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Editorial Notes.

IN next number of the Entrance and Public School Leaving Department the Arithmetic paper in the late Entrance Examination will be solved. Look out for it, and, when you see it, study the method used, and see if it is not good. This will be followed by solutions of other of the late Entrance and P.S. Leaving papers.

THE second of the series of pedagogical articles which are being written for the special benefit of Model School students, but are, we cannot doubt, equally valuable to very many teachers, appears on page 130 of this number. The next article will deal, from the point of view of an educated and experienced teacher, with the all-important subject of "School Management." This is always a living theme for teachers.

YOUNG teachers will find some very useful hints in Mr. Mark M. Donald's excellent paper on "Class Questioning," which we have placed in the department of Class-room Methods, in this number. Do not fail to read it. Nor is it, by any means, to be taken for granted that many a teacher who is no longer a novice may not get some useful suggestions from the same paper, or, at least, be led by it to the conclusion that there is something yet to be learnt about the subject of class-questioning, which is really practical teaching under another name.

THE Education Department has made provision for the following commercial courses in our High Schools and Collegiate Institutes: (1) A junior course—"First Form" work, and (2) a senior course—"Commercial Diploma" work. All who have passed the Entrance Examination or the Public School Leaving Examination may enter the junior department; those who have passed the recent "First Form Examination," or who hold High School commercial certificates, may

enter the senior department. These courses include a training in bookkeeping, commercial transactions, stenography, English, and mathematics.

WE have been asked by more than one teacher for definite information concerning certain changes in the Regulations of the Education Department, which they understand to have been made, to take effect during the current year. On enquiry we learn that the Minister of Education has issued a circular proposing some changes in the Regulations, but that those changes have not yet been adopted. No doubt all teachers actually engaged will be notified by Departmental circular as soon as any such changes, affecting their work in any way, shall have been decided on. We will, however, as soon as definite information is available, publish, as we have hitherto done, a carefully prepared statement of all the changes made. Meanwhile teachers cannot go wrong by following the Regulations as they now stand, as these will rule until changed or superseded.

SEE the H.S. Entrance and P.S. Leaving Department for full notes on Literature selections for these two courses. In this department will be found also a continuation of Mr. Casselman's instructive papers on Drawing, a branch which had, perhaps, before the commencement of these papers, hardly received the prominence in our columns its importance demands. Drawing, as a second means of expression, is pretty sure soon to take a higher place in the schools, as an educational acquisition of the first importance. The man or woman who can sketch rapidly and skilfully from nature has really two means of expression, while the one who is without this ability is shut up to one. Mr. Armstrong's eminently practical papers on Grammar and Mental Arithmetic make up a number of this department which must commend itself to every hard-worked teacher as a most valuable auxiliary to be put into the boys' hands. Get a few copies and try it.

WE do not often turn aside from our work to call attention to what we are doing; but as this is a season of the year at which THE JOURNAL falls into the hands of many new subscribers, and may, it is hoped, be seen by many others who need but to get a clear notion of its contents in order to promptly become subscribers, we shall be pardoned for saying an additional word to indicate what is to be found in this number and what may be expected in following numbers. To commence with the Primary Department, where, as a teacher of high standing writes us, "Rhoda Lee is always good," we beg leave to call special attention to her article in this number on "Phonic Reading," a subject in which she is known to be particularly good and to have been particularly successful in the schoolroom. This article is the first of a series which will briefly cover the whole ground. No young teacher can afford to lose these articles, no older one who has paid attention to the subject will willingly do so.

TAKING a step upward, we come to the new Intermediate Public School Department. This, under the care of Miss M. A. Watt, is yet in the tentative stage, but, we venture to think, has made a good beginning. As we have before intimated, we expect it to grow and become better, number by number. The Mathematical Department does not appear in this number, but it is too well known as one of the fullest and best to be found in any Canadian or American educational journal or magazine to need to have attention directed to it by us. No better proof of its interest and usefulness could be asked for than the voluminous correspondence it brings to its Editor, and the enthusiasm it arouses in the solution of problems. We hope that every reader will examine carefully the Scientific Department, which, it will be seen, is conducted by one of the ablest specialists of Toronto University in that subject. Illustrations are to be more freely used than hitherto, "regardless of expense," as the advertisers say, and we expect the department to prove more attractive and instructive than ever.

Special Papers.

TO COUNTY MODEL SCHOOL STUDENTS.

SECOND ARTICLE.

In this article we wish to address you on teaching. As beginners in the work you cannot at first realize the difficulties which will meet you in teaching young children. To be successful in this, you must proceed along the lines on which the child has passed. Your methods must be in harmony with those which the child has practised—with those by which he has been teaching himself, under the guidance of nature, before he enters the school. He comes to school knowing a great deal, and it will be well for you to inquire how he has obtained his information. He has not learned it from books. From conversation with others he has learned merely the names of things, of qualities, of actions, etc., but how has he learned the *meaning* of these words?—not from the words themselves, for words alone do not convey thoughts.

If, to illustrate, I use a word with which you are not familiar, there will be no corresponding thought in your mind. If you hear the word roup for the first time, no thought is awakened; but if, instead of roup, we say "a sale of goods by auction," at once the mind grasps the thought. If you ask yourselves why is this, you will see that, while there is no thought in the words, yet each has been used by you before in connection with an idea in the mind, as its sign, so to speak, and, being retained by the mind, as soon as the sign is seen or its name heard, at once the corresponding idea is called up in the mind, and associated with its sign. But it must never be forgotten that a sign or symbol has no meaning or use unless there is a corresponding idea already in the mind to be called into activity. If a child has no idea of the number seven, the figure 7 has no meaning whatever for it.

This may seem a simple matter, but probably few of you have ever thought of it before. The neglect of this is the cause of much failure in teaching, not only in the failure to impart information, but in causing children to become confused, and to lose heart in their work.

Young teachers, fresh from High Schools and High School text-books, are apt to use a rigid phraseology of technical terms, and fixed definitions, which are often worse than meaningless, inasmuch as they are confusing, if not stupefying, to a child.

You will, in all probability, realize the truth of this when you come to teach. You will stand before your pupils, and in your eagerness to teach, will undertake to tell them all you know of the subject to be taught. You will talk and talk and talk on, expecting that because you tell, your pupils must, of course, learn; but, when the result is tested, it will too often be found, like the little questions or "sums" which we give as the first exercises in addition, when we "add the lines up" there is *nothing* to carry.

Nearly every young teacher has bitterly felt the disappointment of having his work weighed in the balance at the first visit of his inspector and found to be wanting.

If this should be your experience do not blame the pupils, do not class them as stupid. There may be stupidity somewhere in the work, but the chances are it can be found in using stilted forms of speech, which "went over the children's heads," causing confusion rather than thought, and in forgetting the worthy maxim: "The *more* you *tell* the *less* you *teach*"; or, to put it in another form: "A multiplicity of words causes poverty of thought."

We started out by advising you to teach little children as far as possible in the way in which they had already been acquiring knowledge. What is this natural way? How does this product which we call knowledge first get into the mind, so to speak? It comes primarily from without, from the world outside of ourselves, from realities, from entities, from what is usually called the concrete. And, in order that there may be knowledge of these entities, there must first be contact between them and our organism. This contact must first be of the realities *themselves*, not of their names, not of their signs or symbols. And this contact must be made through the senses—seeing, hearing, touching, etc. It can be made in no other way. There is no other avenue by which knowledge of the externality can be acquired by the mind. Language, at first, is absolutely useless. Of course, when the mind has acquired knowledge through the reality, it can, in obedience to language, call up this knowledge, and by imagination rearrange it and transform it into new compounds in harmony with verbal description. But we must ever remember that imagination, however active, deals only with material already in the mind. It may form new compounds, but it cannot create the elements. These must come, as we have said, primarily from without, through the senses to the mind.

For example, if a person had been born blind, had no thought-material whatever in his mind of color, how could you by words explain to him what purple meant? How would you begin? If you were to attempt it you would at once find out how utterly useless words in themselves were to convey thought from your mind to that of the blind man. You would also realize in your helplessness, as you never realized before, that there is no other way of giving a knowledge of color to the mind than by conveying the light through the eye, and that if this or any other sense is destroyed nothing can be done to enable imagination or anything else to act as a substitute for it. This truth, being understood, should have a most important bearing on your teaching. It is in obedience to this natural law that objects are put before little children to enable them to distinguish number before figures or names are given to them, that the moulding board is used to teach the natural divisions of land and water before names or definitions are given, that botany,

chemistry, etc., are now taught rationally, are taught through the plants or other things to be learned; it is, in short, the foundation of all objective teaching.

You should be careful, however, not to limit your teaching of this kind merely to what may be illustrated by means of what is commonly understood by the term *object*. It should include much more than this. In grammar nearly everything should at first be taught in this way. The sentence, the different kind of sentences, the subject, the predicate, all the parts of speech, the inflections of words, etc., should be taught objectively. Just as you put a piece of chalk in a child's hand in order that he may know what chalk is, so the different things to be taught in grammar should first be placed before the pupil, in order that he, under the skilful direction of the teacher, may see for himself the form and the use of the thing to be learned before any technical term or definition is presented. In this way only can there be any real knowledge.

In arithmetic, also, the objective teaching should not be limited to objects to illustrate number. It should always be used for primary examples of operations to be performed, and should be extended, if possible, to assist pupils, when necessary, to understand difficult problems. Occasionally a teacher is found who teaches reduction objectively, by means of measures, as gallons, quarts, and pints, and requires the pupil to find out for himself the number of quarts in a gallon, etc., and afterwards, by induction, leads him to establish his own rule for solving problems. Long measure and other tables are taught in the same way.

The teaching of reduction in this way, with the use of objects to illustrate number, and the use of bundles of splints and single splints to explain the operations of "carrying" in addition, and of "borrowing" in subtraction, which is practised in most schools containing primary classes, is strictly in accordance with this natural law of which we have been speaking, that anything must first be learned through *itself*.

We would advise you, in your teaching of arithmetic, to apply it to all primary operations to be performed. 6 plus 3 conveys no meaning at first to a child's mind, and there is a time in every child's life when he has no conception whatever of what you mean when you say six and three are nine. And he can grasp the meaning only in one way—first by knowing what six is and what three is, and then by putting six objects and three objects together and noting the result.

As in addition, so in subtraction, multiplication, and division. Let the child first *know* what these terms mean, not by putting figures and signs upon the blackboard, but by putting objects in his hand and allowing him to perform the operations for himself. In what are commonly known as type problems, have a sufficient number solved by means of objects, wherever possible, in order to prove to you that the operation is thoroughly understood by the pupil before figures are used at all. In this way only can you be certain that the

pupil really grasps the thought. Many a teacher allows himself to be deceived by the good memories and mere imitation of his work by his pupils.

We have dwelt upon this at some length, because it is the fundamental principle of education, upon which all good teaching must depend. When knowledge is obtained in this way, and language is used in connection therewith, the latter henceforth has a meaning when spoken or written, and we are enabled, through language, to grasp new thought, but only by its relation to what is already in the mind. If I say, "I bought the picture for fifty florins," it is necessary, in order that the knowledge may be complete, that the meaning of every word shall be already known. If, for example, the value of the florin is not known, the thought intended to be conveyed is incomplete, because the mind lacks this one element necessary to complete it, and it can be put in possession of the full thought only by using some other word, or words, to represent the value, with whose meaning the mind is already familiar. Everything new to be learned should be taught, if possible, in its relation to something which is already in the mind. Discrimination has very properly been called the basis of all knowledge. The points of similarity, or of contrast, between what is often called "the known and the unknown," when detected by the learner, awaken interest, secure attention, and develop mental activity. When knowledge is obtained in this way, not only is the mind awakened and assisted to grasp new difficulties, but its function of memory is also assisted in perhaps the best possible way.

Young teachers are themselves apt to fail to notice the relations which exist between the known and the unknown; between what they have taught and what they are to teach. They should, however, be constantly on the alert for these, which may be found in a thousand places, and which should be pointed out all along the line of their teaching. It is not enough to point them out; on the contrary, leading the pupils to thoroughly grasp these relations should be an integral and essential part of their everyday teaching.

