McMurry

How to conduct the recitation

# TEACHERS MANUALS

## No. 13.

# How to Conduct the Recitation

and the

*Principles Underlying Methods of Teaching in Classes.*

BY

CHARLES McMURRY, PH. D.

Of the State Normal School, at DeKalb, Ill.



E·L·KELLOGG·&·CO·

·NEW YORK·&·CHICAGO·

# THE TEACHERS' INSTITUTE

**The Teachers' Magazine. Monthly, $1 a Year.**

Gives wonderful value for one dollar a year. Each number has 54 large pages 9 x 13 inches. It contains the methods of the most successful schools told by teachers who have used them. Everything written expressly for it—no clippings and no padding. All departments of school work covered. The School Entertainment pages are famous. The illustrations are an invaluable feature. Every page is bright with them. The new covers in colors are a great attraction. THE INSTITUTE has nearly 40,000 regular subscribers, leading all other educational papers, a sure indication of its splendid value.

**The departments are as follows:** School Management, Writing, Reading, Language Work, Arithmetic, Nature Study, Myths, Drawing, Geography, Occupations of Man, Morals and Manners, Common Objects, Physical Culture, N. Y. State Graded Examination Questions—with Answers, Desk Work, Recitations Dialogs, Special Day Exercises, Current Events, etc.

# THE SCHOOL JOURNAL

**Weekly, at $2.00 a Year.**

The First Educational Weekly. Established 1870. Fifty numbers are published each year making a volume of about 1600 large pages, 9 x 13 inches, equal to 8 books, usually sold at $1.50 each. Many special issues are published during the year. Among these are: Twelve "School Board" Numbers, 36 to 64 pp. each; Ten "Method" Numbers; Ten "Educational Review" Numbers; A Superb "Annual Summer" Number, 100 pp.; A "Christmas" Number of 72 pp.; A "Private School" Number of 56 pp.

Illustrations are a most important feature. During the past year nearly 700 illustrations were published. THE JOURNAL discusses such subjects as Courses of Study, the Examination and Training of Teachers, Child Study, Pedagogy, Supervision, the Promotion of Pupils, Government Manual Training, Correlation and Unification, University Extension, the Teaching of Patriotism, Music, Drawing, Nature Study, Ethics, Pupils' Reading, Vertical Writing, Summer Schools, the Teacher's Profession.

# THE PRIMARY SCHOOL

**Monthly, $1 a Year.**

Crowde with the best primary methods. The oldest, the most help-giving, the most carefully edited and beautifully illustrated primary paper. Tells what to do and how to do it. Nature Study, Reading, Language, Seat Work, Busy Work, Numbers, Hand Work—all subjects—the best methods in each. The "Hints and Helps" page is famous. The "Child World" supplement gives best supplementary reading. The "Pieces to Speak" are very bright. The illustrations are very numerous and add greatly to its value and good looks. Every phase of the first four years' work receives help thru its columns.

# EDUCATIONAL FOUNDATIONS

**Monthly, $1 a Year**

is the title of a monthly magazine devoted to furnishing a course of reading for teachers. Its leading departments are: History of Education, School Management, Theory of Teaching, English Literature, American Progress 1800-1902.

Each department is conducted by a specialist in his subject. One of the best of teachers' books is printed complete in a special number each year and sent free to all subscribers. This furnishes the best possible course for teachers' meetings, reading circles, and for individual study. Hundreds of teachers' clubs meet weekly during the school year to read it together.

The ten numbers contain nearly 900 pages, equal to three large books that would sell for $1.50 each.

# OUR TIMES

**Fifty Cents a Year.**

The pioneer semi-monthly news-magazine of the important events, discoveries, etc., for school-room and home. The plan of this paper is to give: 1. A clear, condensed, and impartial account of the Leading Events of the Month. 2 The Important Inventions and Discoveries. 3. Interesting Geographical Material 4. Answers to Questions of General Interest, relating to these and other kindred matters.

Each number contains 32 pages, in magazine form, nicely illustrated with portraits, maps and pictures of leading inventions.

**E. L. KELLOGG & CO.,** Largest Educational Publishers and Booksellers **61 E. 9th St., N. Y.**

# How to Conduct the Recitation,

AND THE

## *Principles underlying Methods of Teaching in Classes.*

BY

CHARLES McMURRY, PH.D.,

PROFESSOR OF EDUCATIONAL METHODS AND PRACTICE IN THE STATE NORMAL SCHOOL, WINONA, MINN.

---

NEW YORK AND CHICAGO:

E. L. KELLOGG & CO.

1893.

# INTRODUCTION.

**The Herbart School.**—This paper is in the main an exposition of some of the leading ideas which have been developed theoretically and practically by the Herbart school of pedagogy in Germany. The late Professor Ziller of the University of Leipzig was a disciple of Herbart, and an original thinker of unusual powers. He recast Herbart's ideas on education in a new mould, and sought in his practice school at the university to make these principles the basis of systematic class-room work for the public schools. Prof. W. Rein of the University of Jena and many other disciples of Ziller, since well known as practical teachers, have put Ziller's ideas into practice during the last twenty years, and have illustrated them in all the studies and grades of the common school. No attempt is made to present all the important ideas of the Herbart school, or to give an exhaustive discussion of any one. After a brief survey of certain leading ideas, there follows a fuller discussion of a definite and systematic plan of class-room teaching. A translation from Professor Rein is appended.

