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OFFICIAL CALENDAR
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Educational
Department
annual examinations, 1894. Notices.
May 24. Applications for the High School Primary, Junior and Senior Leaving Examinations and University Pass and Honor Matriculation Examinations to Inspectors due.

May 25. Inspectors to report to Department number of candidates for same.

June 1. Public and Separate School Boards to appoint representatives on the High School Entrance Examination Board of Examiners. [H. S. Act, sec. 38 (2).]

Notice by candidates for Kindergarten Examinations to Department, due.

June 5. Practical Examination at Normal School begins.

June 13. Written Examination at Normal Schools begin.

June 14. Normal Schools close (First Session).

## Examinations.

June 27. High School Primary Examination in Oral Reading Drawing, Bookkeeping and Commercial course begin.

June 28. High School Entrance Examinations begin.

Public School Leaving Examinations begin.

Kindergarten Examinations at Toronto, Ottawa and Hamilton begin.

July 3. The High School Primary, Junior Leaving and University Pass Matriculation and Scholarship Examinations begin.

The Commercial Specialists' Examinations at Toronto, begin.|11z RICHMOND ST. w., TORONTO

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## Editorial Notes.

A note received from Principal McCabe, just as we are handing in the last instalment of "copy" to the printers, brings the disappointing information that he finds it impossible to forward the time-table award for this number of the Journal. This is, we know, due to no want of effort on his part, or on that of his coadjutors. The fact seems to be that special and unexpected difficulties have been met with in deciding upon the merits of the competing documents. These difficulties will, no doubt, be surmounted in a short time. Meanwhile it is better, of course, that the examiners should have all the time needed in order to make a minute and thorough comparison than that they should give a hasty verdict. We regret the unavoidable delay all the more because we perceive that some of the Institutes proposed to make the new table a subject of discussion at their meetings.

That was a truthful and suggestive reply once made by a teacher to one who said to him, "I should think it would become very wearisome, this necessity laid upon you of going over and over again the same lessons year after year; the road must appear dry and dusty beneath your feet, and the scenery tiresome in its constant repetition." "That is because you are not a teacher," was the reply. "The interest of a student is in new truths; the interest of a teacher is in new minds." Here there is, indeed, endless variety. No two minds are precisely alike, as are no two faces. The modes of dealing with these, of
securing attention, awakening interest, presenting truths, etc., require to be constantly varied in order to meet this perpetual variety in the minds addressed. Minds, not less than books, are the objects of the teachers study, and are certainly not less interesting in their endless phases, wondrous unfoldings, and boundless possibilities.

We saw somewhere the other day a severe reflection upon certain unnamed Ontario teachers, to the effect that they were inveterate tobacco-users. We wonder how large a percentage of the male teachers in Canada use the weed. We feel sure the number of those who patronize the saloon or tavern bar, or indulge in the use of stimulants at home, is now exceedingly small. We wish we were sure that the percentage of those who set a bad example in regard to the deleterious tobacco habit is equally insignificant. There are few professions in which personal example is of so much weight and importance as in that of teaching. The sense of responsibility inseparable from a full recognition of the fact should make every teacher pause and weigh well the effects and tendencies of all his personal habits. However able, enthusiastic, and successful a teacher who uses tobacco may be, we hazard little in saying that his power for good might be largely increased by the exercise of the self-denial necessary to the breaking-off of this unrefined and not over-cleanly habit.

We are sorry to observe that in some of the city councils and boards of trustees the spirit of a petty economy is struggling for the mastery. An effort is being made to do away with the kindergartens and other departments or subjects, which some, out of the depths of their profound want of knowledge of the child mind and its laws of growth, are pleased to regard as " fads." One great mistake often made by parents and guardians is that the beginning of the training of children is too long delayed. The restless energies of childhood, both physical and mental, will not remain quiescent. If these are not properly directed and scope given for their free play in a right direction, there is great danger of their early perversion. Bad habits, mental and moral, are often formed before the child enters school, which, if not absolutely inveterate, can often be eradicated only by dint of long and patient effort. Hence, even on the low ground of simple economy, it would
not be hard to prove to an intelligent and open mind that the money expended in the support of kindergartens of the genuine stamp, and in cultivating tastes and habits whose "practical" usefulness is not always seen on the surface, is really economy of the very wisest kind. It tends not only to the promotion of the public good negatively, by turning the currents of youthful activity from wrong channels, but positively, as greatly increasing the proportion of intelligent and useful citizens, whose developed intelligence may one day be of the greatest service to the community and the state.

A correspondent asks the ever-recurring question: "What are the best positive methods of securing attention and order in the school? What would you do with boys who are bent on nothing but mischief?" Such questions cannot be answered in a word. There is no cast-iron formula or patent panacea for the cure of inattention and disorder. "Something for every pupil to do at every moment, and a motive for doing it," is perhaps the best general rule we can give. But then, everything depends upon the skill of the teacher in choosing the "something," arousing the child's interest in it, and thus supplying and applying the proper motive. In order to this the teacher must, as far as possible, study and understand the individual boy and girl, gain his or her confidence, rouse ambition, curiosity, love of knowledge, etc. The boys who are "bent on nothing but mischief" are not always the worst boys to deal with, when one "gets hold" of them. Often the boy's mischief is but the escape of surplus energy which must find vent in some direction. Perhaps with a little study of the case and tact in drawing him out, it may be found that he has some special bent which can be utilized. If he is found to have special taste or ability in a particular direction, the wise teacher may, by giving him scope and encouragement in that direction, find just the vent required for the escape of the overcharge of electricity, which must be drawn off in some way. One thing is, however, pretty certain. Very little will be gained by simply trying to repress by force the mischievous impulses of such boys. Some counteracting influence and attraction must be brought to bear. This question is of perennial interest to teachers. We should be very glad to publish a few chapters from the experience of those who have successfully grappled with and overcome such difficulties as those which are vexing our correspondent.

## Special Papers.

## DEFECTS IN OUR PUBLIC SCHOOL SYSTEM.

an address bl a. mcmillan, toronto, chairman p. s. dEPT. ontario educational association.
(Continued from last number).
I have said that this is a question of supply and demand. But what is the cause of this abnormal demand for cheap teachers. Coincident with the predominance which the high school has acquired in our system has been the elimination of the higher classes from our public schools, and their absorption into the high schools. Material must be found to feed these schools, and so, as was well shown in the paper already referred to, came the lowered status of the public school, with its deterioration. Any one could now teach the babies - a mere boy or girl could fill the bill. Third-class teachers, or rather apprentices, underbid the higher grade and more experienced teachers, who in many cases quit the field, with the result that we have more thirdclass teachers to-day than at any time in the past.
This unfair treatment of the public schools provoked criticism in the Legislature. A remedy was provided, the chief characteristic of which was its mildness. We were given the Public School Leaving Examination, but as its ostensible purpose was to benefit the public schools, it must cost nothing, and it did cost nothing. The rigorous conditions attached to it made it perfectly safe in this respect. However a little more pressure from those interested in the welfare of the schools led to some relaxation of the conditions. Still we are but toying with the evil. The last report from the Education Department gives no particulars regarding the operations of the Leaving Examinations of the last year. It is known, however, that for the whole Province probably less than 300 certificates were issued, and about $\$ 1,000$ was granted on the conditions which the regulations preseribe. This munificent sum means an average of seventeeu cents for each school in the province. But this, it must be remembered, is for the advancement of public school education.
How different has been the fostering care bestowed upon the high school, and this too when public opinion is divided on the question of granting state aid to higher education. As teachers we realize the value of higher education to the state, and it should be our desire to see an efficient high school system maintained. But it shonld be a system such as the needs of the country demand. Owing to geographical conditions we are necessarily an industrial people, and any system of education which ignores this fact must in the end prove a failure. We need good public schools everywhere, but it is doubtful whether we need a high school in every village or on every crossroad. We now have 126, and many believe that fewer schools well equipped would suffice. Even then we should be better supplied than most, if not all, other civilized nations. Massachusetts ranks high in education - higher perhaps than any other state in the union. In the matter of high schools this is emphatically so. For the whole of the United States there are about thirty-three high schools sufficiently
well equipped to prepare candidates for admisWell equipped to prepare candidates for admission to the leading colleges, and of these Massachusetts has twenty-five. Though her popula-
tion is greater than ours, we have five times tion is greater than ours, we have five times as
many high schools. While she has one for every 90,000 of her population, we have one for every 16,400 . If the comparison be carried further, the disproportion becomes vastly greater.
This multiplication of high schools, apart from its injurious effects upon our public schools, has not been without bad results. Many are attracted to the high schools, whose usefulness would be enhanced by a good public school training, but with the
craze for the so-called genteel occupations which seems everywhere prevalent, they take a course in the high school and leave it to still further swell the ranks of professions already over-crowded. The larger proportion, however, take a short course, receive a modicum of preparation, and at once or much too soon blossom out as teachers. It may not be fair to charge this solely to the high schools, but it will not be denied that our copious system of high schools offers facilities for perpetuating the most flagrant defect of our public schools, viz. :- the transitory character of the teacher's calling.
I have referred to the Leaving Examinations as an instance of the generous treatment which the public schools have received from the Legislature. That we may view more fully the contrast in the treatment of our high schools, let me quote the following figures. In 1891 there were registered in the public schools 491,741 pupils, and the total Legislative grant for the year was $\$ 289,610$, or fifty-eight cents for each registered pupil, the grant for 1892 being several thousand dollars less than that for 1891.
In the same year there were registered in the high schools 22,230 pupils, but the Legislative grant was nearly $\$ 100,000$, only $\$ 300$ less, or \$4.48 per pupil. There are no figures showing the additional grants to high schools on the score of equipment, but leaving this out of the calculation it will be seen that the grant per capita is nearly eight times greater for the high schools. This money, it should he remembered, belongs to the people, all of whom are vitally interested in the public schools, and the great majority of whom are but indirectly interested in the rest of our school system.
The plea usually advanced for this discrimination in favor of high schools is that their efficiency must be maintained in order to supply teachers for the public schools. Bearing in mind what has already been said about the Model Schools, viz. :-That 1.200 teachers are annually turned out from them to fill positions which, with anything like adequate safeguards for their protection, should not number more than 200 ; bearing further in mind the fact that a large proportion of the 1,200 put in but a brief and perfunctory apprenticeship to the business, and while still prentice hands forsake the calling, making way for the new army of recruits; bearing still further in mind what has been said regarding the undue stimulus which the omnipresence of the high school has given to aspirants for genteel occupations, how transparently fallacious does this plea become. Is it not the sheerest mockery to argue that this is in the interest of the public schools? What is alleged as a justification for increased expenditure becomes the most prolific means by which this farce is kept up. Increased expenditure may be justitied on other grounds, certainly not on this. Our high schools could, even if made largely self-sustaining, furnish many more than the necessary number of teachers, and this too with little fear that some flower might be "born to blush unseen." This degradation of the people's schoels has gone on with such constancy that it has become familiar and has ceased to excite wonder. True, we have deplored it and have recognized the blighting influence, but apparently we have become convinced that it is inevitable. This is where we most seriously err. Silence on our part implies either want of faith in ourselves or indifference not only to our calling but to the interests of the scbools.
I confess that it is easier to point out these defects than to provide a remedy which will be at once feasible and effective. Evils that have been allowed to grow without any adequate attempts to curtail them, do not readily yield except to heroic treatment. Yet the status of the teacher, or in other words the condition of the school-the one determines the other-is a matter vital to the state, and the state, which means the people, will in this, as in other questions, look for light to those who are specially concerned in the work and welfare of the
schools, and who are in a position to give expert testimony regarding the same. The public is to blame only so far as apathy on its part permits the continuance of evils the existence of which bas been clearly pointed out. It should be borne in mind too, that the average citizen is better fitted to judge of matters pertaining to his own particular arocation than to questions which may be foreign to it.
Here then is a field for effort. If we shirk the responsibility which the situation imposes on us, and trust-as I fear we too often do-to our legislative godfathers, then we need not hope for improvement.
I have indicated some of the weakest spots in our system, and likewise some of the contributing causes. There are other defects which are allied to, or spring from those suggested. Let us inform ourselves fully as to the effect upon our schools and teachers of what has been feebly pointed out here, then our part will be clear.
In conclusion let me say a word bearing on the relation of the teacher to the state. Is it not strange that the teacher - and think of what this word should suggest-is in the position of a ward to the state. It is difficult to realize how a condition of tutelage can be compatible with the development of true manhood or womanhood, yet these qualities are expected in the teacher, and rightly so. But do we realize what their absence implies? We may almost say with Shylock that "sufferance is the badge of all our tribe," and assuredly we utter nonsense when we speak of teaching as a profession. True there is no higher work regarded intrinsically, but look at the conditions which hedge it around.
Here then there is scope for effort, and in this direction at least lie some of our responsiblities. The time has long since passed when teaching should be something more than a mere temporary convenience for the many at the expense of those who are giving their life to it-something more than the byword makes it, viz.: "a. stepping-stone to something better." With the assurance that springs from a righteous cause, we should insist on such changes as will give more stability, and therefore more dignity to the teacher's calling. We can insist on this too, with the full conviction that it is not only compatible with, but essential to, the highest interests of the community. The conditions now are such that we can and should have a higher standard for entrance to the ranks-higher from the standpoint of age or maturity ; higher from the standpoint of literary culture, and higher too from the standpoint of professional training.

