac{4}{4}$ of the number, or the number is 4 times 3, which is 12. Therefore, 9 is $\frac{3}{4}$ of 12.

One, however, who sees clearly that a principle of early teaching is—the relations must be presented to the senses, or pictured to the mind's eye—will put the relations before the pupil in some concrete way: as,




and then ask him what he sees. Among the many relations he will perceive in a way that will enable him to hold it, and also to more readily see other relations, that 9 is $\frac{3}{4}$ of 12.

The teacher who has no opportunity to study psychology as given in books, will clearly see this mental fact that is now under view—the rational faculty, the power to learn in an abstract way through the logical faculty is undeveloped in the child—if he studies with care and intelligence the phenomena of his own mind, and the individual minds of the children through the medium of their words, actions, and the play of their countenances.

Such study will also show, as previously indicated, that the power of continuous attention is not possessed by the child. That knowledge will prevent many mistakes on the part of the teacher by his consequent perception of the truth that attention is but little more to be assumed than a knowledge of the multiplication table, and that it must be taught as a habit, just as the other must as an element of knowledge.

The teacher has an important educational principle when he understands that the germ of attention, the capacity to attend, is the condition of education, but that the *power* to attend closely for any considerable time is the result of education. It will then be manifest that *inattention is natural in the child*, and that the problem is to determine the kind of teaching that will build up the habit of attention; the kind that will not foster inattention.

Observation having shown the teacher that inattention is natural in the child, reflection will make it clear that among the things by which inattention is fostered are the following:—

1. Apathetic, uninterested demeanor on the part of the teacher.

2. Too little attention to trifles and to beginnings in laxness in recitations, and in disorder.

3. Too much attention to them, and the setting over against each point of inattention and disorder its fixed arbitrary penalty.

4. The concentration of the teacher's attention on the point being discussed in the class, and on the pupil reciting, to the exclusion of the other members.

5. Failure to train the pupils into careful habits of attentive study. Pupils frequently sit at their desks during their study hours attentive as to the eye, but inattentive as to the mind. In spirit they are absent, although the eye travels along each line and the words come as images before the mind. Often after a page or more has been conned in this mechanical way the mind awakens to the fact that the thought contained in the words has been in no sense obtained. In all such cases, which are not infrequent, the pupil could appropriately say with the poet:

> My soul to-day,
> Is far away,
> Sailing the Vesuvian Bay;
> My winged boat,
> A bird afloat,
> Swims round the purple peaks remote.

This habit will necessarily reappear in the recitation room.

6. Poor arrangement of the class as to its position in relation to the teacher. Some hold that if the class is standing, the arrangement should be the horse-shoe shape, in order that all may be equally within spiritual touch of the teacher.

7. Inattention to the bodily attitude of the pupil when studying and when reciting. It is said that Lord Byron in preparing to write was as scrupulous in regard to his appearance as he would have been, had he been preparing for a royal reception. In a less degree such was the fact in regard to Washington Irving. And it is generally observed by any one who gives attention to it, that he writes more logically and more pointedly when

using pen and ink than when writing with a pencil. These things indicate the law.

8. Too long lessons, and too great a length of school hours.

Elaborate the eight points given, and make it clear, why the habit of inattention becomes more firmly fixed by means of them.

Omitting all study of psychology as presented in books, if need be, (such study, however, being necessary to the ideal teacher,) the close study of the phenomena of his own mind on the part of the teacher, and the patient, intelligent, and persistent study of child nature will necessarily equip the teacher with several additional truths in regard to education; with the truths:—

1. That there can be no thinking without materials for thought.

2. That there can be no materials for thought without observation.

3. That in the beginning of its career the child observes and gathers materials for thought naturally and spontaneously.

4. That very early in his school course, through familiarity with the surface of things, through ignorance and repression on the part of his instructors, through memory and rote-work, both the desire and the power to observe are to a large degree non-existent in the average school child. "*Having by our method induced helplessness, we make the helplessness a reason for our method,*" and continue the cramming and telling pro-

cess, on the ground that the child can not observe and decide for himself.

5. That the fundamental, and hence the absolutely necessary first step in conscious education is to implant in the child, first the desire, and second the habit of conscious observation—the habit of consciously gathering the material for its thinking.

One without the power of accurate observation is not only without the power of gathering the materials for his thinking, but he is also deprived in a large degree of legitimate enjoyment. A person who is not firmly grounded in the habit of observing is in the same condition as is one who is ignorant of Latin. Schopenhauer says, "One who is without Latin is as a man walking through a beautiful region in a fog. The horizon is close about him."

A study of the mind of the average pupil will make clear both the practical absence of the power of observation and the absolute necessity for it. Pestalozzi's fundamental principle was, "Observation is the absolute basis of all knowledge."

The power and the benefit of observation, i. e., of the habit of seeing things in nature, art, and books, and reflecting in the presence of them can scarcely be overestimated. "Turner, the eminent land-scape painter," says an English writer, "was often observed to spend a whole day in throwing pebbles into the water while others were working around him. His power of observation was so great, and his patience and love so unwearied, that with his trained eye he could find intense interest, and gather lessons above all price from the rip-

ple, and the wave, and the play of light, and harmonious discord of varying movements, from the common curves, made by a common stone, falling into common water; over which the untrained eye and mind could not spend a profitable moment. Before his eyes was spread the ever stationary, ever moving mirror, the changeful eternity of light that flows, the gliding earth-born light of water, with its strange memories of higher worlds, and strange affinities to cloud and sky, free beyond all earthly things to come and go, still loving to borrow, as it moves, brightness from sky, and gleams from cloud, or shore, and welcoming in its bosom, like a living thing, all images that reach it in its course; he stood and looked upon it, and tried to unlock its secrets, and conscious or unconscious of the full interpretation, caught some glimpses of the great illuminated text of the book of the thoughts of God, appreciated the exquisite subtlety of the handwriting of speech divine, became a kind of living microscope in his power of seeing unknown beauty, and then handed on to us non-seers the gain of new discovery to be henceforth a part of the possession of the world. A common stone thrown into common water could thus become a prophet, revealing beauty and truth. But to whom does the prophet-voice of stones and water speak? A careful analysis will show that the great painter, the genius, could see and understand because he had learnt by years of patient work *to observe more than others.*"

The difference in persons as to their power to observe, in the sense in which Pestalozzi uses the term, and the value of the habit may be made more vivid by consider-

ing the following, in which an English school-master converses with two of his pupils concerning their employment of a holiday:

*Master.* "Well, Robert, where have you been walking this afternoon?

*Robert.* I have been, sir, to Broom-heath, and so around by the windmill upon Camp-mount, and home through the meadows by the river side.

*M.* Well, that's a pleasant round.

*R.* I thought it very dull, sir; I scarcely met with a single person. I had rather by half have gone along the turnpike road.

*M.* Why, if seeing men and horses is your object, you would, indeed, be better entertained on the high-road. But did you see William?

*R.* We set out together, but he lagged behind in the lane, so I walked on and left him.

*M.* That was a pity. He would have been company for you.

*R.* Oh, he is so tedious, always stopping to look at this thing and that! I dare say he is not home yet.

*M.* Here he comes. Well, William, where have you been?

*W.* O, sir, the pleasantest walk! I went all over Broom-heath, and so up to the mill at the top of the hill, and then down among the green meadows by the side of the river.

*M.* Why, that is just the round Robert has been taking, and he complains of its dullness, and prefers the high-road.

*W.* I wonder at that. I am sure I hardly took a step that did not delight me, and I have brought my handkerchief full of curiosities home.

*M.* Suppose, then, you give us some account of what amused you so much. I fancy it will be as new to Robert as to me.

*W.* I will, sir. The lane leading to the heath, you know, is close and sandy, so I did not mind it much, but made the best of my way. However, I spied a curious thing enough in the hedge. It was an old crab tree, out of which grew a great

bunch of something green, quite different from the tree itself. Here is a bunch of it.

*M.* Ah! this is misseltoe, a plant of great fame for the use made of it by the Druids of old in their religious rites and incantations. It bears a very slimy white berry, of which birdlime may be made, whence its Latin name of *viscus*. It is one of those plants which do not grow in the ground by a root of their own, but fix themselves upon other plants; whence they have been humorously styled *parasitical*, as being hangers-on or dependents. It was the misseltoe of the oak that the Druids particularly honoured.

*W.* A little further on I saw a green woodpecker fly to a tree, and run up the trunk like a cat.

*M.* That was to seek for insects in the bark, on which they live. They bore holes with their strong bills for that purpose, and do much damage to the trees by it.

*W.* What beautiful birds they are!

*M.* Yes; they have been called, from their colour and size, the English parrot.

*W.* When I got upon the open heath, how charming it was! The air seemed so fresh, and the prospect on every side so free and unbounded! Then it was all covered with gay flowers, many of which I had never observed before. There were at least three kinds of heath (I have them in my handkerchief here) and gorse, and broom, and bellflower, and many others of all colours, that I shall beg you presently to tell me the names of.

*M.* That I will, readily.

*W.* I saw, too, several birds that were new to me. There was a pretty grayish one, of the size of a lark, that was hopping about some great stones; and when he flew he showed a great deal of white above his tail.

*M.* That was a wheat-ear. They are reckoned very delicious birds to eat, and frequent the open downs in Sussex, and some other countries, in great numbers.

*W.* There was a flock of lapwings upon a marshy part of the

heath, that amused me very much. As I came near them, some of them kept flying round just over my head, and crying *pewet* so distinctly one might fancy they almost spoke. I thought I should have caught one of them, for he flew as if one of his wings was broken and often tumbled close to the ground; but as I came near, he always made a shift to get away.

*M.* Ha, ha! you were finely taken in then! This was all an artifice of the bird to entice you away from its nest; for they build upon the bare ground, and their nests would easily be observed, did they not draw off the attention of intruders by their loud cries and counterfeit lameness.

*W.* I wish I had known that, for he led me a long chase, often over shoes in water. However, it was the cause of my falling in with an old man and a boy who were cutting and piling up turf for fuel, and I had a good deal of talk with them about the manner of preparing the turf, and the price it sells at. They gave me, too, a creature I never saw before—a young viper, which they had just killed, together with its dam. I have seen several common snakes, but this is thicker in proportion, and of a darker colour than they are.

*M.* True. Vipers frequent those turfy boggy grounds pretty much, and I have known several turf-cutters bitten by them.

*W.* They are very venomous, are they not?

*M.* Enough so to make their wounds painful and dangerous, though they seldom prove fatal.

*W.* Well—I then took my course up to the windmill on the mount. I climbed up the steps of the mill in order to get a better view of the country round. What an extensive prospect! I counted fifteen church-steeples; and I saw several gentlemen's houses peeping out from the midst of green woods and plantations; and I could trace the windings of the river all along the low grounds, till it was lost behind a ridge of hills. But I'll tell you what I mean to do, sir, if you will give me leave.

*M.* What is that?

*W.* I will go again, and take with me Carey's county map, by which I shall probably be able to make out most of the places.

*M.* You shall have it, and I will go with you, and take my pocket telescope.

*W.* I shall be very glad of that. Well—a thought struck me, that as the hill is called *Camp-mount*, there might probably be some remains of ditches and mounds with which I have read that camps are surrounded. And I really believe that I discovered something of that sort running round one side of the mount.

*M.* Very likely you might. I know antiquaries have described such remains as existing there, which some suppose to be Roman, others Danish. We will examine them further, when we go.

*W.* From the hill I went straight down to the meadows below, and walked on the side of a brook that runs into the river. It was all bordered with reeds and flags and tall flowering plants, quite different from those I had seen on the heath. As I was getting down the bank to reach one of them, I heard something plunge into the water near me. It was a large water-rat, and I saw it swim over to the other side, and go into its hole. There were a great many large dragon-flies all about the stream. I caught one of the finest, and have him here in a leaf. But how I longed to catch a bird that I saw hovering over the water, and every now and then darting down into it! It was all over a mixture of the most beautiful green and blue, with some orange colour. It was somewhat less than a thrush, and had a large head and bill, and a short tail.

*M.* I can tell you what that bird was—a kingfisher, the celebrated halcyon of the ancients, about which so many tales are told. It lives on fish, which it catches in the manner you saw. It builds in holes in the banks, and is a shy retiring bird, never seen far from the stream where it inhabits.

*W.* I must try to get another sight at him, for I never saw

a bird that pleased me so much. Well—I followed this little brook till it entered the river, and then took the path that leads along the bank. On the opposite side I observed several little birds running along the shore, and making a piping noise. They were brown and white, and about as large as a snipe.

*M.* I suppose they were sand-pipers, one of the numerous family of birds that get their living by wading among the shallows, and picking up worms and insects.

*W.* There were a great many swallows, too, sporting on the surface of the water, that entertained me with their motions. Sometimes they dashed into the stream; sometimes they pursued one another so quickly that the eye could scarcely follow them. In one place, where a high steep sand-bank rose directly over the river, I observed many of them go in and out of holes with which the bank was bored full.

*M.* Those were sand-martins, the smallest of our species of swallows. They are of a mouse-color above and white beneath. They make their nests and bring up their young in these holes, which run a great depth, and by their situation are secure from all plunderers.

*W.* A little further I saw a man in a boat, who was catching eels in an odd way. He had a long pole with broad iron prongs at the end, just like Neptune's trident, only there were five instead of three. This he pushed straight down among the mud in the deepest parts of the river, and brought up the eels sticking between the prongs.

*M.* I have seen this method. It is called spearing eels.

*W.* While I was looking at him, a heron came flying over my head, with his large flagging wings. He lit at the next turn of the river, and I crept softly behind the bank to watch his motions. He had waded into the water as far as his long legs would carry him, and was standing with his neck drawn in, looking intently on the stream. Presently he darted his long bill as quick as lightning into the water, and drew out a fish, which he swallowed. I saw him catch another in the same

manner. He then took alarm at some noise I made, and flew away slowly to a wood at some distance, where he settled.

*M.* Probably his nest was there, for herons build upon the loftiest trees they can find, and sometimes in society together, like rooks. Formerly, when these birds were valued for the amusement of hawking, many gentlemen had their *heronries*, and a few are still remaining.

*W.* I think they are the largest wild birds we have.

*M.* They are of great length and spread of wing, but their bodies are comparatively small.

*W.* I then turned homeward across the meadows, where I stopped awhile to look at a large flock of starlings which kept flying about at no great distance. I could not tell at first what to make of them; for they rose altogether from the ground as thick as a swarm of bees, and formed themselves into a kind of black cloud, hovering over the field. After taking a short round, they settled again, and presently rose again in the same manner. I dare say there were hundreds of them.

*M.* Perhaps so; for in the fenny countries their flocks are so numerous as to break down whole acres of reeds by settling on them. This disposition of starlings to fly in close swarms was remarked even by Homer, who compares the foe flying from one of his heroes, to a cloud of stares retiring dismayed at the approach of the hawk.

*W.* After I had left the meadows I crossed the corn-fields in the way to our house, and passed close by a deep marl pit. Looking into it, I saw in one of the sides a cluster of what I took to be shells; and upon going down, I picked up a clod of marl, which was quite full of them; but how sea shells could get there, I cannot imagine.

*M.* I do not wonder at your surprise, since many philosophers have been much perplexed to account for the same appearance. It is not uncommon to find great quantities of shells and relics of marine animals even in the depths of high mountains, very remote from the sea. They are certainly

proofs that the earth was once in a very different state from what it is at present; but in what manner and how long ago the changes took place, can only be guessed at.

*W.* I got to the high field next our house just as the sun was setting, and I stood looking at it till it was quite lost. What a glorious sight! The clouds were tinged with purple and crimson and yellow of all shades and hues, and the clear sky varied from blue to a fine green at the horizon. But how large the sun appears just as it sets! I think it seems twice as large as when it is overhead.

*M.* It does appear so, and you probably have observed the same apparent enlargement of the moon at its rising.

*W.* I have; but pray what is the reason of this?

*M.* It is an optical deception depending upon principles which I cannot well explain to you till you know more of that branch of science. But what a number of new ideas the afternoon's walk has afforded you! I do not wonder that you found it amusing; it has been very instructive, too. Did *you* see nothing of all these sights, Robert?

*R.* I saw some of them, but I did not take particular notice of them.

*M.* Why not?

*R.* I don't know. I did not care about them, and made the best of my way home.

*M.* That would have been right if you had been sent on a message; but as you only walked for amusement, it would have been wiser to have sought out as many sources of it as possible. But so it is—one man walks through the world with his eyes open, and another with them shut; AND UPON THIS DIFFERENCE DEPENDS ALL THE SUPERIORITY OF KNOWLEDGE THE ONE ACQUIRES ABOVE THE OTHER. I have known sailors who had been in all quarters of the world, and could tell you nothing but the signs of the tippling-houses they frequented in the different ports, and the price and the quality of the liquor. On the other hand, a Franklin could not cross the Channel with-

out making some observations useful to mankind. While many a vacant, thoughtless youth is whirled throughout Europe without gaining a single idea worth crossing a street for, the observing eye and inquiring mind find matter for improvement and delight in every ramble in town or country. Do you then, William, continue to make use of your eyes; and you, Robert, learn that eyes were given you to use."

1. Determine the scope of the term observation, used in the Pestalozzian sense.

2. Consider critically the foregoing conversation as expressing an instance of the habit and the power of observation.

3. How can arithmetic be taught so that the tendency shall be to produce the habit exemplified in William? In Robert? The same inquiry in regard to geography, reading, etc.

It may be claimed, however, that the difference between the pupils cited is not one of education but of inheritance. But what would that mean other than this: that for generations back of William, his ancestors had been so trained in accurate habits of observation, that the habit was transmitted to him, just as his physical characteristics were. The mind of a pupil is, to a degree, an art product, representing in its peculiar nature, the education and training not only of *its* period of existence, but of many generations in the past.

A child's mind, with its peculiar habits and powers is the joint product of the culture of its own brief time, and of congenital endowments resulting from the culture of its ancestry for ages back; so the difference between two persons in respect of their power to observe and to enjoy because of that power, is, after all, the result, at least to a large degree, of education, conferred somewhere along the line of life.

In Smiles' Self Help, it is truthfully said, "*It is the close observation of little things which is the secret of success in business, in art, in science, and in every pursuit of life.* Human knowledge is but an accumulation of small facts, made by successive generations of men, the little bits of knowledge and experience carefully treasured up by them growing at length into a mighty pyramid. Though many of these facts and observations seemed in the first instance to have but slight significance, they are all found to have their eventual uses, and to fit into their proper places."

Arising from the inter-relations of all of the foregoing thoughts, several conclusions present themselves:

Mind is the real subject of education; the individual mind of each child; this individual mind in its two clearly marked stages of *preparation* and of *use.*

The teacher, in order to become an artist, or even a fair mechanic, must study this plastic, living material.

It may be studied in its general characteristics, as presented in books; or in a more individual sense, as embodied and manifesting itself in the teacher himself, and in each of his pupils.

Even if the teacher is unable, on account of means or time, to study mental phenomena and laws in the first way, in the second sense they are ever present to the mental gaze.

Even the unaided study of mental phenomena, as exhibited by his own mind and by those of the pupils, leads the teacher to many educational truths; among which are:

The imagination and the spontaneous memory are active in early years.

The child does not learn by the abstract logical faculty.

The child is naturally inattentive; the power of attention is the *result* of education, not the *condition;* though embryo attention is the basis of all growth in mental power.

The child has been *trained away* from his natural tendency to observe.

The heart is the avenue to the intellect no less than is the intellect to the heart.

The individual mind of the child is the true subject of the educational process; the necessity for its study is absolute; the opportunity for its study is ever present.—Such is the clue of Ariadne, and without it the teacher hopelessly gropes.

# *CHAPTER II.*

## *THE AIM OF EDUCATION.*

"WHAT are a nation's possessions? The great words that have been said in it; the great deeds that have been done in it."

A distinguished Chinese scholar who was travelling in the United States was asked what he considered to be the most prominent American trait. He quietly and promptly replied, "A lack of honor."

"Conduct is three-fourths of life."—MATTHEW ARNOLD.

"But you were always a good man of business, Jacob," faltered Scrooge, who now began to apply this to himself. "Business!" cried the ghost wringing its hands again. "Mankind was my business. The common welfare was my business. Charity, mercy, forbearance and benevolence, were, all, my business. The dealings of my trade were but a drop of water in the comprehensive ocean of my business!"—DICKENS' *Christmas Carols.*

"And ye shall know the truth, and the truth shall make you free."

—JOHN, 8: 32.

### *ARGUMENT.*

THE greatest idea in a thing is its final purpose. Purposes are of two general kinds—a purpose in the thing itself, and its related purpose. A plant has a purpose in itself and a related purpose (to animals and to men.) An animal has a purpose in itself and a related purpose (to man.) Man has a purpose in himself and a related purpose (to other human beings and to the Infinite.) Such things as the church, the state, the family, business society, the school, a school board, a superintendent, (as such,) a teacher, (as such,) a course of study, a recitation, etc., have no final purpose in themselves—they have only a

related purpose. Their final purpose is found only in the final purpose of man's being. The final purpose of a thing is that alone which can determine the conditions of its existence and growth, and the co-ordination of its parts. For example, the final purpose of the plant—the purpose in itself—is to perpetuate its species,

This determines the conditions of its process of growth—light, heat, moisture, etc.—allowing no more or others, permitting no less or other than those demanded by its nature. In like manner the co-ordination of its parts—root, stem and leaves—is determined.

Such is the case in respect to the animal; and so it is with man. The final purpose of the child determines the conditions of his growth in school, i.e., the functions of the school board, superintendent, teacher, nature of a course of study, whether he is to do his own thinking, or the teacher think for him, the relative training to be given to intellect, sensibility and will, the purpose of any branch of study, the purpose of a recitation, etc.

The conditions of a school and the co-ordination of its parts are determined by nothing in itself. They are determined by its final purpose (final cause.) The final purpose or cause of the school is found in the final purpose or cause of the child's being. The purpose of the child's being is to free himself from the bonds of his selfishness, prejudice, ignorance; to remove the antithesis that exists between his subjective nature and objective thought; to elevate him to his species, (rational freedom.)

The attainment of rational freedom, or the process of true education, involves the passage of mind through mind (objective thought) into mind. (Mind is a universal substrate.) For example, Whittier is an embodiment of life; Snow Bound is an embodiment of Whittier's life to a degree; the child is an embodiment of life. The education of the child, by means of Snow Bound, consists of the passage of the life of Whittier through Snow Bound into the life of the child, transforming it to a degree, implanting in it some of the elements of Whittier's nature, and to that extent elevating the child to his species.

The same process of life passing through life into life is to be seen in the study of the cotton-gin, the magnolia tree, in the study of any idea whatever. That is, education deals with life, not lessons, and any process of education is a failure that battens mainly on books—viewing their mastery as an end. Education, dealing with life must distinguish between the child's

higher or life power and his automatic or mechanical power, in order to determine what studies minister most to this life power because of the presence of the elements of the higher life in them, and what ones do so to a less degree, as well as to decide in what attitude of mind to approach a subject.

The four things herein adverted to must be studied for a two-fold purpose—to make clear the aim of school and education, to aid in seeing *the thought in things*.

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In order to adequately comprehend the purpose in education, one must understand, at least to a degree:

1. The ideas:
   *a.* Final Cause.
   *b.* Rational Freedom.
2. The judgments:
   *a.* Mind is a universal substrate, i.e., everything is, in essence, mind or thought.
   *b.* Man has in his single nature a dual power—*instrumental-power* and *character-power*, the latter constituting man as man, or feeling, in distinction from man as a machine, or intellect.
   *c.* Character-power is the higher element in man—the life.

Whittier gives expression to this thought by saying in reference to Webster,

> "When faith is lost, when honor dies,
> The *man* is dead!"

*d.* Character-power is sensitive, retiring, in the presence of force, or alien feeling.

The relative value of instruction and education; of information and training; of a preparation for business in a technical sense, and a preparation for business as defined by Marley's ghost; of intellectual-power and character-power, i.e., of brain-education and heart-education is, as indicated, to be comprehended through an insight into the foregoing ideas and judgments, to which the mind is now to address itself.

## *FINAL CAUSE.*

As shown by Porter, causes have been divided into four classes: material, formal, efficient, and final.

'*Material* causes are the material elements or principles which compose any existence, whether the matter is bodily or spiritual.

The cause termed *formal* is the property or properties which constitute the *essence*, *logical content*, *form*. Thus used the cause is an element or constitutive principle.

*Efficient causes* are the working causes, or those agents which palpably bring about an effect.

The *final cause*, is the design which is conceived as impelling and directing the action of working causes, until the result appears, e. g., if one forms a purpose, the result, when made actual is the end of a series of actions or events. In this way the word end or final comes to mean a purposed result. Thus the final cause of a series of actions is the *result* of the series. The purpose is called a *cause* for the reason that it is conceived when formed as originating or setting in motion the

series of acts or events necessary to its realization. Thus the final cause of a series of actions is the purpose or thought which gave rise to the series. On account of this double view the idea is termed a final cause, i. e., a cause which beginning as a *thought* works itself into a *fact* which is the end or result of the series of agencies set in motion because of the thought.'

By Aristotle the material cause was termed the raw material, the underlying thing; the formal cause, the true nature of the thing; the efficient cause, that whence the beginning of motion is; the final cause, that *on account of which* a thing is.

In Everett's Science of Thought it is said "Where a process is carried on by means of parts co-operating for their own mutual support, or for the promotion of a common end, this composition of parts is called an *organism* and the end for which they co-operate is called a *final cause.* The cause, although it no longer exists as cause, is fulfilled in the effect. The end is more really the cause than the beginning, for, in the end, the cause finds first its real and complete existence. The end for which all the parts of an organism work together—termed the final cause—is really the cause of the organism. If one goes to a city his *object* in going is the *cause* of his movement rather than the locomotive that took him there. A seed is buried in the earth. The warmth and moisture make it sprout into life; yet if it had not this tendency to life, this final cause embodied in itself, the sun and moisture would have been in vain. The final cause of the seed is to produce the plant. Its ex-

istence is fulfilled in that. The final cause is the real cause. The great difficulty in regard to final causes is that they are always mingled with working or efficient causes. A final cause has no objective existence except in its result, and this result has been produced directly by efficient causes, while it—the final cause—has only been working invisibly behind and through these. In all actions that are the result of mind or intelligence, there must be final cause; for intelligence is the acting for a final cause, and hence every intelligent act must have a final cause." In nature, in life, in history, in all organisms, in the school, in the recitation, in the study and behavior of the pupils, final cause is hidden and at work. It is the essence of the school, of the preparation for school work, of the recitation, and of the whole subject of the children's actions, and of discipline. The real teacher always seeks for, and is able to recognize its presence.

The aim of education in its limitation to the *period of preparation*—the period of family and school influence—is to assist the child toward the final cause of his existence, not by giving him knowledge merely or mainly, but mainly by sending him forth equipped with the desire and the power to attain knowledge. The aim of education in its full sense, i. e., through the instrumentalities of the family, school, church, business society and state—including both the *period of preparation* and that of *use or action* is to confer upon each individual truth-freedom, reason-freedom, rational-freedom. The stages in the process are:

Period of Preparation. — Family, Kindergarten, School.

1. Presentation of material for the mind's action.
2. Action of the mind upon the material, and consequent acquisition of knowledge.
3. Mental strength and skill, intellectual, emotional and volitional, arising from such action, and the assimilation of knowledge.
4. A partial insight, arising from the strength and skill, into that knowledge which is of most value.
5. A desire to enter into possession of the knowledge thus opened to the mind.
6. In the high school, mental discipline and knowledge become substantially co-ordinate aims.
7. In the college, the mastery of the sciences and the liberal arts, i. e., knowledge, becomes the main aim, with mental discipline as the necessary attendant.
8. In the professional schools of universities, and in technical schools, the mastery of knowledge and the acquiring of skill necessary to special vocations.

Period of Use or Action. — Church, Business, State.

9. The unconscious or unsystematic acquiring of knowledge in the various spheres of life.
10. The assimilation and employment of this knowledge.
11. The perception of the truth, growing out of all the foregoing.
12. The *truth-freedom* resulting—"Ye shall know the truth, and the truth shall make you free."

*RATIONAL OR TRUTH-FREEDOM.*

Freedom is, in essence, obedience. True freedom is obedience to natural law, whether physical or spiritual;

but all freedom, whether true or not, is obedience—obedience to something.

Freedom is of two kinds, as is bondage—physical and spiritual. True physical freedom is that in which the body is, through a training into a condition of unconscious habit, of second nature, instantly, as occasion requires, obedient to all its physical laws. Real physical freedom requires that the obedience shall be unconscious, automatic. Spiritual freedom is likewise of two kinds:

1. *Caprice-freedon*, or obedience to caprice, prejudice, ignorance, i.e., *bondage.*

2. *Rational freedom*, or obedience to truth, i.e., to knowledge, to reason, to the feeling "I ought."

The first is the freedom of a Henry VIII., of an Elizabeth, of a Trinculo and of a Caliban. In such freedom, which in truth is the veriest slavery, the baseness of the master makes the servant baser still, and Trinculo gives Caliban wine, and Caliban thinks him a god, and that he has entered into freedom. There is no hope of real advancement in such a state of things; rebellion against the true master is a necessary consequence; he must be got rid of, or Trinculo and Caliban can not rule.

It is a spectacle of caprice-freedom to see, in any phase of life, the Trinculos and Calibans conspiring against the true lord of the island—reason, truth, the "I ought."

Rational freedom is the habitual joint right action of the intellect, sensibility and will. The will in one sense is not free; in another sense it is absolutely free. It is

not free in the sense that it can not avoid choosing. It is its very nature and essence, however, to choose; and it fulfills the function of its being in choosing. The proper conditions being supplied, the will must, of necessity, choose. Yet it is free in that it has absolute power in its choosing. If its choice is in accordance with reason, it is rationally free.

If the choosing of any given individual is habitually in accordance with the principles of justice—each shall render an equivalent for that which he receives—universal brotherhood—mutual love—he is a rationally free member of the social system. But each of these principles is, in essence, love or kindness, and if one, in all circumstances, acts in obedience to this, the highest element of his emotional nature—the one that links him most closely to the Divine—for God is in form or essence love—he is rationally free.

The thought that all other principles have their root in this one—love or kindness—and that therefore, the nobler elements of man's emotional nature are really the man is clearly seen in this:

"The night has a thousand eyes,
The day but one;
So the light of the whole day dies
At set of sun.

The mind has a thousand eyes,
The heart but one;
So the light of the whole life dies
When love is done."

The transcendent thought for the teacher is that when force, fear, or any alien power has driven the child's higher nature into its inacessible retreats, the eyes of

the intellect are made less acute, just as the stars—the eyes of the night—would lose their silvery luster if the sun were no more.

The aim of education, then, is heart-education. It is habitual obedience to the higher elements of man's emotional nature; obedience to the 'ought.'

The first recorded instance of caprice-freedom, was the choosing of knowledge by the first man, in the Garden of Eden. This following of the 'I want' instead of the 'I ought'—the exaltation of knowledge and intellectual power over obedience to the principle of love—constituted the Fall of Man. In like manner the exaltation of dogmatism and verbalism over the essence and reality of things constituted the fall of education, and demanded and required in the fourteenth century 'The Revival of Letters.' And just as Henry V. thought the defection of Lord Scroop to be like unto a second fall of man, so by many it is held that there has been a second fall of education, since in its period of preparation—the period of the family and the school, especially the latter—it seems to exalt mere form, words, definitions—a hardened crust of verbalism——over the reality, the thought; since it seems to make, as the end of the school, preparation for business in the sense in which Scrooge used the term, rather than that in which the Ghost used it; since the goal appears to be facts, knowledge, percents, or at best intellectual power, rather than habitual obedience to the higher emotional nature—character-power. If intellectual power were the true aim of education, there could be but slight objection to Mephisto-

pheles, or to Faust in his early career. (It is evident from the illustrations that the terms *intellect* and *intellectual power*, are employed in a limited sense—the rational phase falling, substantially, outside the terms.) The real aim of education is to restore man by dethroning intellectual power and knowledge, and by enthroning man's real being—his emotional and volitional powers. The true end is to relegate facts to their proper sphere—that of materials mainly, and intellect to its proper station, that of a servant or instrument—the highest instrument it is true—and to make character-power, the power of "having withstood all, to stand," the goal. The final cause of education, then, is rational freedom.

Rational freedom unites the powers of habit, rational intelligence and sensibility. Taken singly, the cultivation of neither of these powers gives rational freedom. The exclusive development of either one leads from it.

Thus intellectual power in the limited sense, is not rational freedom though it is involved in it. The keenest intellectual power, as above indicated, may exist side by side with caprice. The cultivation of the mere intellect may lead one to think that that is the one thing needful, and that his actions are not concerned, and that therefore, their character is a thing indifferent; this forms the habit of not obeying what he knows to be the truth, hence he is not truth-free.

The training of the will alone is not rational freedom, though that is in it. Habit, without knowledge and conscious motive, is the characteristic, not of a rational being, but of a machine; acts performed under its in-

fluence have no moral character, whether their results are in accordance with morality or not. This seeming habit of morality cannot be permanent and sufficient. The routine conduct to which it leads may endure for a while, as long as circumstances do not interfere with obedience to the habit; but it will never stand against the rush of personal prejudices and interests, when these clamor, as they inevitably will, for a hearing. There is wanted intelligence to give such acts a moral character, and motive to secure their performance against all opposing tendencies.

The sensibilities alone will not give rational freedom. Apart from habit, the performance of actions must always be difficult, and uncertain; while there is also needed the intelligence to prevent good motives from being blind guides.

The process in rational freedom is:

1. The perception of that which is fit or right in human action. (Intellect.)

2. The arising of the feeling 'I ought.' (Feeling.)

3. The determination to obey the feeling 'I ought.' (Will.)

4. The resulting action, mental or physical. (Practical.)

This is obedience to the true self, hence it is freedom. True obedience to another person or to an institution of which one is a member, is choosing the same end as that other person, or as the institution. Such obedience is freedom. No one can be forced to act in a certain way, or to choose a given purpose; each one chooses his own

purpose; hence, the third point indicated above is the element of freedom. Every one has freedom, in the sense that he is free to make either the choice that he does or some other one. The free spirit cannot be enchained. Man acts in freedom. If he obeys the 'ought' he acts rationally, and hence has rational freedom.

"Rational freedom is that state in which one is when he does right, or acts in obedience to the 'ought'; for this alone is the dictate of the reason. In this state the intellect discerns the true, the sensibility feels the beautiful, and the will chooses the good; hence, there is a blending of the true, the beautiful, and the good in the character." Character-power of this kind is the true aim of education. That is, the aim and scope of that civilizing process through which the child passes in his contact with the family, school, church, business society, and state, is the attainment of *rational freedom.* But the very term *freedom*, in this connection, presupposes a previous *bondage.* Bondage to what? In the conversation of the descendants of Abraham with Christ, they referred it to the *physical* power of the ruling body. In that conversation, they, however, catch a gleam of a new doctrine—that imperfect humanity is in bondage to itself, to its own belief, ignorance, and prejudice.

The true aim and effect of the social system—family, school, church, business society, and state—is the deliverance from that bondage. This is the removal of the antithesis that exists between the objective and the subjective, by merging the external to any one into his subjective. In the lower stages of civilization the moral

and political restrictions of the family, school, church, business, and state, are looked upon as objectively determined; the social system being viewed as something into which one is born, but which is subjectively different from that one. In such a state "the individual feels himself bound to comply with requirements of whose justice or propriety he is not allowed to judge, though they often severely test his endurance, and even demand the sacrifice of his life." In a state of higher civilization, though an equal sacrifice be demanded, the individual feels that the institutions are just and desirable, and that the laws and restrictions are at one with his own subjective nature, and such as his own rational choosing would have produced. This is the harmonization of the objective and the subjective. The true aim of education in the stage of preparation is to harmonize the subjective of each individual in the family and the school with the objective, in order to fit him for a like harmony in the church, business, and state. This would remove, among other things, the ground for the Chinese traveller's statement.

### *MIND A UNIVERSAL SUBSTRATE*

The first part of the word *nature*—*nat*—is the same as the first part of the words *natal* and *native*, and means *born*. The last part, *ure*, is from the Latin *ura*, meaning *to be* or *necessary to be*. In its original sense, therefore, the word *nature* signifies *that which is to be born*.

That is, nature is in essence energy, and that which outwardly appears is merely a manifestation, the sub-

stratum of which is life, spirit, mind. But mind is an energy of three-fold variety—intellect, sensibility, and will. Nature, then, is at heart intellect, sensibility and will, and for a human being to comprehend nature in whole or in part, is for him to transmute it into thought. The true standpoint is that whatever God has put forth in audible or visible form is in truth God himself to a degree, and for an individual *to comprehend*, to really *know* any such form means that the intellect, sensibility, and will of God, which to a degree lies concealed in it, is to come forth and touch the mind of the learner, and coalesce with it, and in a manner lift the mind of the learner up to itself.

This passing of the divine life into the human life is the education that nature affords. God thought a thought, and made that thought manifest in visible form. That visible form is called North America. What, then, in reality is North America but thought—a thought of God? What is the lily of the valley but the life of the Divine Being made manifest to a degree? Such, indeed, they are, and such also, is each bird of of the air, and beast of the field. Christ, while on earth, was God manifest in the flesh; in like manner God has manifested Himself in the visible forms of nature. Nature is in essence a thought of God. Hence the meaning—*about to be born*; for the mind of God, which, to a degree, is ensconced in every form of nature, is about *to come forth* and touch the mind of the true learner, and transform it. But to whom does it come forth? Only to the one who has the power to break the spell. Only

to the true prince—the one whose spirit is in harmony with the life, the thought concealed.

The *child himself* is a thought of God. Each human being is the intellect, sensibility, and will of God shadowed forth imperfectly and faintly. In order then that the teacher may assist in the education of the child, he must be able to think the child, i. e., to comprehend the life, the embodied mind to that degree which will enable him to call forth the mind of the child and cause it to touch the thought that lies hidden in his own (the teacher's) expressions, and in the object of study; for example, the llama, or the heliotrope. But to whom does the child-mind thus come forth? Only to the true prince, the one whose spirit is in harmony with it, and who has therefore, the power to reach it in its otherwise inaccessible retreats.

Again, *art* is the intellect, sensibility, and will of man, manifest in merely another form; poetry, prose, painting, architecture, music, sculpture, and all done by man, are embodiments of certain portions of man's life set in action. Whenever a man does anything, he puts forth a part of himself, of his mind, and if it is understood it must be re-transmuted into that.

And these mind-creations are naturally subject to the same conditions as the life of which they are the outcome, and, as far as they go, represent it as faithfully as if they were separate living beings. Spiritually there is one Bartholdi; externally there are two (really many)—one, full-orbed, in which the life or mind is most free, most self-determining, lives, moves and has its being in

Paris; the other, partial, in majestic iron and copper stands on Bedloe's Island and is called Liberty Enlightening the World.

The one who is to really know the Bartholdi statue must transmute it into thought. If the learner is of kindred spirit, the three-fold mind of the artist that is embodied in the statue will touch his mind and it will be as it was no more, for at the touch of kindred spirit the inventive genius that lies hidden in the statue will awake and live again in the life of the learner, and to some extent, depending upon his native endowments, he is evermore a Bartholdi. So everything that divine or human artist has produced, a chair, a pencil, a table, a house, the wren, the rose, Mount Blanc, Evangeline or Hamlet—is in its reality, mind or thought, and if thus contemplated and reached, becomes a living crucible, an educating force. But otherwise it is a mere dead form.

Everett says, "When it is said that all being is objective thought, it is meant that all being exists to the infinite mind as thought, and that all being may exist to any mind as thought, so far as that mind is developed enough to grasp it; the limit in every case being not the nature of the outward object, but the capacity of the mind itself."

All being is animate with enchanted life for all who have the power to break the spell.

The true aim of education is to assist the child to the power of viewing all being as thought; of reading the high and varied emotions of noble minds, and thereby

kindling high and varied power in himself. For then only is he educated.

*INSTRUMENTAL AND CHARACTER POWER.*

In the Louvre, at Paris, is a renowned statue of a slave. The attitude and proportions proclaim the artist, and the resignation and intelligence depicted in the face are striking. Yet all who have beheld it and studied it agree that the finest touch (it being the statue of a slave) is the absence from the face and bearing of that finer, subtler something which always indicates the real man. It stands there the embodiment of a perfect animated machine. Mechanical power of a high order is evident in it, but it is clear that the lash, or the will of the master, has driven into exile those higher feelings which constitute the real being, *and which always enter into man's true work.* It is an illustration of a hard mechanic power of mind and body when the real being has retired at the presence of alien feeling, or compulsive force.

There lies within every child and in every work of man, in addition to its mechanical side, a finer nature which is the true being, and which, viewed as power, may be called character-power. *The mechanical side exists for this*, and may therefore be termed instrumental power. In education, the character element in the child, or in man's work, must be reached. But the slave owner might as well try to call forth the finer nature with his lash as for the mere intellect to expect to win its way by force into the heart of visible thought.

'Both deal, and deal successfully, if strong enough, with the husk, the mere mechanical side of that which they approach; both fail, if not strong, even in that; and both stand forever outside the walls of the home in which true power and beauty dwell. Education is not concerned with the external except as an instrument; as an end it is concerned with the life, the character-power. Should this be granted, it becomes clear that all work which deals with the externals, as, words and their pronunciation in reading as an end; rules, definitions, and technical terms in language as an end; figures, and rules for manipulating them, in number, as an end, fails to fulfill the demands of higher training; and, also, that all hard, unfeeling, irreverent temper, unfits both the teacher and the pupil, however strong in intellect they may be, for the higher ranges of power, which can only be attained by giving and taking the thrill of true feeling, and by an endeavor to enter into communion with each other, and with the life embodied in the thing studied. This conception of power as two-fold—mechanical power and living power—manifestations of the child's being, both contained always in greater or less degree, balanced or unbalanced within him, establishes the first principle of true education. It forms the basis of educational science. One consequence appears at once—that child-life can only be trained to its highest perfection *by contact with life and thought, or by processes of life;* and hence, however useful or necessary certain forms of skill, and certain branches of knowledge are, they do not belong to the teaching and

training of the higher life, except in a subordinate degree, because of the absence of the very elements of the higher life in them.' *

Test the common school branches by this thought.

"The aim of education is not to prepare for life in any technical sense, but to raise the standard of life itself." Locally it is to remove the ground for the Chinese traveller's answer. The necessity for the removal is evidenced in that the press of the country recently set forth as remarkable the fact that a business man having failed some years since, and having paid at the time fifty cents on the dollar, had just completed the payment in full, though not compelled by law to do so. In the record, moreover, the press unconsciously gave testimony to the popular sentiment that such payment was optional, and therefore notably honorable. But it was not optional—man's higher nature compelling it, the man simply performing his bounden duty in compliance with the plain business principle—"Every one shall render an equivalent for that which he receives."

Bodily strength is a very great power, but to live for the body only is to be a mere animal. Intellectual strength, also, is a very great power, but to live for the intellect only is to be a Mephistopheles.

Both these powers are necessary and must be cultivated, but as instruments, not as supreme. However much the intellect may have usurped the throne, it may nevertheless be united with the most destructive, or the meanest qualities. Intellectual power has no necessary

* E. THRING.

connection with good (except as indicated in "*a*" and "*b*" under the second "2" following).

There is an adage that "Whatever you would put into the life of a nation, you must first put into the schools." The experiment is yet to be faithfully tried in the schools, whether they can so train to true life as to keep the nation from falling, and maintain it in its true rank; whether by their work they can insure that the nation shall seek after true life, rather than mere knowledge and material prosperity; that it shall rightly use the two servants of the real being—bodily and intellectual strength. The danger to the nation is correctly fore-shadowed in "The Message of the Nineteenth Century to the Twentieth," by Ex-President White, of Cornell.

It is self-evident that any truth belonging to man as man, must belong to every individual, and that no truth belongs to man as man that is limited to a small number. This must hold good whether by truth is meant means or end. The universal is synonomous with truth pertaining to man and man's nature. All men must be able to attain the end of existence, if there is an end of existence for man; that is, the end must be universal. All pupils must be able to reach the aim of school education if, as is held, there is a universal aim. *Extensive knowledge can never be the possession of every individual; excellent power of doing skilled work, and true feeling as a motive power, can.* The nature of things makes the extremes of perfect training, and of producible knowledge, to a certain degree antagonistic; i. e., the time spent in

questioning with a view to train, can not be employed in pouring in knowledge with a view to turn it out again on demand. The importance of this distinction is not seen, however, in the best pupils. They succeed to a creditable degree under either system. What results to the average, or to the poor pupil, is the real question. With them, the vain attempt to get a certain amount of knowledge results in emptiness, and a stolid unbelief in education. The attempt to get training results in the native strength being improved, as far as it is capable of improvement, and in as much skill being acquired as the case admits of. The first ends in a diseased state of mind; the second in a healthy condition however weak it may be.

The true aim of education, especially during the period of preparation, is therefore three-fold:

1. To train the character-power; that is, "to set the loving and the hating on the right track."

2. To train the intellect (subordinate) and the body (more subordinate); i.e., the instrumental powers.

3. To obtain knowledge; primarily as the material for thought, and secondarily for future application.

The relation of the intellect and the character-power is:

1. Oppositional, in that the highest intellectual activity at any given moment, excludes the highest emotional activity at that given moment, and *vice versa*, in accordance with the principle that the mind has but a given *quantum* of energy.

2. Supplementary:

*a.* Whatever increases one's knowledge of things as they are, leads to an appreciation of truth.

*b.* Increase of mental power increases the power to judge on moral questions.

*c.* When the will, affections and conscience are cultivated with a view to independent action, the intellect must be cultivated so as to impose proper limits upon that independence.

*d.* In proportion as the intellect is cultivated, the sensibilities and will—the real being—must be trained to carry its judgments into effect.

The truth of "c" and "d," as given at the beginning of the chapter, is made evident in the consideration of instrumental and character-power.

Consider the aim of education as above presented, in the light of the following, and weigh these by that:

"Man is the last, the most complete, and the most excellent of living creatures.

The final end of man lies beyond this life. This life is threefold, viz: Vegetative, Animal, and Intellectual or Spiritual. The first nowhere manifests itself outside the body; the second stretches forth to objects through the operations of the senses; the third is able to exist separately as well as in the body, as in the case of angels.

This life is only a preparation for an eternal life. The visible world is only a seed-plot, a boarding-house and training-school for man.

There are three steps of preparation for Eternity. 'Se, et secum omnia, nosse; regere; et ad Deum dirigere.'

It is accordingly required of man that—

He should know all things.

He should have power over all things, and over himself.

He should refer himself and all things to God the Source of All.

These requirements are summed up in the words *Eruditio, Virtus, seu Mores Honesti, Religio, seu Pietas,*—Knowledge, Virtue and Piety. All else is merely accidental and extrinsic.

The seeds of these three are in us by Nature, i.e., our first original and fundamental nature, to which we are to be recalled by God in Christ.

It is as certain that man has been born fit for the understanding of things, the harmony of morals, and the love of God, as that there are roots to a tree."—COMENIUS.

"In the natural order of things, all men being equal the vocation common to all is the state of manhood, and whoever is well trained for that, cannot fulfill badly any vocation which depends upon it. Whether my pupil be destined for the army, the church, or the bar, matters little to me. Before he can think of adopting the vocation of his parents, nature calls upon him to be a man. How to live is the business I wish to teach him. On leaving my hands he will not, I admit, be a magistrate, a soldier, or a priest; first of all he will be a man. All that a man ought to be, he can be, at need, as well as anyone else can. Fortune will in vain alter his position, for he will always occupy his own."—ROUSSEAU.

"Elementary education, in his view, means, not definite instruction in special subjects, BUT THE ELICITING OF THE POWERS OF THE CHILD AS PREPARATIVE TO DEFINITE INSTRUCTION—it means that course of cultivation which the mind of every child ought to go through, in order to secure the all-sided development of its powers."—PAYNE'S *Pestalozzi.*

"Education has for its chief object moral culture, the formation of character; and for this end it is above all necessary that there should be freedom of individual movement, room for the development of personality."—FROEBEL.

"What the education is that will best enable a man to educate himself, ought surely to be the paramount inquiry. Is it *Instruction*, or is it *Training*, or is it both?

Is it the amount of elementary knowledge communicated, or is it that exercise of mind by which the pupil acquires the power of educating himself? Till within the last few years, the term used to define Education was Instruction. Give elementary and religious *instruction*, it was and is still said, and this will be sufficient. Teach the poor to read the Bible, and forthwith you will make them good, holy, and happy citizens—kind parents, obedient children, compassionate and honorable in their dealings; and crime will diminish. Hundreds of thousands of our population have received such an education. Are such the results? Have our political advocates for educating the poor—has the public hit upon the right kind of education, *or upon the proper mode of communication?* Can teaching or instruction alone produce the results which are so fondly anticipated?

Can all the *telling*, or teaching, or instruction in the world enable a man to make a shoe, construct an engine, ride, write, or paint, without *training*, that is, without *doing?* Can the mere *head-knowledge* of religious truths make a man good without the practice of it, without the training of the affections and moral habits? Will teaching to read, write and cast accounts, with a little knowledge of geography and grammar, cultivate the child —*the whole man?*

Is this process of mere head-knowledge likely to up-root selfishness, pride and vanity, and to substitute in their stead, kindness, generosity, humility, forbearance and courteousness, without the practice being enforced in suitable circumstances, as well as the theory communicated? The boy may repeat most correctly, and even understand in a general way, the precepts, 'Avenge not yourselves, but rather give place unto wrath,' 'Render not evil for evil,' 'Be courteous'; but see him at play among his companions, neither better, nor perhaps

worse, than himself, un-superintended, and his conduct unreviewed by parent or school-master, and what do these scriptural injunctions avail him when engaged in a quarrel? Reason is dormant, passion reigns for the time and the repeated exercise of such propensities strengthens the disposition, and eventually forms evil *habits*."—STOW.

"Education comprises all the influences which go to form the character. In early infancy, before the child has acquired the power over thought and language which fits him for direct intercourse with those around him, he is educated by the experience which he acquires through the natural activity of his instincts.

In childhood and youth his education proceeds under the superintendence of the family circle and the school. In mature years he is again thrown upon the resources of self-education, but now with the power of controlling these for definite ends; and he finds in the intercourse of society, in his own reading and reflection, and in the ministrations of the Christian church, the means by which his nature is to reach its destined measure of perfection. The education of childhood is often spoken of as if it were pre-eminently the education of the whole man. It is not so, however; the education which the man carries on of himself in maturity, when he has come into the possession of all his powers, is that which determines his character and position. The peculiar importance of the education of childhood lies in the consideration that *it prepares the way* for the subsequent self-education of manhood. It brings the man into command of his faculties, and enables him to use his opportunities of progress; it equips him with intellectual, moral and practical principles, but for which he would pass through life without any purpose of self-improvement, and without the power of profiting by its experience."—CURRIE.

"The aim of the educationalist is not the giving of information, nay, not even instruction, though this is essential, but

*mainly discipline;* and the aim of discipline is the production of a sound mind in a sound body, the directing and cherishing of the growth of the whole nature, spiritual and physical, so as to make it possible for each man within the limits of the capacity which God has given him, to realize in and for himself, with more or less success, the type of humanity, and in his relation to others to exhibit a capability for wise and vigorous action. This result would not be attained by pressure. By anticipating the slow but sure growth of nature, we destroy the organism. Many and subtle are the ways in which nature avenges itself on the delicate, complicated machinery of man, but avenge itself somehow it will and must."—LAURIE.

"*The true view of education is to regard it as a course of training.* The youth in a gymnasium practices upon the horizontal bar in order to develop his muscular powers generally; he does not intend to go on posturing upon horizontal bars all through life. *School is a place where the mental fibres are to be exercised, trained, expanded, developed and strengthened.* * * It is the very purpose of a liberal education, as it is correctly called, to develop and train the plastic fibres of the youthful brain so as to prevent them from taking too early a definite 'set,' which will afterward narrow and restrict the range of acquisition and judgment. I will even go so far as to say *that it is hardly desirable for the actual things taught at school to stay in the mind for life.*

The source of error is the failure to distinguish between form and the matter of knowledge; between the facts themselves and the manner in which the mental powers deal with facts. * * * It is the purpose of education so to exercise the faculties of mind that the infinitely various experiences of after-life may be observed and reasoned upon to the best effect."—JEVONS.

"The conclusions of the honest and intelligent enquirer after the truth in this matter, will be something like the following:—That education (from e and *duco*, to lead forth) is development;

that it is not instruction merely—knowledge, facts, rules—communicated by the teacher, but it is a discipline, it is a waking up of the mind—growth by a healthy assimilation of wholesome aliment. It is an inspiring of the mind with a thirst for knowledge, growth, enlargement—and then a disciplining of its powers so far that it can go on to educate itself. It is the arousing of the child's mind to think, without thinking for it; it is the awakening of its powers to observe, to remember, to reflect, to combine. It is not a cultivation of the memory to the neglect of everything else; but it is a calling forth of all the faculties into harmonious action. If to possess facts simply is education, then an encyclopædia is better educated than a man."—PAGE.

"The central thought of my doctrine assumes that the ultimate or total object of the teacher's profession is not the communication of knowledge; or even, according to the favorite modern formula, the stimulating of the *knowing faculty*, if by the knowing faculty we understand a faculty quite distinguished and separate from the believing faculty, the sensibility, and the will. It has been generally admitted, for a long time, that education does not consist in inserting facts into the pupil's memory, like specimens into a cabinet, or freight stowed in the hold of a ship. But not only must we dismiss those mechanical resemblances that liken the mind to a store-room, a museum or a library; we must also carry our conception of learning above the notion of an agile and adroit brain. Education does not consist in provoking bare intellectual dexterity, any more than in presenting ascertained truth to the intellectual perceptions; or in both together. Education involves appeals to faith, to feeling, to volition. The realm of positive science shades off on every side—not by abrupt transitions, but by imperceptible gradations—into the realm of trust; nor does science consult her dignity more than her modesty, when she undertakes to sharpen the partition-line of hostility between knowledge and belief.

So does the true training of the mind involve an engagement of the affections, including taste, or the sense of beauty, and love, or the sense of good, both the mind's freedom and its harmony being dependent on a healthy heart. And so, again, the understanding and the feelings wait on that brave executor, the will; and nobody can be wise who leaves its scholarship neglected."—HUNTINGTON.

# *CHAPTER III.*

## *THE PRINCIPLE AND THE CONDITION OF EDUCATION.*

"I LEARNED early in life that my business was *to grow*."
MARGARET FULLER.

"Our chief want in life is somebody who shall make us *do* what we can; such a one is a friend." EMERSON.

NOT every one is able to attain a great amount of knowledge; but every one is capable of GROWTH. Growth is the fundamental principle of education, and its condition is EXERCISE. Activity, or exercise, is the law of development, either mental or physical; and each of these two kinds has its reflex influence upon the other. "Learn to do by doing," is the practical expression of this thought.

Comenius says, "*Let things that have to be done, be learned by doing them.* Mechanics and artists do not teach

their apprentices by disquisitions, but by giving them something to do. They are taught to make anything by making it, to paint by painting, to dance by dancing, etc. So we should teach to write by writing, to read by reading, to sing by singing, to reason by reasoning, etc."

The several elements of the child's nature grow by exercise suitable in kind and amount. By physical exercise the body is invigorated and developed, and by no other conceivable means.

By the exercise of its several faculties, likewise, does the mind attain its power to use them. No faculty can interchange with any other. The faculty of language is developed by speaking; of observation, by observing; of imagination, by imagining; and of reason by reasoning. If but one is exercised, but one is educated; if one is over-exercised, the excess does not flow over to the benefit of another.

The moral powers, also, require their own appropriate exercise. Morality being a quality of actions, it is by regulation of the conduct according to its laws that morality is inculcated. Intelligence does not secure it. If the pupil is to be educated to the truth, he must be led to act and to speak the truth; to honesty, he must be led to act honestly in cases where his honesty is tried; to diligence, he must be caused to apply himself to strenuous work.

Observation has made it plain that the mind's faculties grow by exercise, but this has been thought to be peculiarly true of *thought* and *attention*, which are energies eminently dependent upon the *will*. *Education is a growth*,

*a habit.* Hence no one can be said to know how to command his faculties who has not the *habit* of it. This state is attained only by those who exert their faculties to the maximum degrees, so that this state becomes habitual. Mere theory will never produce these habits. All teaching of pupils how to study, which does not demand of them their maximum efforts *in practice*, is ineffective. "The arm of the smith does not grow strong by his looking at the hammer, but by his wielding it." Intellectual growth comes not by thinking how to study, but by mental *application in studying* up to the measure of the highest degrees. *Difficulty in school work is objected to only by those educators who hold to the theory that the aim of school education is the accumulation of knowledge; to those who hold to the theory that school education has for its end the conferring of power and skill, the highest stretch of difficulty appropriate to the mind of the pupil, is seen to be a requisite. Nay more. Even, if an idea is too difficult to be mastered by the pupil, it may nevertheless be selected as an exercise-ground, and the consideration of it confers upon him a high degree of power to think.*

'In the application of these thoughts to education it is necessary to advert to the reflex influence which in any given psychological process runs back from *action* to its source. Action, in satisfying a desire, in gratifying an interest, in expressing an emotion, by a reflex influence strengthens, purifies, idealizes these forms of feeling, and through them their corresponding forms in thought. Hence, *action* is a most powerful instrument in education for quickening all forms of thought-growth.

Through action, the subjective becomes objective; the inner assumes an outer existence, in terms of the outer. Thus an opportunity is afforded for testing the correctness of the inner conceptions, with reference to their outer counterparts, by comparison. The contrast between the original outer counterpart, and the outer reproduction of the conception, appears as inaccuracies, deficiencies, exaggerations, etc., that require correction. Thus *outer action* pushes *conception* (subjective action) steadily and surely nearer to objective truth.

In the case of the will, action appears as conduct, which as *practice*, exerts a powerful reflex influence in fixing the will into habit, and establishing the character.

The primary conditions, then, under which psychological growth occurs, are: first, an *active external*, capable of making impression; second, an *active internal*, capable of receiving these impressions, and of controlling the external for subjective needs. Hence, the work of education is to *adjust surroundings* with reference to the subjective needs, so as to call forth appropriate *activity* on the part of the pupil.'*

It is evident, therefore, that the *doing*, in the educational process, is of two kinds:

1. Mental. (Thinking, feeling, willing).
2. Manual. (Preceded, accompanied, and followed by mental doing).

Under the first, it has been said that "the great mistake of education is the attempt to learn to do one thing by doing something else."

*W. N. HAILMANN.

If reading is the association of thought with expression, the pupil can not learn to associate thought and expression by dealing with the pronunciation of words.

If arithmetic is "the limitation of things by ones," the child can not learn to do this by studying figures; and likewise in regard to the other subjects.

The manner in which outward action may press subjective action, i.e., conceptions, nearer to objective truth, appears to a degree from the following: *

*Liquid Measure.*—The teacher should be furnished with gill, pint, quart and gallon measures, also a box of sand, or some water. The children may be asked to name some measure they know, and to point it out; with that for a starting-point, proceed to other measures. If a quart is first selected, let another child find another measure, and tell, if he knows, what it is. Then let him find out for himself, by measuring the sand or water, how many of one are the other. If a gallon is next selected, let some one see how many times he can fill the quart and pour into the gallon, the children watching and counting. Proceed in a similar manner with the other measures. Ask what articles are measured with these measures. Who use them. Have the children buy and sell quantities of that which is measured by liquid measure.

*Curved Lines.*—Provide the children with short pieces of stiff, yet pliable wire. Ask them to bend the wire into different positions. Have them make similar lines

* EDUCATION BY DOING, BY A. JOHNSON, E. L. KELLOGG & CO.

on the board. Try to have them make all the positions themselves—curved, crooked, broken, waved, spiral, circle, and semi-circle. If they do not do so readily, direct their attention to objects that contain them. Show a ring, arch, spring, draw a spider's web, waves, etc. Refer to straight parallel lines, and then have them make with the wire, and then draw parallel curved lines.

*Form*, (*With Clay.*)—Have each pupil furnished with a small piece of board, and a piece of moistened clay. Have the ball or sphere made first. What kind of surface has it? How many hemispheres can be made of it? What part of a sphere is a hemisphere? How many halves in a sphere? In an apple? In anything? How many faces has it? What kind? What edges? Let them place the two halves together, then press it, and make an oblate-spheroid; then make it round again, and taper one end for an ovate-spheroid. Return again to the sphere, and cut off each side for a cube. Review the shape as to faces, edges and corners. Roll it out for a cylinder, cut off the sides for a square prism; cut in two for a triangular prism. Then form pyramids, cones, etc.

Let them make the shapes of different kinds of fruit, using little sticks for stems; for strawberries they could make little indentures with pins for the seeds. Have a talk about each kind of fruit, and when practicable present the real fruit.

Have a lesson on the bird's nest, and let them mold it in clay, make the eggs, and place them in the nest.

Let them give the names of and talk about little birds that they know.

A great variety of objects can be made and a little lesson on each given. The children may also exercise their own ingenuity and devise many new forms.

*Form*, (*With Paper.*)—Let each child be given some short, narrow pieces of colored paper and cards, or small pieces of paste-board or box-covers, the size of cards. Dissolve five cents' worth of gum tragacanth in a bowl of water, and pour into small butter-plates, placing one plate for the use of two or three children.