We will close this article with a few illustrations. In teaching subtraction, the difference between it and addition should be noted; the relation between multiplication and addition, between division and subtraction; the difference between compound addition and simple addition; why the term *compound* is used; the unity of idea in compound addition, compound interest, compound sentence, compound word, etc.; also the unity in reduction of dominate numbers, reduction of vulgar fractions, of decimals; the relation between division and reduction ascending; the relation between island and peninsula, between lake and bay, between strait and isthmus, between latitude and longitude, between latitude and climate, between climate and natural products, between products and occupations of the people, between the adjective and the adjective

phrase or clause, between the different inflections, the different kinds of sentences, of nouns, of verbs, of degrees, of moods, of tenses, etc.

As we said before, the relations of similarity or contrast exist all along the line of your work, and no lesson has been prepared by you until you have detected these, and are ready to lead your pupils to detect and master them.

In this article we have limited ourselves to calling your attention to objective teaching, and to teaching from the "known to the unknown." Space will not permit us to pursue the subject farther.

English.

All articles and communications intended for this department should be addressed to the ENGLISH EDITOR EDUCATIONAL JOURNAL, Room 5, 11½ Richmond Street West, Toronto

READING AND LITERATURE.

To the Editor of THE EDUCATIONAL JOURNAL:

SIR,—Allow me to use your JOURNAL to call the attention of teachers of reading and literature to a little volume by Professor Hiram Carson, of Cornell University, entitled, "The Voice and Spiritual Culture," and published a few months ago by the MacMillan Co. The purpose of the book (I quote from the preface) "is to emphasize the importance of vocal culture in its relation to literary and general culture. . . . Special stress is laid upon the importance of spiritual education as the end towards which all education should be directed, and as an indispensable condition of interpretative reading." The work is a most valuable exposition of the subject, and is well worth the careful study of every teacher of literature.

JOHN SEATH.

Hints and Helps.

A SPELLING-BEE.

"I'm going to have a spelling-bee to-night," said Uncle John, "and I'll give a pair of skates to the boy who can best spell 'man.'"

The children turned, and stared into one another's eyes.

"Best spell 'man,' Uncle John? Why, there's only one way!" they cried.

"There are all sorts of ways," replied Uncle John. "I leave you to think of it awhile."

And he buttoned up his coat and went away.

"What does he mean?" asked Bob.

"I think it's a joke," said Harry, thoughtfully; "and, when Uncle John asks me, I'm going to say, 'Why, m-a-n, of course.'"

"It's a conundrum, I know," said Jo; and he leaned his head on his hand and settled down to think.

Time went slowly to the puzzled boys, for all their fun that day. It seemed as if that after supper-time would never come; but it came at last, and Uncle John came, too, with a shiny skate-runner peeping out of his great-coat pocket.

Uncle John did not delay. He sat down and looked straight into Harry's eyes. "Been a good boy to-day, Hal?"

"Yes—no," said Harry, flushing. "I did something Aunt Mag told me not to do, because Ned Barnes dared me to. I can't bear a boy to dare me. What's that to do with spelling 'man'?" he added, half to himself.

But Uncle John turned to Bob, "Had a good day, my boy?"

"Haven't had fun enough," answered Bob, stoutly. "It's all Jo's fault, too. We boys wanted the pond to ourselves for one day, and we made up our minds that when the girls came we'd clear them off. But Jo, he—"

"I think this is Jo's to tell," interrupted Uncle John. "How was it, boy?"

"Why," said Jo, "I thought the girls had as much right on the pond as the boys. So I spoke to one or two of the bigger boys, and they thought so, too; and we stopped it all. I thought it was mean to treat girls that way."

There came a flash from Uncle John's pocket. The next minute the skates were on Jo's knee.

"The spelling-match is over," said Uncle John, "and Jo has won the prize."

Three bewildered faces mutely questioned him. "Boys," he answered, gravely, "we've been spelling 'man,' not in letters, but in acts. I told you there were different ways, and we've proved it here to-night. Think over it, boys, and see."—*Selected.*

THINGS FOR THE TEACHER TO REMEMBER.

A recitation without attention is waste of time and energy.

All teaching should be to develop the powers of doing by doing.

The sure way to make study delightful is to teach as if it were.

In written exercises, train pupils to correct one another's work.

Use slates and the blackboard in teaching reading from the beginning.

See that the schoolroom has a steady supply of fresh air through the day.

Teach figures precisely as you teach words, by the simple law of association.

The teacher should ascertain the pupil's manner of working and habits of study.

During recess the windows should be opened, and the schoolroom thoroughly aired.

In teaching geography do not crowd the minds of the pupils with dry facts and names.

The teacher needs not only to awaken a love of books, but to guide in their selection.

Where one man inspires twenty in any other profession, the teacher inspires a thousand, or ought to.

The minds of pupils will grow towards improvement if we will but free the way before them.

Do not allow yourself to be hedged in by a wall of self-conceit so that you cannot look beyond yourself.

A school teacher who does not take a good school journal cannot keep up with the age in which he lives.

One lesson depends on another. Every unlearned lesson weakens the foundation on which the others rest.

A lesson in the first and second grades should not exceed a quarter of an hour in length under any circumstances.

Singing is one of the most valuable instruments in a skilful hand for keeping alive the tone and activity of the school.

Teachers must not forget that correct thinking must precede all attempts at talking, whether by young or old.

Your work as an instructor of boys and girls is an exceedingly noble one, and as a teacher you can and ought to be one of the best.

In teaching history, supplement the dry, condensed statements of the text-book by anecdotes, incidents, stories, and biographical sketches of noted men, drawn from your memory or from good books.—*Intelligence.*

Just to be good,

This is enough—enough!

O, we who find sin's billows wild and rough,

Do we not feel how more than any gold

Would be the blameless life we led of old,

While yet our lips knew but a mother's kiss?

Ah! though we miss

All else but this,

To be good is enough.

It is enough—

Enough—just to be good!

To lift our hearts where they are understood;

To let the thirst for worldly power and place

Go unappeased; to smile back in God's face

With the glad lips our mother used to kiss,

Ah! though we miss

All else but this,

To be good is enough.

—James Whitcomb Riley.

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Editorials.

DARK DAYS IN THE SCHOOL.

EVERY teacher knows something of them, those days when everything goes wrong. The spirit of evil has taken possession. Even the good boys have become, all at once, restless and perverse. The room seems to have become transformed into a whispering gallery. The prescribed lessons have not been prepared. The usually bright pupils are dull and careless. The dullards are hopelessly imbecile. You thought you had, by dint of patient effort, succeeded in establishing tolerable order in your department. You now wonder how you could have so deceived yourself. The room is a perfect pandemonium. Sounds of all disorderly kinds are ringing in your ears till you are half-distracted, and it almost seems as if deafness would be a relief. Every effort you make to restore quiet appears but to intensify the disorder. If you are a woman you would give anything to be able to run away to your chamber and have a good cry. If you are a masculine savage you have to exercise strong self-control to keep your hands off half a score of the little school-demons who are tormenting you and seem to delight in it. On one

point you are resolved. If you can but survive to the end of the term of your engagement you will abandon teaching thenceforth and forever. Better to break stones on the Queen's highway, or go out to wash and scrub for a daily pittance, than to suffer such tortures as you are now enduring.

Well, you survive. Another day comes of a very different kind. You enter the school with elastic step and a song in your heart. The children file in with quiet movements and bright, smiling faces. Everything falls into line and the work goes on cheerily. There are no discordant notes in the general harmony today, or, if there is an occasional jar, it does not grate upon the nerves, and a little patient effort sets it right. The pupils' minds seem to be on the alert. It is no hard task to gain their attention. They are interested in their work, and act as if they both enjoyed it and loved their teacher. The hour for closing comes all too soon. You feel as if you could enjoy another hour's work when everything is going on so nicely. You leave the schoolroom feeling that yours is indeed a "delightful task," and are glad at heart that you have chosen so pleasant, so useful, so noble a profession.

Now what is the cause of the difference? Is it in the atmosphere? Is some mysterious and baneful influence generated on certain days by some new condition of the elements? There may be something in this. Our souls are in contact with air and sky and sunbeam more closely and at more numerous points than we are apt to suppose. It is very likely that the dark days are not, as a rule, the days when the sun shines brightly in a clear sky, when refreshing breezes are blowing, and the face of nature smiling.

Other disturbing causes, too, may be at work. Some special attraction the evening previous may have kept the boys and girls from their studies, and from their beds, and all who have to do with children know what these irregularities and excitements mean; or some peculiarly difficult stage may have just been reached in the work of an important class.

Mrs. E. D. Kellogg, writing in the *American Teacher* some years ago, after a graphic description of these same "dark days" when "everything goes wrong; every sound is piercing; the door slams; the boots hit at every angle; books are left at home; the ink spills; children laugh at nothing; visitors come, and drive you half-distracted with their undertone to each other; slates and pencils obey the law of gravitation with the perversity of inanimate things; and the spirit of mis-

rule reigns triumphant," adds, by way of suggestion to young teachers: "First of all, don't lose heart, and conclude you are a failure as a teacher, either then or after you get home. . . . You are in conditions you cannot analyze, my dear young teacher, when the clouds gather from all points of the compass—and don't try it. Just hold yourself with all the calmness that is possible, and be as patient with yourself as you must be with the children. Perhaps you, yourself, through that subtle action of mind over mind, are practically responsible for the complicated condition of things. That is hard consolation, but not at all unlikely to be true."

Not unlikely to be true! Far from it. It is most likely to be the very essence of the truth. On any doctrine of probabilities it is far more reasonable to suppose, when one mind comes into disagreeable contact with fifty, that the jutting angles which produce the collision have been suddenly developed in the one, rather than simultaneously in the fifty. In nineteen cases out of twenty, we make bold to say, the origin of the troublous times is in the teacher, not in the pupils. The causes are many and various, a slight attack of indigestion, too little fresh air and exercise, want of congenial surroundings, social or business disappointments, Any one of these, or of a dozen other influences, emanating from our own neglect, and—shall I say?—selfishness, may be sufficient to work out for ourselves and our pupils a day of wretchedness.

But there are other causes arising likewise from a mental condition of the teacher which is, in itself, not only not discreditable, but praiseworthy, but no less harmful in its immediate effect. Mrs. Kellogg, in the article above alluded to, deals with some of these causes so forcibly that we close by commending a thoughtful study of her words:

"Perhaps there is no greater cause for the dark days of young, normal-trained teachers than in the inability to work out the ideal plans that had grown to be a part of daily thought. Bristling individualities spring up at every step, and stand like bayonets to prevent an approach. Every child calls for separate tactics, and in the confusion of disappointed hopes the heart sinks, the head is lost, and a mild panic is threatened.

"Let me suggest the unwisdom of attempting to force any up-hill course at this juncture. There is too much demoralization to attempt any re-organization of plans on the spot. Turn the attention in another direction, and manage as quietly as possible till the day is over; then think it out alone, and be quite ready to accept your part of the blame. Fortunate will you be if it leads you to recognize the hardly learned fact that you are for the pupils, and not the pupils for you; that

your methods must be fitted to the children, and not the children to your methods; Every child's soul, as Holmes tells us, is 'a little universe with a sky over him all his own,' and it is for the teacher to enter that 'little universe' with the humility and respect due one of God's creatures.

"But, after a fair-minded review of the day, don't pore over it. Look after the repairing of the physical and nervous waste that has been rapidly going on in those trying hours of discomfiture. Go out of doors, and change the whole direction of thought. Looking too long at the wake of a ship is a poor preparation for avoiding future collisions."

OVER-SUPPLY IN EDUCATION?

A LIEUT.-GOVERNOR of Nova Scotia, in addressing the farmers of the province at the opening of an agricultural exhibition a few years ago, urged that they should bestow as much attention upon the education of the sons whom they intended to take up farming as upon that of those destined for the professions. Why not? It is clearly true, as he said, that often farmers and their wives stint themselves for the purpose of educating sons for the learned professions, to make them doctors, lawyers, or clergymen. He had all honor for those who did this, but claimed that the education of the lad who was to have the farm should have their first care. For the practical purposes of their life-work, as well as for all the higher ends of human life, it is important that the farmers of the future should be men of the highest intelligence and culture. Again we ask, Why not?