Of this we may be assured. Apathy on our part means the perpetuation of existing evils. If we are convinced that these evils exist, our duty is clear. The words "who would be free himself must strike the blow," even if trite, should possess inspiration for us, and if we cannot achieve all we desire, let us for the cause, which-though too often trailed in the dust, is yet noble and dearly lovedtransmit to those who follow an insproved
heritage.

The purpose of moral education is not to add to a pupil's knowledge but to affect his will.-
Anon.

It is by loving virtuous men set before him for examples, and by loving a divine model of every virtue, that the child will come to loving good himself.-Compayre.
Give a boy address and accomplishments and you give him the mastery of palaces and fortunes wherever he goes; he has not the trouble of earning or owning them; they solicit him to enter and possess. Among strangers a good manner is the best letter of recommendation, for a great deal depends upon first impressions, and these are favorable or unfavorable according to a man's bearing, as he is polite or awkward, shy or self-possessed. Manners, in fact, are minor morals, and a rude man is generally assumed to be a bad man.-Emerson.

## Seience.

Edited by W, H. Jenkins, B.A., Science Master Owen
Sound Collegiate Institute.

## SIMPLE EXPERIMENTS.

## secected.)

TO ILLUSTRATE POROSITY
(a) Two plain, dry beakers or tumblers and a piece of cardboard. Into one tumbler pour boiling water until half full, cover with cardboard, and invert second tumbler over first, and allow to stand for a few minutes. How does the condition of the interior of the upper tumbler change? hat does this experiment teach regarding the ardboard? About water:
(b) In a graduated tube put $75 \mathrm{c} . \mathrm{cm}$. of water, and add $2 \mathrm{c} . \mathrm{cm}$. finely ground sugar, and when the latter has dissolved note the volume. Account for the phenomenon.

## indestructibility of matter.

In a beaker containing water and sulphuric acid invert a test tube containing the mixture, and weigh all. Weigh a small fragment of zinc and drop in the beaker, and cover with the mouth of the test tube. When the zinc has all disappeared weigh the whole apparatus. How does this weight compare with the sum of the two former weights? What has become of the zinc?

## to ascertain the cohesion of paper.

Glue a strip of paper to a firm support and the other end to a flat wooden strip in the end of which is a hole. Through the hole slip the hook Which is a hole. Through the hole slip
of a spring balance and pull steadily.
WATER AS A MEDIUM FOR CONVEYING SOUND.
Fill a rubber tube, six feet long, with water, and hold in a shallow curve. Place a vibrating tuning fork in one end and have a pupil place his ear near the other.

EXPERIMENTS IN OPTICS.
The following arrangement, in a suitably equipped laboratory, for experiments in light, admits of individual experimentation, which is always more difficult to provide for in this than in other departments of physics.

Place the electric lamp in a large hexagonal or octagonal box. In the sides have slits or holes for the insertion of lenses, etc. Opposite each side of the box place a student's working table, at which four or more students can be easily accommodated. Individual apparatus can be placed on each table, and when used passed on to the next table. In this wry over thirty can carry on individual work simultaneously. It is not necessary for all to perform the same experiment at the same time, but it is quite possible for students with a little practice to perform two experiments in each working period, and with four or five periods a week each student will have performed the series laid down, and all be ready for recitation and comparison of notes at least once a week.
artificial glaciers.
Teachers who have found it difficult to make the movements of glaciers clear to their pupils may find it helpful to use one of these simple methods, which are given by a German writer. For ice, he substitutes yellow pitch, the surface layers of which, after exposure to the air, show about the same degree of plasticity and brittleness that ice has. Take a square tray which has a slanting gutter; this gutter must first be lined with a layer of very hot pitch, to prevent the mass from rolling down. Then pour in the rest of the pitch. As it moves downward, cracks are made from the edges towards the centre at an angle of $45^{\circ}$ to the edges, and join traverse fissures which are produced in the middle. Where the tray widens, longitudinal crevices are produced.
The other method differs from this only in coating the surface of the pitch with a layer of white paint, so that the cracks appear black on white, and are more easily seen. The writer says that particular forms of cracks can always be observed at the same parts of the tray, and that the motion, which has the same kinds of variation noticed in glaciers, can be croscope.

## NOTES.

It is sometimes exceedingly interesting to compare the views held by modern scientists With those entertained by early investigators.
tury, gravely propounds a recipe for making mice. It is as follows: Press a dirty shirt into a pot partly filled with corn. After twenty-one days the ferment proceeding from the shirt, modified by the odor from the corn, turned the la ter into mice. He says he witnessed this la ter into mice. He says he witnessed th
Digby, who lived about the same time, attributed plant growth to the influence of a balsam which the air contains.

Butterflies and moths. Casual observers often ask how to distinguish a butterfly from a moth. Attention to the following prints will assist the enquirer.
Butterflies have the antennæ knobbed or hooked, chrysalis rarely enclosed in a cocoon, generally fly by day and rest with their wings erect.
Moths fly by night, rest with wings expanded, construct silken cocoons, and have antennæ plumose or straight.

## CORRESPONDENCE.

W.I B., Priceville.-Q.-Explain the terms ovule, seed, and fruit, illustrating your answer by reference to Canadian Rosaceæ, Cruciferæ, and Liliacer.

Ans.-If the pistil of a Trillium (one of the Liliacex) be cut across there will be observed three small cavities (ovaries) in each of which is a small, rounded body, the ovule. Upon magnifying this it is observed to consist of two coats and a small globular body inside - this is the body of the ovule. In this body a small sac (embryosac) is developed, which contains the germ cell. After fertilization of this germ cell, it subdivides and eventually grows into a miniature plant, the embryo. The outer coat of the ovule becomes hardened, thus firmly enclosing the embryo. At this stage the ovule is termed a seed. It is enclosed in the ovary, now known as a pericarp. The latter may include only one or many seeds, according as there were but one or many ovules. The matured ovary, i.e., pericarp (or ovaries, if the pistil is compound) forms what is called the fruit. In the apple (Rosacee) what is popularly called the fruit is in reality the calyx thickened, surrounding the papery core (pericarp) in which the seeds are developed. In the blackberry there are many little "fruits," each consisting of a fleshy mass surrounding the real fruit, in which is the seed. In the Cruciferæ, i.e., wild mustard, the fruit is a long pod-i.e., the ovary wall hardened, enclosing the seeds. As far as the Primary examination is concerned, all that was required was a description of the ovule, what changes in it transform it into a seed, and a description of the various kinds of fruits found among the families mentioned, e.g., plum, strawberry, apple, blackberry, silique, etc.

## Hints and Helps.

## INDIVIDUAL TEACHING.

The gardener who trims his trees all to one pattern fails to produce those pleasing effects which are found where the pecularities of each individual are respected. A well trimmed hedgerow may look well as a whole, but the varied beauties and normal development of the units are entirely lost. Is it not so in the most of our schools where the pupils are dealt with in masses? Every one must be cast in the same mould and subjected to the same treat ment. The talented become restive and bad or acquire habits of idleness while waiting for the dull, and the dull become discouraged and hopeless while trying to follow those naturally bright. We always felt it to be a great in justice to keep large classes entirely together for six months or a year at a time, to suit the teaching to the average ability of the class and to ignore the idiosyncrasies of each pupil. It is contrary to the fundamental principles of modern pedagogy.
We have endeavored in our own class teaching to direct our attention to the weakest members of the class, allowing the rest to work by themselves but reserving enough time to give them some individual assistance, and allowing them to advance as rapidly as they were able without regard to the progress of their classmates.
We were therefore much interested in reading a description by Mr. Search, Superintendent of the Pueblo Schools, of a system of "Individual

Teaching" adopted there. "The fundamental characteristic of the plan on which the schools are organized is its conservation of the individual." Every pupil carries on a large part of his studies by himself-the teacher passing from desk to desk, developing self-reliant and independent workers. Love of work caused by success soon becomes a more powerful stimulus than competition. A careful record is kept of each pupil's advancement. It is found that artificial inducements to study are not needed -nearly every one developing into an ideal student. We believe that when laboratory methods become more common a modifati of this plan will be adopted everywhere.-The Educational Review.

## ONE WAY OF TEACHING.

The following is from an old number of an American exchange. We are glad to believe that the methods illustrated have few counterparts in Canada, though we are bound to confess that we have listened in past days to exercises not very dissimilar:
History teaching is often the narrowest kind of task-work, having in it no element of teaching. The text-book is the only source of information. The lessons are assigned by pages and chapters. The daily class exercise is a mere catechetical examination, and most of the questioning violates every educational principle. In one school each pupil was called upon to Wecite the whole lesson without questions. While each one was reciting the others were studying. In another school, as the pupils hesitated, the teacher gave the first words of the paragraph. Then, losing his place in the book, he remarked, "I don't quite see where you are working."
In another the following dialogue took place, the subject of the lesson being the Greek philosophers, the pupils a first-year class, and the teacher with open book in hand :
Teacher to the Class. - "Who was an eminent friend of Pericles and taught mathematics, and astronomy?"
One Pupil.—" Diogenes."
Teacher. - "No, Anaxagoras. Who was Diogenes? Can any one tell?
Several Pupils.-" He lived in a tub."
Teacher. -"Yes; he was a famous cynic, (No answer). "Democritus, because he treat(No answer). "Democritus, because he treated the follies and vices of mankind with ridicule. He taught that the physical universe consists of atoms, and that nature, space, and motion are eternal."
I heard a similar exercise by another teacher in the same school.
In another school, as I entered the class-room the teacher was eloquently describing her travels in France. Resuming the examination, the subject being the reign of Charles I., she questioned as follows :
"The Scotch came into the northern part -"?" Answer. "England."
"This is known in history as the --?" Answer. "Long Parliament.
"The king ungratefully gave his consent to bis "The?" Answer. "Execution."
"The king retired amid cries of -_?" Answer. "Privilege."

## TWO METHODS.

I rang my school bell at five minutes to nine, and when I stopped, tapped the gong and marked all late who came in thereafter. Result: much tardiness; those tardy say, "the bell has stopped," " too late," "don t care," "no use to try.

I rang my bell at ten minutes to nine, stopped at five minutes to nine, and only those in the school knew when school had been called to order. Result: very few tardies; increased effort; no relaxing of energy because the gong may not have tapped, and the influence goes through the whole day. - Virginia School Journal.

Moral principles are few, simple, clear, and are perceived by men universally. Appeal to these, awaken them, use them, and make men moral beings.-Duryea.
The formation of habits is of the utmost importance, not in educating the intelligencealone, but its value with regard to the moral actions is even greater still.-Radestock.