# THE ESSENTIAL ELEMENTS OF GOOD RECITATION WORK.

**Facts and their Connection.**—A liberal education embraces a good many branches of study. Besides the subjects of the common school, there are history, classics and higher mathematics, the natural sciences and the fine arts, political economy, literature and philosophy. We are all naturally inclined to think that the more facts we have collected, the more information we have gathered in each of these topics, the better educated and the wiser we shall be. But this is only a half or a quarter true. The strength of an army does not consist in the *number* of men alone, as Xerxes discovered long ago, but in the *kind of men*, in their strength and courage, in their power of united action. Our knowledge is really serviceable to us only as it is combined into connected compact masses ready for varied use. The purpose of the school, then, is not simply to *accumulate* knowlege, but also to arrange and connect, to organize and energize the facts learned, to bring them into potent combination; just as a general first enlists recruits, then disciplines them into soldiers and organizes them

into an effective army. The facts commonly learned in the schools are indeed the materials out of which our intellectual house is to be built, but we are concerned not only about getting these materials into the structure of the mind, but about the plan and order there is among them, and whether the walls are loose and shaky or firm and solidly built.

**Digesting Knowledge.**—The stomach and the mind are alike in some points and unlike in others. The food that once enters the stomach is taken up and assimilated by the organs of digestion. Our chief care is to avoid overloading the stomach, and to give it a chance to perform its functions. It is self-acting. The materials which enter the mind pass through a digestive process; and this lasts longer. A cow chews her cud once; but the ideas which have entered our minds may be chewed over and over again, and that with great profit. Ideas do not assimilate so easily as the different food-materials in the body. Ideas have to be put side by side, compared, separated, grouped, and arranged into connected series. Thus they become organized for use. This sorting, arranging, and connecting of ideas is so important that it demands more time and more care than the first labor of acquisition.

**Absorption and Reflection.**—The process of acquiring and assimilating knowledge involves certain simple conditions which are easily stated.

When some new object presents itself to the mind the attention must be first fixed upon it for a while so that there may be time to take it in as a whole and in its parts. The mind then recovers itself from this momentary absorption in the object, and begins to survey it in its surroundings and connections. Absorption and reflection! The mind swings back and forth like a pendulum between these two operations. Herbart, who has closely defined this process, calls it the mental act of breathing. As regularly as the air is drawn into the lungs and then excluded, so regularly does the mind lose itself in its absorption with an object only to recover itself and reflect upon it.

In this first simple action of the mind are reflected the two fundamental principles which control all growth in knowledge.

**Observation.**—The first is the inspection of things in themselves and in their details. Absorption with objects! Object lessons! The principle of observation is confirmed in its full scope. The training of the senses to the full capacity of sense of perception is primary and necessary. The contact with nature, the actual experience with things, is the only concrete basis of knowledge.

**Survey.**—The second principle is the act of reflecting upon the things which enter the mind, the comparison of objects. It brings together things that are alike, e.g., the river basins of

North America and the river basins of South America. It throws into contrast things that differ, e.g., the desert of the Sahara and the rich moist valley of the Amazon. By a constant use of reflection and survey we classify our increasing knowledge into larger and smaller groups; causes are linked with their results, and the spirit of investigation is awakened which discovers and traces out those simple laws which underlie the complex phenomena of nature. The linking together of ideas into continuous series, the comparison of objects so as to bring out the salient features of whole classes, and the tracing of causes and results are means of organizing, of binding together, ideas which must be at the disposal of teachers in their recitation work or the higher results of education will not be reached. We may sum up the thoughts involved in this second great principle of learning as *Association of Ideas.*

**Apperception.**—Going back to the first simple state of the mind in learning, its absorption in a given object, the question arises, How can any new or partially new object be best understood at its first appearance? How can a full and distinct understanding of it be readily gained by the mind? We claim that if the kindred ideas already in the mind are awakened and brought distinctly to the front the new object will be more rapidly and accurately appropriated than by any other means. This is

called the principle of *apperception*, i.e. the reception of a new or partially new idea by the assistance of kindred ideas already in the mind. If old friends come out to meet the strangers and throw their arms about them and lead them within, how much more quickly they will be at home! But these old friends who are already in the house, who stand in the background of our thoughts, must be awakened and called to the front, they must stand on tiptoe ready to welcome the new-comer; for if they lie asleep in the penetralia of the home, these strangers will come up and pass by for lack of a welcome. Closely allied to this is the principle of *proceeding from the known to the unknown*, which has caused so much discussion and misunderstanding. Apperception contains what is true in this idea of going from the known to the unknown. As soon as we see something new and desire to understand it, we at once begin to ransack our stock of ideas to see if we can find anything in our previous experience which corresponds to this or is like it. For whatever is like it, or has an analogy to it, or serves the same uses, will explain this new thing, though the two objects be in other points essentially different. We are constantly falling back on our old experiences and classifications for the explanation of new objects that appear to us.