The children may paste the papers on their cards, using all the positions of straight lines, angles, and figures enclosed with straight lines which they have learned. The teacher may have these previously drawn upon the board for children to copy.

As it will take many days for them to finish their sets, they may have small rubber bands to slip over their cards; the top card may have the name of the pupil written upon it, so that each child may get his own package each time. When a set is completed it may be laid aside for review, and at the close of the term given to the child.

When the children become expert in this work, they may be furnished with muslin scrap-books, which may be when filled, laid aside for exhibition.

*Geography*, (*Third Year.*)—Have a board 4x5 feet made, with a rim around the edge an inch high. Upon this board, which should be adjusted to a table or desk,

put half a bushel of moulding sand, such as may be had from a foundry; or if this is impracticable, a half bushel of moist loam, sifted, will answer the purpose well. With the use of blocks, toy houses, trees, animals, large and small pieces of looking glass, green tissue paper, narrow blue ribbon or tape, small twigs for evergreen trees, shells, and stones, the principal definitions in geography may be practically and impressively taught.

When the class is small, it is best to have all of them gather around the moulding board; but when the class is large, a part may gather round the board, while the others observe and suggest. The teacher should be careful to give every pupil his proportion of time at the moulding board. In giving an idea of the *sea-shore*, place a large piece of looking-glass on one side of the moulding board, and fill the rest with sand.

Tell the children you will have a talk with them about the earth or world in which they live.

On what do ships sail? On what are houses built? What two things are found on the earth? What have we to represent water on this board? What the land? Who will find the place where the land and water come together? Does anyone know what we call the place where the land and water come together? Give the term coast or shore. When sailors go far off on the water, where do we say they have gone? What may we call this water? What may we call this shore or coast? How many have ever been to the sea-shore? How does the water of the sea taste? If they do not know, place some salt in water and have them taste it. Of what use

is the sea? Speak of the water rising, forming into clouds, and returning in rain, etc. In a similar manner may be considered valleys, mountains, plains, deserts, etc.

THUS, GROWTH, BASED UPON THE ALL-COMPREHENSIVE LAW OF ACTIVITY, OR GROWTH BASED ON EXERCISE UPON APPROPRIATE MATERIAL—THE EXERCISE BEING GIVEN FOR THE PURPOSE OF THE GROWTH, AND ONLY SECONDARILY FOR THE SAKE OF THE MATERIAL—IS THE CENTRAL THOUGHT OF EDUCATION.

# CHAPTER IV.

## THE EXERCISE-GROUND IN EDUCATION.

"Every parent has occasion to say now and then, "I do not know." The surprise of the child on first hearing that there is anything that his parents do not know [illegible] When he has once discovered that his parents [illegible] and this also one [illegible] and that it is [illegible] as they live [illegible] dear to him with [illegible]

The [illegible] and simpleton mind that education has [illegible] * * * * *."

—Harriet Martineau's *Household Education.*

An error frequently made is to demand of the school all kinds of education,—education for trades and business, in religion, in politics, and in habits which the nurture of the family should supply.

Education, in the full sense, includes the whole life of man, in so far as the different institutions of human life react upon the individual and educate him. These institutions are the family, the school, the church, the social community, and the state.

The education that is received by each individual is of two kinds:

1. The education of direct *preparation*, the stage of development and training. (Knowledge being necessarily acquired as it is the divinely appointed exercise-ground, or instrument, but being secondary in consideration.)

2. The education resulting from *use*, the stage of application and acquiring. (Discipline being necessarily advanced, as the mind is constantly acting upon the conditions and materials presented, but not being sought primarily.)

The institutions that are designed to confer the preparatory development and training, are the family, kindergarten and school, and to a degree, the church; while those whose main function is to educate through use are the church, business society and the state. Each of these five institutions gives a special kind of education, which can not be given by any one of the others. Their combined efforts are to make the mere individual the possessor of the fruits of the labors and experience of the human race—to elevate him to his species.

The education that the child receives in the *Family* extends thus far: by example, precept, and sympathy he is trained into good sentiments and habits—habits of behavior toward superiors, equals and inferiors; habits of personal cleanliness, of proper dress, of eating, of drinking, industry, economy, etc. Through these three i.e., example, precept and sympathy, he receives also his primary ideas of right and wrong; by constant familiar conversation, the family develops the child's latent capacity for language, and it develops his power of observa-

tion, and awakens his interest in knowledge, by exercising his intelligence on the things around him. The advantages of the family for discharging its responsibility are chiefly two: indefinite strength of affection between parent and child, whereby the one is impelled to seek the true welfare of the other; and indefinite contact in the daily engagements of life, whereby the parent has the child's actions under his constant inspection with a view to the formation of habits, and has adequate opportunity of intercourse to quicken into life the germs of his moral and intellectual nature.

All the other institutions presuppose in the child that he has learned these great fundamental lessons in the family. If he has not, the other institutions are at a great disadvantage. The school can do but little for him, because it can not well deal with a child who does not know language, and who is not industrious, nor can it take time to teach him all the personal habits he should know. The church will be very much hampered with him, for the spirit of reverence is lacking in him.

The social and business community can not receive the child who comes to it devoid of family training; for he lacks the sense of social propriety, has no respect for the rights of property, is not honest nor truthful, and has no instinct for industry. The beggar is the symbol of the destruction of the social community.

Even the state will of necessity reject him, and be unable to permit him to exercise his liberty, because he lacks the habits which would make him a safe person;

he has not attained the characteristics which are essential to the individual for living in a lawful community. The state imprisons him, therefore,—his period of family nurture, having been an education into hostility to social forms.

The function of the *School* in education, is peculiarly the *development* of the powers of the mind, so that the pupil may have full *use* of them in after life.

PRESENT KNOWLEDGE IS NOT GIVEN EXCEPT IN A SUBORDINATE SENSE, FOR ITS OWN SAKE, NOR WITH A VIEW TO FUTURE PROFESSIONAL OCCUPATION, BUT THAT THE PUPIL WHO HAS GONE THROUGH THE PROCESS OF EXERCISING HIS MIND UPON THE IDEAS—THEY FORMING IN THE FIRST SENSE MERELY EXERCISE-GROUNDS—MAY GAIN THEREFROM THE POWER TO THINK ACCURATELY, FEEL, WILL, AND ACT RIGHTLY, AND HENCE ACQUIRE WITH FACILITY, PRESSING THEREBY TOWARD RATIONAL FREEDOM—THE GOAL.

According to the degree in which it tends to give this power and this disposition, is any branch of knowledge a suitable or an unsuitable instrument for school purposes. The school has a general, not a special design; it does not consider how much of this subject or of that will be required to fit the pupil for such and such a position; but how it can best discipline his mind. The elevation of character implied in the attainment of this end, will better prepare him for the position he may be called on to occupy, than any accumulation of knowledge presented to him from its apparent exclusive adaptation to its requirements.

The *Church* is the highest educational institution, because it reveals the highest principle to man,—that of

the Creator. In revealing this principle, it reveals the origin and destiny of the world of nature, and of man. Under such an education as the religion of Pantheism teaches, there can be only despotism in the state, slavery in the social community, and patriarchal rule in the family. But with the Christian ideal, the individual is all-important, and the progress is toward the education and preservation of each individual.

The education succeeding that of the church, is that of the *Business and Social Community.* This is regarded as third in importance; that of the church being first, of the state second, of the family fourth, and of the school fifth. In this sphere, the business relation of man to his fellow men, continually educates the individual, and humanizes him, or degrades him, according as his employment is rational or the reverse.

As before said, the education of the *State* ranks in importance next to that of the church. The influence of the form of government, its laws and the efficiency of their execution, have a most powerful effect in forming the character of each citizen. What can school education do toward making a man of the child who is born under the blight of absolute despotism? The education of the state would dwarf such an individual more than the school could cause him to grow. But under a free government, where each citizen is permitted to assist in making the laws, this education is very powerful toward building up self-respect and strong individuality.' *

* W. T. HARRIS.

Show that each of these institutions is an *organism*, and that each is an organic part of a greater organism—the *Social System*.

Make it clear that the purpose of the social system is *rational or truth-freedom*.

Of these five educational institutions, the one that claims specific consideration, in this connection, is *The School*, involving first a treatment of its vestibule—*The Kindergarten*.

# *CHAPTER V.*

## *THE KINDERGARTEN.*

THOSE that do teach young babes,
Do it with gentle means and easy tasks.
—SHAKESPEARE.

That which issues from the heart alone
Can bind the hearts of others to our own.
—GOETHE.

"Die Kindheit von heute
Ist die menschheit von morgen."

### *THE GENESIS OF THE KINDERGARTEN.*

No inquiry, however brief or imperfect, into the genesis of an educational system, for which so much is claimed as for Froebelism, can be altogether without use. Nothing can be rightly understood but by considering its connection with other things, since "to understand" is to perceive the *relations* of ideas. Indeed, to limit one's attention to Froebel's method itself, without ever attempting a more comprehensive view, is like-

ly to contort rather than intensify the mental vision. In the intellectual firmament, reflected light plays as important a part as in the physical.

All systems may be said to have descended from previous ones. Of thought, which is a product of life as of life, there is no spontaneous generation. The ideas of one generation are the mysterious progenitors of those of the next. Each age is the dawn of its successor, and in the eternal advance of truth.

> *There always is a rising sun,*
> *And day is ever but begun.*

It is thus true that there is nothing new under the sun, since the new grows from the old, as boughs grow from the tree; and though errors and exaggerations are, from time to time, shaken off, yet "the things which cannot be shaken" will certainly abide.

Carlyle says, "Literature is but a branch of religion, and always participates in its character." It is still more true that education is a branch of psychology, and takes its mould and fashion from it. For it is evident that as philosophy, in successive ages, gives varying answers as to man's chief end and *summum bonum*, so education, which is simply an attempt to prepare him thereto, must vary accordingly. Humboldt hints that the vegetation of whole regions bespeaks, and depends on, the strata beneath; and it is certainly true that we cannot delve long in the teacher's plot without coming upon those moral questions which "go down to the centre."

1. The dawn of the New Education arose after the

night of the middle ages. During those long centuries, in education, obedience without intelligence was the pupil's dreary task, and self-denial without love his ideal of Christian duty. The "dim religious light" of the Church gave hardly a glimpse of the beautiful world of Nature without.

2. On this "opaque of nature and of soul" the light of the New Learning broke in. Men's eyes were suddenly opened to see "a beauty that was Greece, and a grandeur that was Rome," and to reverence once more the wisdom and piety of the classic past. A more eclectic intellect, a more genial sympathy, a more Hellenistic conception of life came upon Western Europe, and,

> *Thus deeply drinking in the soul of things,*
> *They became wise perforce.*

Education changed accordingly. It began to recognize that man has to be trained for this world as well as for the future one; that though the way to heaven is strait, "not *every* strait way leads there;" and that in Physical Nature's vast museum was offered a field more worthy of man's faculties than the wandering mazes of scholasticism.

3. Strange to say, however, the Spirit of the Reformation suffered an early divorce from that of the Renaissance, and in the hands of the Protestant, on the one hand, as of Jesuits on the other, education crystallized, or rather congealed, into methods, WHICH FOR TWO HUNDRED YEARS HAVE BEEN USED BY ALL TEACHERS, AND CONDEMNED BY ALL REFORMERS. The publication of Rousseau's *Emile* was a protest, and its date marks the next

great epoch. Rousseau demanded that man should be treated as an organism, and that education should be a development of all the faculties of that organism. He discarded the prejudices of society and the dogmas of authority, and took as his watchwords, Nature, Reason, and Individuality.

4. But the crude audacities of the French philosopher had, after the Revolution, to be disentangled and woven into order by German labor and insight. How the philosophy of Kant or Hegel contributed to the result, we would not attempt to trace out. But notably from the fertile and sympathetic mind of Richter came forth in full luxuriance the ideas which Froebel plucked and arranged with such discernment. Richter delighted to preach the doctrine of an ideal-Man, and that education is the harmonious development of the faculties and dispositions of each *individual.* He would give ample scope especially to the fancy and imagination of a child, in whose hand "the simplest wand is like Aaron's rod which budded." No one, moreover, knew better than he, that (in Carlyle's words) "A loving heart is the beginning of all knowledge. This it is that opens the whole mind, and quickens every faculty of the intellect to do its fit work."

5. Inspired by the same *principles*, Pestalozzi and Froebel devised their *methods.* Pestalozzi may be styled the father of *popular* education. He would develop the human being from within outward; would give primary importance to the receptive and perceptive faculties; and held self-activity to be the great condition of pro-

The tables are three feet by eighteen inches, ruled in inch squares; or six feet by two feet, with a line one inch from each edge.

The reason for these measurements?

In the kindergarten are the head teacher, a mature woman, and young girls, one for each class of ten or twenty.

These young girls are as older sisters to the pupils, and take a loving and intelligent interest in all that concerns them. They carry into execution the plans of the head teacher, and consult with, and are advised by her upon all points.

What two reasons are there for the employment of young girls in the kindergarten?

The apparatus devised for the kindergarten consists of balls, wooden cubes, paper, and various other materials that allow the children to exercise their physical powers and their imagination.

The occupations with these gifts are strictly graded, and by means of them the children become somewhat familiar with the elements of music, form, number, size; the properties and uses of objects; language; and the beginnings of moral training.

Show in what way each of the above points is gained.

The occupations having been pursued for a time, the children repair to the large room for games. These games have a three-fold object:

To give physical exercise.
To call into exercise the imagination.
To cultivate the moral nature.

How in the games may these objects be accomplished?

The games of the kindergarten are founded on the observed habits of children. They have specifically, in relation to the body, a two-fold purpose:

To give exercise to the voice and body in general.
To train some particular sense or muscle.'*

## *GIFTS AND OCCUPATIONS.* †

Kommt, lasst uns unsern kindern leben.
—FROEBEL.

Froebel, adopting the principle of Comenius, that nature does nothing *per saltum*, held that education should be so conducted that it shall have no abrupt transitions.

It is to be expected, therefore that each step in the occupations shall be a logical sequence from the preceding. Such is the case. The various occupations are developed one from another in a perfectly natural order, beginning with the most simple and concluding with the most difficult. Taken together, therefore, they satisfy all the demands of the child's nature in respect both of physical and mental culture, and lay a sure foundation for all subsequent education of school and of life.

*KINDERGARTEN MANUAL. BY J. S. LAURIE. †KINDERGARTEN HANDBOOK BY F. A. STEELE.

*Systematic work, though apparently slow, is always economical in the end*, as it avoids the waste of time and power which is incurred in finding and connecting the lost threads of unsystematic work. Thus, a sure basis in lessons and exercises on *Form* will prepare for a study of those branches in which a knowledge of form is required, as geometry, drawing, geography, etc.

In the kindergarten the children's work begins with materials that are *whole*, *substantial*, and *undivided*, and proceeds to *parts*, to the *less substantial*, and to the *divided*. The first are more easily seen, are more tangible, and therefore plainer to the capacity of the young child. Hence the solids form the first group of the occupations. These are followed by planes, which form the basis for several series of occupations and designs.

The lines, which are the edges of the surfaces, become the next material. From the line, the passage is to the point, represented by the end of the line, and appearing in the occupation termed pricking. In this the points are holes, which are ranged in rows or lines, and thus lead again to the outline of a surface. In the reverse order the surface ascends to the solid, and the circle of consecutive occupations is thus completed.

The kindergarten occupations would therefore develop in the following order:

1. Solids—ball, cube and cylinder—gifts one to six.
2. Surfaces—Wooden and paper planes.
3. Lines—sticks, lines drawn on slates and paper, rings, thread.

4. Points—produced by pricking, or represented by peas in peawork.

Ascending from points to lines and surfaces, solids are reached, which may be given to the children in an unfinished condition, or as shapeless material, so that they may make their own solids, with clay and other plastic materials.

*FIRST GIFT.*

The first gift consists of six worsted balls of the rainbow colors, with strings attached. It is said that Froebel selected the balls as the first gift because he wished to found all the toys used for his games upon a mathematical basis, and because the spherical shape of the ball is the simplest and most perfect form of all solid objects, and is that in which all other forms are contained. They became the first gift also because he noticed that a ball is the first object a mother gives to her child as soon as it is able to play, and because it seems to be a favorite even with large children.

In compliance with the principle that in education there should be no abrupt transitions, it is to be expect ed that this first gift forms the connection between the family and the kindergarten.

By its use in the family the child learns the primary and the secondary colors and to express himself in correct language concerning the various powers and movements of the ball. In the kindergarten he finds his old gift exhibiting new powers in the hands of numbers instead of one. If the child is timid, he is allowed to

observe the game or occupation until he shows a disposition to join it. This is on the principle that *no forcing it to be attempted*, but that the teacher is to *watch for the first sign of inclination*, and then call it into exercise.

The balls are taken out for use somewhat as follows:

All stand in a ring, and the balls are brought out by some of the children chosen from those who volunteer, and they are handed gently from one to another until all are supplied.

The advantage of this?

The following may be given as specimen exercises with this gift:

The children by direction hold the balls above the head, in the right hand and then in the left.

Again the ball is held in both hands in front of the body, and then gently raised above the head, and lowered to the floor, etc.

What is gained by the first exercise? What by the second?

When some skill has been gained in these exercises but before the children are wearied, the teacher tells some little story which the movements illustrate, as, the balls represent birds picking up crumbs from the ground and carrying them to their young; or they are the cargo of a boat and the children are handing them up to men in a ship, etc.

Then a song is sung in which the balls are spoken of as birds, cargoes, etc.

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The balls having been given out as usual the teacher finds that here is, for example, a red one. She asks how

many have balls of the same color, who can point out anything of the same color in the room, name things of the same color in the room, name things of the same color out of doors, at home, etc. A timid child is asked to show his ball and the same kind of work is taken with it. After a consideration of color, number is considered by having the balls of different colors counted as held; then all of one color, e.g., green, placed in a circle and counted; a circle of another color placed outside of that and counted; then both counted, etc.

The balls are placed and retaken in perfect order, and songs and stories accompany the exercise as before.

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The children stand side by side in the circle and at the word of command or song, as,

> 'The soft ball loves to wander
> From one hand to another,'

pass the ball from the right hand to the left and from the left to the next child's right, thus each receiving the ball of each and passing it on. The ball may be imagined to be other things, as a child, a bird, etc. In which case the song changes to 'The little child loves to wander,' etc.

In regard to exercises it is to be understood that both the teacher and the pupils are to frequently invent them, governed by the following thoughts:—

1. The various parts of the body, both singly and in combination are to be exercised in a gentle, graceful manner without undue fatigue.

2. The appropriate moral and intellectual faculties are to be called into use and trained by arousing the dormant ones and directing any that are taking the wrong direction into right channels.

3. The exercises are to be linked to previous work in order to bring in the element of association.

What advantages arise from having the pupils invent exercises?

This gift may form the ground work of exercises in language upon various topics.

For example, the children may be led to express freely the qualities, actions, and changes of position of the ball; to imagine the ball with its string to be a pendulum and enter into a conversation concerning clocks; to suppose it to be a potato or apple, and themselves to peel, cook and place it in a plate upon the table, after which they converse concerning manner of holding the spoon, knife and fork, and other points in table etiquette.

Again, the ball may be imagined to be a grape, currant, cherry, etc., and may thus open the way to a conversation about the vine, bush, or tree; or it may be imagined to be a seed in the ground, and the sprouting of seeds may be talked about. These topics would naturally lead to conversation and songs concerning the gardener and his work, Spring, Autumn, etc.

The ball may also be imagined to be a bird and held in the hand as in a nest. This may lead to a conversation about birds, their homes, habits, etc. Or the ball

may be thought to be an egg in the nest, hatched, and the young bird cared for and taught to fly, etc. Thus the children acquire a real interest in animals and their habits—the true foundation of a reverence for life and living things.

How may this last theme tend to develop reverence for the Creator and His highest creation—man?

It is to be understood that the range of subjects suitable for language exercises is by no means limited to these suggested, nor to this gift. The aim is to show that this—the most simple gift—is, in the hands of a thoughtful, sympathetic teacher, fitted to cultivate the hand, senses, and voice; and to call forth the idea of number, language, the power of imitation, sympathy, politeness and reverence.

Among rhymes suitable may be given the following:

1. For the directions—

"Look! the balls swing to and fro;
Ne'er too fast, ne'er too slow,
Swing to left, swing to right,
Swing together in our sight."

2. For plants—

"Winter's storms and frosts are over,
Trills the lark at early dawn;
Guelder-roses, springtime's snowballs,
Scatter snow-flakes on the lawn."

3. In connection with themes to awaken reverence—

"We sow the seed in early spring,
When the rain comes mild and sweet;
It lies safe hid from the chilly rime,
From the stormy wind and sleet.

"It grows, and it spreads its tiny roots,
In the earth so cool and light;
But ever its buds and leaves look up
To the sunshine, warm and bright.

"So does our Maker plant us here
In the world, to live and grow;
Let us, like the flower, look up to heaven,
Though set in the earth below."

How does this gift supplement and react upon the family and its training? How does it prepare for the school? In what work of the primary school may this gift be used to advantage?

*SECOND GIFT.*

The central thought in the first gift is *color;* in the second, *form.*

Is this in accord with natural development?

The principle that there is to be no abrupt transition, but a gradual procedure from simple to complex, prepares the mind for the second gift—the wooden ball, cylinder, and cube—in which is exemplified clearly an object, its opposite and their mediative.

What training may be gained in taking out the gift? Determine a set of directions.

The first work in the second gift is the comparison of the hard with the soft ball. In this comparison the children learn the meaning of such words as light, heavy, hard, soft, rough, smooth, etc. As to sound, the hard ball will be found to produce a sharp sound, when it strikes upon the table; this will suggest to the imagination a hammer, or some other solid tool, and may lead to imitation of, and conversation concerning the work of blacksmiths, tinsmiths, carpenters, etc. The children

should be led to see what the soft ball is best fitted to do and what the hard, together with the reason.

After a comparison of the two balls, the study of the cube is commenced. It is found that while the ball moves readily, the cube does not, and this fact is fixed by some such expression as the following:—

"This is the ball that runs away,
This is the cube sitting still all day."

The children are then led to point to the different faces, edges and corners and to give them their names; they are then counted, after which the ball and cube are compared in respect to these characteristics. The edges and faces are then measured and the result fixed in the mind. In this work the children become familiar with the terms height, breadth, and depth.

At all stages the idea being considered is viewed in connection with familiar objects, as when speaking of points (corners) and lines, they are to be pointed out in the room, in nature, etc.

The cylinder is then to be compared with the cube and the ball.

What points of likeness and difference will be found?
What work may be done with the axes and diameters of the ball, cube and cylinder? How?

In this gift the child gains some elementary conceptions in regard to motion and resulting appearance.

In what way may the gift lead to this?

As in gift one the imagination is called into exercise at every stage. Thus, the cube may be imagined to rep-

resent a house, table, sheep, etc.; the cylinder, a roller, a man, etc.; the ball, a wagon, train, mouse, etc.

The cube with a stick placed upright in it, may represent a fort with a flagstaff, and supplying a paper flag the children are led to converse concerning a fort, its use, and those who live in it; a cube with a stick in it may also form a carpenter's mallet, and thus lead to a familiar talk about the carpenter, his tools and his work. A song of the carpenter and his useful labors may be sung, and his motions imitated.

The imaginative exercises of this gift may be much extended. The progress of the child is as follows:

1. He observes places and persons present.
2. He becomes able to think and speak of them when they are absent.
3. By means of what experience has shown him of distance and persons, he is able to think of places and persons that he has never seen.

The construction work of gift two should give this natural growth such exercise as shall systematically develop the powers of mind, and at the same time give the child valuable physical and moral truths.

Exercises such as the following will tend to do this:—

A short stick with a paper sail converts the cube into a boat, and a sail may be taken along a river, thus furnishing the occasion for a conversation upon the river, its waters, its banks, fish, etc.; or the boat may be made larger, called a ship, and launched for an ocean voyage. The imaginary voyage will form the ground for talks on storms, waves, sea-birds, icebergs, etc.

Voyages may be made to Holland, Spain, Brazil, Cuba, etc., obtaining from each its principal productions. The relative distances to these regions is to be indicated by the time occupied; and the cargoes form subjects for object and language lessons.

After the children have become familiar with the idea of journeys and voyages to distant places, by connection with objects in common use, they may be led to picture these places in imagination, and thus lay the foundation of geography. The ship's voyage along a coast may be imagined, the character of the coast pictured, and the towns described and named. Pictures from geographies and periodicals will aid much in this work. The imaginary track of the ship along a coast may be traced upon the board, or in moulding sand; by such work the outline of a region may be made familiar, and the use of a map learned. This work should be accompanied by lessons on place, distance, measurement, etc.

Several children may combine to build with their gifts. A square may be formed of four cubes; on these two or more cylinders may be placed to represent a factory chimney, monument, telegraph-post, light-house, etc. A conversation is thus prompted concerning those who are employed at such places, what they do for us, what we should do for them, etc.

How does this gift supplement and react upon the family and its training.

How does it prepare for school?

In what work of the primary school may this gift be used to advantage?

*THIRD GIFT.*

The purpose of the third gift is to train the mind and the hand by means of exercises in form, number, construction and design. The gift is a two-inch cube, divided once each way so as to form eight one-inch cubes. This gift forms a contrast to the second gift, inasmuch as in this one the whole is divided, while in the other the cube, sphere and cylinder are, each, undivided wholes. The connecting link, or mediative, is the cube-shape of the third gift.

At about three years of age a child shows a wish to ascertain the *cause* of things. It attempts to take objects to pieces, and to alter their form in order to discover new peculiarities in, and fresh applications for them. After examining their exterior forms, it wants to see their interior, and by putting the parts together, either to restore them to their original form, or to form something new. This is the reason why a child of that age is in the habit of breaking to pieces its toys, and of preferring to play with the pieces rather than with the whole toy; and for that reason the divided cube is provided at this stage, since, while it satisfies this desire, it is not easily destroyed.

With this, and with the succeeding gifts, forms of *knowledge*, forms of *utility* or *life*, and forms of *art* or *beauty*, are produced. Forms of knowledge are the mathematical forms. Forms of utility are those used in real life, as the chair, table, sofa, bedstead, etc. Forms of art are creations of the imagination, including espe-

cially symmetrical forms, such as architectural designs, designs for carpets, wall paper, etc.

As in the second gift the taking out and the replacing of the gift form exercises of great value.

Prepare directions for taking out, and for replacing.
What is to be gained by such exercises?

The work with the third gift consists mainly of exercises in:

Comparison in form.

Number.

Construction or building.

Designing.

The first exercise is to examine, measure, describe and name the gift. All points of likeness and difference as compared with the second gift are then discovered and stated.

The work in number is mainly counting. It is taken somewhat as follows:

1. There being ten gifts upon the table the pupils first touch and count all the faces, corners, and edges of each cube; and secondly, count the cubes thus: one, two, three, etc., to ten; and ten, nine, eight, etc., to one, each pupil touching and counting his own.

2. The left half is drawn away from the right half by each pupil, and the parts are compared as to size and each part compared with the whole as to size and number. The term *half* is then applied.

3. The halves are counted to twenty and then back to one, by ones and by twos, as one half, two halves, three halves, etc.; twenty halves, nineteen halves, etc.

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2. The left half is drawn away from the right half by each pupil, and the parts are compared as to size and each part compared with the whole as to size and number. The term *half* is then applied.

3. The halves are counted to twenty and then back to one, by ones and by twos, as one half, two halves, three halves, etc.; twenty halves, nineteen halves, etc.

4. Work as in "3," modified by the removal of the first half. Thus, one, three, five, etc; nineteen, seventeen, fifteen, etc.

5. The midway point is made the starting point, and the number of ones and of twos, from that point to either end is found by counting.

The cube is then divided into fourths, and the five kinds of work taken with fourths; after which the division is made into eighths, and the division followed be similar exercises.

Indicate the points of knowledge that the children will gain from these exercises. The kind of discipline. How may this gift be used in connection with square and cubic measure?

The work in construction, or building, is to be in conformity to certain rules:

1. Each construction must be gradually developed from the cube.

2. In each building all of the cubes must be used.

3. Every structure that can be produced by the removal of one cube, is to be constructed before one is built requiring two cubes, etc.

4. Each structure must be gradually re-formed into the cube.

These rules are based on what principle of education?

There are three kinds of work. One in which training is given to the powers of observation, imitation, imagination and language. Another in which training is given to the powers of memory, imagination and language. A third, in which the main thought is the development of the social nature.

In the first case, the teacher or a pupil builds a structure, the pupils imitate, and a conversation is had concerning it.

In the second case, the teacher names the structure, the pupils make it and the conversation follows.

In the third kind of work a child is allowed to build as he chooses, and often requires more than his eight cubes. When this occurs, the other children are led to assist by lending the cubes required, while the one building is taught to accept the help gracefully, to return the cubes as soon as he is done with them, and to be ready to assist others in like cases.

In another form of this exercise, one child is the architect, while the rest act as laborers.

What things are gained by these last exercises?

In designing, the same rules apply as in building. Designing differs from building in that in the first the cubes form only one layer on the table, making patterns, or forms of symmetry. Everything is developed from the square, and all designs that can be made by the moving of the upper square are completed before the lower square is moved. Each move is as slight as possible, and always by exact measurement.

The principle of teaching involved in these rules of designing?

How may music be taught by means of the third gift?

How does this gift supplement and react upon the family and its training?

How does it prepare for the school?

In what work of the primary school may this gift be used to advantage?

*FOURTH GIFT.*

This gift, like the third, is a box containing a cube divided into eight equal parts. The parts are not cubes, however, but are oblongs, each measuring two inches in length, one in width, and one-half of an inch in thickness.

The difference between this gift and the previous one lies in the *form* of the parts, and the likeness in the *number* of the parts.

Indicate the difference.

The mediative of gifts three and four is seen when two cubes of the third gift are placed together so as to form a rectangle; the rectangle is equal in length and width to the tablet of the fourth gift, and in width and height to a cube of the third. The mediative also exists in either gift—both forming when wholes, cubes of equal size.

The work with this gift is similar to that of gift three: comparison, number, building, and design.

The same exercises are taken in number as in the previous gift, and the fractional names, half, quarter, eighth, are applied to the new divisions of the cube.

What is the effect of continuing similar exercises with different forms?

The forms in building are, as before, those of knowledge, utility, and beauty. The forms differ considerably from those produced with the cubes, and give rise to conversations concerning a greater range of subjects.

For instance, two or more slabs leaning against each other form a tent.

This introduces a conversation about those who live in tents, why they do so, where the tent is usually pitched, etc. The children may, then, in imagination, travel with some Arab family; or have told to them the story of Gemila, the child of the Desert—one of The Seven Little Sisters; or consider some early Bible story.

Three or four slabs will form a cavern, and thus lead to a talk concerning caves. If the contents of several boxes are combined, buildings of increased size and complexity may be produced. Thus, a farm with its yards, stables, cow sheds, barn, carriage house, etc., may be represented. The name and use of each part, the habits of the animals, etc., are considered. A shop or manufactory may be treated in the same manner. If each tablet is made to represent a store or shop, a street may be represented, and the children may be led to converse as to the contents of the stores, their prices and uses, where and how obtained, etc.

In designing the oblongs are laid flat and symmetrically. The rules for designing, as well as those for building, are the same as for gift three. The peculiar powers of the oblong, as distinct from those of the cube, arise from the fact that it has narrow sides and ends, and that it may be made to stand on either of these. If upon the narrow edge of one tablet, another is put upon its broad side, the law of equilibium is illustrated; if all of the tablets are arranged in a row, with a small space between each two, so that should the first

one fall, all the others will also, the law of transmitted motion is shown.

This gift affords an admirable opportunity for the legitimate exercise of the child's natural propensity to knock over or down its play things and buildings. This propensity is, of course, to be kept within bounds, and regulated; but within its bounds it is to have due exercise.

The act of upsetting buildings and playthings may involve what different feelings?

How should the propensity be treated?

How does this gift supplement and react upon the family and its work?

How does it prepare for the school?

In what work of the primary school may this gift be used to advantage?

*FIFTH GIFT.*

All the gifts, as previously indicated, develop from one another. The fifth gift, like the third and fourth, is a cube; but for convenience it is larger than the previous ones. The cube of the third gift is divided *once* in all directions. The natural progress is from 1 to 2; hence, the cube of the fifth gift is divided *twice* in each direction. The result is twenty-seven cubes of equal size. But as this division would only have multiplied, not diversified the occupation material, it was deemed best to introduce a new element, by subdividing some of the cubes in a slanting direction. Heretofore, only perpendicular and horizontal lines have been used. These opposites, however, require their meditative; and this meditative has already appeared in the forms of life

and of beauty in the two previous gifts, when side and edge were made to touch.

The slanting direction appearing in that manner incidentally, becomes here permanent by introducing the oblique line by a division of the cube. Three of the small cubes of the fifth gift are divided into half cubes, and three into quarter cubes, so that there are twenty-one whole cubes, six half cubes, and twelve quarter cubes—constituting a gift of thirty-nine pieces.

The first practice with this gift is like that with the others introduced thus far. The gift is measured. It is then compared and contrasted with the other gifts in all points. The children then deal with number in connection with it—the gift obviously affording a wide field.

By these exercises the child becomes familiar enough with the gift to employ it for the production of various forms of use, beauty and knowledge, in building and design.

The main condition in these last exercises, as before indicated, is that for each representation the whole of the material is to be employed; not that only one object should be built, but that having built one structure, the remaining pieces, if any, are to be used so as to represent accessory parts. The child should be constantly reminded that nothing belonging to a whole can be superfluous. Nor should it be forgotten that nothing should be destroyed, but everthing produced by rebuilding. It is advisable to always start from the figure of the cube.

How does the gift supplement and react upon the family and its work?

How does it prepare for the school?

In what work of the primary school may this gift be used to advantage?

*SIXTH GIFT.*

As the third and fifth gifts form an especial sequence of development, so the fourth and sixth are intimately connected with each other. The sixth gift contains twenty-seven oblong blocks of the same dimensions as those of the fourth gift. Of these twenty-seven blocks, eighteen are whole, six are divided breadthwise, each into two squares, and three by a lengthwise cut, each in two columns, altogether making thirty-six pieces.

This gift differs from the fifth in the shape and in the number of the parts, and in being capable of being made into a greater variety of forms of perception, of utility, and of beauty or art. The sixth gift completes the groups of *bodies*, the succeeding mediums of occupation representing *surface*, *line* and *point*.

The succeeding exercises are: Pattern-laying with wooden planes; paper-folding; paper-cutting; lath-platting; stick-laying; ring-laying; thread-laying; construction with sticks and softened peas; paper-plaiting; paper-pricking (not much used); stitching; drawing; coloring; modelling in clay.

The relation existing between the kindergarten and other education is shown by the following diagram, adapted from the table by A. De Portugall:

- **First fundamental form—The Ball.**
  - Ball games (soft balls)
  - Ball games (hard balls)
  - Gymnastic games
  - Language—Stories
  - Singing—Rhythm
  - Modelling
  - Colors
  - Gymnastics
  - Knowledge of Native Place
    - Natural History
    - Geography, Cosmography
    - General History
    - Mother Tongue
    - Grammar
    - Reading
    - Writing
  - Music
  - Natural Science
    - Astronomy
    - History
    - Literature
    - Philology
    - Music
    - Sculpture
    - Painting
  - Science
  - Fine Arts
  - Philosophy
- **Second fundamental form—The Cube.**
  - Points
    - Threading beads
    - Pricking
    - Pea-work
    - Embroidery
    - Stick-laying
  - Lines
    - Linear drawing
    - Laths—Paper-twisting
    - Pasteboard and buttons
    - Paper-plaiting
    - Paper-cutting
    - Paper-folding
  - Surfaces
    - Planes of wood
    - Card-board work
    - Building
    - Modelling
  - Solids
  - Arithmetic† and Needle work
  - Drawing and Calligraphy*; Needle work
  - Geometry† and Arithmetic†
  - Drawing and Calligraphy*; Needle work
  - Geometry† and Needle work
  - Drawing and Calligraphy*
  - Drawing, Calligraphy*, Arithmetic†, Needle work
  - Drawing and Calligraphy*
  - Geometry†
  - Geometry†
  - Geometry†
  - Arithmetic—Geometry†
  - *Painting
  - †Perspective
  - Fine Arts
  - Philosophy
- **Third fundamental form—The Cylinder.**
  - Solids
    - Modelling
    - Cardboard work
  - Surfaces
    - Paper cutting
    - Paper folding
  - Lines
    - Metal Rings
    - Thread laying
  - Geometry
  - Needle work, Drawing and Calligraphy*
  - Drawing and Calligraphy*, Arithmetic, Needle work, Drawing and Calligraphy*
  - Geometry
  - *Drawing
  - Arithmetic
  - Mathematics
  - Science
  - Philosophy

Harmonious Development.

# *CHAPTER VI.*

## *THE SCHOOL.*

"WHAT you would put into the life of a nation you must first put into the schools."

"What constitutes a State? Men, high-minded men; men who their duties know, and knowing dare perform."

### *THE GROUND OF THE SCHOOL.* *

THE state may be viewed as including the family and civil society. It may be viewed as a means whereby the family and civil society are possible; as the agent which creates, defines and protects them. But the existence of these institutions in any degree of perfection, is made possible to the people through the training given in obtaining possession of literature, science and art.

Take from the people the training given in obtaining knowledge of the common branches and they would be not merely children, but barbarians. All the evidences of civilized life would be as difficult to interpret as were the ships of Columbus to the Aborigines.

* WM. A. JONES.

The necessity for universal education may be seen from the following suppositions:

1. Deprive one of his *skill obtained in gaining a knowledge of geography*, and of his knowledge of the subject—the science which frees him from his limits in space; the science which teaches him a rational conception of the earth and his relations to it; deprive him of this skill and knowledge, and the earth becomes to him that extent of territory which he has actually perceived.

2. Take from one his *development obtained through a knowledge of history*, the subject that frees him from his limitations in time, and reveals to him the struggle of the human soul towards its goal—freedom—the subject which reveals to him the antecedent events which he has unconsciously taken up into his own life; take from one the result of this knowledge and he is limited to the events of his own narrow observation.

3. Take from one his *discipline arising from the effort to gain a knowledge of arithmetic*, and the knowledge, necessarily thus acquired, and it is impossible for him to effect exchanges except in a sensuous equivalent; such a thing as a note of hand, a bank note, or a bill of exchange is an incomprehensible object to him.

4. Take from one his *ability to read*, and he is limited to the narrow range of his own experience.

The rich treasures of the past are his only who takes possession of them.

From these few statements it may be seen that the very existence of a highly civilized state is conditioned on the universal education of the people.

Universal education in the wide sense in which it has been defined, is the means by which the people may attain their destiny—freedom.

The state is created as a special institution whose end is "to ascertain, define, and enforce what is right and to prohibit what is wrong."

The state in the exercise of its functions creates the school as a necessary means for the education of all: for giving that education, intellectual and moral, which will enable the individual to join himself to the various parts of the social organization, and to participate in the substantial enjoyment of the freedom which they afford.

The ground of the school is *the necessity of the people for training* by employing the elements of learning as an exercise-ground. The state creates the school as a means to meet this necessity—a necessity which no other institution can meet.

## *THE IDEA OF THE SCHOOL.*

This will be presented under form and purpose.

### *FORM.*

As an institution created by the state, the school must have a legal form. This form is delineated in the whole body of school laws of the state.

1. The form of the school in Indiana is called "The School System of Indiana."

*a.* Common School System.
- (1) Ungraded Schools.
- (2) Township Graded Schools.
- (3) Town and City Schools.
- (4) Indiana State Normal School.

- *b.* University System.
  - (1) State University.
  - (2) Purdue University.
- *c.* Special Schools.
  - (1) Charitable
    - (*a*) School for the Blind.
    - (*b*) School for Deaf Mutes.
    - (*c*) Soldiers' Orphans' Home.
  - (2) Reformatory
    - (*a*) Girls' Reformatory.
    - (*b*) Boys' Reformatory.

2. The common school system is administered by the following officers:

- *a.* General Officers.
  - (1) State Superintendent of Public Instuction.
  - (2) Board of Eduction
    - (*a*) Governor of State.
    - (*b*) Superintendent of Public Instruction.
    - (*c*) Presidents of State University, State Normal and Purdue University.
    - (*d*) Superintendents of schools of the three largest cities of the State.
- *b.* Special Officers.
  - (1) In Ungraded Schools.
    - (*a*) County Superintendent.
    - (*b*) County Board of Education.
    - (*c*) Township Trustee.
    - (*d*) Director.
    - (*e*) Teacher.
  - (2) In Township Graded Schools.
    - (*a*) Township Trustee.
    - (*b*) Teacher.
  - (3) In City and Town Schools.
    - (*a*) Board of Trustees.
    - (*b*) City Superintendent.
    - (*c*) Teachers.
  - (4) In State Normal School.
    - (*a*) Board of Trustees.
    - (*b*) President and Faculty.
  - (5) In State University.
    - (*a*) Board of Trustees.
    - (*b*) President and Faculty.
  - (6) In Purdue University.
    - (*a*) Board of Trustees.
    - (*b*) President and Faculty.

STATE SUPERINTENDENT.

1. Election: At a general election by the qualified voters of the state.

2. Time of taking office: Fifteenth day of March succeeding his election.

3. Term of office: Two years.

4. Office how filled in case of death, resignation, or removal: By appointment by the Governor of the State.

5. Duties of office:

*a.* Takes general charge of the schools of the state and supervises the management of the school funds and revenues.

*b.* Visits every county once in two years, confers with officers, and makes public addresses.

*c.* Receives reports concerning proceeds of state school tax, and interest on school fund from County Auditors, and statistical reports from County Superintendents.

*d.* Apportions the school revenue for tuition to counties in proportion to the number of school children therein.

*e.* Hears appeals from decisions of County Superintendents, and gives opinions concerning the school law.

*f.* Makes annual reports and causes school law to be published.

*g.* Is Trustee of the State Normal School, and President of State Board of Education.

STATE BOARD OF EDUCATION—DUTIES.

The Board forms an advisory council of the State Superintendent. It issues instructions to County Su-

perintendents, and prepares questions for the use of County Superintendents in the monthly examination of teachers.

It examines candidates for state license, and issues certificates for life to such as are competent and have had forty-eight months successful experience.

It appoints trustees of the State University, and the visitors to the State Normal School. It commissions High Schools to send graduates to State University, Purdue University, and State Normal School without examination.

COUNTY SUPERINTENDENT.

1. How appointed: By the Township Trustees at a meeting held at the County Auditor's office on the first Monday in June.

2. Term of office: Two years.

3. Duties:

*a.* To examine all applicants for license as teachers of the schools of the state by a series of written or printed questions.

*b.* To hold at least one public examination in each month of the year.

*c.* To revoke, when required, licenses granted by him or his predecessors.

*d.* To take general superintendence of the schools of his county.

*e.* To attend each Township Institute at least once in each year.

*f.* To encourage teachers' institutes and associations, and to labor in every practicable way to elevate

the standard of teaching, and to improve the condition of the schools.

*g.* To constitute the medium between the State Superintendent and subordinate school officers.

Any questions arising about the school law, the opinion of the County Superintendent should first be sought, whence an appeal may be made to the State Superintendent, on a written statement of facts certified to by the County Superintendent.

*h.* To at all times carry out the orders of the State Board of Education and State Superintendent of Public Instruction.

The County Board of Education is composed of the following persons: County Superintendent, Trustees of the townships, Presidents of the School Boards of the several towns and cities of the county.

TOWNSHIP TRUSTEE—DUTIES,

1. He shall receive the special school revenue, and the revenue for tuition.

2. The Trustee shall employ and contract with teachers, but he has no power to engage a teacher without a license properly issued and in full force at the date of the employment.

3. The Trustee is personally liable for the wages of a teacher for services rendered under his contract without examination.

*PURPOSE.*

The purpose of the school is to give strength and training to the will and sensibilities—*ethical conduct;* and to

confer knowledge, *by employing it as an instrument of moral and intellectual training—mechanical conduct and scholarship.*

Conduct may be defined, in general, as the manner in which one bears himself in relation to The Infinite, to himself and to others.

In its endeavor to confer conduct, the school seeks to prepare the pupil for self-conformity to the standard of action in each of these relations.'

# *CHAPTER VII.*

## *CONDUCT.*

WILL. SENSIBILITY. INTELLECT.

LIFE is three-fourths conduct: one-fourth knowledge.

MATTHEW ARNOLD.

THE reward of one duty performed, is the power to fulfill another. The idea of *duty*, that recognition of something to be lived for beyond the mere satisfaction of self, is to the moral life what the addition of a great central ganglion is to animal life. No one can begin to mold himself on a faith or an idea without rising to a higher order of experience: a principle of subordination, of self-mastery, has been introduced into his nature: he is no longer a mere bundle of impressions, desires, and impulses.

GEORGE ELIOT.

### *CONDUCT IN RELATION TO THE INFINITE.*

IN so far as the school takes a part in grounding the child in his duty in this relation, it is usually through the medium of the devotional exercises of the school.

The work of the opening exercises may be viewed in two ways:

1. As intellectual.
2. As moral.

As intellectual it is subject to the same laws as other branches of instruction. The child will not attend to the instruction with the reverence due, merely from its

own pre-eminent importance. Therefore, as before stated, the same conditions under which he yields his attention when being educated by means of reading, geography, etc., must be observed when this, the highest of all subjects, is being considered.

*a.* The conditions for securing attention explained.
*b.* The ones that apply to opening exercises indicated.

But, as stated, the opening exercises have a moral aspect also—the implanting of the germs of love and reverence. This is the higher aspect. No one who deals with this phase of school work, will contemplate an aim lower than this.

*THE DESIGN.*

The design of *parental training* is, first of all, to lead the child to see that he is the object of parental love, and to foster in him sentiments of love, trust, and obedience in return.

The design of *opening exercises* should be to impress the child with a sense of God's parental love and presence, so as to arouse in him sentiments of filial love and reverence for God.

*THE BASIS.*

Basis in general explained.

The true basis for this important work must be that love and reverence which dwell amid the sentiments, examples, and associations of home.

The idea of *God as The Father* must be made the central one. To this all the others must be subordinated, and it must give life and light to them all.

The child's knowledge of *home relations* and this central idea of *God as a Heavenly parent*, form an amply sufficient basis for that series of lessons extending through the early years of school, in which the pupils may be led to understand the love, reverence, and obedience due to the Divine Being in His benign aspects; as,

1. The creator and preserver of all.
2. All-knowing and ever-present.
3. Endowed with wisdom, holiness, truth and goodness.
4. The infinitely kind and generous Ruler and Father in His future and eternal home.

Obedience and happiness are the ideas of the child's early existence, and therefore this is the aspect of the divine character which he can comprehend, for it is the same in its kind as that relation in which he is conscious of standing to his earthly parents. In the words, "Our Father who art in heaven," is found the whole groundwork of that love and reverence which it is the aim of the opening exercises to instill. These words are worthy from their inexhaustible depth of meaning and fullness of obligation to preface that model prayer which was uttered for us by the Divine Teacher.

Let prominence be given to the idea of "*Father*," and the pupils may be led to see :—

That He provides lovingly and carefully for His children.

That when He sees His children in danger He rescues them from it.

That they may cherish the elevating hope of an eter-

nal life, for they will naturally look upon a father as unwilling to bestow life upon his children in order afterwards to destroy them.

That they should render unto Him all the love, reverence, and obedience which are due to a father.

Let the thought be centered upon "*our*" and it will be evident that His love and care are over not merely one, but all the members of his countless family, and therefore that they ought to dwell together in unity and love.

Dwell upon the phase "*in heaven*," and they will understand that He is all-wise, holy, and good.

That they should seek to be like him, and to know and do His will.

That if they render unto Him a fitting love, reverence, and obedience, they will dwell with Him in that abode of peace and joy.

The opening exercises in the early years of school life as in later years, may consist of *singing*, *lessons on the Sacred Word*, or on topics closely connected therewith, and *prayer*.

*THE METHOD.*

The child will best apprehend the work of the opening exercises when presented by the method of illustration, and not explanation proper. (See chapter ix.)

It will therefore be readily seen that the main channels of instruction in this work as based upon the Holy Writ, are three:

1. Narration including biography.
2. Emblems.
3. Parables.

Having indicated the three channels along which the instruction should flow, it remains—

1. To speak briefly of the nature of each.
2. To designate the steps peculiar to each.
3. To furnish an illustration.

### NARRATION.

#### NATURE.

Biography always interests and instructs the child, whenever he is susceptible of instuction at all, because it appeals directly to his experience. And of biographies, there are few if any, more highly interesting and instructive than those of the Bible, both on account of the admirable simplicity with which they are delineated, and of the unerring standard of conduct by which all the actions which they record, are tried.

#### STEPS.

When the truth to be conveyed by the opening exercises is expressed in the form of narration, the steps should be:—

1. To read the account to the children, or to tell the story in one's own words, as in familiar conversation, depending on the power of description to impress the pictures vividly on the mind.

2. To lead the pupils to note the most important features.

3. To lead them to exercise their judgment concerning these features.

4. To lead them to apply the conclusion to themselves.

5. To lead them to express the main thought in a Bible precept or maxim.

ILLUSTRATION.

THE SEPARATION OF ABRAM AND LOT.

*Gen. XIII.* 5-13: "And Lot also, which went with Abram had flocks and herds and tents.

And the land was not able to bear them that they might dwell together; for their substance was great, so that they could not dwell together.

And there was strife between the herdmen of Abram's cattle and the herdmen of Lot's cattle; and the Canaanite and Perizzite dwelled then in the land.

And Abram said unto Lot, 'Let there be no strife, I pray thee, between me and thee, and between my herdmen and thy herdmen, for we be brethren.

Is not the whole land before thee? Separate thyself, I pray thee, from me. If thou wilt take the left hand then I will go to the right; or, if thou depart to the right hand, then I will go to the left.'

And Lot lifted up his eyes and beheld all the plain of Jordan, that it was well watered everywhere, before the Lord destroyed Sodom and Gomorrah, even as the garden of the Lord, like the land of Egypt as thou comest unto Zoar.

Then Lot chose him all the plain of Jordan; and Lot journeyed east; and they separated themselves, the one from the other.

Abram dwelled in the land of Canaan, and Lot dwelled in the cities of the plain, and pitched his tent toward Sodom."

INTRODUCTION.

Before treating of the main subject—the separation—lead the pupils to note carefully the persons mentioned in the lesson; show how they came to be traveling together; dwell briefly upon their previous journeyings showing that they had last been in Egypt on account of a grievous famine and that they had now returned out of Egypt into Canaan and had pitched their tents at a mountain between Bethel and Hai, where Abram had previously erected an altar and offered sacrifices unto the Lord; call special attention to that which they had with them, showing their occupation and wealth.

THE SEPARATION.

THE DIFFICULTY.

In treating of the difficulty, show that their prosperity was in accord with God's promise as previously given to Abram.

*Gen. XII.* 2: "And I will make of thee a great nation; and I will bless thee and make thy name great, and thou shalt be a blessing."

Show in what their wealth consisted, and illustrate by familiar observation that a grassy and well-watered region is required; lead the pupils to see also that many herdsmen would be required to care for the flocks; how many, show by referring to Gen. XIV-14. "And when Abram heard that his brother was taken captive, he armed his trained servants born in his own house, three hundred and eighteen, and pursued them unto Dan."

Describe carefully the region in which they were,

with its pasturage and wells, explaining the dangers of the situation, the place and the cause of the quarrel.

THE GENEROSITY OF ABRAM.

Call attention to Abram's temptation, considering what he did in connection with what ordinary men would have done under the circumstances; determine reasons for his action by showing how they were related—uncle and nephew—and that strife is always to be deprecated; is so especially among kinsmen; and also that Abram, being a man of God, felt that he should set a worthy example before the idolatrous Canaanites. Lead them to see how he avoided the quarrel, the prudence of separating, and in addition, by referring to Gen. XII. 1-5, show who had the better right to choose, and why.

"Now the Lord had said unto Abram, 'Get thee out of thy country, and from thy kinsmen, and from thy father's house, unto a land that I will shew thee; and I will make of thee a great nation, and I will bless thee and make thy name great, and thou shalt be a blessing; and I will bless them that bless thee, and curse him that curseth thee; and in thee shall all the families of the earth be blessed.'

And Abram departed, as the Lord had spoken unto him, and Lot went with him; and Abram was seventy and five years old when he departed out of Haran."

Dwell upon the generosity and faith in God, shown by Abram.

THE SELFISH CHOICE OF LOT.

Let what Lot should have thought and done, be made to stand out clearly against what he really thought and

did; describe particularly the expressions, "lifted up his eyes"—"all the way to Zoar."

Show that it was a meadow land all along Jordan, well watered everywhere and very fertile, i. e. a garden of the Lord; speak of the position of Zoar.

Carefully note Lot's solicitude to choose the best for himself, and lead them to fitly characterize his choice.

THE CONSEQUENCES.

Show who would be the happier and why, by considering the thoughts of both, and in addition consider the one important thing that Lot overlooked by referring to Gen. XIII. 13. "But the men of Sodom were wicked and sinners before the Lord exceedingly."

Then illustrate the misery of living with bad neighbors even amidst plenty; show the future troubles of Lot from war and from the destruction of Sodom, from both of which he was saved by Abram. Dwell upon the disposition this shows, by considering, Gen. XIV. 1-16. Show that Abram remained where he was, contented, blessed still more and more, and call especial attention to the promise given him just after Lot's departure.

*Gen. XIII.* 15-18: "And the Lord said unto Abram after that Lot was separated from him, 'Lift up now thine eyes, and look from the place where thou art, northward and southward and eastward and westward, for all the lands which thou seest, to thee will I give it and to thy seed forever. And I will make thy seed as the dust of the earth, so that if a man can number the dust of the earth, then shall thy seed be numbered.

Arise, walk through the land in the length of it and in the breadth of it, for I will give it unto thee."

CONCLUSION.

In conclusion fix clearly three thoughts:

1. That one should live peaceably with all, especially with brethren. Illustrate by their school-life and have them learn the following:

*Psalms CXXXIII:* "Behold how good and how pleasant it is for brethren to dwell together in unity! It is like the precious ointment upon the head that ran down upon the beard, even Aaron's beard that went down to the skirts of his garments; as the dew of Hermon and the dew that descended upon the mountains of Zion; for there the Lord commanded the blessing, even life forever more."

*Romans XII.* 18: "If it be possible, as much as lieth in you, live peaceably with all men."

2. That those who know what is right ought to set a good example to others as Abram did.

Illustrate by their school life and have them learn:

*Matt. V.* 16: "Let your light so shine before men, that they may see your good works and glorify your Father which is in heaven."

3. That one should be generous and not selfish; the one leading to happiness and the other to misery.

Illustrate by their school life and have them learn:

*Matt. VII.* 12: "Therefore, all things whatsoever ye would that men should do unto you, do ye even so unto them; for this is the law and the prophets."

*Romans XII.* 10: "Be kindly affectioned one to another with brotherly love; in honor preferring one another."

### EMBLEMS. *

#### NATURE.

Emblems are not only very numerous, but they convey all the encouragements, hopes, duties, and experiences of the Christian life; while they are quickly and pleasantly learned and easily retained, from the conciseness of their statement, the aptness of illustration, and the interesting associations suggested by them. There are no parts of Scripture, moreover, that more readily occur to one, or are more welcome guests to the imagination amidst the busy scenes of life.

#### EXAMPLES.

1. Old Testament.

"The Lord is my Shepherd."

"The name of the Lord is a strong tower."

"We all do fade as a leaf."

"As a hart panteth for the water-brooks, so panteth my soul for Thee, O God."

"Keep me as the apple of Thine eye."

"The righteous shall flourish as the palm tree."

"I will be as the dew unto Israel."

2. New Testament.

"Ye are the salt of the earth."

"All flesh is grass."

"Put on the whole armor of God."

* STOW'S BIBLE EMBLEMS.

STEPS.

The method with a lesson on a Scripture emblem is comprised of two steps:—

1. The natural image or object of reference in the figure must first be fully illustrated in itself; as fully as is required for the use which is to be made of it. The length of the illustration will depend upon the nature of the object.

Sometimes the image is exclusively oriental or tropical, as in "The righteous shall flourish as the palm tree," in which case, since it would be remote from the experience of the pupil, detailed illustration would be required to bring it before him with anything of its original force. Sometimes again the image is, in itself, as significant to him as it was to those to whom it was originally addressed, as in "Ye are the salt of the earth."

The more clearly and forcibly the image is impressed on the pupil's mind, the broader will be the foundation for the second step.

2. The image should be given the spiritual interpretion.

In this second step lies the greatest difficulty, which is the avoidance on the one hand of the presentation of the spiritual emblem in terms too vague to be of any practical value; on the other hand, an avoidance of an overstraining of the analogy, by pursuing it in directions in which it does not hold; the effect of which is to weaken the force of the truth which the emblem inculcates.

ILLUSTRATION.

"I WILL BE AS THE DEW UNTO ISRAEL."

INTRODUCTION.

Under the introduction, the teacher might speak of a walk in the fields on a summer morning; the surprise on finding the shoes all wet, on a clear, dry, warm morning; call attention to the cause of this—the dew; discuss the manner of its formation.

NATURAL IMAGE.

THE REFRESHING POWER OF THE DEW.

Show that among other things, moisture, obtained principally from rain, is required for the growth of plants; that sometimes, however, there are long and hot dry seasons in which the plants would be scorched; lead the pupils to see that moisture is required frequently and regularly, and that while the gardener might water the delicate flower, this would be impossible with the grass and grain of the wide fields; but that this office is filled by the gentle dew by keeping all vegetation fresh, green and full of sap, when otherwise it would wither and die.

Speak then, of the rainy and dry seasons of the East and the greater strength of the sun's heat there, and the longer drought; show that therefore, a greater amount of dew is there required, and that it is deposited in greater quantities; so much greater that often little water-courses are filled with it, as they are in our regions after a rain, and tell how much in such countries the dew is valued.

THE SILENT ACTION OF THE DEW.

Call the attention of the pupils to the fact that even when they are busy at home or at school, they can know of the coming and presence of rain, from seeing it, or from the sound of the drops, but even were they watching, they could not notice the coming of the dew; but that in the morning they may know of its presence; picture to them the dew as collecting gradually, silently and invisibly on the plants.

SPIRITUAL TRUTH.

THE BLESSING OF GOD IS LIKE THE DEW.

Call attention again to the languishing flowers, and show that animals and people also languish, and require rest to refresh them. Present the idea that human beings have things to weary them other than toil, i.e., pain, anxiety, and grief, from various causes, and that time and the comfort of friends tend to relieve them from these.

Then consider another cause of weariness and anxiety—the sense of sin or wrong-doing in their relations to God. Illustrate how this oppresses them when they afterwards reflect upon it. Lead them to see that God, as their Heavenly Father, will refresh them and make them glad and hopeful again, just as the plants are revived and refreshed by the dew.

GOD'S BLESSINGS COME IN SILENCE, LIKE THE DEW.

Call attention to some of the chief blessings of life, and show that some people do not look upon them as

blessings at all, but as things that belong to them. Consider God's promises to those in distress, and show that he fulfills them and sends his gifts upon all, as the dew comes, invisibly and in silence.

CONCLUSION.

Under the conclusion, lead the pupils to see that all should be animated by the feelings of love, reverence, and obedience toward the Heavenly Father, and that they should look to Him in all difficulties and look with confidence. Consider the advantages of being His people.

*Hosea XIV.* 1–7: "O Israel, return unto the Lord thy God; for thou hast fallen by thine iniquity. Take with you words and turn to the Lord, say unto Him, 'Take away all iniquity and receive us graciously, so will we render the calves of our lips. Asshur shall not save us; we will not ride upon horses, neither will we say any more to the work of our hands, Ye are our gods; for in Thee the fatherless findeth mercy. I will heal their backsliding, I will love them freely, for mine anger is turned away from him. I WILL BE AS THE DEW UNTO ISRAEL; he shall grow as the lily and cast forth his roots as Lebanon. His branches shall spread and his beauty shall be as the olive tree, and his smell as Lebanon. They that dwell under the shadow shall return; they shall revive as the corn and grow as the vine; the scent thereof shall be as the wines of Lebanon."

Read and explain the above seven verses and cause the pupils to learn the last three.

## PARABLES.*

### NATURE.

It would be somewhat difficult to give any definition of a parable to which reasonable exception might not be taken, on account of the great variety of construction existing among the compositions which pass under that name. But if such a definition could be framed it would not greatly serve the present purpose, which is not so much to find the correct theory of their structure as it is to determine the best method of presenting them so as to bring out their full force and beauty.

The method of teaching the parables ought to be made both interesting and instructive.

The parables themselves are interesting, because the mind, even of the unenlightened, readily apprehends and retains such representations as they embody, from their dealing with things similar to those of actual experience. The Son of God addressed them to audiences which were often ignorant, and when not ignorant, unfriendly—if not openly hostile; yet it is evident, from various indications, that interest and attention were always aroused when He spoke in parables.

Much more are they suited to enlist the interest and attention of children, who always turn from the abstract to the concrete, from the general principle to the particular action embodying it.

The parables, besides being interesting, are always instructive. They are devoted to unfolding the great moral duties of religion, the performance of which is at

*TRENCH ON THE PARABLES.

once the test and end of true religion. They all have an extremely practical purpose, and they are wonderfully fertile in suggestions. It is not only their one leading lesson that is enforced on us; numerous incidental lessons spring up as we advance from part to part of the narration. Moreover, they are all as applicable to present circumstances as to the circumstances of those to whom they were first addressed. None of them are obsolete; all are as fresh as when they fell from the lips of the Great Teacher. They rouse our sympathies as much as they did those of the men of olden times. And they will arouse the sympathies of men under any of the conditions of human life as much as they do ours, because the incidents they build upon occur in the life of every society, and because the elements of character and the affections to which they appeal are the same at all times and in all places.