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J. E. Wells, M.A., Editor and Proprietor.

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## Editorials.

## TORONTO, MAY 15, 1894

## " HOME-WORK."

The Christian Inquirer, a thoughtful New York weekly, says:
"The public ought to awake to the evils connected with crowding our children in the public schools. Boys and girls are being, ruined by what is called 'home work.' This home work is largely necessary, if necessary at all, by the bad school methods, and the defective teaching in school hours. Children ought not to be allowed to study out of school. They should romp and play. Now they tackle 'home work,' as soon as they leave the school house, and keep it up late into the evening when they should be in bed. In Brooklyn this 'home work' business is simply appalling, and the School Board should forbid it. Children should not bring home a lot of books to study hours when they should be at play."

The same evil exists in some, probably in all our city schools in Ontario. We have often had occasion to protest against it. We shall continue to do so, and hope that parents and teachers who regard the thing as a real and serious evil, as it seems to us every thoughtful person must do, will join with us in keeping up the protest until a reforp is brought about. The Inquirer holds "defective teaching in school hours" accountable for the result. That may be the true explanation in New York. In Ontario it is not so much the teachers as the system which is, we think, in fault. The programme has to be followed, the grade must get through with its allotted
task in the term. It must be prepared for the examination.

The "defective teaching" in the school is no doubt a subsidiary cause. But that, again, is often, we are persuaded, not so much the fault of the teacher as of the system. The number of pupils in one class is often such as to render true, which implies individual, teaching impossible. What can a single teacher do in the presence of fifty or sixty boys of from eight to twelve years of age? From twenty to thirty, we make bold to affirm, and we appeal to the experienced and skilful teachers to say whether this is not true, is as large a number as can be efficiently taught in a single class. One result of the overgrown classes is that, as we have heard them bitterly complain in the City of Toronto, parents are often obliged to do at home, in the evenings and mornings, the actual work of teaching which they had supposed would be done in the school-room.

But to return to the question of the home-work. We were very sorry to read, in a report of one of the educational debates in the Ontario Legislature, during the session just closed, some remarks by the Minister of Education in which he seemed disposed to make light of the complaints of too long school hours for the children. We can quote only from memory, but the gist of the remark was that children who had only six hours a day for five days in the week, at school, had little reason to complain. We do not now remember whether the Minister included in his calculation any definite number of hours for "home-work." Let us add, however, two hours per day, for the five days, for the home study required-and we are sure this must be within the mark--and we have forty hours per week of brain-work exacted from children in the public schools. Forty hours per week means nearly seven hours per working day. And this for children of tender years! How many brainworkers of mature years feel themselves able to do seven hours' solid work per day, for six days in the week? Think of the absurdity, not to say cruelty, of expecting from the restless bodies and immature minds of children of eight or ten, anything like the same number of hours of application which the man of middle age can safely exact from his ripened and accustomed brain!
The Inquirer is right. Children under ten or twelve years of age ought not, if we would make able-bodied and able-minded men and women of them, have more than twenty or twenty-five hours of study and continement exacted of them in the week. With proper teaching there would be no loss of time. On the contrary, we are per-
suaded that even three or four hours of real mind-work per day, under a genuine teacher, or mind-trainer, with both body and mind of the child invigorated by abundance of fresh air and recreation, would accomplish far more in the shape of real educational progress than can possibly be accomplished by the longer hours, during half of which the child is sure to be listless and destitute of mental energy.
Parents, physicians, and other men of science in Ontario should take up this question, think about it, investigate it, and take vigorous action, in fairness to the children and in the interests of the future men and women of Ontario. Surely if nature teaches anything she teaches that children are made for play at least as much as for work, and that to defraud them of their play in the open air for hours every day is to do them a wrong and to seriously impair their prospects of a vigorous manhood and womanhood, in their coming years.

## THE AIM IN COMMON $\operatorname{SCHOOL}$ EDUCATION.

AN English writer some time ago deplored the alleged fact that the child emerges from the American common school with but one idea before him-" How can I make money?" Nothing is taught, it was declared that "is not directly, and to the commonest perception, available in making money. The farm boy goes to the district school to learn to write, cipher, and spell correctly, and learns geography as a useful branch of study because he does not always mean to remain on a farm. He looks forward to a translation to city life and a money-making business." There is no doubt, as we have often had occasion to say,"too much tendency on the part of the country youth to look upon whatever education he may be able to gain in the public and high school, as a preparation for city life. And, on the other hand, the cases are all too rare in which the methods and influences of the city school are such as to create or foster a taste for rural pursuits and pleasures. All this, we venture to hope, now that so much attention is being directed to it, is undergoing a gradual change, in both cases, for the better.

But what is the true end of public school instruction? It would be well if every teacher in Canada should put the question to himself and keep studying it until he found a clear and satisfactory answer. What should the farm boy be taught if not to write, cipher, and spell correctly? These are bread-and-butter subjects of coursebut, with reading, they constitute the condition and instrument of all culture of whatever kind. May it not be as high
an end, viewed from the standpoint of a sound morality, to teach the children of the masses to become wide-awake, independent citizens, as to use the public means to impress upon them the duty of being content with the state in which they were born, aiming at nothing better than toilsome, if not grovelling poverty, and becoming "hewers of wood and drawers of water" for others?

The fact that the pupil's time, during the first few years of his school life, is mainly occupied with these, is no evidence that he is, or is not, being trained in all the "elements that produce greatness of mind, high sense of duty, and continuous progress in culture and religion."

Those are certainly the all-important results to be wrought out. But success in attaining them depends, we fancy, far more upon the how than the what of the teaching. A teacher who has moral power and spiritual insight, will unconsciously infuse these subtle influences into every lesson. A virtue will perpetually go out of him. At every point of contact with the child's nature his own high aims and motives will permeate all the daily routine. Whether the average British teacher has more of this moral magnetism than the average American or Canadian may well be doubted. But, and this is the point we wish to make and to leave with every reader, it is a thing which can be cultivated, by cultivating the high aims and aspurations from which it springs.

Some one has strikingly represented the teacher as the modern Archimedes, who has the standing-place, the fulcrum, and the lever for lifting up the world, and who is raising it slowly but surely into its right place. An inspiring picture: Is it a true one? That depends upon the kind of teacher the man or the woman is. Time was when it was thought that the mere secular education, the universal knowledge of the "three R's," was going to abolish pauperism, vice, and crime, and raise the world to a lofty moral plane. Common school education is still far, very far, alas : from being universal, but most thoughtful persons are already convinced that the panacea is not working. Honesty, truth, virtue, do not keep pace with the growth of intelligence. It is now being seen that great moral effects can be produced only by adequate moral forces; and there is no necessary moral force in arithmetic, or penmanship, or geography, or even in literature. This mighty elevating force can be derived only.from the highest sources. The development of the spiritual side of the soul, the inspiring belief in God and a future life, alone can supply the standing place and the fulcrum, while no teacher
but one of lofty personal character can effectively apply the lever. It would be well if every Canadian teacher could be brought to put to himself daily the question, "What is the great end I should keep constantly before me in my school work?"

## DEFECTS IN MODERN TEACHING.

THE following extract from an article by James J. Greenough in a late number of the Atlantic Monthly, contains some thoughts worthy of careful consideration:

The lack of clearness in the few ideas which a boy does have is due to a dangerous tendency in our educational methods, a tendency to make everything easy. Kindergarten methods, which are necessary when a child is incapable of long-continued mental strain and all work must be in the form of play, have influenced the later school work. Clear, exact reasoning, and accurate, careful expression of thought cannot be got by any system which tries to make work into play. Thirty years ago teachers heard recitations from a text-book, and did very little teaching. This method had many great disadvantages, but it had one advantage - the child had to think for himself, or he learned little, and had to express himself in recitation, or he had no credit. The method was dull, it was dry, and the cause of many tears to the unfortunate pupil. There was nothing inspiring, and nothing to awaken the clild's love for the subject studied. In the re-action from this barbarous method we have been carried too far, and now, in the effort to awaken interest, to make the work pleasant, we are tempted to do too much teaching. The children are now helped so much that without the stimulation of a teacher's questions and assistance their minds refuse to work. The thinking is too often done by the teacher, and only reflected by the class. Such methods make the child's thoughts vague and indistinct. This is particularly noticeable in arithmetic classes, where explanations have to be made over and over again. Here the average boy is very loose in his reasoning. Exact expression or the saying of just what he means is almost impossible to him at first, and can be secured only by constant correction and care on the part of the teacher. When questioned, and made to see that what he said was not clear, the boy is surprised that what he said was not what he really meant. He has the idea, but it is so vague that he does not notice how different an dea was conveyed by the words he used.
After a careful explanation of some experiment in physics, I have repeatedly asked the class if they understood it, and have been told by each boy in turn that he did, only to find that the majority were incapable of describing the processes and reasoning intelligently. Generally the boy ends with some such statement as this: "I understand it, but I can't express it." The truth is that all our teaching now is directed toward making the boy understand; but much of it stops there, and does not require him to explain his understanding to others.

Each of us can call to mind times when he wished to talk over a matter with some one else, not to get new light or advice, but to straighten out his own ideas by expressing them. This outward expression boys used to be practised in under a recitation system of instruction, but now lose under a lecture system. Here the preparatory schools are at fault, and we can stem the tide of illiteracy somewhat by requiring more reciting in all subjects rather than by
giving more work in English giving more work in English.

The third difficulty which meets a boy in efforts to write, comes from the fact that he is more accustomed to receive information through the ear than through the eye. He is read to and talked to, but is not made to read enough himself. He does not accustom himself to comprehension at the sight of printed words. When he starts to write, the words are not as real to him on paper as they are when he speaks them or hears them spoken. For this reason, boys use forms of expression in writing which they would never use in conversation. Frequently boys come to me, after studying a lesson in a text-book, with a complaint that they do not understand this or that, but go away perfectly satisfied if I explain it in the exact words of the textbook. They understand the sound and comprehend it, but they do not take in the sense from the printed page. This failure to read enough is also largely responsible for increasingly bad spelling. To correct this difficulty, children should be made to read as early as possible, and to read much aloud. It is dull and uninteresting to the person read to, but the reader is gaining a necessary power to help in all later study and writing.

We are grateful to those teachers who ${ }^{*}$ have within the last few weeks contributed interesting and useful practical papers on various subjects. These papers have, no doubt, been helpful and suggestive to many. The main value of such papers, e. g., those of Mr. Batten on the teaching of the participle and the infinitive; those of "Barda" on teaching the powers of numbers; and others of similar character, is not so much in the actual methods they present, however valuable those may be, as in their suggestiveness. They can hardly fail to set the teacher whose mind is active, and whose heart is in his work, thinking, and lead him to work out for himself new and improved modes of taking up these and other subjects in his classes. Sometimes it is of real advantage to a class to have the subject treated in a new fashion, or approached from a new direction, even when the new method may be no better than the old. It is, in fact, better for the occasion, if it secures better attention and greater interest on the part of the children. We hope to have the number of these voluntary contributions greatly increased. The study required in working them out and putting them into the best shape will often prove quite as useful to the writer as to the readers.

## English.

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## THE ISLES OF GREECE.'

MISS GERTRUDE LAWLER, M.A.
(Continued from last number)
III.-INTRODUCTION.
'O ye! who teach the ingenuous youth of nations Holland, France, England, Germany or Spain, I pray ye flog them upon all occasions It mends their morals; never mind the pain
Don Juan, a poem of over 14,000 lines, is divided into sixteen cantos, each canto consisting of from 85 to 222 stanzas, each of eight verses. The 86th stanza of canto mI is exceptional both in length and matter. It has the usual cight-line stanza and then is followed by a song of sixteen stanzas, each of six lines. These stanzas are quoted on page 211 of the High School Reader under the title "The Isles of Greece."