And yet it is astonishing how persistently even the newspapers, which should be educators of public opinion in such matters, continue to inculcate the idea that the purpose of higher education is to prepare the student for some profession in which the knowledge which he is supposed to have acquired can be put to practical use, just as it is. For instance, one of the Toronto dailies had a paragraph the other day, in which the fact was pointed out that the number of students who obtained professional certificates at the recent examination at the School of Pedagogy was twice or thrice as great as the whole number of possible vacancies during the year in the High Schools. The remark has, of course, a point in cases like the one specified, in which the education given is professional, *i.e.*, intended to fit the student for a special pursuit. But the remark accompanying was evidently intended to make the criticism apply generally to all those graduates of High Schools and colleges for whom there are no immediate openings in the

ranks of the professional and mercantile workers. Teachers should do all in their power to correct and counteract such heterodox notions in respect to the true value and end of higher education.

We saw, somewhere, the other day, some facts and figures showing that we have at present, or are, at least, threatened with, a great excess of supply over demand in the medical profession. These facts were accompanied with a warning to parents and others interested against the education of the young in so large numbers for this particular profession. The caution is, no doubt, wise, though such warnings are always liable to be received with suspicion when they emanate, as these did, from within the ranks of a close corporation, as is, we are sorry to say, the profession of medicine in Ontario. But the thing against which we wish to protest in the strongest terms we can command is the almost constant assumption that the chief end of education, especially of higher education, is to prepare the student for some one of the learned professions, or for some particular bread-and-butter occupation. The idea of education for its own sake, the education of men and women because they are men and women, and as such are possessed of powers and faculties which can reach their true and full development only through the expansive effect of an educational process, seems seldom to have entered the mind of the speaker or writer. The prevailing idea seems to be, even in these democratic times, that the normal condition of the great majority must be one of stunted mental development—that the welfare of the whole people is best attained by allowing ninety-nine one-hundredths of them to remain undeveloped.

Educators of all grades should surely always remember, whatever editors of newspapers and other so-called "practical" writers may say or think, that the first and great reason why a given boy or girl should have his or her mind educated to the greatest possible extent, irrespective of future bread-winning occupation, is that such boy or girl has a mind to be educated. May we not assume that two great principles will be accepted as axiomatic: first, that the bestowment by nature, or the God of nature, of certain powers and capacities in an undeveloped state, carries with it to a moral agent the obligation to develop those faculties to the fullest possible extent, seeing that on no other condition can they fully perform the purpose for which they were bestowed; secondly, all experience and all analogy teach us that only by a process of patient and prolonged culture, or training, can

such development of these faculties be attained? Granted these two principles, the one self-evident, the other demonstrable, and it follows that the primary and chief duty of parents to educate their children one and all, and of the young to educate themselves, to the fullest extent of their opportunities and abilities, bears with full weight, apart from any plans which they may very properly form with regard to future occupation in life. Hence the warnings which are so often uttered with regard to the danger of over-education is not only short-sighted, but distinctly immoral and harmful, as tending to hinder the progress of the higher development of the individual and of the race.

Herein we have the broad and comprehensive answer to all arguments and outcries against the supposed danger that too many of our young men and women are getting too much education. All the practical considerations have their place and weight, and must, of course, be taken into the account. Especially should the great truth be continually kept in the foreground in the schools, that the land is the primary source, not only of all the means of sustaining human life, but of all wealth, that the cultivation of the land is, always has been, and must always continue to be, one of the noblest of occupations, and that it affords one of the best possible opportunities for turning to practical account the highest mental cultivation. If it be feared that education too widespread will render it impossible to find men to till the soil, the reply is, "Let all be educated, and we need not fear that all shall starve through want of tillers of the soil." Let the levelling be up, not down.

LEADING EVENTS OF THE FORT-NIGHT.

Arrangements have been completed between the Belgian Steamship Company and the Canadian Government for a steam service between Antwerp and Cologne and Canada. The British steamer *Greta Holme* will open the service, sailing from Antwerp on Monday, September 7. The steamers will sail fortnightly from each terminal point.

Riots in the Straits of Constantinople resulted in the massacre of a number of people, estimated at 2,000, mostly Armenians. This new outrage has aroused great indignation in Great Britain, Germany, and other places in Europe, which now seems likely to lead to the adoption of stern measures by the Powers, possibly to the overthrow of the Sultan and the partition of Turkey.

Some of the Irish dynamiters imprisoned for lengthy terms in the penitentiary, have been released by the British Government on the recommendation of the Government's medical advisers.

The Czar makes a tour, visiting the courts of the great European powers. Ill-health compels the Czarina, who set out to accompany him, to return.

Sir Richard Cartwright, Canadian Minister of Trade and Commerce, takes steps to inform himself as to the ways in which trade may be developed. He addresses letters to the various Boards of Trade, asking for information on the subject.

High School Entrance and P. S. Leaving Department

EDITED BY

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Headmaster Boys' Model School, Toronto, Ont.

With the assistance of several special contributors.

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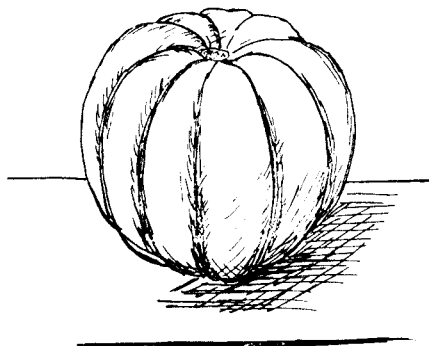
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DRAWING.

BY A. C. CASSELMAN.

OBJECTS LIKE THE SPHERE.

When the sphere is taken up in the class the pupils should be required to name a number of objects like it. Write the names on the blackboard and allow them to remain there for a few days. It will be found that many objects will be named, such as fruits of all kinds, balls, etc. The pupils should be required to bring these objects for next lesson. The different objects to be brought should be agreed upon beforehand, so that a fair representation of them may be on hand. Ask for about three or four volunteers to bring, say, pears; another three or four to bring apples; another, a ball, and so on. These objects

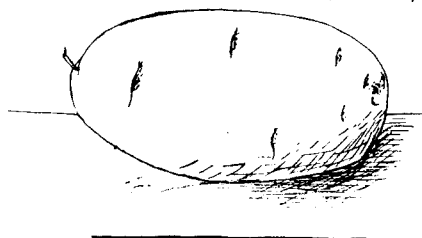


should be placed on a stand somewhat higher than a table. The top should be about two feet by three feet, and a strip tacked round the edge and projecting above the top surface about one-quarter of an inch to keep the objects from rolling off. When the time for the drawing lesson arrives, and you have the objects before you, begin by having a general chat about the fine objects brought. Ask who brought this one, and that, and that. Keep up a lively talk, and encourage every member of the class by saying, in a pleasing way, how delighted you are with the fine display and with their efforts in selecting such fine examples. Pupils

delight to be of service to the teacher, and always look for recognition. Do not fail to appreciate their efforts, let them be ever so small. Try to get every member of the class to talk about the objects. Encourage the diffident ones in every possible way. The far-seeing teacher can so guide the conversation that a few will not monopolize



the conversation, or lead him too far from the subject. Fruit may be compared. One apple with another. Apples with peaches and tomatoes, etc., and how each differs from the sphere, the type. Get from the class their method of growth, where they grow, their use, whether they are raised from the seed in one season, as tomatoes and melons are, or does it take many years, as in the case of apples and peaches. Everything done in this way will arouse the interest of the pupils, and will give them impressions of the objects that, perhaps, they never had before. To do this with all the objects may take several periods. Some one may say this is not drawing. No, it is not drawing just yet. You are arousing the interest of the pupils, and giving them ideas which they now express by language. You are investing the objects with life, and leading them to observe closely. Drawing is a means of expression, and before commencing to draw you must be sure that the pupils have something to express. The teacher must show the pupils how to express themselves in this new way. He must teach them the alphabet of drawing. He must show them what to represent by a line, and

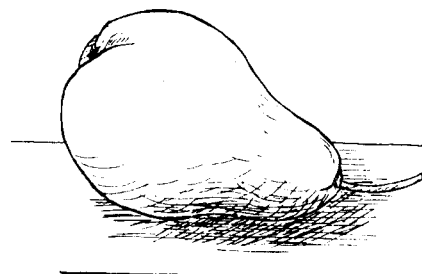


how to use the pencil to produce an expressive line as explained in the last paper. When the pupil has obtained knowledge of an object by sight, and verified it by touch, and knows what a line represents, it will not be difficult for him to draw. The reason that pupils hate drawing is because they are either asked to copy a picture, or asked to draw an object of which they possess no definite

ideas, or the means to express the crude one they may have.

A little drawing should be done during each period. While gaining a knowledge of the objects like the sphere, the sphere might be reviewed. Get the pupils to draw the sphere again and again, until they know the alphabet of drawing or method of expression thoroughly. Do not forget to insist upon their showing a table line and a few marks to suggest the surface upon which the object rests. The objects that show the greatest resemblance to the type form should be drawn first.

In many schools modelling in clay might be taken up in the lower classes. The making of an object should precede the drawing of it. Clay, for modelling, may be procured in most localities in Ontario, but a better quality can be purchased, ready for use, at a pottery, or at any dealer in art materials or kindergarten supplies. It should be free from sand or gravel, and of about the consistency of soft putty. Of course, it should not stick to the fingers or crumble easily. No tools are required, except a smooth board about ten inches square, a fine wire, and a thin splint of hardwood about five inches long and one-half inch wide, and made thin as a knife blade at the edges. Give to each pupil a cube of clay of about one and one-half inch edge. Show them how to mould it into the required shape. The clay in stock should be kept in a jar, with a moist cloth over it.



The type solids should always be moulded first, and, if plenty of clay can be got easily, the objects modelled may be dried and used as objects to draw from. As many objects as possible should be modelled, and afterwards drawn.

Take up the drawing of the different objects like the sphere. Never draw for the pupils on the blackboard and get them to copy. Let them express their idea of the object by drawing it from observation. Supervise the work thoroughly, and lead them to make corrections where necessary. Use the blackboard for the correction of general errors. In the junior grades, in the beginning, all drawings should be made in school; but after the pupils learn to place objects and what to look for, and know how to express what they see, drawing should be given as a home exercise. The first drawings of all objects should be made in the scribbling books, and after errors are pointed out and corrected, the drawings should be recorded in the drawing book. In the case of objects to be drawn at home, the teacher should have the object to refer to when supervising and correcting the

MAPS

- POLITICAL
- GEOGRAPHICAL
- HISTORICAL
- PHYSICAL
- RELIEF

GLOBES

- TERRESTRIAL
- CELESTIAL
- TELLURIANS
- SLATED
- RELIEF

CHARTS

- ASTRONOMICAL
- BOTANICAL
- ANATOMICAL
- RELIGIOUS
- READING
- PICTORIAL

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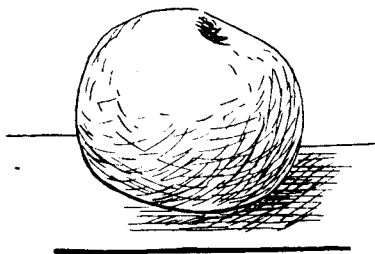
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work done. The pupils may copy their own drawings then in the book. There is a vast difference between copying a drawing that a pupil has made from the object himself and copying a drawing that some one else has made.

In these papers on drawing the work is taken up in a general way, and the teacher must adapt the principles to the age and experience of the class. For advanced classes a distinction might be made between the spheres, the spheroids, and ovoids, but in junior classes it is enough to say that they are like the sphere. In advanced classes the objects may be divided into (1) those like the sphere, as a ball, an orange, an apple, a globe, a cherry, a grape, a peach, etc.; (2) those like the



prolate spheroid, as a lemon, a potato, a plum, a butternut, a watermelon, a squash, etc.; (3) those like the *oblate spheroid*, as an onion, a tomato, a pumpkin, a turnip, a cantaloupe; (4) those like an *ovoid*, as an egg, a pear, a potato, some apples, the fruit of the egg-plant, etc.

A prolate spheroid is a solid whose surface is described by the rotation of an ellipse on its long axis. It is a *prolonged* sphere.

An oblate spheroid is a solid whose surface is described by the rotation of an ellipse on its short axis.

An ovoid is a solid whose surface is described by the rotation of an oval on its long axis.

Procure all of the above objects and make drawings of them. Try to express by a few lines the characteristics of each.

ARITHMETIC—MENTAL EXERCISES.

BY G. H. ARMSTRONG, B.A.

PERCENTAGE.