STEPS.

In indicating the lines which the method should follow, it will be sufficient to notice the one leading feature of the parable, i.e., that it has two distinct aspects—the one literal, and the other figurative and spiritual; and that the spiritual is conveyed by the analogy of the literal representation.

Viewed in the one light, a parable is a story setting forth some incident in nature or in human life, real or imaginary, and having an interpretation complete in itself.

Viewed in the other light, it is the language of symbol, teaching duty to God and man.

In the presentation of the parable, the steps are therefore two:—

1. To make clear the literal idea.
2. To present the spiritual truth of which the literal idea is the symbol.

All explanations necessary to the comprehension of the incidents should be given in connection with the first step, e.g., explanations in regard to the geography of the scene, or the manners and customs to which reference is made—that they may not afterwards interrupt the interpretation.

This first step ought to possess the merit of being clear and graphic, so as to impress the pupil's imagination.

In the second step—the presentation of the spiritual truth—the story should be taken part by part, and each portion have clearly attached to it the spiritual meaning of which it is the symbol.

In dealing with the parable, as well as in dealing with the emblem, there are two dangers peculiar to the second step.

The first, as before, is vagueness, arising generally from the teacher's not apprehending with sufficient clearness and force the precise aim of the parable. This will lead to the attempt to make it teach a great many things; but it will result in causing it to teach nothing in particular.

The second danger, as before also, is an overstraining of the analogy, which results from pressing the story too far into detail, which will end in a distortion of the

spiritual truth, when the attempt is made to carry out the parallel between it and the literal side. If the parable has been well illustrated in the first step, as it should be, the reflections which it suggests will be such that no minute or indirect inference will be justified. The overruling point in connection with the second step is to see that the spiritual truth is distinctly and impressively brought forth. The test of success in teaching the parable is the force and clearness with which the practical conclusions, which are deduced from it, *are brought to bear on the home and school surroundings of the pupils.*

It is to but little purpose that the story is graphically presented in the first step, or that the inferences drawn from it in the second step are just, if the duty which it is designed to impress is not brought to bear with clearness and force upon the consciences of the pupils.

Let the teacher habitually lead them to look upon the truth which the parable conveys as a truth to be received into their hearts, and to be held there as a life-long influence.

To aid in this, as a concluding step, the parable should be committed to memory.

ILLUSTRATION.

*Matt. XIII.* 33. "Another parable spake He unto them: 'The kingdom of heaven is like unto leaven, which a woman took and hid in three measures of meal, till the whole was leavened.' "

*Luke XIII.* 20-21. "And again He said: 'Whereunto shall I liken the kingdom of God? It is like leaven

which a woman took and hid in three measures of meal, till the whole was leavened.'"

INTRODUCTION.

Under the introduction, first question the pupils on materials used in bread-making and the process of making the dough; call especial attention to an additional element and its office—the yeast or leaven; note its effect—a change next morning in the dough in appearance and taste, in every part and particle.

Under the introduction, in the second place, read the parable.

THE STORY.

Under the story or literal part, call attention to the meaning of "*hid*," the amount of flour or meal, and show how much three measures were and that this was the quantity commonly used. See

*Gen. XVIII.* 6: "And Abraham hastened into the tent unto Sarah, and said, 'Make ready quickly three measures of fine meal, knead it, and make cakes upon the hearth.'"

Speak then of the use of water, and then of the leaven, noting specially that the change requires time, and by referring to the introduction illustrate the nature of the change, dwelling upon the ideas that it is both gradual and complete.

INTERPRETATION.

THE CHANGE.

Show that by a change in the dough is meant a spiritual change in ourselves; try to lead the pupils to see in a general sense, what that change must be; by appeal-

ing to their experience, show that all at times do wrong, illustrating by referring to particular acts or thoughts, and that therefore all are sinful; show how a Father of infinite love and kindness must regard this, and that before we can come into harmony with Him, and accomplish the purpose of our lives, we must be changed, just as the dough must be changed before it becomes bread.

THE CAUSE OF THE CHANGE.

Show, first, that it is likened to the leaven, and that, therefore, the "*kingdom of heaven*" must mean something felt on earth among men, for Jesus was speaking of men; convey the idea that it is the love of God in our hearts, or the love and kindness toward all, which animates us; refer to the love the pupils bear to their parents and brothers and sisters, showing how it influences their whole home conduct, giving, if possible, some illustrations; so, if we feel love and reverence toward God, we shall do what will meet with His approval, and shall be kindly disposed toward all.

THE CHANGE IS GRADUAL.

Lead the pupil to think of the appearance of the dough, if it were examined at short intervals after the leaven was put in; show that the woman had to wait for the change, not in doubt, but certain that it would occur in time. From this go to the thought that no one can change himself all at once, referring to some habit to illustrate the difficulty of changing and the time needed; advancing the idea that if we are animated by love and reverence toward God, and growing out of that,

by kindness for all, we shall be changed by degrees, first one bad habit and then another; first one bad thought and then another, as life passes along, until the change is entire, impressing the idea that however slow and imperceptible, it is, under those circumstances, sure.

THE CHANGE COMPLETE.

Lead the pupils to think of the condition of the dough when the woman came back to it, showing that so entire was the change that even those portions furthest from the center, where the leaven was put in, had been changed; enforce the idea that this must be the nature of the change in us; that every bad act, bad word, bad thought, even the secret ones, must be given up.

CONCLUSION.

Under the conclusion, or practical part, show first that all need to be changed; that all can obtain the thing needed to change us; that it is love and reverence for the Heavenly Father, alone, which can make the change, and that therefore all ought to seek to know Him, and to love and reverence, and to obey Him.

Under the conclusion, or practical part, show, in the second place, what our conduct will be if we are animated by love and reverence for Him; that we shall avoid sinful acts, and shall grow better day by day.'*

SUGGESTIVE EXERCISES.

The following, prepared by the teachers of the respective grades in the Training School, indicates the work in opening exercises as given by them: It will be seen that the work bears upon conduct in all three relations.

*REV. JAMES CURRIE.

### FIRST AND SECOND GRADES.

The opening exercises in a primary school should be short, suited to the child's comprehension, varied from day to day and sufficiently interesting to hold the *complete* attention.

The great object in view will be defeated if the child is made to feel that he is receiving moral instruction; it is not necessary that each selection read or story told should be "pointed with a moral." Let the story be told in simple, forcible language; let the selection be from an honest, consistent author, who understands the child's nature and needs, and the moral will impress itself without aid.

Those exercises should be employed which have in view both instruction and moral training.

Collect a series of facts and anecdotes from the lives of good people, each of which shall teach some important lesson, such as:—patience truthfulness, bravery, kindness to people and animals, self-denial, heroism, patriotism, generosity, etc. If possible, obtain a reliable picture of the person who forms the subject of the lesson. Let the children handle it, if it be small; if large, hang it upon the wall where it can be easily seen. (Harper's Weekly will occasionally furnish a portrait. Holiday catalogues of books will do the same).

While the portrait and name are becoming familiar, relate the anecdotes or facts selected. If an author forms the subject of the sketch, read from his writings. Thus the children will associate the face, the character and the product of his pen.

Such characters may be selected as:

George Washington, Putnam, Benjamin Franklin, J. G. Whittier, H.W. Longfellow, Abraham Lincoln, Hans Andersen, Louise Alcott, Mary Mapes Dodge, Lucy Larcom, etc.

At the proper time there may be associated with their author, the "Scrap Bag" stories, chapters from "Little Men" and "Little Women;" "Merry Rhymes and Jingles" with Mary Mapes Dodge; "Fairy Tales" with Hans Andersen; etc.

Whittier and Lucy Larcom have each a collection of poems for children.

A series of articles entitled "Stories About Favorite Authors" in "Our Little Men and Women," will be found useful. "Babyland," "St. Nicholas," "Wide-Awake" and the "Independent" will furnish good material, as will "Our Children's Songs," a book of carefully selected poems. From the study of the characters suggested, the attention may be turned to the life of Christ, as presented in the New Testament. The study may begin with his childhood, and the interest be heightened by a description of the manners and customs of the time as differing from our own. Having studied Him, His words and teachings will gain additional interest. The Lord's Prayer should be explained and committed by the pupils. Many of the parables can be understood and their truth impressed.

A series of texts (arranged in alphabetical order to assist the memory) may be taught the pupils, each text being the subject of a lesson, or a series of lessons. The meaning of the text should be thoroughly understood by the pupils before it is formulated, otherwise, as is often true, the words alone remain in the memory, and are like an empty shell, the rich kernel being overlooked.

Through these texts may be taught:—

Love to God, to parents, to all things created.

That we must obey Him if we wish Him to love us.

That He wishes us to love Him.

That we must be honest in thought, word and deed, etc.

### THIRD AND FOURTH GRADES.

The opening exercises consist of singing devotional songs, repetition of the Lord's Prayer, Bible verses, alphabetically arranged, alternating with the Twenty-third Psalm or Ten Commandments and the morning lesson.

The Lord's Prayer and the psalm may be sung as a chant for variety.

BIBLE VERSES.

These verses are selected by the pupils in the following manner:—

Each child is prepared, on a certain day, with a Bible verse beginning with "*a.*"

The children select the child's verse which they can most easily understand.

Examples:—"A good name is rather to be chosen than great riches, and loving favor rather than silver and gold." "Do unto others as you would have others do unto you." "Even a child is known by his doings, whether his works be pure, or whether they be right." "Lying lips are abomination to the Lord, but they that speak truly are his delight."

After the selection has been made the pupils are allowed to give their own thought of its meaning.

The teacher, by illustration, makes the meaning more plain.

Illustration:—"Go to the ant, thou sluggard, consider her ways, and be wise; which, having no guide, overseer or ruler, provideth her meat in the summer and gathereth her food in the harvest."

Lead pupils to observe the ant-hill; tell them about its wonderful structure, its builders, their queen, workers and warriors.

Give a vivid picture of the sluggard.

Lead the pupils to apply the meaning to themselves.

The work on the ant can be done for rest work on the previous day.

MORNING LESSON.

This lesson consists in a portion of a Bible story, read or told by the teacher, in simple attractive language.

Last year the teacher selected one story for each month, occasionally changing the story for a parable or emblem, or had the children select and commit verses containing certain thoughts; as love, truth, obedience, etc. Birthday verses, the longest and shortest verse, also give pleasing variety.

MANNER OF PROCEDURE.

1. Read or narrate a portion of the story.

2. Question pupils on the leading points.

3. Lead the pupils to give their own thoughts of its meaning and application.

4. Write upon the board the Bible precept found in or suggested by the lesson.

5. After the entire story has been given, let the children give or write the story, and its lesson to them.

Each day allow one or more of the pupils to give the story of the previous day, in order that they may more plainly see the connection between the old and the new. Show pictures representing the scene, when possible. Make all descriptions vivid and real.

The following stories were taken last year in the order given:—

1. The Garden and Its Inhabitants.
2. Joseph and His Brethren.
3. The Wandering Children of Israel. Balaam's Parables.
4. Gideon.
5. Samson, Samuel and Saul.
6. The Shepherd Boy that Became a King.
7. Solomon and the Queen of Sheba. Emblem—Consider the lilies, etc.
8. Queen Esther.
9. Daniel.
10. The Great Teacher.

The following gives the division of the first story for each day of the month:

The Garden and its Inhabitants.

*a.* Description, as given beautifully by Rothingham, in his "Stories of the Patriarchs."

*b.* Outside the Gate.

*c.* Quarrel of the First Brothers.

*d.* Death of Abel. Cain's Flight.

*e.* The Ark and the Flood.

*f.* Tower of Babel.
*g.* Abraham's Childhood.
*h.* Abraham's Journey.
*i.* Visit of the Angels.
*j.* Destruction of Sodom.
*k.* Lot's Escape.
*l.* Sacrifice of Isaac.
*m.* Isaac's Two Sons.
*n.* Jacob Cheats Esau of His Birthright.
*o.* Jacob Receives his Father's Blessing.
*p.* Jacob's Flight.
*q.* His Dream.
*r.* History of the Twenty Years He Remained with His Uncle.
*s.* His Return.
*t.* Meeting of the Brothers.
*u.* Review and Application to us.

The stories were given in this order that pupils might study them in connection with the country in which they were located. "The Children of Israel" were studied at this time because the Third Grade were studying and moulding the peninsula of Arabia. The Fourth Grade were studying and moulding Africa—the desert, where the "Israelites wandered forty years," "the place where they were supposed to have crossed the Red Sea," "the mount where Moses received the Ten Commandments," and "Egypt" could be located; thus adding interest to both story and country.

In the study of Daniel, a description of Babylon, its walls, gates, towers and hanging gardens make it more real. Representing the position of the armies, in sand, when David killed Goliath, will add interest also.

Some books, valuable for their simple, attractive language and illustrations:—"Stories of the Patriarchs," "Joseph and His Brethren," "Line Upon Line," "Precept Upon Precept," "Stories of David," "Ben Hur," extracts from "Near Home and

Far Off," "Description of Jerusalem," "John the Baptist," "Christ's Teachings and Death."

FIFTH AND SIXTH GRADES.

In opening exercises the subject of *behavior* affords many fruitful topics for conversation.

As to place, the work should include the behavior of the child:

1. In the school-room.
2. On the play-ground.
3. On the street.
4. At home.
5. In railway cars and other public places.

By questions and illustrations, the children are led to see that behavior in the school-room includes obedience, honesty, silence, industry, kindness, neatness, politeness, punctuality, etc.

In considering each of these topics, the meaning of the term should be understood. The children may refer to dictionaries for meaning, and the teacher, by illustrations and otherwise, may assist in making the meaning clear.

To whom and by whom must obedience be rendered in the school-room, and *why*, may be discussed by the children, the teacher leading in the discussion.

Illustrations may be called for, and the children will cite many instances where the law of obedience is violated.

After discussing this law in a general way, the teacher may ask for individual experiences; as, How many of you ever violated the law of obedience in the school-room? Probably all will raise hands, but if not, call upon those who are ready and willing to speak of their own faults, and the others will reach that point sooner or later.

In like manner, each of the above topics may be discussed from day to day, as time permits.

The interest will be greatly enhanced by calling upon pupils to decide whether an illustration given is right or wrong, and by calling special attention to those that are particularly good.

Of course the accuracy of the statement, and of the language used must be noticed in every case.

After the discussion of all or many of these laws, the children will readily see that a single act may be a violation of several laws.

If a pupil whispers to his neighbor he has violated the following laws: Obedience, silence, politeness, kindness, and honesty. The children will probably see, and give all these. But if one does not see just how obedience or some other law mentioned has been violated, some one else may explain to him.

Following this, illustrations may be given by pupils, and the school decide how many and what laws are violated.

When all of these topics are carefully discussed with reference to the school-room, the children may be called upon to decide which of these will apply to the play-ground, which, if any, shall be discarded, and whether any new topics may be added.

The same plan may be followed with regard to the other places mentioned.

The benefits of such discussions are manifold.

1. The children themselves are led to decide upon a course of action to be followed out.

2. They become conscious that every action they put forth is in obedience to or in violation of law, and they will thus be led to reflect upon what they do before the deed is done.

3. The results of the violations of these laws will be carefully traced in many cases, and the children are led to see that *the deed returns to the doer.*

4. They learn to discriminate and judge for themselves; and to rely upon themselves; thus making the school, in a great measure, control itself.

Other exercises are:

1. The studying and committing of beautiful poems.
2. Investigation of Scripture texts.
3. Consideration of Bible stories, etc.

*CONDUCT IN RELATION TO SELF.*

'HUMAN RESPONSIBILITY is the fundamental principle of morals, or conduct. As a special being of nature, it is the duty of the individual to realize in himself the ideal of humanity. This demands the use of his natural being as a means, and not as an end.

1. He must foster and preserve his physical organism.

2. He must learn to absorb his whole endeavor in the pursuit of a rational end—some particular avocation in life.

3. He must confine his gratification of the natural wants within proper limits, and learn to sacrifice them for higher duties.

4. Through this self-control he must strive for self-culture, sacrificing his natural being for his spiritual being.

These duties to self, apparently immediate, are however, only contingent upon broader duties which he owes to others.'

*CONDUCT IN RELATION TO OTHERS.*

'The individual is not able to achieve his highest end and aim directly through himself, but only through combination with his fellow-men. This combination has four stages:

1. The family.
2. The church.
3. Social and business society.
4. The state; including the school as an instrument of the state.

Conduct in the sphere of the church is considered here, as previously given, only in so far as the school prepares the child to enter upon the relations involved in the church, as a higher institution.

### *IN THE FAMILY.*

*Within the family* the interest of each is that of all in a special natural sense. The reciprocal duties of parents and children, of brothers and sisters, of husband and wife form a special code distinguished from other spheres of morality by its close connection with natural impulse; *affection* and *reverence* form its foundation. In this sphere isolated interest is vicious and immoral; the community is the unit. A transition from the family to civil society is found in *polite society* wherein there prevails the tone of the family elevated to a general demeanor. The essence of politeness consists in *persistently treating the special individual with whom one has relations, as an ideal being.* Every human being has in himself the possibility of ideal humanity. Polite conduct consists in regulating one's behavior toward him by this ideal. Consequently politeness requires us to *ignore all personal defects*, not alluding to our own or to those of others; even rudeness toward us passes unnoticed and receives only courteous treatment in return.

Within the family and within polite society these unselfish and refined manners must prevail. It is not however sufficient for the human spirit that it remain within such limits. They serve only as polish to human actions which penetrate deeper the essence of personality.

*IN THE BUSINESS WORLD.*

*In civil society* proper we have combination by means of division of labor and commerce. Each works for himself and has in so far a selfish end; but he achieves it through devoting himself to the gratification of some want of his fellow-men. Thus his selfishness is mediated, and its quality changed. In the field of productive industry the individual does not any longer act from the impulse of affection, or pity; he helps others as the organized means of self-aggrandizement; he does not treat others as abstract ideals merely (the polite world); but he treats them as free personal units concretely realized in the ownership of property. The fact of realization of personality through property gives an externality to the whole code of duties belonging to civil society. One man deals with another as an abstract legal person in business transactions which form the real practical interest. Honesty and integrity, prudence and policy, punctuality and regularity are the cardinal virtues here.

*IN THE STATE.*

*In the state* mere natural affection and courtesy to the ideal—the principles of the family and polite society —as well as the pursuit of individual gain, which finds

its sphere in civil society, are subordinated to an actual ideal, that of justice. Man is here complemented so that whatsoever he does returns through the state to himself and he becomes actually free and self-determined What polite society assumes and makes into an appearance, is in the state realized as an actual, but in such a way that complete responsibility attaches to the individual.

*IN THE SCHOOL.*

To cultivate behavior *the school* as an instrument of the state, presents a wide field for the pupil's activity.

The school is a little world in which the pupils devise and carry out schemes as in the world without, in which individual interests are often concurrent, and not seldom in opposition; but where both the concurrence and the opposition give rise to indefinite activity.

There are constant opportunities for embodying in action the virtues of truthfulness, justice, and benevolence, or for being swayed by their opposites.

The virtues to be manifested toward superiors are drawn out in the respect and obedience exacted by the teacher, or give place to the opposite vices of insolence and insubordination.

In the performance of duty, the moral qualities of diligence and resolution may be steadily fostered; or the opposite vices of idleness and sluggishness; while the routine of the school may be gone through either with punctuality or the reverse. The teacher's duty with respect to this activity of the school in all of its phases is to regulate it and increase it.

He sees it to a great extent manifested in the course of engagements conducted by himself or under his superintendence; he can control its defects, and can point the way to such improvement as is practicable. Much of it comes to his knowledge through report, or through casual inquiry. But in great measure it goes on beyond the teacher's observation, and in a sphere over which he has no direct control. In the playground this activity of the school exercises its greatest influence for good or for evil. If the spirit that presides there is in conformity with his, then its intercourse is for good; if any there retain in their hands a commanding influence over their companions, but of a different tendency, the activity of the school will develop into bad habits. The teacher can only control it in this sphere by establishing in the school *a sound public opinion, the reflex of his own*, which shall make itself felt every where—a difficult task, and only to be accomplished by him who *has the interest of his pupils at heart*, and who to that benevolence adds *the force of character* and *tact of management* necessary to secure personal ascendency over others. But difficult as it may be, it must be accomplished, if the teacher would have his influence constantly at work on his pupils. When there is a bad state of feeling in school between teacher and pupils, their activity will be restrained and insincere in his presence; they will be afraid to act, and thus reveal their sentiments to him whom they mistrust. This bad relation will usually carry with it an unsatisfactory relation among the pupils themselves; restrained by no

central influence they will be apt to separate, according to their several interests, into parties having no good will toward one another, and thus the malevolent dispositions will be stimulated into preponderating activity. The teacher is responsible for establishing confidence between the pupils and himself, and among the pupils toward one another, under the genial influences of which the right activity may spring up and gain strength, and the wrong wither away for the want of room for its display.

The main difference between the family and the school as places of moral instruction is this: That in the former the parent sees precisely what is wanting to the child's knowledge from having him so constantly in his presence and observing his conduct. The family instruction is therefore more spontaneous and better regulated to the necessities of the case than that of the school can ever be; for the teacher must, in the nature of things, proceed less by special requirements at the moment than by consideration of the general training which the pupil will require to fit him for life. But this comparative disadvantage under which the teacher labors only supplies an additional reason why he should strive, with all the resources of his art, to make the instruction he gives the more impressive; and he is not altogether without compensation.'

'The more formal teaching of a school may, to a considerable extent, be supplemented by such instruction as is naturally elicited from the incidents of the family-circle. There are school cases equally with family cases

which the teacher has the means of observing; and, if he observe at all, he will find a greater variety of them than any one family is likely to supply, illustrative of both virtues and vices. His object should be to turn them to the benefit of the school, which has, more or less, been witness of them. If he cannot do this without exposure of individual pupils, he cannot profitably do it all. If he does it with direct and recognized personal reference he will be suspected both by the pupil and by the school of doing it with personal motives, either with the view of establishing his authority or of gratifying his dislikes. But the judicious teacher will find it by no means impossible to handle cases in an indirect way so that all his statements shall seem to be naturally suggested by the train of his story, so that the allusions shall never be suspected of personal intention. The penetration into their experience which the skilful management of such cases shows, will affect them with a power which no other channel of instruction can attain. Virtues should be illustrated this way as well as vices; it is in every way desirable that he should show the same insight in dealing with the one as in dealing with the other, and that he should appear zealous and gratified to recognize the good that may be done in school, as well as ready to reprimand the evil. The observant teacher will see from this how much he will gain in influence as an educator by any intimate acquaintance he may set himself to acquire of the school life.'*

* ABBOTT.

SELF SACRIFICE.

'In these spheres of action there lies at the basis the fundamental idea of the distinction of man as a natural being (mere animal) from man as human (elevated into his ideal through culture.) Thus the fundamental basis is SELF-SACRIFICE, employing as its conviction *responsibility*, i. e. the insight into the necessity of its own agency in attaining its true self by the suppression of its natural appetites. Self-control, self-denial, temperance, neatness, cleanliness, self-respect,—these are the various species that fall immediately under this general category.

OBEDIENCE.

Obedience is the general mode of the conformity of the individual to general rules, laws, and prescribed forms of activity. This is one side of self-sacrifice.

In the practice of duty, obedience is the first condition: obey the higher, repress the lower. In obedience, reference is had to what is external. But it is the external to mere natural being only. Obedience is the mediation by which the true self is realized and the illusive self of mere natural impulse renounced.

Obedience has several phases:

*a. Order* and *regularity*—conformity to the rhythm that governs external things.

*b. Punctuality* or conformity to the external requirements of time and place.

*c. Perseverance*—conformity to purpose.

*d. Earnestness*—conformity of outward endeavor to inward resolution.

*e. Justice*—conformity to the universal (self-measured) standard of action.

*f. Truthfulness*—conformity of utterance (speech and behavior) to reality.

*g. Industry*—conformity of activity to the channels prescribed by society so that what one does is directly for others, indirectly for one's self.

The first requisite of the school is *order:* each pupil must be taught first and foremost to conform his behavior to a general standard. Only thus can the school as a community exist and fulfill its functions. In the outset therefore the group of virtues above referred to are taught the pupil, and these are taught so thoroughly, and so constantly enforced, that they become fixed in his character. The method of this moral training is, like that which rules everywhere in the practical world, one of division and repetition. The duty of being a well-behaved pupil is not a vague generality. It divides into specific, well-defined duties:

*a. Punctuality:* The pupil must be at school in time. Sleep, meals, play, business, indisposition—all must give way to the duty of obedience to the external requirement of time. Punctuality does not end with getting to school. While in school it is of equal importance. Combination cannot be achieved without it. The pupil must have his lessons ready at the appointed time, must rise at the tap of the bell, move to the line, return; in short, go through all the evolutions with equal precision.

*b. Regularity* is punctuality reduced to a system. Conformity to the requirement of time in a particular

instance is punctuality; made general it becomes regularity. Combination in school rests on these two virtues. They are the most elementary ones of the moral code—its alphabet. Schools achieved a high rank in this respect only through the most persistent effort on the part of the teachers. The community submits to regulations patiently, but it may be doubted whether their importance is fully appreciated. This age is called *the age of productive industry.* It is the era of emancipation of each and every member of society from the drudgery of slavery to his natural wants. The emancipation is effected through *machinery.* Machinery during the past fifty years has quadrupled the efficiency of human industry. With the same amount of labor each man may obtain four times the amount of food, clothing, and shelter, or for one-fourth of the labor necessary fifty years ago he may obtain as much, as the laborer of that period did. Achievement in this direction has but begun. In the future hovers the picture of a humanity so free on the side of its natural wants that its time is its own for spiritual culture. But there is one general training especially requisite for the generations of men who are to act as directors of machinery, and of business that depends upon it—this training is in the habits of punctuality and regularity. A human being may wait for the arrival of another, a machine will not make any allowance for subjective whims, or caprices, or failures in obedience to the laws of time and space. The fact that so much of labor depends upon machinery makes itself felt throughout all occupations of life. The

necessity of conformity to the time of the train, to the starting of work in the manufactory, fixes the time for the minor affairs of life with absolute precision. Only by obedience to these abstract external laws of time and place may we achieve that social combination necessary to free us from degrading slavery to our physical wants and necessities.

But the school makes these duties *the ground and means of higher duties.* They are indispensable, *but no ultimatum.* They render possible higher spiritual culture. The quick and prompt obedience of the pupil in simple mechanical training, renders the child penetrable, and accessible to lessons of higher import. To this end the discipline extends to calisthenics; the pupil is taught to sacrifice his arbitrary control over his body and to combine regularly and punctually with others in imitating prescribed bodily gestures or exercises. Thus his sense of rhythm—or regular combination with others—is further developed. Through this becomes possible the training to general habits of proper position for sitting and standing, proper modes of speaking—addressing others; in general, the formalities of polite intercourse. The highest discipline under the head of rhythm is reached in vocal music. This presupposes in the highest degree the training in punctual and regular habits, and a conscious participation in the result is reached by the pupil through his enjoyment of the harmony he assists in producing. Here—in vocal music—the external, mechanical aspect of discipline softens, and a response to it is felt in the deepest inner being of

the soul—the domain of feeling. This brings us to the next step in school discipline.

*c. Silence* is the basis for the culture of internality or reflection—the soil in which thought grows. The pupil is therefore taught habits of silence: to restrain his natural animal impulse to prate and chatter, or to excite attention by his occupation on the material world around him. All ascent above natural being arises through this ability to hold back the mind from utterance of the immediate impulse, and to correct its one-sidedness by combination and generalization. The largest combination and widest generalization is the deepest and truest. Thus silence in the school-room has a twofold significance. It is necessary to the attainment of combination with others, and besides this, it is a direct discipline in the art of combining the diffused and feeble efforts of the pupil himself. He begins his career with mental distraction, everything isolated in his mind, and learns to connect the scattered phases, classify and arrange them, and thus to generalize and reduce them. The first glance does not suffice; it is the repetition of mental effort, the *absorption* of the mind that digests the multiplicity before it. This depends directly upon silence. The distraction of the mind consequent upon garrulity, or the occupation of any of the senses exclusively, prevents reflection. Silence allows the repose of the senses and the awakening of insight and reflection. In our schools this is carried further than merely negative silence and the pupil is taught the difficult but essential habit of absorption in

his proper task even when a lively recitation is going on with another class. He must acquire the strength of mind (of internality) which will enable him to pursue without distraction his train of thought and study, under any external conditions. Out of this discipline grow attention, memory, thought—the three factors of theoretic culture. The culture described thus far, is very formal although it is essential to all that follows. It is a great point to gain so much, and to gain it by proper means. A school discipline that secured this through harsh, rough means, through appeals to corporal punishment, would break down the deeper sense of honor in the pupil.

The school therefore as its fourth virtue in the ascending scale inculcates truthfulness.

*d. Truth* is the basis of the duties of a man toward others. Truth makes free, says the old proverb. No positive relation with our fellowmen is possible except through truth. Untruth is the essence of discord. Earnestness and sincerity, honesty and reliability are the virtues that rest directly on truthfulness. The vices founded on neglect of this duty are lying, deceit, hypocrisy, cheating, and all manner of fraud; its effects on society are to produce suspicion and distrust among men and to stifle all spiritual relationship. It is a subtle poison that destroys the positive benefits that may be derived from the institutions of society. The virtue of truthfulness is developed in a twofold way in the schoolroom. First, by the continual discipline of the recitation; the pupil is required to be accurate and compre-

hensive in his statements; he is taught that suppression of essential particulars makes his statement false; he is held strictly accountable to know what he says, i. e., to have a clear conception of what is involved in the words he uses. Very much of the untruth and consequent distrust among men arises in the first instance from lack of a clear insight into what was implied by the words used. It is only one step from a lie committed by mistake to a lie on a purpose; for to suffer the penalty for a supposed vice is a temptation to enjoy its supposed selfish advantages. Careful attention to the implications of one's statements is the first step in the inculcation of truth; and this can scarcely find a better discipline than in the properly conducted recitation. The second mode of securing truthfulness is the direct application of discipline to the behavior of the pupil. Any lack of truthfulness in the pupil reveals itself at once in his struggles to conceal his misdemeanors. It is an object of constant care on the part of the teacher to suppress lying and dishonesty in whatever forms they may manifest themselves. The admonition of the teacher, the disgrace felt at exposure in presence of the class, are most powerful caustics to remove this moral disorder.

*e.* The duty of *justice* next follows that of truthfulness and finds partly its presupposition in the latter. Justice can be taught only in a community. In a well-ordered community it grows spontaneously. A system of measure established, by which conformity to rule and right is rewarded by recognition, and all breach of discipline met by prompt exposure, appeals constantly to

the sense of justice and develops its normal exercise. A danger lies, however, in certain baneful practices sometimes adopted by educators. On the supposition that the child cannot see the legitimate and healthy results of doing his duty he is offered a special reward for it. This goes far to sap the foundation of all morality. The feeling of responsibility is the essence of virtue, and an extraneous reward held up as the end sought tends to destroy what little internal self-determination the pupil may possess. The distinction between the inclination (the "I want") of the child, and his true ideal nature (expressed in "I ought") should be continually kept before the child and not confused by concealing the duty under some shape of immediate self-interest. Doubtless self-interest lies at the bottom of all virtue, for man is a self-related being; but its circle is so large that no one can perceive its full return in an individual instance, and the only guide, at all safe, is duty pure and simple. The little community of the school-room, filled with fifty or sixty children presents a miniature world. There are children of the wealthy and of the indigent, children of talent, and children of slow, imprisoned intellects; some with quick theoretical, some with strong practical tendencies; some with deep spiritual instincts, others with base brutal ones. External dress and carriage, and use of speech vary accordingly. Before the school-room ideal all prerogatives vanish and each is equal in that respect; the standard of comparison shall be the work done, its quality and its quantity. From the very outset the child learns to distinguish essential humanity from

its accidental surroundings. Keenness of perception, moral integrity, practical sagacity, these are the triumphant powers of the good school. Can there be a better soil for the growth of moral responsibility or a sense of justice?

### KINDNESS.

The other side of self-sacrifice is kindness in its varied species included under the terms of sympathy, forbearance, considerateness, mercy, benevolence, charity, philanthropy. Kindness is akin to politeness and courtesy, in that it looks upon the human being as embodying the ideal of humanity, no matter what forms he wears; but it differs from courtesy and is superior to it, in that it sees also the real, its imperfections and limitations. It does not merely, like justice in the state, hold up in the face of each, the mirror of his deed, but regards this as no ultimatum and affirms the ideal to be the true final aim and destiny of the individual, to whom it offers aid and comfort. It seeks to remove the imperfections and limitations of humanity without injury to the individual. Justice does not respect particularity—kindness does respect it. In kindness or love the universal is carried into the particular (descends into it) without destroying it, but with the design of drawing up to it the latter. Kindness therefore is the moral duty that approaches nearest to religion and forms the connecting link with it. Like the sense of justice, it requires a community for its culture—a community which, like the school, brings together all classes and conditions, and subjects them to the

same trials and the same standard of success. The feeling of justice fostered by a constant opportunity to see through the adventitious wrappings of social rank and condition and observe the real substance of the character, prepares the basis for kindness. The discrepancy between good intent and deserts, which arouses childish sympathy most readily, is the first incitement. Justice proclaims that seeming and good intent are not sufficient—there must be adequate performance. If this principle did not prevail in society and the moral world at large, there would be no more strenuons exertion to growth; the wish would be sufficient. But the good intention baffled of its actual fruition through inadequate performance is ever an object that excites deepest sympathy and commiseration in the kind heart. Not only the good intention is the object of kindness, but even the depraved and corrupt excites pity. The trials, that all are alike subjected to, reveal to each childish heart the temptations and struggles with passion and impulse, as well as the weakness of intellect and will that belong to his fellows. Broad human sympathy grows up under these conditions and a Christian civilization finds in it its necessary presuppositions.

The education of youth by means of private tutors essentially lacks the whole side of moral education, such as is found in the good school.'*

*W. T. HARRIS.

# CHAPTER VIII.

## SCHOLARSHIP.

INTELLECT. SENSIBILITY. WILL.

## METHOD.

THERE is a best way of doing everything, if it be but to boil an egg.
—EMERSON.

"In all things a man must beware of so conforming himself, as to crush his nature, and forego the purpose of his being. We must look to other standards than what men may say or think. We must not abjectly bow down before rules and usages; but must refer to *principles and purposes*. We must think, not whom we are following, but what we are doing. If not, why are we gifted with individual life at all? Uniformity does not consist with the higher forms of vitality. Even the leaves of the same tree are said to differ, each one from all the rest. And can it be good for the soul of a man with a biography of its own like to no one else's, to subject itself without thought to the opinions and ways of others; not to grow into symmetry but to be moulded down into conformity?"

### *WHAT IS METHOD IN TEACHING?*

THE student-teacher, as a preparation for his work, considers a field that involves four, to a degree, distinct phases.

1. That in which he deals with knowledge in order to distinguish its parts as elements; in order to discover the relations existing among the elements; in order to re-arrange, classify, and systematize the elements, or the isolated points of knowledge in the light

of relations. This is the region of scholarship. In it the student approaches the subjects or exercise-grounds, i. e. arithmetic, geography, etc., with a somewhat vague, confused comprehension of each; he distinguishes the different facts or elements; compares them, discovering the relations—essential, non-essential, the similar, and the dissimilar, and then synthesizes the remaining elements into a new intellectual whole. In this phase the essential facts of a subject are arranged into an organic relation. This is the sphere of *logical system.*

2. That in which, by introspection of his own mental phenomena, and by aid of the testimony of others, i. e. works on psychology, he becomes conscious of the various methods by which the mind learns.

This is the region of study in which he perceives:

a. That one method by which the mind learns, is to comprehend vaguely a whole, discriminate the parts or elements; compare the elements in order to discover the relations of similar and dissimilar.—*Analysis.*

b. That one of its methods is to apprehend the elements that are similar rejecting the unassimilative ones, (*abstraction*); to create from the similar essential elements a new intellectual product or whole.—*Synthesis.*

c. That another method that belongs to mind is to observe in a number of objects, elements that are similar, conceive these similars as the *same*, (*generalization*), and apply to this element a term common to it and to all objects that have it as their characteristic mark.—*Naming.*

d. That a fourth method of the mind is to hold before itself a general element or elements and compare objects with this general idea, rejecting those that are devoid of it and grouping those marked by its presence.—*Classification.*

e. That another method is to take the classification at any given stage and extend by inference the generalization to objects that have never been within the mind's experience, thus creating a general or universal.—*Induction.*

f. That a method of the mind is to employ the generals or universals furnished by induction or intuition as a means of obtaining individual truths in regard to individual objects.—*Deduction.*

This is the phase of *general method.*

3. The region in which he becomes conscious, through introspection, and through testimony, i. e. psychological works, of the mental methods above indicated, and that they are organically related; of the relation to these methods, of consciousness, attention, memory, imagination, sensibility and will; of the *conditions* of these methods of mental activity, their *underlying laws*, and their *results or products.* This is the sphere of *psychological system.*

4. The fourth phase of the teacher's investigation is that in which he considers the principles employed in adapting the subject-matter of the various branches of learning to the capacities of the learner's mind. This is the phase in which he studies the science and the art of adjusting objects or ideas to the actual mental condition

of the pupils in order that they may give exercise to and be comprehended through this or that faculty, at one or another of the stages of development. This constitutes the province of *method in school education.*

It is evident from the above distinctions that the material presented under method in relation to the various subjects is not strictly either system or method; but it is, in any given case, the system of the subject modified in general by the idea of method. The work given is to be viewed as a basis for the discussion of:

a. The psychological laws especially applicable.

b. The principles that determine the adjustment of subject-matter to its appropriate faculty.

c. The determination of suitable devices.

### *COMENIUS' IDEA OF METHOD.*

"REFORMATION is possible. I undertake an organization of schools whereby—

1. All the youth may be instructed save those to whom God has denied intelligence.

2. And instructed in all those things which make a man wise, good, and holy.

3. And *that*, as a preparation for life, in such a time as will set him free before he is adult.

4. And *that*, without blows, severity, or compulsion, but most lightly, gently, and, so to speak, spontaneously.

5. And *that*, in such a way that they shall be trained, not to specious and superficial, but to true and solid learning, and to the use of their own faculties, —not to dependence on others or on mere memory.

With like solidity will they be instructed in morality and religion.

6. And *that*, so that the course of instruction shall not be laborious but very easy; four hours a day being sufficient.

Order it is that is the soul of the world; order sustains nature in all its parts.

Order too is the eye of the school, and we must take from nature the order of the school.

Our business is to discover from the indications of nature the principles which underlie the answers to the following queries:—

1. How life may be so prolonged as to enable us to learn all things.

2. How arts may be shortened with a view to rapid learning.

3. How we may seize the right occasions for learning so as to learn *Surely*.

4. How we may unlock the mind so as to learn *Easily*.

5. How we may sharpen the understanding so as to learn *Solidly*.

### CERTO OR SURELY.

*How are we to teach and learn surely*, i.e., *so as to be sure of our result?*

This is to be done by finding the *modus operandi* of Nature, and accommodating ourselves to that, as follows:—

FIRST PRINCIPLE.

Nature Attends to a Fit Time.

Birds do not begin the work of multiplying their species in winter. So with other natural operations, such as the growth in a garden; the season determines all. Right in the teeth of this, schools do not choose a fit time for exercising the minds of pupils; and they do not so accurately arrange the exercises as to insure that all things advance infallibly through their own successive steps.

Just as Nature chooses spring as the time of preparation for future products, so the right time is boyhood—the spring of life. The right time of the day is the morning hours, which is the spring of the day; and as to arrangement of studies, it may be said, generally, that nothing should be taught except when it can be comprehended.

SECOND PRINCIPLE.

Nature Prepares Material for Itself Before it Gives it Form.

In the school-books, matter does not precede form. In schools also they teach words before things—the mere clothing or husk of words before the reality itself. Then in the study of a language they teach form before things, because they teach rules before words and sentences. They give rules and then examples, whereas the light ought to precede that which it is intended to light up.

In all instruction it is necessary that, having got ready the necessary books and materials: 1. The understanding be instructed before speech is demanded;

2. That no language should be learned from a Grammar, but from suitable authors, that real studies should precede organic (formal), and that examples should come before rules.

THIRD PRINCIPLE.

Nature Takes a Fit Subject for its Operation, or at least Takes Care that it be Made Fit.

Wherefore—

1. Let him who goes to school remain steadily there.

2. Whatever study is taken up for treatment, let the minds of the pupils be predisposed towards it (and prepared for it).

3. Let all obstacles be removed out of the path of the pupils.

FOURTH PRINCIPLE.

Nature Does Not Confuse Itself in its Works, but Advances Distinctly to One Thing After Another.

Wherefore let pupils be occupied with only one study at a time; that is to say, teach only one thing at a time.

FIFTH PRINCIPLE.

Nature Begins all its Operations from Within Outwards, e.g.,

A tree grows from within, etc.

Teachers err herein, that instead of diligently explaining and articulating everything, they would acquit themselves of their task of instructing youth, by speaking, dictating, and exercising memory.

Wherefore—

1. Let the understanding of things be first formed, then the memory exercised on what is understood, and

only in the third place, speech and hand (*i. e.* writing).

2. The teacher should attend to every way of opening the intelligence, and must apply it fitly.

SIXTH PRINCIPLE.

Nature Begins all its Formation from Generals, and thence Proceeds to Specialize—e.g.,

It warms and nourishes the whole mass of the egg, and does not form first the head, then the wings, then the feet, but, having warmed the whole, it sends its creative force into the special parts, and there specializes. So, a painter in painting a portrait does not draw first the nose, then the ears, etc., but outlines the whole man on the canvas roughly with chalk, and then proceeds to fill in. So with instruction, the outline should first be given.

Wherefore—

1. From the very beginning of their instruction, the (principles or) essential groundwork of *all* learning should be given.

2. Every language, science, or art should first be learned in its simplest rudiments. Thus the idea of the whole, as a whole, will be grasped; then, more fully, rules and examples should be given; thereafter, peculiarities and anomalies; and finally, if necessary, commentaries, etc.

SEVENTH PRINCIPLE.

Nature does not Proceed per Saltum, but Step by Step.

The hatching goes on by insensible degrees. So, a man building a house does not begin from the top but from the foundation, and step by step he rears his structure.

Wherefore—

1. The whole sphere of studies should be distributed carefully among the successive classes of the school in such a manner that the earlier study always prepares the way for what is to follow, and, as it were, lights the path to it.

2. The time at the teacher's disposal should be carefully distributed, so that its own peculiar task may await every year, month, day, hour.

3. This distribution of the time should be most closely attended to, so that nothing may be passed over, and nothing put in its wrong order.

EIGHTH PRINCIPLE.

Nature, When it Once Begins, Does Not Stop Till it Has Completed its Task.

Wherefore—

1. He who is handed over to the school should be retained there until he is ready to come forth an instructed, moral, and religious man.

2. The school should be in an undisturbed locality.

3. What has been laid down to be done should be strictly carried on on the lines laid down, and no gap permitted.

4. No one should be allowed to absent himself on any pretext.

NINTH PRINCIPLE.

Nature Carefully Avoids Whatever is Contrary to its Operations, or Hurtful.

Wherefore—

1. Permit a scholar the use of no books save those which have to do with his own class.

2. The books should be so constructed that they may with truth be called channels of Wisdom, Morality, and Piety.

3. Dissolute associates in or out of school are not to be tolerated.

### FACILE, OR EASILY.

We have exhibited the principles in accordance with which the work can be done with *certainty*. Now we proceed to show that it can also be done easily and pleasantly. This will be the case if we attend to the following ten principles (many of which repeat what has been already laid down).

1. Let the education begin early, before the mind is corrupted.

2. Let it be done with due preparation of the mind.

3. Let it proceed from the more general to the special.

4. And from the easy to the more difficult.

5. Let no one be weighted with too much to learn.

6. Let progress be slow everywhere.

7. Let the intellect be *forced* to nothing save what it spontaneously desires in accordance with its age and with right method.

8. Let everything be communicated through the senses.

9. And turned to present use.

10. Let all things be taught according to one and the same method.

Let us follow the steps of Nature as illustrative of the above principles.

FIRST PRINCIPLE.

Nature Begins from Pure Elements.

The egg which is to be hatched is pure. The tender minds we seek to train should be free from distractions and uncorrupted.

Wherefore—

1. Let the education of youth begin early.

2. Let there be only one preceptor in each subject for each pupil (*i. e.* do not send the child from one master to another in the same subject).

3. Before all, let the morals be reduced to harmony under the influence of the preceptor.

SECOND PRINCIPLE.

Nature Predisposes Matter so That it Shall Seek Form.

The bird hatched *desires* to walk and to peck, and finally desires to fly.

Wherefore—

1. The *desire* of knowing and learning is to be stirred up in boys in every way.

2. Let the *method* of teaching lessen the labour of learning, so that nothing be a stumbling-block to the pupil and deter from perseverance in study.

This ardour to acquire is to be excited by parents, who should evince their respect for schoolmasters and learning; by teachers, who should be kind, paternal, and ready to commend; by schools, which should be pleasant rooms, well lighted, clean, and adorned with pictures, etc.; by the things which the pupils study, which should be so presented as to attract; by the method, which should be the natural method; and by

magistrates, who should be present at examinations and distribute rewards.

THIRD PRINCIPLE.

**Nature Draws Out All Things from Beginnings, which in Their Bulk are Small, in Their Virtue Strong.**

Note in connection with this—

1. That every art be summed up in rules, very short, but very exact.

2. That every rule be conceived in words as brief as they are lucid.

3. That numerous examples be given with each rule, so that the applications of the rule, however various, may be clear.

FOURTH PRINCIPLE.

**Nature Proceeds from the More Easy to the More Difficult.**

We find Latin rules taught in Latin—the unknown by the equally unknown, and many other faults which will be amended if

1. The teacher speak the same vernacular as the boy.

2. If all explanations of things be given in a *known* tongue.

3. If every grammar and lexicon be adapted to that tongue (*i. e.* the vernacular) by means of which the new is to be learned.

4. If the study of the new tongue advance by degrees—the pupil being taught first to understand, then to write, and finally to speak it (which, being extemporaneous, is the most difficult).

5. If, when Latin words are given with vernacular,

the vernacular words, as being best known, always come first.

6. If the material of study be so arranged that the scholar learns first that which is nearest, then that which is near, then that which is more remote, and finally that which is most remote (*e.g.* do not seek illustrations from theology or politics, but from things at hand and familiar).

7. If the senses of boys be first exercised, then the memory, then the intelligence, and finally the judgment. For science takes its beginning from the senses, and thence passes into the memory through imagination, then by induction of singulars an understanding of universals is formed, and finally a judgment as to things understood takes effect, giving the certitude of science.

FIFTH PRINCIPLE.

Nature Does Not Overweight Itself, but is Content with Few Things at a Time.

It does not demand two birds out of one egg.

SIXTH PRINCIPLE.

Nature Does Not Hurry Itself, but Proceeds Slowly—e.g.,

Slow is the hatching of the bird.

Wherefore—

1. Spend as few hours as possible in public lessons; four being the right number, as many more being left for private study.

2. Fatigue the memory as little as possible, only fundamental things being exacted, all else being allowed to flow freely.

3. Proportion all things to the capacity, which, according to the progress of years and studies, will grow of itself.

SEVENTH PRINCIPLE.

Nature Pushes Nothing Forcibly Forward, Except What, Being Already Inwardly Matured, Desires to Burst Forth.

The bird does not urge its young to fly till their wings are ready.

Let nothing, then, be done against the grain. The want of desire frequently arises from want of previous preparation and explanation.

Wherefore—

1. Let nothing be attempted with youth except those things which their age and ability not only admit of but desire.

2. Let nothing be prescribed as a memory-task which has not previously been thoroughly understood.

3. Let nothing be prescribed to be done till the form of it and the rule of imitation have been sufficiently pointed out and impressed.

EIGHTH PRINCIPLE.

Nature Assists Itself in Every Possible Way—e.g.,

There is vital warmth in the egg itself, as well as in the maternal incubator.

Boys must be so far assisted as to understand what is given them to do. The teacher who demands a task without sufficient explanation and preparation is as cruel as a nurse who would put an infant on the ground and tell it to walk. We must bear patiently with weakness.

Wherefore—

1. Let no stripes be inflicted on account of studies: (for if the boy does not learn, whose fault is it save the teacher's, who either does not know how to make the pupil docile, or does not care to do it?).

2. Let what the pupils have to learn be so placed before them and explained that they see it as clearly as their own five fingers.

3. And in order that everything may be imprinted the more easily, let the senses be applied to the subject as often as possible—*e.g.*, let hearing be joined with vision, and the hand with speech. It is not enough to tell to the ears, but the teacher must present to the eyes, that through them the instruction may reach the imagination. Leave nothing until it has been impressed by means of the ear, the eye, the tongue, the hand. Write up on the walls (or draw) the substance of your teaching. Thus the pupils will also acquire the habit of writing down in their note-books

NINTH PRINCIPLE.

Nature Produces Nothing the Use of Which is Not Ultimately Apparent—e. g,

Wings and feet are found to be formed for flying and running.

Wherefore—

Let nothing be taught except for manifest use.

TENTH PRINCIPLE.

Nature Does All Things Uniformly—e.g.

One bird is produced in the same way as all other birds.

Wherefore—

1. Let there be one and the same method for instructing in all sciences; one and the same in all arts; one and the same in all tongues.

2. Let there be for all school-exercises the same order and manner of procedure.

3. Use the same editions of books throughout.

### SOLIDE, OR SOLIDLY.

Few give a solid amount of instruction to scholars. This is a general complaint.

To cure these evils—

1. Let only things likely to be of solid advantage be treated of.

2. All these should be taught without separating any of them from the curriculum.

3. A solid basis should be laid for each.

4. That basis should be laid deep.

5. Let everything subsequently aimed at rest on these same foundations.

6. Wherever distinctions are to be made, let these be distinctly and most articulately made.

7. Let all studies which follow be founded on those that go before.

8. Let all things which as a matter of fact cohere be always connected in teaching.

9. Let everything be arranged according to its true relation to the understanding, the memory, and the speech.

10. Let everything be firmly implanted by continual exercises.

FIRST PRINCIPLE.
Nature Begins Nothing that Will be Useless.

Wherefore in schools—

1. Let nothing be taught which is not of the most solid utility for this life and the next.

2. If some things have to be instilled into youth only for the sake of this life, let them be of such a kind as will not hinder the interests of the eternal life, and as will produce solid fruit for this life.

SECOND PRINCIPLE.
Nature Omits Nothing Likely to be of Benefit to the Body it is Forming.

Therefore it is that in schools there must be not merely knowledge, but also morals and piety.

THIRD PRINCIPLE.
Nature Does Nothing Without a Foundation or Root.

Wherefore—

1. The love of any studies that are begun should be excited in the pupil.

2. The idea (*i. e.* outline or sketch) of the subject to be taught—language or art—should first be given before going to particulars. In this way a foundation is laid in the mind of the pupil.

FOURTH PRINCIPLE.
Nature Sends its Roots Deep.

The general idea of the subject to be taught must *therefore* be deeply impressed.

FIFTH PRINCIPLE.
Nature Produces Everything from a Root; Nothing from Any Other Source.

Wherefore—

1. Let all things be deduced from the unchangeable elements of things.

2. Let nothing be learned by authority, but by demonstration, sensible or rational.

3. Let nothing be taught by the analytic method only, but rather by the synethic.

SIXTH PRINCIPLE.

The More the Uses for Which Nature Prepares Anything, the More Articulately Does it Differentiate it into Parts.

Wherefore—

Let there be no confusion in instruction.

SEVENTH PRINCIPLE.

Nature, in Each of its Works, is in Perpetual Progress, Never Halts, and Never Attempts New Things, the Former Things being Cast Aside, but Only Continues What Has Been Previously Begun, Increases it, and Perfects it.

Wherefore—

1. Let all studies be so arranged that the subsequent things shall be founded in what has preceded, and be strengthened by them.

2. Let everything which is presented to the pupil, and rightly understood, be fixed in the memory.

EIGHTH PRINCIPLE.

Nature Binds Together Everything by Continuous Bonds.

Wherefore—

1. Let the studies of the whole life be so arranged that they shall be one encyclopædia, in which there shall be nothing which does not arise out of a common root, nothing not in its proper place.

2. Let everything that is taught be so strengthened by reasons that no room shall be left for doubt or forgetfulness. And further, let all things be taught through their causes.

NINTH PRINCIPLE.

Nature Preserves, Between Root and Branches, a True Proportion in Respect of Quantity and Quality.

Wherefore—

1. Let everything taught be at once a subject of reflection as to its use, lest anything should be learned to no purpose (i. e. the root of knowledge must spread out into the branches of its various applications.)

2. Let everything that is learned be communicated to others, that nothing may be known to no purpose.

TENTH PRINCIPLE.

Nature Develops and Strengthens Itself by Frequent Movement.

There must therefore in everything be very frequent repetitions and exercises."*

METHOD IN READING.

THE PREPARATORY STAGE.
(Several Months.)

THE KNOWN.

On entering school at the beginning of his sixth year, the child is possessed of a considerable store of ideas, in many cases vague and partial; the oral terms for most of his ideas; a large array of thoughts; the oral sentences for these, often incorrect; power to recognize and name, in many cases, all or a part of the letters, and a few words; power to produce all the sounds in their combinations, and most of them singly; and the power of proper emphasis, inflection and modulation, as required by his own thought.

* JOHN AMOS COMENIUS.—BY S. S. LAURIE.

The mind being an organism, it is of course true that in acquiring the above mentioned ideas, thoughts, expressions and powers, all the mental faculties were called into action, some prominently, some slightly. Those prominently employed appear to be *observation* and *association.*

THE ADVANCE.

The work of reading in this stage is to *preserve* the power of proper emphasis, inflection and modulation; to complete the knowledge of the alphabet; to make the child conscious of the separate elementary sounds, and to give adequate power to produce them; to associate with the ideas, thoughts and oral expressions, their printed expression; and to associate with new ideas and thoughts their oral and printed expressions. The work has several starting points, each connecting with the known, and the proper point of beginning cannot, therefore, be determined by that relation alone.

THE VARIOUS (PARTIAL) METHODS. (RATHER SYSTEMS.)

The different points of beginning have given rise to different systems which have been termed methods. Thus: beginning with what was known of the alphabet, completing that knowledge, passing by means of this into the study of syllables, words, and then of sentences, was known as the *alphabetic* method; passing from the oral word as a whole to the separate sounds, to the letters, to the printed word as a whole, and then to sentences, was called the *phonic*, or with certain modifications the *phonetic* method; associating the oral word as a whole with the printed word as a whole, and then

entering upon a study of sounds, letters and sentences, took the name of the *word* method; making the thought the unit, and moving from thought to oral sentence, and thence in order to printed sentence, words, sounds, and letters, assumed the name *sentence* method.

ALPHABETIC METHOD.

1. Its subject matter.—*The alphabet* (letters,) word, and sentence.

2. What it presents in dealing with the alphabet.
   *a.* Form of letters.
   *b.* Name of letters.
   *c.* Order of letters.

3. What it presents concerning the word.
   *a.* Form as a whole.
   *b.* Pronunciation.
   *c.* Visible parts.

4. Principles.

*a.* Any whole may be more clearly comprehended if its elements are known.

*b.* But twenty-six characters enter into the composition of the various words, and these words differ mainly in the arrangement of these characters, hence it is more logical to teach the alphabet first.

*c.* The alphabet should be taught by grouping and juxtaposition, involving likeness and difference: thus, placing and teaching together c, o, and e; w and v; m and n; p and q; p and d, etc.

*d.* The word should be taught by associating its visible form and its pronunciation with the letters and the aggregate of the letter-names.

5. Favorable points.

*a.* Its recognition of principles *a*, *c* and the first part of *b*, as above stated.

6. Objections.

*a.* It adheres to the last part of principle *b* thereby reversing the order of reading and spelling, spelling being a habit of the eye; and disregarding the principle that in acquisition the more natural method of procedure is from the whole to the part.

*b.* The association which it makes between the pronunciation and the aggregate of the letter-names is arbitrary.

*c.* It does not associate the printed form with the idea, though it might, indirectly.

PHONIC METHOD.

1. Its subject-matter.—

*The alphabet*, (sounds,) word, and sentence.

2. What it presents concerning the alphabet.

*a.* Forms of letters.

*b.* Names of letters.

*c.* Order of letters.

*d.* Sounds of letters.

*e.* Diacritical marks.

3. What it presents concerning the word.

*a.* Form of word as a whole.

*b.* Pronunciation.

*c.* Visible parts.

*d.* Audible parts.

*e.* Relation between *c* and *d*.

4. Principles.

*a*, *b* and *c* same as in alphabetic method.

*d*. The word should be taught by associating its visible form and pronunciation with the letters and the aggregate of the letter-sounds.

5. Favorable points.

*a*. Same as under alphabetic method.

6. Objections.

*a* and *b* same as under alphabetic.

*c*. The aggregate of the letter-sounds does not naturally suggest the pronunciation, although the association is much closer than that between the aggregate of the letter-names and the pronunciation.

*d*. Its classification of the elementary sounds, in connection with their signs, is complex yet inadequate.

PHONETIC METHOD.
(Leigh's Pronouncing Orthography.)

1. Its subject-matter.—

*The alphabet*, (sounds,) word, and sentence.

2. What it presents concerning the alphabet.

*a*. Forms of letters.

*b*. Names of letters.

*c*. Order of letters.

*d*. Sounds of letters.

*e*. New characters.

3. What it presents concerning the word.

*a*, *b*, *c*, *d*, *e*, same as in phonic method.

4. Principles.

*a*, *b*, *c* and *d*, same as in phonic method.

*e*. There should be a separate character for each sound, and that character should have a uniform power.

5. Favorable points.

Same as in phonic.

6. Objections.

In this method the transition to the common alphabetic characters is made by giving to the pupil the same primers to read in these characters that he has already been reading in the phonetic characters.

Such a method is liable to the same objections that have been urged against the phonic method excepting *d*, while its peculiarity in using new characters has two difficulties special to itself.

(1.) The irregularities of sound in the language as it is written are not surmounted by such a contrivance but only delayed.

(2.) Such a method, to be introduced at all, would require to be introduced universally; for it is incompatible with the ordinary methods, and a pupil changing from one to another with change of school, would find his previous acquisition not only useless to him, but an actual obstacle to further progress.

WORD METHOD.

1. Its subject-matter.—

*The word*, alphabet, and sentence.

2. What it presents concerning the word.

*a.* Association of idea with the oral word.

*b.* Association of the printed form with the oral word as a whole.

*c.* The analysis of the word into its sounds.

*d.* Analysis into letters.

*e.* Association of the sounds with the letters, including diacritical marking.

3. What it presents concerning the alphabet.

*a.* Names of letters.

*b.* Forms of letters.

*c.* Sounds of letters.

*d.* Diacritical marks.

4. Principles.

*a.* Same as *a* in the alphabetic.

*b.* It is the more natural to proceed from the whole to the elements.

*c.* The printed word should be taught by associating it directly with the already familiar oral word.

*d.* A part is contemplated with more interest after its whole is known.

*e.* In teaching the forms of the letters, the eye should observe and the hand reproduce.

5. Favorable points.

The recognition of the five principles above stated.

6. Objections.

*a.* It does not make a *direct association* between the idea and the printed word.

*b.* It does not directly give the pupil the power to *master new words*, in which the power of reading really consists.

*c.* It presents the diacritical marks before necessity requires, thereby complicating the work of the preparatory stage.

IDEA-WORD METHOD.

1. Subject-matter.—

*The word in direct association with its idea*, alphabet, and sentence.

2. What it presents concerning the word.

*a.* Printed form as a whole.

*b.* Direct association of the printed form with the idea.

*c.* Pronunciation.

*d.* Analysis into sounds.

*e.* Analysis into letters.

*f.* Association of the letters with the sounds.

3. What it presents concerning the alphabet.

*a.* Names of letters.

*b.* Forms of letters.

*c.* Sounds of letters.

4. Principles.

*a.* The method of learning the printed word should be analogous to that by which the child learns the oral word; i. e., the association between the printed word and the idea should be direct, and the expression should be kept in the background. *When has a word been learned?*

The true answer to this question is involved in the answers to two other questions—What is a word? and, What is the *use* of a word? A word is an arbitrary sign of an idea; that is, it is only by arbitrary agreement that a certain familiar object is called *table;* it might with as good reason have been called *door.* The only valuable use of a word is to suggest to the mind an idea. If a word is an arbitrary sign of an idea, it can be made to suggest its idea only by acts of association. If the acts of association are weak, the word will suggest its idea vaguely; if they are strong, the idea will be recalled vividly.

*The root idea in primary reading, then, is strong association of idea and word.* It is held by some that the main thought of primary reading is the mastery of the written or printed word. It is said, the child is familiar with the idea, and with the oral word, and the thing remaining to be done is to teach him the printed word. This thought is at the basis of the formal and mechanical reading work of the schools. It inevitably tends to concentrate the attention of both teacher and child upon words to the comparative exclusion of ideas. If those holding to the thought that the mastery of the printed word is the design, employ ideas or objects, it is simply to make vivid the picture of the word. It is true that the printed word must be taught, but as a *means* not as an *end.* It is to be taught only that it may be associated with its idea, and not for itself.