## With Byron let me say :

"My way is to begin with the beginning."
"Don" is the Spanish word corresponding to the Latindominus, a lord, and was a title formerly equivalent to the English "Lord," but came to mean about the same as the English Mister. "Juan" is the Spanish for the English John."
Don Juan, or Lord John, is the hero of the poem, and from him the poem takes its name. He is a Spaniard, born in the pleasant city of Seville. His life is narrated from the time that
he was he was
" A curly-headed good-for-nothing,"
surrounded by exemplary teachers, chosen by a doting mamma. At sixteen-but listen to Byron: "Young Juan was but sixteen years of age,
Tall, handsome, slender, but well knit ; seemed
Active, though not so sprightly as a page ;
And every body but his mother deemed
Him almost man.'
About that time he got into a scrape, was obliged to leave Spain, and embarked at Cadiz to travel through all European climes. A storm struck the ship; a few boats with several of the crew got off before she sank - all the rest perished. We follow Juan in one of the boats. One by one his companions die from hunger and thirst. His favorite spaniel is eaten by the famished men. At last they cast lots to see which shall die for the others. A few live on, till land is just in sight. So euger are they to land, that they over-set the boat. Only Juan can swim; he alone is saved.
'Twas a wonderful shore on which he was Greek pirate henseless - the home of a wealthy Greek pirate, Lambro by name; and of his lovely
daughter Haidee.
"Her dowry was as nothing to her smiles."
This beautiful young Haidee found Juan insensible, almost famished, half-drowned. It father of the strang sight. She dare not tell her father of the stranger, for her father would sell the unfortunate wanderer as a slave. Therefore health.

Meanwhile her father went on one of his expeditions, and not returning after a lapse of time, it was thought he was dead. Haidee and
Juan were married. Juan were married.
"And now 'twas done - on the lone shore were plighted
Their hearts; the stars their nuptial torches,
shed Beauty upon the beautiful they lighted:
Ocean their withess
Ocean their witness, and the cave their bed, By their own feelings hallow'd and united,
Their priest was Solitude, and they were wed
And they were happy, for to their young eyes And they were happy, for to their young eyes
Each was an angel, and earth paradise." Each was an angel, and earth paradise. At the marriage festivities was a poet who had travelled amongst the Arabs, Turks, and Franks, and who sang to order, befitting the occasion
and the country. His choice for this occasion was "The Isles of Greece."

It is not natural to suppose that a bard can give genuine, patriotic songs for money; he cannot make enthusiasm to order. Much less can a wandering minstrel be expected to produce this Grecian burst of feeling. The reader of The Isles of Greece must listen to the sentiments of Lord Byron, uttered by another. From a man that worked for Greece, as Byron did, this patriotic lyric is most natural, most sincere. If it be remembered that Byron wrote the song in 1819, and published it in 1821, it is easy to understand how well the spirit of song echoes the feelings of its author - The Friend of the
Greeks. Greeks.

## iv.--Explanations.

## (Not included in Parts I., II. and III).

Stanza r. - Isles of Greece. - Some of these islands are mentioned in the poem. All the islands around Greece have historic interest. In fact the history of Greece has been determined largely by those islands. They were the stepping-stones between Asia Minor and Greece - the asylums of gods and of men. It will be remembered, "Mountains alone divide. seas unite." When Byron was at Ithaca - the Island bome of Ulysses and Penelope [Pěn-厄l'- $\delta$ pè ], he said, "If this isle were mine, I would break my staff and bury my book."
Sappho. - A very famous Grecian poetess ; she wrote chiefly songs of love. There is a story, more or less believed in, that because Shaon did not return the love she felt for him, Sappho threw herself from a high cliff into the sea. Sappho was born on the island of Lesbos, 630 B.C.

Delos.-Phœebus.-Delos is one of the famous islands to the east of Greece. Jupiter, the king-god of the Greek heavens, and his queen Juno were not always the best of friends. Of a goddess Latona [Lă-to'-nă], Juno was very jealous; so vindictive was Juno, that she banished Latona from Heaven and made her a wanderer on the earth. One day when Latona was thirsty and weary, she asked some peasants to give fier a drink of water. They answered her request by insulting replies. To punish them, Jupiter changed them into frogs. Then Neptune, the God of the sea, took pity on Latona and, with a blow of his trident, he fixed for her the island of Delos, which, up to that time, had been a floating rock. Here Latona lived and gave birth to Phobus and Phœbe, the God of the Sun and of the Moon.
Stainza ir.-Scian.-The Scian Muse or poet is the king of poets-Homer. It is said he was born on the island of Scio. He sang of Grecian and of Trojan heroes.
Teian.-Anacreon [An-ăk'-rē-on] is an immortal writer of love ballads and drinking songs. He was born at 'Teos [Téos], a small town on the coast of Asia Minor. He spent much of his time on the island of Samos [ $\mathrm{Sa}_{\bar{\prime}}$ 'moss], which was under the rule of Polycrates [Prl-1e'-rä-tess], a patron of men of learning. It was about 500 years B. C. that Anacreon flourished. See stanza $x$.
Islands of the Blest.- By these islands the Greeks meant the place where the souls of the good Greeks went after death. We know they referred to the Canary Islands. It will be remembered that the Pillars of Hercules, the straits of Gibraltar, terminated the węstern known world of the Greeks.
Stanza Ix.-Samian.-Samos and Scio were noted for excellent wine.
A Bacchanal.-Bacchus was the God of Wine. A Bacchanal is a follower of Bacchus, ur a
lover of wine. Stanta wine.
Stanza x.-Pyrrhic. - The Pyrrbic dance was a war-dance-an exercise that promoted military tactics in attacking and defending-a kind completely armed. It is the dancers were completely armed. It is said the inventor's name was Pyrrhichos [Pyr'-rhy-choss]. Julius
Cæsar loved the dance Cæsar loved the dance, and introduced it at like dance became a kind of mand days this war-
dance. The Pyrrhic phalanx [fa'lanx] was a wedged-shape arrangement of the troops of King Pyrrhus of Epirus [E-pi'-rits], a King friendly to the Greeks. It is thus evident that Pyrrhic comes from two distinct nouns.

Cadmus.-Cadmus was a famous Pbenician that introduced the alphabet into Greece about 1000 B.C.

Stanza xir.-Chersonese.-This is the Greek word for peninsula; here it refers to the Thracian Peninsula, the modern Roumania.
Stanza XiII.-Suli.-This is the name of a rocky stretch of land, the home of the Suliotes, a mixed Grecian and Albanian race.
Parga.-Parga is a fortified town on the coast of Albania.
Stanza xiv.-Franks.-This term refers to the French - Franks being the name of the early conquerors of France. Louis XVIII was King of France in 1815. Byron loved Napoleon, although even Napoleon had envious eyes on Greece. Latin fraud also points to France. It is well known how eagerly foreign governments unite to divide a weak state. Byron seemed to fear for Greece. It is a sad irony that points to 1827, when England, France and Russia freed Greece.

Stanza xvi. -Sunium. - Sunium [Sŭn'-r-ăm] is the ancient name for Cape Colonna. The promontory is 300 feet high and was crowned by a splendid marble temple.

## v.-Questions.

In the writer's opinion, it is essential that the teacher be familiar with the matter contained in parts I, II, IiI and IV. Then the class might be permitted to read the poem. The proper names will, doubtless, make the poem abstruse; yet the readers will grasp the idea of the poet-patriotism-an idea gladly welcomed by the youthful mind. Some such general questions as the following will aid in testing the intelligence of the class; the teacher, knowing the facts of the poem, will be able to direct these answers, and to introduce judiciously explanations of the proper names, and the author as the friend of the Greeks.

## general questions.

1. Of what nationality do you suppose the speaker of these lines? 2. To whom is he speaking? 3. On what occasion? 4. Does he blame or praise the spirit of his hearers? 5 . What was the military character of the ancestors of his hearers? 6. Quote from the poem one fact significant of the military character of those ancestors. 7. Refer to the lines that best indicate the spirit of the listeners. 8. What passage tells the hearers to trust in their own power alone? 9. What is the fate of the speaker?
I. How many stanzas are there? II. How many lines in each stanza? III. What verses rhyme? IV. What foot prevails? How many feet in each verse? VI., What kind of gram-
matical sentences predominates? Why p matical sentences predominates? Why?

## vi.-A more particular study.

Stanza i.-1. What feeling does the Minstrel express by the exclamation, "The Isles of Greece!"? 2. Is it natural to repeat this exclamation just as the minstrel does?. [Compare Hear, hear!" "Come, come!" etc.] 3. Express in a simple assertive sentence the meaning of the first line. 4 What is the meaning of burning? 5. Why not say sang and sprang, not sung and sprung? [Byron is
especially fond of the $n$ ? especially fond of the u sound. Poets may use old forms, just because they are old, provided only they are reasonably intelligible]. 6. Show the grew is an appropriate word. 7. Which is war and peace? prose-order, peace and war or war and peace? Comment on the poet's arrangement. 8. In what sense does summer gild? 9. Explain eternal. Is it always sumWer in Greece? 10. We say the sun sets. What do we mean by sets? . 11 Mention something included in all. [Honor, Literature, etc.]
12. How can these set ? Stanza can these set?
Stanza II. - 1. When is a poet called a
muse?
the nine inspired goddesses of song. "Muse in the masculine for poet is very bold."] 2. Which muse sang of the hero; which of the lover? 3. Where was Greek learning welcomed? [France, Germany, England and America cherished and cherisb Greek]. 4. Is mute the correct word? [Mute is applicable to animals. The country is here naned for the people. People are mute When they can speak and will not ; dumb, when they will, and cannot. Compare the last line of the eighth stanza]. 5. Compare the last two verses by supplying the ellipsis.
2. What int-1. Explain the mountains look. 2. What does musing mean? 3. Parse alone. 4. Why not dreamt instead of dream'd? 5 . What does still mean? 6. Deem? 7. Why is it suitable to stand on the Persian's grave and then judge himself a free man? 8. How can the Greeks regain their freedom?
Stanza iv.- What is meant by the brow of the mountain? 2. Why use the old-fashioned sate for sat? 3. What is the difference between looks on the sea and looks o'er the sea $P 4$. Why call Salanus sea-born? 5. Are by thousands ard in nations historical? 6. What does the dash after nations indicate? [Ask this question wherever a dash occurs, remembering that a dash always indicates the omission of a thought that is readily supplied; often that thonght is a mere gesture, but a gesture pregnant with expression]. 7. Give the expression " all were his!" in the exact words the King would use. 8. From the last two lines can you infer that the battle lasted all day? 9. Where Were they? Give examples of the rhetorical tigure of Interrogation.
Stanza v.-1. Explain voiceless. Find this sentiment in the second stanza. 2. Give synonymous words for lay? 3. What is the difference in meaning of beroic used with lay and with bosom? [Heroic verse is that which celebrates brave deeds. In Latin and Greek such poetry was generally written in verses of six feet; in England the poets use the iambic of five feet. These neasures have therefore been called heroic]. 4. Can the bosom beat? 5 . What is a lyre and what the meaning here? 6. Explain degenerate. [De means from, and genus, race; hence fallen from the virtue of ancestors].
Stanza vi.-1. Explain dearth. [A. S. deore. dear + th, meaning state, compose this word; therefore it means, the state of being dear, hence costliness, hence scarcity]. 2. To whom Were the Greeks fettered? 3. How would it affect the meaning to say - "For Greece a blush-for Greeks a tear."

Stanza vir.-1. What does but mean? 2. Show how we and but add special emphasis to the questions. 3. What else could the Greeks do? 4. Explain remnant. [This is corrupted from remanent. Compare the third verse of the 13 th stanza]. 5. What prompted the poet to say three?
Stanza viri-1. Is all a pronoun or an adverb? 2. Is it essential to hear the torrenc's fall at a distance in order to compare its sound with that of the voices of the dead. 3. What does head mean?