- 4 per cent. of 12?
- 4 is what per cent. of 12?
- 25 per cent. of 8?
- 8 is what per cent. of 24?
- $\frac{1}{2}$ per cent. of 20?
- 120 per cent. of 6?
- 3 is 5 per cent. of what number?
- 6 is 40 per cent. less than what number?
- 12 $\frac{1}{2}$ per cent. of 32?
- $\frac{1}{5}$ is what per cent. of $\frac{1}{2}$?

PROFIT AND LOSS.

- Cost, \$400; selling price, \$500; rate per cent. of gain?
- Cost, \$600; rate of gain, 25 per cent.; selling price?
- Cost, \$300; rate of loss, 40 per cent.; selling price?
- Selling price, \$500; rate of gain, 53 $\frac{1}{3}$ per cent.; cost?
- Selling price, \$150; rate of loss, 20 per cent.; cost?
- Selling price, \$200; gain, \$40; gain per cent?
- Cost, \$450; rate of gain, 60 per cent.; gain?
- Gain, \$90; rate of gain, 15 per cent.; cost?
- Selling price, \$40; rate of loss, 20 per cent.; cost?
- Cost, \$120; loss, \$12; loss per cent.?

COMMISSION.

- Commission, \$8; rate of commission, $\frac{1}{4}$ per cent.; amount of sales?
- Commission, \$12; rate of commission, $\frac{1}{2}$ per cent.; amount of sales?
- Amount of sales, \$400; net proceeds, \$395; rate of commission?
- Amount invested, \$2,000; rate of commission, 1 $\frac{1}{2}$ per cent.; total cost?
- Net proceeds, \$960; rate of commission, 4 per cent.; amount of sales?
- Commission, \$12; rate of commission, $\frac{1}{4}$ per cent.; net proceeds?
- Net proceeds, \$50; commission, \$150; rate of commission?
- Amount sent agent, \$816; rate of commission, 2 per cent.; commission?
- Total cost, \$1,200; commission, \$2.40; rate of commission?
- Commission, \$15; rate of commission, $\frac{1}{3}$ per cent.; amount of sales?

INTEREST.

- Principal, \$600; rate 5 per cent.; time, 3 years; interest?
- Principal, \$400; rate, 8 per cent.; time, 4 years, six months; interest?
- Principal, \$700; interest, \$7; time, 3 months; rate?
- Principal, \$650; rate, 4 per cent.; time, 4 years; amount?
- Interest, \$54; rate, 6 per cent.; time, 3 years; principal?
- Principal, \$300; rate, 5 per cent.; time, 2 years, 4 months; amount?
- Amount, \$590; rate, 3 per cent.; time, 6 years; principal?
- Principal, \$650; rate, 6 per cent.; interest, \$156; time?
- Principal, \$60; rate, 4 $\frac{1}{2}$ per cent.; time, 8 months; interest?
- Amount, \$420; principal, \$350; time, 5 years; rate?

INSURANCE.

- Amount of insurance, \$3,000; rate, $\frac{3}{4}$ per cent.; premium?
- Premium, \$40; rate, 1 $\frac{1}{4}$ per cent.; amount of insurance?
- Amount of insurance, \$2,500; premium, \$37.50; rate?
- Premium, \$60; rate, 1 $\frac{1}{2}$ per cent.; amount of insurance?
- Amount of insurance, \$1,400; rate 1 $\frac{1}{3}$ per cent.; premium?

TAXES.

- Assessed value, \$5,000; tax, \$25; rate?
- Assessed value, \$3,200; rate, $\frac{3}{8}$ per cent.; tax?
- Tax, \$40; rate, $\frac{1}{2}$ per cent.; assessed value?
- Rate, $\frac{3}{8}$ per cent.; tax, \$60; assessed value?
- Assessed value, \$1,600; tax, \$14; rate?

STUDIES IN ENGLISH GRAMMAR.

BY G. H. ARMSTRONG, B.A.

We have been asked very often to name an English grammar in which the classes of the verb were treated in a manner suitable to students and young teachers. We do not know of any. Yet not long since Entrance candidates were asked to classify the verbs in a list of sentences and to give a definition of a transitive verb that would apply to each case in the list.

We shall now ask our young friends to join us in our lesson for to-day. Let us consider the verbs in the following sentences:

- The child *sees* the house.
- The house is *seen* by the child.
- He *struck* the man.
- The man was *struck* by him.
- He *dreams* that he is at home.

In sentence (a) the action expressed by the verb *sees* goes out to the object *house*.

In sentence (b) the action expressed by the verb *is seen* goes out to the subject *house*.

In sentence (c) the action expressed by the verb *struck* goes out to the object *man*.

In sentence (d) the action expressed by the verb *was struck* goes out to the subject *man*.

In sentence (e) the action expressed by the verb *dreams* goes out to the object *he is at home*.

All verbs of this class are called *transitive verbs*.

DEFINITION.—A transitive verb is one that expresses an action that goes out to something, either object or subject.

Let us give our attention now to another type of verbs:

- I *am* well.
- The boys *were* in the field.
- He *sleeps*.
- The wind *blows* through the trees.
- The man *fell* into the lake.

The verbs in sentences (a) and (b) denote *being*.

In sentence (c) the verb *sleeps* denotes a *state*.

In sentences (d) and (e) the verbs express actions, but in neither case does the action go out to anything.

All such verbs are called *intransitive verbs*.

DEFINITION.—An intransitive verb is one that denotes *being*, or a *state*, or that expresses an action that does not go out to anything.

Note.—A verb may be used intransitively in one sentence and transitively in another.

Intransitive.—He writes well. The wind blows from the north. The boy ran off.

Transitive.—He writes novels. The wind blows the leaves away. The boy ran a race.

"PICTURES OF MEMORY."—ALICE CARY.

BY A. W. B.

I. INTRODUCTORY NOTE.

This poem is not included in the volume of Miss Cary's works, published after her death by Houghton, Mifflin & Co., and edited by Mrs. Mary Clemmer, who had been, during her lifetime, the editor of her writings. It is, however, still published as a song, with an accompaniment by Hauptman, under the title of "The Little Forest Maiden." In the song, lines 5 to 16 of the poem are omitted; line 17 reads, instead of "I once had a little brother," "It is of a little maiden"; and, in line 32, "arrows of sunset" is changed to "golden sunset," other alterations to correspond with these being made. The song was published during Miss Cary's lifetime, but I do not know whether the changes have her sanction. They seem to me, on the whole, to be judiciously made. The pictures suggested by lines 5 to 16, though sometimes beautiful, and always prettily expressed, are, when true to nature, somewhat out of keeping with the general picture of the "dim old forest"; and the relationship indicated by the word "brother" is rather commonplace for the highly romantic, not to say improbable, incidents of the poem. By changing "arrows of sunset" to "golden sunset" there is a gain in euphony at the expense of the loss of a very striking figure.

II. QUESTIONS.

1. Tell the story of the poem in your own words.
2. Describe, as clearly as you can, the pictures suggested to your imagination by the first and last sections.
3. What is there in the poet's pictures that makes you think that she is drawing upon her imagination, not describing what she has seen?
4. Can you give any reasons why the author should select autumn rather than any other season as the time of the brother's death.
5. With what feeling does the supposed speaker regard her brother's death?
6. Divide the poem into sections, grouping the lines in accordance with the changes in the thought, and making the subdivisions different from those of the text-book. State the subject of each section.
7. If this poem were divided into stanzas, how many lines would there be in each.

III. EXPLANATORY NOTES.

Line 2. *Memory's wall*.—Memory is compared to a picture gallery, on the walls of which hang beautiful paintings.

5. *Gnarled*.—With rough, knotty trunks and branches.

6. *Mistletoe*.—A parasitic plant, that is, one that grows upon another, deriving sustenance from it. The mistletoe is generally found on trees of the apple family, and sometimes on poplars, but very rarely indeed on the oak. It is an evergreen, bearing leaves of a very light color and small semi-transparent white berries.

7. *Violets golden*.—The yellow violet grows abundantly in spring in rich woods. It is not, however, a very conspicuous flower.

9. *Milk-white lilies*.—The only wild lily I know that bears a milk-white flower is the trillium, a very common plant in the woods in spring. Line 10, however, suggests the idea of a more graceful flower than the trillium. The word hedge, too, though it might mean simply a thicket of bushes, is generally applied to bushes used to form a fence or enclosure. Perhaps, therefore, the poet has in mind cultivated white lilies growing near the forest in a garden hedge of sweet-briar or of some other fragrant plant.

11. *Coquetting . . . sunbeams*.—The writer poetically attributes to the lilies the intention of coyly attracting the caresses of the sunbeams.

12. *Stealing . . . edge*. The edges of the petals of the lilies glow in the golden sunlight. Cf. Mrs. Browning's poem, "To a Dead Rose":

"The sun that used to smite thee,
And mixed his glory in thy gorgeous urn,
Till beam appeared to bloom, and flower to burn,
If shining now, with not a hue would light thee."

13. 14. *Not for . . . rest*.—A somewhat common climbing plant, bearing a bright red berry, is the bittersweet. It is, however, generally found in low marshy ground, not in the "upland."

15. *Pinks*.—The poet probably has in mind the fire-pink, found sometimes in Southern Ontario, and common a few degrees south of us in the United States.

Cowslips.—More commonly called primroses, are plants bearing clusters of pale lilac flowers with a yellow centre.

19. *Lap*.—Suggests an idea of tenderness and love, in association with that of the resting place of a child.

33. *Arrows of sunset . . . bright*.—The rays of

sunlight darting through the spaces between the trees, and illuminating the foliage of the upper branches.

36. *Gates of light*.—The glorious beauty of the sunset sky calls to the mind of the poet the thought of the golden gates of heaven, through which the soul of the dead child is to pass.

IV. SKETCH OF THE LIFE OF THE AUTHOR.

Alice Cary was born near Cincinnati, Ohio, in 1820. Her parents were people of a fair degree of culture; but in a newly settled country, as Ohio then was, they found few opportunities for securing educational advantages for their daughters, Alice and Phœbe. The latter, however, overcame by their patient energy the difficulties of their position. It is related, as an example of their perseverance, that when their niggardly and unsympathetic stepmother denied them the use of candles they constructed a rude lamp with a piece of rag and a saucer of lard, by the light of which they pursued their studies. At eighteen years of age, Alice began to write poetry, and she was for many years afterwards a valued, though generally unpaid, contributor in prose and verse to newspapers and magazines. In 1852 she and her sister published a volume of poems. The success of their venture was such that they decided to move to New York and devote themselves wholly to literary pursuits. In their city career they were very prosperous, attaining a high position in the literary world. Alice Cary died in 1871, after a lingering and painful illness, which she bore with patience and resignation. In her sufferings she was tenderly cared for by her inseparable companion, her sister Phœbe. The latter, though apparently in robust health up to the time of her sister's death, only survived her five months. Alice and Phœbe Cary stand among the foremost of the female poets of America. Their prose works, too, are remarkable for their graceful style and for their realistic descriptions.—*From Lessons in Entrance Literature, edited by F. H. Sykes, M.A., 1892.*

PUBLIC SCHOOL LEAVING.

"THE BARD": THOMAS GRAY.

BY W.

See footnote in Reader. Picture in imagination the aged bard, robed in black, with haggard eyes, his long gray beard and dishevelled hair streaming in the wind, standing on a precipitous rock which juts out from the side of Snowdon, and overhangs the small river Conway, which roars beneath him in its impetuous rush to the Irish Sea. At a short distance below him King Edward I. is seen slowly leading the long column of his victorious but weary army down the mountain side, when he and his chiefs are startled by hearing the wild denunciations and prophecies of the unseen seer falling in harsh thunder-tones upon their ears. The chiefs at first fear an attack from some desperate guerilla band of the scattered but indomitable Welsh patriots, and hasten to put their army in battle array to await the onset. The bard first denounces the double terrors of remorse from within and vengeance from without upon the ruthless king. He then goes on to lament in mournful numbers the fate of his fellow-bards, who, slain at the mandate of the cruel king, do not sleep in their graves, but appear to the rapt vision of the seer as spectres, on a neighboring cliff, where they linger as avenging spirits, joining their voices, with the weaving of their "bloody hands" with his own, "in dreadful harmony" with his numbers

as he utters his fearful prophecies touching the future of the fated line of the doomed king.