The child in the beginning does, as is said, know two things—the *idea* and the *oral word;* but it is hardly correct that there remains but one thing to do—the mastery of the printed word. There are *two* things to be done:

1. The mastery of the printed word.
2. *The strong association of the idea with the printed word.*

The last is the central idea of primary reading—the one that determines method, means, etc. If it is said that those who say that the mastery of the printed word is the work of a primary school mean to include the second point, the answer is that the results show a very *weak association*, but considerable power to *call words*

*at sight*—thus indicating that the stress of the work has been upon *expression* and not upon the *association of thought with expression.*

There are, however, as has been shown, two ways of associating the printed word with the idea—one indirect, the other direct. In the first, the thought is—the child already knows the idea and the oral word and has associated them; he is now to be led to associate the printed word with the idea *through* the oral word. This assumes that the thing that above all others the child needs is the *oral word;* that he is already able by means of association with the idea to call it up, and that his power to call it up must be increased by associating it with the printed word. It is thus seen that the termination is again, power *to call words at sight*, instead of power to instantly drink in the meaning of words *at sight of them.*

In "The True Order of Studies," by Thomas Hill, the statement is made that "the children must early be taught that the printed word is the sign or picture of the oral word." This idea has been the blight to thought work in primary reading.

In the second way of associating the printed word with the idea, the thought is that nature has already provided the child with one means of suggesting the idea, viz., the oral word, by associating the two directly and frequently, and that the aim of primary reading work is to furnish another means, by the same method —the printed word. This consideration makes the *direct association* of printed word and idea the ruling thought.

It furnishes the true ground for deciding as to the means and devices that are to be employed—if they strengthen the direct acts of association they are legitimate; if not, they hinder in the process of reading, which consists essentially in bringing about acts of association between printed words and ideas.

A printed word has been learned, when the association between it and its idea is so strong that the idea (not the sound—the oral word) is instantly suggested at sight of it.

*b.* The power to master new words as to printed form and pronunciation should be given through the law of analogy.

For example, at some stage in the work the pupil has encountered the word hem, and in connection with it studied gem, stem, them, etc. At another time he may have been required to deal with the word ark, and along with it to consider dark, hark, mark, park, stark, etc. At still another time he has had presented some word involving b—e.g., ball, or web; or some word involving is, as this. In the study of these the work involved not the use of diacritical marks, but a dependence—

(1.) Upon phonic and visible resemblance.

(2.) Upon the spontaneous induction which the mind of the pupil tends to make.

(3.) Upon direct and systematic guidance to the proper induction by the teacher.

In this way the pupil gradually comes into a comprehension of the genius of the English language as to its letter-combinations and the associated sounds. By

natural mental growth he begins to understand that as a rule there is, according to the inherent nature of the English language for the analogous combinations ark, dark, hark, park, etc., an analogous sound regardless of any markings; and likewise, in regard to such words as gem, stem, them, hem, etc.

Therefore, it is held that work based upon this thought, taken day by day, establishing the general laws as to the relation of combinations of letters and sounds first, and dealing with the exceptions afterwards, confers a natural power for the mastery of the printed form and the pronunciation of new words, and one that is as applicable to the newspaper and general literature as to the prepared text book in which markings are to be found. It thus occurs that if the pupil meets for the first time, upon the page of a newspaper or elsewhere, the word *disembark*, he is already substantially master of it, because in the combinations already referred to he has studied the forms em, ark, b, d, and is, and comprehends their power; and the idea that he has gained of phonic and visible resemblance enables him to see with but little difficulty the relation between form and sound of this new word.

*c.* The sense or meaning of a word is its strongest bond of association, and also the one of greatest worth.

*d.* Other things being equal, those things that are brought most often before the mind are best retained.

*e.* Other things being equal, those things which are most free from entangling relations are best retained.

*f.* The word as a whole, and the letters are visi-

ble forms, and therefore in learning them the eye should observe and the hand reproduce.

SUGGESTIONS.

1. For perhaps two months present isolated words as wholes, *making the association between the printed word and the idea direct, using the oral word only incidentally.*

*a.* Nature of the work under "1" explained.

2. At about the beginning of the third month commence to teach words in sentences.

*a.* Nature of the work under "2" explained.

3. At the beginning of the third month begin to analyze words into their sounds.

*a.* Manner of beginning the analysis explained.

4. Sometime during the third month commence to analyze the words into their letters, and to associate the letters with their sounds.

*a.* Nature of the work under "4" explained.

The time as given under 1, 2, 3 and 4, as well as that given elsewhere, is only approximate. It may be varied according to the condition of the school community, or the mental development of the pupils.

5. Diacritical marks.

*a.* Purpose.

To aid the child in the intelligent use of the dictionary.

*b.* Time of teaching these marks:—

Beginning of the third year.

(1). Reason:—

Principle *e* of this method.

6. Print and script.

*a.* Reasons for presenting words in *script* from the beginning.

(1). Printed letters have a vertical position. Pupils who practice printing for any considerable length of time acquire a stiff, awkward manner of forming the letters.

(2). Script preserves closely the unity of the word.

(3). The script form is more easily made.

(4). It gives the child at the very beginning of his school-life the second important medium of communication.

*b.* Reason for presenting words in *print* form from the beginning.

The purpose of the preparatory stage is the association of ideas with words as *printed* forms. A careful consideration of the reasons for presenting script and for presenting print from the beginning will show a preponderance in favor of presenting print.

7. Manner of teaching the words "a" and "the."

There are three methods of presenting these words, which will be stated in the order of their value, beginning with the one of least worth.

*a.* To teach the sounds of these words as given by the dictionary, and to hold the pupils rigidly to this pronunciation.

*b.* To teach the words, giving "a" and "e" their name sounds, on the assumption that the pupils will naturally acquire the proper pronunciation.

*c.* To omit all direct teaching in regard to the pronunciation of these words. First, on the ground that the directions given for their pronunciation by the dictionary are based upon the observed habit of both children and adults; and, second, on the assumption that the pupils will naturally and readily continue their already acquired habit of pronouncing these words when they are presented as printed forms without any direct instruction.

8. The words to be taught in the preparatory stage:

*a.* The number:—

About one hundred. The number may vary. By some teachers it is deemed best to begin almost at once with the words in the book; by others, after presenting orally from ten to twenty words; while still others advocate the teaching of from fifty to one hundred words in the preparatory stage. Each teacher should decide this for herself in view of her surroundings, and the condition of the school and class, but enough should be taught to fix clearly in the mind of the pupil the thought that the use of a word is to suggest an idea, before letters and sounds are dealt with.

*b.* Ideas to be considered in selecting them:

(1). They must be familiar orally and as to their meaning.

(2). They must be interesting.

(3.) They must be in a large measure those contained in the first reading book.

(4). They should be composed of groups that contain words analogous in form and sound.

*c.* How they are to be selected:

(1). The words that occur in the first reading lesson should be taken.

(2). To these should be added all familiar words that are analogous in form and sound.

(3). The words of the succeeding lesson should be selected in the same way until the number of words required for the preparatory stage is secured.

(*a*). The preparation of a list of words suitable for presentation in the preparatory stage, in accordance with the thought expressed under "*c*."

### SENTENCE METHOD.

#### GENERAL NATURE.

Observations as to the reading of those who learned to read before they entered school, show that most of them are rapid readers of the thought. In a glance their eye would pass over the sentence or sentences with but little consciousness of the words and they would grasp the thought of the selection much more rapidly than if the words were pronounced. The discovery is, on the other hand, that those who have been taught to read in school are slow readers, i. e. of the thought, their habit being to pronounce the words mentally, if not aloud. They are almost invariably rapid readers of words, i. e. they call words at sight rapidly, but are slow to drink in the meaning. The inferences are that in the public school too much attention is given to word calling, to pronunciation, to sounds and diacritical marks in the early work, thereby establishing a bent in the direction of mere form; that not enough stress is laid upon the *direct association* of thought and expression;

and that there is not enough training in drinking in the thoughts of whole sentences at a glance.

Reading consists of *silent* reading and *oral* reading. The first is the comprehending of the thought expressed and suggested by printed or written language and the second is the adequate oral expression of that thought in the same language. The first is the fundamental process. In fact the oral reading is to be considered largely as a means by which the teacher determines whether the pupil has "read" in the first sense. The correctness of the oral reading depends largely upon the silent reading. The object in teaching reading is to give the pupil the power to look upon the printed or written page and to grasp the thought with the least possible consciousness of the words. If the pupil is so taught that he either thinks the pronunciation of each word, or actually pronounces it, the thought is not obtained *directly* through the printed or written language, but *indirectly*, in that the printed or written words have first to be translated into oral words.

The pupil should be able to look directly through the printed or written words to the meaning, or to at once determine the unknown elements.

The ordinary use of the eye is to convey to the mind the visible attributes of objects. But the ear while recognizing sound as sound, has from the beginning learned to recognize thought through oral words in such a way that the thought becomes primary in consciousness, and the sound of the words secondary. So purely does language become the representative of thought, that, as sound, it is almost entirely in the back-ground.

To cause the eye to obtain thought from language with as little consciousness of the expression as does the ear in comprehending the thought from spoken language is the problem. And this problem is settled, largely, one way, or the other, by the end of the third year of school. The prime aim is to so change the function of the eye that, in reading, words will suggest directly to the consciousness their contained thought.

PRINCIPLES.

*The principles* of the sentence method are:

1. The mind naturally begins with wholes in its investigations.

2. As the unit of thinking is the thought, so the unit of expression is the sentence.

3. As parts are naturally learned while considering their wholes, words, as parts of a sentence are learned while studying the sentence, and letters while studying their whole—the word.

4. Language should be learned indirectly, the stress of the attention being upon the thought.

STEPS.

The first step in the sentence method is to awaken thought in the mind of the pupil by means of objects present to the senses and to the imagination, and to lead him to give the thought proper oral expression.

The second step is to lead the child to grasp the exact thought of any given oral expression, and to make the appropriate concrete representation.

The third step is to lead the child to grasp the exact thought contained in a printed or written sentence, and

to enable him to express the thought in the language used.

For example, the teacher prints or writes upon the board, "I have a ball." The pupils never having studied printed or written words, do not know the meaning; but from the habits and tendencies gained from the previous steps, when the teacher places the ball in the hands of the pupil he says "I have a ball."

The teacher continues the work in the same way until several children are supplied with objects, and corresponding number of sentences being upon the board.

The pupils will then be called upon one by one to point out their sentences upon the board, and to read them orally. Since each retains his object, this will be readily done. If the child forgets the sentence the teacher is to point it out for him. The pupils are then led to exchange objects and continue the same kind of work. In the lessons from day to day the position of the sentences is to be changed, in order that the pupils may not recall them from their position. The objects to be used should be kept upon a table or desk within reach of the pupils. When the teacher prints or writes a new sentence she may hand the object to the pupil or point it out for him to take.

At a later stage the teacher may, after printing or writing a sentence, wait, and thus give the pupils an opportunity to select the object without its being shown. Whenever a pupil expresses a desire to do this it indicates that he has read the thought, and is acting in obedience to the impulse occasioned by the thought. The pupils are, from this point on, able to read the

sentences, silently, orally, and to represent the thought objectively with but little aid from the teacher. In due season they pass to the consideration of single words, letters, sounds, etc.

Indicate, in detail, the exercises under each step. What are the favorable points of the method? The objections to it? How test it?

No one of these, however, constitutes a method of teaching reading. *Each is a system, one condition of the method.*

*The central thought in each is association;* each in its place is best. The things to be associated in reading are ideas and thoughts on the one hand with their printed symbols on the other. *It is not the aim of reading to teach the printed word or the printed sentence, but to so associate them with the idea and the thought that they express, that the one shall instantly suggest the other.* Each of these systems, in its proper relation, is an aid to the association of thought and expression; but each may be employed at such a time, and make such association as to be a hindrance to thought. THE GREAT POINT IN READING WORK IS TO ASSOCIATE IDEAS AND PRINTED WORDS, AND THOUGHTS AND PRINTED SENTENCES, SO AS TO MAKE THE PUPIL AS LITTLE CONSCIOUS OF THE PRINTED WORD AS HE IS OF ORAL WORDS WHEN HE IS GIVING OR RECEIVING THOUGHT BY MEANS OF THEM. The sole use of a word or sentence is to suggest an idea or thought. Unless they do this they are worse than useless. But words and sentences have in themselves as forms no inherent power of suggesting ideas and thoughts, since they are arbitrary expressions. In order that they may

at once suggest their ideas and thoughts, the association must from the first be direct, the weight of attention resting upon the thought side. "An irrefragable law of didactics," says Comenius, "is that the understanding and the tongue should advance in parallel lines always." The cleavage idea in reading is that the printed expressions are to be associated with their ideas and thoughts so as to instantly suggest them, *and yet be themselves in the background in consciousness, just as oral expressions do and are.*

Association being the essential act in learning to read, a consideration of the laws of association is requisite. The fundamental principle of association is that *the mind tends to act again as it has acted.* Subordinate to this is—*if two things are presented to the mind at the same time, or in immediate succession, and one of them is afterward presented, the tendency is for the other to appear in consciousness.* But this is only a tendency; there is no absolute certainty that the one will present itself to the mind when the other does. This certainty is to be secured by the application of another law of association—*other things being equal, those things that are most often brought together in consciousness are most strongly associated.*

Economy requires that this law should be supplemented by two others: *Other things being equal, those things that are brought together in consciousness with the greatest degree of emotion are most strongly associated.* (If the emotion becomes absorbing, however, the tendency to strong association is weakened.) *Other things being equal, those things that are held together in consciousness,*

*most free from entangling relations, are most strongly associated.*

The ideas to be mastered in reading, or the exercise-ground, should be, and should appear to the child to be a development from the basis, i.e., that which he already knows upon the subject.

The thought that is to determine what means or devices are to be employed in teaching the child to read is—whether the given device or means will aid the association of the thought and expression.

The development of the mind is thus presented by PORTER:

"The development of the mind begins with the *beginnings of attention.* Before this, its activities are, as it were, rudimental only. From this condition the mind awakes when some object attracts and holds its attention. The infant's power to know begins to be developed when it begins to attend. As soon as the infant begins to notice, its vacant countenance assumes the expression of intelligence, and is lighted with the dawn of intellectual activity. Attention gives *discrimination,* and discrimination implies objects discriminated. The first objects distinguished are *object of sense.* The sensible objects that are first mastered are those which relate to its *wants,* and generally so far only as they are related to these wants; first to its *appetites,* then to its *affections* and *desires.* With the discernment of these objects, in their relations to these sensibilities and desires, begins also the direction of the active powers by intelligence.

But though the attention is at first chiefly occupied with sensible objects, and these prominently in their relations to the sensibilities and the practical wants, it is not wholly neglectful of the psychical operations and the psychical self. At a very early period the body is distinguished from the material world of which it forms a part. The soul also begins to be appre-

hended as diverse from the body, as soon as the purely psychical emotions, as the love of power and sympathy, or the irascible passions, are vividly experienced.

As fast as the attention masters distinct objects, it must separate them into separable ideas or images, which are henceforth at the service of the *imagination and the memory.* These reappear in the occasional dream-life that begins to disturb what was hitherto the animal sleep of the infant. Memory begins to recall past experiences of knowledge and feeling. Recognition finds old and familiar acquaintances in the objects seen a second time. At a later period, imagination begins to imitate the actions and occupations of older persons, and furnishes endless and varied playwork for childhood in the busy constructions of the never-wearied fancy; while it irradiates the emotional life with perpetual and inextinguishable sunshine.

Slowly the rudiments of *thinking, or the rational processes,* begin to be learned and practiced. The attention not only discriminates, but compares. As it compares, it discerns likenesses and differences in qualities and relations. These, it thinks apart from the individual objects to which they pertain. It groups and arranges, under the general conceptions thus formed, the individuals and species to which they belong. To these activities language furnishes its stimulus and lends its aid. Inasmuch as there can be but a limited language without generalization, the infant or child is forced to think, by the multitude of words which catch its ear and force themselves upon its attention; each representing the previous thinking of other men, and even of other generations.

With classifying, are intimately allied the higher acts of tracing effects to causes and illustrating causes by effects. Then, inductions are made by interpreting similar qualities and causes, as exhibited in experience and elicited by experiments. The mind becomes possessed of principles and rules, which it applies in deductions both to prove and explain.

From the development of the child's mind it is evi-

dent that devices or means that will not be appropriate, and will not aid the association at one time, will at another, and *vice versa*.

What are the principal means or devices that may be employed in reading? (a). To call the idea into consciousness. (b). To call the word into consciousness.

Among the principal means of suggesting the idea to the mind may be mentioned:

1. Illustration.
   a. Objective.
   b. Graphic. { Drawings. / Pictures.
2. Language.
   a. Oral word. { Alone. / In a sentence.
   b. Conversation.
   c. Stories.

The printed word is brought into consciousness, in the first place mainly by observation and copy. It is afterwards suggested by any one of the means given above as suggesting the idea.

The great and most prevalent defect in teaching children to read is in having them try to learn one thing by doing another, i. e., *in having them associate expression with expression*, when the aim is to associate expression with thought. Dealing too much with form or expression, has been, and is, the source of all the mechanical reading that so abounds. In reading, the form or expression is the incident, and is to be kept in the background.

The tendency to make the expression prominent is seen in the association of the printed word with the oral word in unnecessary cases; the association of the printed word with the same word in other places on the board or in the book; in the practice of calling the pupil's attention to his mistakes in emphasis, inflection, modulation, etc.; in the practice of asking one pupil to try to give a better oral reading than the one given. All these tend to make the pupil self-conscious, and hence divide his mental energy, which should be concentrated upon the thought.

### THE PRIMARY STAGE.
(To about the close of the Third Year).

#### GENERAL NATURE.

In the first part of this stage the subject matter and the methods partake of the nature of those in the advanced stage but more largely of those in the preparatory stage; while in the latter part of the work the reverse is the case.

Since all literature is the embodiment of thought, and all thought involves the relations indicated under the head of the categories—(considered at another place)—it follows that the teacher of silent reading will find that all the questions employed by her in leading the children to obtain the thought will find their classification under these categories referred to, so that the question can not be—Shall the categories be employed in obtaining the thought of the reading lessons in the primary stage? but—Shall they be applied informally, (to the children) or formally and in such a way that the children are conscious participants in their application?

The true answer, probably, is that in the beginning of the primary stage their application should be informal, (the teacher, however, having in mind their systematic use) gradually passing into a conscious and systematic use of them, so as to, by this means, early implant among other habits a habit of *studying* the reading lessons in the light of them. This alone would be a gain of great value, as it would go far toward solving that problem so often met by the primary teacher—How can the primary pupil be led to study the reading lesson? Many difficulties in discipline would thus be removed.

USUAL MODE OF PROCEDURE.

The most prevalent method of dealing with a reading lesson is based on two principles:

1. *The chief aim in a reading lesson has to do with the thought.*

2. *The mind can best master a thing, when the thing to be mastered is most free from entangling relations.*

It is therefore said by many, 'unless the mind is freed from the consideration of such things as the spelling, pronunciation, and meaning of new or vaguely understood words when it enters upon the attempt to obtain the thought of a paragraph or of a whole selection, it will be hampered and engrossed by these elements of form so as to seriously interfere with the mastery of the thought'

The inference of those who reason thus is that the treatment of a given selection as a reading lesson would involve three general kinds of work:

1. The mastery of new words.
2. The consideration of the general thought.
3. The oral reading.

The mode of procedure would therefore be (a selection having been decided upon):

a. The selection of the most difficult words (difficult as to pronunciation, spelling, meaning, or in any respect) and the placing of them upon the board.

b. The study of these words by the pupils, as to their spelling, sounds, diacritical marking, pronunciation and general meaning.

c. A recitation upon the given words in respect to these points.

d. The consideration and discussion of the thought. (The supposition being that the mind by this considerable and minute treatment of the form, has been so freed from it as to be able to turn the whole attention upon the thought.)

e. (In primary classes). The calling of the words from the beginning to the end of the sentence and *vice versa.*

f. The oral reading.

This method although apparently rational, is seen upon close reflection, to be fallacious. If those same words with their peculiar characteristics of form and meaning were the ones that were to appear in every possible reading lesson, in and out of school, the theory would then hold true; and it would, therefore, be the rational order of work to first devote a period to the mastery of this universal form and then ever after be able to turn the undivided attention upon the thought.

But such is not the case. Each selection has its peculiar words with their peculiar characteristics. And to consider them first, and with all the detail indicated, tends not to free the mind from them but to engross it with them, to give them an undue prominence in the mind. According to the method being considered, only about one third of the time is devoted to the thought element; as for example, upon any three days' work with a selection it usually requires one day upon the unfamiliar words, one concerning the general thought and one devoted to the oral expression; or if but one day is employed, one third of the time upon the first, one third upon the second and the remainder of the time upon the oral expression.

The practical results, therefore, of reading work of this character are:

1. To give great prominence to the formal side, and to engross the mind with it.

2. To disregard, to a degree, the principle of proceeding from the known to the related unknown.

3. To disregard the idea that the mind gains most power, when in each exercise, it exerts its present power to the highest degree.

The general mode of procedure that is suitable in the reading work of this or of the succeeding stage is based upon the following principles:

1. The aim in teaching reading is to confer upon the pupil the power to obtain thought from language *without considering the spelling, sounds, pronunciation and general meaning of the words, except in a very subordinate degree.*

2. The mind, in the attempt to master the thought of a selection must exhaust its already acquired power and knowledge in the attempt at interpretation before dealing with extraneous aids. That is, the pupil's experience, knowledge, and power, and the relations of the words in the paragraphs should all be utilized to the utmost before outside agencies, such as dictionaries, etc., should be employed.

3. Spelling, separate sounds, pronunciation, etc., belonging to oral reading, should, until the thought is thoroughly mastered, be kept as subordinate as possible.

#### A PREFERABLE MODE OF PROCEDURE.

The plan of work that would be in accord with these principles, whether the lesson is upon a whole selection, a paragraph or a sentence is—

#### THOUGHT.

1. To have the class come to the recitation without having considered at all the spelling, sound and pronunciation, except incidentally or unconsciously, as they would necessarily do when attempting to interpret the thought. The pupils are not in their preparation to have used the dictionary. The aim is to have the selection, paragraph, or sentence utter to them its entire thought as fully as possible without any aid outside of it. The only instruments that are to be brought to bear upon the lesson in its study are the pupil's previously acquired knowledge and habits, and these are to be pressed to the full test.

2. (*In the recitation.*) The teacher, by questions,

applying the categories informally or formally, is to determine:

*a.* To what extent the pupil has come into possession of the thought.

*b.* What the impediments to his full comprehension of the thought are, i.e., where his difficulties lie. There will thus be disclosed, definitely to the teacher, the expressions or words that, for want of comprehension, stand between the pupil and his full insight into the thought.

3. The third kind of work is to concentrate the attention upon these difficulties. No extraneous aids, however, such as the dictionary, are to be used at this time. The teacher is by question and suggestion to marshal and bring to bear upon these seemingly unfamiliar words, all the pupil's related knowledge; all that analogy of form and sound have previously given him; all that may be gathered from every possible relation as indicated or suggested in the paragraph or sentence, in order to dissolve the difficulties or reduce them to the minimum.

4. If there still remain a word or words that have not yielded to the previous work, such word or words are then (in the recitation) to be examined in the dictionary, (if the class is advanced enough to use it) or explained by the teacher at the board, and so intertwined with the pupil's previous ideas and vocabulary that they become his permanent property. If it is not desired to investigate these words during the recitation, the pupils may be asked to study them before the next recitation.

The objection may be urged, however, that in the answers required in the work suggested, the pupils will necessarily have to use some of the words of the lesson, and not having studied the spelling, pronunciation, etc., will doubtless make mistakes in pronunciation, and thereby tend to fix an incorrect habit.

The answer is:

1. That the words in a new lesson that have not been made familiar to sight and sound by the child's experience before entering school, and by the work in reading and in other studies are much fewer than would be at first supposed.

2. That if the pupils do frequently mispronounce words in their answers it is much better that these mechanical mistakes should occur (*the teacher quietly correcting them at the time*) than that by the previous study of them the mind should be prevented from giving the thought due prominence, and from gaining the highest degree of exercise.

FORM.

The thought of the selection, paragraph, or sentence having been substantially mastered, the attention is then to be turned to a mastery of the unfamiliar elements of the form, i. e. pronunciation, etc.

In this work essentially the same kind of steps would be taken as have been suggested for the thought work. That is, the thought having been obtained, the teacher would:

1. Test the pupils thoroughly without reference to dictionaries or other aids, as to mastery over the language in regard to the separate sounds, pronunciation,

etc., in order to determine the exact location of their difficulties.

2. The nature and extent of the unknown having thus been brought clearly before both the pupil and the teacher, the effort is then to be made to translate this unknown into the known, i. e. to master the difficulties by means of questions, suggested analogies of form, lines of relation to known words in meaning, inference, etc., before resorting to the dictionary, or to explanations by the teacher.

3. If any difficulties remain unremoved as might be the case for example with the word *bade* on account of its anomaly, they are to be explained by blackboard work, or by use of dictionary, or assigned for investigation.

### ORAL READING.

In the oral reading, the mistakes in emphasis, inflection, modulation, etc., are signals of defects in the thought. They are *effect*. The want of comprehension of the thought is *cause*. Remedies should, if possible, be directed to the cause. When such mistakes occur, therefore, the attention of the class should not be called to them, but it should be again concentrated upon that element of the thought, which, for want of being comprehended or felt, caused the oral mistake. Whenever a mistake of the kind mentioned occurs, it should serve as a notice to the teacher to turn quietly to the thought, in order to further investigate it, without any reference to the mistake itself. In this way the pupils will silently imbibe the idea that a mistake in emphasis, modulation, etc., is a mistake in thought, and will hence acquire

the habit of dealing with the mistake at the root. If the mistake is more mechanical, as articulation, the quality of a sound, defect in the use of the vocal organs, etc., the nature of the remedy is likewise to be different. Most of the work, however, upon orthoepy, diacritical marking, spelling, etc., should be done at a time separate from the work upon either silent or oral reading.

In general the same method in oral reading would be employed in this stage as in the advanced stage. The function of oral reading is to be viewed, however, as indicated, as almost wholly a means by which the teacher is enabled to look into the mind of the pupil and determine whether he has grasped the thought, and experienced the feeling.

SUPPLEMENTARY WORK.

It is not the intention here to present new means of interest, but merely to emphasize the value of old and well known devices, such as:—

1. Illustration—objective, pictorial and verbal.
2. Conversational exercises.
3. Reading to pupils.

The first means is based upon the principles that the strongest and most interesting bond of association that a word can have is its meaning presented in conjunction with the form, and that, other things being equal, that is most easily acquired and best retained, which is presented most concretely, vividly and graphically. These would indicate that whenever the word stands for an object, the object should, if possible, be at hand, or a representation of it in a picture or upon the board, in order that the qualities for which it is known may be

observed and associated with the printed form which is its symbol. There are, however, many words that are susceptible of neither objective nor pictorial illustration. These are to be made vivid in their significance and therefore interesting, through verbal illustration, i. e., by picturing out to the minds of the pupils, the ideas for which the printed forms stand. In order to make the mastery of such words interesting, there are required verbal comparison, analogy and illustration to the degree that the significance shall stand out present to the mind's eye.

In reality every word represents an object or a combination of objects, and may therefore be made strongly interesting to the pupils by being pictured out in words representing the objects. That every word represents either an object or a combination of objects does not at first appear; yet a close analysis of even such words as *of, from, this, that, towards, resting, etc.*, will show that each represents an object or objects in certain relations or conditions.

Pestalozzi was the first who introduced the systematic use of objects and pictures as an element of interest and knowledge in language work; but long before, a greater teacher than he, one who "spake as never man spake," gave the true way of filling every abstract term, figurative word, and phrase with significance and interest by the simple and interesting method of picturing out to the mind's eye through analogy and verbal illustration. The New Testament is rich in examples of verbal illustration. Among them will be remembered the following:—

When the Savior wished the Jews to understand *His love for Jerusalem* and the *destruction of Jerusalem*, in order to fill these phrases to the utmost, He said—"O Jerusalem, Jerusalem, thou that killest the prophets, and stonest them which are sent unto thee, how often would I have gathereth thy children together, even as a hen gathered her chickens under her wings, and ye would not! Behold, your house is left unto you desolate."

The judicious employment of the device of picturing out to the mind in reading lessons upon all appropriate occasions will tend to enrich and fill with interest the usually uninteresting process of mastering words as forms. It may be said in objection to this that such a process, in conjunction with the other forms of illustration, would require too much time. The reply is that mere instruction, the mere lodging in the memory of word-forms may be pressed, but that education is of slow growth.

The second means—conversational exercises—is based upon the principles that education is a process in which mind addresses mind, and that in order that the process may be successful, there must be sympathetic harmony between the minds to insure freedom of mind action on the part of those addressed. It should therefore be the constant aim in the early reading work, to foster, by using every fitting opportunity, that sympathy and freedom which will arise from the interweaving of conversation and instruction upon the forms of words. This is one of the most accessible approaches to the interest of the child.

The third means—reading to children—is employed to confessedly great advantage in the family, and it is somewhat strange that it is neglected to so great an extent in many schools. Reading to pupils has, clearly, two advantages:—

First, it furnishes a strong stimulus to the pupils to learn to read for themselves; and this is peculiar to it in distinction from telling the same thing to the pupils in the teacher's own words. The teacher should read to the school; interest them in what he reads by clustering pleasant associations round the book; and lead the children to see that he gains a large part of his knowledge from books.

If the children are thus frequently shown both directly and indirectly the pleasures of reading for themselves, an incentive to master the formal, hard, dry side of reading will naturally arise in the mind, because of the desire to take possession of the beauty and enchantment which the form has within it, forever locked away and hidden from all not possessed of the key—power to read.

The second advantage of reading to pupils is the culture that it brings to the imaginative, moral, and æsthetic natures, to which it should be addressed.

Direct address, or the telling of stories to the children may, it is true, accomplish the same end; but even if all teachers possessed the grace and charm of narration that is found in the works of Irving, Prescott, Dickens, Miss Alcott, and like writers, which is not the case, their power would be greatly extended by the use of books. These present a large range of beautiful ideas clothed

in elegant and graceful drapery, giving them a permanent existence to which the child may be led again and again, each time with renewed pleasure; for the child delights in an old story, because all his surroundings are new to him, and he seeks repose from novelty in familiarity, just as when the world grows old to the mature, they seek a change from monotony in novelty.

Reading to children, in addition to interesting them, tends, if rightly conducted, to confer that which is one great aim of education—the power of close and self-sustaining attention.

The books from which to read belong to two classes—those whose subject-matter is real, and those in which it is imaginative. Of the former, many incidents of biography and history may be employed, but not to so great a degree as might at first be supposed, because they do not, in a large measure, present the quiet and unobtrusive virtues, but are, in many cases, connected with wrong, oppression, and punishment.

In addition to this, the most of biographies and histories are written for adults, and need much modification in order that they may be available for primary work.

The second class of books—the imaginative—has, to a great extent, been sent into exile by the utilitarian spirit, which prevails to a harmful degree in the public schools. Almost all of the old nursery and fairy tales have been banished by this spirit, but they should be recalled and used again, being fitted for all children in all times. They are much superior in respect of healthy influence, to many that have superseded them.

They develop the imagination, amuse and interest, and are, at the same time educating, since they have, especially the fairy tales, a distinct moral influence, separating the good from the bad by an impassable gulf. The spirit which would make the public school a mere drill-ground on which to prepare the child to earn his daily bread, would exclude all these primary imaginative tales from the realm of educative influence, and from the schools, disregarding the fact that the æsthetic faculty is one of the earliest to unfold in the mind of the child.

The æsthetic nature is regarded by Herbert Spencer as the mere ornament of life—the "effervescence of civilization," the culture of which may be deferred to some distant day of idle leisure in a future golden age, in order meantime to press forward the studies necessary for the preservation and maintenance of material existence. "When," says that distinguished thinker, "the forces of Nature have been fully conquered to man's use, when the means of production have been brought to perfection, when labor has been economized to the highest degree, when education has been so systematized that a preparation for the more essential activities may be made with comparative rapidity, and when consequently, there is a great increase of spare time, then will the Beautiful, both in Art and Nature, rightly fill a large space in the minds of all."

The scheme of education as given by Alexander Bain would also exclude from the schools this important means of arousing interest, and relegate it to the family. He regards early imaginative literature as only "a means for indulging the emotions,—an ingredient in the satis-

faction of life," going on to state—"In addition to our enjoyment gained from realities, we crave for the contribution to our enjoyment which comes from ideality. Now Ideality is a different thing in different ages,—fairy tales and extravaganzas for the young; the poetry of Milton for the old. There is nothing educative in the first instance; we are not aiming at instruction, but drinking in emotion. The gratifying of children with the literature of the imagination is a matter for the parent as much as giving them country walks or holiday treats."

Both of these eminent educators seem to ignore to too great a degree the fact that the æsthetic faculty is one of the earliest to unfold, and that therefore primary imaginative literature becomes educative; and also that it is one of the great means of interest in the formal or primary side of reading, *in that it opens enchanted ground, and wonder-land,* in connection with that subject.

If it were possible to separate education from interest, and to contract it into a training which had for its first object the obtaining of the means for improved material existence, it might well be asked whether the race so trained would be likely to have any large space of mind left to be filled by beauty in the idle years, after nature had been forced to contribute all she could to man's material prosperity.

A school training separated from interest and æsthetics, through the early formative years would tend to lead those who come under its influence to say at last,—

"Little we see in Nature that is ours,
We have given our hearts away, a sordid boon.
This sea, that bares her bosom to the moon,
The winds, that will be howling at all hours
And are up-gathered now like sleeping flowers,
For this, for everything we are out of tune;
It moves us not."

Some of the books that are considered favorable are:—

Jane Austin's novels, (realistic.)
Anderson's Fairy Tales.
Æsop's Fables. Robinson Crusoe.
Little Folks in Fur and Feathers.
Near Home and Far Off.

Extracts from such writers as Miss Edgeworth, Mrs. Barbauld, Miss Alcott, "Peter Parley," "Sophie May," "H. H." and others.

Johonnot's Natural History Series.—D Appleton & Co.

1. Cats and Dogs, and other Friends.
2. Friends in Feathers and Fur.
3. Neighbors with Wings and Fins.

Such Periodicals as St. Nicholas, Youths' Companion. Harper's Young Folks, the Wide-Awake, The Century, Harper's Magazine and Weekly (judiciously used), The Nursery, Our Little Men and Women, and others.

### ADVANCED READING.

#### DEFINITION.

#### THE WHOLE OF WHICH THE SUBJECT OF READING IS A PART.

"Reading belongs to the group of language studies, the other studies of which are rhetoric, composition, literature, grammar, orthography and orthœpy. These subjects are called language studies because their subject-

matter is language and their purpose is to give skill in the interpretation and use of language.

COMPARISON OF LANGUAGE STUDIES AND OTHER STUDIES.

Language is involved in all thinking and hence all subjects, especially those involving the use of text-books, give skill in the interpretation and use of language; in this respect language studies and all other studies are alike.

LANGUAGE STUDIES CONTRASTED WITH OTHER STUDIES.

Between the two groups of studies there is this difference. In the language studies the thought expressed is incidental to the manner of expressing it; in other subjects the language is incidental and the attention is directed mainly to the thought expressed rather than to the manner of expressing it. In other words, in language studies the thought expressed is regarded as a means of exhibiting the forms of language; in studies other than language studies the language employed is regarded as a means of exhibiting the thought. One teaches the form by means of the content, the other teaches the content by means of the form.

LANGUAGE STUDIES SEPARATED INTO GROUPS.

Language studies naturally divide themselves into three groups on basis of the parts of language with which they deal: 1. Word studies.—Orthography and Orthœpy. 2. Sentence study.—Grammar. 3. Discourse studies.—Rhetoric, Composition and Reading.

DISCOURSE STUDIES COMPARED.

Discourse studies are alike in that they deal with discourse as a whole rather than with its parts as in the case of orthography, orthœpy and grammar.

### READING CONTRASTED WITH COMPOSITION

Composition deals with the synthesis of discourse. Reading deals with the analysis of discourse. The one organizes the parts into a whole, the other separates the whole into parts. The one teaches involution, the other how to deal with what has been involved. While analysis and synthesis are present in both cases, they are not employed in both cases in the same way. The composer first analyzes his subject, then synthesizes the parts into a connected whole. The reader first comprehends vaguely by means of synthesis the subject as a whole; and then more largely by analyzing or separating it into its parts; and by synthesizing or determining the relation of these parts. He begins and ends with synthesis, and employs analysis as an intermediate step.

### THE RELATION OF READING AND LITERATURE TO OTHER SUBJECTS.

Discourse represents products of three forms of mental activity—intellect, sensibility and will. Studies other than literature and reading whether language studies or not deal mainly with didactic discourse or the discourse of pure intellect: they represent thought and awaken thought in the student. Literature proper is that kind of discourse which represents products or states of the sensibility, and which tends to stimulate those powers in the mind of the reader. Other discourse gives power to the intellect mainly. Literature is addressed to universal human nature and gives power to our whole spiritual being. A marked difference exists between the two kinds of discourse, whether regarded as to form or

content. The content of one is addressed to the understanding and is written in the language of the understanding, or in the language of science: the content of the other is addressed to the sensibility and is presented in a sensuous form or in the language of the imagination. Both reading and literature deal with this kind of discourse. In this respect they are alike.

### READING CONTRASTED WITH LITERATURE.

There must be in the mind of the student a condition that shall constitute a proper basis of the psychological states of the author which he is expected to experience. The principles of conduct presented must be identical with or similar to those involved in the simple problems of life which have already confronted him and commanded his attention. The language employed must be such that he can with reasonable effort master it. Having mastered the principles of conduct, the value of which his own experience enables him to appreciate, and having been exercised in the simple forms of expression, and being strengthened in his imagination by the short flight presented in his school reader, he has been furnished a basis for the deeper problems of philosophy, the subtler elements of style and the more sustained flights of the imagination, presented in the more advanced grades of literature such as the book of Job, Paradise Lost, or the plays of Shakespeare. Reading is primary or elementary literature. Literature is advanced reading. There is this further difference between the reading work and literature; literature is studied for its own sake in a sense that reading is not. Reading is

preparatory to not only literature but to other subjects in that *it seeks to give skill in the interpretation of all discourse.*

READING CONTRASTED WITH OTHER SUBJECTS.

It is generally held that pupils should receive instruction and deal in the art of oral expression; and that the subject of reading should secure to him this drill. All subjects that require the student to talk give skill in the oral expression of thought, but not in the expression of feeling. Some subjects do not give this drill because: 1. The matter dealt with, being deductive does not furnish the proper occasion for such expression. 2. In these as well as in case of subjects the matter of which is appropriate to such expression no attempt is made to give it because such a result would be foreign to the end. 3. The matter in the reader furnishes a variety of expression and it is held to be the study of the teacher to give the student instruction in this art. Reading should teach the forms of expression appropriate to various typical feelings and the principles involved in the oral expression of thought learned in other subjects, and the thought employed in conversation.

KINDS.

Reading may be separated into kinds or classes on several bases.

ON BASIS OF AIM.

*Silent reading*, i. e., that in which the purpose is to experience the thought expressed and suggested by the composition.

*Oral reading*, i. e. that in which the aim is to give the

power to decide the oral expression suitable to the thought, and to cause others to experience the thought by giving adequate oral expression in the words of the author.

ON BASIS OF SUBJECT MATTER.

Discourse contains products of the three forms of mental activity: on this basis we have the three kinds of reading.

1. Thought reading, or the reading of matter that seeks to awaken thought.

2. Emotional reading or the reading of matter which seeks to excite the sensibilities.

3. Ethical reading, or the reading of matter which seeks to influence the reader's thought and determine his action.

Thought is the necessary condition of feeling and volition and hence whatever feeling or choice the author seeks to inspire in the reader or whatever course of action he would lead him to adopt, he first seeks to communicate some idea or thought as the condition of the ethical or emotional end in view.

ON BASIS OF FORM.

Form is the means which the author employs to represent thought, feeling and volition.

1. The reading of *narration* or reading of discourse which represents events succeeding each other in time.

2. The reading of *description* or the reading of that which represents complex objects and their attributes.

3. The reading of *exposition* or the reading of discourse which deals with definition and arguments.

4. The reading of *mixed forms* or the reading of that discourse which contains several of the above forms.

THE STUDY OF WORDS.

In the study of a selection as a whole there are involved:

1. The study of the literal meaning of words or the study of words which give to objects of thought attributes and relations which they actually possess, and which directly express objects of thought, attributes and relations by naming them. In studying the literal meaning of a word, its derivation and generally accepted meaning should be learned. Thus a valuable addition to the student's general vocabulary is made and the habit of critically studying the meaning of words is cultivated.

2. Its meaning in the content. This is necessary in order to understand the author's meaning.

3. The figurative meaning."*

In order to be able to direct the work in all these phases the teacher should understand *the process of thought analysis; etymology, or the derivation of words;* and the distinction between *language of the understanding and language of the imagination.*

THOUGHT ANALYSIS.

Those things which are the ground for the employment of the *categories or forms of knowledge* in the interpretation of discourse are:

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1. The mind in its processes of thinking, in the formation of its mental products, involves and assumes certain *categories or forms of knowledge* according to which it performs its thinking, and constructs its products.

These categories are:—

Substance; Attribute; Time; Space; Similarity; Diversity; Whole; Part; Cause; Effect; Design; etc.

2. Literature or reading is objective thought. That is, any selection in literature, as Gray's Elegy, is the life or thought of the author put forth in objective or visible form—in language. The Elegy then is a mental product, projected into the outer world. Since its formation as a mental product involved the relations referred to, it, as an element of thought or life made objective, still involves them. Moreover, the mind that is to approach it and awaken it to life again, i. e. to re-think it, is itself subject in its processes of thinking to the same fundamental relations as the author who thought the Elegy and gave it concrete form. To re-think the poem the mind of the learner must move forward upon the same *categories or forms of knowledge* that the poet of necessity employed. The question naturally arises,—Under what *forms of knowledge or thinking*, did the poet produce his work?

Could the scene have been imaged by the author, without involving the idea or category of space? That it could is inconceivable. Then the one who is to re-think it must do so under this relation. Could the writer have produced it without assuming the category of design, and without viewing it as a whole and

as consisting of parts, and could he do otherwise than to think the whole, and each part under the relation of design? The mind can not conceive that this is possible. Then the learner is to consider it under the relations or categories of design and of whole and part, etc.

The practical form of the questions that direct the mind in its consideration of any selection under these *forms of knowledge* or *categories*, has been given as follows: ("it" indicating to the mind, but not naming, the subject of the selection or lesson).

1. What is (or was) it?—(Category of Substance and Attribute.)
2. When is (or was) it?—(Category of Time.)
3. Where is (or was) it?—(Category of Space.)
4. Why is (or was) it?—(Category of Cause and Effect.)
5. The purpose of it?—(Category of Design.)
6. The whole of which it is a part?—(Category of Whole and Part.)
7. The parts of it?—(Category of Whole and Part.)
8. What is (or was) it like?—(Category of Similarity.)
9. What is (or was) it unlike?—(Category of Diversity.)
10. What is (or was) the effect of it?—(Category of Cause and Effect.)

The province, force, and value of the categories in their application to reading work may be understood, to a degree, by a careful consideration of the following selections and their accompanying analyses:

THE DISCONTENTED PENDULUM.

"An old clock, that had stood for fifty years in a farmer's kitchen without giving its owner any cause of complaint, early one summer's morning, before the family was stirring, suddenly stopped. Upon this the Dial-plate (if we may credit the fable) changed countenance with alarm; the Hands made an ineffectual effort to continue their course; the Wheels remained motionless with surprise; the Weights hung speechless. Each member felt disposed to lay the blame on the others.

At length the Dial instituted a formal inquiry into the cause of the stop, when Hands, Wheels, Weights, with one voice protested their innocence. But now a faint tick was heard from the Pendulum, who thus spoke:

'I confess myself to be the sole cause of the present stoppage, and am willing, for the general satisfaction, to assign my reasons. The truth is that I am tired of ticking.' Upon hearing this, the old Clock became so enraged that it was on the point of striking.

'Lazy Wire!' exclaimed the Dial-plate.—'As to that,' replied the Pendulum, 'it is vastly easy for you, Mistress Dial, who have always, as everybody knows, set yourself up above me—it is vastly easy for you, I say, to accuse other people of laziness—you who have nothing to do all your life but to stare people in the face, and to amuse yourself with watching all that goes on in the kitchen.'

'Think, I beseech you, how you would like to be shut up for life in this dark closet, and wag backward and forward year after year, as I do.'—'As to that,'

said the Dial, 'is there not a window in your house on purpose for you to look through?'

'But what of that?' resumed the Pendulum. 'Although there is a window, I dare not stop, even for an instant, to look out. Besides, I am really weary of my way of life; and, if you please, I'll tell you how I took this disgust at my employment.'

'This morning I happened to be calculating how many times I should have to tick in the course only of the next twenty-four hours—perhaps some of you above there can tell me the exact sum?' The Minute-hand being quick at figures, instantly replied—'Eighty-six thousand four hundred times.'—'Exactly so,' replied the Pendulum.

'Well, I appeal to you all if the thought of this was not enough to fatigue one? And when I began to multiply the strokes of one day by those of months and years, really it is no wonder if I felt discouraged at the prospect; so, after a great deal of reasoning and hesitation, thought I to myself, 'I'll stop!'

The Dial could scarcely keep its countenance during this harangue; but, resuming its gravity, thus replied: 'Dear Mr. Pendulum, I am really astonished that such a useful, industrious person as yourself should have been overcome by this suggestion.

'It is true, you have done a great deal of work in your time; so have we all, and are likely to do; and though this may fatigue us to *think* of, the question is, Will it fatigue us to *do?* Would you now do me the favor to give about half a dozen strokes, to illustrate my

argument?' The Pendulum complied, and ticked six times at its usual pace.

'Now,' resumed the Dial, 'was that exertion fatiguing to you?'—'Not in the least,' replied the Pendulum; 'it is not of six strokes that I complain, nor of sixty, but of millions.'

'Very good,' replied the Dial; 'but recollect that, although you may *think* of a million strokes in an instant, you are required to *execute* but one; and that, however often you may hereafter have to swing, a moment will always be given you to swing in.'

'That consideration staggers me, I confess,' said the Pendulum.—'Then I hope,' added the Dial-plate, 'we shall all immediately return to our duty, for the people will lie in bed till noon if we stand idling thus.'

Upon this, the Weights, who had never been accused of *light* conduct, used all their influence in urging him to proceed; when, as with one consent, the Wheels began to turn, the Hands began to move, the Pendulum began to swing, and, to its credit, ticked as loud as ever; while a beam of the rising sun, that streamed through a hole in the kitchen-shutter, shining full upon the Dial-plate, made it brighten up as if nothing had been the matter.

When the farmer came down to breakfast, he declared, upon looking at the Clock, that his watch had gained half an hour in the night."

THOUGHT ANALYSIS.

*Written as a Class Exercise.*

*1. Subject.* (*Category of substance and attribute.*) *The conversation between the different members of the clock.*

*2. Time.* (*Category of time.*) *A summer morning, one half hour before sun-rise, fifty years after the clock had been placed in the kitchen.*

*3. Place.* (*Category of place.*) *On the west side of the farmer's kitchen.*

*4. Cause.* (*Category of cause and effect.*)

*a. The weariness of the Pendulum.*

*b. The stoppage.*

*c. Surprise of the other members of the clock.*

*d. The inquiry made by the Dial.*

*e. The protestation of innocence.*

*5. Effect.* (*Category of cause and effect.*) *Special effort made by other members of the clock, and the return of the Pendulum to duty.*

*6. Purpose.* (*Category of design.*)

*a. Of Pendulum. To justify himself.*

*b. Of Dial. To secure the willing service of the Pendulum.*

*c. Of the Author. To teach that it is better to work than to do nothing.*

7. *Parts.* (*Category of whole and part.*)

*a. On basis of characters.*

(1.) *Pendulum.*

(2.) *Weights.*

(3.) *Wheels.*

(4.) *Hands.*

(5.) *Dial.*

*b. On basis of ideas expressed.*

(1.) *Confession as to the cause of stoppage.*

(2.) *Angry retort.*

(3.) *Sarcastic reply.*

(4.) *Complaint as to dark room.*

(5.) *Mention of a window.*

(6.) *Complaint that there is no time to use it.*

(7.) *Reason for stopping.*

(8.) *Acknowledgment that it was the work of the Pendulum.*

(9.) *The request.*

(10.) *Compliance.*

(11.) *Question as to fatigue.*

(12.) *Reply.*

(13.) *Forcible statement.*

(14.) *Confession.*

8. *Whole.* (*Category of whole and part.*)

*This is a fable and fables belong to narration.*

*9. Comparison. (Category of similarity and diversity.) The dial, weights, wheels and hands were alike in that they were willing to do their duty and were willing to assist others to do their's. The pendulum was easily discouraged, but when convinced, was willing to do the right.*

GRAY'S ELEGY.

The curfew tolls the knell of parting day,
The lowing herd winds slowly o'er the lea,
The ploughman homeward plods his weary way,
And leaves the world to darkness and to me.

Now fades the glimmering landscape on the sight,
And all the air a solemn stillness holds,
Save where the beetle wheels his droning flight,
And drowsy tinklings lull the distant folds:

Save that from yonder ivy mantled tow'r,
The moping owl does to the moon complain
Of such as, wand'ring near her secret bow'r,
Molest her ancient solitary reign.

Beneath those rugged elms, that yew-tree's shade,
Where heaves the turf in many a mould'ring heap,
Each in his narrow cell for ever laid,
The rude forefathers of the hamlet sleep.

The breezy call of incense-breathing morn,
The swallow twitt'ring from the straw-built shed
The cock's shrill clarion, or the echoing horn,
No more shall rouse them from their lowly bed.

For them no more the blazing hearth shall burn,
Or busy housewife ply her evening care:
No children run to lisp their sire's return,
Or climb his knee the envied kiss to share.

Oft did the harvest to their sickles yield,
Their furrow oft the stubborn glebe has broke:
How jocund did they drive their teams afield!
How bow'd the woods beneath their sturdy stroke!

Let not ambition mock their useful toil,
Their homely joys, and destiny obscure:
Nor grandeur hear with a disdainful smile,
The short and simple annals of the poor.

The boast of heraldry, the pomp of power
And all that beauty, all that wealth ere gave,
Await alike th' inevitable hour,
The paths of glory lead but to the grave.

Nor you, ye proud, impute to these the fault,
If memory o'er their tomb no trophies raise,
Where through the long-drawn aisle and fretted vault,
The pealing anthem swells the note of praise.

Can storied urn, or animated bust,
Back to its mansion call the fleeting breath?
Can honour's voice provoke the silent dust,
Or flatt'ry soothe the dull cold ear of death?

Perhaps in this neglected spot is laid
Some heart once pregnant with celestial fire;
Hands, that the rod of empire might have sway'd,
Or wak'd to ecstasy the living lyre.

But knowledge to their eyes her ample page
Rich with the spoils of time did ne'er unroll;
Chill penury repress'd their noble rage,
And froze the genial current of the soul.

Full many a gem of purest ray serene
The dark unfathom'd caves of ocean bear:
Full many a flower is born to blush unseen,
And waste its sweetness on the desert air.

Some village Hampden, that, with dauntless breast,
The little tyrant of his fields withstood,
Some mute inglorious Milton here may rest,
Some Cromwell guiltless of his country's blood.

Th' applause of list'ning senates to command,
The threats of pain and ruin to despise,
To scatter plenty o'er a smiling land,
And read their history in a nation's eyes,

Their lot forbade: nor circumscrib'd alone
Their growing virtues, but their crimes confin'd;
Forbade to wade through slaughter to a throne,
And shut the gates of mercy on mankind.

The struggling pangs of conscious truth to hide,
To quench the blushes of ingenuous shame,
Or heap the shrine of luxury and pride
With incense kindled at the Muse's flame.

Far from the madding crowd's ignoble strife,
Their sober wishes never learn'd to stray;
Along the cool sequester'd vale of life
They kept the noiseless tenor of their way.

Yet ev'n these bones from insult to protect
Some frail memorial erected nigh,
With uncouth rhymes and shapeless sculpture deck'd,
Implores the passing tribute of a sigh.

Their name, their years, spelt by th' unletter'd Muse,
The place of fame and elegy supply:
And many a holy text around she strews,
That teach the rustic moralist to die.

For who, to dumb forgetfulness a prey,
This pleasing anxious being e'er resign'd,
Left the warm precincts of the cheerful day,
Nor cast one longing ling'ring look behind?

On some fond breast the parting soul relies,
Some pious drops the closing eye requires;
E'en from the tomb the voice of nature cries,
E'en in our ashes live their wonted fires.

For thee, who, mindful of th' unhonour'd dead,
Dost in these lines their artless tale relate;
If chance, by lonely contemplation led,
Some kindred spirit shall enquire thy fate,—

Haply some hoary-headed swain may say,
"Oft have we seen him at the peep of dawn
Brushing with hasty steps the dews away,
To meet the sun upon the upland lawn.

"There at the foot of yonder nodding beech,
That wreaths its old fantastic roots so high,
His listless length at noontide would he stretch,
And pore upon the brook that babbles by.

"Hard by yon wood, now smiling as in scorn,
Mutt'ring his wayward fancies he would rove;
Now drooping, woful-wan, like one forlorn,
Or crazed with care, or cross'd in hopeless love.

"One morn I miss'd him on the custom'd hill,
Along the heath, and near his fav'rite tree;
Another came; nor yet beside the rill,
Nor up the lawn, nor at the wood was he:

"The next, with dirges due in sad array
Slow through the church-way path we saw him borne:—
Approach and read (for thou can'st read) the lay
Grav'd on the stone beneath yon aged thorn."

THE EPITAPH.

Here rests his head upon the lap of earth
A youth, to fortune and to fame unknown:
Fair science frown'd not on his humble birth,
And melancholy mark'd him for her own.

Large was his bounty, and his soul sincere,
Heaven did a recompense as largely send;
He gave to mis'ry (all he had) a tear,
He gained from heav'n ('twas all he wish'd) a friend.

No farther seek his merits to disclose,
Or draw his frailties from their dread abode,
(There they alike in trembling hope repose,)
The bosom of his Father and his God.

THOUGHT ANALYSIS.

*Written as a Class Exercise.*

*1. Purpose.* (*Category of design.*) *To inspire in the exalted a feeling of respect for the lowly and to induce them to treat the poor with more consideration.*

*2. Means.* (*Category of cause and effect under the special form of means and end.*)

*To accomplish the above object the author presents:*

*a. A picture intended to inspire a feeling of solemnity. The things which tend to inspire this feeling are:*

(1.) *The Place.* (*Category of place.*) *A grave yard.*

(2.) *Time.* (*Category of time.*) *Evening.*

(3.) *Sounds which possess one or more of the following attributes:* (*Category of cause and effect under the form of means and end.*)

(*a.*) *Low pitch.*

(*b.*) *Slow time.*

(*c.*) *Regular movement.*

(*d.*) *Large volume.*

(*e.*) *Subdued force.*

*The sounds are:*

(*a.*) *Tolling of the curfew.*

(*b.*) *Lowing of the herd.*

(*c.*) *Solemn stillness.*

(*d.*) *Flight of the beetle.*

(*e.*) *Tinkling of the bell.*

(*f.*) *Hooting of the owl.*

(4.) *Objects of sight.* (*Category of cause and effect under the form of means and end.*)

(*a.*) *Animate objects possessing one or more of the attributes mentioned under* (*3.*)

*The objects are:*

(1′) *The ploughman.*

(2′) *The herd.*

(*b.*) *Inanimate objects suggesting one or more of the following ideas:*

(1′) *Age.*

(2′) *Desolation.*

(3′) *Mortality of man.*

*These objects are:*

(1′) *Fading landscape.*

(2′) *Ivy mantled tower.*

(3′) *Rugged elms.*

(4′) *Yew tree.*

(5′) *Mounds.*

*b. A picture intended to inspire a feeling of sympathy, by giving an ideal form of life.* (*Category of cause and effect under the form of means and end.*)

(1.) *The beautiful morning.*
(2.) *Singing of the birds.*
(3.) *Sweet odors.*
(4.) *Crowing of the cocks.*
(5.) *Echoing horn.*
(6.) *Cheerful home.*
(7.) *Busy house-wife.*
(8.) *Blazing hearth.*
(9.) *Affectionate children.*
(10.) *Occupation:*
(*a.*) *Harvesting.*
(*b.*) *Breaking.*
(*c.*) *Felling timbers.*

*c. Argument.* (*Category of cause and effect under form of means and end.*)

(1.) *Mortality of all.*
(2.) *None can be called back to life.*
(3.) *Monuments affect not the dead.*
(4.) *Natural endowments.*
(5.) *Difference in power may be owing to difference in circumstances.*
(6.) *Difference in circumstances prevents doing evil.*
(7.) *Natural affection.*
(8.) *All fear death.*

(9.) *Their opinion of us should not affect feeling towards them.*

(10.) *We should feel and act in such a manner that it would be pleasing in the sight of God.*

DERIVATION.

GENERAL SUGGESTIONS.

Principle.—*In the work indicated under each of the following points the learner is to put to the utmost test all his powers of observation, comparison and inference in respect to both form and meaning, before employing the dictionary, or other extraneous aids.*

1. Associate carefully each *root* with its meaning.
2. Give examples of English words involving the roots.
3. State of each word:
   a. Its primary literal meaning.
   b. Its secondary literal meaning.

E. g. *Defer* meaning to *put off*, furnishes *deferer, one who puts off;* and *deference, deferential,* in which the idea is—*yielding to the wishes of another.*

4. Associate each *prefix* and *suffix* with its meaning.
5. Give examples of English words involving prefixes: find words in which the suffixes have the meaning given.
6. The treatment of each word in the appended list of derivatives (page ) should consist of:
   a. The separation of the word unto prefix, root, and suffix.
   b. The statement of the meaning of each.
   c. The force of the time element as indicated by the form of the root or suffix.
   d. The giving of:
      (1). Primary literal meaning.
      (2). Secondary literal meaning.
   e. Statement of current meaning.

7. Consider each significant word in the Elegy:

a. As to whether it is language of the understanding or language of the imagination, using the form suggested under "Figurative Language" (page 266).

b. As to its derivation.

INCIDENTAL.
(Fourth, Fifth and Sixth Years).

By the time the pupil is able to use the Third Reader, he has obtained such facility in reading that he may begin the study of derived words. The work may be taken orally as a general lesson, or incidentally in connection with reading lessons. The following illustration will tend to suggest the nature of the work on affixes and prefixes during the fourth year. In the fifth and sixth years, the general plan would be similar, the material, however, presenting more difficulty.

ILLUSTRATION.
(Diminutives).

It may be that in some reading lesson the word *river* has occurred. During the recitation or at another time, as a general lesson, lead the pupils to consider rivers as to their size, and to call that moving body of water that is too small for even small boats to float upon, *a little river*. Consider then the meaning of *rivulet*. Write the word *river* at one part of the board and the word *rivulet* in another place. Have the children:

1. To state the difference in meaning.
2. To observe and state the difference in form.
3. To infer and state the force of *let*.

Under the word *river* write the word *stream*. Obtain from the children its meaning, and lead them to infer the word that means *a little stream*. Write the word

*streamlet* under *rivulet.* Deal in a similar way with *brook, tart, wave, cloud.* Let the class give orally, and then write on their slates the meaning or force of *let*, i. e., define it. In like manner consider *kin*, as with *lamb, pan, man, etc.*

At this stage lead the children to observe that in each case *let* and *kin* are added or fixed to a syllable, and then state and have them write "*Let* and *kin* are affixes, meaning *small* or *little.*" Have the sentence given orally many times.

Ask then for two affixes meaning small. Write the two as the beginning of a column. Suggest others, writing them in the column as obtained, by asking the name for a little duck, a little goose, etc. Inquire what is meant by *lordling, darling*, etc.—suggesting if necessary that the first means a lord or person who is little in mind but great in his own thought, and that the second is a slight modification of *dear* with the affix. Have the pupils infer the meaning of *nursling.* State that a sack or bag is also termed a *poke.* Ask what those little bags sewn in their coats, vests, trousers, aprons, and dresses in which they carry handkerchiefs, knives, marbles, etc. are called. In this way obtain the word *pock(e)et.* From it and *floweret* infer the meaning of *et.* In a similar way obtain *ock*, from *hillock, bullock*, etc. Then have the list read. Ask the name for such endings. Have the definition repeated, and the force of the affixes given. Leave the thought with them that there are many other affixes with other meanings, and that at another time these will be reconsidered in connection with those as yet unknown ones.

SYSTEMATIC.

Seventh and Eighth Years.

ROOTS.