Stanza ix. - 1. What does the Minstrel mean by exclaiming, "in vain-in vain ?" 2 . Tell the meaning of strike other chords. 3. Is hordes applicable to Turkish troops. [Horde Was first applied to the wild tribes of Tartary. These tribes lived by plunder and rapine]. 4. Give one word for blood of Scio's vine. answer the verses that show how the Greeks answer the call of patriotism and the call of self-indulgence.
Stanza x.-1. Mark the words that are constanza in the first two verses. [Read this Can ya and listen to the roll of the vowels]. 3. Can you measure a nation's freedom by its ostering of literature?
second rers.-1. Show the force of will in the second verse. 2. What does tyrant mean? [Tyrant now means an absolute monareh ruling despotically. Literally the word means a master ; in Grecian history the tyrants succeeded
the hereditary sovereigns on the establishment of republics; these tyrants were often cruel usurpers]. Explain the last two verses.
Stanza xir. - Why would such a tyrant's claims bind?
Stanza xiil. - 1 . Write the meaning of the stanza in good prose.

Stanza xiv.- Show that this stanza expresses the sentiments of Lord Byron. 2. How did history prove that his opinion was wrong? 3. What does fraud mean? 4. Does the goodness of a shield cousist in its breadth?

Stanza xv.-1. What is meatit by our virgins? 2. What does glorious mean? 3. What glowing? [Compare burning in the first stauza].

Stanza xvi.-1. Why may the steep be called marbled? 2. In what case is I? 3. Explain mutual. 4. What is the well known fact about the swan's dying song.? 5 . Is shall the correct word?

## JACK IN THE PULPIT.-WHITTIER.

mary agnes watt.
(Our English Department was already full when the

"Jack", came to hand, but as "Jack" is now holding forth from myriads of pulpits all over
the land, we felt that this is the appropriate number, and have accordingly made room for it.Ed. JovRNaL).
Have you been to the woods yet? Or if you have not, have the wild Howers come to you hepatica, dogtooth violet, trailing arbutus, trillium -- have they presented themselves to you as sweet reminders of spring days gone by, and harbingers of the spring-time to come.
'God does not give us new flowers every yearWhen the spring winds blow o'er the pleasant places,
The same dear things lift up the same fair
The violet is here !
It all comes back - the odor, grace and hue-
Each sweet relation of its life repeated,
No blank is left, no longing-for is cheated,
It is the thing we knew.
So after the death-winter must it be-
God will not set strange signs in heavenly places,
The old love will look out from the old faces,
My own-you shall I see!"
Now, then, is the time to read "Jack in the Pulpit" and to have an inspiring talk about wild flowers. You may find, perhaps, that it is not your roughest boy who needs inspiring. He has a soft spot inside his hard shell that you have never known before you spoke of flowers, but it may be that it is your pet pupil whose emivently proper mind is dead to all uncommercial interests, who in his lop-sided development needs correcting by an esthetic bias. If your pupils have been presenting you with flowers, you can speak of them, and when the interest seems awake lay aside your lesson for the day, even though it be "The Thermometer," which will keep till next winter, or "Volcanoes," in which you can work up an interest after the wild flowers are gone, and say:
"Open your book at page 103 and let us read about wild flowers, a poem written by a man who loved flowers."

Class read silently. When done, call on a good reader to read it aloud. It may be read at least five times before much explaining is done.

While the second pupil reads, the class is istening with a purpose-to notice the names of the flowers and to see how many of the flowers they have seen, the teacher asking :
"How many of you have seen every flower mentioned by Whittier P"
"What one have you never seen, Mary ?"
"Has any one seen ' White Indian Pipes,' or any other rare plant?"
" Can someone bring us a specimen ?"
During the third reading the class listens to count the number of flowers who came to hear "Jack" preach. During the fourth reading they again listen to confirm the first answer. Before the fifth reading any things necessary to be explained are made clear, and the class listen with deepened interest to the fifth pupil, who should be a volunteer.
The chief points to be explained will be "canopy," "surplice," and "bands," "windlyre," "profanely," and "expound." The first is shown by reference to the flower or to a black-board sketch, if the flower is not yet on hand (it will be present as soon as the children can procure a specimen, you may be sure). The Episcopalian children will know what the surplice and bands are, and will take pride in explaining to the others. A sketch of the lyre on the board will clear up the difference between " liar" and "lyre." Reference to the tiny twigs and branches of the trees with the wind blowing through, the "green-fingers" being the leaves, will make plain the meaning of
"Green fingers playing unseen on wind lyres."
Explain the verb "profane," and derive the adverb of manner, "profanely," from it, and "expound" will be readily understood from experience and the word "explain."
When the tifth reading is over, have a little talk about flowers or anything that suggests itself in connection with the topic. The chief difficulty will not be to keep up an interest, but to know how to cut off the stream of informa. tion and questions when the time is up. Next day the class will be ready to go more deeply into the details of the lesson.
Sketches of each flower on the black-board, especially if done by a pupil, give immense satisfaction to the class, and afford materials for designing in the drawing lesson. Memorize the selection with the class, and read at least one other poem by Whittier, to allow the class to get an idea of his singularly sweet and innocent mind and his love of nature.

## STORIES FOR REPRODUCTION.

MR. GOLDBRAINS.
[From the French of Alphonse Daudet, translated for the Educational Journal.]
There was once a man who had brains of gold: yes, madam, brains entirely of gold. When he came into the world, the doctor thought that he could not live, his head was so heavy and his skull so enormous. He did live and grow like a fine olive plant; only his big head kept continually dragging him forward, and it was pitiful to see him bumping his head against all the furniture when he walked about. He often fell down. One day he rolled from the top of a flight of steps, and as he happened to strike his forehead against a marble step, his skull sounded like an ingot. They thought he was dead; but, when they picked him up, they found only a slight wound on him, with two or three little drops of gold clotted in his fair hair. That was the way the parents learned that the child had a golden brain.

The affair was kept secret; even the poor little fellow himself did not suspect anything. Sometimes he would ask why they never let him play in the street with the other boys any more.
"Some one might steal you from us, my precious one," his mother replied.
Then the little fellow was very much afraid of being stolen; he came back to play all alone without saying anything, and dragged himself about from one room to another.

When he was eighteen years old, his parents revealed to him the monstrous gift that he had received from destiny ; and, because they had brought him up and cared for him until then, they asked in return a little of his gold. The child did not hesitate, that very hour-how, by what means, the story does not tell - he tore from his skull a solid piece of gold, a piece as
large as a walnut, and threw it proudly into his mother's lap. Then, dazaled with the riches he carried in his head, mad with ambition, intoxicated with his power, he left his father's house and went out into the world, squandering his treasure.

To judge by the way he lived, royally, scattering gold without counting it, a person would have said his brain was inexhaustible. It was being exhausted, nevertheless, as one could see by eyes that became less brilliant, and cheeks that became more hollow. At last one day, the day following an evening of merry-making, the poor wretch, alone amid the ruins of the feast, and the half-extinguished tapers, suddenly realized with terror the enormous breach he had made already in his treasure; it was time to call a halt.

From that time forward he led a different life. He went and lived in retirement on the labor of his hands, suspicious and nervous as a miser, avoiding temptation, trying to make himself forget the fatal wealth which he wished never to draw on again. Unfortunately, a friend had followed him into his retirement and this friend knew his secret.

One night the poor man was alarmed suddenly by a pain in his head, a frightful pain; he rose terrified, and in a ray of moonlight saw his friend stealing out of the room, hiding something under his cloak.

He had lost a little more of his brain!
Some time after the man with the brains of gold fell in love, and that was the end of everything. With all the strength of his nature he loved a little, fair woman, who returned his love, but who, after all, cared more for pompous, white plumes, and the reddish brown tassels on her shoes.

In the hauds of this dainty creature-half bird, half doll-the little pieces of gold melted away joyously. She had fancies of all kinds, and he could deny her nothing; and what was more. for fear of troubling her he hid from her until the end the sad secret of his fortune.
"We are very rich, are'nt we?" she would say, and the poor fellow would answer, "Oh, yes, very rich indeed !" and he would smile lovingly on the little blue bird who was innocently eating his brains.
Sometimes, however, fear seized him, he tried to be sparing ; but then the little woman would say:
"Why, husband, you are so rich, buy me something very dear."
And he would buy her something very dear. Things went on in this way for two years; then one morning the little woman died, without anyone knowing why-like a bird. The treasure was almost exhausted; with what was left of it the widower procured a handsome fuceral for his dead wife. The tolling of bells, heary mourning carriages, plumed horses, nothing seemed too costly. What did he care for his money now? He spent it freely for the church, for the bearers, for flowers; he scattered it everywhere without stint. That was how it happened that, when he came out of the cemetery, he had scarcely any of his marvellous brain left, just a few particles adhering to the skull.

Then he was to be seen going about in the street with a bewildered look, with his hands outstretched, stumbling along like a drunken man. In the evening, at the hour when the shop windows are lighted up, he stopped in front of a large show-case, in which a large stock of goods and ornaments shone in the gaslight, and remained a long time looking at a pair of blue satin shoes, edged with swan's down. "I know someone whom those shoes would please very much," he said to himself, and forgetting already that the little woman was dead, he went in to buy them.

From the end of the shop the shop-girl heard a great cry ; she hastened forward and then recoiled with fright when she saw a man standing, leaning against the counter looking at her stupidly. He held in one hand the blue slippers edged with swan's down and held out to her the
other hand all bleeding with particles of gold adhering to the ends of the nails.

That, madam, is the story of the man with the brains of gold.
L. 'L. J.

## Primary Department.

## OBSERVATION.

## rhoda lee.

"What is ever seen is never seen." How much truth there is in this saying. How many familiar things there are about us to which we pay little or no attention and of which we are deplorably ignorant. Only a day or two ago $I$ heard of a senior class of boys who were asked to place their hands behind them and were then questioned ${ }^{\text {w }}$ as to which was the longest finger. There was actually quite a difference of opinion on the subject. But that case was only one in a thousand in which children fail to observe because they have not been trained to see.

Not long ago I was telling my children a story of two little boys who were lost in the woods and were out all night. I spoke of the children watching the bright stars and being comforted by them. Then as morning came the bright lights grew fainter and fainter until they disappeared. As I noticed the puzzled look on the face of a little girl I asked her where the stars went when morning came. She did not know. A more venturesome boy, however, informed us that " they just went out like lamps did." That night I asked the children to find out at home, if they could, what became of the stars during the day. Next morning we had a long talk on the stars and light. The next night they were instructed to watch, by means of a tree or roof of a house, the motion of the stars. The fact of their moving was something strange and the observations reported next morning were, to say the least, unique. After that we had a number of talks on the heavenly bodies in which the children seemed to take great interest. After having for several nights assigned some subject to be thought over, I neglected it for a time. It was not to be forgotten, however. As we were preparing for dismissal one evening a little lad raised his hand and asked, "Isn't there anything we can find out to-night?" I saw that several of the children near him awaited my answer with interest and I determined to foster the spirit if possible. Since then I have devoted a part of my pocket note-book to observation work. The object is not to give any direct or connected teaching in science, it is merely to train the children to think; not to accept blindly and unquestioningly facts which they hear and read, but to know something of the why and wherefore of familiar phenomena about them. One. or two questions will suffice to illustrate.

1. When the water in the kettle boils away where does it go to?
2. When the planks dry after the rain where does the moisture go ?
3. What made the rainbow last night?
4. Where does the dew come from?
5. What makes the water come out of a pump when you work the handle?
6. How many toes has a cat?
7. Why can a duck swim while a chicken cannot?
8. Which feet does a horse move simultaneously?
9. Standing with your back to the sun where does your shadow fall?
10. Standing with your face to the sun where does your shadow fall?
11. Of what use are leaves to a plant?
12. Of what use are roots to a plant?
13. What roots do we use for food ?
14. What stems do we use for food?
15. What leaves do we use for food? etc.