**Examples of Apperception.**—A boy goes to town and sees a banana for the first time, and

asks, "What is that? I never saw anything like that." He thinks he has no class of things to which it belongs, no place to put it. His father answers that it is to eat, like an orange or a pear. Calling up these familiar objects, the whole significance of the new thing is clear to him though it differs from anything he has ever seen.*

**From Simple to Complex.**—The notion of going from the simple to the complex is illustrated also in the simple process of the mind which we described. First one object, then the survey of it in connection with other things, forming a complex unit. This idea has been confused with the idea of going from a whole to the

* We will add one other illustration of apperception. Two men, the one a machinist and one who is not, visit the machinery hall of an exposition. The machinist finds new inventions and novel applications of old principles. He is much interested in examining and understanding these new machines and devices. He passes from one machine to another, noting down new points, and at the end of an hour leaves the hall with a mind enriched. The other man sees the same machines, but does not understand them. He sees their parts, but does not detect the principle of their construction. His previous experience is not sufficient to give him the clue to their explanation. After an hour of uninterested observation, he leaves the hall with a confused notion of shafts, wheels, cogs, bands, etc., but with no greater insight into the principles of machinery. Why has one man learned so much and the other nothing? Because the machinist had previous knowledge and experience which acted as interpreters, while the other man had no old ideas and so acquired nothing new. "To him that hath shall be given."

parts. But there is no real contradiction. There are many objects which we first take in as a whole, and then descend to an analysis of their parts, e.g., a camel, a mountain, a flower. Almost all concrete objects are approached in this way. But there is an entirely different set of ideas which can be best approached gradually, adding part to part and comparing till the whole appears. This is the case with the general classifications in the natural sciences, and in all subjects that admit of a system of classified objects.

**Excite Interest.**—That the *interest* of children is to be awakened in the subject of study may now be accepted as one of the axioms of teaching. To answer the important question how a healthy and sustained interest is to be awakened in studies would be to solve many of the greatest difficulties in teaching. To interest children, not simply for the hour, but permanently; to select, arrange, and so present ideas that they awaken a steady appetite for more knowledge and create a taste for what is excellent, *this* at least is one aim that we must insist upon in recitation work. Some things already mentioned contribute to this result. Nature and natural objects have a charm for us all, children included. Story, biography, history, and poetry, each in its place and time, awakens mind and heart, and sows seed that will germinate and grow.

**Compare.**—In school life, also, the more serious work of study requires us to put familiar objects together and to notice how they resemble or differ, and it may excite interest to note the superiority of one or its defect. This gives children a chance to see and compare for themselves, to draw conclusions and form their own opinions. Still more the tracing of causes and their effects, the following out of analogies in botany and zoology, or in the life of great men, may contribute greatly to interest older children.

**Arouse Self-activity.**—We are already encroaching upon the principle of *self-activity* which we believe, with many other teachers, should be systematically encouraged from the beginning of school life. The child itself should have something to do, some aim set up to be reached, a problem to be solved, a series of objects, places, or words to develop,—not simply something to learn by heart, but something that requires thought, discovery, invention, and arrangement; e.g. first-grade children may be asked to hunt up and form a list of all the words in the lesson containing *th* or *ll* or some other combination.

**Develop Will Power.**—*The effort to create* a progressive and sustained interest in study and the arousing of self-activity are steps preparatory to the *growth of will power*. This is one of the root ideas of intellectual as well as of moral

training. In connection with self-activity and interest there must be the pursuit of definite and clearly seen aims, i.e. definite and clear to the pupil, if will energy is to be developed.

Of course the adaptability of the materials of study to the child will have much to do with exciting interest and with the exertion of will power in their pursuit. But every step should involve a clearly seen aim, a natural sequence of subjects, so that children can see the objects they are working for at least in outline, and the means of reaching them. For we adopt the principle that there can be no exercise of will power unless the aim and the possibility of reaching it be distinctly seen.

**Summary.**—Summing up the essential ideas of good recitation work, we say: The training of the senses to close, accurate observation, and the process of comparing and classifying objects and ideas, constitute the fundamental action of the mind in learning. The assimilation of the new materials of knowledge by bringing old, familiar ideas into the closest contact with the new according to the principle of *apperception* is the true interpretation of the popular idea "from known to unknown."

The principle known as association of ideas requires that all our knowledge be united into firmly compacted groups and series, and bound together by the law of cause and effect. Finally, a sustained interest, self-activity, and will

energy, steadily cultivated from the earliest years of school life, indicate that it is not simple knowledge or increased information which we aim at, but increase of intellectual resource, and a permanent, progressive interest in knowledge.

**Lesson Unities.**—It is evident that in this kind of teaching no single recitation can be viewed apart from the series of lessons to which it belongs. The subject-matter of any study should be first selected so as to be adapted to the age, spirit, and previous knowledge of children, and then it should be arranged into a succession of topics or unities each of which may be treated first separately, and then in its relation to the others. One of these methodical unities may be completed in a single recitation or it may spread over a series of lessons.

**Steps in Teaching a Lesson.**—On the basis of the psychological principles already treated, the process of teaching a new topic leads through a series of steps. The Herbartian school of pedagogy in Germany has developed a plan of recitation work based upon these steps, and has applied them successfully to the teaching of common-school studies. The two main stages on the road to acquisition of knowledge have been already indicated: 1. As observation and scrutiny of individual things; 2. As the association and comparison of objects or ideas with a view to arrangement into classes or for the purpose of generalizing and formulating results.