*Latin.—Verbs.*

'Ag*ere*, to do, to perform; eg, act.
Am*are*, to love; amat.
Apt*are*, to fit or join.
Ard*ere*, to burn; ars.
Argu*ere*, to argue.
Ar*are*, to plough.
Aud*ire*, to hear; audit.
Aug*ere*, to increase; aux, auct.
Bib*ere*, to drink.
Cad*ere*, to fall; cas.
Caed*ere* to cut, to kill; caes.
Cal*ere*, to be warm or hot.
Cand*ere*, to glow with heat.
Cap*ere*, to take; cep, capt.
Cav*ere*, to beware; caut.
Ced*ere*, to yield, to go away; cess.
Cens*ere*, to judge or estimate.
Cern*ere*, to separate, distinguish or discern; cret.
Ci*ere*, to rouse, to call forth; cit.
Clam*are*, to cry out, to shout; clamat.
Claud*ere*, Clod*ere*, Clud*ere* } to shut, to close; claus. clos. clus.
Clin*ere*, to incline or bend.
Col*ere*, to cultivate; cult.
Coqu*ere*, to cook; coct.
Cred*ere*, to believe; credu, credit.
Cre*are*, to create; creat.
Cresc*ere*, to grow; cret.
Cub*are*, Cumb*are*, } to lie down.
Curr*ere*, to run; curs.
Deb*ere*, to owe; debit.
Dic*are*, to devote, to show; dicat.
Dic*ere*, to say; dict.
Divid*ere*, to divide; divis.
D*are*, to give; dat.
Doc*ere*, to teach; docu, doct.
Dol*ere*, to grieve; to be in pain.
Duc*ere*, to lead; duct.
Ire, to go; it.
Err*are*, to wander; errat.
Æstim*are*, to value; aestimat.
Fac*ere*, to do or make; fec, fact.
Fall*ere*, to deceive; fals.
F*ari*, to speak; fat.
Fend*ere*, to strike.
Ferre, to carry or bear; lat.
Ferv*ere*, to boil; to be hot.
Fid*ere*, to trust.
Fig*ere*, to fix or fasten; fix.
Fing*ere*, to form or fashion; fict.
Flect*ere*, to bend; flex.
Fligere, to beat, to dash; flict.
Flu*ere*, to flow; flux.
Frang*ere*, to break; frag, fract.
Fug*ere*, to flee; fugit.
Fulg*ere*, to shine.
Fund*ere*, to pour out; fus.
Ger*ere*, to bear or carry on; gest.
Gign*ere*, to generate or produce; genit.
Gradi, to take steps, to walk; gress.
Hab*ere*, to have; habit.
Imper*are*, to command; imperat.
Jac*ere*, to throw; jact or ject.
Judic*are*, to judge; judicat.
Jung*ere*, to join; junct.
Jur*are*, to swear; jurat.
Leg*are*, to send as an embassador; legat.

Leg*ere*, to gather, to select, to read; lect.
Lev*are*, to raise; levat.
Lig*are*, to bind; ligat.
Linguere, to leave; lict.
Loqui, to speak; locut.
Lud*ere*, to play; lus,
Mand*are*, to commit, to give charge or command; mandat.
Man*ere*, to remain; mans.
Med*ere*, to cure.
Memini, to remember.
Merg*ere*, to dip, to sink; mers.
Met*iri*, to measure, mens.
Mitt*ere*, to send, miss.
Mon*ere*, to warn, to put in mind; monit.
Monstr*are*, to point out, to show; monstrat
Mov*ere*, to move; mot.
Mut*are*, to change; mutat.
Nasci, to be born; nat.
Noc*ere*, to hurt, to harm; nocit.
Nect*ere*, to tie or bind; nex.
Nosc*ere*, to know; not.
Nunci*are*, to announce; nunciat.
Or*iri*, to rise or sping from; ort.
Or*are*, to pray, to ask; orat.
Pat*ii*, to suffer, to endure; pass.
Pell*ere*, to drive; puls.
Pend*ere*, to hang;
Pend*ere*, to weigh, to pay out; pens.
Pet*ere*, to seek; petit.
Ping*ere*, to paint; pict.
Plac*ere*, to please; placit.
Plaud*ere*, to clap, to applaud; plaus.
Pl*ere*, to fill; plet.
Plic*are*, to fold; plicat.
Plect*ere*, to twine or weave; plex.
Ponere to put or place; posit.
Port*are*, to carry.
Prehend*ere*, to seize; prehens.
Prem*ere*, to press; press.
Prob*are*, to prove; probat.
Pung*ere*, to sting; punct.
Put*are*, to think; putat.
Quær*ere*, to seek; quæsit.
Reg*ere*, to direct, to rule; rect.
Reri, to think, to judge; rat.
Rog*are*, to ask; rogat.
Rumpere, to break; rupt.
Sal*ire*, to leap or spring; salt.
Scand*ere*, to climb, to mount; scans.
Scrib*ere*, to write; script.
Sed*ere*, to sit; sess.
Sent*ire* to perceive; sens.
Sequi, to follow; secut.
Serv*are*, to watch, to preserve; servat.
Sist*are* or st*are*, to stand, to place, to set up; stat.
Solv*ere*, to loose; solut.
Spic*ere*, to look, to see; spect.
Sper*are*, to hope; sperat.
Spir*are*, to breathe; spirat.
Stru*ere*, to build, construct; struct.
Sum*ere*, to take; sumpt.
Tang*ere* to touch; tact.
Tend*ere*, to stretch, to go towards, to aim at; tens or tent.
Ten*ere*, to hold, to keep; tent.
Tex*ere*, to weave; text.
Trah*ere*, to draw; tract.
Uti, to use; us.
Val*ere*, to be strong; to have force or value.
Vert*ere*, to turn; vers.
Ven*ire*, to come; vent.
Vid*ere*, to see; vis.
Vinc*ere* to conquer; vict.
Viv*ere*, to live; vict.
Voc*are*, to call; vocat.
Volv*ere*, to roll; volut.
Vov*ere* to vow; vot.

*Nouns.*

Ager, a field; agr.
Angulus, a corner; angul.
Anima, the life or spiritual principle; anim.
Animus, the mind; anim.
Annus, a year; ann.
Arma, arms, weapons; arm.
Ars, art, skill; art.
Articulus, a joint or limb; articul.
Cantus, a song; cant.
Caput, the head; capit.
Caro, flesh; carn.
Causa, a cause; caus.
Circus, a circle; circ.
Civis, a citizen; civ.
Classis, a class; class.
Concilium, an assembly, a council; concili.
Cor, the heart; cord.
Corona, a crown; coron.
Corpus, a body; corpor.
Crux, a cross; cruc.
Culpa, a fault; culp.
Cura, care; cur.
Damnum, harm, loss; damn.
Dens, a tooth; dent.
Deus, God; de.
Divus, a god; div.
Dies, a day; di.
Dominus, a master or lord; domin.
Domus, a house, a home; dom.
Exemplum, an example; exempl.
Fama, a report; fam.
Familia, a family; famili.
Fanum, a temple; fan.
Femina, a woman; femin.
Filius, a son; fili.
Filia, a daughter; fili.
Filum, a thread; fil.
Finis, an end or limit; fin.
Flamma, a flame; flamm.
Flos, a flower; flor.
Folium, a leaf; foli.
Forma, form, beauty; form.
Frater, a brother; fratr.
Frigus, cold; frigor.
Frons, the forehead; front.
Fumus, smoke; fum.
Fundus, a foundation; fund.
Granum, a grain of corn; gran.
Grex, a flock of sheep; greg.
Haeres, an heir or heiress; haered.
Hospes, a host or guest; hospit.
Hostis, an enemy; host.
Humus, the ground; hum.
Imago, an image; imagin.
Iter, a journey; itiner.
Jus, right, law, justice; jur.
Labor, labor.
Latus, a side; later.
Lex, a law; leg.
Liber, a book; libr.
Linum, flax; lin.
Litera, a letter; liter.
Locus, a place; loc.
Lux, { light } luc.
Lumen, { light } lumin.
Magister, a master; magistr.
Manus, the hand; man.
Mare, the sea; mar.
Mater, a mother; matr.
Merx, merchandise; merc.
Minister, a servant or attendant; ministr.
Modus, a manner; mod.
Mons, a mountain; mont.
Mors, death; mort.
Mos, custom, practice; mor.
Munus, an office or gift; muner.
Numerus, a number; numer.
Opus, a work; oper.
Pars, a part; part.

Pater, a father; patr.
Poena, punishment; poen.
Pes, a foot; ped.
Planta, a plant; plant.
Populus, the people; popul.
Signum, a sign or seal; sign.
Socius, a companion; soci.
Terra, the earth; terr.
Testis, a witness; test.
Verbum, a word; verb.
Vulgus, the common people; vulg.

*Adjectives.*

Altus, lofty; alt.
Amplus, large; ampl.
Brevis, short; brev.
Cavus, hollow; cav.
Centum, a hundred; cent.
Clarus, clear, bright; clar.
Crudus, raw, unripe; crud.
Curvus, crooked, winding; curv.
Decem, ten.
Densus, thick, close; dens.
Dignus, worthy; dign.
Durus, hard; dur.
Æquus, equal, just; æqu.
Exterus, outer, foreign; exter.
Felix, happy; felic.
Festus, joyful; fest.
Firmus, strong; firm.
Fortis, brave, fort.
Grandis, great; grand.
Gratus, pleasing, agreeable, thankful; grat.
Gravis, heavy, grievous; grav.
Lenis, mild; len.
Liber, free; liber.
Longus, long; long.
Magnus, great; magn.
Major, greater, maj.
Malus, bad; mal.
Mathrus, ripe; matur.
Minor, less.
Mirus, strange, wonderful; mir.
Miser, wretched; miser.
Multus, much; mult.
Novus, new; nov.
Omnis, all; omn.
Par, equal, like; par.
Planus, even, level, evident; plan.
Proprius, belonging to, peculiar; propri.
Rudis, unpolished, uncultivated; rud.
Sagus, wise, discerning; sag.
Sanus, sound, healthy; san.
Severus, severe; sever.
Similis, like; simil.
Solidus, solid; solid.
Solus, alone; sol.
Ultimus, last; ultim.
Unus, one; un.
Vagus, wandering; vag.
Verus, true; ver.

*Greek.*

Aer, the air.
Arche, the beginning; government.
Astron, a star.
Autos, one's self.
Ballo, to cast or throw.
Kentron, a central point.
Chole, bile, anger.
Christos, the Anointed.
Chronos, time.
Kosmos, the world.
Krites, a judge.
Kuklos, a circle.
Demos, the people.

Doxa, an opinion.
Hedra, a seat.
Ergon, a work.
Eu, well; rightly.
Ge, the earth.
Glotta or glossa, the tongue; language.
Gonia, an angle or corner.
Grapho, to write.
Gramma, a writing.
Helios, the sun.
Hudor, water.
Idios, belonging to one; peculiar.
Laos, the people.
Logos, a speech, account or description.
Mathema, knowledge; that which is learned.
Metron, a measure.
Monos, sole; only.
Naus, a ship.
Neuron, a cord, a nerve.
Nomos, a law or rule.
Ode, an ode or song.
Odos, a road or way.
Onoma, a name.
Optomai, to see.
Orthos, erect, right.
Oxus, sharp, acid.
Paideia, education.
Pan, every; all.
Pathos, suffering, affection, emotion.
Petalon, a leaf.
Phaino, to appear, to show.
Pharmakon, a drug; a medicine.
Phemi, to say or tell.
Philos, a friend or lover.
Phone, a sound.
Phrazo, to say or relate.
Phren, the mind.
Phusis, nature.
Polis, a city.
Polus, much, many.
Pur, fire.
Skeptomai, to examine; to consider.
Schole, leisure,
Skopeo, to observe; to watch.
Sophia, wisdom.
Spao, to draw.
Stasis, a standing or position; a placing.
Stenos, narrow.
Thesis, a putting or placing.
Theos, God.
Tome, the act of cutting.
Tonos, tension; tone.
Topos, a place.
Tupos, a shape, figure, model.

*Prefixes.*

A (Eng. or Sax.), in, on, at.
A or ab (Lat.) from.
A or an (Gr.)destitute of.
Ad (Lat.) taking the forms a, ac, af, ag, al, an, ap, ar, as, or at.) to.
Am or amb (Lat.) round or about.
Ana. (Gr.) throughout; up.
Ante (Lat.) before.
Anti or Ant (Gr.) against.
Apo or Ap (Gr.) from.
Be (Eng.) upon, over, about.
Cata (Gr.) down, against.
Circum (Lat.) around, about.
Con (Lat.) with or together. It may assume the forms of co, cog, col, com, cor.
Contra (Lat.) against.
De (Lat.) from, down from.
Dia (Gr.) through.

Dis. (Lat.) asunder, apart, away, taking the forms di and dif.
E or Ex (Lat. and Gr.) out or out of. It sometimes changes to ec or ef.
En or Em, See In.
Epi or Ep (Gr.) upon, over, for.
Extra (Lat.) beyond.
Fore, before.
Hyper (Gr.) above, beyond.
Hypo (Gr.) under.
In or En (Lat. and Gr.) in, on, or into. In may become il, im, ir; en may become em.
Inter (Lat.) between or among. Sometimes becomes enter.
Intro (Lat.) within.
Meta or Met (Gr.) after, beyond, from one to another.
Mis, wrong, erroneous, defective.
Non. (Lat.) not.
Ob (Lat.) denotes opposition, and may become oc, of, or op.
Out, beyond.
Para or Par (Gr.) by the side of.
Per (Lat.) through.
Peri (Gr.) around.
Post (Lat.) after.
Pre (Lat.) before.
Preter (Lat.) beyond.
Pro (Lat.) for, forth, forward. It may become por and pur.
Re or Red (Lat.) back again, anew
Retro (Lat.) backward.
Se (Lat.) aside, apart.
Sub or subter (Lat.) under. It may become suc, suf, sug, sup, sus.
Super (Lat.) above, over, more than enough. Often changed to sur.
Syn (Gr.) with, together. It may become sy, suf, sym.
Trans or Tra (Lat.) over, through, beyond.
Un denotes privation or negation.
Under.
With denotes opposition or separation.

*Suffixes.*

Suffixes have not fixed significations, as is the case with prefixes. These must be determined in every case by the meaning of the word in which the suffix is found. In the following list one or more meanings are given with each:

Ac, like; pertaining to.
Aceous, having the qualities of.
Acy, state or condition of.
Age, the condition of; the doing of.
Al, relating to; the act of.
An or ian, belonging to; one who.
Ance or ancy, the state of being.
Ant, being in; one who.
Ar, belonging to; resembling; one who.

Ard, one who.
Ary, pertaining to; a place where.
Ate, having the qualities of; one who.
Ble, that can or may be.
Cle, little.
Cule, minute.
Dom, the state or condition of.
Ee, one who is.
Eer, one who does.
En, to make.
Ence or ency, the state of being; the act or quality of.
Ent, having the quality of; one who.
Er, one who does; more.
Ery, a place where.
Escence, the state of growing or becoming.
Escent, becoming.
Ess, denotes feminine gender.
Ful, full.
Hood, the condition of.
Ic, like; having the qualities of.
Ice, the quality of.
Ics, the science of.
Id, having the quality of.
Ile, pertaining to; capable of being.
Ine, pertaining to; having the qualities of.
Ion, the act or state of.
Ish, like; somewhat.
Ism or asm, the state of being; an idiom of.
Ist, one who.
Ite, one who is; one belonging to.
Ive, fitted to.
Ize or ise, to make or render.
Less, without.
Let, little.
Like, resembling.
Ling, denotes littleness.
Ly, like; in a manner.
Ment, the state of; the act of; that which
Mony, the quality of.
Ness, the state of being; quality or circumstance of being.
Or, one who does.
Ory, fitted or designed; a place where.
Ose, abounding in.
Ous, partaking of; having the quality of.
Ship, the place or office of; the condition or relation of.
Some, characterized by.
Ster, one who.
Tude, the condition of; the quality of.
Ty, the condition or state of being.
Ure, the act of.
Ward, in the direction of; having the quality of.
Y, the quality or state of being.

In the consideration of the succeeding list of words:—

1. Determine with each word the full extent that can be wrought out unaided by the already acquired powers.

2. Study it by means of the dictionary.

3. Consider, in the light of the knowledge gained from the dictionary, whether the data for mastering the word were not, even before the use of the dictionary, within the scope of the mind's experience.

| | | |
|---|---|---|
| Acidulate. | Master. | Destroy. |
| Exigency. | Emancipate. | Tent. |
| Inimical. | Matron. | Tenor. |
| Millenium. | Remedy. | Terrier. |
| Inert. | Moderator. | Protestant. |
| Obedient. | Summon. | Testament. |
| Regicide. | Tantamount. | Trait. |
| Scald. | Momentum. | Extravagance. |
| Incendiary. | Common. | Invaluable. |
| Accent. | Manoeuver. | Venture. |
| Precept. | Adore. | Verse. |
| Precipitate. | Peerless. | Trivial. |
| Accuse. | Portion. | Survey. |
| City. | Jupiter. | Divulge. |
| Courage. | Repent. | Aeronaut. |
| Corpuscle. | Triple. | Asterisk. |
| Succumb. | People. | Hyperbole. |
| Proxy. | Surprise. | Centre. |
| Succor. | Proper. | Choler. |
| Indite. | Amputate. | Anachronism. |
| Condign. | Require. | Cosmogony. |
| Disdain. | Incorrigible. | Crisis. |
| Render. | Realize. | Cathedral. |
| Circuit. | Prorogue. | Energy. |
| Iniquity. | Erudite. | Geology. |
| Pontiff. | Salmon. | Stenography. |
| Vociferous. | Serf. | Heliotrope. |
| Suffrage. | Pursue. | Catalogue. |
| Foundation. | Obsequious. | Thermometer. |
| Bellicose. | Signet. | Psalmody. |
| Exhibit. | Constable. | Pantomime. |
| Reject. | Interstice. | Periphrastic. |
| Adjust. | Solder. | Pyrotechnics. |
| Neglect. | Despicable. | System. |
| Libel. | Spiritual. | Tonic.' * |

### FIGURATIVE LANGUAGE.

#### DEFINITION.

"Figures of speech are those forms of language which give to objects of thought attributes and relations which they do not actually possess, which indirectly suggest

* THE SCHOLAR'S COMPANION.

objects of thought, attributes or relations by giving some related idea.

EXAMPLES.

In each case the sentence numbered "a" is intended to express a thought in the language of the understanding, and the sentence numbered "b" is intended to express the same thought in figurative language.

1. Attributes which they do not actually possess are given to objects of thought.

a. The child weeps.

b. The tree *weeps*.

2. An object of thought is suggested by an attribute.

a. Belgium's capital had gathered there her beautiful women and brave men.

b. 'Belgium's capital had gathered there her *beauty* and *chivalry*.'

3. An attribute suggested by an object.

a. He showed the fierceness of his disposition.

b. He showed the *tiger* of his disposition.

4. An object of thought is suggested by giving its time relation.

a. Remember the assassination of Cæsar.

b. 'Remember *March*, the *ides* of *March*!'

5. An object of thought is suggested by giving its place relation.

a. He smote the people living in the city.

b. He smote the *city*.

6. An object of thought is suggested by giving its cause.

a. We read the works of Milton.

b. We read *Milton*.

7. An object of thought is suggested by giving its effect.

a. We plant a tree.

b. We plant a *shadow.*

8. An object of thought is suggested by giving its purpose.

a. Men intending to benefit society have founded good institutions.

b. *Benefit* has founded good institutions.

9. Part is suggested by giving whole.

a. We are citizens of the United States.

b. We are citizens of *America.*

10. Whole suggested by giving part.

a. Give us this day our daily food.

b. 'Give us this day our daily *bread.*'

11. An object of thought suggested by giving one like it.

a. Go ye and tell Herod.

b. 'Go ye and tell that *fox.*'

12. An object of thought is suggested by giving one unlike it.

a. Ye are not the people and wisdom will not die with you.

b. 'No doubt ye are the people and wisdom will die with you.'

13. An object of thought is suggested by giving an accompaniment of it.

a. The choice of the people governs this country.

b. The *ballot-box* governs this country.

In addition to the above cases, adjectives are transferred from one object to another. The objects which

allow such transfer sustain to each other some of the above relations. The learning of the different names which rhetorics apply to the above forms of language may be deferred until quite late in the pupil's course or omitted altogether. When he meets those forms of expression in his reading it is not necessary that he shall think the names which custom has applied to them, but it is important that he shall see the relations involved.

In reading the sentence "The Lord is my shepherd," if he thinks—'as the shepherd cares for his sheep so the Lord tenderly cares for His people,' he can very well afford to omit from his thinking the word 'metaphor.'

Indeed it may be claimed that not to know their names is a positive advantage to the young learners in dealing with forms of expression. A very vague perception of the relations involved may suggest to him the names of the figures and if half guessing he pronounces the name, that relieves him from further responsibility and he has not received from the difficulty the strength it was capable of affording him. If on the other hand not knowing the name, he is required to see clearly and to state in the language of the understanding the relations involved he soon acquires perfect mastery over such forms as well as the power of independent thinking in other directions.

Perhaps no other power of the young mind needs more restraining and directing than the imagination.

The understanding is the natural check to the imagination.

FORM OF ANALYSIS.

The following form of analysis has been found useful: *The tree weeps.* "Tree" is language of the understanding because it directly expresses an object of thought by naming it. "Weeps" is the language of the imagination because it gives to the object "tree" an attribute which it does not possess.

"*Belgium's capital had gathered there her beauty and her chivalry.*" "Beauty" and "chivalry" are language of the imagination because they indirectly suggest objects of thought—beautiful women and brave men—by giving attributes of them.

"*We celebrate the fourth of July.*" "Fourth of July" is language of the imagination because it indirectly suggests an object of thought—The Declaration of Independence—by giving its time relation.

With the slight modification necessitated by the different relations involved, this form will apply to all cases and will require close thinking and definite expression."*

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METHOD IN WRITING.

The most potent reason why teachers do not train children to write correctly is, that they can not write well themselves and will not take the trouble to learn.—F. W. PARKER, *Talks on Teaching.*

DESIGN.

The design of writing in the common schools is to give the pupil that power over slope, height, and width of letters, thickness and curvature of lines, and mode

* JOSEPH CARHART.

of union, as applied to script, which shall make his writing rapid, and at the same time graceful and legible. Stated in the order of their importance, beginning with the least important, the ends of the subject of writing are gracefulness, facility and legibility.

### GRACEFULNESS.

Gracefulness in writing relates to design and to execution. It assumes legibility and, in so far as it relates to design, depends upon the lines prominently employed.

Lines, as they appear in writing, are of three kinds:—straight lines, arcs of one circle, arcs of more than one circle. Gracefulness in script arises from the prominent use of the third kind of line. Analysis of script that is lacking in beauty will make it manifest that the defect arises from the general tendency of the curved lines to approach the straight line and the circle. In so far as gracefulness in script depends upon execution, it is attained by giving regularity, smoothness, and proportion to the various lines.

### FACILITY.

While rapidity is one of the ends of the subject of writing, it should not be sought in the early stages of the work. The prime end of the subject in all its stages is legibility; and the attempt to attain facility or rapidity should be deferred until the elements of legibility and beauty of style are effectually mastered.

These features having been attained, however, it then becomes advisable on account of the business relations that the pupil is in the future to assume, to give him the power of ease and rapidity of execution.

The attainment of this end will be advanced if it is understood that rapidity depends largely upon five characteristics of writing.

1. The round style.
2. The minimum of slope.
3. Simple, as opposed to ornamental.
4. Regular and uniform, as opposed to the irregular and jerking.
5. Smooth and flowing rather than disjointed union of the letters.

LEGIBILITY.

Were legibility the sole end in writing, no form other than the print characters would be employed, since print is the standard of simplicity and legibility. Writing having, however, the additional ends of beauty and rapidity, a compromise is required in which legibility shall, to some extent, be sacrificed in order to better attain the other ends, especially that of rapidity. The result of that compromise is script. The problem then becomes, How shall the greatest degree of legibility in the use of script be attained?

Legibility in script rests upon several conditions:

1. The employment of the round hand.
2. The formation of letters with the minimum degree of slope.
3. Simplicity of outline.
4. Proportion in regard to the height and width of the letters, and the thickness of the lines. If the height be too great for the width, the closeness of the letters perplexes the eye. If the width be too great for the height, the eye has further to travel to gather up the

sum of the whole. In either case distinctness is impaired; the want of proportion in the length of the parts of certain letters is a common cause of indistinctness; e. g., in d, t, q, g, etc. If the lines or loops are made too long, they extend into the writing above or below, causing the whole to assume a tangled appearance.

In the matter of thickness, various faults are committed:—

a. The lines may be too light for the size of the letter.

b. They may be too thick for the size of the letter, which produces the "heavy" hand.

c. There may be a strong and irregular contrast between light and heavy in the same line, which makes a "jerking" hand, the most indistinct of the three.

5. The proper separation of words and the proper joining of characters, i.e., the formation of all characters and parts of characters that admit of it, by one continuous motion of the hand.

### MECHANICAL CONDITIONS.

Under mechanical conditions may be considered the adjustment of the furniture, the position of the body the spacing and writing materials.

#### ADJUSTMENT OF FURNITURE.

The adjustment of furniture should be in regard to the relation of the parts to each other, and of the whole to the age of the pupils.

The pupil when seated should be perfectly steady

and have complete command over his materials. If the seat be too high and without support for the feet, the pupil's position must be unsteady, and his work of the same character; if the desk be too high for the seat, he will not have control over his arm in writing. The edge of the desk should be on a level with his elbow when he is seated; the top of the desk should be sloped but slightly, and should be broad enough to prevent the copy-book from folding over its outer edge. The desks should be arranged so as to allow the pupils to observe the teacher's illustrations on the board without changing their position, and so that the light shall fall on them from the pupil's left. A moderate front light is the next best.

### POSTURE.

The posture of the pupil should be natural and easy; he should therefore sit upright at the desk, or nearly so, not leaning his breast on the edge of it, but turning the left side slightly toward it, steadying the body by resting the lower part of the left arm on the desk, and having his right arm free to support its own weight on the muscles of the forearm and the third and fourth fingers. If he is allowed to bend forward or to twist his posture in any way, his point of view is such as to prevent him from judging of the qualities of the work he is performing. The posture should be attended to very carefully at the outset, when it is as easy for the pupil to adopt the right one as the wrong; a bad habit will become very difficult to correct.

MATERIALS.

The materials used in writing should be good and kept in good order. The teacher should have very explicit arrangements to secure their proper keeping. To prevent copy-books from being ill used, they should be delivered to and taken from the pupils at the beginning and close of each lesson. By a very simple arrangement, the teacher may secure that each pupil shall have his own pen and pen-wiper as well as his own copy-book. Such arrangements should be attended to both for economy and for moral considerations. Finally, the pupil should be taught to use his materials properly; e. g., to hold the pen lightly yet steadily between the first and second fingers at a certain distance from the point of the pen, directed toward the shoulder, but so that the point shall fall squarely upon the copy, the fingers which hold it being neither too stiff nor too much bent, the others quite at rest, and the hand as a whole not turned too much upon its edge; to have his copy-book squarely before him, neither too near nor too far from him, somewhat toward the right and steadied by the left hand."

BASIS, I. E., PSYCHICAL CONDITION.

The basis, or psychical condition for writing, is the knowledge and power gained through elementary drawing. The perception of form requires cultivation like any other exercise of the senses. The eye cannot appreciate an intricate form, if it has not been exercised upon a succession of simpler forms leading up to it. The

pupil should therefore bring to his writing an educated eye. The forms he is called on to imitate are complex; the simplest of them is so when observed for the first time. If he has not been taught to observe accurately he cannot be expected to imitate accurately. He should know what a straight line is in its different positions of vertical, horizontal, and oblique; he should recognize equality and difference of lengths, widths, and thicknesses, and he should be acquainted with the simpler curves, and the simpler combinations of curves with straight lines. Without such an experience of form he can make but slow progress in writing; if he does not bring it with him to this art, he must work it out for himself in his first attempts, but his advancement will be of necessity slow on this account. *Writing should be based on drawing;* it is a species of drawing, and any instruction in drawing, therefore, which the pupil receives may be expected to bear fruit in the improvement of his writing. *When the eye is educated to observe, and the hand to execute correct and graceful forms of objects in general, the taste for form is refined;* and it cannot but happen that the culture thus given will show itself in any special branch of instruction in form.

### STEPS.

The three main principles to be observed in writing are:—

1. Writing should be acquired, to a degree, *incidentally, in connection with the endeavor to express thought.*

2. The child should not be left to his individual

inclination, but should acquire from the very first that style of writing which has been settled upon as the standard.

3. The power of forming smooth, continuous lines should be acquired.

These principles indicate three corresponding stages.

1. That stage beginning after a short period of practice in drawing, and in printing words, in which the child gives expression in script to his thoughts, in reading, spelling, and in various other lessons. This kind of work continues throughout the school course. In this stage capital letters are used whenever necessary.

2. That stage in which the child is trained to thoroughly master the form of each letter. This and the first stage progress hand in hand, the first stage furnishing the application, and giving the power to combine letters into words and sentences, while the second is conferring the accurate mastery of the accepted form of each letter. *Each letter should be dwelt upon until it is thoroughly mastered.*

In teaching the small letters, which are taken up before the capitals for the obvious reason of their greater simplicity and more general use, opinions differ as to the order, some beginning with the letter *i*, some with *o*, etc.

The natural order would seem to be to begin with the straight line combined with the curve, as in i, and t; then the complete curve as in o; then the combination of the straight line with the loop, as in j. The letters should be taken in the order of their simplicity as com-

posed of these elements, so that letters of similar formation will occur together. The few exceptional forms should be taken last. When the pupil has advanced to the writing of words, the capital letters should be gradually introduced, and in the same spirit of teaching as the small letters.

3. That stage in which the pupil is trained to the proper movement. This begins at the stage of the use of the pen and ink, about the beginning of the third year.

Position, movement, etc., in application in order not to negate, but to supplement this stage, should be the same as in the practice in this stage.

#### ADHERENCE TO COPY.

Experience shows that frequently the pupils do not imitate the copy, or if they do so at all, only for the first few lines, and as they descend the page they gradually lose sight of the model, and imitate either their impression of it, or their own writing.

There are three things that assist in preventing this:—

1. Copy-books with from four to six lines.
2. A sliding copy.
3. Careful oversight of the work of each line, and correction of all errors that occur, always with direct reference to the copy.

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### METHOD IN SPELLING.

A diagram of the work in spelling may be given as follows:—

- Spelling
  - 1. Design.
  - 2. Principles
    - a. Familiarity of the eye with the form.
    - b. Association of form and meaning.
    - c. Mainly written work.
    - d. From simple to complex.
  - 3. Stages.
    - a. Copy.
    - b. Dictation.
    - c. Application.
    - d. Analysis.
  - 4. Syllabication.
  - 5. Grouping.
  - 6. Rules.

*The ultimate design* in learning to spell is to gain the power to *write words correctly when expressing one's thought.*

*The principles* are four:

1. Spelling deals with the forms of words, and the eye of the pupil should therefore be made familiar with the forms by repeated observation before he is required to reproduce them in writing.

2. In teaching spelling, the principle that all instruction in the forms of language should be based upon a comprehension of the meaning, should be observed, on the ground that the sense of a word or passage is a stronger and more interesting bond of association than the appearance or sound.

3. Since the pupil learns the spelling of words in order that he may write them, the instruction should be

mainly through the art to which spelling is applied in after life, and only subordinately through oral work.

4. Instruction should proceed from the simple to the complex.

In the light of these principles the *stages* in spelling are four.

1. *Copy-work*, the simplest form of spelling.

2. The reproduction, *in dictation exercises*, of words previously learned, a more difficult form of spelling.

3. *The spelling of the necessary words when the thought is fixed upon the idea which is being expressed*, a still more difficult work.

4. *The analysis of difficult combinations with a statement of the reasons for their difficulty*, a work the most complex of the four kinds.

A pupil should be required to copy accurately and readily before he is given the more difficult work of reproducing from memory. "That which we know *thoroughly*," was said by Jacotot, "contains the explanation of the unknown." "The end is in the beginning."

Success in teaching spelling depends upon *thoroughness*. It is not the amount but the manner of doing it. The *vague* forms are to be made perfectly *distinct* forms to the eye *by writing* before passing to others.

To develop power to reproduce from memory: After a word has been copied from the board, erase it, and have it reproduced from memory. Do the same with two words, three, a short sentence, etc. Regulate the work by the pupil's power to do it accurately. Train him to do exactly what he is asked to do.

When he can *copy* and *reproduce readily* and *accurately*, he is prepared for the spelling of words that are used to express his original thought, i. e., the words used in *composition.*

During the time the pupil is acquiring facility in copying and reproducing, attention should be given to developing his powers of observation and description by lessons on color, form, animals, etc., and by inducing him to talk freely on all subjects that come within the range of his observation.

After a period of using words in the expression of original thought, the pupil is prepared for the fourth stage—the stage of *difficult combinations.*

The difficulty of English spelling arises from *the variety of combinations employed to represent the elementary sounds.* For example, the short sound of e may be represented in eleven different ways, as is shown by the words web, head, again, æsthetics, any, nonpareil, leopard, bury, friend, guess, says.

This difficulty is to be overcome by—

1. Concentrating the attention upon only such words as involve difficult combinations.

2. Mastering tables of equivalents for elementary sounds. For example—

The name sound of a is represented in twelve ways:

In many words by a, as ale; by ai, as ail, and by ay, as bay. In a few words by ey, as they; ei. as veil; ea, as break; ua, as guage; ao, as gaol; aa, as Aaron; e and ee, as melee; aye, (meaning *ever.*)

3. *Analysis with open book*, in order that both the eye and the ear may be addressed. For example, the word

*police.* The pupil pronounces and spells the word from the book, thus: "Po-lice, police; it is a difficult word because the name sound of e is represented by i, and not by one of the more frequent modes—e, ea, ee, ei, ie. There are twelve ways to represent this sound. The word is more difficult to spell, because the sound of s is represented by ce."

The first stage occupies the first year; the second, the second year; the third, from the beginning of the third year to the end of the seventh year; and the fourth, the eighth year.

According to to the principle of Comenius, however, that '*nature does nothing by leaps*,' the work of any given stage appears in a subordinate degree in the preceding stage; there is also combination as the pupil passes from stage to stage.

Correct spelling requires not only a proper order of letters in a word, but a proper *division of syllables.* The practice of spelling by syllable should therefore be followed; not only will it cost no additional trouble, but it will most materially diminish the difficulties of spelling, since errors are most frequently caused by the pupil falling into confusion from the length of the words, which difficulty this practice would prevent. The most expeditious and effective way of spelling by syllables is simply to require *a slight pause at the end of each.*

In the *grouping of words* for spelling, the main classifications should be three:—

1. A grouping of words that present *difficult combinations* for elementary sounds.

2. A grouping of words that have the *same pronun-*

*ciation* as certain other words, but a *different spelling and meaning.*

3. A grouping of words that have *two or more pronunciations and meanings.*

In dealing with words of the second class, the pupil should be required to spell and define the other words having the same pronunciation.

In considering the words of the third class, the pupil should give the other pronunciations and meanings.

Other bases of classification also may be employed to give additional interest and profit to the work. For example, the pupils may be required to group and spell words that denote articles of food, drink, clothing and furniture; articles used in writing, building, traveling, etc.; the name of qualities belonging to any object; the words which are formed from one root; the names of individuals and species comprehended under one genus. This exercise may obviously be framed to suit any stage of advancement, considering the various principles of classification which may be followed, viz., the forms of words, their meanings, their derivation, and their logical relation; and it is valuable not only for the practice in spelling which it affords, but for what it teaches of the use of words, and for the mental exercise implied in the classification. It is equally suited for writing and for oral instruction.

In regard to *rules of spelling*, it is to be held in mind that spelling is a habit of the eye and ear, and not of rule or reason. Rules have, however, their place in spelling work, but it is a subordinate and concluding

one, as the subject of spelling should be substantially mastered before the pupils enter upon a consideration of rules. The rules learned should be those that are most general in their application, and least encumbered with exceptions, *and they should be the outgrowth of observation, comparison and inference.*

Incidental spelling naturally and necessarily appears at all stages of school work. It has been correctly said that all lessons are language lessons; for the words used in them must be made familiar to the class both in meaning and form. Thus the object-lesson gives opportunity for spelling the names of common objects, qualities and actions; the form and color lessons, the names and qualities of commonly occurring forms and colors; the lesson on number, the names of the numbers, cardinal and ordinal; and reading and general lessons, the names of important places and persons, in addition to many of those already enumerated.

Where these names do not occur to the class for the first time, the spelling of them may be asked for at once; when they are new, they should be presented on the blackboard, that the class may observe their forms before spelling them from memory.

Incidental spelling is a very profitable exercise, from the strict connection which it maintains between the spelling of words and their meanings. It is to be, however, only incidental.

## METHOD IN NUMBER.

### DEFINITION.

Number has been said to be the limitation of objects by ones. That is, by the idea one, objects, either mental or material, may be limited, just as material things are limited by the ideas red, hard, blue, rough, etc.

Thus,—objects of various colors and qualities may be placed upon a table, and the requests be made: Show me the red objects; point out the things that are hard; bring to the desk all the blue things that you see; which of the objects upon the table are rough? etc.

In like manner, the objects being variously arranged, it may be said: Show me one ball: all the one-cubes; point out all the two-spheres; take in your hand a three-prisms, etc. It is thus evident that objects are as definitely limited by the idea one, as by the idea red. The psychological definition of number is—"Number is the limitation of things by ones." But the things themselves are not units or numbers, though frequently spoken of as such, especially in the early stages of the work.

### WHAT CAN BE DONE WITH A NUMBER.

Comenius has said that we learn to do things by doing them. The truth of this being granted, it becomes apparent that the teacher should answer the question: What can be done with a number?

Experiments show that all that can be done with a number is:

To separate it into unequal numbers.

To separate it into equal numbers or parts.

To combine it with a number equal to it.
To combine it with a number unequal to it.

### WHAT CAN BE KNOWN OF A NUMBER.

The importance of definitely determining what can be known of a number before beginning to teach number, can scarcely be overestimated. It gives definiteness to all the work following.

Of any number, as 6 for example, may be known :—

1. The number as a whole.
2. The relations in the number.

*a.* Any two unequal numbers that make the number, as required by the following problems :—

If a boy has five marbles and finds one more, how many has he?

If the flour for a family costs two dollars a month, and the meat four dollars, what is the cost of both for a month?

*b.* Any two equal numbers that make the number, as required by the following problem :—

A man earns three dollars in one day, and three dollars the next day; how many dollars does he earn in the two days?

*c.* Any two unequal numbers into which the number may be separated; as required by the following problems :—

A boy has six apples and eats one; how many has he remaining?

A lady spends four of her six dollars for a hat; how many dollars has she left?

*d.* Any two equal numbers into which the number may be separated; as required in the following problem:—

A merchant has six yards of ribbon and sells three; how many remain?

*e.* The number of equal numbers that make the number; as required by the following problems:—

A man gives one apple to each of six boys; how many apples does he give?

A boy leaves two pints of milk at each of three houses; how many pints does he leave?

*f.* The number of equal numbers that are in the number; as required by the following problems:—

A man has six pints of vinegar; how many quarts has he?

A grocer wishes to give to poor families six bushels of potatoes, one to each family; to how many families can he give?

*g.* The equal parts of a number; as required by the following problems:—

A miller divides six barrels of flour equally among three families; how many barrels does each family receive?

A stationer distributes six pencils equally among six boys; how many pencils does each receive?

A druggist has six ounces of quinine and sells one-half of what he has to another druggist; each has then how many ounces?

A boy having one apple divides it equally among five other boys and himself; what part does each receive?

PURPOSE.

To present any subject well, the teacher must be able to strike the cleavage idea.

In number this is two-fold :—

1. Number, in the stage of perception, may be viewed as an attribute or quality of things.

2. Addition, subtraction, multiplication and division are not properly the *fundamental* processes of arithmetic; they are the *only* processes, and are all involved in addition.

Percentage, Compound Numbers, Ratio, Proportion, Cube Root, etc., are merely kinds of addition, subtraction, multiplication or division, in a new garb, and there should be clearly shown :

*a.* Their *essential nature.*

*b.* Their *distinctive features.*

*c.* The *relation of the new terms to the old ones.*

DEFECTS IN PRESENTATION.

The fundamental defect in dealing with arithmetic is that *expression* is treated instead of *number.* Symbol is taught instead of substance. Arithmetic is made "the science of figures and the art of memorizing them and the rules for manipulating them."

This manifests itself in various ways :—

1. *In the failure to teach the ideas and oral terms of numbers for a considerable time before beginning the work on written symbols.* In reading, the child has been dealing with ideas and oral terms for six or more years before he begins work upon the written word.

The reason that a year or more is not given to the

study of real number, or numbered things and oral terms, before commencing the work upon figures, is because *figures are considered to be the real subject in number and arithmetic.* Being such, the aim is to begin to deal with them as soon as possible, and if numbered things are used at all, it is merely for the purpose of explaining figures.

2. *In dealing with large numbers (in figures) during the first three years.* This would be impossible if real numbers, i. e., numbered objects, (actually or in imagination) were dealt with. If the pupil were to thoroughly master, during the first three years, real numbers to one hundred, with their relations as whole numbers, fractions, percentage, and in tables, together with the appropriate symbols, he would be vastly better prepared to encounter the actual affairs of life if deprived of school advantages at the end of the third year, than if he were trained to manipulate figures by rule to hundreds of millions.

3. *In counting higher than numbers are learned.*

Sometimes, directions for the first year's work are somewhat as follows:

"Take numbers to 20. Count to 100. Roman numbers to L."

This is manifestly work with expression. Counting and work with Roman numerals should keep strict pace with the mastery of numbers. If in the second year real numbers are studied, as suggested elsewhere, to twenty, *counting and Roman numeral work should extend to twenty and no further.* If it goes beyond that it becomes work with mere words. In counting the word

five names *one*, the fifth one. In number, the word five means *five ones*.

4. *In the teaching of the various topics as isolated.* This is to teach the various stages and processes of number in such a manner that the relation of one to the other is not shown. For example, notation is presented as an isolated subject, throughout the range of small and large numbers. This is followed by a consideration of numeration in the same manner, and then addition, etc. Such work arises in great measure from teaching expression instead of number itself.

If real number, or numbered things are considered it will appear that in any one process the three others are implied, and that a knowledge of *number* is a knowledge of *fractions* and of *percentage*. Thus one subject, if presented in its natural relations is the interpretation of others.

In the following it will be seen that all the processes, whole numbers, fractions, and percentage are involved in relations that are mutually interpreting:

| | | | |
|---|---|---|---|
| 1 sq. inch<br>¼<br>25 per cent. | | | |

Compare one sq. in., one-fourth, and 25 per cent. with the whole.

*Addition.*—One sq. in. and three sq. in. are how many sq. in.? etc.

One-fourth, and three-fourths are how many fourths? etc.

Twenty-five per cent. and three twenty-five per cents. are how many per cent.? etc.

*Multiplication.*—Four one sq. in. are how many sq. in.? etc.

Four one-fourths are how many one-fourths? etc.

Four twenty-five per cents. are how many per cent.? etc.

*Subtraction.*—Four sq. in. less one sq. in., are how many sq. in.? etc.

Four-fourths less one-fourth are how many fourths? etc.

One whole, less twenty-five per cent. are how many per cent.? etc.

*Division.* (First phase—finding the *number* of equal parts or numbers in a number.) In four sq. in., there are how many one sq. in.? How many two sq. in.? etc.

In four fourths there are how many one-fourths? How many two-fourths? etc.

In one whole, or one hundred per cent., there are how many twenty-five per cents.? How many fifty per cents.? etc.

*Division.* (Second phase—finding the *size* or *amount* of one of the equal parts.) One-fourth of four sq. in. are how many sq. in.? etc.

One-fourth of four-fourths are how many fourths? etc. Twenty-five per cent. of one hundred per cent. are how many per cent.? etc.

*Facts that may be seen in the geometrical figure.*

One-half of one-half of four sq. in. is what part of three sq. in.?

What part of three-fourths of four sq. in. is one-half of four sq. in.?

Fifty per cent. of fifty per cent. of one hundred per cent. is what part of seventy-five per cent.

What part of seventy-five per cent. of one hundred per cent. is one-half of four-fourths?

Twenty-five per cent. is what per cent. of seventy-five per cent. of four sq. in.? etc.

5. *In the failure to 'picture out' to the minds of the pupils the conditions of the problems.* It is no absolute proof of the pupil's comprehension of the relations in a problem, that he is able to give the process and result in words or figures. In beginning new work, whether in primary or advanced stages, the relations should be shown by numbered things, or by illustration. This should be true in all primary work (employing either the observation or imagination) where development by thinking *concerning things and their relations* is the principal idea.

Consider for example the following problems:

If one orange costs three cents, what will five oranges cost? (Primary work).

A man left $\frac{3}{7}$ of his estate to his elder son, $\frac{4}{7}$ of the remainder to his second son, and the rest to his daughter, which was $1,440 less than the younger son received. What was the value of the estate? (More advanced work).

One way of considering the first, and the one growing out of a prominent study of expression is to give:

1. *Statement.*—If one orange costs three cents, what will five oranges cost?

2. *Analysis.*—If one orange costs three cents, five

oranges will cost five times (?) three cents, which are fifteen cents.

3. *Conclusion.*—Therefore, if one orange costs three cents, five oranges will cost fifteen cents.

Another way to consider it is to represent the conditions thus:

O O O O O
OOO OOO OOO OOO OOO

The child may then be led to say:

1. I see that there are as many three cents as there are oranges.

2. The problem is one in multiplication.

3. Three cents is the multiplicand; five three-cents (or five) is the multiplier; fifteen cents is the product.

One way of considering the second, and the one resulting from a study of expression, is to give, as before:

1. *Statement.*—A man left $\frac{3}{7}$ of his estate, etc.

2. *Analysis.*—

If a man left $\frac{3}{7}$ of his estate to his elder son, and $\frac{4}{7}$ of the remainder to his second son, the first step is to find the remainder.

Since the whole estate was $\frac{7}{7}$ of itself and he left $\frac{3}{7}$ of it to his elder son, the remainder was the difference between $\frac{7}{7}$ and $\frac{3}{7}$ or $\frac{4}{7}$.

Second step. If he left $\frac{4}{7}$ of the remainder to his second son, and the remainder was $\frac{4}{7}$ of the estate he left to his second son $\frac{4}{7}$ of $\frac{4}{7}$ of the estate. $\frac{1}{7}$ of $\frac{4}{7}$ is $\frac{4}{49}$ and $\frac{4}{7}$ of $\frac{4}{7}$ is 4 times $\frac{4}{49}$ or $\frac{16}{49}$. Therefore he gave to his second son $\frac{16}{49}$ of the estate.

Third step. If the man left the rest to his daughter, he left to her the difference between $\frac{7}{7}$ or the whole estate

and the sum of $\frac{3}{7}$ left to the elder son and $\frac{16}{49}$ left to the younger son. $\frac{3}{7}=\frac{21}{49}$. $\frac{21}{49}+\frac{16}{49}$ is $\frac{37}{49}$. $\frac{49}{49}$ (or the whole estate)$-\frac{37}{49}$ (given to the two sons)$=\frac{12}{49}$, left to the daughter.

Fourth step. But the amount received by the daughter was \$1,440 less than that received by the younger son.

The amount received by the younger son was $\frac{16}{49}$, and by the daughter was $\frac{12}{49}$. Therefore \$1,440 was such a part of the estate as the difference between $\frac{16}{49}$ and $\frac{12}{49}$ or $\frac{4}{49}$.

Fifth step. If $\frac{4}{49}$ of the estate was \$1,440, $\frac{1}{49}$ was $\frac{1}{4}$ of \$1,440 or \$360, and $\frac{49}{49}$ or the whole estate was 49 times \$360 or \$17,640.

3. *Conclusion.*

Therefore: If a man left $\frac{3}{7}$ of his estate to his elder son and $\frac{4}{7}$ of the remainder to his second son, and the remainder to his daughter; and the amount received by the daughter was \$1,440 less than that received by the younger son, the value of the estate was \$17,640.

A different way to deal with the problem given, is:—

1. To picture it out thus:

2. To have the analysis given somewhat as follows:

1. It is seen that the value of $\frac{4}{49}$ is \$1,440.

2. The problem is first one in division (second phase).

3. $1,440 is the dividend; 4 is the divisor; $360 is the quotient.

The work now involves multiplication.

$360 is the multiplicand. Forty-nine $360 (or 49) is the multiplier.

$17,640 is the product—the value of the estate.

6. *In the failure to definitely determine and weigh.*

a *The various conceptions of the scope of multiplication and of division.*

b. *The various conceptions of the nature of the multiplier, and hence of the quotient.*

In regard to the scope of multiplication and its consequent definition, the methods of determining are two:

(1.) One is to examine and analyze every case of multiplication as given by the various authorities in mathematics, and then, rejecting the nonessential elements in each of the cases, to synthesize the essential elements into an abstract general conception. To this concept the term multiplication is applied. This idea of multiplication and the definition constructed upon it would obviously be comprehensive enough to include every authoritative phase of multiplication. Such would be the mode of procedure in determining the scope of division. This is the scientific method of definition. In this manner would be determined the definition of the oak, a fish, etc.

(2.) Another method is to begin with three propositions.

(a.) Numbers or numbered things can be only separated or combined.

(b.) The numbers or numbered things that are combined are either equal or unequal.

(c.) The root idea and the prevalent idea of the term multiplication are to *increase,*—to *combine.*

With these three propositions the mind passes in review each case as given by the various authorities under the head of arithmetical operations.

All those that involve as their essential element, the idea of a uniting of numbers so as to produce increase, are termed *combination.*

In the second place, all cases of combination are analyzed. These are found to resolve themselves into cases in which unequal numbers are united, and into those in which equal numbers are united. The former are termed cases of addition.

The third step is to analyze all cases in which equal numbers are united. This examination reveals, it is held, that in given cases the mind unites equal numbers by separate steps or moves, and that in other given cases it unites them instantly by memory. Whether this is a true distinction is to be answered by consciousness. The former combination is termed addition and the latter multiplication.

The definition that is then given is—Multiplication is uniting equal numbers at once, or by memory. Such also would be the process of defining division.

The majority, perhaps all, of the special authorities in mathematics hold that the first method is the true and scientific one.

A few educators who are concerned with the general

problem of education, consider the second method as the true process.

The second process would seem to be less artificial and formal than the first, and to accord more with the mind's natural tendencies to analysis and synthesis.

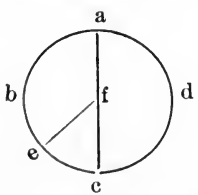
Under definitions obtained through the second process such operations as $2\times1=2$ (two multiplied by one), $2\times0=0$, $0\div1=0$, etc., are not strictly provided for, as are considered to be purely formal, not actual.

Under the head of form, therefore, they are classed as operations of the processes severally indicated by the form.

Further, by the definition derived through the second method such expressions as—$\frac{1}{2}\times\frac{1}{3}$ or $\frac{1}{3}$ of $\frac{1}{2}$, are provided for under the second phase of division—that in which, the number itself and the number of parts into which it is to be separated being known, the aim is to find the size of one part.

Those who hold that the idea of multiplication as obtained by the second mode of procedure is the more correct and the more valuable, attempt to show that such cases as $\frac{1}{3}$ of $\frac{1}{2}$ belong under division thus:

Let abcd=1; abc=$\frac{1}{2}$ of abcd; and cfe=$\frac{1}{3}$ of abc.




It is evident that to obtain "cfe," "abc" is not multiplied but divided. The only sense in which there is

any multiplication, in the limited scope in which that term is used under the second mode of procedure, is in that it requires *two* parts the size of "abc" to constitute "abcd," and *six* the size of "cfe." But this is obviously not a multiplication of "abc."

It has been held under the second idea of division as above noted, that a fraction cannot be divided by a whole number, as e. g., $\frac{1}{2} \div 2$; that is, the operation as expressed, cannot be performed. The "2" in this case does not represent an integer which shall become the divisor, but the number of parts into which $\frac{1}{2}$ is to be separated, and the problem becomes—Find $\frac{1}{2}$ of $\frac{1}{2}$. A case under the second phase of division.

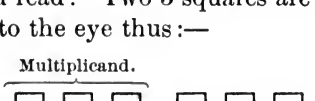
According to the more comprehensive definitions of multiplication and division, all these cases referred to, together with such as "7 is what part of 3?" are provided for under those phases to which their respective forms would assign them.

In regard to the nature of the multiplier, one view is that it (considered as a symbol) expresses a relation—the ratio of the product to the multiplicand. That is, if 6 is the product and 2 the multiplicand, 3 is the multiplier, in that it expresses the ratio of 6 to 2. If 2 is the product, and 6 the multiplicand, $\frac{1}{3}$ is the multiplier as it expresses the ratio of 2 to 6. This is perhaps the most satisfactory scientific conception of the multiplier. It is held to be the true conception by those who have given most thought to mathematics as a science. It is comprehensive in that it provides for any case of multiplication as considered in the wider sense. Another view is that "the multiplier is a number indicating the

number of times the multiplicand is to be taken." With a liberal interpretation of the application of the word "times," this idea of the multiplier would apply to any case occurring under multiplication viewed in its broad sense. This is the most prevalent conception of the multiplier. In this and in the previous view, the multiplier is considered as always abstract.

A third conception of the multiplier is that it expresses the number of equal numbers or of numbered things that are united. In this view multiplication is considered as the uniting of equal numbers; the multiplicand as one of these number; the multiplier as the number of equal numbers; and the product as the equal numbers united.

The following example will illustrate the thought: $2\times3=6$. Considering 2 as the multiplier, 3 as the multiplicand and 6 as the product, if squares are meant, the sentence would read: Two 3 squares are 6 squares, and would appear to the eye thus:—




The two groups united form the product, and these statements seem to follow:—

Three squares is the multiplicand.

Two three-squares is the multiplier.

Six squares is the product.

In this view of the multiplier it is not considered as always abstract. The thought is that in the concrete stage of the child's thinking, the multiplier is concrete

when the multiplicand is, and that by the natural order of the mind's development in passing from concrete particulars to abstract general conceptions, the concrete idea of the multiplier merges into the conception of it as a ratio, within the scope of the uniting of equal numbers.

This idea of the multiplier is not accepted by the various authorities in mathematics. It is held, however, by a few educators who have made a close study of mind development and of the adaptation of arithmetic to mind as an instrument of development. These consider such a conception of the multiplier as true to the science of number, adapted to mind development at every stage, and as tending to give definiteness to all arithmetical conceptions.

### STAGES.

Stages in number and arithmetic, as based on mind development and the nature of the subject, seem to be four in number.

### THE STAGE OF PERCEPTION.

In this stage the child can not learn numbers and their relations except through the medium of objects *present to the senses.*

This incapacity is the ground for the concrete work in giving the first ideas of numbers.

Whether or not objects are to be used in early number work is not left to the opinion of the teacher. This point is predetermined by the nature of child-mind, and it only remains for the teacher to study and understand the material he is training, and to adapt the work to it.

The concrete work that is done should not, however, be for the purpose of illustrating the meaning of figures, with the idea that the children are afterwards to deal with addition, subtraction, multiplication and division by means of figures. The work with objects is to give ideas of numbers and their relations; to teach the processes, and to give the pupil skill and accuracy in performing them, and in applying them to practical problems. The distinction between numbers and figures is important. Figures are but arbitrary signs, representing numbers, and teaching the meaning and use of figures is essentially language work, not number work.

To teach this language before the pupil has learned number with objects is to fill his mind with useless lumber, and to destroy, in a large measure, his inborn desire to know.

This mistake is less only than that of teaching figures to give first ideas of numbers, and of assuming that in studying figures one is learning numbers. "There is no difficulty in learning the figures along with the numbers; *the difficulty comes in learning the numbers along with the figures.* So it seems best to ignore the sign in favor of the thing."

The objects to be used in the work should be various. Among them may be mentioned: form, in wood, paper (paper folding), and drawings; grouped objects, as brace, span, yoke, etc.; units of measure, as pint, peck, inch, etc.; objects in room, as window-panes, lines, corners, doors, pieces of furniture, pictures, etc.; parts of animals; parts of plants and flowers; kinds of minerals; fingers; the pupils themselves; miscellaneous objects, as shells,

pieces of chalk, pegs, etc.; kindergarten material, especially the first six gifts; the abacus.

Since the aim in using objects is to ultimately free the mind from the necessity of using them, they should be wide in range.

Since interest is the basis of attention, they should be of such a nature that the child can conveniently handle them. Since they are used for the purpose of giving ideas of number they should not be so attractive as to draw the attention from the idea of number.

The stage of perception covers, approximately, the work of the first year.

THE STAGE OF IMAGINATION.

This stage occupies about the time of the second and third years. But the mind has now advanced to that degree of power which enables it to study numbers and their relations by means of objects absent to the senses, but present in the imagination. According to the principle that "Nature does nothing *per saltum*," there is to be no sudden transition from the first to this stage, the withdrawal of objects being gradual, and being determined by the pupil's ability to image absent objects.

The purpose of the stage is to make the pupil rapid and accurate in his power to think numbers and their relations by means of objects present to the imagination. This is the stage in which most work in the picturing out of the conditions of problems to the mind by means of drawing or sketching is done.

THE STAGE OF TRANSITION.

This stage includes, approximately, the period of the fourth year in school. In the first part of the year the

mind is more largely engaged in thinking the relations of numbers by means of objects present to the imagination, and yet it is growing more and more into the habit of considering numbers through figures. In the second part of the year the mind is engaged more largely in the consideration of numbers and their relations through symbols, while to a considerable extent engaged in a study of them by means of objects present to the imagination. Hence, the stage is termed the stage of *transition.*

THE STAGE OF PRINCIPLES AND SYMBOLS.

This stage, beginning about the fifth year, extends throughout the remainder of the work in arithmetic.

PRINCIPLES.

Among the principles to be considered in the method work in number are the following:—

1. Number work should be concrete.

2. 'Nature does nothing *per saltum*, but step by step.'

3. Small numbers should be employed in elementary work, and in giving first ideas of each branch of work.

4. All the processes are implied in addition.

5. The process of gaining ideas of numbers requires some such term as *ideation* or *numerical ideation.* The process bears the same relation to notation that gaining the ideas in reading, does to the mastery of the printed terms.

6. Ideation is practical and theoretical—practical when it presents a number as composed of *so many*

*units of the same kind;* and theoretical when it presents a number as composed of so many units of the same kind, and also as composed of units different in kind, and having the relation of one to ten.

7. Notation, which is merely the expression side of ideation, is consequently practical and theoretical.

IDEATION.

Theoretic ideation may be explained when the number ten is reached, or the time may be determined by the necessity for the use of the ideas. This would place the time of explanation sometime in the second year, or at the beginning of the third. It is best, probably, to defer it until the beginning of the third year.

In practical ideation the number three is taught as a whole composed of three ones of the same kind (units); the number eleven is taught as a whole composed of eleven ones of the same kind (units); the number nineteen is taught as a whole composed of nineteen ones of the same kind, (units), etc.

In theoretical ideation the number three, and all numbers between one and nine inclusive, are taught as in practical ideation; the number eleven is taught as a whole composed of two kinds of ones (unit and ten), and the relative value of the ones is shown. It is also taught as a whole composed of eleven ones (units); the number nineteen is taught as a whole composed of nine ones of one kind (units) and one one of another kind (ten), and the relative value of the different kinds of ones is shown. It is also taught as a whole composed of nineteen ones (units), etc.

When a class enters upon formal aritmetic, i. e., about the beginning of the third year, its first effort is to learn theoretical ideation. The principle of theoretical ideation is that a number may be considered as divided into successive multiples of ten.

In regard to the first nine numbers, in practical ideation, it is only necessary to say that they should be given as one-unit, two-units, etc. The necessity for explanation does not arise until the number ten is reached. Two points are to be shown in regard to this number :—

1. That it is to be considered as grouped, as a ten.
2. The advantage of grouping.

In proceeding beyond ten the reckoning begins with units again, viewing them as added to the one ten already grouped; so that the numbers are in succession, one ten and one unit; one ten and two units, etc., which are to be called for convenience eleven, twelve, etc. After twenty the gradual addition of units is resumed, etc. The grouping of ten tens is to be on the same principle as that embodied in grouping ten units, etc.

NOTATION.

Notation may likewise be viewed as practical and theoretical.

In practical notation the symbol 3 is taught as a whole, a picture, a sign, representing the idea or number three; the symbol 11 is taught as a whole, a picture, a sign, representing the idea or number eleven; the symbol 19 is taught as a whole, a picture or sign representing the number nineteen, etc.

In theoretical notation the symbol 3 and all symbols

from 1 to 9 inclusive are taught as in practical notation; the symbol 11 is taught as a sign composed of two figures, one representing one of the two kinds of ones in the number eleven, and the other representing the other kind of one; the symbol 19 is taught as a sign composed of two figures, one representing the nine ones of one kind in the number nineteen, and the other representing the one one of the other kind, etc.

It is obvious that it is with the symbol 10 that the necessity for explanation arises. The manner of procedure is:—

1. To show that the one ten *resembles* the one unit in being a one, but that it *differs* from it in value.

2. To show that therefore the symbol should be *like* that for one unit and yet *different* from it.

3. To show that the same symbol is employed, the difference being that it is *held in the second place by the cipher*, which in itself expresses no value.

4. To explain the principle of notation, i. e., that the difference in value expressed by a figure is denoted by *relative position.*

5. To treat of the combination of the symbols for tens and units.

If it has been impressed that one ten is denoted by the symbol 1 in the second place from the right, and the one unit by the symbol 1 with nothing to its right, the pupil will have but little difficulty in seeing that one ten and one unit together, or eleven, should be indicated by two symbols in the relation indicated by 11.