Speaking in his own person, the bard prophesies the death of Edward II., the conquests of Edward III., his death, the death of the Black Prince, the death of Richard II., the Wars of the Roses, the imprisonment of Henry II. and of Edward V. and his brother. He then celebrates the glory of the Tudors, and especially of Elizabeth's reign, and concludes with a vision of the poetry of Shakespeare and Milton.

I. 1. *Ruin . . . ruthless*.—Note the effect of the repetition of the *r* sound. In this, and probably many other instances of so-called alliteration, the poet's choice is probably determined by an unconscious but artistic perception of congruity between the sounds of certain letters and the ideas to be conveyed. The harsh rolling sound of the *r* in *ruin* is peculiarly suited to the signification of the word.

Ruthless.—Pitiless; from old English *ruth* (pity), with privative termination *less*.

Ruth began to work

Against his anger in him, while he watched, etc.
Tennyson (*Enid*).

Confusion . . . wait.—*Wait*, what mood? It is unnecessary to supply *may* or *let*, making *wait* infinitive. Why not take *wait* and *seize*, in first line, as direct imperatives of the third person, after the manner of the classics?

Though fann'd.—A bold and striking metaphor, made particularly effective by the epithet *crimson*. What does *though* connect?

They mock the air.—Though kept proudly flowing, they indicate no lasting triumph. The epithet *idle* repeats the idea. Their stately waving is but an idle mockery, in view of what is in store for the conqueror and his descendants.

Helm.—A piece of armor for the head. A more poetic form of *helmet*.

Hauberk.—The *hauberk* of the middle-age warriors consisted of a jacket or shirt of mail, with sleeves reaching a little below the elbow, and skirt reaching to the knees.

Twisted mail.—The hauberk was formed of small steel rings interwoven.

Nor e'en thy virtues.—Edward was personally brave. He took part in the last Crusade. He has been called "The English Justinian," on account of the wisdom of many of his laws. But he was cruel and vindictive to a degree, for which no personal courage could atone.

Thy secret soul.—Transferred epithet. It was the fears, of course, that were kept secret.

From Cambria's curse, from Cambria's tears.—An effective use of *anaphora*.

Cambria.—The ancient name of Wales.

The crested pride.—His pride as resting in and displayed by the crests or plumes which surmounted his helmet and those of his chief warriors.

Snowdon.—A mountain range in Caernarvonshire, North Wales. It contains one or two of the highest peaks in south Britain.

Speechless trance.—These words strike us as ill-chosen. As speechlessness is involved in the very notion of trance, the epithet is superfluous and tautological. Note the different effects produced by the weird interruption upon different warriors. The one, the more superstitious, is overawed and struck dumb, attributing it to the supernatural. The soldierly instincts of the other prompt the call to arms and the warlike attitude.

Couch'd.—To *couch* was to throw into a position for attack or defence. A semi-military term, in the days when the spear was the warrior's chief weapon.

Quivering.—Why? Does the word indicate the usual slight vibration caused by the nervous tension of the strong warrior's arm, or a tremor caused by the startling denunciations of the weird voice of the unseen bard? Give reasons for your opinion.

I. 2. *Conway's foaming flood*.—The river *Conway* is about thirty miles long, flowing in a northerly direction into the Irish Sea.

Loose . . . streamed.—Do *loose* and *streamed* agree with both *beard* and *hair*, or with the latter only?

Struck the deep sorrows.—A species of metonymy. Explain it. Does it seem to you a happy and effective use of the figure?

Giant-oak.—The use of the hyphen here seems to indicate that the editor of the Reader regards the two words as a compound, denoting a particular species of oak. We can find no sufficient warrant for such a conclusion, and should prefer to drop the hyphen and use "giant" simply as a descriptive adjective. The correlative "desert cave" favors this view.

Beneath . . . breathe.—Do these words make a perfect rhyme? (Authorities differ in regard to the pronunciation of *beneath*.) Distinguish carefully between the flat and sharp sounds of the digraph *th*.

Their hundred arms.—In grammatical strictness the pronoun *their* and the adjective *vocal* should agree with both *oak* and *cave*, but *hundred arms* seems to indicate that the poet loses sight of the latter and keeps in mind only the former.

Vocal no more.—Why no longer vocal? What relation do these two lines bear to what goes before? Are they merely descriptive of the oaks, or do they give a cause or reason in consequence of any preceding statement?

Cambria's fatal day.—The allusion is, probably, to the battle of Llanfair, Dec. 11, 1282, in which the famous King Llewellyn was slain.

High-born Hoel's harp.—Hoel and the other bards enumerated are but a few of a long list of bards whose names are recorded during the 12th and following centuries.

I. 3. *Made huge Plinlimmon bow*.—*Plinlimmon* is a mountain nearly 2,500 feet high, on the boundary between the counties of Montgomery and Cardigan. Can you mention anything in Grecian or Roman mythology which this resembles, or by which it may have been suggested? Compare the legend of Orpheus.

The affrighted ravens.—By a spirited exercise of the poetic imagination, Gray represents the affrighted raven and even the famished eagle as denying their natural instincts and refusing to prey upon the ghastly corpses of the murdered bards.

Dear, lost companions.—Note the effective use of the *apostrophe*; also the emphasis given by the repetition of the word "dear" at the beginning of each line. (*Anaphora*.)

No more I weep.—Observe the sudden change in the metre, adapted to the change in sentiment. The slow and mournful strains of the iambic pentameter are changed for the abrupt and spirited tetrameter. Account for the change at this point. The student should not fail to note all through the poem the correspondence between the metre and the sentiment, a characteristic which contributes much to the freedom and power of the Pindaric ode.

On yonder cliffs.—An effective use of the rhetorical device sometimes called "vision."

No more I weep.—Why? What change of feeling ensues?

Grisly.—(*Gris'le, s as z.*) *Grisly* (A.S. *grislie*, terrible) means properly, as here, a terrifying ex-

pression; e.g., "My *grisly* countenance made others fly," Shakespeare (King Henry VI., I., 4). *Grizzly* (Mid. Eng. *grisel*, old man) denotes properly a mixture of white and black, gray. But the word is often confused with *grisly*.

Weave . . . line.—Cf. the legend of the Fates. In what sense is the word *line* here used?

II. 1. *Severn*.—Berkley, or Berkeley, Castle, in which Edward II. was murdered, is near the banks of the River Severn.

Berkley's roof.—See preceding note.

She-wolf of France.—Isabella, the wife of Edward II., who took a prominent part in the conspiracy which led to the dethronement and murder of her husband, was a sister of Charles IV., king of France.

Weave the warp.—The spectral bards are called on to prophesy the dark fates of the descendants of Edward I.

Shrieks . . . King.—The pupils should read, or the teacher recount in brief, the history of Edward II. and his tragic end, here so vividly suggested. He was the first to receive the title, "Prince of Wales."

From thee be born, etc.—Edward III., son of Edward II. and Isabella, repeatedly invaded France. On the second occasion he gained important victories, leading his troops to the very gates of Paris, and inflicting upon the French army the tremendous defeat of Crécy. Gray poetically represents this as a heaven-sent scourging of France for the sins of Isabella against her husband.

Amazement in his van.—This is a graphic picture, and should be closely studied. Amazement, sudden terror, is represented as marching in the van of Edward's invading army, accompanied by the flight of the terrified French, citizens and soldiers. As that army passes on it leaves nothing but sorrow and solitude in its rear. Note the personifications.

II. 2. *No pitying heart*.—Most of the children of Edward III. died young. The latter years of his life were embittered by disappointment and sorrow.

The sable warrior.—The famous Black Prince, Edward's eldest son, died about a year before his father.

The swarm, etc.—Observe this note of interrogation. The question is repeated from preceding sentence, "Has the swarm, etc., fled?"

The rising morn.—Courtiers are proverbially quick to abandon the departing and attach themselves to the coming monarch.

Fair laughs the morn.—Morning, or Dawn, is often personified as rosy, smiling, etc. *Laughs* is a stronger term. Do you think it equally poetic?

The Zephyr.—Zephyr is the classical personification, or deification, of the southwest wind.

Youth on the prow.—Observe the succession of bold personifications in this and the preceding stanza. They are quite in keeping with the weird, impassioned character of the poem.

That, hush'd, etc.—What is the antecedent of *that*? Is there any ambiguity in the form of the expression?

(Concluded in next number.)

HALF-YEARLY PROMOTION EXAMINATIONS—PETERBOROUGH PUBLIC SCHOOLS.

June, 1896.

COMPOSITION—JUNIOR 4TH.

Time, 2 Hours.

(A maximum of five marks may be allowed for neatness.)

1. Readers, page 267, "Gilliat clutched . . . altar-like stone."

Re-write these two paragraphs, combining the short sentences into longer ones.

2. Readers, page 38, "Who is that man . . . make ready for the fight."

Write this passage in the indirect form of narration. (Examiners explain if necessary.)

3. A game of hockey at the rink.

A description of the Quarry Park.

A birthday party.

Choose one of the above as a subject for a composition; write five paragraph headings. Under each heading indicate briefly the matter you would speak of in connection with it.

4. Write a letter of at least thirty lines to a friend at Port Hope, describing how you spent the Queen's Birthday. Rule an envelope on your paper and address it neatly.

Values—15, 15, 30, 40.

GRAMMAR—JUNIOR 4TH.

100 marks + 5 for neatness. Time 2½ hours.

(a) "With every breath of air that stirred among those branches in the sunshine, some trembling light would fall upon her grave."

(b) "Nature's voice is full of gladness

Even its showers can hope impart,

And each fading cloud of sadness,

Leaves a rainbow in the heart."

(c) "The ocean currents are partly the result of the immense evaporation which takes place in the tropical regions, where the sea greatly exceeds the land in extent. The enormous quantity of water there carried off by evaporation disturbs the equilibrium of the seas; but this is restored by a perpetual flow of water from the poles. When these streams of cold water leave the poles they flow directly toward the equator."

1. Fully analyse (a) and (b).

2. Write out the subordinate clauses, and the phrases in (c), and tell their kind and relation.

4. Parse the words in italics in all three extracts.

4. Make lists of the adjectives and adverbs in the three extracts above, and compare those that admit of it.

Most of the answer papers were remarkably neat; and, in all but a few instances, the pages were neatly written, and the sentences carefully arranged. A few papers, however, indicated that the writers had not been thoroughly trained in putting down their work.

5. Make a list of the verbs occurring in the above extract, and draw one line under intransitive verbs and two under transitive verbs.

6. Re-write the passage, changing the "voice" of the verbs.

7. (a) Priest, belle, belief, conductor of the train, son-in-law, bee-keeper, senses, and dice.

(b) They, who, whoever, you and we.

(c) Ring, swam, sit, froze, lie (to recline), begun, set, rise, sit, and raise.

Write the other number-form of the nouns in (a), putting them in the possessive case; decline the pronouns in (b); and write the principal parts of the verbs in (c).

8. Make necessary corrections in the following sentences, giving reasons:

(a) "Why won't you come with me?" "I don't want to and you didn't ought to except the invitation neither, since neither you or me are invited."

(b) "Johnny Brown sat his dog on me, but his gove'nor come out and spoke cross to him and he run and laid down in his kennel."

Values—16, 10, 22, 8, 10, 10, 12, 12. Deduct half a mark for each word misspelled.

Intermediate D.S. Department.

Designed specially for teachers of Second and Third Class. Edited by M. A. WATT.

ARRANGING FOR WORK.

A methodical teacher has a distinct advantage over one who goes at her work in a hap-hazard fashion. In beginning the term, the teacher who wishes to cover the ground in a systematic manner sits down and studies her limit table, and divides the term into so many parts. She leaves a margin for review towards the end of the term, then thoughtfully arranges her arithmetic, grammar, geography, etc., in such proportions as will suit the work and the class, that she may teach the work assigned before the end of the term. The outline will require readjusting, perhaps, as the time goes on. It is better to map out by weeks than by days, trying to teach certain parts of the work in a week; then, grouping the five days' lessons, review them on the Monday. A little examination will fix the work and reveal weaknesses. A committee of the children will mark the papers as to correctness (not as to value), and thus save the teacher the added labor (which labor would, perhaps, prevent the giving of the examination with the overworked teachers of ungraded schools), while it will benefit the young examiners. When the outline is prepared, it should be written out and pasted in some place where it can readily be glanced at. Much worry and anxiety can be saved, and better work done, by thus planning and dating the work. When the teacher finds some class or part of the class is getting behind, she then can use the subject in which they are deficient for a special lesson in that time which she has left open on her time-table for special work. When the next term opens, her experience of the previous term's planning will produce a much better division of work.