**First Stage : Presentation.**—The first stage may be broken into two smaller half-day journeys. Before setting out on a journey it is well to survey the road and glance at a guide-book. Before beginning a new subject it is well to recall familiar ideas bearing upon it, to refresh our minds. This is a *preparatory* study, a making ready for the lesson. The second part is the actual presentation of the new facts, the familiarizing the mind with the new subject.

The subject-matter is now at hand, and the first stage of teaching the lesson is complete. But this newly acquired information has not yet settled to its proper place in the mind; it is not properly associated with previous knowledge.

**Second Stage: Elaboration.**—This elaboration of newly presented ideas and facts leads us through a series of three additional steps, which thus complete the process of acquisition: 1. The new object is compared with similar things already in the mind. In this way it finds its fitting companionship. 2. Every new object presented to the mind and then compared with others gives rise to new conclusions. The clear statement of this general result or truth focuses the main idea of the lesson. 3. This general truth may now be exemplified in new cases and applied to new circumstances.

Briefly stated the steps are as follows: 1. Preparation; 2. Presentation; 3. Association and

comparison; 4. Generalization; 5. Practical application.

It is to be remembered that a subject to be treated in this manner must contain a unity of thought; that it must centre in an object which is typical of a class, so as to serve as a basis of comparison and generalization.

**Analogy of the Farmer.**—These steps may be fairly illustrated in their general outlines by an analogy taken from the work of a farmer. 1. The soil is ploughed, harrowed, and made ready for the seed. 2. The grain is sowed upon the ready soil and raked in. 3. The growing grain is cultivated and the weeds destroyed. 4. The harvest is brought in. 5. The grain is used for practical purposes of food.

The analogy is so complete that it scarcely calls for a commentary. The preparation is the preparing of the soil of the mind for the seed-corn of instruction. The presentation is sowing the seed upon this prepared soil of the mind. The third stage is the cultivation of the growing crop, the working over of the knowledge just acquired by means of comparison. The fourth step is the harvest time, the drawing out of the general truth or law involved in the lesson. Finally, the particular uses to which the harvest grain is put, the application of acquired knowledge to the practical uses of life.

**No Royal Road in Teaching.**—The five steps just outlined are based, as we believe, on general

principles which make them applicable to almost every subject of study. But the manner of applying them to different studies varies greatly. The ability to apply them successfully to geography would not qualify for equal success in arithmetic or botany. The teacher must first be a proficient in the study which he would desire to teach in this way. Both the concrete facts and the general truths of the subject should be familiar and logically arranged in his mind. To put it in a mild form, the teacher must have a thorough knowledge of his subject, and must have this knowledge well digested for teaching purposes *For teaching purposes!* That is, that we have a knowledge of those psychological principles which we first outlined as a basis of the five steps, viz. observation of concrete things, apperception, comparison and association, generalization and the awakening of interest, self-activity, and will power, by these means. Now it is evident that no plan based on these principles will furnish a *royal road* to success in teaching. Success along this line depends upon industry, adaptability, and continuous practice. It will be an uphill road for some time, and it is only gradually that one will acquire that mastery of the subject and that tact in the manipulation of a somewhat complex machinery that come only through toil and pains.

**Dull Machine Work.**—It does not require a

prophet to see that the five steps in careless hands will degenerate into a dry mechanical routine. It might be even worse than text-book lore, for a good text-book is always better than a poor teacher. It is not intended that this plan and these principles shall make a slave of the teacher, but that by a hard-earned mastery of their details, and by a successful application of them to the concrete materials of study, he gradually works his way out into the clear daylight of conscious power. In this way the teacher becomes a skilled architect, with clear ideas of the strength and resistance of materials.

**Examples of the Formal Steps.**—Three simple illustrations of this succession of steps in the treatment of a subject will now be given. Some criticisms which have been raised against this plan will then be discussed. Finally, the translation of Professor Rein's introduction to the formal steps will be appended.

(1) *Statement of the Aim.*

We will examine and study the *oak trees* found in our forests.

1. (Preparation.) Let the class recall what they have seen of oak trees in the woods, size of trees, acorns. Do they remember the shape and size of the leaves? What is the appearance of the wood and what is it used for?

(The purpose of the teacher here is not to

present any new facts to the class, but simply to find out what they remember from previous observation and to excite interest.)

2. (Presentation of facts.) The best plan is to visit the woods or an oak grove, notice carefully the trunk and bark, branches and leaves, acorns (food of squirrels.) On returning to school, have an accurate description of the oak tree from the class, according to definite points (e.g. trunk and bark, branches, leaves, and acorns.) Then follows a discussion of oak wood for chairs, desks, doors and windows, beams, posts and other building purposes, bridges, walks, etc. (The teacher adds such facts as the children cannot furnish.)

3. (Comparison.) Name the different kinds of oak—white oak, red oak, burr oak. Notice the differences in leaves and acorns, size of trees, wood and uses.

4. (Classification, generalization.) Definition of the oak family. The oak is a native hardwood tree. It has acorns, and simple leaves of nearly uniform shape. The wood is tough and strong, of varying colors, but always useful for furniture, building or other purposes. (After the previous observation and discussion, the pupils will be able to give a definition similar to this, assisted by a few questions from the teacher.)