## KINGDOMS.

## rhoda lee.

The game of kingdoms which we have generally relegated to Friday afternoon has perhaps more value than we realize. Certainly a great deal of scientific knowledge, as well as general information, is obtained by means of it and if the exercise be carried on in a brisk and energetic way the thinking powers will receive considerable stimulus.

Every form of matter belongs to one of the three kingdoms, anımal, vegetable or mineral. The first includes all animals and everything obtained or manufactured from animal substances, such as wool, fur, silk, feathers, butter, cheese and leather.

The vegetable kingdom comprises all plant life and everything obtained therefrom, as cotton, linen, flour, tea, paper, etc.

The mineral kingdom includes all rocks, minerals, ores and other inorganic bodies. Articles, such as pins, needles, pens, tacks, nails, knives, glass and porcelain will come under this head.

After explaining and discussing the three great divisions take up in turn the different objects in the room assigning them to the kingdom to which they belong. When any article has undergone considerable change in the course of manufacture, trace the process of transformation as closely as possible.

When the subject is fully understood an exercise may be carried on, with both interest and profit in some such way as the following :-Ask each child to write the names of five objects on a slip of paper. Collect the papers and from them make a general list. It is well to have at least five articles named as many of them will be repeated. At the time arranged for the exercise the teacher mentions some article from the list and calls on a pupil to state the kingdom to which it belongs, giving only a specified time in which to answer. Close attention and quick thinking are necessary to answering correctly.

The interest in the exercise is increased by choosing sides as for an old-fashioned spelling match. As in the case of the mis-spelt word, the scholar failing to answer within the time allowed takes his seat.

Occasionally vary the problem by naming the article, giving the kingdom to which it belongs and asking for proof. For instance, "paper belongs to the vegetable kingdom; show how we know this. My pencil belongs to the vegetable and mineral kingdoms, prove the statement.

It is necessary to begin with very simple objects, but we may soon proceed to the
more difficult ones. At times dictate a list of these to be arranged in order of kingdoms, as a home exercise. In discussing and comparing answers the lesson will be a commingling of object, observation and conversation that cannot but be developing to a high degree.

## COMPOSITION STORY.

the rival artists.
Zeuxis and Parrhasius were the rival painters of Greece. For a long time Zeuxis had stood at the head of his art, and no other painter's fame had even approached the height his own had gained.
But now Parrhasius had arisen; and there were people who were even claiming that he was not only the equal, but the superior of Zeuxis.
"Let us see," cried Zeuxis. "Summon us to a contest and let us prove which artist paints the best."
Accordingly it was arranged that these two artists should produce each a picture "Wh submit on a certain day to the public. "Whichever picture is most like the real, that artist shall be crowned the victor," said the people.
The weeks went on. The artists both Were hard at work. At last the day arrived for bringing forth the pictures. They were placed in a grove beneath the trees.
The picture of Zeuxis was the first to be uncovered. It was a basket of fruit.
"What perfection! Was ever fruit more natural!" The people applauded. How they cheered! Victor ! victor! they cried, and the very heavens resounded with their cries.
"Now," said Zeuxis, flushed with pride, and turning to his rival, "throw back the curtain from your picture-the picture you
Pe claim as equal to the work of Zeuxis."
Parrhasius smiled but made no movement toward his picture. Exasperated at his coolness, Zeuxis rushed towards the picture, to tear away the curtain for himself. As he drew near, lifting his hand to seize the curtain he saw there was no curtain to draw aside.
"Pardon me," saíd Parrhasius stepping to his side; "but, as you have already learned, the curtain you wish me to draw aside from my picture, is my picture."

## MENTAL PICTURES FOR STORYWRITING.

1. Flower day-children around a flower bed-a little girl with a towel in her hand.
2. Twenty-fourth of May - girls and boys on the wharf - steamer coming in.
3. A little sick boy-couch drawn up to the window-a crutch beside him - two or three wild violets in his hand.
4. A little girl feeding a chicken beside the stove-an old hen looking anxiously in at the door.
5. A large tree - two boys looking into a nest_old bird flying around, making a
greât noise.

A BOY'S OPINION OF GRANDMOTHER.
Grandmas are awful nice folksThey beat all the aunts you can find ; They whisper quite softly to mammas, "To let the boys have a good time."
I'm sure I can't see at all,
Whatever a fellow would do
For apples and pennies and candy Without a grandma or two.

Grandmas have muffins for tea, And pies, a whole row, in the cellar, And are apt, if they know it in time, To make chicken pie for a "feller."
And if he is bad now and then, And makes a great racketing noise,
They only look over their specs And say, "O boys will be boys."

Quite often, as twilight comes on, Grandmas sing hymns very low
To themselves, as they rock by the fire, About heaven and where they shall go.
And then, a boy stopping to think Will find a hot tear in his eye
To know what will come at the last, For grandmothers all have to die.

I wish they would stay here and pray, For a boy needs their prayers ever night ; Some boys more than others, I s'pose, Such as I need a wonderful sight.

- Selected.


## CLASS RECITATION.

## who likes the rain?

" I," said the duck, "I call it fun, For I have my little rubbers on ; They make a cunning tree-toad track, In the soft cool mud; quack! quack !
"I," said the dandelion, "I ; My roots are thirsty, my buds are dry ;" And she lifted her little yellow head, Out of her green grassy bed.
"I hope 'twill pour, I hope twill pour," Croaked the tree-toad from his gray back door,
"For with a broad leaf for a roof, I'm perfectly weather proof."
Sang the brook, "I laugh at every drop, And wish it would never need to stop, Until a broad river I'd grow to be, And could find my way to the sea." -Anon.

## THE TEACHER IN RECIIATION.

The teacher, while hearing a recitation, should assume a position that will enable him to keep all of his pupils in sight.

The teacher should be pleasant and affable in his manner of teaching and thus control his class by his own example.
The teacher should so conduct his work as to keep all in the class interested and busy.
The teacher's language should be well chosen and correct, that his pupils may not lose respect and correct, that his pupils may not lose respect
The teacher should be enthusiastic and energetic, thus leading his pupils to feel the importance of the work in which they are engaged.
The teacher should be even tempered, not permitting trifles to ruffle or provoke him to scold, and thus make his pupils disorderly.
The teacher should be prompt in calling and dismissing classes, and prompt in his work.
The teacher should be quick to change his method of recitation the moment interest begins to lag.
The teacher should take as little of recitation time as possible in reprimanding pupils. A simple shake of the head is more effective than a half-hour's scolding.
The teacher should move about occasionally among his pupils, even duriug recitation. This will tend to keep all orderly and busy. The teacher should not be too prompt to help a pupil teacher shouiculy by offering assistance. The recitation is to be made by the pupils, not the teacher.
The teacher should see that his pupils use correct speech in askingquestions and in giving answers.-Raub's School Magazine.

## For Fpiday Afternoon.

## DANDELION.

by kate l. brown.
I saw him peeping from my lawn, A tiny spot of yellow;
His face was one substantial smile, The jolly little fellow.

I think he wore a doublet green,
His golden skirts tucked under,
He carried, too, a sword so sharp That I was lost in wonder.

Are you a soldier, little man,
You with your face so sunny?
The fellow answered not a word, I thought it very funny.
I left him there to guard my lawn, From robins bent on plunder:
The soldier lad with yellow skirt, And doublet green tucked under.
The days passed on-one afternoon As I was out a-walking,
Who should I meet upon the lawn, But soldier lad a-stalking.

His head, alas! was white as snow, And it was all a tremble;
Not much did this old veteran My bonny lad resemble.

I bent to speak with pitying word, Alas! fur good intention,
His snowy locks blew quite away-
The rest,-we will not mention.

## THE LITTLE BROWN WREN

There's a little brown wren that has built in our tree,
And she's scarcely as big as a big bumble-bee ;
She has hollowed a house in the heart of a limb,
And made the walls tidy and made the floor trim With the down of the crow's foot, with tow and with straw,
The cosiest dwelling that ever you saw.
This little brown wren has the brightest of eyes,
And a foot of a very diminutive size;
Her tail is as trig as the sail of a ship;
She's demure, though she walks with a hop and a skip,
And her voice - but a flute were more fit than a pen
To tell of the voice of the little brown wren.
One morning Sir Sparrow came sauntering by, And cast on the wren's house an envious eye: With a strut of bravado and toss of his head, "I'll put in my claim here," the bold fellow said ; So straightway he mounted on impudent wing, And entered the door without pausing to ring.

An instant,-and swiftly that feathery knight, All towsled and tumbled, in terror took fight; While there by the door on her favorite perch, While there by the door on her favorite pe
As neat as a lady just starting for church, As neat as a lady just starting for church,
With this song on her lips, "He will not call again Unless he is asked," sat the little brown wren.
-Harper's Young People.

## LOOKING UP A WORD.

"Father," said his son looking up from a book, "what is pride?"
"Pride," returned the father, "Pride? Why-a-oh, surely you know what pride is. A sort of being stuck-up-a kind of-well, proud, you know. Just get the dictionary ; that's the thing to tell you exactly what it is. There's nothing like a dictionary, Johnny."
"Here it is," said the latter, after, an exhausting search. "Pride, being proud."
"Um-yes, that's it," replied the father.
"But-"

- "Well, look at 'proud.' That's the way-
you've got to hunt these things; out, my lad.
"I've got it," answered Johnny." 'Pre-pri-pro -why-
"What does it say?"
"'Proud, having pride."
"That's it! There you are, as clear as day I tell you, Johnny, there is nothing like a good dictionary when you are young. Take care of the binding, my son, as you put it back."Boston Home Journal.

Sehool-Room Methods.

## CHARTS AND THEIR USES.

by h. b. adshead millbridge.
(Continued from last number).
'CHART NO. 3.-PART II. CLASS.
This chart contains the addition, multiplication, and division tables to be completed :-
$9+4=? 3 \times 5=? \quad \frac{24}{8}=? \quad \frac{32}{4}=$ ? etc.
It contains also plus and minus questions to 100 for rapid class or seat work. (Take care your pupils do not "catch on" to your private mark.)

Paper 2.-Has problems written in words on chart to be solved by illustration, not figures, on slate. Example.-4 squares in a row and 3 rows, how many squares? (Preparing for square measure):-

$$
\begin{aligned}
& 4 \text { sqs. } 6 \text { rows }=? \\
& 768 \quad 4=?
\end{aligned}
$$



## CHART NO. 4.-MENTAL ARITHMETIC.

Draw four circles as large as the paper will admit. Inside these clock faces, write the ligures from 1 to 12 , as they are upon a clock (Arabic notation) and separate each from the next by a radius. Over the first dial write + , over the second -, over the third $x$, over the fourth $\div$. The teacher pointing to a figure in the + circle indicates add the number, if in the - circle subtract, etc.; or begin at some number in the + wheel and add around and around.
chart no. 5.-phonics.
Paper one contains all consonant and vowel sounds, long and short, and also double consonants, initial and final, such as st, pl, etc., and nd, nk, ete. The vowel sounds should be arranged so that the different forms of the same sound may be durectly beneath each other. For example :-

$$
\begin{array}{l|l}
\dot{a} & \bar{e} \\
\text { ay } & \text { ie } \\
\text { ai } & \text { ea }
\end{array}
$$

This is to be used in rapid drill, by the teacher pointing to sounds, forming a word, which the scholars pronounce and use in a sentence.
Papers 2 and 3 may be used as indicated in "Sinclair's First Year." A circle is drawn with some terminal in it, such as at and around it, outside the circle, letters are written, the sounds of which. placed before the terminal, form some word. Not only should simple terminals such as at, ap, eg,og be used, but and, ant, ent and all those used in Part II. together with a great many others. The double consonants such as $\dot{p} l$, st, $g l$, should be placed outside the circle, when a word can be formed with them.
chart no. 6.
Peg Chart-Contains forms to be copied in pegs, such as houses, gates, picket-fences.