M.A.W.

CHILD-STUDY.

The teacher has always studied children—that is, the real teacher. It has been an involuntary effort, an unconscious act, resulting in a more or less vague knowledge of the child studied. But with the introduction of the study of psychology for teachers' certificates, the teacher began to make a conscious effort to study the child, and a longing sprang up to know more of ways of studying, of how to begin to make investigations which would give less vague and misty results. To teachers of kindergartens comes the fresh, innocent child, and the task of study must be easier than that of the teachers of more advanced grades, where shyness, *mauvaise honte*, and the hardening influence of school-companionships, step in to prevent the teacher from entering into the real mind of the child. The tact of the teacher must be very great, and the studying must be done as quietly as possible, to prevent the child taking the alarm. Much mischief would result were the child to get the idea that he was being picked to pieces and classified, and too great care cannot be taken to prevent this idea entering his mind. In tabulating results, the names of pupils should be written in some cipher, such as using numbers instead of letters (as I. 6. for A. F.), so that anyone examining the book could not report the matter to others. Another thing to be deprecated is a habit some teachers have of talking of pupils to other teachers, slyly pointing them out, making references to their ways, with a tinge of amusement, not mockingly, perhaps, yet in a manner

which would be very annoying if the pupil were the talker and the teacher the victim. If the study of the child is carried on in a proper, charitable, Christian spirit, and for the benefit of the child, all objectors should be silenced and much good be done.

There are many ways of studying the child. A very good plan to begin with is to write down the child's name, age, sex, nationality, manner as judged on first view, with a note of complexion and features, size, weight, gathered from time to time, with other observations of actions as may occur. As time proceeds, a color-test may be made, a test of eye-sight, of hearing, and of health generally, being especially valuable, many a child being judged dull or stupid, who is only deaf, or weak.

The pupils will give much information regarding their home influences, and what they consider grand and good or desirable, by their answers to such simple questions as these:

(1) What books have you read? (2) Which one did you like best? (3) Why. (4) What book would you buy if you had the money for it? (5) Which book did you like least? (6) Why?

A new class were given the first four of these questions on the first day of school. Pieces of paper were distributed on which they wrote their names and ages, and the answers to the questions. The teacher thus obtained an idea of their spelling and writing as well as of their mind-culture. When one lad of thirteen wrote in answer:

- I. Speller book, Third Reader.
- II. I liked the speller book.
- III. The speller learns you something.
- IV. I would like to buy———.

a feeling of deep compassion filled the teacher's heart for one so starved of mind, and a resolve was made that the boy should have something to feed his mental nature suited to his feeble capacity, as soon as possible.

Animal stories stood at the top with seventeen votes, while stories of adventures, wars, and travels came in a good second with sixteen expressing a preference. Those that were liked because they had a good lesson to teach, or taught useful things, had thirteen in their favor. Poetry was mentioned by two boys alone, the Bible was preferred by two others, while Black Beauty, Beautiful Joe, Robinson Crusoe, Swiss Family Robinson, The Children's Hour, Boy's Own Annual, Peck's Bad Boy, were the ones most frequently mentioned in telling what book they would buy. The hopefulness of the teacher was strong when she found that "Buffalow Bill" was mentioned once only, and that was the only one of its class, the reason given being that "it told of wars."

The answers to the questions will be carefully kept and classified as occasion arises and thought leads.

Other investigations will follow along the line of preferences for work in school and out of school, ideas about punishment for cases mentioned, their imaginations relative to certain words, relative to colors, pictures, pets, flowers, etc. A series of questions about Santa Claus will afford another good opportunity for study:

- I. When you were little what did you think of Santa Claus? Tell all you can remember about your ideas of him.
- II. How did you find out afterwards who he really was? How old were you, and how did you feel when you first learned it?
- III. Did it do you harm or good to believe in him? Tell what influence it had on you.
- IV. Do you think young children should be taught about Santa Claus? Give your reasons.

We shall surely have a rich treat in the answers

to these questions. The editor will be pleased to receive any communications along this line, especially of a practical, concrete kind. The questions will afford a good lesson in composition, and it will not be a waste of time, considered outside of the value it will be to the teacher, in discovering the child's mind-content.

M. A. W.

MULTIPLICATION TABLE.

BY J. P. S.

The fundamental "rules" of arithmetic are two, addition and subtraction. In the order of instruction addition comes first. There are two cases of it, either of which can be worked by a common process; but, in the case of similar addends, there is a short process called multiplication. Suppose we have to find the sum of:

785
785
785
785
785
785
785

We find by simple adding that it is 5,495. This, then, is the result of 785 taken seven times. But, for such a case, a conciser expression and a shorter working are desirable. Accordingly, it is usually written:

785
7

which means that 785 is to be taken seven times. Beginning with the units, we say, five taken seven times is ——. Well, what is it? We can tell if we write down seven 5's and then add them together; we can also find out what the seven 8's is in the same way. But such a procedure would be as laborious as the common process. Before we can work this particular case of addition in a short way, then, we must be able to say without the least reflection how much is seven 5's, or nine 6's, or four 8's, or three 7's, etc.; in other words, we have to make and memorize what is called the Multiplication Table.

Beginning, we say:

2 taken once is 2
2
2
—
2 taken 2 times is 4
2
2
—
2 taken 3 times is 6
2
2
2
—
2 taken 4 times is 8
2
2
2
—
2 taken 5 times is 10
2
2
2
—
2 taken 6 times is 12

vestigating the distances passed over in each of the first three seconds of its motion ; also find the average speed during each of these seconds ; and describe, as clearly as you can, the manner in which the motion takes place.

2. (a) State, as fully as you can, the various forms of energy, giving illustrations in each case.

(b) A piece of lead on an anvil is given a vigorous blow. What transformations of energy take place here?

3. (a) A few drops of water are sprinkled on a plate of glass, which is then held in a horizontal plane, with the wet side downwards. What inferences can you draw from this simple experiment?

(b) Give simple experiments to illustrate ductility, plasticity, tenacity.

4. (a) Give three distinct experiments which illustrate the phenomena of surface tension.

(b) How would you determine the amount of the buoyant force which a liquid exerts on a body?

5. (a) How would you find the specific gravity of a piece of cork, using a lead sinker? Give a numerical example.

(b) Explain the method of finding the specific gravity by balancing columns of liquids.

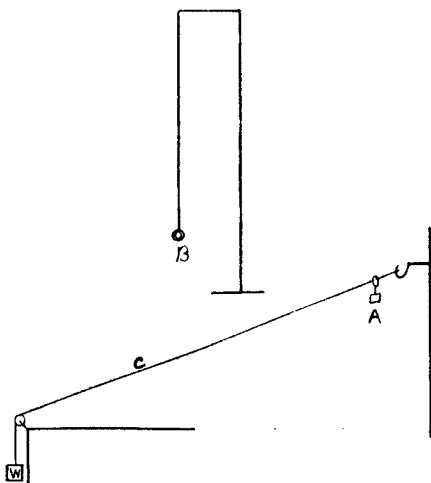
6. (a) Give three experiments which show that a solid body expands when heated.

(b) A bar of iron is riveted to a bar of brass and then held in a strong flame. Describe what happens and deduce any conclusions.

7. Describe fully an experiment to determine at what temperature water has the greatest density.

8. (a) Give an experiment to show that the boiling point of water depends on its pressure.

(b) How would you find the specific heat of some shot?



1. B is a pendulum vibrating in seconds.

C is a stretched piano wire about 20 feet long attached to a hook in the wall, and kept tight by a heavy weight W. Set the pendulum vibrating, and allow the weight A to slide down C for one second. Mark the point reached. Get the average of several trials. Then allow the weight A to slide for two seconds, and for three seconds. Subtract the distance it goes in one second from that it goes in two seconds, and the distance in two seconds from the distance in three seconds, and you have then the distances gone in each of the first three seconds. These distances are unequal, but as it was travelling the same length of time, viz., one second, in each case, its velocity must have been increasing. The average speed in each case is half the sum of the initial and final speeds.

2. (a) See page 40 H.S. Physical Science, Part I.

(b) The energy of bodily motion is transformed into molecular energy or heat.

3. (a) The water forms in rounded drops but does not fall off. We may conclude from this experiment :

(a) That there is adhesion between the water and glass ; and

That this adhesion is greater than the cohesion of the water.

(b) See pages 86, 87, 89, H.S. Physical Science.

4. (a) See pages 104, 105 H.S. Physical Science.

(b) Attach to a spring balance an iron weight; let its weight be x lbs. Place the weight in water or any liquid; now note its weight, say y lbs. Then x - y equals the buoyant force of the liquid.

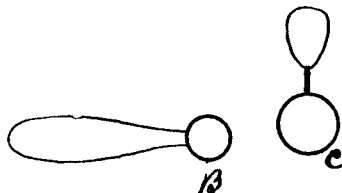
5. (a) Weigh a piece of cork in air - weight = m grams.

Weigh a lead sinker in water - weight = m grams. Attach sinker to cork and immerse both in water - weight now is p grams.

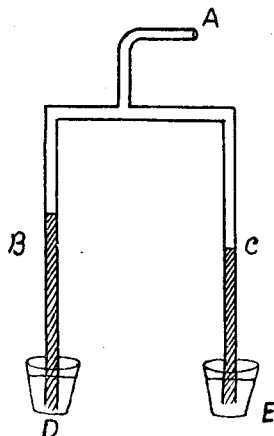
p - n = weight of cork in water.

Let p - n = r. Then cork has lost m - r grams.

$$\text{Then Sp.G.} = \frac{m}{m-r}$$



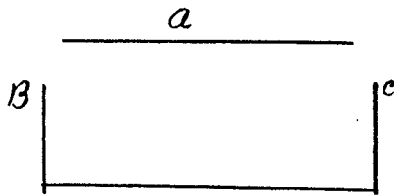
(b) D contains water, E the liquid whose specific gravity is to be ascertained. Place ends B and C in the liquids and apply suction at A by the mouth. Measure the heights of the columns of liquid in B



and C, measuring from the surface in each tumbler. Let BD column be a inches and CE column be b inches.

Then b inches of liquid in E weigh same as a inches of liquid in D ; \therefore 1 inch of liquid in E weighs same as $\frac{a}{b}$ inches of water ; \therefore Sp.G. = $\frac{a}{b}$.

6. (a) B is a metal ball which, when cold, will just pass through the ring C. Heat B and it is found that when hot it will no longer pass through C. Therefore heat expands solid bodies.



Take an iron rod A which will just fit between points B and C. Heat A by placing several gas jets under it. When hot, it can no longer be placed between B and C.

The rails on a railway track are close together in hot weather, but slightly separated in cold weather.

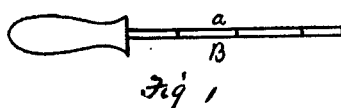


Fig 1

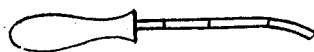
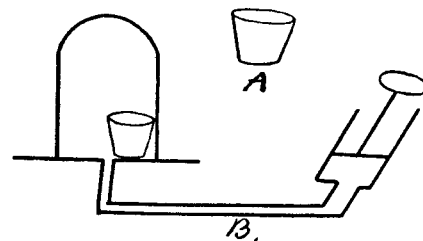


Fig 2.

(b) Let A be the brass bar and B the iron bar. Heat in a flame and the bar becomes bent as in Fig. 2. This shows that brass expands more rapidly than iron.

7. See H.S. Physical Science, page 169.



8. (a) Boil some water in beaker A. Remove it from the flame, and when it has ceased boiling place it on the plate of an air-pump, cover with a bell-jar, and work the pump. The water in the beaker again appears to boil. When the air is removed from the bell jar the pressure on the water in the beaker is lessened.

(b) See Fig. 130, page 193, H.S. Physical Science.

School-Room Methods

CLASS QUESTIONING.

BY MARK M. DONALD, WINTERBOURNE.

There are two methods, one of which must be employed in teaching any lesson. They are the Expository and the Socratic ; or, to use simpler terms, the Lecturing method and the Questioning method.