5. (Application.) Children should be trained to recognize the different kinds of oak trees

about home, and to distinguish them from other hard-wood trees. They may also notice the oak panels and furniture, and be able to tell oak finishing in public and private houses.

*Note.*—If there is time enough for a separate study of two or more varieties of oak, and the trees are close by so as to be seen, it is well to treat each variety according to the first and second steps, and in the third compare as above.

(2) *The Cotton-gin.*

(Aim.) We will find out how a machine was invented to remove the seed from cotton.

1. (Preparation.) Question the class on the cotton-plant, raising and picking cotton, and the uses of cotton.

2. (Presentation.) Tell or read the story of Whitney and the invention of the cotton-gin. Notice the effects of this invention on the production of cotton in the South, and upon the growth of the South.

3. (Comparison.) Name other important inventions and their effects,—sewing-machine, printing-press, steam-engine, reaper, steamboat, telegraph, etc. Which of these had the most important results?

4. (Generalization or abstraction.) Call upon the children to state the general purpose of all these inventions, to save labor, to make a better use of the forces of nature.

5. (Application.) Do any hardships result to anybody in consequence of these useful inven-

tions? (e.g., men thrown out of employment by use of machinery.)

(3) *Nouns.*

Suppose that a class has had oral and written language work, but no technical grammar.

(Aim.) In talking and writing you have been accustomed to use words. We propose to talk now about a class of words called *nouns*.

1. (Preparation.) Have you heard the word *noun* before? Give some words that you think are nouns. Try to point out the nouns in this sentence. "The ship sailed over the ocean."

(It may be that these questions cannot be answered by the children for lack of knowledge. But even if they show no knowledge of the subject, these questions may excite curiosity and awaken interest, and they require very little time.)

2. (Presentation.) I will give you some words that are called nouns. Stove, cherry, hat, courthouse, carpet, picture, whale, shoe, barn, mountain. Have you seen all these things?

3. (Comparison.) Notice these words and see if you can tell what they all refer to. We will take two or three words that are not nouns and see what they refer to. *Up, and, quickly.* What is the difference between these words and the nouns? Look at the nouns again and tell what they refer to.

4. (Definition.) Looking at our list of nouns again you may tell what a noun is. So far as these words are concerned every noun is the name of what? (The conclusion that the children may reach by a little good questioning is that all these nouns are the names of objects. The treatment of proper nouns and abstract nouns may be according to a similar method in the following lessons, and then the complete definition of a noun can be obtained.)

5. (Application.) Each child may make a list of nouns that we have not had.

Let easy sentences be given in which they may point out the nouns.

CRITICISMS.

**Anticipating Results.**—One objection raised to the clear statement of the aim of a lesson at the start was that in such a statement we tell the children what we wish them to find out for themselves, that we anticipate results which they should learn to discover and state. This criticism is just if true. But it is a misconception of the proposed manner of stating the aim. It is a fundamental principle that the statement of the aim should not *anticipate* results. It should be definite and clear, but it should state a problem for solution. It should point in the direction of the result without giving the clue. If the teacher proposes to develop and illustrate the law of multiple proportions in phys-

ics, he would not state the *law* as the aim, but put it in some such form as this: We have noticed that certain chemical elements unite to form compounds; we will next investigate the question as to whether they unite according to any definite law. Experiment and investigation will reveal what the law is.

**Pupil's Work.**—Another serious criticism of this plan of class-work is that it outlines well the work of the *teacher*, but what does the *pupil* have to do?

We will attempt to illustrate as follows:

(Preparation.) The pupil has to prepare his lesson before coming to the class. This is done in all good schools. Suppose that the subject treated is the early discovery and exploration of the Ohio Valley previous to the French and Indian War. The teacher proposes this as the next topic for history study. If this subject is treated according to the recitation plan, the first thing is to determine how much or how little the children know of the proposed subject. Who were the first explorers of the Ohio Valley? Whence came they? Who owned the land? The topics naturally brought out by this brief questioning are, The French, the English, the Indians. Having determined thus what the children know, and having excited their curiosity, the next work for the teacher (at this stage) is to indicate what pages of the text-book and, if desirable, what pages in other histories bear directly upon this

topic. If the references are more than one person will have time to look up, certain persons or sections of the class may be asked to be prepared on special points or books of reference. The work of preparing the lesson by studying up these references is similar to that of lessons as usually assigned.

(Presentation.) Now the pupil is required not only to present the topic which he has studied, but to pay close heed to the additional facts and topics presented by other pupils, and to see if he can arrange the facts presented by the whole class into systematic form. The proof of this ability is the oral statement of the main points. It is plain that the pupil must have his wits about him, pay close attention to all that is said, and then exercise his own powers of arrangement and expression.

With the completion of this part of the work we should be done with the first two steps, namely, the *preparation* and the presentation of the facts.

The third step consists of a *comparison* of the facts of this lesson with similar facts or topics in other lessons previously learned. The self-activity of pupils is fully awakened by asking them to reproduce similar cases in American history where the English and French, the English and Dutch, the English and Spanish have both explored and laid claim to new terri-

tory, causing conflicting claims: e.g. the claim of the English and French to Nova Scotia; the claim of English and Dutch to New York; the claim of English and Spanish to Georgia and Carolina; etc.