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\text { CHART NO. } 7 .
$$

Drawing Chart-Contains not only copies for imitation, but blank construction lines which should be filled out by the pupils with orginal designs. Another paper may contain the facts of the forms of the square, circle, cube, sphere. cylinder, etc., while another paper contains the appearance of these objects. Of course the facts should be taught first by objects.

## CHART NO. 8.

Busy-Work Chart-Contains work for pupils when assigned work is done. A few examples are given:-
(1) Make out of any word in the lesson, as many new words as you can, and use them.
(2) Describe the appearance of any one mentioned in your lesson.
(3) Describe what you see under the microscrope.
(4) Make and solve some problems, similar to those you have been working in class.
(5) Take any problem in to-day's arithmetic, and find out as many things as you can.
(6) Stencil, with a pin, the outline of a map or drawing, from some drawing or old map, and go over with lead pencil.
(7) Suggest, describe, and draw a picture illustrating some verse or paragraph in your lesson.

CHART NO. 9.
Geography Chart-Contains map of the county and outline maps of various countries, etc., with rivers, mountains, towns, etc., but no names written. The backs of school maps can be used for this.

## Chart no. 10 .

Writing Chart-Contains model letters, and exercises in movements, also receipts, notes, and letter forms.

Chart no. 11.
Music Chart-Contains the scale and exercises in singing, together with simple songs in the Tonic-Sol. Fa. system.

## G. C. D. AND L. C. M.

Much time has been wasted in trying to get pupils to understand the process of finding the G. C. D. The reason it was wasted is the pupil tried to get forms to say rather than the thoughts that these forms express. The teacher has allowed his own attention to centre on the Greatest Common Divisor process, rather than on the culture of the pupil in mastering the G. C.D. We teach the G. C. D. for the sake of the pupil rather than for the sake of the G. C.D. True, he needs a working knowledge of it in order that he may master the other processes that are based upon it. But the highest aim in teaching it or any other subject is the effect that its mastery will have upon the pupil, Teaching for this highest aim will secure the other which is often called the "practical."

There is an opportunity for some good thinking in studying this subject. Let us think of the numbers $125,75,175$. Separate the minto prime factors. This the pupils do readily, $125=5 \times 5 \times 5 ; 75=5 \times 3 \times 5 ; 175=5 \times 5 \times 7$. "We wish to find the largest number that will divide each of the numbers 125,175 and 75 ," said the teacher. "How many 5's in the first number?" This was so easy that every one could answer it. The pupils were led to look at the factors of the other two numbers. They make this discovery, that each of them contains two 5 's as factors. Further, that these are the only factors that each contains. They see that 5 will divide each. But the teacher here presses the aim. "We were to find the largest number that will divide each." Said one pupil, "I think 25 is such a divisor." "What makes you think so ?" "Well, each one had two 5's as a factor ; each number is made up of its factors."
"But what do you mean by 'made up?" asked the teacher,
"I mean," said the pupil, " that if we multiply all the factors together the product will be the number; e. g. $5 \times 5 \times 5=125$; so I know there is a 25 as factor in 125 ."
"Very good," said the teacher. Of course the pupils immediately tried the other numbers and found that there is a 25 in each of the others and that it, of course, is the product of the two 5 's. Some one was anxious to say that 25 is the largest number that will divide each of the given numbers. The teacher's "How do you know that it is the largest?" troubled them somewhat, but they soon discovered that there are no other common factors and so the number could be no larger than 25 . The teacher seemed to be atraid that they had learnet this story, so he said: "Will 125 contain a number that has 3 for a factor. Having thought this through m this way, the pupil has gained some in his power to think and the tendency to think is
increased. Will he not be able to "think out" the G. C. D. of any number? Has he not gained what is highly practical? He has not been engaged in applying rules. He has been dealing with the numbers themselves.
L. C. M.

This may be studied in the same way. Suppose we take the same numbers- 125,75 and 175. We wish now to find a number that will contain each of these. A pupil said that he knew one thing about the number we wish to find. "What is it?" said the teacher. "It canuot be smaller than 175 ." "Why not?" "Because it must contain 175, and no number smaller than it is can contain it." "True," said the teacher; "shall we write 175 as one factor of the number we are seeking $P$ " "Yes, sir, came in chorus. "Shall we write 125 as another factor of our number?" One pupil said that we have part of it already in 175. He said, further, that there are two 5 's in 175 , and that there are three 5's in 125. So all we need to do is to put another 5 with 175 . "Well, what about 75 ?" asked the teacher. Said one, "Any number to contain 75 must have two 5 's and a three in it." We have as factors of our number $175(5 \times 5 \times 7) \times 5$. There are two 5 's here, but no 3 , so we put 3 in as a factor. Then the factors of the least number that will contain each of the three numbers are $5 \times 5 \times 7 \times 5 \times 3$. The number must be 2625.-Indiana School Journal.

## THE INFINITIVE.

a. c. batten, model bchool, barbie.

Write the following sentences on the blackboard:

1. It is proper to praise the boy for that act. 2. To be praising the boy all the time will injure him.
2. The boy does not want to be praised all the time.
3. To have praised the girl at that time would have been proper.
4. His intention was to have been praising bis Maker at all times.
5. The boys would like to have been praised for that work.

It will not be difficult for the teacher to obtain from the class that each of the italicized portions in the above sentences has partly the nature of a noun and partly that of a verb; beace each may be called a verbal noun. A verhal noun is said to be an Infinitive, which, besides having the syntax of a noun, is not limited to form, as the verbs are, by the person and number of any subject.

To praise is called the Root Infinitive or the "Infinitive with to." and, as is illustrated above, has the following forms:

Simple Active.-Present, (to) praise; Perfect, (to) have praised.
Progressive Active.-Present, (to) be praising ; Perfect., (to) have been praising.
Passive.-Present, (toj be praised ; Perfect, (to) have been praised.
When the foregoing is understood by the pupils, the teacher should write the following sentences on the blackboard :
7. To write a novel is his great desire.
8. The child tries to write the alphabet.
9. He gave the class permission to write their lessons.
10. The clerk is at the desk to write a letter.

As a result of questions from the teacher, pupils will see that to write in 7 and 8 is used as subject and object respectively and therefore has the relation of a noun; that to write in 9 , modifies permission, therefore has the relation of an adverb. If in 9 and 10 , however, to write is an infinitive, it must have partly the force of a noun, and in these sentences this noun force is not evident, but will become evident by changing the sentences as follows:
11. He gave the class permission for writing their lessons.
12. The clerk is at the desk for writing a letter.
3. Therefore the infinitive with "to" miay
have the relation of a noun, an adjective, or an adverb.
The root infinitive generally has before it the preposition to, which is called the sign, but this sign is omitted in all the persons of the future indicative active; and also in the simple active of all the persons of the present and past potential, present and past emphatic, present conditional, present obligative (with must), and imperative modal verb phrases; besides after certain other verbs as, dare, see, hear, feel, bid, help, know, find, etc.
Therefore verb phrases are formed of
(a) Some part of verb to be and a participle.
(b) "] modal auxiliary
(c) ". part of verb to be and a root intini-
(d) ". modal auxiliary and a root infinitive.
The next step will be the writing of the following sentences on the board :
13. Praising one's self is a sign of vanity.
14. The boy is fond of being praised for bis work.
15. The teacher is not sorry for having praised his pupils.
16. The man is sorry for having been praising too freely.
17. The girls are glad of having been well praised.
4. In the alove sentences as in $1,2,3,4,5$, 6, pupils will observe that the italicized parts are verbal nouns and therefore infinitives. They are not forms of the infinitive with "to," but are different forms of the "infinitive in ing," or the gerund. It has the following forms:
Simple Active.-Present, praising; Perfect, havirg praised.
Progressive Active.-Present, (not used; Perfect, having been praising.
Passive.-Present, being praised; Perfect, having been praised.
The "infinitive in ing," unlike the "infinitive with 'to,'" has always the relation of a houn, viz., subject or object, the most common relation being object of a preposition.
Pupils frequently have difficulty in distinguishing between infinitives in ing, or gerunds, and abstract nouns (names of actions). It is not easy to define the difference clearly. However, if the word under discussion has an object or an adverbial modifier, it is an infinitive, but if it is plural or is modified by a qualifying adjective, or is not completed or modified as a verb, it is an abstract noun.

## EXERCISES.

1. Classify "infinitives with 'to '" according to
(a) Forn-Simple or Progressive.
(b) Form-Active or Passive.
(c) Tense-Present or Perfect.
(d) Relation-Noun, adjective or adverb.
2. Write sentences using "hearing" or any other similar form
(a) As an infinitive. (b) As an abstract noun.
(c) As an imperfect participle.

In this last exercise, pupils should be asked to say why such a word is an infinitive and not a participle or abstract noun, etc., or state what the verb force, etc., is in the work.

I'He voice, however powerful, must be subordinate to the thought-power, soul-power, that is behind it; so the rules. regulations, commands of the teacher must be subordinate to the disciplinary art and power behind them. These things are but the expression of the justice, wisdom, and thoughtfulness of the teacher, of which the real man, in stamina and character, is the power which, like thought in reading, places emphasis, inflection and interpretation. The man who has the disciplinary art needs no rules; they merely serve as guides.-N. $E$. Journal of Education.

## Literary Notes.

The opinion that Lord Rosebery's administration will be a short lived one seems to gain ground daily. This fact is tertain to attract wide attention to a criticism of the new Premier, which appears in the May number of the North American Review, from the pen of Sir Charles W. Dilke, M. P., than whom no one is better qualified to write on the English political outlook. Other important articles in this number are, "Helping People to Help Themselves," ber are, "Helping People to Help Themselves,"
by Mr. Nathaniel Straus, a well-known philanthropist of New York; an interesting review of Dr. Edward "Everett Hale of a remarkable work, entitled, "The Unknown Life of Christ," which has lately appeared in Europe; two papers on the American Protective Association, by George Parsons Lothrop and Bishop Doane, respectively, etc.
Popular Science Monthly for May. Thespring season is reflected in an illustrated article on "The Guests of the Mayflower, describing this charm ing plant and its insect visitors, by Prof, Clarence M. Weed, also in "Up the Chimney," which is a delightful sketch of bird-life by the late Frank Bolles, while there is a reminiscence of winter in " Frost-forms on Roan Mountain." The latter article is contributed by Mrs. Helen R. Edson, who has wintered on this lone summit, and shows by the aid of photographs the strange deposits of ice and snow that form there on all exposed objects. The paper on "The Ice Age and its Work," by Alfred R. Wallace, is continued with an account of the "Erosion of Lake Basins." Prof. C. Hanford Henderson has a stimulating article on "Cause and Effect in Education," a matter which he maintains has been much neglected. There are two articles telling how science has produced value in two formerly wasted products, and eight or ten others on scientific and popular subjects.
Scribner's Magazine for May opens with an article of unusual interest, entitled, "Some Episodes of Mountaineering," by Edwin Lord Weeks, describing some of his own stirring adventures, while mountain-climbing in the Alps, with illustrations furnished by the same hand. Captain John G. Bourke, U. S. A., the Indian fighter, who has long been stationed in Texas, has written the story of one of the most Texas, has written the story of one of the most Mexican border along the Rio Grande. Under the title, "The American Congo," he tells of the strange types of people, the raiders and marauders, the unique life on the ranches, and at the same time reproduces the background and atmosphere of the place. The illustrations are from drawings recently made in that region by Gilbert Gaul, who made the trip excluvely for Scribner's Magazine. Other illustrated articles in the number are "The Provincials," by Octave Thanet, (one of her Sketchets of American Types) with illustration by Frost ; "Climbing for White Goats," a narrative of hunting adventures in the Rocky Mountains, by George Bird Grinnell, with pictures by Ernest E. Thompson, and Philip Gilbert Hamerton's brief article on Jules Muenier, whose painting, "A Corner in a Market," serves as a frontispiece for the number.
The leading feature of The Century for May is the first of a series of papers by Thomas $G$. Allen, Jr., and William L. Sachtleben, recounting their adventures in a journey "Across Asia on a Bicycle." The ground covered in the first paper is from the Bosporus to Mt. Ararat. The objective point of the journey was Peking, and for the greater portion of the way the route was parallel and occasionally identical with that of Marco Polo. The account will be illustrated by a large number of unique photographs taken by the writers during this adventurous trip in a region almost unknown to the western world. The last of the important series of papers of literary criticism by James Russell Lowell appears in The Centu $y$ for May, under the title of "Fragments,", consisting of three short articles; one on "Life in Literature and Language," another on the epic of "Kalevala," of a portion of which there is an unpublished translation in verse by Mr. Lowell; and third, a beautiful passage on the differences between
style and manner.