The point to be made clear is that simple juxtaposition of the symbol for ten with the symbol for one, viz.,

101 would not denote eleven. Great care should be taken to show that the cipher is used only to keep figures in their proper relative positions.

If the preceding points are illustrated with sufficient clearness the pupils may be led to infer the symbols to 100, after which they should have various exercises in observing, making, and using the symbols.

The symbol 100 is the next difficult point. The manner of treating it is analogous to that used in considering 10. This symbol should be compared carefully with other symbols of three figures, especially with 111, 110, 101.

Two points are to be held in mind: one is that the pupil should not be held exclusively to theoretical notation, but is to consider in connection with it all relations and processes, since it is futile to attempt to exhaust this or any other subject at the time the pupil is introduced to it; the other is that in the explanation of notation terms must be used with precision and consistency.

The importance of dwelling with care upon ideation and notation will be evident from the following:—

1. When the principle of ideation, that *a number may be considered as divided into the successive multiples of ten*, is comprehended, every operation becomes a precedent for another; while otherwise every process in arithmetic would be reduced to mere counting.

2. It is in the light of the principles of ideation and notation that the several partial results are arranged in the various processes.

Illustrate "1" and "2."

OUTLINE OF WORK.

**First Year.**

Practical ideation of whole numbers to ten.

Ideation of fractions to tenths. The relations in whole numbers to ten.

The relations in fractions to tenths.

The units of measures and their relations in so far as they are involved in numbers from one to ten.

**Second Year.**

Practical notation of numbers from one to ten.

Practical notation of fractions to tenths.

Practical ideation of numbers from ten to twenty.

Practical notation of numbers from ten to twenty.

Ideation of fractions to twentieths.

Notations of fractions to twentieths.

The units of measures and their relations in so far as they are involved in numbers from ten to twenty.

**Third Year.**

Theoretical ideation of numbers from ten to one hundred.

Theoretical notation of numbers from ten to one hundred.

The fraction involved in numbers from twenty to one hundred; (especially the *one hundreth*, percentage.)

The units of measure and their relations in so far as they are involved in the numbers from twenty to one hundred.

The process of addition and subtraction, in which numbers and fractions, to one hundred and hundredths are involved.

**Fourth Year.**

Multiplication, involving fractions, and whole numbers to ones of thousands.

Division, involving fractions, and whole numbers to ones of thousands.

### DETAILS OF WORK.

#### FIRST YEAR.

First step. The first step in number work is to determine the condition of the child's mind as to number.

This is to be done by some such tests as the following: —(each pupil being, if practicable, tested apart from the others). Say to the pupil (showing one object), Take as many as I have. If the child is able to do so, ask, How many have I?

If he is able to give the oral term—*one*, say, Bring me one—(naming some object). Point out other ones in the room. Tell of ones that you can think of out of the room, etc.

If the child is able to answer satisfactorily all these tests, apply similar ones to the number *two*, and so continue until the limit of the child's knowledge in number is definitely known.

#### WORK OF THE FIRST THREE MONTHS.

The work during a period of about three months *in so far as number is concerned is incidental.*

The main idea is to train the mind by a consideration of *form*, as sphere, cube, cylinder, prism, square, triangle, lines, points, etc.

In doing this work number is, of necessity, incidentally introduced and learned.

The nature of this *combined form and number work* may be seen from the following:—

(It is not to be understood that the numbering necessarily indicates the order in which the forms are to be studied. The exercises are given merely to suggest the kind of work, not the order.)

1. *With the sphere.*

The teacher may place before the children the sphere, and lead them to describe it orally, to mold it, to name things resembling it, in the room, in nature, at home, and to represent spherical objects on the board, as a ball, an apple, a peach, etc.

The number work arises incidentally and is of this nature:

How many spheres are on the table? How many did you mold? If you place the sphere you molded with the one on the table, how many spheres do you have? Two spheres less one sphere are how many spheres? Two one-spheres are how many spheres? In two spheres there are how many one-spheres? How many things that are at home can you think of that are like a sphere? etc.

2. *With the triangular prism.*

The prism is shown to the child, he observes it carefully, and by skillful questioning on the part of the teacher, is led to describe it: which description consists in giving its lines, faces, angles, corners, etc.

The teacher of course gives the child the correct name of each, when he has a clear idea of it.

In this work the child is using his perceptive faculties, and strengthening his powers of observation.

He is then ready to make a similar prism of molding clay. In this part of the work he is taught carefulness and accuracy, using his fingers to shape and smooth the form with which he is working.

So far the child has been gaining the idea of the form.

Next he is required to point out or name objects in the room that are similar to the triangular prism. Also to name objects at home, on the street, or elsewhere, of similar shape, perhaps describing or telling something about some of them.

Then he is required to draw objects that are similar to the prism described.

In this work he is *applying his knowledge of triangular prisms*, and training his eye and hand, as well as gaining language.

The child is now ready *to begin number work* with this object.

The prism may be placed before him, and such questions as the following may be asked: (Each teacher must be judge of the kind and number of questions, and be governed by the development of the child's mind, and the circumstance under which he is working.)

How many prisms do you see?

(Taking it away). Now, how many?

One prism less one prism are how many prisms?

How many faces do you see?

(Changing). How many now?

How many faces on the sides of the prism?

How many on the ends?

How many in all? (Using numbers as wholes, not counting).

How many corners do you see?

Now, how many?

Point out two corners.

Point out the two upper corners.

Point out the two lower corners.
How many corners in all? etc.

Upper, lower, front, back, right, left, etc., are taught with form rather than with number. In the child's answers his language must be guarded, and every answer must be a full, clear, complete sentence.

3. *With the cube.*

The teacher places before the child the cube, and by talking about it in an interesting manner the child is led to observe it closely and to describe it as to form, through skillful questioning on the part of the teacher. The teacher should correct any wrong idea the child has of its form, by leading him to observe it more closely. When he is found to have a clear conception of its form, he is given molding clay with which to mold it, either from an irregular mass or from the sphere previously made. Changing the sphere into the cube will give the child an idea of the relation of the sphere and the cube and will more clearly illustrate the difference in form. The molding should be done with the perfect form in view. The description, molding and drawing (which might be employed) of the cube, are designed to give the child a clear conception of it.

The child is now asked to name objects in the room resembling the cube, also to name such objects that he has seen at home, on the play-ground, etc., thus calling into exercise the observation and memory.

The answers will disclose whether the child has the power to apply the idea of the cube to objects of nature and art.

Form having been thus dealt with the teacher may now present number incidentally.

Thus, questions similar to the following may be asked:

What do you see as to the corners? (holding the cube before the child.)

The child may be led to answer, I see four corners. Four corners less one corner (covering one corner) leave how many corners? "Three corners." Four corners less two corners? In four corners how many two-corners? Four one-corners are how many corners, etc.

In a similar manner the questioning may continue until all the different processes have been touched upon.

The work might be taken through all the relations of the numbers as given by the corners, angles, edges, etc.; then having the pupil place the cube he has formed beside the one being dealt with continue the work, enlarging upon it. But number need not be presented at the length allowed by the material, as the aim is to make the form prominent and the number incidental.

4. *With the cylinder.*

The teacher places on the desk, a cylinder, which the children observe closely, and by her questioning, and work with the cylinder, they are led to describe it orally. The children may then be asked to mold the cylinder. This they do, being very careful to shape it with the tips of their fingers, so that every movement requires a mental act. The work thus far is intended to give a clear conception of the cylinder. It is also necessary that they should know how to apply this knowledge, so the teacher asks them to name every thing in the room that

is like the cylinder ; then objects that they have seen at home, on the street, etc., that are like the cylinder. This is to be followed by drawings on the board of cylindrical objects.

At this stage, number may be brought in, in a manner somewhat as follows:

The teacher points to the cylinder and asks—How many faces do you see? (Covering one face) How many? Tell me about it. The child would answer—

Three faces less one face, are two faces.

In three faces how many one-faces? How many three faces? Three one-faces are how many faces?

It is to be remembered that these questions are only suggestive; and that the relations of number in connection with the various forms are not to be exhausted as this would be teaching number not as incidental.

#### WORK OF THE LAST SEVEN MONTHS.

About the fourth month, the number work that has theretofore been incidental in connection with form, becomes regular and systematic, based upon the use of objects present to the senses, as indicated in the stage of perception.

The ostensible aim is to give clear ideas of the numbers from one to ten, but the ideas of these numbers are really means, not ends, and the true end is the training of the mind by activity upon these ideas, and the all-important question for the teacher in regard to each number is—*How can the idea of this number be presented so as to give the highest and best training to the mind?*

All the different lines of work, as upon whole num-

bers, fractions, and units of measure, move forward abreast.

Each number is considered:

1. As a whole.
2. As to the relations in it.
3. In its applications.

The first work with a number, considering it as a whole, is to present its idea and its oral term. The idea of a number is obtained when it is known *as composed of the next lower number and one, and as made up of so many ones of the same kind.*

Thus, the presentation of the idea and oral term of *two* consists in teaching:

1. A new combination composed of an already known number—one, and one more.

2. That the oral term for this new combination is *two.*

3. That two consists of two ones (units) of the same kind.

*As a Whole.*

The idea and oral term of two having been taught, there remain various devices by which the mind may be trained in considering it as a whole:

1. Two may be dealt with as a whole, and the *observation powers* developed:

*a.* By having all the twos in the room pointed out (sight).

*b.* By leading the pupils to observe two taps of a pencil, two sounds of a bell, two notes of a piano, two ticks of a clock, etc. (hearing).

*c.* By placing on the desk a collection of objects, and having the children with closed eyes select twos (touch).

2. Two may be studied as a whole, and the *memory* be cultivated by requiring the children to recall twos seen on the play-ground, in the street, at home, in other regions.

3. Two may be presented as a whole, and the child's interest aroused, and his will trained by having him *do*, e. g., move the thumb twice, step twice, toss a ball twice, give sound of a letter twice, place two sticks in various positions, string beads in twos by color, arrange paper triangles in twos by color, string kindergarten fundamental forms in twos, illustrate problems involving two by drawings, arrange in twos, shells, pegs, pebbles, leaves, etc.

4. Two may be taught as a whole, and the mind trained by considering the meaning of the words—couple, pair, yoke, span, brace, etc.; by calling attention to the members of the body, parts of vehicles, buildings, engines, etc., that are arranged in pairs.

The association of the printed words with these ideas is to be presented in the reading work, but the ideas belong to number. Thus do the different lines of study, if the work be organized, supplement each other, as seen previously in number, form and language.

*Relations in the Number.*

To the consideration of two as a whole should succeed work with the relations in it.

By means of objects present to the senses the children

should be led to see and to express orally the following relations, *the order being immaterial:*

One and one are two.
Two less one is one.
Two less two is naught.
Two ones are two.
One two is two.
In two there are two ones.
In two there is one two.

In the history of the development of method in number work there have been several modes of dealing with numbers and their relations:

1. That which dealt merely with the figures and symbols of relation.

2. That which dealt with the figures and symbols, but used objects to illustrate them.

3. That in which the teacher, having in mind a given form of statement (oral), uses the objects, so manipulating them, and so questioning as to awaken the thought of the statement, and to obtain the statement she has predetermined.

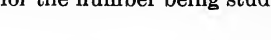
This kind of work is based on principles "1" and "2" (page 303). According to these principles a number, e. g. *three* would be considered as follows (Many exercises and examples being given under each relation):

*Three.*

a. "Three as a whole.
b. Discoveries in three.
c. Facts in three.
(1). Two and one.
(2). One and two.
(3). Three minus one.
(4). Three minus two.
(5). Three divided by one.

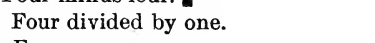
(6). Three ones.
(7). Three minus three.
d. Comparison of three with numbers known.

At various stages ample reviews are taken upon these relations. In connection with the review, the written word for the lower numbers and for the number being studied may be given thus:




*Four.*

a. Four as a whole.
b. Discoveries in four.
c. Facts in four.
(1). Three and one.
(2). One and three.
(3). Four minus one.
(4). Four minus three.
(5). Two and two.
(6). Four minus two.
(7). Four divided by two.
(8). Two twos.
(9). Four minus four.
(10). Four divided by one.
(11). Four ones.
d. Comparison of four with number known.
e. Writing—




" *

(Prepare exercises and examples under each relation indicated under the numbers three and four. What reasons can be given in favor of teaching a certain relation first, etc.? What reasons against?)

*Primary Arithmetic, Wentworth & Reed. Ginn & Co.., Boston.

4. A fourth, and to some, a preferable mode, which is to place the objects before the pupils for the sole purpose of awakening their thought, and of enabling them to perceive the relations of numbers, allowing the expression to be determined by what they see, giving no regard as to whether the relations as seen in addition, subtraction, multiplication, or division, are seen and expressed first.

The relation first seen by the pupil and his own spontaneous expression of it, if correct, are to be accepted in the beginning without any attempt to force upon him any particular mode of seeing the relation or any technical and arbitrary arithmetical expression.

Such are to be considered and used in the later stages.

The above mentioned relations of two (page ) having been dealt with, those that are involved in the second phase of division are to claim attention.

Thus, (using two cubes, balls, or other objects,) separate the two into two parts, lead the children to see that the parts are equal, and apply the name always to be given to any one of two such parts—*one-half*. The pupils are then to see that one half of two is one, and that two halves of two are two.

One (one apple,) is then to be separated into two equal parts, and the pupil led to apply the term one-half to each part. The class are then to see and state:

One-half and one-half are one.
One less one-half is one-half.
One less two halves is naught.
Two one-halves are one.
In one there are two halves.
One-half of one is one-half.

*Applications.*

From the completion of the relations in two the pupils are to enter upon a study of its applications.

These may be considered of two kinds:—

1. Its application *in the tables*, or as to units of measure.

2. Its application *in general.*

Under the first the children would be taught concretely in connection with two, all the units of the tables that involve two, as:

Two one-cents are two cents.

Two pints are one quart.

A sheet folded into two leaves is a folio, etc.

The printed forms of the new words, such as pint, quart, cent, folio, etc., would be associated with their ideas in the coexistent reading lessons, and the coins, as one and two cent pieces, as would the other coins in their order, would form the basis of language lessons, the aim of which would be to develop the children's power of language and observation, and increase their knowledge of the coins of their country, by conversational lessons, and stories concerning their appearance, composition, where and how the materials are obtained, their coinage, etc.

Thus, as before mentioned, would the various exercises of the school, if organized, supplement each other.

Under the second, the pupils would be required to solve, and to form and solve miscellaneous problems; as:—

If a boy buys one orange one day, and another the next day, how many does he buy?

If a man has two apples, and wishes to give them away, giving one apple to each boy, to how many boys can he give? etc.

The work, as indicated for the number two, represents the nature of the work on the numbers from one to ten.

The units of the various tables, and their relations as involved in the numbers from one to ten, are:—

1.

One cent.

2.

Two one-cents are two cents.
Two pints are one quart.
Two reams are one bundle.
A sheet folded into two leaves is a folio.

3.

Three feet are one yard.
Three feet are one pace.
Three miles are one league.
Three one-cents are three cents.

4.

Four quarters are one yard.
Four quarters are one dollar.
Four inches are one hand.
Four gills are one pint.
Four pecks are one bushel.
Four quarts are one gallon.
Four weeks are one month.
Four farthings are one penny.
A sheet folded into four leaves is a quarto.

5.

Five one-cents are five cents.

6.

Six feet are one fathom.

7.

Seven days are one week.

8.

Eight quarts are one peck.
Eight cord feet are one cord.
A sheet folded into eight leaves is an octavo.

9.

Nine square feet are one square yard.

10.

Ten mills are one cent.
Ten cents are one dime.
Ten dimes are one dollar.
Ten dollars are one eagle.

SECOND YEAR.

The second year's work differs from the first in the numbers dealt with; in being in the Stage of Imagination; and in that it presents the practical notation for the numbers considered in the first and second years.

Notation considers two things:

The figures.

The arithmetical sentences.

The figures are taught just as other words are:—

1. Present the number and associate it with its figure.

2. Point to the figure and associate it with its number.

3. Pass in the association from numbers to figures. There should be careful drill in making the figures on board and paper.

In teaching the notation for thought in number there are three stages:—

1. To obtain the notation from objects.

2. To obtain the notation from problems; as, If a boy has three apples and finds two more, how many has he then? In this case the pupil is to write,—3 and 2 are 5.

3. To obtain the notation from the oral expression of number (abstract).

For example, the teacher may give (orally) 3 and 4, when the pupil is to write, 3 and 4 are 7.

The notation is obtained from objects somewhat as follows:—

The teacher presents three objects, e. g., cubes, and after a slight pause one more, and then combines them, asking pupils to write on the board, or slate, what they saw. The pupils write, 3 and 1 are 4.

In like manner a number of sentences are written. The teacher then explains the use of + for *and*, and obtains a number of sentences in which + is used. After the pupils thoroughly understand the use of +, the use of = for *are* is explained.

Sentences in subtraction, multiplication, and division are presented in the same general way.

The units of the various tables, and their relations as involved in the numbers from ten to twenty, are:—

12.

12 inches are 1 foot.
12 pence are 1 shilling.
12 ounces are 1 pound.
12 signs are 1 circle.
12 things are 1 dozen.
12 months are 1 year.
12 dozen are 1 gross.
12 gross are 1 great gross.
A sheet folded in 12 leaves is a 12 mo. or a duodecimo.

16.

A sheet folded in 16 leaves is a 16 mo.
16 drams are 1 ounce.
16 ounces are 1 pound.
16 cubic feet are 1 cord foot.

18

18 inches are 1 cubit.

20.

20 shillings are 1 pound.
20 cwt. are 1 ton.
20 things are 1 score.
20 quires are 1 ream.
20 grains are 1 scruple.

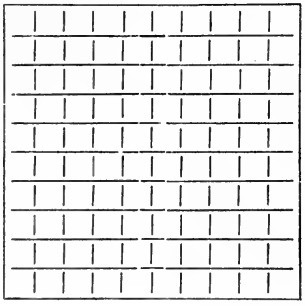
THIRD YEAR.

Numbers in the third year (20 to 100) are treated in the same general manner and spirit as are those of the second year, the work still being in the Stage of Imagination.

Theoretic ideation and notation, if they have not been taught before, are presented as the first work.

In considering *fractions* in connection with the whole number *one hundred*, the idea of *percentage* arises, and is to be treated.

The following illustration and exercises will indicate to some extent the nature of the work:



.2 and .3; .4 — .1; .4 ÷ .2; .9 ÷ .7; .7 ÷ .3; .7 and .07; .27 and .5; .6 ÷ .03; .1 ÷ .01; .8 ÷ .07; .1 of .1; .2 of .1; .3 of .7; .5 of .5.

What is 4 per cent. of $40?

8 per cent. of $200?

10 per cent. of 90 yards?

12½ per cent. of 72 miles?

20 per cent. of a cubic yard?

5 per cent. of an acre?

What per cent of $35 is $7?

What per cent. of $28 is $14?

What per cent. of 42 miles is 21 miles?

$6 is 20 per cent. of what number of dollars?

40 rods is 12½ per cent. of what number of rods?

If 4 qts. of grain are given for grinding a bu., what per cent. is the cost of grinding?

1 lb. 4 oz. is 25 per cent. of what?

*There is nothing in fractions but the relations of whole numbers, except the terms.* (Illustrate.)

The units of the various tables and their relations as involved in the numbers from twenty to one hundred are:

24 gr. are 1 pwt.
24 hours are 1 day.
24 sheets are 1 quire.
24 things are 2 dozen.
27 cu. ft. are 1 cu. yd.
28 days in February.
29 days in February.
30 degrees are 1 sign.
30 days in April, June, September and November.
30¼ sq. yd. are 1 sq. rd.
31 days in January, March, July, August, October and December.
32 gills are 1 gallon.
32 quarts are 1 bu.
32 pounds of oats are 1 bu.
36 inches are 1 yard.
36 things are 3 dozen.
40 perches are 1 rood.
40 rods are 1 furlong.
48 things are 4 dozen.
56 pounds of corn, rye or flax seed are 1 bu.
60 pounds of wheat or clover seed are 1 bu.

60 seconds are 1 minute.
60 minutes are 1 hour.
60 minutes are 1 degree.
60 geographical miles are 1 degree.
60 things are 5 dozen.
72 things are 6 dozen.
84 things are 7 dozen.
96 things are 8 dozen.
100 pounds are 1 hundred weight.
100 years are 1 century.

The processes of addition and subtraction in this year, and also the processes of multiplication and division, in the fourth year, are to be presented and explained at first concretely, first with objects present to the senses, and then with objects present to the imagination.

ADDITION.

This process requires attention to the following points:

1. The object of the process.

2. The impossibility of adding all the numbers at one step.

3. The necessity of the successive steps and of combining results.

4. The division for this purpose.

5. The manner of combining the partial results in accordance with the principle of numeration. (Ideation.)

6. The statement of the rule, and its illustration by reference to the steps of the operation itself.

7. Practice, in which each step of each operation is to be accounted for by reference to the rule.

When the rule is familiar, it remains only to grade the practice according to the complexity of the operation involved. The grading consists of four stages :—

*a.* That which involves the expression on the slates in symbols of what the pupil has previously done orally; as, 8+4+3=15.

*b.* That which involves the axiom of operation by parts but no change of denomination; as, 33+26=59.

*c.* That in which the change of denomination involves the principle of numeration, (ideation) and the axiom of operation by parts; as 37+46=83.

*d.* Exercises involving ciphers.

SUBTRACTION.

The same points in regard to explanation and gradation apply to subtraction.

The method in subtraction is either that which involves a change of minuend alone, depending on the principle of numerical ideation; or that which involves a change in both the form and value of the minuend and subtrahend, depending on the axiom that the difference of two numbers is not changed if both be equally increased.

The proofs in addition and subtraction should be given, as well as the operations themselves, being equally valuable as mental exercises.

The proof of addition is based on the principle that in adding a series of numbers, the sum should be the same, in whatever order the series is added; and that of subtraction on the principle that what is subtracted from a number and what remains must equal the whole.

MULTIPLICATION.

Multiplication, in the limited conception, should be explained by addition, and its object shown to be to find what the addition of a given number of equal numbers will produce. Its relation to division should be clearly set forth, also.

The table should be constructed objectively and should then be made a mental habit by repetition. It is valuable practice to extend it to twenty or more.

The grading of exercises should be as follows:

1. Exercises in which the multiplier consists of the units in succession.

2. Exercises in which the multiplier consists of the tens in succession.

3. Exercises in which the multiplier consists of both units and tens.

In multiplying by such a number as 27, the 2 should not be spoken of as twenty nor as two tens, for that is contrary to the idea of notation, and only complicates the operation.

Let it be spoken of as a 2, and afterward by recalling the fact that it is tens, the denomination of the product may be shown. Success in dealing with such cases depends on success in the work on notation and the previous steps in multiplication, for then the pupil will be able to perceive in how far the multiplication by 2 tens agrees with that by 2 units, and in how far it differs. The axiom of partial operations is employed three times in such cases, and that axiom and the principle of numeration (ideation) explain the entire theory of the process.

DIVISION.

Division, according to the less comprehensive definition, should be explained by subtraction, and its object shown to be to find how often one number is contained in another; or to find one of the equal parts of a number. Its relation to multiplication should likewise be indicated.

The principles upon which the process depends are that of partial operations and that of numeration (ideation.)

Long division should be presented before short division because short division is an elliptical form of long division, and therefore naturally grows out of it.

In commencing with long division, however, small divisors, such as 2, 3, 4, etc., should be used.

The exercises should be graded as follows:

1. Those where the partial quotients are even without involving any change of denomination; as, 84648÷2.

2. Those in which change of denomination is involved.

3. Those which involve ciphers.

The proofs for multiplication and division should be considered for the reasons given under subtraction.

The proof for multiplication is based on the principle that the product is the same in whatever order the partial products are obtained, and that for division, on the principle that the contained number multiplied by the number of times it is contained, will give the containing number.

## METHOD IN GEOGRAPHY.

### DEFINITION.

### SYSTEM.

### PRINCIPLES.

The three root principles in the subject of geography are:

1. Earth and man are mutually adapted to each other as habitation and inhabitant. (The selective principle as to subject-matter.)

2. The earth is an organism, having life *through contrast.* (The directive principle in presentation.)

3. Each new idea is, and is to be made appear to be a development of one already in the mind. (This principle is not peculiar to the subject of geography.)

### MENTAL FACULTIES INVOLVED AND TRAINED.

Elaborate each of the preceding ideas.

### PURPOSE.

The first and most important purpose in teaching geography, is to awaken and to furnish exercise to the mental faculties.

More specifically, the purpose is primarily to develop the imagination.

It should also be the aim to give intellectual and moral breadth. (How does geography tend to do this?)

The secondary purpose is to give a knowledge of the earth as an organic whole, and its parts in their relations; to give a general knowledge of all the political divisions of the earth, and to give a specific knowledge

of the pupil's own country, and four or five others of the leading countries as commercial and industrial units.

Geography is not to be taught for the sake of the geographical knowledge, but for the sake of awakening and exercising the mental faculties, and giving them increased vigor by furnishing material for their exercise, and affording opportunities for the directing and training of them.

In this use and not in its facts, lies the great value of the subject of geography; though the facts have their value, and should be clearly presented.

### THE KNOWN.

*What knowledge have children upon entering school, that is geographical or related to geography?*

When a child enters school he is in possession of ideas, sometimes vague and incomplete, sometimes incorrect, concerning:—

The form, size and position of the earth, its daily motion, day and night, the seasons and their succession, direction, color, form, the rising of smoke.

Rain, snow, ice and dew; where they come from; where they go to.

Heat and cold, and their effects; air, the boiling of water.

Clouds.

Different plants; their relations to heat, moisture, man and animals.

Different animals; their uses.

Different minerals; their uses.

Hill, valley, plain, pond, stream, cape, peninsula, etc.

Different kinds of soil, earth-worms, the coral, and their effect.

Different means of communication, riding on cars, vehicles, etc., and the effect.

Different races of man.

Different nations of men.

Cities; their buildings, streets, governments.

Different religions.

Education.

Different occupations.

Pictorial representation.

The difference in earth and water in receiving and giving off heat.

*Classification of the items given above under:—*

1. Mathematical Georgraphy.
2. Physical Geography.
3. Political Geography.

These ideas classified would be as follows:—

Form, size, position of the earth, its motion;—day and night;—the seasons and their succession;—direction;—form;—streets;—pictorial representation, belonging to *mathematical* geography.

Rain, snow, ice and dew, where they come from; where they go to;—heat and cold, and their effects;—clouds;—different plants; their relations to heat and moisture, man and animals;—different animals, their uses;—different minerals; their uses;—hill, valley, pond, stream, cape, peninsula, etc.;—different kinds of soil; earth-worms, and corals;—different races of man;—difference in earth and water in receiving and giving off

heat;—color;—the rising of smoke; pictorial representation, belonging to *physical* geography.

Different means of communication;—different nations of men; cities; their buildings and governments;—different religions;—education;—different occupations; pictorial representation, belonging to *political* geography.

*Through what sources has the child acquired these ideas?* (*Amplify.*)

*What is the attitude of his mind in regard to them?*

The attitude of the child's mind to this accumulated knowledge is two-fold: First, much of the knowledge is the latent known. In the second place, much of it has become common-place. 'The curiosity excited by novelty has become somewhat satisfied by familiarity with the outside of the surrounding phenomena, or has been repressed by contact with ignorance, and commands to cease unwelcome questions' The child is by birth a naturalist. *His love of nature is the capital in geography.* At first his wondering eyes gather material naturally. Therefore:—

1. The first work of geography is to flash its light across the latent known and turn the child's gaze upon it.

2. The second is to re-awaken his interest in the common-place known.

This is to be done by opening up to the pupil in the beginning all that is strange, picturesque, and wonderful in the realm of which his acquired ideas form a part.

*This can never be done by chaining his mind down during the first year or more of geography, to a study of the objects of the school-room and how to represent them, the school-yard, township, county, and state, and how to map them.*

The child must see the earth first in its most enchanting guise, and through mediums which are perfectly familiar—*pictures and language*—so that the mediums shall be in the back-ground. If he is set in the very beginning to the productiou of a new means of representation—*the map*—the tendency is for it to become all-important in his eyes, and thus, in a measure, close them to that which it represents. It is a reversal of the maxim—"The thing signified before the sign."

*Into what knowledge do the ideas possessed by the child unfold or develop in the geography work?*

Under the influence of proper geography work, the subject of geography appears to the child as the mere expansion or development of those ideas related to the subject which he possessed when he entered school.

For example, the child's idea of the form of the earth, whether correct or incorrect, is that out of which grow considerations of—*reasons* for his belief and their application to the apparent and the real case; *clear ideas* of the form, comparative and actual (spheroid); *proofs* —Magellan's voyage, appearance and disappearance of ships at sea, appearance of objects on land to incoming ships, the circular horizon, and its increase on ascent, the shadow cast on the moon; *illustration*—movement of toy ships on globe, toy man on the surface represented

by sand on the curved surface of a molding board, modelling in clay of the spheroid, a piece of paper with a round hole in it placed on a large globe, etc.

The inadequate idea of the earth's size unfolds into definite ideas concerning—circumference at the equator, diameter at the equator and between the poles, circumference in time—railroad trip of more than a month at the rate of 30 miles an hour, with no stops.

The vague idea as to the earth's position is to unfold into clear ideas in regard to its position by reference to pictures of globes floating in the air; other earths—the evening star and the moon—magnet, balls, balloons, birds, kites, etc., in the air.

From the idea possessed as to the motion of the earth or the apparent motion of the sun, the development is, through illustration afforded by riding upon the cars, and by comparison of the size of earth and sun, to the rotation of the earth.

The knowledge of day and night will lead to the idea of rotation, axis, poles, and variation of length of day and night.

Illustration work.—Rotation with axis vertical, horizontal and oblique, using card-board disc or day circle; the finding of sunrise, noon, sunset, and midnight for given places; place ball or globe in position for northern midsummer, mark with dots the places for sunrise and sunset, and then rotate, having the pupils observe whether the dots are longer in the light or dark. (Read in connection "Agoonack" of "The Seven Little Sisters," and "Bidding the Sun Good night in Lapland," by Joy Allison); hold a crayon on the farthest point of the surface

beyond the North Pole that the sunlight reaches, and rotate, keeping the crayon in position—have the pupil tell about the day at all places within the circle formed by the crayon. In like manner, place the ball for the other seasons and show results as to day and night.

The ideas that the child already possesses in regard to the seasons and their succession, are to develop into clear ideas concerning the revolution of the earth, the zones, the orbit, climate and its relation to vegetation.

These ideas are to be obtained by reference to the pupil's experience, and employment of such devices as placing a ball or globe on a table to represent the sun, and another in the hands of a pupil to represent the earth. The pupil by holding the ball in its proper position, rotating it and moving with it to represent the revolution, can show the changes of light and heat, and the inferences as to the most obvious effects will follow. This may also be shown by a candle and a ball, and, of course, by scientific apparatus, if it be possessed.

In like manner the development of each of the familiar ideas could be shown.

THE MORE COMMON DEFECTS IN PRESENTING THE SUBJECT.

1. It is made too largely a verbal memory study.
2. Neglect in use of the globe.
3. Study of facts as isolated to too great an extent.
4. Tendency toward national conceit and narrowness through the early and continuous study of one's own region, before grounds of comparison are furnished by the study of the earth as a whole, and of other countries.

5. Subordinating the map to the text on points of which they both treat.

6. Not guarding sufficiently against the tendency on the part of the pupils to make the map and text the end.

7. Teaching the hemispheres from but one standpoint instead of from three—the eastern and western, northern and southern, land and water.

8. Teaching the continents only as surfaces.

9. The failure to distinguish between the twenty-five or thirty cities of the earth in which the commercial and industrial relations are strongest, and which should therefore require the preponderance of treatment, and those whose importance is arbitrary, political or local, and which therefore require less exhaustive study.

10. Failure to sufficiently utilize the experience of the pupils.

11. Presenting the different stages of the work in an unnatural order, e. g., the presentation of political divisions before natural divisions, winds, currents, etc.

12. Presenting the symbol before the reality—the sign before the thing.

13. Neglect of map drawing, one of the very best means of giving clear conceptions of the various regions on the ground that it takes too much time.

### OUTLINE OF WORK.

#### FIRST YEAR.

The geographical threads of the first year are lessons on:

Place, form, drawing, size, distance, direction, and color.

In the lessons on *place*, work would be given illustrating the use of such expressions as,—on, above, before, between, under, below, behind, around, etc., right-hand corner, left-hand corner, front right-hand corner, back left-hand corner, middle of right side, etc.

In such work the teacher would place objects and the pupil imitate; the teacher place and the pupil describe; the teacher place and the pupil draw; the teacher dictate and the pupil place; the teacher disarrange and the pupil place from memory, etc.

In the work on *color*, *form*, *size*, etc., the pupils would be led to speak of the color, form, size, place on the earth, etc., of animals, plants, minerals, etc.

Thus, of the tiger: its colors would be spoken of and represented; its form and size shown on the board and in pictures and by reference to tigers that the pupils may have seen; then the region that it inhabits would be spoken of, its distance and direction from the pupil's own region indicated, etc. In a similar way the tiger-lily, magnolia, lead, gold, etc., would be briefly touched upon, in connection with the lessons on place, form, color, size, etc.

SECOND YEAR.

In the second year the geographical threads are lessons on:—

1. Animals:

That live on the *land;* in the *water;* in the *air.*

That live in *hot parts* of the earth; in *cold parts;* in *forests;* in *plains;* in *deserts;* on *mountains*, etc.

2. Vegetation—Same as animals.

3. People: (By stories and readings.)

Their kinds of homes.

What they wear, eat, and do.

The animals they use.

The distance and direction of their homes from the pupil's home.

(See The Seven Little Sisters; Each and All; Aunt Martha's Corner Cupboard, or Stories about Tea, Coffee, Sugar, etc.; Little Lucy's Wonderful Globe; Little People of Asia; Johonnot's Natural History Series; etc.)

THIRD YEAR.

(It is not the thought that all the work that is outlined in any one year's work should be taken during that year. The outline indicates the order, method, and topics from which to select.)

AIM.

1. *Principal.*—To open up to the child the wonderful and picturesque features of the subject.—To guard against making the map, definition and text, all-important.—To give a general conception of the earth as a whole *without the use of a map.*

2. *Incidental.*—Extended ideas of distance, direction, means of communication, vegetation, animals, and of the different peoples and their habits.

NATURE OF THE WORK.

The work is based upon the idea that *every region of the earth is composed of some or all of the few geographical elements,* (about thirteen in number): as, hill, lake, peninsula, etc., each of these having its *essential marks or elements* (as the base, slope and summit of a hill), which

essential elements may appear in *various types*, e. g., a summit may be flat, rounded, or pointed; a slope, wooded, rocky, grassy, etc.

The purpose of the year's work is to be accomplished by giving clear, rich and full conceptions of the various geographical elements; so that a geographical term, as "*peninsula*" shall call up in the mind of the child—not the conception as derived from a single example, but as gained from a number of instances sufficient to present the element in its various types.

In order that the purpose as stated above may be best accomplished the various examples necessary to illustrate the different types are selected from as many different regions of the earth's surface as possible.

In the use of the molding sand and drawings as means of making clear the geographical elements, to insure that the pupils shall look through the molding sand and the map to the real objects which these represent, preliminary work of two kinds is necessary.

1. Work in which teacher and pupils mold in sand, (common molding sand) and draw in horizontal and in vertical outline, (profile) regions with which the pupils are familiar; all knowing in each case what region is being represented.

This work may be pursued for several weeks.

2. Work in which the teacher molds in sand, and draws in horizontal and vertical outline regions with which the class is familiar; the pupils, however, not knowing before hand what region is to be represented,

but being required to determine the region through the representation.

Two or three weeks may be consumed in this kind of work.

This preliminary work having been completed, the pupil is prepared to enter upon the study of the various geographical elements.

The work with any one geographical element consists of three parts:

1. Study of the example in the home region.
2. Imaginary journeys to examples in foreign regions.
3. Study of examples selected in foreign region.

On the supposition that the lake is the element to be considered, and that its various types are adequately represented by the lake or pond in the home region, and by Lake George in North America, Lake Titicaca in South America, Lake Geneva in Europe, Lake Balkash in Asia, Lake Tchad in Africa, and Lake Eyre in Australia, the work would be of the following nature:

a. If practicable, the pupils should observe the lake or pond in the home region, noting its essential characteristics and their types; and should mold it in sand, while it is before them.

b. Mold from memory.

c. Describe orally.

d. Describe in writing.

e. Draw in horizontal and vertical outline.

The foregoing work on the example in the home region having been completed, the pupil is prepared to enter upon the second kind of work—the imaginary journey.

In the imaginary journey the pupil should notice carefully the distance, direction, means of communication, the general character of the intervening surface, the habits and industries of the people, etc.

When the pupil has been brought, by means of the imaginary journey, to the first example of the element in foreign regions which has been selected, (in this case Lake George) the teacher should make his conception of the element as vivid as possible by pictures and descriptions.

When this has been accomplished the pupil may occasionally be required,

a. To mold the example.
b. To describe it both orally and in writing.
c. To draw it in horizontal and vertical outline.

When the work has been completed to this point, the pupil is to return to the home region either by the same or a different route.

He is next to make an imaginary journey to the next example of the element in foreign regions—(Lake Titicaca)—noticing the same things during the journey and studying the example in the sameway. Returning to the home region, as before, either by the same or by a different route, he proceeds to study in the same manner all the examples selected as necessary to give a full and vivid conception of this geographical element.

Such work as that indicated in relation to the lake, should be pursued with each of the remaining geographical elements; *the treatment of examples in foreign regions being obviously less exhaustive than that of the example in the home region.*

Supposing the *hill* to be the element selected to begin with, the general order of presentation would be as follows:

1. The Hill.
   a. Work as indicated with the lake.
   b. The hill region.
   c. The expansion of the hill into the mountain.
2. The mountain.
   a. Work as indicated with the lake.
   b. Combination.
      (1.) Into the range.
      (2.) Ranges into the system.
3. The Valley.
   a. Work same as indicated for the lake.
   b. Extension of valley into the plain.
4. The Plain.
   a. Work same as with the lake.
   b. Elevation of the plain into table-land or plateau.
5. The Table-land, or Plateau.
   a. Work same as with lake.
6. The Spring.
   a. Work as indicated for the lake.
   b. Extension of the spring into the streamlet.
7. The Streamlet.
   a. Same as with the lake.
   b. Expansion of streamlet into river.
8. The River.
   a. Same as with lake.
   b. Formation of river-system.
   c. Expansion of river into the ocean. (Atlantic.)

9. The Lake.
   a. Work indicated before.
   b. Expansion of lake into ocean. (Pacific.)
10. The Cape.
   a. Same as indicated for the lake.
   b. Extension of cape into peninsula.
11. The Peninsula.
   a. Same as with lake.
   b. Showing isthmus from the part of the peninsula which connects with the main body of the land.
12. The Isthmus.
   a. Same as with lake.
13. The Island.
   a. Work as indicated for lake.
   b. Island group.
14. Gulf or Bay.
   a. Same as with lake.
   b. Extension of the gulf into the inland sea.
15. The Inland Sea.
   a. Same as with lake.
   b. The connection of the inland sea with gulf or bay, forming the strait.
16. The Strait.
   a. Same as indicated for lake.

In connection with the foregoing, the pupils may receive elementary ideas of climate, productions, inhabitants of various regions, means of communication, cities; but this work should be incidental, and limited to those regions which have been selected to give full conceptions of the various geographical elements. The following outline will suggest the nature of the work :—

1. Climate.
   a. The Spring Day.
      (1.) Comparative length of day and night.
      (2.) Variations of heat and moisture, or the combinations of the elements of climate.
      (3.) The effects of their combination as found in the spring day upon productions and inhabitants.
   b. The Summer Day.
      (1.) and (2.) Same as for Spring Day.
      (3.) The effect of the combination as found in the summer day upon the productions and inhabitants.
      (4.) Merged into the tropical day and season.
   c. The Autumn Day.
      (1.) and (2.) Same as for Spring Day.
      (3.) The effects of the combination as found in the autumn day upon inhabitants and productions.
   d. The Winter Day.
      (1.) and (2.) Same as in Spring Day.
      (3.) The effects of the combination as found in the winter day upon productions and inhabitants.
      (4.) Merged into the frigid day and season.
2. Productions.
   a. Minerals.
      (1.) In home region.
         (a.) Kinds.
         (b.) Appearance.
         (c.) How obtained.
         (d.) Use.
      (2.) In other regions.
         (a.), (b.), (c.) and (d.) same as in home region.

(e.) Comparison as to kind and use.
(f.) Generalization.
b. Vegetation.
(1.) Of home region.
(a.) Appearance.
(b.) Use.
(c.) Adaptation of soil and climate to vegetation.
(2.) Of other regions.
(a.) and (b.) Same as in home region.
(c.) Inference as to soil and climate.
c. Animals.
(1.) Of home region.
(a.) Wild.
(b.) Domestic.
(1.') Foreign.
(2.') Native.
(c.) Appearance.
(d.) Habits.
(e.) Uses.
(f.) Adaptation of climate and region to habits and uses.
(2.) Of other regions.
(a.), (b.), (c.), (d.) and (e.) Same as under home region.
(f.) Inference as to region and climate.
3. Inhabitants.
a. Of home region.
(1.) Races.
(2.) Influence of climate and region upon mode of life, as to:—

(a.) Occupations.
(b.) Habitations.
(c.) Food.
(d.) Clothing.

b. Of other regions.

(1.) and (2.) with (a.), (b.), (c.), (d.), same as under home region.

4. Means of communication.

a. Of home region.

(1.) By land.

(a.) Natural—Those possessing the motive power within themselves and using as passage-ways:—

(1.′) Roads.
(2.′) Bridges.

(b.) Artificial.—Those not possessing the motive power within themselves, and using passage-ways,

(1.′) On the surface.
(2.′) Above the surface.
(3.′) Beneath the surface.

(c.) Objects communicated.

(1.′) Material.
(2′) Immaterial, or thought.

(2.) By water.

(a.) Natural.—Those using as motive power the currents of the streams and passing *on* the water.

(b.) Artificial.—Those employing as motive power forces other than the current and passing,

(1.′) On the water.
(2.′) Under the water.

(c.) Objects communicated.

(1.') Material.
(2.') Immaterial, or Thought.

b. Of other regions.

Same as under home region.

5. Cities.

a. The Village.

(1.) Work as indicated for the lake under geographical elements.

(2.) Expansion of the village into the city.

b. The City.

Comparison of the various types of cities met with in the study of the geographical elements.

IDEAS INCIDENTALLY ACQUIRED.

Although this year's work does not deal with locality, yet the pupil will necessarily become somewhat familiar with the general position of countries, together with their names and those of their remarkable features.

Thus, in listening to a description of rivers, as the Amazon or the Hudson, interest fixes their names in memory so that they are familiar when, in the course of their later work, their position is learned.

Likewise, in studying animals or vegetation, the pupil associates the countries with these: Africa, with the lion; China, with tea, etc.

If in the general lessons of the school, the following three lines of work, among others, are pursued, as supplementary to the second year's work, they will furnish valuable assistance in rendering more vivid the pupil's conception of the regions described in the geography work:—

1. One upon the lion, elephant, camel, tiger, wolf, bear, hyena, kangaroo, buffalo, reindeer, dog, serpent, whale, shark, eagle, ostrich, vulture, etc.

2. Another upon the palm, olive, breadfruit, vine, cotton-plant, tea-plant, coffee-tree, sugar-cane, rice, maize, cinnamon, cedar, mahogany, etc.

3. A third upon articles of food, clothing and building.

In the course of these lessons the principal countries would evidently be noticed so often that the pupils would, of necessity, accumulate a considerable fund of ideas concerning each.

#### ILLUSTRATIONS.

During the work of this year, the only illustrations to be used other than those previously mentioned, are pictures of the objects dealt with in the general lessons, and pictures of scenes typical of countries.

In accord with this thought the teacher would present pictorial representations somewhat as follows:—

*Arabia*, by a desert scene exhibiting the general features of the desert and sky, the caravan as a whole, the camel, and the Arab himself, in his usual costume.

*Egypt*, by its river, pyramids, and inhabitant, engaged in his usual avocation, etc.

Only a limited supply of such illustrations is furnished by the text-books. The teacher should, therefore, make collections of pictorial illustrations of natural features; animal, vegetable and mineral productions; buildings, manufactories and processes of manufacturing; representative men of different nationalities; cities; bird's

eye views, etc. These should be divided on the basis of continent, and then subdivided on the basis of country, region, etc., and kept separate.

Harper's Magazine and Weekly, and the Century Magazine are among the richest sources of such illustrations.

Number 1,370 of the Weekly contains views of "The Funeral of a Little Waif," in Paris; "The Fish Hatching at Cold Spring, Long Island;" "Prince Gortchakoff;" "Mount Ætna, Sicily;" "Interior of a Southern Cotton Press by night," and "Sketches in Cairo."

Number 1,390 of the Weekly contains views of "Coney Island," and the "Louisville Exposition."

1,391, views of scenery at "Grand Rapids," of "Oyster and Clam Fisheries," of "Sands Point, Long Island," and views from "Sandy Hook."

The Monthly for June, 1877, contains "Scenes in the Vicinity of the Androscoggin Lakes," (17.) "The Wheeler Survey in Nevada," (10.) "Gibraltar," (3.) "Representations of Birds' Nests," (3).

Scribner's Monthly (now the Century) for November, 1876, contains views of "Hartford, Conn," (38.) "Pictures from Rome," (14.) "Furniture," (19.)

These numbers, selected at random, indicate the value of such illustrations when divided and subdivided in such a manner as to be available for systematic use in studying the various geographical regions.

(See for collateral reading—parts of Near Home and Far Off; Scribner's Geographical Reader; Our World, No. 1, by Hall; Seven Little Sisters; Each and All.)

#### IDEA OF THE MAP.

At this stage the pupil is to be led to comprehend *the idea of the map*, by a series of lessons upon the schoolroom and its furniture, the school yard, etc., then to

study by means of it the earth in the order so generally advocated, viz., the state; the group of states; the United States; the continent, etc.; or to pursue the method indicated in the work as outlined in the following years.

### FOURTH YEAR.

#### AIM.

To train the mind by giving a clear *structural* conception of the earth by *means* of *representation*: i. e., globe, map of the earth as a whole, maps of parts of the earth, moldings, drawings, etc.

#### STEPS.

1. *Consideration of the form.*

The work under this point should be somewhat of the following nature:

a. Obtain the pupil's opinions in regard to the shape of the earth and the reasons for such opinions.

b. Discuss the question whether a body having the characteristics which he presents as reasons for his opinion, could be flat; also if it could be round.

c. Obtain if possible, if not, give familiar proofs of the earth's form, such as the following:—

(1.) The earth always casts a circular shadow.

(2.) Objects which are out of sight to one standing on the surface may be seen from an elevation.

(3.) Of an approaching ship, the masts may be seen before the hull, etc.

2. *Presentation of lines of latitude and longitude.*

The steps to be taken in dealing with this subject are:

a. To explain the terms *literally.*

b. To show the necessity for the lines.

c. To teach the pupils how to construct the lines.

A good piece of apparatus to use in presenting these ideas, is a small black ball. If a dot be placed upon the ball with chalk and the pupils be asked to locate it, it will soon become evident that sufficient data for its exact location are wanting.

If dots are now placed upon the ball in proper positions to represent the poles, and circles are drawn through these and numbered, the pupils will see that these aid to a great extent in locating the dot, but that something is still wanting to make the location definite.

If, in a plane at right angles to the plane of the circles already drawn, a circle be drawn, midway between the two points selected to represent the poles, and circles parallel to this be drawn between it and the poles, and numbered, it can be shown that the means for locating the dot are now complete.

The streets of a city also form a good means of illustration of lines of latitude and longitude.

3. *Explanation of the globe as a representation of the earth as a whole.*

4. *Explanation by means of the globe, of the map of the earth as a whole.*

5. *Air.*

a. Position.

b. Composition.

In treating of the composition of air, it is to be made to appear that of the four elements—Oxygen, Nitrogen, Carbonic acid gas, and vapor, the most important in relation to the subject of geography, is the vapor, and that Carbonic acid gas is second in importance.

c. Manner of heating.

avoided. Every thing that can be, is to be made palpably evident by illustration, analogy, observation and experiment. For example, in treating of the different degrees of heat in the atmosphere due to the direct and reflected rays of the sun, refer to the stove, the wall, and the heating of the intervening space.

In teaching that heated air rises and that this rising causes lateral currents, call attention to what may be observed at a register, a fire place or over a slab of heated iron.

The expansion of heated air may be observed in the popping of corn, baking of apples, etc.

The difference in the rapidity with which earth and water receive and give off heat, may be shown by observing buckets filled with each, and exposed to the sun, at noon, and again sometime after sunset.

The aim is to be to awaken an intelligent appreciation of what is already known in part by rote, or daily seen by eyes that see not, or daily done but not understood, and to connect it by its innumerable links with the unknown. The materials presented are to be used as an exercise ground for thought. To a degree it is dealing with the latent known and the answers are, in part, theoretically in the pupils' minds already, and the object is to awaken thought; to cause them to sift and rearrange their ideas; to implant new desires and new capacities for satisfying desires; to give, not so much knowledge, as power to learn and to observe.

Unless this habit of intelligent observation is implanted, the horizon will be close about the pupil and he will be as Schopenhauer says of one without a knowledge of

Latin, "as a man walking in a beautiful region in a fog."

The pupils are to consider the questions carefully, which is a great point gained.

They are to debate the questions thoughtfully which is a greater point gained.

They are to answer the questions with thought which is the greatest gain.

Pupils who are merely instructed and who are assisted unduly at almost every step cannot answer questions with thought. But even if they were unable to answer the questions, to acquire the power to consider and debate questions with thought is to attain the end sought for. The points are, however, so intertwined with their daily experience, and with the common things around them, that all may comprehend them.

It is true that the power to question on these common phenomena requires that the questioner shall be a skilled workman, and that he shall view himself as the director, the suggestor, the stimulator, and the child as a being educating himself by self effort; but such a supposition is allowable.

SUGGESTIVE QUESTIONS.

Among the many questions to be considered, the following will, no doubt, present themselves:—

Where does the rain come from?

How does rain get into the clouds?

Why does rain fall?

Why does water collect in a river channel?

Where does a river make its bed?

Why does the water in a river channel flow in one direction more than another?

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How does rain get into the clouds?

Why does rain fall?

Why does water collect in a river channel?

Where does a river make its bed?

Why does the water in a river channel flow in one direction more than another?

What discolors a river in a rainy season?

Where did the mud come from?

What becomes of the mud and water in a river?

In what way are the sand and gravel disposed of when they reach the sea?

Why does one river form a delta and another an estuary?

What is the air? Its parts?

When water is placed in a kettle and then heated until the kettle is dry, what has become of the water?

Where do plants get their solid parts?

Where does the sand in maple sugar or syrup come from?

Where does the silica in grain come from?

When plants and animals decay what do they give back into the air?

In breathing what do animals give the air?

How do we become sensible of the air?

How is the air heated?

Why is air ever cold?

Why is the air warm during a snow storm?

Why are slanting rays weaker than direct rays?

Why are cloudy days sometimes warm?

What causes the motion of the air?

How does vapor get into the air?

How does vapor get out of the air?

Where does the water that collects upon the outside of a pitcher come from?

Can vapor be seen?

When can the air hold the least vapor?

What is dew?

What is mist, or fog?

What is a cloud?

What is the difference between rain, snow, hail and sleet?

What are the shapes of snow?

When rain falls upon the ground in how many ways does it disappear?

What becomes of the part that sinks into the ground?

Why does it not sink to the center of the earth?

What would be the result if the water which sinks into the earth were to remain there?

How does the water get out of the ground?

How does it happen that there is room for water in the ground?

What makes it rise to the surface?

What does the water take from the air as it falls as rain?

What happens to the water that sinks into the ground?

What does the water in the ground do to the rocks?

What makes buildings, rocks, fences, etc., look old?

What advantage is it to have rocks decay?

All the surface of the land is traveling in what direction?

Why does water flow down?

Why do rivers wind?

Is it better to have them wind?

Of what advantage are brooks and rivers?

What becomes of snow and ice in warm regions?

What becomes of that upon cold mountain-tops?

Does a glacier help to make soil? How?

Why is the sea salt?

Is the sea getting more or less salt? Why?

THE STRUCTURE OF THE CONTINENTS.

1. *Instruments.*

a. The regular text.

b. Other texts.

c. Cyclopedias.

d. Special works on physical geography, as Geike, Somerville, etc.

e. Construction lines.

f. Molding.

g. Drawing.

(1.) Vertical.

(2.) Horizontal.

2. *Features in the Structure.*

In the study of the structure the pupils must form a picture of the continent as a *solid;* as divided by an axis into *two slopes*, one *long* and gradual and the other *short* and steep; as having on these slopes *secondary axes;* as consisting of *mountain land, plateaus* and *plains;* of the mountains as consisting of *systems, ranges* and *peaks;* of the continent as arranged into *river basins;* of the river basins as *parallel to*, and as at *right angles* to the continental axes.

3. *Order of Study of Continents.*

In the study of structure the order may be given, as —South America, North America, Asia, Europe, Africa, and Australia. Reasons for the order indicated?

(See Guyot's Physical Geography, and Earth and Man; Maury's Physical Geography; Recluse's Earth; Huxley's Physiography; Kingley's Town Geology; Forms of Water, by Tyndall; Vegetable Mold and Earth-Worms, by Darwin.)

FIFTH YEAR.

AIM.

The purpose in this year is *to clothe the structure studied in the previous year;* i. e., to train and develop the mind by a consideration of the vegetation, minerals, animals, people, trade cities, (those determined by natural conditions; the natural depots of trade, commerce and manufacture; as, New York, London, San Francisco, Pittsburg, etc.), religions, governments and systems of education of the earth.

OUTLINE OF WORK.

VEGETATION.

1. *Means of original investigation.*

a. The pupil's own knowledge.
b. Regular text-book.
c. Other text-books.
d. Cyclopedias.
e. Special works.
f. Charts, pictures, books on travel.

2. *Means of review.*

a. Lead the pupils to place on the board names of all important vegetable products.

b. Lead the children to classify them, as—food plants; building materials; art materials; material for medicine, etc. Thus:—

Food Plants.
  Staple.
    Placed upon board.
  Luxuries.
    Placed upon board.
Building and Shelter.
  Clothing.
    Placed upon board.
Arts and Manufactures.
  Coloring.
    Placed upon board.
  Cabinet work.
    Placed upon a board.
Medicines.

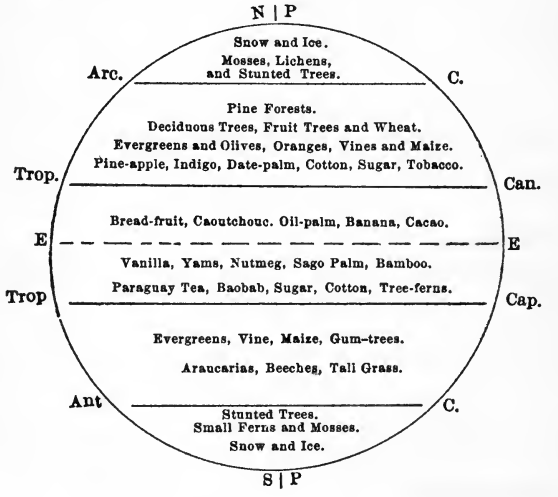
Names of plants used for medicines written upon board.

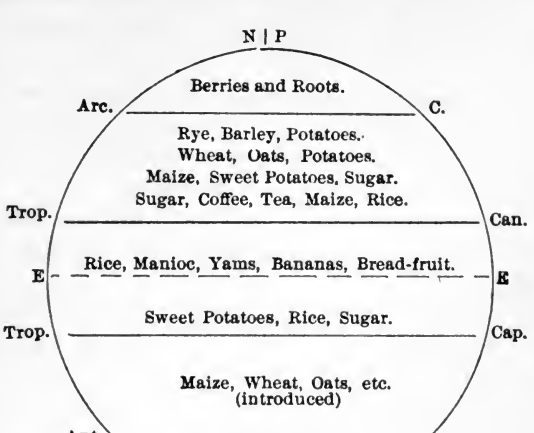
c. Obtain and place upon board the names of the parts of the plants used as food, building material, art and manufacturing material, medicines, etc.; e. g., leaves, bark, sap, seed, stalk, trunk, root, etc.

d. On the basis of the part used, re-classify the vegetable productions; as, all plants the leaves of which are used, etc.

e. Classify vegetable productions according to regions; first, by lines, second, by coloring on map of the earth as a whole, or on maps of the continents.

The representation by lines would appear somewhat as follows:






f. Consider the vegetation by zones, as follows:—

The Arctic Zone is the zone of mosses and stunted trees. The plants are mosses, lichens, sedges, ferns and birches.

The Temperate Zone is divided into three plant belts:

In its *colder portion* are found *cone-bearing* trees, principally pine, fir, and spruce. Cranberries, raspberries and small strawberries also occur. The food plants of this region are oats, barley, rye, potatoes and turnips.

In the *moderate portion*, *leaf-shedding* or *deciduous* trees abound; such as oaks, elms, beeches, walnuts, and chestnuts. The food plants are wheat, corn, barley, onions, carrots, cabbage, etc.

In the *warmer portion* the trees are *Evergreens*, such as myrtles, laurels, mulberry, olive, etc. The food plants are the fig, orange, lemon, the vine, tea, rice, etc.

Cotton also belongs to this zone.

The Tropical Zone is the zone of *palms* and *bananas*. Tree-ferns also abound. The food-plants are the date-palm, sago-palm and cocoa-palm, and the bread-fruit.

g. Consider vegetation by continents as follows:—

North America is the continent of flowering trees, the most striking being the tulip tree and the magnolia.

South America has palms, bananas, tree-ferns and fig-trees.

Asia is the home of fruit trees. The peach, apricot, fig, olive, date, mulberry and spice trees grow there.

Vines, melons, cucumbers, gums, balsams, resins and the tea-plant are also among the products of this continent.

Europe has the same plants as Asia in the same latitudes.

Africa has in the north, palms; in the south, very large heaths.

Australia is the home of myrtles, acacias and gum-trees.

MINERALS.

1. *Means of original investigation*, same as under Vegetation.

2. *Means of review.*

a. and b., same as a. and b. under means of review for Vegetation.

c. Represent prominent mineral regions by coloring on the map of the earth as a whole, or on maps of the continents.

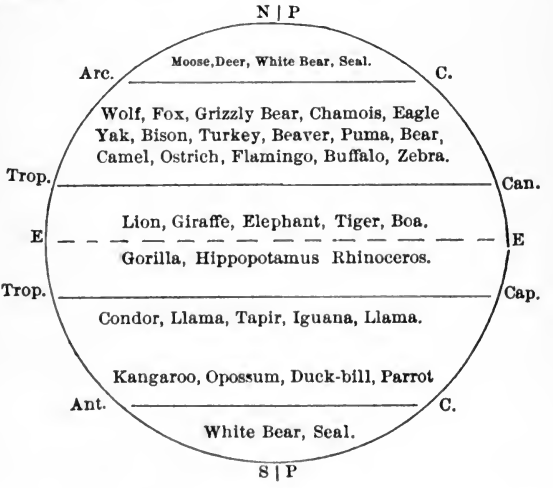
ANIMALS.

1. *Means of original investigation*, same as under Vegetation.

2. *Means of review.*

a., b. and c. Work similar to a., b. and c. under means of review for Vegetation.

d. Classify animals according to zone regions, as follows:—




PEOPLE.

1. *Means of original investigation*, same as under Vegetation.

2. *Means of Review.*

Same as c. under Minerals.

NATURAL OR TRADE CITIES.

1. *Means of original investigation*, same as under Vegetation.

2. *Means of review.*

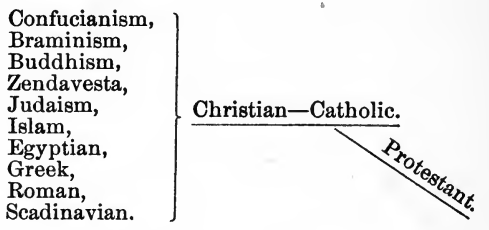
Represent on the map of the earth as a whole, on maps of continents, or countries, (as the various cities may require) in the same color, each city considered and the regions with which it is most closely associated in business, together with the routes used between them.

RELIGION.

1. *Means of original investigation.*

a. Same as under Vegetation, in so far as it will apply.

b. By diagram, thus:




(1.) Determine the main characteristics of each.

(2.) Decide upon the characteristic, or characteristics, common to each and the Christian Religion.

2. *Means of Review*—Coloring upon the map.

GOVERNMENT.

1. *Means of original investigation.*

a. Same as a. under Religion.

b. By diagram, thus:

| | |
|---|---|
| Patriarchism,<br>Theocracy,<br>Oligarchy,<br>Monarchy, { Absolute, Limited,<br>Aristocracy,<br>Democracy. | Democratic Republic. |

(1.) Determine the main characteristics of each.

(2.) Decide upon the characteristic, or characteristics, that are common to each and the democratic republic.

2. *Means of review*—Coloring upon the map.

EDUCATION.

As usually presented in geographies.

BOOKS FOR TEACHERS.