The clear statement of each of these cases and their comparison will bring out a common conclusion from the children regarding them all (fourth step). What did all these claims rest upon, and how were they enforced? The pupil's own intelligence and moral judgment are abundantly sufficient to answer these questions. The conclusion thus reached will probably point to the manner in which the claim to the Ohio Valley was settled (fifth step).

After a topic has been thus fully treated before and during the recitation, it will often prove an excellent exercise to call for a written composition giving a full discussion of this topic. The pupil is left free to treat the main topics in his own way. The outline of the subject has been already fully developed in the class, but the pupil is free to discuss the points in his own language and to form his own conclusions.

TRANSLATION FROM PROF. W. REIN'S "DAS ERSTE SCHULJAHR."

**The Formal Steps in their Outlines.**—Proceeding now to the act of instruction itself, we notice first of all that the subject-matter of every

study like Arithmetic or Geography is to be divided up into a large number of smaller parts, units of instruction, each of which will occupy from one to four, or even more, recitations. These divisions of a term's work in History or Geography are what Ziller calls *methodical unities*, and each one of them is to be carried through the successive steps of a systematic recitation plan, namely, the formal steps.

For if the single topics which go to make up the great variety of school studies are to be clearly understood and thoroughly assimilated, each must be worked over by itself. For this purpose sufficient time must be given so that the details of each object can be absorbed, and this absorption with the details must be succeeded by a period of recollection, a brief survey of the situation, a glance backwards and forwards, so as to fix the relations of this object to others. Suppose that the instruction in a class begins with one of these methodical unities. The first thing to do is to make plain to the pupils the general *object* or *aim* of the lesson. In a primary class, for instance, the aim may be so expressed: "To-day we will hear the story of a little girl that lost both father and mother." For a more advanced class as follows: "We are acquainted with the earth as a great ball hanging in space. We will next see whether this ball is at rest or in motion."

**Reasons for Stating the Aim at First.**—There

are several important reasons in favor of the plain statement of the purpose of a recitation at the beginning. 1. It pushes aside and out of view those irrelevant thoughts which chance to occupy the mind before the recitation, and it accordingly makes room for those ideas which are about to be developed. 2. It transplants the children into the new circle of ideas which are to demand their attention, and it encourages the rise in the child's mind of those older and kindred thoughts which will be most welcome supports to the new ideas about to be presented. 3. It excites expectation, and this is the most favorable disposition of mind for the beginning instruction. 4. It gives the child a strong incentive to an exercise of the will, and impels it to voluntary co-operation in solving the difficulties of the proposed lesson.

The last point is of fundamental importance, and worthy of a special consideration. The pupil should know beforehand what is coming if he is to bring all his powers to bear on the work of learning, and it is easier to call out all his effort if he knows beforehand just what is to be gained. To conduct a child along an unknown road toward an unknown object, by means of questions and hints, the object of which he does not see, to lead him on imperceptibly to an unknown goal, has the disadvantage that it develops neither a spontaneous mental activity nor a clear insight into the subject.

Having reached the end of such a line of thought, the pupil looks about himself bewildered. He cannot survey the road that he has just gone over. He does not comprehend what has happened to him. He stands at the goal, but does not see the relation in which the result stands to the labor performed. He does not rise to that satisfactory mental activity and favorable disposition of mind which are stimulated by the pursuit of a clearly set purpose. No aim, no will! Now since an instruction that aims at moral character finds its highest purpose in the development of will power, it follows that a lesson should develop the will just as much as the understanding. But to develop will-power, instruction must pursue plainly set aims, and to reach them the pupil must be called upon to throw all his mental powers into the *effort*.

The general purpose of a lesson having been made plain, the real work of teaching then begins, and in every methodical unity this work runs through a succession of five steps.

**First Step.**—The first step in this process consists in a preparation of the ground for the reception of the new lesson. This is done by freshening up and calling clearly to the mind such older ideas as bear upon the new, such as by their similarity explain and assist the understanding of the new. It is only when a troop of old familiar ideas come forth to meet the

strangers that they are received easily into the mind. It is in this way alone that they can make a lasting impression upon the thoughts aud feelings. If these forces which lie asleep in the background of one's thoughts are not called into activity, one will remain dull and indifferent to the recitation, and the instruction reminds us of a learned discourse which shoots over the heads of the listeners. Instead of interested attention and participation, it produces only weariness of mind.

This result will always follow when that which is said awakens no chords of sympathy in the minds of the hearers. If nothing springs forth from within to greet that coming from without, the lesson will be meaningless and the pupil unreceptive. Things new and strange can only be appropriated by means of a wealth of old ideas, and the plan of recitation must see to the preparation of these old materials during the first step.

**Second Step.**—The second step begins with the presentation of the new lesson, which will vary in manner according to the age of pupils and the nature of the study. A story would be related to a primary class, or developed according to the conversational method. A reading lesson for older pupils would be read. A geography topic would be presented by the teacher while talking and drawing, and a subject in physics while experimenting and speaking. If

the preparation has been of the right kind the lesson will be appropriated with ease and certainty, and the teacher will not be compelled to talk and ask and explain all round the subject. Whenever this is necessary the preparation, *the first step*, must be regarded as a failure. What has been learned is not only to be momentarily understood, but permanently appropriated. It is necessary to close up this step with repetition and drill, and these must be continued under varying forms till the lesson has been firmly fixed. In this manner the first great act in the process of teaching and learning has been completed, namely, the presentation and reception of the subject-matter, and it consists, as we have seen, of two steps, preparation of the ground and presentation of the lesson. The second act within the limits of a methodical unity is the process of building up and bringing into distinct form the general or abstract ideas which are to be drawn from the concrete materials already collected, and this second act is brought to a conclusion in the three following steps.