In presenting a lesson according to the former, the instructor gives his class in the form of a lecture the knowledge he wishes to convey ; and with advanced classes, such as those doing university work, this style of instruction answers sufficiently well. But, with young pupils, it is unsuitable, since they have not sufficient interest in the getting of knowledge to prompt them to maintain interest in a continuous exposition. And even if they had they would still be unable to discriminate properly ; to note the important points of the lesson, and to pass over the unimportant.

With young children, then, such as are found in primary, and the majority of those in secondary, schools, the only effective method of teaching, especially those subjects that require reasoning, is the questioning method. In using questions as a means of teaching the aim is always to elicit certain facts from the pupil himself, and these facts must have a logical order of arrangement from beginning to end ; so that the mind is led on naturally from what is already acquired to the new knowledge. From this it will appear self-evident that the questioner himself must have the matter intended to be taught clearly arranged in his own mind ; and that his questions must follow one another in such a manner, that, if the answers, or rather, perhaps, the answers expected, were written, they would present a perfect line of reasoning. It is the ability to put questions in this way that is of paramount importance in a good questioner, and to be a good questioner is of the highest importance to him who would be a successful teacher. But there are many other points to be considered in questioning a class to the best advantage, a few of which I will briefly discuss.

For convenience here I shall divide questions into two classes, viz., teaching questions and examining questions. Under the first of these classes

I place all those questions put to a class in teaching a lesson, with the possible exception of those given at the close in a brief review of the matter taught.

First of all, a few rapid, pointed, questions on the previous lesson are given for the purpose of recalling old knowledge and bringing forward in the mind that portion of it which is akin to the new, in order that the latter may be the more easily and naturally built upon it. These questions also arouse interest, which is an absolutely essential condition in every lesson; and it may be said here, once for all, that a question always serves this end, if no other. Every question is a "challenge to attention."

These preliminary questions are not to find out simply *what* is in the mind, as you might measure the quantity of wine in a cask with no thought as to its quality, which would be of greater moment. So, too, you seek to ascertain how the old knowledge got there, if I may use the expression; or, in other words, whether it is organized knowledge, or a mere jumble of empty words conveying no meaning to the child. To illustrate: You have taught a lesson on the adjective, concluding it by giving the definition. In beginning the next lesson the careless teacher may ask for the definition and pass on. The child rattles it off because he has memorized it, and yet he may know very little about an adjective. A better plan would be to write a sentence on the board containing straightforward examples of adjectives, and see if he can pick them out. If he cannot, you may as well teach the lesson over again without troubling yourself about the definition. Your previous lesson was a failure. If, however, he can pick out an adjective, question as to why he thinks so, and see if you can determine from his language whether he understands the nature and function of the part of speech; whether the ideas you presented in a former lesson have been assimilated and have become organized or digested knowledge. Finally, ask for the definition, and when he gives it you may be reasonably sure that he understands what he is talking about.

These questions, then, have kept up interest, and, in addition, have stimulated the mind, since they have not only satisfied the teacher of the pupil's knowledge, but have led the pupil himself to feel that he has really acquired something; to perceive that an adjective is not thus and so because the definition says so, but that the definition is merely a logical outcome depending on facts relative to the nature of the part of speech. Thus he has a sense of power which is a wonderful stimulus, producing a strong desire to grapple with new work. And this frame of mind is exactly what you want, since you are about to teach a new lesson.

There are, however, other conditions to be fulfilled, without which the questions would fail to accomplish the end sought. They might be too easy, or contain too much repetition. To illustrate: You have taught a fraction, and wish to question on it. Put a fraction on the board. What do you call the number above the line? The number below the line? What is the denominator here? What the numerator? Which number is above the line? Which below? Point out the numerator. Point out the denominator. And so on to the end, after which another fraction is put down, on which similar questions are asked. Any child who knows even a little about a fraction might answer these questions, for they require little more than good eyesight; certainly very little brains. The questions begin nowhere in particular, lead nowhere in particular, and end no-

where in particular, and the child soon ceases to give attention.

On the other hand, questions may be too difficult. When this is the case, the pupil will give attention for a time, and make an honest effort to grasp the lesson. But soon the mind tires, and, losing confidence in his ability to understand, he gives the whole up as useless.

Granted that questions are neither too easy nor too difficult, the most important requirement, as pointed out at first, is that they have some logical sequence, that they have a definite beginning, a defined course, and a definite ending. If preliminary questions, as I have chosen to call them, they must gradually lead the mind up to that which is to be taught. For instance, you wish to teach a lesson on Walpole, his character, policy, etc. How will you introduce it? You might do so by questioning about the sun, the moon, and the planets, throwing in a story or two to keep interest, from flagging. The whole would doubtless be interesting, perhaps intensely so. The minds of the pupils would be stimulated and active. But it would not help you much, for when you suddenly commenced to talk about Walpole they would lose interest, because the new knowledge is not in line with the old, is not related to it. The gulf between the old and the new is so great that the mind cannot pass over without losing that stimulus and activity so necessary to the successful presentation of a lesson. A better way to commence this lesson would be to question on the South Sea Bubble—assuming that this has already been taught. Question on the nature of the scheme. Elicit that the people blamed the government of the day for sanctioning it. But was there no one in all the nation shrewd enough to foresee the evil results sure to follow? Yes. There was a certain Norfolk squire, Walpole by name, who saw the danger and gave warning. Then what is your opinion of Walpole compared with other statesmen of his time? The pupils conclude that he must have possessed greater ability than the others. Point out that this was true; that he was by far the ablest man of his time; that the people recognized him as such, placed every confidence in him, and that he easily secured first place in the councils of the nation, and so on. The lesson is introduced and taught almost before the pupils realize that a new lesson is being given.

The lesson is now fairly introduced, and the development of it begins. Questioning is to be the means by which the new matter is to be presented. As regards too easy or too difficult questions, pretty much the same objections hold in case of the teaching questions as in that of the preliminary ones.

The most essential thing now to be observed is to see that the questions are connected so that they lead the child on from the known fact, through related facts, to that desired to be ultimately reached. One illustration will suffice. In teaching the following problem: If five apples are worth fifteen cents, what are eight apples worth?—question first as to what is given or told us. Answer: Five apples are worth fifteen cents. What is required to be found? Answer: The value of eight apples. The child is unable to grasp in one effort the relation between five and eight; therefore the teacher must so direct him that he may himself arrive at the desired knowledge. If five apples are worth fifteen cents, what is one apple worth? Answer: Three cents—which he gets from his previous knowledge of division. Then, if one apple is worth three cents, what are eight

apples worth? Answer: Twenty-four cents—which he gets from his previous knowledge of multiplication. And so we may say the teacher has enabled the pupil to reason out the problem for himself. This questioning from the known fact to the next related fact, and so on to the end, is the guiding principle in teaching any lesson by means of questioning.

During the course of a lesson a teacher not infrequently discovers that the pupil has false ideas, or misconceptions. When such are found to exist, the immediate aim is to dispel the illusion by putting a few questions, and the style of questioning thus employed is known as Socratic questioning, because Socrates was the first and greatest master of this form of catechizing. For excellent illustrations see McLellan's "Psychology," page 204 and succeeding pages.

From what has been said it is easy to deduce, in general terms, a few of the advantages of good teaching questions. They are specially valuable because they aid the pupil to discover truth for himself by merely directing his self-activity; and they provide the surest means of obtaining attention. Indeed, they generally compel attention.

By examining questions I mean those given when the object is to test the extent of the pupil's knowledge of a subject, it being assumed that the whole of it has been taught. I have also placed under this head the summary questions given at the close of a lesson, in a brief, rapid review of what has been taught, and with these only I shall deal very briefly in conclusion. No matter how carefully a lesson has been taught, some of the points in it will be lost on some pupil or other. Hence, before dismissing a class the teacher should run over the work again, and in a few comprehensive questions ascertain how much is retained by the pupil. When he finds forgetfulness or obscurity he can repeat and dwell upon the point until it is firmly fixed in the mind. These review questions always serve to clarify and fix the lesson; and, moreover, they furnish a welcome change in the work, which is as good as a rest to the pupils.

Something still remains to be said as to the qualifications of the questioner and the forms of questions. I shall not discuss these at any length here. Respecting the former, he should possess all the qualifications of the good teacher—broad knowledge, thorough preparation, deep sympathy, and great earnestness. In form, questions should always be brief, if possible, definite, and straight to the point. They should not be ambiguous, or so obscure as to require a further explanation by the teacher before the class can be expected to understand what he wants. I would recommend to those who wish fuller information on this last phase of the subject a careful perusal of an interesting chapter by Fitch on "Examining."

WHAT HAPPENED TO A TIRED LITTLE WORM.

A tired little worm went to sleep one day,
In a soft little cradle of silken gray,
And he said, as he snugly curled up in his nest,
"Oh, crawling was pleasant, but rest is best."

He slept through the winter long and cold,
All tightly up in his blankets rolled,
And at last awoke, on a warm spring day,
To find that the winter had gone away.

He woke to find he had golden wings,
And no longer need crawl over sticks and things.
"Oh, the earth was nice," said the glad butterfly,
"But heaven is best when we learn to fly."

—C. F. Hemenway.

Primary Department.

PHONIC READING.

RHODA LEE.

In beginning a study of the phonic system of teaching reading it is well to have before us, in a definite order, the sounds necessary to be taught. Our language is, unfortunately, not a phonetic one. We have over forty sounds and only twenty-six letters. Many of the sounds have clumsily to be represented by two or more letters; other sounds are represented in more ways than one. The letter *c*, for instance, is unnecessary, as its power is always either that of *s* or *k*. We have the long sound of *a* (*fate*) represented by both *ai* and *ay*, as in *pail* and *pay*. Other illustrations showing the faultiness of our language might readily be found, but that is not the object before us. I wish rather to discuss ways and means of overcoming the difficulties and to outline a method of teaching reading in a rational, practical, and rapid way. This the phonic system certainly does.

It aims, first and foremost, at making the children independent of the teacher. Memory is not the only part of their thinking powers employed; the work is not a parrot-like imitation. The child thinks and reasons for himself. Armed with the powers of the letters, there is no limit to the work he may do.

The consonant sounds may be divided into several groups, according to their character; but for our purpose at present it will be sufficient to divide them into two classes, namely, *breath* and *voice* consonants.

CONSONANT SOUNDS.

Breath.	Voice.
p—pat	b—bat
t—tap	d—dog
f—fat	v—vat
k—Kate	g—go
ch—chip	j—just
x—ox	l—lip
	m—mat
	n—nut
	r—rat
wh = hw—when	w—wet
	y—yes
s—Sam	z—size
th—thin	th—that
h—hat	
sh—shell	
ph = f—phonic	
qu = kw—queen	

-tion and -sion are equivalent to *shun*, and cannot be correctly placed in either of the above classes.

The vowel sounds may be divided into long and short.

VOWEL SOUNDS.

Long.	Short.
a—ale	a—pat
ai—pail	
ay—pay	
a—all	
au—paul	
aw—paw	
e—mete	e—pet
ee—meet	
ea—neat	

o—hope	o—pot
oa—boat	
ow—low	
i—line	i—pit
u—tune	u—nut
ew—few	
oo—food	
ou—cloud	
ow—owl	
oi—oil	
oy—boy	

In making the above list of sounds I do not aim at an exhaustive scientific analysis on philological principles. I have merely given in a somewhat definite order what I have found to be a sufficient number of sounds to enable a child to read ordinary matter.

The letters, as I have given them, are, of course, not arranged in the order in which they should be taught. No fixed order need be followed after the first five letters have been taught. These should be *m*, *a*, *s*, *t*, and *p*. After this vowels and consonants should follow in the order that will admit of the largest number of words.

The first lesson should consist of the teaching of *m* and *a*.

As little children are always interested in life, we personate the letters, calling the consonants boys, and the vowels girls. In teaching a new sound, the children should be taught to make the letter, script being used entirely at first. The names of the letters are spoken of incidentally, the sounds being the part of the lesson that must be impressed. When practicable, associate the form of the letter with some object familiar to child-life. This assists greatly in these first writing lessons.

Teacher.—(Making a single crook on the blackboard.)



What does this look like, children?

Pupils.—A walking-stick.

Teacher.—Make a walking-stick on your slate. Now we will put another one close beside it.



Now a third one.



How many sticks? Three; and they look as though they might be candy, they stick so closely. Are yours close together?