Ocean Wonders, by Damon; The Little Merchants, by Miss Edgeworth; Modern Egyptians, by Lane; Lands of the Saracen, Bayard Taylor; Heart of Africa, by Schweinfurth; Livingston's South Africa; Stanley's Across the Dark Continent, and Congo; Journey in Brazil, by Agassiz; Arctic Explorations, by Kane; The Pampas and Andes, by Bishop; Overland Through Asia, by Knox; Northern Travel, by Taylor.

The Childhood of Religions.

The Childhood of the Earth. (Lovel Library.)

Humboldt's Cosmos. (Bohn Library.)

Ritter's Life.

Le Conte's Geology. (Read First Part.)

Geological Story Briefly Told.

Last chapter of Conservation of Energy — International Scientific Series.

Guthrie's First Book of Knowledge.

Oriental Religions. Caird.

Age of Fable. Bulfinch.

BOOKS FOR PUPILS.

Up the Amazon.
Zig Zag Journeys.
Children's Fairy Geography.
Our Boys in India, } Lee & Shepard: Boston.
Our Boys in China. }

SIXTH YEAR.

The work of the sixth year consists of two phases:—

*Political geography*, extending over a period of about five months.

*Industrial geography* occupying about the same length of time.

POLITICAL GEOGRAPHY.

Political geography is not really *geography*, but *history*. It has generally been treated as if it were almost the 'all in all' of the subject. The first five months of the sixth year should be devoted to this branch of the subject, in order to give a general and cursory view of the political divisions. To secure that the inter-relation of geography and history shall render the greatest mutual assistance, the order of study should, probably, be as follows:—

1. The countries of Asia.
2. The countries of Africa.
3. The countries of Europe.
4. The countries of North America.
5. The countries of South America.
6. The divisions of Australia.

The scope of study may be included under three heads:

a. Position. { Absolute. Relative.

b. Aspect.

c. The inhabitants; in particular, their industrial character.

ASPECT.

The first object in describing the aspect of a political division, is to distinguish its great natural divisions, i.e., to give its general plan. These are of four principal kinds:—Mountain region, slope, river-basin, plain or plateau.

These should be described as they would actually appear to the eye. The teacher must take one natural division at a time, and give a bird's-eye view of it; this implies that the river shall be noticed in connection with the mountain *from* which and the plain *through* which it flows, and that the surface shall be described as generally hilly or flat, pastoral or agricultural, fertile or barren.

A country may have mountain ranges and large rivers; it is not on the *possession* of these simply, that its aspect depends, but on the manner in which they are connected. If the mountains, plains, rivers, etc., be separated, and each kind studied by itself, the idea of natural division is lost sight of.

Towns or cities should be considered under three heads:—river towns, sea-coast towns and inland towns.

These should be studied under position, site, size, appearance, historical and industrial facts.

CHARACTER OF THE PEOPLE.

In geography, national character should be stated as fact, and traced to its causes only in those cases where the connection is obvious.

Examples:—

Mountain.—Freedom and independence.

Plain.—Steadiness and dullness.

Rigors of the North.—Stunted growth of body and mind. Etc.

The great and important aspect of national character which is properly embraced in the study of geography is the industrial, as being directly influenced by the productions of the soil.

### CHARACTERISTICS OF INSTRUCTION.

Under characteristics of instruction are included description according to the order and unity of nature, questioning apart from the map, study in the light of the idea of contrast, use of newspaper, molding, map-construction, coloring, use of text, historical geography and incidental geography.

### MAP CONSTRUCTION.

For presenting position and aspect, there is, after bird's-eye views and molding, no other mode so effectual as is map construction. The map of the continent should be first constructed as a basis for the map of the political divisions. The map to be constructed should not be completed in a single effort. It should be constructed in the presence of and by the aid of the pupils. It should grow with their advancing knowledge of the country, and should represent no more at any time, than they know of it; otherwise, the exercise becomes purely a mechanical act of copying, and fails of its object. One division at a time should be filled in with mountain, river and town; then another and another, till the whole country appears

in the representation; the progress of the map being kept in strict accordance with the progress of instruction.

Finally, the pupils should present, on paper, carefully prepared maps of the most important countries.

USE OF TEXT.

The text is to be used for certain kinds of facts; but as a rule, the text should be used to confirm and supplement the conclusions drawn from the other means. So far from being looked upon as aids to books, books should be considered as explanatory of these means.

HISTORICAL GEOGRAPHY.

From the close relation that exists between geography and history, in geography there should be constant reference to the historical associations of places, limited by this principle:—*Historical facts are to be considered in the study of geography when the facts are so suited to the mental development of the pupils, that they can be led to perceive their significance.*

INCIDENTAL GEOGRAPHY.

In many of the lessons in school, other than the geography lesson, there are allusions to places. These allusions should be illustrated by oral statement, and then by actual reference to the map. There are two reasons for this:—

It is necessary for the full comprehension of the lesson being studied.

It teaches the pupil to use his geographical knowledge for casual purposes, just as he will afterwards have to use it in his business life.

(See Earth as Modified by Human Action,—Marsh; Buckle's History of Civilization in England; Draper's Intellectual Development of Europe; Books of Travel,—G. Putnam & Son; Round About Rio; Strange Dwellings; Travels in Mexico; Our Boys in India, and Our Boys in China.)

INDUSTRIAL GEOGRAPHY.

In this division, the United States are considered in their business aspect. This involves—

1. That the country as a business whole, should be considered in relation to the countries with which it has important commercial relations.

2. That each of its important commercial cities should be studied in connection with the places with which it is closely related in business, instead of each of these being considered separately, and the pupil allowed to learn their relation incidentally.

3. That each of its most important manufacturing cities should be presented in connection with the mineral and other districts upon which its importance depends.

THE SPECIFIC LINES OF INVESTIGATION.

1. The manner and degree to which the people of the United States sustain themselves.

2. The manner and degree to which they contribute to the sustenance of others.

3. How they come to make the particular contributions which they do.

4. The manner and degree to which the other nations considered, contribute to the sustenance of the people of the United States.

5. How they come to make the contributions which they do.

The preliminary steps are:—

1. To construct a blackboard map of the earth as a whole.

2. To place on that map, the United States and its dependencies in a given color.

3. To represent in another color its chief business cities in their business relations.

4. To represent in like manner on the same map the countries that are most largely engaged in trade with the United States.

THE STEPS IN THE WORK.

1. *The study of the United States*, under:—

a. Actual position.

b. Relative position.

(1.) In relation to the other countries represented.

(2.) In relation to the direct rays of the sun.

(3.) In relation to the prevailing winds.

(4.) In relation to ocean currents.

c. Actual and relative size.

d. Aspect.

(1.) Mountain regions.
(2.) Slopes.
(3.) Plains.
(4.) River basins.

} General relation of these to business.

e. Natural productions.

(1.) Mineral.

(a.) Location of principal mineral regions.

(b.) Amount and value of mineral production.

(2.) Vegetable.
(a.) and (b.) as in (1.)
3. Animal.
(a.) and (b.) as in (1.)

f. Manufactured productions.
(1.) Location of principal manufactories.
(2.) Reasons for such location.
(3.) Amount and value of manufactured productions.

g. Means of communication.
(1.) Shipping.
(a.) Principal lines.
(b.) Number of miles.
(c.) Distinctive features of the trade.
(2.) Railroads.
(a.), (b.), (c.), as in (1.)
(3.) Telegraph.
(a.) and (b.) as in (1.)
(4.) Telephone.
(a.), (b.), (c.), as in (1.)

h. Inhabitants.
(1.) Number.
(2.) Races.
(3.) Number engaged in each of the principal occupations.
(4.) National character and causes thereof.
(5.) Their form of government.

2. Less exhaustive *study of the dependencies of the United States* under the same points.

3. Less exhaustive *study of the other countries represented, and their dependencies*, under the same points.

The instruction, as before indicated, should be characterized by:—

a. Thorough description in the order of nature.
b. Questioning apart from the map.
c. Adherence to the principle of contrast.
d. Full and regular use of newspapers.

One way of employing the newpaper to advantage is to take some paper like the N. Y. Tribune, Herald, Times, etc., which advertises the departure and arrival of shipping, and have the pupils trace the course of the vessel, explaining why such course is taken.

(See newspapers and periodicals; Tribune Almanac, and others of like character; Reports of Heads of the Departments of the Government; Manual of Commerce, by S. W. Browne; Natural Resources of the U. S., by Patton; A Hand-Book to the Industries of the British Isles and the U. S., by Bevan; Commercial Products of the Sea, by Simmonds; The Geography of the Oceans, (containing tables of commerce) by J. F. Williams; The Statesman's Year Book, Statistical and Historical Annual of the States of the Civilized World, Macmillan & Co.)

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## METHOD IN U. S. HISTORY.

*Practical Teacher.*—"To begin the study of U. S. History, mold a map of Charleston and Boston, showing Bunker Hill, Breed's Hill, ships in the harbor; throw up a redoubt on Breed's Hill. Mark the line of the stone and rail fence. Draw a map showing Boston, Charleston, Dorchester Heights, Cambridge, the British quarters, the American encampment. Make the scene as real as possible. Who are these men in the redoubt? How are they dressed? Tell me about their equipments? What kind of guns have they? How are these guns fired? Did you ever see such a gun? Describe the soldiers' ammunition. How do they carry bullets? How were the bullets made? How do they carry powder? How do they load their guns? Where

did these men come from? Draw a map of the places in which they live. In what kind of houses do they live? Where do they work? Draw one of their houses? Describe the inside of the house? What do they learn? Of what religion are they? How did they get here? WHY DID THEY COME? Have they good reasons for coming? What are they? Who are those soldiers landing on the shore? How are they dressed? How do they march? Who leads them? Where do they live? Why are they here? Who sent them? Why? Who are leading the farmers? Who is Prescott? Putnam? Warren,? Stark? See the Americans as they hold their guns steadily over the breastworks until the British come within eight rods. Is it not a terrible thing to kill men? Are the Americans right in firing? *What if they had run?* What excellent reasons have they for running? What gave them courage? Tell all about the battle. Who commauded the Americans? Who won? Why do the Americans celebrate the day as if it were a victory?

The questions suggest the line of study. Have pupils find the answers by reading, questioning their parents and friends, and by pictures or relics.

*Take time*, let the investigation cover weeks if you can keep up the interest. First lead your pupils *to live* upon the scene.

*Objector*—"But we haven't the time to spend on Bunker Hill. What of the examination?"

*Practical Teacher*,—"The examination? Remain on Bunker Hill so long that from the height your pupils can see with clear vision the past and that which led to that glorious morning—and what those brave acts did for mankind—and let the examination take care of itself. It will."

—F. W. PARKER'S *Practical Teacher*.

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WHAT HISTORY IS.

WHAT U. S. HISTORY IS.

THE AIM IN TEACHING HISTORY.

THE AIM IN TEACHING U. S. HISTORY.

THE SYSTEM OF HISTORY.

THE SYSTEM OF U. S. HISTORY.

THE MENTAL POWERS INVOLVED AND TRAINED.

BIOGRAPHY.

Biography is studied incidentally, in connection with devotional, general, reading and other lessons; and also

in the consideration of the third individual—the nation; as, in connection with the Revolution, Washington; with the Mexican War, Scott and Taylor; with the administrations, Adams, Jefferson, etc.; with the Rebellion, Grant, Thomas, etc.

### THE STUDY OF HOMES.

1. In the *Fourth year*, after having completed the structure of North America, in geography, the study of the *Aborigines in their homes*, is entered upon. The premises of a typical home or village would, with molding sand and building material, be represented by the pupils. They would make the construction of the miniature houses as real as possible. The people would then be studied in their homes, as to what their work is; what they wear, and how they obtain it; what they eat, and how they obtain it; their furniture; their weapons; their education; how they are governed; their *strongest beliefs*. The pupils are to study about them from various sources, and *to live with them in imagination*, until they obtain something of an insight into their genius and spirit, as a community.

2. In the *Fifth year* the pupils are to study the *Spanish* and the *French*, of all grades, in their homes.

3. The work of the *Sixth year*, is to endeavor to lead the pupils to comprehend the spirit and influence of typical *Dutch* and *English* homes of different grades.

4. The first five months of the *Seventh year* are to be devoted to the study of the colonists from these four nations, in their new homes.

*The pupil is to study the homes as indicated in the different years, in order to come into a comprehension of the spirit of their lives.* "*All true history centers around homes. There are the secret springs of action.*" Who were the '*Embattled farmers?*' What did they eat? What did they wear? What did they study? What did they believe? How came they in those homes? Who were their ancestors? Describe a New England home. Compare it with an English home." The homes of the Spanish, French, Dutch, English and Colonists, having been made *real* to the pupils, they are prepared to commence, about the middle of the seventh year, the study of the national individual, with genuine and enduring interest.

(See Letters from Spain—Bryant; Outre Mer—Longfellow; Old Streets and Houses of England—Scribner, Sept., 1877; The Saxons in England—Kemble; Notes on England—Taine; Old English History—Freeman; Our Old Home—Hawthorne; Stories of Old Dominion—Cook; The Siege of Boston—Frothingham; A Short History of the English People—Green; Child's History of England—Dickens; Pioneers in the Settlement of America—Crafts; The Home of Columbus—Harper, Dec., 1876; The Knickerbockers of New York Two Centuries Ago—Harper, Dec., 1876; "The Good Old Times" in Plymouth—Harper, Jan., 1877; The Romance of the Hudson—Harper, April, May and June, 1876; Old Philadelphia—Harper, May, 1876; Spanish Sketches—Scribner, Dec., 1875; History of France—Mrs. Markham; see Century for July, 1885.)

### STUDY OF THE NATION.

#### AS TO ITS INNER LIFE.

##### PRINCIPLES.

1. Those that pertain to history in general:

a. A nation being sovereign, has, per consequence, a *moral* purpose.

b. History may be viewed as the biography of

commonwealths; it is therefore *subjective* and *objective*, *i. e.*, it deals with principles in their development and with outward events.

c. It concerns itself with *deeds* as the manifestation of the development of rational free-will in a people.

d. Being the investigation of development, it is composed of epochs.

e. The epochs of the development of a nation should be determined by those events that are peculiar to it.

f. The spirit and action in any epoch should be studied in the work of a writer of that epoch, as well as in the work of a writer of the present epoch.

g. The wars of a nation, are in general, its subordinate events.

h. The purpose of history is: (1.) To show what real history is. (2.) To create an interest in history. (3.) To acquaint the pupils with a method of investigation. (4.) To so discipline the judgment that it shall be able to apply the lessons of the past to the present. (5.) To cause the pupils to love and honor all that is noble in their country's progress.

2. Those that pertain to the American people as a distinctive political community.—

Singly:—

a. Government by the people, for the people, and of the people.

b. The supremacy of the civil over the military power.

c. Equal laws for the common good.

In opposing pairs:—

a. (1.) The absolute authority of the community in religious affairs.

(2.) The absolute authority of conscience in religious affairs.

b. (1.) The union of church and state with church supreme.

(2.) The separation of church and state.

c. (1.) Suffrage and office based on church membership.

(2.) Suffrage and office based on citizenship.

d. (1.) The supremacy of the colony or state in a final appeal.

(2.) The supremacy of the central government in a final appeal.

e. (1.) The central government is endowed with only those powers expressly delegated to it in the Constitution, all others being reserved to the states,—the Strict Constructionist view.

(2.) The central government is endowed with all powers of acting for the general welfare that are not denied to it in the Constitution—the Liberal Constructionist view.

The triumph of this principle is seen in the acknowledgement by all parties that the national government is endowed with the power of making internal improvements, of abolishing slavery, of coercing a rebellious state, of conferring civil rights upon the freedmen; of laying protective duties; and of organizing a national banking system.

f. (1.) Freedom of speech and of the press.

(2.) Authority of the government in regard to these.

g. (1.) Right to peaceably assemble and petition for redress of grievances and right to carry arms.

(2.) Authority of the government in regard to these.

It is obvious that these indicate the principles that have obtained not in any single stage of our national progress, but in its successive epochs.

3. Those that pertain to the mind in acquisition;

a. In a series of events the mind requires a general plan.

b. All education is based upon actual experience.

c. The child is most interested in that which appeals to his experience.

d. Interest is the basis of attention; attention of memory, and memory of permanency of acquisition.

e. The memory may act through judgment.

f. The exercise of the judgment begins early, and continues throughout life.

g. The natural procedure is from the known to the related unknown.

h. The imagination creates no new material; it creates ideals.

i. The mind has certain innate principles of association, in accordance with which it acquires.

EPOCHS.

ABSOLUTE RELIGIOUS ASCENDENCY.

The compact of the May Flower in 1620 announced the birth of constitutional liberty. This was the dawn of that light which now sends forth its full beams from institutions based on "equal laws" for "the common

good." This was the beginning of the primal epoch in our history—the epoch of *absolute religious ascendency.* Twenty-three years later, the epoch had its close in an event indicating no small progress in political science. The Union of the New England Colonies, "Protection against the Dutch, French and Indians and the liberties of the gospel in purity and peace" were its objects. To this significant event may be traced four notable things —two provisions of the present Constitution, a principle which was later the occasion of a long and bitter struggle,—viz., ultimate colonial supremacy—and the glorious hope of a new and better union; for it was provided in the plan of union that fugitive servants and criminals should be delivered up; that judgments of courts of law and probates of wills in each colony should have full faith and credit in all others, and that to each colony should be reserved its respective local jurisdiction—so old is the question of State Rights.

The principles of this momentous epoch were—the supremacy of the colony in local affairs; the absolute authority of the community in religious affairs; a union of church and state with church supreme, and equal laws for the common good.

#### DECLINE OF ABSOLUTE RELIGIOUS ASCENDENCY.

In the union of 1643, only church members were the free-men or electors, showing that the religious element was still in the ascendency, as at the beginning; but the nation was then about entering on a new epoch—the decline of absolute religious ascendency. The close of this long epoch is fittingly marked in 1754 by the

memorable Albany Plan of Union, and its rejection; in which plan was the first official suggestion of what grew, afterward, to be our present Constitution. This union was significant in that it was a plan of *permanent* union. Brancroft says—(see vol. IV., p. 123): "The constitution was a compromise between the prerogative and popular power. The king was to name and support a governor-general, who should have a negative on all laws; the people of the colonies, through the legislatures, were to elect triennially a grand council, which alone could originate bills. Each colony was to send a number of members in proportion to its contributions, yet not less than two or more than seven. The governor-general was to nominate military officers, subject to the advice of the council, which in turn. was to nominate all civil officers. No money was to be issued but by their joint order. Each colony was to retain its domestic constitution, the federal government was to regulate all relations of peace and war with the Indians, affairs of trade, and purchases of lands not within the bounds of particular colonies; to establish, organize and temporarily to govern new settlements, to raise soldiers, and equip vessels of force on the seas, rivers or lakes; to make laws, and to levy just and equal taxes. The grand council were to meet once a year, to choose their own speaker, and neither to be dissolved or prorogued, nor continue sitting longer than six weeks at any one time, but by their own consent."

There can be no stronger evidence of both religious and political advance since the close of the previous epoch, than the purely political nature of the constitu-

tion, and the fact that it was rejected by the colonies as giving too much power to the king.

The principles of state rights and equal laws for the common good were still prevalent, while supremacy of the community in religion and the union of church and state, with church supreme, had given place to the principles of the supremacy of conscience, and separation of church and state.

JUDICIAL STRUGGLE.

The nation was now entering upon an epoch of *fierce contention for the purity of its judiciary*, the central principle being that tenure of office in the judgeship should be based upon good behavior. This was in 1765 merged into the ever-memorable epoch of agitation for legislative power in financial affairs. The condition of the public mind at this time was shown with peculiar force by that wonderful union of the colonies in Congress, in October, 1765, which determined to ground American liberties on *natural justice, abstract truth and universal reason.* It was resolved that, "We should stand upon the broad common ground of those natural rights that we all feel and know as men and as descendents of Englishmen. We should wish such charters as may not ensnare us at the last, by drawing different colonies to act differently in this great cause. Whenever this is the case, all will be over with the whole. There ought to be no New England man, no New Yorker known on the continent, but all of us Americans." These views prevailed; and in the proceedings of the Congress the argument for American liberty from royal grants was

avoided. This was the first great step toward independence. During this epoch the principles of the previous epoch—the supremacy of the colony in local affairs; equal laws for the common good; supremacy of conscience; and separation of church and state—were manifest, though they were thrust into the background by that of the *appointment of judges during good behavior.*

LEGISLATIVE AGITATION.

America was now entering upon its great epoch of *agitation for legislative power*, which, so rapid was the development, assumed in the brief period between 1765 and 1776, the three distinct phases of "no taxation without representation," "no legislation without representation," "no legislation." It needed but the single step—no political connection—and America's great and glorious struggle would be complete. This great step was consummated on the ever memorable second of July, 1776, when twelve of the thirteen colonies, "without one dissenting voice," resolved: "That these United Colonies are, and of right ought to be, free and independent states; that they are absolved from all allegiance to the British crown, and that all political connection between them and the state of Great Britain is and ought to be, totally dissolved." "The greatest question," wrote John Adams, "was decided, which ever was debated in America; and a greater, perhaps, never was nor never will be decided among men. When I look back to 1761, and run through the series of political events, the chain of causes and effects, I am surprised at the suddenness as well as the greatness of this revolution. Britain

has been filled with folly and America with wisdom. It is the will of Heaven that the two countries should be sundered forever. * * * * * * The second day of July, 1776, will be the most memorable epoch in the history of America, to be celebrated by succeeding generations as the great anniversary festival, commemorated as the day of deliverance by solemn acts of devotion to God Almighty from one end of the continent to the other from this time forward forevermore."

In this epoch the same great principles that pertained to the preceding one were cherished, but the overshadowing one was that of independence.

CONSTRUCTION.

Independence having been declared, America had thrust upon her the critical epoch of construction, extending from 1776 to the formation of the present Constitution in 1787. This was pre-eminently an epoch of compromise. Its principles were the same as those of the epoch which ended with the Declaration of Independence. But two that had, since 1643, been contending principles—State Rights and Centralization—stood out in this epoch in still more stubborn antagonism; and two others—Slave Labor and Free Labor—entered the lists in that irrepressible conflict.

TRIAL.

With the formation of the Constitution began the great tentative or test epoch of the Union. It was the most extraordinary in its results. It marked the rise of parties and party spirit. The principles of the people,

as a whole, were as before—equal laws for the common good; separation of church and state; the absolute authority of conscience. Freedom of speech and of the press also became the definitely expressed principles of all parties in this epoch. But these did not furnish the contending principles, the solution of whose conflict marks the close of this epoch. There were arrayed upon the one side these ideas—the absolute sovereignty of the state in an ultimate appeal; the strict construction of the Constitution; the relegation of the status of slavery to the state and to the territory. Upon the other side were the opposing ideas of the limited authority of the state; the sovereignty of the central government in the limits of the Constitution; the liberal construction of the Constitution, authorizing internal improvements by the general government, a general tariff and kindred means; state authority over slavery in the states, but national authority over it in the territories. This last appeared later as national authority over the subject of slavery, and finally as no slavery.

This crucial epoch ended in 1865, in the establishment of the principles of free labor, limited state authority and a liberal construction of the Constitution. So ended the conflict that began with the Union of the New England Colonies in 1643. Such are the principles of to-day, to which are added, of course, those which were stated as principles common to all parties in the previous epoch.

METHOD

Those principles that mark and characterize each epoch, form its inner life. In each epoch they form the

true ground for the interpretation of the outer life. In the light of principles only, can the pupil be led to a clear understanding of the events, laws, charters, conventions and petitions of the early epochs; and the great questions of territorial organization, tariff, national bank, internal improvements and others of the later epochs.

The true method in history will seize upon these principles that give character to the different epochs and hold them aloft to give light and life to all outward events. It consists of two essential steps. According to one phase, in the *first place*, the religious, political and social aspects of the *present* should be definitely set forth, including outward manifestations and principles; and in the *second place* the religious, political and social principles of the *first epoch* in U. S. history should be presented as a set of principles animating the people of that epoch; and the events of that epoch should be viewed as manifestations of those principles. Thus, epoch by epoch, the pupils are to trace those principles, in their collisions, changes, and transfusions, considering events in the light of them, until they are merged into the principles of the present.

In accordance with the other phase, there should be presented in the beginning, the events or manifestations of any one nature as seen in the present and the spirit or principle which they embody should be determined; *e. g.*, the explorations or expeditions of discovery of this age, as those of De Long, Stanley, etc., should be discussed, and then the principle or spirit animating them made clear;—and as a second step, the

principles or spirit of discovery preceding the first epoch of U. S. history should be set forth. These principles should be traced in a continuous course with all their accompanying manifestations until they are merged into the present age.

The events or manifestations of another nature, *e. g.*, settlements, in the present and their underlying principles or spirit should be taught, with their accompanying results. This topic should then be pursued from the beginning, in all its phases down to the present.

Thus, one by one, the principles of the present, as the religious principle; free trade and protection; state rights and centralization, etc., should be considered:

1. In their present aspect.
2. In their origin,
3. In their course and manifestations from the beginning to the present.

The first phase of this double method is the appropriate one in the *original investigation* of history; the second in its *review*. The review may also be conducted by means of the categories, (page 243). Illustrate the manner in which the categories may be employed, by considering the Battle of Bunker's Hill.

(See Cyclopedia of Education; Hildredth's History of the U. S.; Lectures on Modern History—Dr. Arnold; The Battle of Long Island—Harper, Mar., 1876; The Fifteen Decisive Battles—Creasy; Some Unpublished Letters of Washington—Harper, March, 1878; New York in the Revolution—Scribner, Jan. and Feb., 1876; A Piece of Secret History—Scribner, Feb., 1876; Camp Fires of the Revolution—Parley; The Mohawk Valley During the Revolution—Harper, July, 1877; General Stark and

the Battle of Bennington—Harper, Sept., 1877; The Campaign of Burgoyne—Harper, Oct., 1877; Bancroft; The Lost Cause—Pollard; The War Between the States—Stephens; The American Conflict—Greely; The Memoirs of W. T. Sherman, and The Memoirs of U. S. Grant; The Century's War Articles, 1885-86.)

AS TO ITS GOVERNMENT.

The study of this should commence with a general examination of the different forms of government in the world—Patriarchal; Theocratic; Monarchical, Absolute, Limited, Hereditary, Elective; Democratic and Republican—with historic examples.

The class should next enter upon an examination of the government of the United States. Although such analysis begins with the most complex and highly organized government in the world, it finds the pupils already prepared for the instruction, by having lived in the country and entered into the spirit of the nation.

As it more intimately concerns them and their future, their interest is readily awakened. And as it is conspicuous as a representative form of government, which form is being more and more adopted and extended, the knowledge thus acquired raises them to a position where they can easily study and understand other governments, and the laws of civil government in general. There is, besides, a certain connection between this government and that of England. A certain political evolution brought it forth from a limited monarchy. The teachings of the Commonwealth of Milton, Locke, Sidney, Penn and others, united with the experience in colonial and local government here, educated the people, step by step, for a government of the people, by the

people, for the people. This connection—this evolution—furnishes a very interesting and instructive opportunity for studying the progress of government, through English history, from savage despotism to the most highly organized form of modern free government.

A brief examination of the settlement and early history of the United States, including, particularly, the government of the Colonies, and their efforts towards union for protection and common good, serves as an introduction.

Advancing to the Declaration of Independence, the Revolution and the Articles of Confederation, the class study the first political organization; and then proceed to the Constitution itself. It enters as far as possible into the rigorous necessity which forced each change in the organic law. The pupils are to be led to study with interest the terse and comprehensive clauses of the preamble which set forth the exigencies which produced the Constitution.

And here the study of the Constitution proper begins. It is found to divide into three great branches. First, the Legislative, or Law Making; second, the Judicial, or Law Interpreting; third, the Executive, or Law Enforcing.

When the pupils have investigated each of these branches in detail, they are ready to observe the delicate checks and balances sustained between them, and the mutual strength and support they furnish.

Then follow the prohibitions, limiting the powers of the general government,—an enumeration of the acts which the government cannot do, except in certain

emergencies: such as the suspension of the writ of habeas corpus; interference in inter-state commerce; the appropriation and drawing of public money, except as provided; the creating of titles of nobility; the passing of bills of attainder, or ex post facto laws and the restriction of civil and religious freedom; i. e., no religious test shall be required as a qualification to any office, neither shall any law be passed abridging the freedom of speech or of the press; and the right of the people to keep and bear arms shall not be infringed.

Then follow the rights of the states, such as representation in the two houses of congress, privileges of citizenship, elections, militia, federal protection, to-wit: a guarantee of a republican form of government; and freedom from foreign invasion and domestic violence.

Next, the subordination of states, their powers and limitations. And finally, the several amendments of the Constitution, and the events which produced them.

Occasion will be found at every step to refer to the British Constitution, or to English history or English literature, as well as to our own history and literature; because all these contributed to the Constitution, in its inception, and some of them have thrown light upon it since. The great judicial decisions also elucidate and explain it, and must be in constant use in the class.

This knowledge of the general government furnishes the basis for a thorough knowledge of the government of the states, and renders it easy and simple, because the general government is usually the model on which they are fashioned.

The connection between the state government and the administration of county and town affairs is so close, that they are to be studied next. Great interest may be awakened in a class, over these elementary or primary organizations. It is a rich field in American civil government.

Having reached this point the attention is turned to a few principles of municipal law, e. g., the distinction between common and statute law, civil rights, personal security, liberty, private property, something of the law of contracts, marriage, principal and agent, partnership, sales, gifts, fraudulent transfers, bills of exchange, interest, insurance, estates in real property, deeds and mortgages, landlord and tenant, the distribution of property after death by statute and by will, a little international law, the relations of nations at war and at peace.

The class then study and describe the various offices in the civil service, with their powers and duties, from the chief magistrate to the justice of the peace; the methods of courts of law, both in mesne and final process; the methods and detail of law making, both judge-made and statute law; the officers of court and their duties. Here, as elsewhere, the interest may be heightened by personal reminiscence, biographical incident, and by historic allusions to eminent persons, in active official duty, both in the United States and other countries. Thus the pupils have presented government as a living, real thing. The greatest orator has said that his power consisted in *action;* so *government in action* in the hands of living or historic men, is taught.

Throughout this course of study, civil service reform may and should be constantly inculcated. It is the golden moment in which to teach that office is a sacred public trust which is to seek the man; that patriotism, the public good first, ought of right to be the one grand leading purpose of office holders; that the man who perverts a public trust to private uses, merits the contempt of mankind, and deserves to mate with traitors; and that whoever neglects his duties in official station to secure his own re-election, is of that class and quality. So are those persons who trade, compromise and barter their vote and public influence for selfish, personal ends, whose votes are not on their convictions and conscience, but guided by their probable effect upon their own fortunes at the next election.

Walter Savage Landor has portrayed the supreme peril of political life and ambition. He says: "When Satan would have led our Savior into temptation, he did not conduct Him where the looser passions were wandering; he did not conduct Him amid flowers and herbage, where a fall would only have been a soilure to our frail human nature; no, he led Him up to an exceedingly high mountain, and showed Him palaces and towers and treasures, knowing that it was by these alone that he himself could have been so utterly lost to rectitude and beatitude. Our Savior spurned the temptation, and the greatest miracle was accomplished. After which, even the father of lies never ventured to dispute His divine nature."

What a beautiful model of the just statesman is given for the instruction of American youth, by Daniel Web-

ster, in the character of Washington. He says: "In the first place, all his measures were right in their intent. He stated the whole basis of his own great character, when he told the country, in the homely phrase of the proverb, that 'honesty is the best policy.' One of the most striking things ever said of him is that 'he changed mankind's ideas of political greatness.' To commanding talents and success, the common elements of such greatness, he added a disregard of self, a spotlessness of motive, a steady submission to every public and private duty, which threw far into the shade the whole crowd of vulgar great. The object of his regard was the whole country. No part of it was enough to fill his enlarged patriotism. His love of glory—so far as that may be supposed to have influenced him at all—spurned everything short of general approbation. It would have been nothing to him, that his partisans or his favorites outnumbered, or outvoted, or outmanaged, or outclamored those of other leaders. He had no favorites; he rejected all partisanship, and acting honestly, for the universal good, he deserved what he so richly enjoyed—the universal love.

"His principle it was to act right, and to trust the people for support; his principle it was not to follow the lead of sinister and selfish ends, nor to rely on the little arts of party delusion to obtain public sanction for such a course. Born for his country and for the world, he did not give up to party what was meant for mankind. The consequence is, that his fame is as durable as his principles, as lasting as truth and virtue themselves. While the hundreds whom party excitement and temporary circumstances, and casual combinations

have raised into transient notoriety, sink again like thin bubbles, bursting and dissolving into the great ocean, Washington's fame is like the rock which bounds that ocean and at whose feet its billows are destined to break harmlessly forever."

Another noble example is found in Aristides the Just, contrasted with the selfish and time-serving Themistocles, related with classical beauty in Plutarch's lives.

With this foundation, students may go on to comparative politics. They may seek in other governments, first, the three great branches—Legislative, Judicial and Executive. If they fail to find either branch, then they may search for the department which holds that power.

Representative government, and its extension and growth in the governments of the world, is full of interest and instruction. These investigations ought to be carried out in elaborate written essays, to give full and permanent possession of the knowledge acquired.

Nothing will inspire greater respect for and confidence in their own government, than this study. Admiration of the wisdom, integrity and patriotism of the fathers, will awaken and stimulate in their own bosoms, greater patriotism.

A general survey of the whole subject, with lessons on political evolution and sociology will furnish a suitable conclusion to the foregoing instruction.

(See Webster and the Constitution—Harper, March, 1877; State and Society in Washington—Harper, March, 1878; Our Civil Service—Harper, July, 1877; Instruction in Political Science—Augustine Jones.—The above, as to form of government, has been, substantially, obtained from the last.)

## METHOD IN LANGUAGE.

### FIRST STAGE.

Word and separate sentence-making.

**First Year.**

- Correction of oral errors.
- Free oral expression of thought upon lessons in { Color, Form, Size, Reading, General Lessons, etc. }
- Copy work. (1) from board, (2) from book.

Thought prominent; expression incidental.

Separate sentence-making.

**Second Year.**

- Correction of oral and written errors.
- Free oral expression of thought upon lessons in { Color, Form, Size, Reading, General Lessons, etc. }
- Copy work from board and book.
- Dictation work in sentences.
- Expression in written sentence or separate sentences of a thought obtained from a sentence in reading book.

Thought prominent; expression incidental.

Sentence-making.

**Third Year.**

- Correction of oral and written errors.
- Free oral expression of thought upon lessons in { Color, Form, Size, Reading, General Lessons, etc. }
- Dictation work in sentences.
- Expression in separate written sentences of thoughts obtained from two or three sentences in reading book.
- The making of original separate sentences on position, qualities of objects, single actions, a leaf and leaves, a plant and plants, a fruit and fruits, an animal and animals, a mineral and minerals, man and his works, pictures, etc.

Thought prominent; expression incidental.

All education consists in the development of thought and expression. The thought must precede the expression. This principle has not been adhered to in language work sufficiently.

The underlying principle that should be kept in mind during the entire language work, is that *thought* is prominent, while *expression* is only incidental. In grammar work, however, the expression is made prominent and the thought explanatory; *but power to think is the aim.* In the first two years of language the single expression for a given idea is to be carefully and continually observed; but in the third year, while this is continued, *variety of expression* is sought. If the teaching in these years should consist in the training of expression without regard to thought, the child's imitative powers alone are cultivated, while his creative strength is allowed to remain dormant. This change from a single expression for an idea to a variety of expressions for the same, should be gradual, for "Nature does nothing by leaps, but proceeds gradually and smoothly from the simple to the complex." *It is the nature of the mind in investigating to learn, first particulars—soon it spontaneously observes similarities—and then is naturally led to generalize and classify, after which it names and gives definitions.* If success is to be attained in the work, this idea is to be ever held in mind —that during the first three years' work, the sentences are all to be clear, simple, *separate* sentences. *Pupils should not be permitted to write connected sentences, until they have formed the habit of good single sentences.* In each year there should be correction of oral and written errors at the exact time that they are made. The teacher may call attention to the error, or may have the pupils do so. The one who made the error must then repeat the sentence as he first gave it, and then correctly. In this correction,—when the error is made—the thought and not

the expression is uppermost in the mind; but when the attention is called to the correction of the error the expression then is specially noted. In the free oral expression of thought upon lessons in color, form, size, reading, general lessons, etc., the ultimate end is training and a knowledge of the object, shown in the thoughts expressed in regard to it. The object should be placed before the child and he be permitted to see what he can, and then tell in definite separate sentences what he sees. Then by judicious questioning and devices he can be led to see more. Thus he will become skilled to observe and think, and at the same time be learning many useful and important facts.

Only one particular should be presented at the beginning, as that is Nature's method of procedure. That is, one definite color, one form or size, etc., is to be taught.

Toward the close of the first year, copying words and sentences from the board and also from the book is to be begun. This will impress upon the mind unconsciously the form or arrangement in general of the elements of the sentence and the modifiers, the punctuation, capitalization and other things to be noticed in a good sentence. In copying work from the board the script will be learned; and the work is easier than if taken from the book, since the sentences stand alone, disconnected from others, with which they are connected in the book. In the second year dictation work is begun. In order that this may not be a leap from the preceding year's work, it is connected with the first in that the sentence is written as usual upon the board, time given for its imprint on the mind, then erased and given orally.

This is continued for some time, when the writing on the board is omitted and the sentences are merely dictated and written from memory.

The written expression, by the pupil, of a thought obtained from a sentence in the reading book, is a phase of great value, on account of the power it gives both to employ expression, and to interpret it.

This requires a short period of preparatory work in which the pupil is to be led to give the thought obtained from a sentence in the reading book, in original oral sentences.

The nature of the work would be:

1. To have the pupils ponder carefully the sentence in order to obtain all its contained or suggested thought.

2. To close the books and then express in original oral sentences the thought or thoughts that the sentence suggests to them.

Their work will at first, probably, exhibit two errors:

a. Their oral sentences will be entirely, or largely the language of the book.

b. They will not set forth all the suggested thought.

*The first work* of the teacher will therefore be to lead them to express the suggested thoughts in language as original as possible.

*The second work*, will be to lead them to see thoughts that are suggested by the sentence which they did not grasp.

*The third work*, will be to lead them to express all the suggested thoughts in good separate original sentences.

This period of preparatory oral work is to be followed by similar work in which the sentences given by the pupils are to be written.

If the pupils are led to attempt to give in written sentences the thought as obtained from a sentence or sentences without a preparatory stage in which they are taught to carefully gather all the elements of thought that are suggested, express them orally, and then compare both language and thought with that in the book, the results will make manifest the general inability on the part of pupils either to drink in at a glance the thought of a sentence or to express in good English a a thought that they possess.

ILLUSTRATION.

SECOND YEAR GRADE.

(Average age of children 7½ years.)

Sentence.—*Under a great tree in the woods, two boys saw a fine, large nut, and both ran to get it.* (McGuffey's Second Reader, page 44.)

With this sentence the pupils were required:

1. To ponder it carefully in order to comprehend all its suggested thoughts.

2. To express on the slate in original sentences, the thoughts suggested by the sentence in the book.

3. To copy the sentences from the slates upon paper.

The following indicate the nature of the results:

*(Name.) F ebruary 19 1886.*
*O ne day in the fall two brothers went out in the forest and sow a fine wall-nut and both ran after it.*

—o—

*F ebruary 1 9 1 8 8 6*
*(Name.)*
*O re day in winter when wallnuts were om the ground two boys were at play and they saw a nut and they all ran to find it .*

—o—

*F ebruary 19. 1886*
*(Name.)*

*O nce in the fall when the nuts were ripening two boys saw a fine nut and skiped to it under a tree.*

—o—

*(Name.)* *February. 19 1886.*

*Two boys went in the farest lhey both saw a fine nut and they went to try to get to the place first. It was a wall - nut tree.*

—o—

*T e bruary 19*
*(Name.)*

*T wo boys were out in the wods and thre was a nut on the ground and it was in the fall. They both ran after the nut.*

*February 19.1886.*

(*Name.*)

*One summer day two boys were in the wood, they saw a nut and both ran to get it.*

—o—

*February 19 1886.*
(*Name.*)

*In the fall there were two c hildren on the farm and they saw a fine wall nut and they run to get it.*

—o—

(*Name.*) *19,1 8 8 6.*

*Under a big wall-nut tree two childern found a big nice uut and they both tired to get it. They went to the woods in the F all.*

—o—

The work of the teacher, after the sentences have been prepared, as above, is:

1. To lead the children to compare carefully the thoughts suggested by the sentence with those as given in each written exercise.

2. To compare as to points on the expression side.

Indicate all points that could be made with the pupils concerning the given exercises:

a. As to the thought.
b. As to the language.

THIRD YEAR GRADE.

(Time allowed for study of the sentences—ten minutes. Average of children 8 years.)

Sentences.—*Squirrels build for themselves summer houses. These are made of leaves, and sticks, and moss. They are nice and cool for summer, but would never do for the winter cold and snow.* (McGuffey's Second Reader, page 58.)

The requirements and conditions were the same for these sentences as for the previous one. These pupils, as those in the second grade, had been given no previous oral or written work of this nature.

The following are specimens of the work done:

*The Squirrels.*

*Squirrels build themselves houses that are made of leaves, and sticks, and moss. They would do very nice for Summer but would never do for Winter.*

(*Name.*)

*The squirrels*

*Squirrels build them selver Summer houses. thay build their houses out of sticks, and moss, they are nice and cool for Summer.but would never do for the winter. cold und snow They find an old tree that has o large cave in it and they build themselves a house in it for the winter. they build it of soft moss and sticks. they buildit very nice and snug. and warm -*

*The S.quiels..*

*The Squrrels build for themselvls houses, they worm and sung they make them with soft moss and sticks they are wise little people.*

(*Name.*)

—o—

*The squirrels.*

*Squirrels build summer houses. They are made of leaves and sticks, and moss. They are very nice and cool for the summer. But they would not do for the winter cold, snowy, and grey.* (*Name.*)

—o—

*The Squirrels.*

*The summer houses that squirrels make for themselves are not nice for Winter, but are nice and cool for summer, but would never keep out the cold. The houses are made of slicks and leaves, and moss.*

(*Name.*)

—o—

*Patty and the squirrels.*

*6. Sguirels build houses themselves houses. They nake the out of leaves and stichs and moss. These are made. They are nice and coot for sumrner, but never do for the cold and snow.*

(*Name.*)

*The Squirrels.*

*Squirrels builad for themselves summer house. These are made of leaves. and sticks. and moss. thar are nice and cool for Summer. but for Winter it would never do.*

(*Name.*)

—o—

*Patty And The Squirrl*

*Suirrl tire in a hoses made with leares, and stickcand mos s.*

*These hoses are nice and cool. but woud never do for Winter*

(*Name.*)

—o—

*A Nice Home*

*Squrrls lives in a nice house for summer. But it is not nice for winter.*

*Squrrels have two homes a summer homes and a winter honne.*

(*Name.*)

—o—

*The Squirrels*

*Sqsuirrels build for them house.*
*They would do for. But would summer, But winter.*

(*Name.*)

*The Squirrles.*

*Squirrles build houses in the summer they teke leaves and stcilse and noss. Theg would. do for summer but would nerve do for winter cold and snow.*

(*Name.*)

—o—

*Patie And The Squirrel*

*Squirrel live in a hollow oh tree in the woold*
*There house is made out of Sticks and moss*
*Ne eat them sum time When they are good and nice.*
*I like to play with squirrels that are tome.*

(*Name.*)

—o—

This was doubtless an average third year grade. These exercises indicate what as to the pupils' power:

1. To interpret the thought in reading?
2. To express their thoughts in good English?

Set forth clearly the work that could be done with the class:

a. Upon the thought side.
b. In regard to the expression.

In the third year this kind of work becomes more complex from the fact that *several sentences* are to be reproduced in the same manner. In this year variety of expression for the same thought or idea is entered upon. Also, the making of original separate sentences upon given topics or objects is begun in semi-regular lessons.

SECOND STAGE.

Connected sentence-making, i.e., composition.

**Fourth Year.**

Correction of oral and written errors.

Variety of expression for { Noun / Pronoun.

Connected sentence-making on natural objects, plants, fruits, animals, minerals, tools and manufactured articles, geographical subjects, pictures, actions, etc.

Expression in connected written sentences of thoughts obtained from a paragraph in reading book.

Variety of expression for a given idea or thought.

Connected sentence-making.

**Fifth Year.**

Correction of oral and written errors.

Variety of expression for { Verb. / Adverb. / Adjective.

Connected sentence-making on natural objects, plants, fruits, animals, minerals, tools and manufactured articles, geographical subjects, pictures, actions, etc.

Expression in connected written sentences of thoughts obtained from two or more paragraphs in reading book.

Variety of expression for a given idea or thought.

Connected sentence-making.

**Sixth Year.**

Correction of oral and written errors.

Variety of expression for Phrase.

Connected sentence-making on natural objects, plants, fruits, animals, minerals, tools and manufactured articles, geographical subjects, pictures, actions, etc.

Expression in connected written sentences of the thoughts obtained from three or more paragraphs in reading book.

Variety of expression for a given idea or thought.

Connected sentence-making.

**Seventh Year.**

Correction of oral and written errors.

Variety of expression for { The Clause. / The Ellipsis.

Connected sentence-making on natural objects, plants, fruits, animals, minerals, tools and manufactured articles, geographical subjects, pictures, actions, etc.

Expression in connected written sentences of the thoughts obtained from a whole selection in reading book.

Variety of expression for a given idea or thought.

The language work, which was incidental in the first and second years, and semi-incidental in the third year, becomes regular and formal in the fourth year.

The work throughout the period extending from the fourth to the eight year, is to be based largely upon two prevailing thoughts:

1. The fundamental ideas of grammar are:

*a.* Use.

*b.* Classification based upon use. For example, the word *mountain* is classed as a noun, by reason of its use in naming an object, but in the phrase—a mountain stream, on the ground of its use in limiting the word *stream*, it is classed as an adjective. The idea of *use* is the final appeal in all questions in grammar, and proficiency in this subject requires skill in determining the exact use of expressions.

2. The fundamental idea of composition and rhetoric is *appropriateness*. Thus, in the sentence, "The monks yielded to the Pope; but John, defying the Pontiff, drove the monks from the monks' abbeys," grammar does not question whether it is better to use the word *Pontiff* instead of repeating the word *Pope*; nor does it ask whether one should use the word *them* instead of the second word *monks;* neither does grammar inquire as to the comparative merits of the words *monks'* and *their*, as limiting the word *abbeys*. But all these questions must be considered in composition and rhetoric, for they deal with not only the grammatical expression of thought, but especially with the comparative appropriateness of different grammatical expressions.

It is not to be forgotten that language as a subject of school instruction, is, like all other subjects, a means and not an end; that it is taught, not for its own sake, but for the sake of the mind considering it. It is an instrument for mind training. The highest aim of language work is *to train the mind to think.* The second aim is to master language as an instrument, in order that thought may be expressed and interpreted with accuracy and facility. A third design is to lay the foundation for an intelligent study of grammar, composition, and rhetoric, as succeeding subjects of study; language as here used being limited to elementary work, and not including these subjects, which are of course, included in the general term—language.

Language lessons, being fundamental to grammar, composition and rhetoric, as indicated in the third purpose, should be to a considerable extent determined by the underlying ideas of those subjects, *i. e.*, *use* and *appropriateness.* These being the ideas, also, that predominantly pertain to language as an instrument of thought, they are the guiding ones, considering language work, as to its three-fold aim. The specific province of language in the grades from the fourth to the eighth—the period preceding text-book grammar—would, therefore, seem to be to thoroughly ground the pupil in:

1. The *use* of expressions.

2. *Fullness* and *variety* of expression, as a basis for future classifications.

3. The power to weigh expressions as to *appropriateness.*

It is evident from what has been given, that the gen-

eral process of work would involve in regard to each point in language the substitution of an equivalent expression for a given expression.

Consider, for example, the sentence, "The monks yielded to the Pope, but John defied the Pope."

The point in language that the child is to be led to comprehend, is that the English language provides two equivalent expressions for the word *Pope* as used in the second place, *i. e. Pontiff* and *him.* Indeed, two do not at all exhaust the equivalent expressions for the term given.

The various steps in the work, in dealing with the point are:

1. To lead the pupils to determine the exact nature and use of the expression given. (The word Pope in the second case.)

2. To lead the pupils to make the substitution. As follows, if the point in language is the use of the pronoun for the noun—"The monks yielded to the Pope, but John defied him." Thus, if the point should be the use of a noun of equal extent for another noun—"The monks yielded to the Pope, but John defied the Pontiff." (Both points should not be taught at the same stage, the one being under substitutions of the pronoun, and the other of the noun. The terms noun and pronoun need not be used).

3. To lead the pupils to determine the exact nature and use of the substituted expression.

4. To have the pupils weigh accurately the two expressions—*Pope* and *him;* or *Pope* and *Pontiff*, by the idea of appropriateness.

THE SERIES OF EXERCISES.

1. In the first exercise, the teacher explains, by means of a set of examples, a given substitution.

2. In the second exercise, the teacher tests the pupils, by means of a second set of examples, upon the substitution made in the first exercise.

3. In the third exercise, the pupils are required to select from their text-books examples in which the same substitution may be made, and to make the substitution.

4. In the fourth exercise, the pupils are required to select from newspapers and literature in general, examples in which the same substitution may be made, and to make the substitution.

5. The fifth exercise is three-fold in its nature:—

a. The preparation by the pupils of an original exercise in writing.

b. The discussion of all the substitutions previously considered that may be made in the exercise.

c. The re-writing of the exercise, in which re-writing all substitutions that are demanded by *appropriateness* or *fitness* are to be made.

The fifth exercise should be given from five to ten times during the year. It involves:—

In the *Fourth Year Grade*, compositions, narrative in form, and letter-writing.

In the *Fifth Year Grade*, compositions, descriptive in form, and letter-writing.

In the *Sixth and Seventh Year Grades*, compositions, both narrative and descriptive in form, biographical sketches and letter-writing.

The substitutions presented in the outline for the various grades are considered as suitable in difficulty to the development of the pupils, but if careful work upon a given substitution proves it to be too difficult for the grade to which it is assigned, it should be deferred until the pupils are better fitted to deal with it.

The outline of illustrations is not to be considered as presenting all the forms of substitutions that the language affords, but merely those that are most essential.

The examples that have been selected to illustrate the outline are not, in the main, so simple as those that should be presented to the pupils.

### VARIETY OF EXPRESSION.

#### ILLUSTRATIONS.

#### FOURTH YEAR.

*Substitutions for Noun.*

1. Noun.

Of equal extent.

He boasted of his feats and compared them to the *feats* of ancient heroes. *Exploits.*

Of greater extent.

He was extremely fond of coffee, and often praised *coffee.* *That beverage.*

Of collective nouns for class nouns.

He welcomed his *tenants.* *Tenantry.*

Abstract nouns for class nouns.

*Young people* are rash.

*Youth* is rash.

2. Pronoun.

Personal.

An Englishman's house is an *Englishman's* castle. *His.*

Indefinite.

Strange sounds frighten *a person.* *One.*

Relative.

She walked by the side of her father; *her father* walked on in silence. *Who.*

Demonstrative.

Though he was a valiant soldier, he was not a *valiant soldier* alone. He was not *this* alone.

Pronominal adjectives.

Here are some cherries. You may have *two cherries.* *Two.*

3. The Noun Phrase.

The better part of valor is *discretion.* Is *to be discreet.*

4. The noun clause.

England's *wealth* is well known. *That England is wealthy*, is well known.

*Substitutions for Pronoun.*

1. Reverse of substitutions for noun in so far as they relate to pronouns.

2. Noun phrase or Infinite.

To do this is brave, but *it* is not wise. But *to do this* is not wise.

3. Noun clause.

He declared that their leader was slain, but they would not believe *it.* Would not believe *that their leader was slain.*

FIFTH YEAR.

*Substitutions for Verb.*

Voice.

Soldiers *filled* Newburg. Newburg *was filled* by soldiers.

*Substitutions for Adverb.*

1. Adverbial Phrase.
   It has rained *incessantly* all the week.
   It has rained *without cessation* all the week.
2. Adverbial clause.
   I am contented *here.*
   I am contented *where I am.*

*Substitutions for Adjective.*

1. Noun.
   Possessive.
   This was said with *maternal* pride. A *mother's* pride.
2. Adjective phrase.
   This is a *steel* pen.
   A pen *of steel.*
3. Participial phrase.
   The *public* burdens are heavy. Burdens *borne by the public.*
4. Adjective clause.
   He has *powerful* friends. Friends *who are powerful.*

SIXTH YEAR.

*Substitutions for the Phrase.*

1. The Noun Phrase replaced by—
   Nouns.
   *To be just* is more important than *to be generous.*
   *Justice* is more important than *generosity.*
   Noun Clause.
   *To obey* is their only safety.
   *That they should obey* is their only safety.

2. The Adjective Phrase replaced by—

Adjectives.

The house *of my uncle* was destroyed. My *uncle's* house was destroyed.

She wore a dress *of blue.*

She wore a *blue* dress.

Nouns.

In apposition.

*Having shared* in his disasters, were they not to share in his triumphs?

*Sharers* in his disasters, etc.

Used as an adjective.

This ring is of *gold.*

This is a *gold* ring.

Adjective Clauses.

The crime *of Sunderland* was never forgiven.

The crime *which Sunderland committed* was never forgiven.

Adverbial Clauses.

The judges, *holding their office by favor of the king,* were obsequious.

*As the judges held their office by favor of the king,* they were obsequious.

Co-ordinate expressions.

The island, *being encircled by a coral reef,* was very difficult of approach.

*The island was encircled by a coral reef,* and was very difficult of approach.

3. The Adverbial Phrase, replaced by—

Adverbs.

Rizzio was murdered *in this room.* Was murdered *here.*

Adverbial Clauses.

The prince was found *in the fiercest of the battle.*

The prince was found *where the battle was fiercest.*

Infinitives.

He was pleased *on hearing* of the decision.

He was pleased *to hear* of the decision.

Co-ordinate Expressions.

*After a hard struggle,* he at length recovered.

*He struggled hard* and at length recovered.

SEVENTH YEAR.

*Substitutions for the Clause.*

1. Noun Clause replaced by—

Nouns.

*That you were weak* was your excuse. *Weakness* was your excuse.

Noun Phrases.

*That one should be so afflicted* is a great misfortune.

*To be so afflicted* is a great misfortune.

2. Adjective clause replaced by—

Adjectives.

A man *who is diligent,* will succeed.

A *diligent* man will succeed.

Adjectives Phrases.

He was a man *whose integrity was unquestioned.* He was a man of *unquestioned integrity.*

Co-ordinate Expressions.

His schemes, *which were very ambitious,* were never carried out. *His schemes were very ambitious,* but were never carried out.

3. The Adverbial Clause replaced by—

Adverbs.

I shall remain *where I am.*

I shall remain *here.*

Adverbial Phrases.

Coblentz stands *where the Moselle joins the Rhine.*

Coblentz stands *at the junction of the Rhine and Moselle.*

Co-ordinate Expressions.

*When she looked up,* she saw it approaching.

*She looked up and* saw it approaching.

*Ellipsis.*

1. In Noun Positions.

After adjectives.

The *future* shall obliterate the *past.*

*Future time,* etc.

After possessive case.

I stopped at the *grocer's. Store.*

Pronouns as subjects of imperative verbs.

Spare my eyes!

Spare *you* my eyes!

Pronouns as subjects of verbs in other moods.

Thank you.

*I* thank you.

"To" of infinitive omitted.

Better be dead.

*To* be dead would be better.

Bid him go.

Bid him *to* go.

Object omitted.

Heat expands.

Heat expands *substances.*

2. In Predicate.

A ministering angel thou!

A ministering angel *art* thou!

3. In Adjective Modifiers.

The President resides in the White House.

The President *of the United States*, etc.

4. In Adverbial Modifiers.

Preposition omitted.

He waited an hour.

He waited *during* (*or for*) an hour.

Noun omitted in adverbial phrases.

I have never seen him since. Since *that time*.

5. In noun Clauses.

"That" omitted.

I hope you will succeed.

I hope *that* you will succeed.

6. In Adjective clauses.

"That," as object, omitted.

Show me the passage you quoted.

Show me the passage *that* you quoted.

Preposition omitted.

There was hardly an hour that something did not happen.

There was hardly an hour that something did not happen *in* (*or during*).

Preposition and relative omitted.

The moment I saw it, I remembered it.

*In* the moment *at which* I saw it, I remembered it.

Antecedent omitted.

Whom the gods love die young.

*Those* whom the gods love, etc.

7. In Adverbial Clauses.

That is important if true.
That is important if *it is* true.
Speak as distinctly as you can.
As you can *speak distinctly.*
He is taller than I.
He is taller than I *am tall.*

8. In Compound Sentences.

Of common elements.

He came yesterday and returned to-day. He came yesterday and *he* returned to-day.

I take this; you that. You *take* that.

Their welfare pleased him and their cares distressed.

Their welfare pleased him and their cares distressed *him.*

Of the conjunction.

Send out more horses; scour the country round; hang those that talk of fear.

Send out more horses *and* scour the country round; *and* hang those that talk of fear.

Of two or more common elements.

Queen Elizabeth, knew instinctively how far she could go and what she could do.

Queen Elizabeth knew instinctively how far she could go and *Queen Elizabeth knew instinctively* what she could do.

The Structure of the sentence.

Eighth Year. Oral Grammar.

- Correction of oral and written errors.
- Expression in connected written sentences of the thought obtained from a selection in the reading book.
- The thought and its elements.
- The sentence and its elements.
- Parsing with { The parts of speech. / The principal inflections.

Generalization, Definition and Classification.

The oral grammar stage may be considered under:—
Purpose.
Central Thought.
Scope.
General Method.
Order of Instruction.

1. *The purpose* is to *train* the pupil by giving him a conception of the nature of the parts of speech and their principal inflections.

2. *The central thought* is that grammar should be presented as a body of results obtained from the observation of language, and not as a collection of rules exercising an arbitrary and mysterious power over language from without.

3. *The scope* includes:—
   a. The thought and its elements.
   b. The simple sentence and its elements.
   c. The parts of speech.
   d. The principal inflections.
   e. Parsing.

4. *The general method:*

a. The method is to be oral and is to proceed analytically, i. e., it is not to impart rules and apply these as if language were the product of grammar, but is to attain all results by the pupil's own induction upon examples of expression submitted to him for examination.

b. The starting point is to be the thought and the simple sentence, on the ground that the parts of speech can be adequately illustrated only by reference to their

whole; by their use in which, their nature may be determined.

c. The explanation of grammatical forms must be based on an understanding of the meaning. The nature of all classes of expressions must, therefore, be made familiar to the pupil before their terms are used.

d. Throughout this stage, the language presented for the pupil's observation should be mainly furnished orally by the teacher and the pupils; for the reason that such illustrations are more familiar and interesting than those drawn from books.

5. *The order of instruction:*

a. *With parts of speech.*

Observing the logical succession, the following order of procedure may be suggested:

(1.) The presentation of sentences containing a given part of speech.

(2.) Investigation of the nature and use of the part of speech being considered.

(3.) Other examples of the same part of speech furnished by the pupils.

(4.) The application of the name.

(5.) Additional examples furnished by the pupils, together with the reason for their being such.

(6.) Construction of definition.

(7.) Memorizing of definition.

b. *With inflections.*

These, as the parts of speech, may be best presented through the sentence; e. g.—

(1.) *Number.*

(a.) Present a series of sentences in pairs, each pair containing a given verb and subject, but differing in the number of the subjects.

(b.) Consideration of the use and form of the words.

(c.) Additional examples given by teacher and pupils.

(2.) *Case.* This may be presented in a similar manner. It is well, however, to employ pronouns in order to have the assistance of change of form in leading to a comprehension of the *relation.*

(3.) *Tense.* In explaining this, some such order as the following may be observed:

(a.) An example involving the first person may be given; as, *I write the word.*

(b.) Obtain other examples in which the same verb form is used; as, with *you*, (sing.) *we*, *you*, (pl.) *they.* Also examples in which the other form is used; as with *he*, *she* and *it.*

The observation of these examples will fix the prevailing identity and the single difference which mark the present tense. In similar manner the other tenses may be considered.

Founded on like observation of sentences the pupil may be led, in dealing with the adjective and the adverb, to see that they are not inflected for number, case, etc., but only for *comparison.*

c. *With parsing.*

An efficient instrument in grounding the pupil in a

knowledge of the parts of speech and their principal inflections, is the exercise termed *parsing*.

Since, however, it deals with the relations of words to other words, it involves the element of syntax, and is employed more largely in the succeeding stage. It is desirable, however, to consider in connection with this stage certain features in regard to parsing; as—

The condition of the pupil as to syntax.

The application of parsing.

The marks of good parsing.

*The condition of the pupil in regard to syntax* is that the subject is a matter of habit with him and he has a practical knowledge of the subject, but is not possessed of its rules. He stands now in the same relation to the rules of syntax that he did at the beginning of the stage in regard to the parts of speech, and the method of attaining a knowledge of the rules of syntax is essentially the same as that employed in learning the parts of speech. Each syntactical relation should be illustrated by means of sentences exemplifying it.

*The application of parsing* under any given rule of syntax is two-fold:

To trace the application of the rule within examples arranged for the purpose.

To trace the application of the rule in passages from the reader.

*The marks of good parsing* are four:—

That the procedure should be from the general to the particular.

That the process should be the work of the pupils themselves, and not dependent on reiterated questions at each step.