**Third Step.**—In the third step we are to bring together in the mind the newly won ideas, to compare them among themselves and with older ideas, and when necessary with additional new ones still to be presented; in short, to compare and to combine the new and the old. Such a comparison and union of ideas is neces-

sary for two reasons: (1) in order that connection and harmony be established in one's range of ideas, and (2) that what is general and essential in the midst of special individual things may be extracted from them. Nowhere should heterogeneous heaps of knowledge, like piles of gravel, be brought together. Always and everywhere there should be an effort towards well associated and systematized knowledge. "Our whole personality rests in the end upon the unity of consciousness, and this is disturbed and injured when the mind is driven through a confused conglomerate of knowledge in which unconnected ideas are piled up together."

But every concrete individual thing which is treated as a *methodical unity* contains or embodies a general truth, an abstract notion, which may be separated from the concrete thing in which it is embodied. But it can only be brought to light by bringing this object into comparison with other well-known concrete objects which contain the same essential idea or truth, by bringing together in the mind things similar but not identical. That which is common and essential to all is strengthened by repetition, while accidental features and differences drop easily into the background. The common truth which all the objects embody springs forth as a new idea of higher potency, as a general notion, as a rule or law.

**Fourth Step.**—But the abstract idea is still bound up with the concrete thing; a complete separation of this abstract or general notion from its clothing in particulars has not yet taken place: and this is the purpose of the fourth step. By means of a few well-directed questions we call out into pure and simple relief the general truth or rule, freed from its particular applications. We reduce this idea to definite language expression, and finally bring it into systematic connection with our previously acquired knowledge. It only remains to impress the abstract ideas thus acquired upon the mind by repetition, so as to convert them into a real mental possession. With this the process of abstraction is complete, but teaching cannot afford to end the matter here. A fifth step is needed to convert the knowledge acquired into use.

**Fifth Step.**—Knowledge and ability to know have of themselves no value either for the individual or for society. Knowledge must first step into the service of life. One must know how to apply his knowledge. Knowledge and power must be changed into use; they must be transformed into conscious ability. But will not this take care of itself? Not at all. Hundreds of children have learned how to estimate the surface of a triangle, and many of them can give the proof of the rule with ease and precision. But put the question to one of them:

How many acres does a triangular garden contain? He will stand helpless, unconscious of the fact that he possesses in his own mind all the necessary elements for the solution of the problem. How is this explained? He has not learned to employ his knowledge. It is a dead possession. And are there not plenty of such cases? The conclusion is that even the application, the use of knowledge, has to be learned. "Here also it is only practice that makes the master. But drill which aims only at mechanical habit is not sufficient. Even during school life that which is learned should be applied as often and in as many cases as the narrow limits of the child's life permits."

Since the value of knowledge culminates in use, instruction should cultivate its use so far as possible in a closing step called *application.* For this purpose the child should be held to a diligent use of its stock of ideas as rapidly as they are acquired, to go from the particular to the general, and back again from the general to the particular, to traverse his circle of ideas from a given standpoint in all directions, and to make use of the results reached for the solution of moral, theoretical, and practical questions. In this manner a child's acquired ideas may be so developed, so welded together in firm, systematic, comprehensive association, that all his knowledge becomes a reliable, personal posses-

sion. It is clear and systematic as well as practical.

And this ends the development of general notions within the limits of the formal steps of instruction.

To recapitulate: In the work of instruction each methodical unity should be carried through the following steps:

1. It should introduce the new lesson by means of a preparatory discussion.

2. Present the new lesson.

3. Compare the new in its parts and with older ideas and their combination.

4. Draw out the general results of this comparison, and arrange them in systematic form.

5. Convert the knowledge acquired into use.

# BOOKS ON
# CHILD STUDY

## Hall's Contents of Children's Minds on Entering

SCHOOL. By Dr. G. STANLEY HALL. Details the results of an inquiry into a matter of much importance to primary teachers. A knowledge of what the average child already knows when he first goes to school will be a valuable guide in determining not only what to teach him but how to teach him.

This little book gives the results of careful investigations made by the writer and others to determine the amount and kind of knowledge possessed by the average child on entering school. The book opens up a valuable field of inquiry and shows how it may be carried on. It is sure to interest teachers.

All "Child Study" organizations should read this book. Dr. Hall is the acknowledged leader of the child study movement in this country.

Size, 6 3-8 x 4 1-2 inches. 56 pages. Limp cloth covers. **25 cents.**

## Hall's A Study of Dolls.

By Pres. G. STANLEY HALL. This is a very full account of one of the most complete and satisfactory investigations along the line of "Child Study" that have been undertaken. It is first presented in this book in a form for general circulation and must prove of the greatest value to all pursuing any study or investigation of the intellectual life of children. Child study circles will do well to make a study of this book.