The first attempts at making the letter will not be very successful. They will probably be very large and shaky-looking, but "try again." Encourage every attempt, urge them to make them like the copy, standing up straight, and all the same length.

Teacher.—This is a little boy-letter, children, and I am going to tell you something about him. He could not talk as you can; he could say only one thing, and that with his lips closed like mine. (Teacher makes the sound of *m*.) Let me hear you all try to say what the little boy said.

The pupils *individually* tell the teacher what the letter says.

Teacher.—One day as this little boy was playing, a little girl came along—a round, stout little girl. See, I will make a picture of her.



Like the little boy *m*, she could say only one thing. Would you like to know what? (Teacher makes sound of *a*, as in *mat*. Children imitate, as before, and make the letter on their slates.)

When the little boy saw her, what did he say?

Pupils.—(Sound of *m*). Um-m-m.

Teacher.—What did the little girl *a* say?

Pupils.—(Sound of *a*).

Teacher.—The little boy?

Pupils.—(Sound of *m*).

Teacher.—The little girl?

Pupils.—(*a* sound.)

Teacher.—The little boy at last took hold of the little girl's hand, and they said what they could, quickly, one after the other. Like this:



(The teacher points to the letters and the pupils give the sounds, getting closer and closer until the word is given.)

Turn the letters around, and make the word *am*. Try to fix the sounds thoroughly before leaving them, and also the forms.

After the first, every lesson should begin with a short review of the last.

When the children go to their seats, the lesson having been given at the blackboard, ask them to make the two letters they have learnt. Examine their work, and, when necessary, guide the hand in making the forms. Scratch the slates, and, as soon as possible, have the letters made within the lines. The simplest form of the letter must be taught at first.

LITTLE STORIES FOR SUPPLEMENTARY READING.

RHODA LEE.

(To be cut out separately and mounted on pasteboard.)

1. "Now," said the wind, "I am going to have some fun to-day. I am going to blow."

Fred was coming home from school, and he lost his hat three times. When it blew off the third time he carried it in his hand instead of on his head, until he reached home. Then his mamma gave him his cloth cap to wear.

2. Fred's papa had an apple tree in his yard. Before night nearly all the apples were blown off. Fred helped sister Bessie to pick them up in baskets. Then they carried them to the cellar, so that they would not spoil.

3. The wind blew harder than ever. The leaves of the trees began to fly all over. A little sick boy was sitting at the window, and when he saw the boys and girls playing with the leaves he wished he

could go out. He will soon be better, and then he will be able to romp in the leaves too.

4. "Oh, my nice tall sunflower!" cried Nellie, when she got home from school. "Did the wind do that? I wanted so much to keep it until father came home. And now it is all broken down." Nellie felt as though she could have a good cry, but just then her brother came along and told her how much the chickens would like to peck at the seeds. So they put them away until morning for the chicks.

THE SCISSORS.

We're a jolly pair of twins,
And we always work together.
We are always bright and sharp,
However dull the weather.
Whenever little Maidie
Takes her work-box in her lap,
We are always up and ready
With our "Snip, snip, snap!"

Chorus—

Snip, snip, snap,
Snip, snip, snap,
We are always up and ready
With our "Snip, snip, snap!"

We cut the pretty patches
To piece the pretty quilt;
Each square the next one matches,
Their posies never wilt.
We trim the edges neatly,
With never a mishap,
And what music sounds so sweetly
As our "Snip, snip, snap?"

We cut the dolly's mantle;
We shape the dolly's dress.
Oh, half the clever things we do
You'd never, never guess!
For food or sleep or playtime
We do not care a rap,
But are ready, night and daytime,
With our "Snip, snip, snap!"

Chorus—

Snip, snip, snap,
Snip, snip, snap,
But are ready, night and daytime,
With our "Snip, snip, snap!"

—Laura E. Richards, in *April St. Nicholas*.

Teachers' Miscellany.

A GRAND SERMON.

BY EDWARD EVERETT HALE.

"Let us make man."—Gen. i. 26.

In any board of education I should be told that the great object of education is to carry out this purpose of the good God. In any adequate treatise on government I should be told the same thing. And certainly if I turned to the directors of the various churches, to the people who say they are the church, and that other people must obey and follow them, they would say that this is what churches are for—to make men. And probably they would add what this noble legend of Genesis adds: "We want to make men in God's image, after His likeness."

Is it not, then, rather pathetic that, with all their endeavors, the people whose business it is to make men turn out so few specimens of successful manufacture?

Why are there so few men? And when one changes the sex, and for the work of women makes the same inquiry, the women come out no better. You find a plenty of people fussing over detail who, as somebody says, cannot tell a small thing from a great one. But you ask eagerly and nobody tells you, where are the women? Where is our steady supply, not exceptional, not a miracle, which shall give "a perfect woman nobly planned"? It is worth while to ask what our five hundred colleges propose to themselves. What do they say in their best achievement? At their

annual commencements, from Labrador to San Diego, they say, "We present to you these youths who have acquired skill in Greek or Latin or mathematics, or in the study of nature, or in the study of history." Possibly they will say, "We present to you this or that hero who has successfully led his crew in a boat race or in a ball match." But there will not be one of them from one end of the country to another which will say, "We present to you this youth who can control his appetites and can govern his mind." That is to say, there is not one of them which will venture to say on commencement day, "We present to you a man." All that my own college says in presenting the bachelor's degree is this:

"We present to you these youths whom we know to be fit for speaking in public as often as anybody shall call them to that duty."

This is the best that has been achieved in a course of study covering four years and prepared for in many more.

A man is not a finely-formed or well-trained physical machine. Physical strength and health come from manhood, but they are not manhood. A man is not a well-adjusted, well-trained—shall I say well-oiled?—intellectual machine. Reasoning, imagination, memory, are good tools of manhood, but no one of these nor all of them can make a man.

A man is a child of God. No language is fine enough to make the full statement, but this is the best that has been tried. He is come from God and he goes back to God. "Spark from the divine fire," the poets are fond of saying. "Light from the divine light," that is one of the Bible expressions. "Dewdrop from the divine ocean," that is an image hinted at in the Bible. Man is a living soul. Perhaps I shall not do better than to take this phrase. This living soul has the business of controlling this body, making it strong and quick, active and pure. This living soul has also the business of controlling this mind, and making that to be strong and quick, active and pure. And it is only as this living soul asserts itself, will not be swayed by the body or by the mind—it is only thus that you have a man; only thus that you have a woman.

Those who have to do with machinery know instances upon instances where, in familiar language, the machine "runs away." The locomotive runs so fast on a down grade that for a moment it escapes from the hand of the driver. The steam which is called the power is not the power; for it is crowded back on itself by the impetuous force which the downward grade has given. Precisely in the same way one sees intellectual action, where the vigor of a man's habit of reasoning or where the distinctness of his memory gets control of his conscience, gets control of his will, and conscience and will are ridden over by the mere force of the intellectual machine. And in every day, in every hour of the day, you see some poor wretch who has let a bodily appetite so overmaster him that, as Paul says, he does the thing that he does not want to do.

The body has become too strong for the soul, as on that downward grade the weight of the engine was too much for the steam. With perfect correctness we then call him a "poor devil." All these are instances where in the man the divine power has been lost. It is fair to say that the man has ceased to be a man, in the true interpretation of manhood. For the man appears only where the soul masters the mind and the body. The man appears where the true will achieves its real purpose. The man appears where the purpose of God is carried out. As Paul says, in that noblest epigram of the New Testament, "to will and to do God's good pleasure," here is the sign of the present God.

One hears a great deal in our time of better education of hand and eye. All right! But I wish we could always manage, in this mere sharpening the edge of the tool—for it is nothing more—to give a boy or girl a deeper sense of who it is who is to use the tool; how great, how unmeasured is the power of the boy or the girl! If we could lead along a boy or a girl from day to day in this sense of possible mastery, if we could really make them believe that in the temptations which are likely to befall them they can really tread on serpents and scorpions, and that nothing shall by any means hurt them, we should not so much mind if the edge of the tool were not of the very sharpest.

When Daniel Boone made his forest home he owed more to the strength of the blow by which he drove his axe, he owed more to the precision with which the axe alighted in its preordained place, than he owed to the sharpness of the tool. And these boys and girls of ours are to succeed or are to fail according as it is the infinite power of the child of God which undertakes the duties of manhood or womanhood.

This is the true lesson when a great man dies, or a great woman. Little people ask in a little way, "How could she do what she did, or he?" The great teachers answer, "She did it because she was a child of God; she could do what she set out to do." Sons of God do not stop or turn backward from the plow, and any boy or girl who will try the great experiment has this victory open. "I control my body; it shall do what I command. I control my mind; it shall think the things which are pure, which are lovely, which are of good report; it shall not think things which are base or mean or in any shape wrong."

The boy who makes that determination of a son of God, and determines to put an end to all other notion, in that moment becomes a man. The girl who thus determines becomes a woman. Such are accomplishing what the good God set Himself to accomplish when He said, "Let us make man in our image."—*Providence Journal*.

Book Notices.

"LE VOYAGE AUTOUR DE MA CHAMBRE" and "LE JÉPREUX DE LA CITÉ D'AOSTE" of Xavier De Maistre. "LA GRAMMAIRE" and "LA LETTRE CHARGÉE" of Eugène Labiche. Edited, with introductions, notes, and vocabulary, by F. H. Sykes, M.A., Ph.D., Professor in the Western University of London, Ont., and E. J. McIntyre, B.A., Modern Language Master, St. Catharines Collegiate Institute. Published by the Copp, Clark Company, Ltd., Toronto.

Both students and teachers interested in the Matriculation or Departmental examinations will find this edition of the prescribed French texts for 1897 of great value, on account of its accuracy and completeness. On these points the vocabulary, notes, and sketches of the authors leave nothing to be desired, and, in addition, the book contains well-chosen selections for sight-reading and many excellent exercises in French prose, based on the text, and well-adapted to acquaint the pupil with the ordinary constructions and idioms of the language.

THE FACTS OF LIFE (LES FAITS DE LA VIE).

Idiomatically described and systematically arranged, forming a complete dictionary of the objective language. Part I.—Home Life—The School—Travelling Plants. By Victor Bétis, Director of the Normal School of Languages, Boston, Mass., and Howard Swan, Director of the Central School of Foreign Tongues, London. Publishers, George Philip & Son, 32 Fleet street, London, E.C.

This book is a dictionary of the common phrases and sentences of the French language, so classified and arranged that the student can readily find the French equivalent for any ordinary English idiom. On this account alone it will be a useful handbook to the student who is seeking to acquire a practical knowledge of conversational French. But, beyond this, it is an exponent of the "psychological method," as differing from the natural method of teaching languages so much in vogue. In the latter method, as a result of the study of natural processes, purely oral teaching forms the greater part. The psychological method, on the other hand, does not merely copy the processes of nature, but strives rather to interpret and adapt them to the various conditions and phases of intelligence. For example, words are taught by associating them with the *thought*, or the mental visualization, of the object, instead of with the actual object or picture. The principles of the method are well and carefully worked out in "Les Faits de la Vie," and, in the hands of a skilful teacher, much of the irksome and parrot-like learning by rote that accompanies the study of a foreign language may be avoided.

science

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Literary Notes.

In *Appleton's Popular Science Monthly* for September Mr. David A. Wells continues his articles on the "Principles of Taxation." In a humorous paper entitled "The Sympsycho-graph; a Study in Impressionist Physics," President David Starr Jordan satirizes the conclusions and claims concerning certain visionary matters, mental and moral, which some enthusiastic persons are disposed to infer from Roentgen's discovery. Important physiological information is given in J. E. Humphrey's "Some Modern Views of the Cell." In "The Vivisection Question," Prof. Hodge makes an argument for the value of the knowledge to be gained from physiological experimentation. Mr. Sidney G. Fisher discusses the relations of "Immigration and Crime." Prof. W. R. Newbold's diagnosis of "Illusions and Hallucinations" is illustrated by the citation of several incidents of experience. Prof. J. A. Udden treats of "Dust and Sand Storms in the West." Clare de Graffenried presents as "Debts of the New Woman" what the emancipated ladies of the present owe to their humbler sisters who have toiled in the past and to those who are now toiling. Helen Zimmer

contributes an analysis of Enrico Ferri's treatise on "Homicide." New York: D. Appleton & Company. Fifty cents a number, \$5 a year.

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