That the order of parsing words should be that of logical connection.

That the parsing should deal mainly with the critical words in the structure of the sentence.

# *CHAPTER IX.*

## *THE RECITATION.*

"KINDNESS adds sweetness to everything. It is kindness that makes life's capabilities to blossom, and paints them in cheery hues, and endows them with their invigorating fragrance. Whether it waits on superiors, or ministers to inferiors, or disports itself with equals, its work is marked by a prodigality which the strictest discretion can not blame. It does unnecessary work, which, when done, looks the most necessary work that could be done. If it goes to soothe sorrow, it does more than soothe it. If it relieves a want, it cannot do so without doing more than relieve it. Even where it is economical in what it gives, it is not economical in the gracefulness with which it gives. The secret impulse out of which kindness acts is an instinct which is the noblest part of ourselves, the most undoubted remnant of the image of God, which was given us at first. It is the nobility of man. It runs up into eternal mysteries. It is a divine thing, rather than a human, because it springs from the soul of man, just at the point where the divine image is graven deepest."

"A LOVING heart is the beginning of all knowledge. This it is that opens the whole mind, and quickens every faculty of the intellect to do its fit work." —CARLYLE.

### *THE SCHOOL.*

"School is the effort to bring the scholar to the right consciousness of the nature and inner life of things and of himself; to teach him to know, and to make him

conscious of, the inner relation of things to each other, to the scholar, and to the living cause and clear unity of all things,—to God."

The school assumes various phases:—

The Kindergarten.
The Common School.
The High School.
The College.
The University.
The Industrial School.

Set forth the scope, and the peculiar function of each.

## THE COMMON SCHOOL.

### INSTRUMENTS.

The instruments of the child's education in the common school are the influences upon and modifications of his own self-conscious and self-active nature through:

1. Physical surroundings.
2. Laws of the school.
3. Branches of study.
4. The teacher.

What educational principles may be evolved from the truth that the thing being dealt with—the child's mind—is *self-conscious*, and *self-active*?

### PHYSICAL SURROUNDINGS.

1. Seating.
   *a.* Size of desks.
   *b.* Arrangement.
2. Light.
   *a.* Its two-fold end.

*b.* Best mode of admitting light.
*c.* Blinds.
*d.* Tint of walls.

3. Ventilation.
   *a.* The ceiling.
   *b.* Arrangements of the windows.
   *c.* Escape flues.
   *d.* Expedients.
   *e.* Causes of impure air.
      (1.) Respiration.
      (2.) Combustion.
      (3.) Uncleanliness.
   *f.* Effects of impure air.
4. Temperature.
   *a.* Object of heating.
   *b.* Average temperature of a room.
5. Site of school building.
   *a.* General nature.
6. Play-ground.
   *a.* General nature.
7. Out-door exercise.
   *a.* Object.
   *b.* Kinds.
8. Intermissions.
   *a.* Object.

The physical surroundings in addition to their bearing upon health tend to educate the child in three respects:

a. If the building and grounds are arranged and kept in order, habits of neatness and order will be uncon-

sciously implanted.

b. If they are comfortable and pleasant, the pleasurable emotions will be stimulated, thus favoring mental effort.

What law of mind underlies this thought?

c. The surroundings will, if the grounds and the mural decorations exhibit taste, educate the æsthetic nature of the child.

THE LAWS OF THE SCHOOL. (Page 168.)

These are an educative influence in that the pupil is required to conform to them.

What law of mind is ground for the thought that obedience to them is educative?

The child obtains from these laws a more rational education if he is led to see them as they are—as certain laws and conditions of his own spiritual nature made external. He will then of his own accord place himself in harmony with them.

## THE BRANCHES OF STUDY.

### THEIR ORGANIC RELATION.

In considering the branches of study as instruments of education, one needs to consider four root thoughts, out of which the true conception of their organic relation arises. Every act of the human mind is characterized and distinguished by the presence and predominance of one or another of the elements, *intellectual*, *emotional* or *volitional*; yet it is also true that the mind by its self-active power, 'springs at once along the completed curve of its capacities.' That is, while it is true

that every act of mind is pre-eminently an act of knowing, feeling or willing, yet it is nevertheless true that along with and involved in this predominant element may be detected the presence of the two other elements.

Among these three elements, there exists the relation of dependence in that the element of knowing must precede that of feeling, and knowing and feeling that of willing.

So pre-eminently one, however, is an act of mind, that no one of these elements can be called forth and exercised without necessitating the exercise of the others. If the intellectual element is to be called into superior activity, it can only be done by stimulating the element of feeling into a high degree of interest concerning the object to which the intellect is applied, or the ends for which it works, and by concentrating, through the will, all the energies of the mind and directing them into a harmonious action. *This conception of an act of mind and its peculiar characteristics, is the first of the four root thoughts.*

The second is, *that every act of the Divine Mind is distinguished by the same characteristics, differing only in degree.* It may be asserted that this proposition expresses knowledge which transcends man's power. Some may consider that while it is true that man through consciousness may discover these characteristics as pertaining to an act of his own mind, he has no adequate avenue through which to determine, with any degree of certainty, the characteristics of an act of the Divine Mind. The reply to this is two-fold:

1. It is impossible for man to conceive of the Divine

Mind as possessing powers more, or less, or other than those of knowing, feeling and willing; or to conceive of an act of the Divine Mind as being different from that of the human mind, except in degree.

2. The nature of the Scriptures themselves tends to establish the identity in kind between the human and the Divine Mind.

When it is said that *God breathed into man the breath of life*, the meaning, it may be held, is that he endowed him with a life kindred to his own. The expression that *God created man in his own image*, in its deepest import must imply that God, being a Spirit, imaged in man, in a spiritual way, the characteristics and attributes of The Divinity; although in man, the Divine powers are but imperfectly and faintly expressed. It is sometimes maintained that the idea of the Trinity is only a peculiar indication of the three-fold power of the Absolute; that the Divine Mind acting with the volitional element predominant is the Father; with the intellectual element predominating, the Holy Spirit; with the sensibilities in the ascendency, the Son.

This three-fold attitude of the Divine Mind is still more strongly indicated in the dealings of God with with His people. In the patriarchal times, God is seen manifesting Himself to His people predominantly as *will*. When His nature was set forth in His law to the people, there was a manifestation of the God-head as predominantly *intellectual*, although, according to the organic unity of all spirit, feeling and volition were involved.

When, in the progress of His government, God put Himself forth as Incarnate, it was the manifestation of Himself as pre-eminently feeling, though at the same time, highly intellectual and strong in the power of His will. It was however, eminently the reign of love. These and many other evidences in Holy Writ tend to establish that every act of the Divine Mind is characterized and distinguished by the presence and predominance of one or another of the intellectual, emotional and volitional elements; and that in every act, the Divine Mind involves all of these at the same instant and that the same relation of dependence exists among these elements as is found to hold true in every act of human mind.

*This conception of an act of the mind of the Absolute and of its peculiar characteristics is, as previously stated, the second of the four root thoughts.*

Having considered the nature of a thought of the Divine Mind, and of the human mind, it becomes necessary, at this stage, in order to exhibit the true function of the branches of study in education, to consider *objective thought.*

God thought a thought. This thought, as before indicated, was characterized by:—

1. The presence of all three elements—intellect, sensibility and will.

2. The predominance of one of them.

3. The fact that a relation of logical dependence exists among them—the element of feeling depending upon that of knowing and of willing upon that of feeling.

4. The fact that superior activity in either one of these elements, depends upon the superior activity and force of the others, i. e., that *each element is the true and necessary avenue to the others.*

This thought of the Divine Mind thus constituted and characterized was projected into outward form and became the macrocosmos (the universe). The essence of the universe is therefore a thought, an organic unity, and is, hence, itself an organic unity.

The materials of geography, being elements of the the universe, partake, in their separation and in their aggregation, of the organic unity of the whole.

The microcosmos (man) is a thought of the Divine Mind. As a physical being, man is the objective expression of a thought of God; and as a spiritual being, he is the spiritual image of the Absolute, differing, in the beginning, only in degree.

As a physical being, man constitutes the materials for physiology and hence physiology deals with subject-matter which is in essence organic, since it is the objective expression of a thought. As a spiritual being, man constitutes the materials for psychology, subject-matter which is obviously organic.

The attempt of man to make subjective to himself, the thought of the Divine, as expressed in the universe, furnishes what may be called *the path of history.* This path of history, being a series of thoughts or mental movements, obviously involves the organic relations that pertain to any single thought. This progress of the finite mind toward the Infinite becomes objective in

the materials considered in arithmetic, grammar, reading (with its attendants, spelling and writing) and history. The common school studies are organic therefore, in the sense that *their common element is thought, in that they have a common substratum, which is spiritual and therefore organic.* Physiology and geography are the objective expression of the thought of the Infinite Mind, characterized by all the organic relations before mentioned. It is with great difficulty, however, that one is able to determine whether the element of feeling, knowing or willing is predominant, except when the materials of these subjects are considered in detail. For example, if in the study of geography, one considers in the plant life the heliotrope as an objective expression of a thought of God, the emotional or æsthetic element is seen to be predominant. Arithmetic is the objective expression of the thinking or intellectual element in man, as related to the objective and inorganic world. Grammar is the objective expression of the thinking or intellectual element in man as related to the processes of his own thinking. Reading, with its attendants, spelling and writing, is that into which man has projected his emotional or æsthetic nature, while in history, the volitional element in man or *man as a being of deeds*, is portrayed.

According to the nature of a thought, as before indicated, it is to be understood that while each of these subjects is marked by the predominance of one element, all of the elements are present with the relation of dependence existing among them, and that to transmute

them into thought, all three elements must be reached and touched.

*This conception of the material universe and of man as the objective thought of the Absolute, and of whatever man has put forth in concrete form, as the life or spirit of man himself to a degree, is the third root thought.*

The attempt of man to harmonize his being with the thought made manifest in the macrocosmos as evinced in the development of history, discloses man in a three-fold relation, i. e., in relation to himself, in relation to others involving a relation to self, in relation to the Infinite involving a relation to himself and to other beings.

*This conception of man as moving in a three-fold relation, i. e., as having duties to self, to others and to the Infinite, constitutes the fourth root thought.*

Out of the four root thoughts arises the true conception of the organic relation of the common school studies. It is obvious at once that this relation cannot be simple. It is complex and involves three constituent thoughts. *The first of these constituent thoughts is that there exists among the studies themselves, and among their constituent ideas, and among the three elements—those of knowing, feeling and willing—the relation of mutual dependence.*

For example, the subject of history depends upon and is made clear to a degree, by the subject of geography; while it in turn throws its light back upon the subject of geography. Division prepares for and makes clear the subject of ratio, while ratio makes more

definite and plain the subject of division. The familiar idea of a draft in a stove or chimney leads up to a consideration of the trade winds and is itself made clear by an explanation of them; and in studying DaVinci's Last Supper, the element of knowing must precede that of feeling, and feeling that of willing, i. e., the student of this piece of art must know the general plan, the groupings, the idea in each group, the significance of the various postures as a condition for his feeling of satisfaction and high appreciation of it as a work of art, and the reverential feeling which the theme, as thus portrayed, suggests; and this knowing and feeling are the condition to those resolves of excellence and duty that the proper knowledge and emotions would arouse.

The first constituent thought—that there is a relation of mutual dependence existing among the subjects and among the ideas of each subject,—involves and is based upon two related thoughts. The first of these is *that the universe has its spiritual and its material sides; that the material side is composed of the inorganic and the organic world;* arithmetic being the gate-way to the inorganic world; while geography and physiology form avenues to the organic world; that the spiritual side consists of man as a logical being (to which phase grammar is the avenue)—as a being of emotion, (reading being the opening to this phase)—as a being of deeds, (the mind entering into this realm through the subject of history.)

The second of these related thoughts is *that the child*

*before entering school has mastered to a degree and made a part of his experience, ideas pertaining to every phase of the field of knowledge.*

The first of these related thoughts together with the development of the mind, determines that there is a general order or sequence of studies.

The second makes it clear that, to a degree, the various subjects move forward simultaneously. To illustrate: In giving a lesson in language upon the two-cent coin, the child would study the relation of one cent to two cents—(number); the form of the coin (form); its size (size and number); its color (color); the material of which it is made (geography—minerals); where the material is found (geography—location); how it is obtained (geography—mining); its coinage (government); its uses (business).

If the lesson were in reading—for example, "The Loss of the Birkenhead"—the pupil in studying it should connect it with the realm of *ethics*. He should learn how the German emperor had paraded his vast army and had caused to be read to them, regiment by regiment, "The Loss of the Birkenhead;" how they had thus learned the quiet firmness of the English soldiers during that trying ordeal, while the women and children were being saved and the vessel was slowly sinking down with them, in parade order upon its decks, inch by inch into the cruel African sea. They should know that the German emperor thought this quiet faithfulness unto death to be an example of what noble men ought to be —an education for heroes. Thus should the *reading work* and the *idea of duty* react upon each other.

But taken even as a point of knowledge, how admirably would the lesson pass out in various lines. Let it be studied when the class are engaged in the consideration of the continent of Africa. What a lesson in geography it could be made. How vivid a description of the translucent African sea—the home of the shark and kindred wonders it would enable their active minds to comprehend. How great an interest it would throw upon the study of the continent itself—its structure, its vegetation, its beautiful rivers and lakes, its inhabitants and their queer customs.

If "Time's Swing," were the lesson in reading, the whole selection should not be studied at once, but that part relating to winter, in the winter time, and that relating to spring in the spring time, etc. *Reading* and *outward nature* should react upon each other. The pupil should note that first "lilac bud" and put down its date. Each day he should watch the new comers with their curious differences, their kinds of growth, the beauty of their leaves, their color and structure, the upward flow of the sap, until all the glory of that moving life should be understood and he would see in every blade of grass a rivulet, and in every tree a river; and it would thus come upon him that the quiet fields with their grass and trees, were yet the scene of constant life and motion. Not a bird should fly unnoticed. He should hear the note of the first robin. Not a song should be sung and not a wing should be moved that did not appeal to hearing ears and seeing eyes and to a mind interested in reflecting concerning them. Thus should the *realm of*

*nature* reinforce and move forward with the *reading work* of the school.

On the supposition, however, that the teacher thoroughly understands this constituent thought of a mutual relation of subjects and ideas and its two related thoughts, what practical conclusions come to him that will tend to make him more rational and organic in his work?

This thought of a relation of mutual dependence, since it considers man mainly in the lowest relation—to himself—gives rise to practical conclusions relating largely to details. The first practical conclusion is that the present common school studies are those necessary for the common schools, inasmuch as each is the only gate-way to some one division of the field of knowledge. Satisfactory preparatory education admits of no less, nor of other studies, and requires no more. It will be seen, in the second place, that a thorough understanding, of this constituent idea, with its underlying principle, would modify many details of school work:

It would transfer work with diacritical marks from the first year to the second or third year.

It would establish the validity of a brief period of printing in the beginning of reading work.

It would justify the teaching together of the four processes in number during the first two years; the presentation of long division before short; the consideration of any number in relation to whole numbers, to the fraction to which it gives rise, and to the units of the various tables, before taking up the next higher number.

It would prevent the teaching of Arabic or Roman symbols, or of counting, higher than the actual numbers taught.

It would at least call into serious question that kind of language work which furnishes the pupils with a miscellaneous list of subject and predicate words and requires them to mechanically unite these into statements, questions, exclamations, etc.

It would also raise the question whether that method of geography work is best which begins with the study and mapping of the school-room and proceeds in like manner to the school yard, township, county, state, group of states. etc.

Indicate the ground for each of these conclusions.

*The second constituent thought of the complex idea of the organic relation of these studies is that the common school subjects are designed to constitute a mental gymnasium for mind exercise.*

This involves the idea that education is a course of training. As the youth in a gymnasium practices upon the horizontal bar in order to develop his muscular powers generally, without intending to go on posturing upon horizontal bars all through life, so the pupil in the school exercises his mind upon the subjects there presented in order to develop all of his powers harmoniously without regarding as a supreme end either the acquisition of the facts and organized knowledge which he necessarily obtains, or any particular vocation that he may be thinking of entering upon.

Jevons says, "School is a place where the mental fibers are to be exercised, trained, expanded, developed and strengthened. It is the very purpose of a liberal education, as it is correctly called, to develop and train the plastic fibers of the youthful brain in that general and harmonious way that will effectually prevent them from taking too early a definite set which will afterward narrow and restrict the range of judgement and acquisition. *I will even go so far as to say that it is hardly desirable for the actual things taught at school to stay in the mind for life.* The source of error is the failure to distinguish between the form and the matter of knowledge; between the facts themselves and the manner in which the mental powers deal with the facts.

It is the purpose of education so to exercise the faculties of the mind that the infinitely various experiences of after-life may be observed and reasoned upon to the best effect."

This constituent thought, that the common school branches constitute a mental gymnasium for mind exercise, involves and is based upon several related thoughts among which may be stated the following:

The highest development of man is to be attained through communion with his fellow men in organized society.

But the root idea of organized society is *exchange*—on the one hand *spiritual exchange*, an interchange of ideas, on the other, *material exchange*, that of food, clothing and shelter. In considering the common school branches in relation to these exchanges, it is seen that arithmetic is

the key to material exchange, reading and writing to the spiritual. Geography opens to the view the sources to the material exchange. Grammar is the medium by which are first disclosed the workings of mind—the origin of the ideas to be exchanged.

History shows the working of the past as seen in the present, either of the individual or of the nation.

A second related thought is that the American individual possesses the *unrestricted right to change his status or vocation in organized society.*

This is not the case in India. The pariah's status is fixed. He is predestined, even before birth, to menial vocations. A web of fate extends over all members of society in that region from which they cannot extricate themselves if they would. To such individuals the common school branches could have no organic relation in the sense here indicated. This inability to change is less manifest in Europe, but it exists there to a certain degree. The tendency in Europe is still to educate the child to move in the class in which birth places him; but in America, absolute freedom of change in vocation is not only accorded but encouraged. All the environment of a child urges him to exhibit all the power that there is in him and to receive the appropriate reward. To such a child alone can there be this true organic relation of the studies, and this power of his to transfer his status *makes it evident that the common aim of the branches must be to furnish his mind an exercise ground—to give him a key by which he may unlock and discover his capacities*, and thereby determine for himself the vocation that he is called upon to fill.

The third related thought is *that the basis of true success in any vocation, in organized society, is character or manhood.* Rousseau says, "In the natural order of things, all men being equal, the vocation that is common to all is the state of manhood, and whoever is well trained in that cannot fulfill badly any vocation that depends upon it. Whether the pupil who leaves my hands is destined for the church, the bar or the army, matters little. Before a child chooses the vocation of his parents, nature calls upon him first to be a man. *How to live* is what I want to teach him. He may not be when he leaves my charge a magistrate, a soldier or a priest; but all that a man can do, he can do as well as any one and fortune will in vain alter his position, for he will always maintain his own."

The fourth idea which is involved in this constituent thought is *that any design which is common to these subjects must be attainable by every child in the school;* and the fifth *that great knowledge is not attainable by every child, but mental development and skill are.* The practical conclusions to be drawn from this constituent idea and its related thoughts, are:

1. That it is a question whether or not the usual method of presenting geography is the best for the pupil.

2. That the most practical education a child can receive is that which trains him to think accurately in any set of circumstances into which he may be thrown.

3. That the cardinal question for the teacher is not "How can I lead the pupil to most clearly comprehend this subject, e. g., grammar?" but "How can I employ

this subject so as to give the highest degree of mental training which it is fitted to give?" Not "How can I lead the pupil to most readily understand this thought, e. g., dividing the divisor multiplies the quotient?" but "How can I employ this thought so as to give the mind of the pupil all the training which the thought is fitted to give?" Not "How can I most clearly present this idea, e. g., the trade-winds?" but "How can I employ this idea so as to develop the mental faculties of the pupil to the highest degree to which the nature of the idea will admit?"

4. That in a business sense, the studies that are most absolutely necessary are reading, writing and arithmetic.

*The third constituent idea is that the subjects constitute a medium by which untrained and immature mind is enabled to touch and coalesce with trained and mature human minds, and with the Infinite Mind.*

This idea is the outgrowth of two under-lying thoughts:

1. That the universe is the objective expression of God's thought.

2. That any work put forth by man is the expression, to a degree, of man's life and thought.

The thought that the universe is the reason of God made objective, is not a novel one. The great astronomer long ago said "I read thy thoughts, O God," and ages before that even, the same thought had been expressed when it was said "The heavens declare the glory of God and the firmament showeth His handi-

work. Day unto day uttereth speech and night unto night showeth knowledge." That whatever a man does is really his life to a degree, ought to be equally clear. A thought arose in the mind of a poet. He pruned, elaborated and refined it. While still subjective this thought is evidently his life, his spirit to a degree. When he causes it to take shape in language and calls it the "Sensitive Plant," what is it other than a part of his life and thought made objective?

The practical conclusions from this constituent thought and its involved ideas are:

1. That education deals with *life* and not with *lessons or books*, except as instruments.

2. That the true process of education is the passing of life through life into life and the fusing with it.

That education is really a communion of spirit with spirit, a blending of thought with thought, is but little regarded in education. The Ancients, however, had a true conception of this passage of life, in that they represented it as a fountain ever flowing, from which, thinker, historian and poet might drink and thus imbibe inspiration for their lofty themes; and its truth may easily be made clear to even the practical modern man.

A philosopher of old conceived a beautiful thought. He clothed this in a paragraph, and between the lids of a book it rested for ages until it came in contact with the mind of a thinker, and at his touch it awoke and arose from the folio sepulchre in which it had so long been entombed and entered into his thought and mind

and lived again, and awakened to him the genius and spirit of its originator and thus, to a degree elevated him to his species.

The same idea of the passing of life is given in the expression,

> "A nameless man, amid the crowd that thronged the daily mart,
> Let fall a word of hope and love unstudied from the heart,
> A whisper on the tumult thrown, a transitory breath,
> It raised a brother from the dust, it saved a soul from death."

It is here obviously the intention to convey the idea that the word is an embodiment of life as it is represented as life-giving.

3. That these mind-creations are subject to the same conditions as the minds of which they are the outgrowth.

4. That in the view of a training for higher life, the subjects that are most absolutely essential are reading, geography, and history, in that they embody, more largely than any others, the elements of higher life.

What is meant by higher life? Show in what respect these branches of study embody its elements more largely than the others.

KINDS OF EXERCISE-GROUNDS.

1. The idea or notion.
   - *a.* Individual.
     - External object.
     - An action or event changing from one phase to another.
   - *b.* General.
2. The thought or judgment.
   - *a.* Individual.
   - *b.* General.

METHODS APPROPRIATE.

1. The method appropriate to the treatment of the general idea or notion is Definition, mainly by:—

*a.* Example.
*b.* Analysis.
*c.* Antithesis.

2. The method appropriate to the treatment of the external object is Description, mainly by:—

*a.* A general plan.
*b.* A succession of views.
*c.* The condition at a particular time.

3. The method appropriate to the treatment of changing events is Narration, mainly by presenting:—

*a.* The result of the series of events.
*b.* The events in their sequence.
*c.* A summary.

4. The method appropriate to the treatment of the judgment is Exposition, mainly by:—

*a.* Example.
*b.* Illustration.
*c.* Iteration.
*d.* Obverse iteration.
*e.* Pointing out the difficulty.

These methods are appropriate because the mind, in originally acquiring the ideas or judgments, naturally pursues the methods given.

In preparing to present a lesson from a text-book, the teacher should decide—

*a.* The nature of the subject.
*b.* The method by which the author has treated it.
*c.* Whether the method of the author needs explanation.

*d.* By what other methods appropriate to the subject, the author's method may be supplemented.

### THE TEACHER.

While the child is the real educator of himself, the teacher as a formal educator, is the predominant instrument of the school. The influence due to the teacher is of two kinds:

1. Unconscious influence.
2. Conscious influence.

### UNCONSCIOUS INFLUENCE.

1. What it is.

*a.* The idea of unconscious education, assumes what as the aim of education?

*b.* The principles of unconscious education?

*c.* The avenues through which unconscious influence reaches the child.

2. The relation of the teacher's previous discipline to his unconscious influence.

3. Why the unconscious influence of the teacher is the most potent factor in unfolding the true spiritual being of the child.

Elaborate each of the points suggested.

### CONSCIOUS INFLUENCE.

The teacher is consciously an educative force:—

1. Through his general work in the school.
2. Through the work of the recitation.

The prime consideration in the recitation is that the pupil shall be in a state of genuinely interested attention in the work, and in sympathetic harmony with the

teacher, with the other pupils, and with the exercise-ground.

The principles underlying this thought?

In order that this state may be permanent, there must be in the teacher's character the residuum of a generous previous general and specific preparation. This will manifest itself in the recitation in the efficient employment of the true agencies of the recitation, viz:—

*a.* Suggestion.
*b.* Stimuli.
*c.* Questioning.
*d.* Explanation.
*e.* Repetition. (Iteration, review.)

THE PREVIOUS PREPARATION.

As among the features of the teacher's previous preparation may be suggested:

1. *Accurate and ample preparation* for the work by the teacher, through a careful study *of the subject* in text-books, and *of the active, practical world*, in which the children and himself move.

2. A knowledge of the *subject* of education, together with its inferences. (Page 19.)

3. A knowledge of the *aim* of education. (Page 52.)

4. A knowledge of the *principle and the condition* of education. (Page 81.)

5. A knowledge of what is meant by the *exercise-ground* in education. (Page 90.)

6. A knowledge of *the school* in relation to other institutions. (Page 96—131.)

7. A knowledge of the *trend of educational thought and method*, as seen in the Greek, Roman, and Jesuit education, and in the works of:

| | |
|---|---|
| Ascham, (1515). | Kant, (1724). |
| Montaigne, (1533). | Pestalozzi, (1746). |
| Ratich, (1571). | Fichte, (1762). |
| Comenius, (1592). | Richter, (1763). |
| Milton, (1608). | Jacotot, (1770). |
| Locke, (1632). | Herbart, (1776). |
| Rousseau, (1712). | Froebel, (1782). |
| Basedow, (1723). | Sturm, (1803). |
| Spencer, (1820). | |

The teacher should understand the fundamental ideas of these so that:

a. His mind may be led in the right direction.
b. He may dwell upon *essentials* in his work.
c. He may avoid errors, *long known to be such.*

8. Matured habits of *regularity*, *punctuality*, *silence*, *politeness* and *kindness.*

9. Power of rich illustration.

10. Skill in blackboard drawing.

11. Ability to write well on paper and *on blackbord.*

12. Power of vivid *narration* and *description.*

13. Power to question with accurracy and judgment.

14. *Interest in the children and in the work.*

15. Knowledge of the methods appropriate. (Involving a knowledge of and sympathy with the pupils' minds.)

Scholarship, if combined with natural aptitude in imparting, can accomplish much in teaching; these, and a knowledge of the general or fundamental princi-

ples of teaching, more; the foregoing, combined with a thorough mastery of the specific method of each subject, and practical experience in applying it, most.

The comprehension of the specific method of any subject must be thorough enough to reach its rational basis, i. e., it must be seen to rest upon the nature of the subject and upon the nature of the pupil's mind in the various stages. The first is, and has long been, generally admitted; the second is beginning to be. The teacher, through any specific method, is assumed to be cultivating the mind. But this cannot be done unless the teacher has an insight into mind action, and knows that the method is based upon the laws of such action. Unless such is the case, education might recognize certain faculties in operation, but others, which ought to be active but are dormant, it would not notice; it would meet with obstacles to progress which it could not remove; errors of conduct to which it could apply no remedy; it would give preference to those motives which we most easily obey, rather than to the highest.

Its method, not founded on principles, would be a thing of accident; at best a combination of expedients with no consciousness of one purpose; if right at any time, right only by chance; most probably a confusion of methods, undoing at one time what has been done at another; feeble and irregular, wanting both the power to mold and the beauty to attract. Mere empirical teaching, it is true, may not be altogether unproductive of valuable results; by closely following prescribed laws, much good may be done. But much more can be done if the ground and spirit of these laws are compre-

hended; while many cases must arise which the prescription does not provide for. Moreover, it will doubtless be conceded that it is better to be a conscious than an unconscious agent; to be rationally adapting means to end.

Notwithstanding a method may be rational it should not be applied rigidly and unvaryingly in every school and under all circumstances by any teacher, nor should its interpretation and application be precisely the same in the same school and under the same circumstances by different teachers; i. e., since a method is a mode by which one mind addresses other minds, it should be so individualized by the teacher as to be adapted to the natural and acquired aptitudes of both the mind addressing and the minds addressed.

This is merely to present the evident truth that the intelligent teacher is of more importance than his method; that his sympathy with the minds to be addressed, his force of personal character, and the degree of interest and intelligence with which he is able to invest a method, must always transcend its mere technical propriety.

Each individual teacher should adopt that method best suited to his natural aptitudes, and in which he has the strongest rational faith, relying upon the thought that a sympathetic, earnest and judicious manner of dealing with the pupils will secure success, whether the given method is strictly rational or not; since it is moral considerations, which determine the progress of the pupils, rather than the intellectual propriety of the method employed.

In this thought lies the explanation of the success that has attended the use of the alphabetic, phonic, and various other methods which are not in all respects in thorough accord with the principles of mental activity. The teachers who introduced them, and many who afterward employed them with success, believed in them and applied them with devotion.

It may be reasonably held, however, that the success in such cases was not at all commensurate with what it would have been had these teachers thoroughly comprehended the nature, in general and in detail, of a specific method for the given subject that was more rational and harmonious, and then had invested it, in its application, with their personality and devotion.

16. Power to organize, in the form of a written plan the material and method of a lesson.

There are many teachers, who are highly efficient, and who believe in the efficacy of written plans, and yet who do not, as a rule, prepare written plans for their lessons. This is because they have served their apprenticeship in written plans, and by their work with them their minds have acquired the habit of spontaneously organizing the material and method of a lesson into a logical *mental plan.* This is the real aim of written plans. They are not to be thought of as a direct and immediate means of conducting a recitation according to directions set down in them; but as a means of forming the *mental habit* of systematically organizing the matter and method of a lesson. They, therefore, belong to the period of the teacher's preparation. Written plans should be resorted

to, however, as often as practicable, in the every-day work, in order to reinforce the mental habit referred to, and not for the purpose of using them as guides in the actual recitation. The class of teachers referred to understand this and employ the written plan in its proper place, and to fulfill its true function.

There are some teachers, however, who dismiss summarily the idea of written plans. These are usually of two classes:

a. Those teachers who are too indolent to prepare adequately for their work, considering that their responsibility commences at the moment that school begins in the morning, and ends the moment that school closes in the evening.

b. Those superintendents and teachers who hold that the teacher should inform herself well upon the subject, and without any planning, go before the class, and "trust to the inspiration of the moment." The claim of these is that to prepare written plans for lessons makes the teaching mechanical. Such a criticism indicates a mistaken view of the *true function* of written plans or "notes on lessons."

A farmer once told his sons, when he was about to pass from the scenes of earth, that, concealed beneath the soil in the farm that he was about to leave them, was a great treasure. After their father had passed away, the sons carefully and patiently spaded up every foot of the ground, but found no treasure. Their next crops, however, were found to be more valuable a hundred-fold. The treasure their father meant was the effect of their careful, thorough work.

So it is with the written plan. The value of the plan is in the planning. The purpose of the written plan is accomplished before the recitation begins. To employ it as a guide, and consult it during the progress of the recitation, would be a violation of the spirit of teaching as a psychological art. The attention of the teacher, during the recitation, must be concentrated upon the minds of the pupils, in order that she may read their true condition at each step, and change and adapt her work as their difficulties change. To attempt at the same time to consult at each step the suggestions of a written plan, is to disregard the principle that the mind has but a given quantum of energy; and it is also to deprive the lesson of spirit and interest by thrusting between the mind addressing and the minds addressed, a barrier, thereby making the communion of their minds even more mediate than it must of necessity be.

The true course for the teacher is not merely to inform herself upon the subject, and then go before the class "trusting to the inspiration of the moment." There is no inspiration in the moment, under such circumstances. The course for the teacher, as demanded by the interest and the interests of the children, is:

1. To gather carefully the material for the lesson.

2. To reflect carefully upon its arrangement, the order and method of presenting the ideas, and to determine, in the main, the illustrations, etc., thus obtaining a mental plan.

3. To reduce this mental plan to a written plan, ("Writing makes the exact man") in order to test more

carefully the mental plan, and to insure a better organization of the lesson.

4. To go before the class and conduct the recitation without the aid of the written plan, or if using it at all, obtaining only the main headings, thus insuring that true inspiration and confidence, and that thorough organization that come from careful preparation; and at the same time allowing that freedom which enables the teacher to adapt the work to the changing needs of the class.

But the reply is that the city teacher with eight or ten daily recitations, and the country teacher with from ten to twenty-five can not take the time for such preparation. Admitting that to be true, it may still be said that such should be the preparation for at least one recitation daily, (the most difficult one) and its beneficial effects will be felt in all recitations.

On the supposition that the horse is the animal selected for an oral lesson, the organization of the lesson could be presented in a written plan somewhat as follows:

*Plan.*

I. *Subject.*—The *individual minds* of the pupils.

II. *Design.*—1. To give the mind strength and skill by training it to observe common animals and to reflect upon what it observes. 2. To give (incidentally) certain knowledge of the horse.

III. *Condition of training.—Self-activity* of the pupil.

IV. *Exercise-ground.*—The *idea 'horse.'*

V. *The Basis.*—(The basis consists of the ideas already possessed by the child, that are related to the subject and employed by the teacher.)—Knowledge of various four-footed

animals; ability to count to four; experience as to some of the uses, food, and homes of horses; knowledge as to glue and as to a certain kind of furniture.

VI. *Steps.*—(A step is the advance of the mind, from an idea possessed to the one to be gained.)

1. Advance of the mind to the thought—The horse is a quadruped.

a. *Method.*—Refer to their experience as to number of feet; present pictures; have the feet counted; have the thought that it is a *four-footed* animal expressed; state that there is another word that may be used instead of "four-footed," writing upon the board the word *quadruped*; have other quadrupeds named; write the sentence, and have the children repeat it and write it.

2. Advance of the mind to correct ideas as to the use, food, and home of the horse.

a. *Method.*—Refer to the children's experience in regard to these points; obtain from them what it eats, what it does for man, and where it lives in winter and in summer; supplement that which is thus obtained; organize the information as it is received; have the children help form the sentence; write it upon the board; have the children read it and then write it.

3. Advance of the mind to ideas as to the use of the horse after its death.

a. *Method.*—Obtain from the children the various materials used in furniture, and in this way indicate the use of horse-hair; lead them to talk of glue and its uses; lead them to see that it may be made from the hoofs and some parts of the flesh; add the word *sinews* to their vocabularies; lead them to point out sinews in their own bodies; organize the information as it is given; with the help of the children form the sentences required, and then write them on the board; have the sentences read and written by the children as before; have all the sentences of the lesson read; by questioning, lead the pupils to express themselves freely upon all the points, noting carefully their language.

Many other ideas concerning the horse could be presented; the aim has been, however, not to give a full treatment, but merely to suggest the nature of a written plan that the teacher may prepare in giving oral lessons on animals.

### AGENCIES IN THE RECITATION.

#### STIMULI.

Under stimuli three questions present themselves.

1. What is the nature of interest and attention?

2. What qualities and methods tend to produce attention during the recitation; to give permanent interest to the subjects; and to impel the pupil to mental growth?

3. Of these qualities and methods, what ones are capable of being acquired?

##### *Interest and Attention.*

Interest is derived from *inter* meaning *between*, and *est*, from *esse*, meaning *to be*. Literally, therefore, interest means *it is between*. This indicates that there are two things, between which is a third thing. On one hand is the untrained mind with its natural disinclination to continuous effort in a given direction, and on the other hand, a certain subject or lesson requiring close effort to master it. To master the point of knowledge requires attention. But attention by its literal meaning signifies effort. It means *a stretching to*—the very thing that the untrained mind is averse to. Whatever stands between this tendency of the mind to avoid continuous effort and the knowledge, the mastery of which requires effort, and thereby attaches the mind to its work, is interest.

Attention is the concentration of the mental faculties upon a given subject. It is, therefore, an act of will, and is based upon motive. The motive is interest of some kind. Every lesson requires effort. It is essential, therefore, especially in primary work, that the lesson be interesting.

Interest is the basis of attention. 'Attention in the child is feeble, and capable of but limited continuance. It grows stronger by exercise, and interest is the great promoter of its exercise, and thereby of permanency in the knowledge gained, or the power of memory.'

An act of knowing " may be performed with greater or less energy. This greater or less energy in the operation of knowing is called *attention*, which word, as its etymology suggests, is another term for tension or effort, and was doubtless first transferred to the spiritual operation from the strained condition of the part or whole of the bodily organism, which accompanies or follows such effort." Attention is the concentration of the powers of the mind upon a given instrument of training, at a given time. It is involved in all good teaching, but not as a *condition*, except to a limited degree. It is the *result* of good teaching. As has been said in another connection, the child is by nature inattentive, if by attention is meant continuous effort. Attention is a habit to be acquired. Being a habit, it is subject to the law that the mind tends to act again as it has acted. One act of attention makes the next one easier, and the next still easier until at last attention becomes second nature, i. e., habitual.

Likewise, one act of inattention makes a second more easy, etc. Attention, then, is a habit, a mental growth. It requires in its development, effort, and is consequently, based upon *motive.* Attention is an act of will. The will may be trained and controlled. Everyone, therefore, has the power, to so develop mentally that he may attend at will. It is a question, then, of *desire or motive.*

To give close attention for any considerable period of time is very difficult. The experience of every one will testify to this. Even the person whose powers are substantially mature, finds it difficult to give fixed attention; and for children to give fixed attention to prescribed subjects, and at prescribed times is especially difficult. Yet difficult as it is *attention must be obtained.* It cannot be obtained, however, by demand or entreaty; by urging upon the pupils the importance of the subject, and the brevity of school time.

These last are very valid considerations with the mature, but nothing can be relied upon to secure the attention of the child, for any considerable period, but a *genuine interest in the subject itself.*

1. *Attention in the recitation* may be secured by discipline or by stimulus. By the former the mind becomes stolid and indifferent to education. In the latter there is life, and hence growth.

Napoleon III., having stationed soldiers at the polls was able to say that the election was peaceful. There should be in the recitation attention through inner life.

How can such attention be stimulated?

a. By a familiar and sympathetic manner on the part of the teacher.

b. By having the pupils 'picture out' the thought, or represent it by *doing*.

c. By basing illustrations on the pupils' experience.

d. By varying the usual regularity and routine.

(1.) Illustrate each point.
(2.) Upon what principles of mind are they based?

2. *Interest in the subjects themselves.*

How may this be inculcated?

a. By employing books adapted to the development of the pupils.

b. By studying the subject outside of the book as well as in it; i. e. by making the text-book merely a *text*-book.

c. By stimulating original production (written exercises) as against the tendency to book work.

d. By recognizing and commending the germs of thought and effort, that may be usually detected among the crudities and imperfections.

(1.) Illustrate each point.
(2.) Upon what principles of mind are they based?

3. *Interest in general mental growth.*

In what ways may this be fostered?

a. By clearness in teaching.

Just what constitutes clearness in teaching is a point that requires to be more definitely settled. It should be understood that the prominent marks of clearness are:

(1.) *The setting forth of a general plan, or framework of the thought.*

Then every detail falls into its place; the fragments

exhibit the relations of the whole; the maze becomes mapped. The pupil is then, even in respect of the difficult thoughts, able to say with the poet, "A mighty maze, but not without a plan." Grasp of this kind gives to the pupil a sense of power and conquest. It makes deep thought interesting, inclines to new efforts, gives mental breadth and stimulation.

(2.) *The use by the teacher of precise, clear-cut language.*

(3.) *The making prominent of the salient point.*

(4.) *The change of formulæ, as soon as the pupils begin to recite by rote.*

(5.) *The concentration of the attention exactly upon the difficulty.*

(6.) *The quiet leading on of confused answers till the confusion and the exact point of the confusion are manifest.*

(7.) *The pointed cross questioning of half-knowledge, so as to both make apparent the incompleteness, and indicate the avenue to the full knowledge.*

For a lesson to have these marks of clearness is for it to have stimulus. It is a pleasurable incentive to the growing mind to participate in the unravelling of every tangle in his thought, and to take part in brushing aside, one by one, every cobweb that obstructs his mental vision, until every detail, in its relations is clearly seen.

b. By avoiding too much explanation.

c. By arranging it so that the pupils shall be joint sharers with the teacher in his researches.

(Natural science affords the richest field in this respect. Why?)

(1.) Illustrate each point.
(2.) Upon what principles of mind are they based?

### QUESTIONING.

*Nature.*

If information were the end of the school, the teacher's qualifications should be: knowledge of his subjects; general knowledge of mind; pleasant manner; fluency of speech; knowledge of the nature of description and narration; and richness of illustration. But the design of the school being to make the mind skillful and strong, the teacher must be equipped with one other instrument in addition to the above—*the power to question with skill and judgment;* and no other single means, perhaps, justly assumes the importance of this power.

Questioning is an art. That is, it is a practical power—something that is learned not by hearing lectures upon it, but by doing it. Proficiency in it is learned as in every other art, by practice. Education in it comes through experience. To become a skillful questioner requires patient, watchful practice. But if that were all, it would be sufficient to say to the young teacher,—"Take charge of a school; begin work with your classes; and learn the art of questioning by actual questioning."

Questioning is not only an art, however; it is also a science. That is, the art of questioning rests upon a body of principles; and the teacher should know the principle underlying any given practice in questioning; he should be acquainted with the general principles

that he is to apply to specific cases; he is to know the *why* as well as the *how*.

*Purpose.*

1. The first purpose is to disclose to the teacher, before he attempts to present a new thought, the actual condition of the pupil's mind; to reconnoiter, in order to see how the child's ideas are encamped; to plough up the mental soil, so that the mental germs may have freedom to spring into stronger life; to make the learner conscious of the limits of his knowledge, and to open to his mental view the latent known. In one sense the aim is to apply the "torpedo's electricity," and in another to awaken the stimulus of curiosity.

2. The second aim of questioning is to stimulate, suggest, and direct, but not to tell, or unduly assist; to lead the mind to act upon the new knowledge and assimilate it; to cause the mind to connect the new knowledge with the old by its innumerable relations, i. e., to organize its knowledge; to awaken new desires, and to develop new capacities for satisfying those desires. Indeed, the object of this kind of questioning is almost identical with that of school education—*the pointing out of the knowledge that is of most worth, the creating of a desire for it, and the developing of the power to obtain it.*

3. The third design of questioning is to test whether the work indicated under the second design has been done; to examine upon work assigned; to see what remains in the pupil's mind; to determine what added power he has at the conclusion of a given work.

*Kinds.*

1. The *search* question. This may also be termed the reconnoiter question, and the Socratic question.

2. The *stimulative-directive* question. This has been called the instructive or Socratic question.

3. The *test* question. (Examination oral or written.)

Each of these classes of questions may be set forth more clearly by an illustration.

Thus, in illustration of the first may be cited a portion of Socrates' dialogue with Meno.

Meno asks whether virtue is acquired by teaching or by practice. Socrates replies that he does not as yet know what virtue is, and has never known any one who did.

'Then he cannot have met Gorgias when he was at Athens.'

'Yes, Socrates had met him, but he has a bad memory, and has forgotten what Gorgias said.'

'Will Meno tell him his own notion, which is probably not very different from that of Gorgias?'

'O yes—nothing easier; there is the virtue of a man, of a woman, of an old man, and of a child; there is a virtue of every age and state of life, all of which may be easily described.'

By the cross-questioning of Socrates, Meno was compelled to frequently change his position, until he finally became confused and complained of the negative quality of Socrates' teaching, saying that the conversation has had the effect of a torpedo's shock upon him.

'When he talks with other persons he has plenty to say

about virtue, but in the presence of Socrates, his thoughts seem to desert him.'

In order to demonstrate the province of this kind of questioning, Socrates calls to him one of the attendants of Meno, and the following dialogue, substantially, ensues:—

*Socrates.* What figure is this?

*Boy.* A square.

*S.* What do you see as to the lines?

*B.* They are all equal.

*S.* May a square be of any size?

*B.* Certainly.

*S.* If each side be two feet in length, how many square feet will it contain?

*B.* Four.

*S.* Can there be another square just twice as large as this?

*B.* Yes.

*S.* How many square feet will it contain?

*B.* Eight.

*S.* Tell me the length of the line which forms a side of that double square.

*B.* Clearly, Socrates, it will be double.

*S.* Do you observe, Meno, that I am not teaching the boy anything, but only asking him questions; and now he fancies that he knows how long a line is necessary in order to produce a figure of eight square feet; does he not?

*Meno.* Yes.

*S.* And does he really know?

*M.* Certainly not.

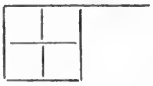
*S.* He only guesses that, because the square is double, the line is double.

*M.* True.

*S.* Observe him while he recalls the steps in order. (*To the boy.*) Do you assert that a double space comes from a double line?

*B.* Yes.

*S.* But does not this line become doubled if we add another such line here?

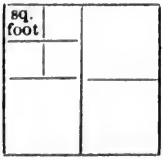


*B.* Certainly.

*S.* And four such lines will make a space containing eight square feet?

*B.* Yes.

*S.* Let us describe such a figure:




Is not that what you would say is the figure of eight square feet?

*B.* Yes.

*S.* And are there not these four divisions in the

figure, each of which is equal to the figure of four square feet?

*B.* True.

*S.* And is not that four fours?

*B.* Certainly.

*S.* And four fours is not the double?

*B.* No, indeed.

*S.* But how much?

*B.* Four times as much?

*S.* Therefore, the double line has formed a space not twice but four times as great?

*B.* True.

*S.* And four fours are—?

*B.* Sixteen.

*S.* What lines would give you a space of eight square feet, as this gives one of sixteen square feet; do you see?

*B.* Yes.

*S.* And the space of four square feet is made from half this line?

*B.* Yes.

*S.* Good; and is not a space of eight square feet twice the size of this and half the size of the other?

*B.* Certainly.

*S.* Such a space will be formed upon a line greater than this one and less than that one?

*B.* Yes; that is what I think.

*S.* Very good; I like to hear you say that you think. Is not this a line of two feet and that of four?

*B.* Yes.

*S.* Then the line which forms the side of eight square

feet ought to be more than this line of two feet, and less than the other of four feet?

*B.* It ought.

*S.* How long will it be?

*B.* Three feet.

*S.* Then if we add a half line to this line of two feet that will be a line of three feet.

Here are two feet and there is one. And on the other side, here are two also and there is one:

And that makes the figures of which you speak?

*B.* Yes.

*S.* But if there are three square feet this way, and three square feet that way, the whole space will be three three-square feet?

*B.* That is evident.

*S.* And how many are three three-square-feet?

*B.* Nine square feet.

*S.* And what is the double of four square feet?

*B.* Eight square feet.

*S.* Then a figure of eight square feet is not made out of a line of three feet?

*B.* No.

*S.* But from what line? Tell me exactly; and if you would rather not reckon, show me the line.

*B.* Indeed, Socrates, I do not know.

*S.* Do you see, Meno, what advances he has made? He did not know at first, and he does not know now, what the side of a figure of eight square feet is, but then he thought that he knew, and answered confidently as if he knew, and had no difficulty; but now he has a difficulty, and neither knows nor fancies that he knows.

*M.* True.

*S.* Is he not better off in knowing his ignorance?

*M.* I think that he is.

*S.* If we have made him doubt, and given him the "torpedo's shock" have we done him any harm?

*M.* I think not.

*S.* We have certainly done something that may assist him in finding out the truth of the matter; and now he will wish to remedy his ignorance, but then he would have been ready to tell all the world that the double space should have a double side.

*M.* True.

*S.* But do you suppose that he would ever have inquired, or learned what he fancied he knew and did not know, until he had fallen into perplexity under the idea that he did not know and had desired to know?

*M.* I think not.

*S.* Then he was the better for the torpedo's touch?

*M.* I think he was.

Socrates was a philosopher, a profound student of mind action, and the greatest of secular teachers, and his questioning is worthy of thoughtful study.

The inferences from this example of the first kind of questioning are plain:

a. The teacher is, as a preliminary step, to obtain light as to what the pupil already possesses, and as to his existing mental power, in order that he may the better see how to adapt his teaching to the pupil's condition.

b. The pupil must be led to see what he does not know, i. e., his difficulty.

c. The pupil is to be shown his latent known, i.e., the foundation that experience has given him.

d. The desire for new power and added knowledge must be implanted.

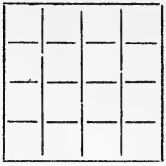
All these things are to be accomplished by means of the *search* or preliminary questions.

As an illustration of the second kind of questioning, the continuation of Socrates' dialogue with Meno's attendant will serve. In the first kind the boy had been shown his difficulty, and had had his curiosity aroused as to its proper solution. To this solution Socrates proceeds:

*S.* Mark now, Meno, the farther development. I shall only ask him, and not instruct him, and *he shall share the inquiry with me*; and do you watch and see if you find me *telling* or *explaining* anything to him, instead of eliciting his opinion. (To the boy.) What is this I have drawn?

*B.* A square of four square feet.

*S.* And now I add what?



*B.* Three other squares, each equal to the first.

*S.* We have, then, what?

*B.* Four equal spaces.

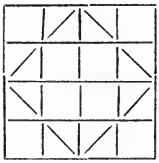
*S.* How many times is this space as large as the former?

*B.* Four times.

*S.* But it ought to have been how many times as large?

*B.* Two times.

*S.* Draw a line from this corner to that one, and so in each space.



What does each line do to each space?

*B.* It divides it into two equal parts.

*S.* What is true of the lines?

*B.* They are equal.

*S.* How much space do they inclose?

*B.* I do not understand.

*S.* How much of the four spaces have these lines cut off?

*B.* Half of them.

*S.* How much was there in the first space?

*B.* Sixteen square feet.

*S.* Then how many in this?

*B.* Eight square feet.

*S.* From what line do you get this figure?

*B.* From this one.

*S.* How may you describe it?

*B.* By saying it extends from one corner to its opposite.

*S.* What is the line called?

*B.* I do not know.

*S.* Show me other lines like it.

Very good. Such a line is called a diagonal. Point out other diagonals.

What is the double of a space?

*B.* The square of its diagonal.

*S.* What do you say of him, Meno? Were not all these answers given out of his own head?

*M.* Yes, they were all his own.

From this example of the second kind of questioning, the distinctive marks of the class appear:

a. They suggest but do not inform.

b. They tend to establish a logical connection between the old and the new; to make the new a development from the old. They lead to the expansion of the germs that lie hidden in the child's mind.

The third kind of questioning needs no illustration.

It is exemplified in all oral and written examination, and by recapitulations at the close of lessons, or divisions of lessons. The distinctive marks of the third kind of questioning are:

a. It tests whether the pupil has added power.

b. It tests whether the knowledge has been accurately learned and thoroughly organized.

c. It tends to deepen and more firmly fix what has been gained.

*Structure.*

The questions should be *simple*, *short*, and *adapted to the capacity of the children.*

They should be such that the talk on the part of the teacher is at the minimum, while fullness and freedom of expression is required by them on the part of the pupil. Their tendency should be to keep the teacher and his work in the background, and to make prominent, the pupil and his work. Plainness and brevity are the desideratum.

Another point in regard to structure is that the questions *should not be information-giving.* A good question does not convey information. Each fact or idea should if possible be educed from the pupil. This indicates that the phraseology of the text is to be avoided in the construction of the questions. If the words of the book are employed in the question, the answer is suggested, and the pupil thereby deprived of the mental exercise that is the real aim of the questioning.

A third thought in regard to the structure is that the question should be *definite.* An indefinite, equivocal

question tends not to concentrate the mental energy upon the point desired, but to divide the mental energy. The tendency is also to inculate the habit of guessing, a habit fatal to accurate thought.

*Sequence.*

The first thought concerning sequence is that the questions in a lesson should constitute *a logical series.*

Desultory, random questioning produces but little that is valuable however good the question may be in its structure, and however well adapted it may be to call forth the activity of the pupil's mind. The claims of both mental discipline and knowledge require that each question shall have a logical connection with the preceding one; that each question shall seem to grow out of the preceding answer; and that each answer shall be the explanation of a point that was brought forward by the previous answer, but not made clear by it. This requires a habit on the part of the teacher of so questioning that each thought advanced by the pupil shall be an outgrowth of his previous thought and a preparation for the succeeding one. The true sequence in questioning is one that portrays the order in which the instrument for the mind's exercise—the subject—would naturally unfold itself in the mind of a trained, logical thinker.

While, however, the teacher will have a logical plan, and a logical series of questions, he should not be in bondage to them. He should be master of all his means to that degree that he can readily readjust, and adapt them to the wants of the pupils as disclosed by

the progress of the lesson. Unlooked-for misconceptions may appear, the need of more ample illustration than was contemplated may become evident, and in various ways the children's mental needs may require digression from the pre-arranged questions. The main purpose of the lesson should, however, be adhered to, at least to that degree that no useless digressions shall occur.

The second thought in regard to sequence is that the question should be *addressed to the class as a whole*, before the pupil who is to answer it is named. This is based upon the principle that the aim of the recitation is to give mental skill and strength. If the question is presented to the whole class, every mind receives it and is exercised upon it, and is ready, therefore, either to answer it intelligently, or to discuss intelligently the answer given, in addition to the mental strength gained by considering it. If the pupil who is to answer the question is named first, and the question is then asked, the above result is, to a degree, reversed. While this is to be the general rule, it should not, however, be invariably adhered to as such adherence would tend to make the recitation stereotyped and monotonous, and the mind recoils from monotony.

A third point under sequence is that there should be that *continuity and steady flow* of question and answer which is the result of animation on the part of the teacher. This animation can arise only from an ample knowledge of the subject, or exercise-ground, special preparation for the given recitation, a real interest in the instrument of training, i. e., the ideas being dealt with, and pleasure in arousing, strengthening, and direct-

ing the action of the mental faculties of the pupils. Such a condition on the part of the teacher will result in giving vigor to his teaching, in making his illustrations graphic, in imparting earnestness to his manner, animation to his voice, and an active, impressive character to his questioning.

Experience shows that slow, dull, heavy and involved questioning is wearisome to children, and deprives a lesson of its interest. It is necessary, therefore:

1. To avoid long pauses between an answer and its succeeding question.

2. To vary the phraseology of the questions.

3. To avoid monotony of tone.

4. To be animated in manner, and thus kindle interest and enthusiasm in the lesson, by exhibiting them in the questioning.

Such considerations as these militate against the use of printed questions, or questions pre-arranged by the teacher, and brought before the class in the form of 'notes.' It cannot be too often iterated that the teacher should make special preparation for each lesson, and have in mind a logical plan, and a logical series of questions; neither can it be too often repeated that the teacher is to go before his class untrammeled by written plan, written questions, notes, or text books; for the minds of pupil and teacher must come into actual contact. And pre-arranged questions, whether printed or in notes, serve to divide the mental energy of the teacher, and at the same time do not have the life and force of questions that are the outgrowth of two things:

a. Careful previous preparation.

b. Watchful consideration of the actual needs of the pupil at all stages of the recitation. The line of questioning is to be carefully thought out before the recitation, but in the presence of the class, questioning takes any direction whatever, is fragmentary, changing as the difficulties of the pupils' minds change, disregarding all precise plan, provided that the general aim is held in view, and a close, laborious, and exact exercise of mind is the result.

Under sequence, may be considered, in the fourth place, *reception of answers.*

A pupil should be required to answer the question given.

An answer as given by the first pupil reciting, may be:

a. Right.

b. Wrong.

c. Partly right.

It is in violation of the principle that the aim of the recitation is to train the mind, if in the first case the teacher states at once that the answer is correct. He should receive the answer, withhold his decision, obtain the thought of the different pupils, with their reasons, and having thoroughly exercised the minds of the class upon the point in question, decide definitely and clearly.

The procedure in the second case should be the same with this addition—at the conclusion of the discussion, the question should be again presented to the one who, at first, gave the wrong answer, and to all who subsequently answered incorrectly.

In regard to answers that are partly right, the decision should be reserved and the point discussed, as in the previous cases, after which the teacher should recast his question, add a subordinate one here and there so as to disentangle the truthful element from the incorrect one, and then present again his original question to the pupil who first answered, and to the class.

The fifth thought in regard to sequence is, that, as a rule, *the question should not be repeated.* It is obvious that the habit of repeating the question on demand, will foster inattention, and the opposite course, attention.

To sum up all: the aim of questioning, as indicated in the statement of the purpose is to arouse thought, to promote mental activity, to develop accuracy in all the mental faculties instead of merely cultivating the verbal memory at the expense of the higher faculties and tendencies. That questioning is best which best stimulates mental action in the pupil; which according to the principle of Jacotot, gives him a habit of thinking and inquiring for himself; which tends to render him independent; which makes him a skillful inquirer after, rather than a receiver of truth. The success of questioning, as of teaching, is to be determined, not by the amount of information that is imparted, but by the degree to which the judgment of the pupils has been strengthened, and their capacity to learn enlarged and skilled; by the degree in which it imparts to them an inquiring spirit, which is a far surer basis for future acquisitions than any amount of mere information can be. It has been truly said that Socrates originated a system of questioning that has been searching the world ever

since it was employed, and that has quickened the perception of all generations; so that the result was that he who taught nothing produced disciples that learned everything.

EXPLANATION.

There are two processes, both explanatory, which require to be distinguished—explanation proper and illustration.

1. *Explanation Proper.*

"A word, as 'spectacle' would be explained by saying that it means a view or scene, or all that we can see around us, or by some similar phrase.

The proverb, 'What a man sows, that shall he also reap,' would be explained by saying that the consequences of our actions will be influenced by their character, or the like.

And so the process of sugar making would be explained when an account of the successive steps in the process is given.

Explanation proper, then, consists in stating an idea or fact in its simplest form."

2. *Illustration.*

Illustration as here used, includes both illustration proper and example.

Kinds of illustration:

Illustration is of three kinds:

a. Objective Illustration.

When the lesson is upon an object, whether an oral lesson or a reading lesson, the thing should be at hand, if possible, so that the qualities for which it is known may be observed.

An object is sometimes referred to incidentally, in the course of a lesson, to illustrate some of its topics; in such a case the illustration is seldom satisfactory without the presence of the thing. This should not be neglected, as it often is, because its presence is seemingly immaterial; the habit of verification which it fosters is invaluable as a safe guard against vague or half-formed ideas.

b. Pictorial Illustration.

As it is but a comparatively small number of objects that can be brought under the notice of the class, however, the want must be supplied as far as it is practicable, by pictorial illustration. This should be introduced just at that point of the lesson where it is needed; i. e., after verbal work, as a picture will always be examined more effectively when the curiosity has been awakened by a previous description.

If the pupil is led to first form the image for himself he will afterward compare with interest his ideal one with the real.

The picture should not be presented to him before it is to be used; otherwise it will supersede his imagination and its use will be less impressive.

c. Verbal Illustration.

Verbal illustration is two-fold:—

(1). The substitution of the particular for the general.

Thus the word "spectacle" would be illustrated by presenting to the imagination of the pupil some conspicuous point and causing him to realize that all that is to be seen from it may be termed a "spectacle."

The illustration of "Whatsoever a man soweth, that shall he also reap," would consist in referring the pupil to the process of sowing the seed in the ground, and the corresponding harvest.

A virtue or duty, such as truthfulness or honesty, is illustrated in a story by which it is exemplified.

(2.) The substitution of one particular case for another with which it is analogous.

Thus "the boiling of sugar may be compared to the making of jelly, the melting of lead to that of wax, or the action of any historical character to some supposed similar one within one's own experience."

The marks of good illustration are three:

(a.) "Illustration should be apposite.

(b.) Illustration should be interesting; i. e., must be drawn from something that has an interest for the pupil. This implies that it be familiar; it is no illustration to refer a thing or case which is unknown to another which is equally or more so.

(c.) Illustration should be clear and graphic."

In using illustrations two errors are to be avoided:—

(a.) "The failure to set forth the illustration with sufficient amplitude to make an impression on the minds of the class.

(b.) The overburdening of the lesson with illustration. Important as illustration is, it must be kept in its place of strict subordination to the thing illustrated."

REPETITION.

Repetition has already been referred to as iteration.

It is essential, especially in primary work, because everything is new to the pupils, and their minds have little power of retaining what they acquire.

The concluding part of a lesson is generally devoted to a recapitulation of the leading points, but opportunities for incidental repetition continually occur in the course of the lesson itself.

There are two ways of repeating—the direct and the indirect. Both are necessary.

In the former the thing is repeated in the precise form in which it was first communicated; the design being to impress the memory.

In the latter, the thing is repeated in another form; i. e., the class is required to express from one point of view what was communicated from another.

This process, besides appealing to the memory, is the educative process in every lesson.

PRINCIPLES OF THE RECITATION.

1. The recitation is the predominant element of the school; all other agencies being auxiliary to it, and designed to promote its ends.

2. The true recitation is one in which the mind of the teacher addresses the individual minds of the pupils, in accordance with the actual condition of the various minds, in order to lead them into communion with the mind, made external to a degree, in the exercise-ground.

3. The purpose of recitation is:—

a. To give the mind *strength* and *skill*, by exercising it upon the ideas involved in the object of study.

b. To give an insight into the true method of study.

c. To test as to the knowledge and power gained by the preparation for the lesson.

d. To supplement that which the pupil has gained in his preparation.