Size, 7 1-4 x 5 inches. 69 pages. Limp cloth cover. **25 cents.**

## Hall's Story of a Sand Pile.

By G. STANLEY HALL. This extremely interesting story was published some years ago in *Scribner's Magazine* and is now for the first time made accessible to the great body of teachers. All interested in the great child study movement should read this very suggestive story. A photograph of the "Sand Pile" is given. Limp cloth. **25 cents.**

## Perez's First Three Years of Childhood.

By BERNARD PEREZ, Edited and translated by Alice M. Chrystie, with an introduction by James Sully.

This is the most widely known and without doubt the greatest and most valuable study of infant psychology. It is an important book for the library of the student of education. For the great body of teachers who are now interested in Child Study this is the first book to read. No teacher can intelligently study children from the age of five years who has not made some study of the psychology of earlier years.

Our edition is the handsomest published. It has a new index of value and is well printed and bound.

Size, 7 1-2 x 5 inches. 295 pages. Library cloth binding, **$1.50**; to teachers, **$1.20**; postage, **10 cents.**

# School Entertainment Library.

*What difficulties teachers have in trying to provide suitable material for school entertainments and how much money they spend without very satisfactory results. Here are seventeen books, all new, made with the needs of the teachers in view, containing exercises of the most attractive kind for every school occasion. They give sufficient material for many years at a cost much less than would otherwise be expended for something that cannot prove as satisfactory.*

| | | |
|---|---|---|
| 1. | How to Celebrate Arbor Day | $.25 |
| 2. | How to Celebrate Washington's Birthday | .25 |
| 3. | How to Celebrate Thanksgiving and Christmas | .25 |
| 4. | Spring and Summer School Celebrations | .25 |
| 5. | New Year and Midwinter Exercises | .25 |
| 6. | Fancy Drills and Marches | .25 |
| 7. | Christmas Entertainments | .25 |
| 8. | Authors' Birthdays. No. 1 | .25 |
| 9. | Authors' Birthdays. No. 2 | .25 |
| 10. | Primary Recitations | .25 |
| 11. | Lincoln the Patriot (Patriotic) | .15 |
| 12. | At the Court of King Winter | .15 |
| 13. | A Visit from Mother Goose | .15 |
| 14. | An Object Lesson in History | .15 |
| 15. | Banner Days of the Republic (Patriotic) | .15 |
| 16. | Mother Nature's Festival (For Spring) | .15 |
| 17. | Christmas Star (Christmas) | .15 |

**We will send the set postpaid for $3.20 cash in advance.** *It will also be furnished on the installment plan. For terms address the publishers.*

---

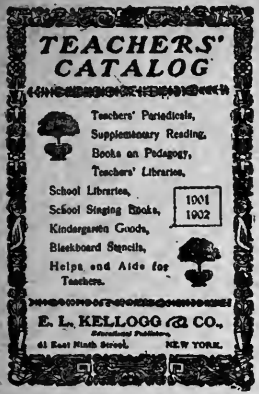
**E. L. KELLOGG & CO., 61 E. 9th Street, New York.**

# Kellogg's Catalogs

*For Teachers, Schools, and Cultured Homes.*

### 1. Teachers' Catalog.

144 large pages elaborately descriptive of books and requisites for progressive teachers, chiefly our own publications. 2c.




### 2. New Century Catalog.

Classified descriptions of the 1600 best books and aids for teachers. *Everything* important and recent of all publishers 100 pages. 2c.

### 3. Kellogg's Entertainment Catalog.

Speakers, Dialog books, Drills, and Marches, Motion Songs, School Plays, Tableaux, Mock Trials, Cantatas, Operettas, Musical Entertainments, etc., 48 pp.

### 4. Teachers' Library List.

Selected libraries for systematic study and reference, sold on installments or for cash.

### 5. School Library Catalog.

Nearly 1000 of the best and most popular books, at lowest possible cost

### 6. Popular Classics and Classic Fiction.

The world's best books, in paper covers at marvelously low cost—3c. to 15c. each; for home and school. Excellent for supplementary reading.

### 7. School Singing Books.

Full descriptions of all popular books in this field, with their lowest cost.

### 8. Brown's Famous Pictures.

Fine artistic reproductions, at the marvelously low cost of 1c. to 10c. each, of of about 2,500 portraits of famous people, their homes, historical scenes, the best representation of the art of all nations and times. 2c.

### 9. Blackboard Stencil List.

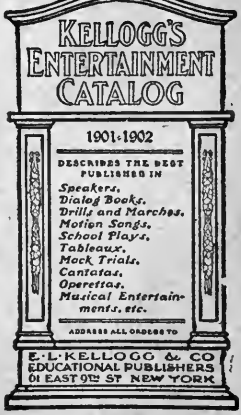
For Blackboard and Slate. Coming into universal use; most helpful in teaching, especially to teachers without special skill in drawing.

### 10. School-Room Portraits.

Excellent for school-room decoration and for teaching by noble example.

### 11. General Literature Popular and Standard.

History, Biography, Science, Fiction, the world of letters generally. The most complete single collection ever made, especially of low-priced editions.




**AT LOWEST COST.** We are much the largest publishers and dealers in our special lines reaching, yearly, monthly, and weekly, thru our five periodicals, hundreds of thousands of teachers of the United States. We are able to give our patrons the lowest obtainable prices. Address,

**E. L. KELLOGG & CO.,** Publishers and Booksellers, **61 E. 9th St., N.Y.**