The May St. Nicholus comes with a blooming frontispiece to remind its readers of the present, and then plunges them into the past by begin${ }_{6}$ ning with Molly Elliot Seawell's patriotic serial, "Decatur and Somers." Young musicians learn, from the article by Mrs. H. S. Conant, how many queer disguises "Ancient. Musical Instruments " may assume. Mrs. Conant imparts a mass of entertaining facts, and Harry Fenn picturesquely groups the quaint mandolins, lyres, guitars, tom-toms, and harps - not to mention the vina, the soonsringa, mokugye, and sawod. Another article dealing with the past. but in a different spirit, is "'The Beautiful Ballad of Lady Lee," a narrative full of movement and life - just the sort of a poem that makes an excellent " piece to speak," and is sure to interest that most critical of audiences parents and friends at a school exhibition. Natural history papers, Brownie adventures, stories for young people, and a biography of Washington Irving by Brander Matthews, are among the other interesting contents of this number.
The Arena closes its ninth volume with the May number. Among the important social and economic problems discussed in a brave and fundamental manner are "The First Steps in the Land Question," by Louis F. Post, the eminent Single. Tax leader; "The Philosophy of Mutualism," by Professor Frank Parsons of the Boston University Law School; "Emergency Measures for Maintaining Self-Respected Manhood," by the editor of The Arena. The Saloon Evil is also discussed in a symposium. A strong paper on Heredity is found in this issue from the pen of Helen H. Gardener. Rev. M. J. Savage appears in a very thoughtful paper on "The Religion of Lowell's Poems;" a fine portrait of Lowell appears as a frontispece. Dr. James R. Cocke contributes a striking paper on "The Power of the Mind in the Cure of Diseases." A strong feature of this number is a brief character sketch by Stephen Crane entitled "An Ominous Baby." Stinson Jarvis' series of papers on "The Ascent of Life" closes with this issue.
In the May Forum the necessity of taxing church property as a restraining influence on great ecclesiastical corporations, as well as in the interest of fair play and sound religion, is forcibly set forth by the Rev. Madison C. Peters, of the Bloomingdale Reformed Church. New York City. This subject is fast coming to be one of great importance from the point of view both of the State and of the Church. Mrs. Elizabeth Stuart Phelps Ward, in answer to the question, "Is Faith in a Future Life Declining?" gives the evidence afforded by the vast volume of letters which she has received since the publication of "The gates A jar," to show that there is no decline in the belief in immortality. Mr. Price Collier, an entertaining American resident in Loudon, writes an interesting letter comparing home life in England with home life in America. Miss Mary E. Laing of the Wisconsin State Normal School, contributes an interesting paper on Child-study, in which she shows a suggestive method of keeping a complete record of the development of her pupils. President G. Stanley Hall deals with two subjects, first, the great recent development of universities in nearly all the European states; and second, with the methods of education at the critical period of puberty. Mr . J. Castell Hopkins, of Toronto, contributes a paper on the House of Lords.

Illustrative anecdotes and portions of history have stangely prolonged lives. It is said that there were originally but thirteen jokes. and that they form the treasury from which all modern wits draw their stores of humor. What college man or politician has not handled and re-handled the fall of the Roman Empire, and the French Revolution? Other empires have risen and fallen, other people have been driven to deeds of violence; but these two pages of the past, like bonds at a premium, are constantly in demand. The ghosts of these ancient events have so long been used to foreshadow the future or explain the past, to brighten the eloquence of promise or darken the prophecy of danger, that to rob the graduate and the reformer of their presence would be to blot out their most valuable resource.-C. M. Harger, in the Current.

# Book Notices, cte. 

Congressional Manual of Parliamentary Practice. Deduced from the Rules and Rulings of the Congress of the United States. By J. Howard Gore, Ph. D., Professor of Mathematics, Columbian University. Syracuse, N.Y. C. W. Bardeen, Publisher, 1893.
What our own Dr. Bourinot has done in his Canadian Manual, recently published, for Canadians, the author of the a bove has done in a more condensed style and form for the people of the United States. Dr. Gore's book is clear and the United States. Dr. Gore's book is clear and concise, and no doubt reliable, and cannot fail
to be very useful to those who have to do with the conduct of public meetings.

Practical Methods in Microscopy. Chas. H. Clark, M.A. D. C. Heath \& Co., Publishers. Price, $\$ 1.60$.
Full and concise directions are given for mounting, cutting, staining and examining botanical, zoological, and mingralogical sections. Photo-micrography receives special attention and is illustrated by seventeen very fine plates of secticns photographed by this process. An appendix gives a number of very useful formulæ. Young microscopists will find it an invaluable help in carrying on their work.
Birds of Ontario. McIlwraith. ${ }^{* *}$ Wm. Briggs,
Publisher, Toronto. Four hundred and Publisher, Toronto. Four hundred and
twenty-six pages. Illustrated. Price, $\$ 2$ twenty-six pages. Illustrated. Price, \$2.
Mr. McIlwraith is so well known as an accurate and enthusiastic ornithologist, that anything coming from his pen about the birds of Ontario is certain to attract the attention of bird-lovers. In this second edition, thoroughly revised and copiously illustrated, an account is given of the characteristics, habits, and methods of collection and preservation of all our Ontario species. It is difficult to conceive a more suitable book to awaken the interest of young readers. Every boy should have it in his library, in fact anyone who takes the slightest interest in our little feathered friends can lardly interest in our little feat
afford to be without it.

Moffatt's Colored Freehand Designs. Moffatt \& Paige, Warwick Lane, Paternoster Row,
and 11 Paternoster Square, London E. C. and 11 P
Price, 2 s.
This package contains a series of twelve designs printed in colors on stout cards, with descriptive letter press and instructions for coloring. They are specially prepared for use in elementary schools and art classes by Joseph "Vaughan, Art Master, London School Board. "The study of color,"'says Mr. Vaughan, "is just beginning to take a place in the curriculum of elementary school work. It will, I venture to say, be one of the most popular lessons with the pupils, investing the forms with a fuller meaning than they ever had when drawn in outline only. The color sense, so often allowed outhine only. The color sense, so often allowed observation, and the cultivation of it is valuable from this point of view." He adds that "contrary to the general idea, it can be taught successfully by collective methods to ordinary classes directly the pupils havea fair knowledge of freehand."

## $*^{*} *$

Moffatt's New Geography, written for the present time; a manual of Geography, Astronomical, Physical, Commercial and Political. Fourth edition, carefully revised. Edited by Thomas Page and revised by Rev. E. Hammond, M. A. London: Moffatt \&
Paige, 28 Warwick Lane, Paternoster Row, and 11 Paternoster Square, London E.C. Price, 4s. 6d.
This compact volume of more than 400 pages was designed, the author tells us, to serve as a text-book, a work of reference, and a means of preparation for various public examinations. For the second purpose it is well adapted, containing, as it does, a vast, comprehensive, and well arranged summary of geographical information, which is made easily accessible by a copious verbal index. For this purpose it is a very useful book for either teacher or business man to have within reach. It will, no doubt, prove useful, too, to candidates for certificates in many of the Civil Service and other examina-
tions. But for school-room purposes it is, according to Canadian ideas, totally unsuited, being wholly didactic, and arranged, apparently, wholly with a view to the giving of information for memory work rather than for true educational development.

Beautiful Joe. An Autobiography By Marshall Suunders. 12 mo., $30 \pm$ pp., illustrated. Price, 75 cents. Toronto: The Standard Publishing Company, 9 Richmond street west.
All our readers have no doubt heard of "Beautiful Joe," though many of them may not have read it. They will be glad to learn that the Standard Publishing Company has just brought out a neat and attractive Canadian edition of this admirable book. Every boy and girl should read it., Every father and mother who "loves mercy" and wishes his or her sons and daughters to "love it too," should put this charming tale upon the sitting-room table. Every teacher should be familiar with it, and strive to interest the children in the lessons of kindness to domestic animals which it inculcates.

Though it is among the first productions of the Canadian author, Miss Marshall Saunders, of Halifax, it is doubtful whether anything better of the kind has ever been written. What "Black Beauty" has done for the horse, in the way of helping us to put ourselves in its place and think and feel, enjoy and suffer, as does that faithful animal in the hands of its kind and thoughtful, or, as much oftener is the case, its thoughtless, vain, ignorant or brutal master, that "Beautiful Joe"'does for the dog. The Laura of the story is a most beautiful character, and is drawn from life. "Beautiful Joe" is, too a real dog, living, we believe, in Western Ontario. The sympathy with all domestic animals, the intimate knowledge of their natures and traits, and the tender pity for them in the sufferings to which they are so often subjected through the thoughtlessness or inhumanity of human tyrants, old and young, displayed ihroughout the book, are remarkable. The style, too, is a model of clearness and simplicity. lnterest is added to the Canadian edition by the printing in the introduction of the fac simile of a letter from Lady Aberdeen warmly recommending the book. The story has been for some weeks before the American public, and is still selling on the other side at the rate of a thousand copies a week.

## Question Dpawer.

M. M.-Heligoland Island is no longer a British possession. It was magnanimously handed over to Germany, to which it geographically belongs, a few years since.
R. J. O.-We have delayed to answer your question, intending to seek authoritative information on the point, but in the pressure of work l. ave failed to do so. Probably a note of inquiry addressed to the Finance Department at Ottawa would elicit the desired information.
D. T.-The answers to some of the last year's Primary Examination papers in Mathematics have, we think, appeared in the Journal in the course of the year, but we are sorry that we cannot now refer you to the numbers containing them. Perhaps we may be able to do so in a future number.

A Subscriber.-(a) The Sinking-fund is a fund to which a certain sum is added every year as a provision for the payment of the national debt. Provision for putting a certain amount annually into the sinking-fund is usually made in connection with every borrowing transaction. (b) The High School History contains, we think, notes on the Municipal System of Ontario. We know no other work to recommend on the subject.
Poyerty and Ignorance. - Your question has been often asked and answered in these columns. Following are the Lieut-Governors of the Provinces: Ontario, Lieut.-Colonel the Hon. G. A. Kirkpatrick; Quebec, Hon. J. A. Chapleau; New Brunswick, Hon. J. J. Fraser ; Nova Scotia, Hon. M. B. Daly; Prince Edward Island, J. S. Carvall, Esq.; Manitoba, Hon. John C. Shultz; British Columbia, Hon. Edgar Dewdney. Premier of Ontario, Sir Oliver Mowat.
I. M. W. asks for a set of examination questions in physiology. A set was published in the last science number of the Journal. See also the number for June 15th.
W. M., North Bay.-Q. Where can a full set of natural history colored plates (large size) suitable for teaching of object lessons, be obtained, and at what price?

Ans. The best charts ever published or that ever will be published, can never accomplish a thousandth part of the good results that actual specimens will. These cost nothing. Every object lesson should be a lesson from the obect itself.

## TALKS WITH TEACHERS.

Which is the better plan in graded schools; one or two grades for each teacher? Nearly all teachers will reply at once, one grade. In giving this answer so promptly, are we not sometimes influenced by our ideas of what is easy? I persume that this feeling is allowable even in a teacher who is supposed by many to enjoy a very easy existence, but there is no necessity to argue that matter with teachers. I am of the opinion that one grade is sufficient for each teacher, always providing that she makes the most of the opportunities it affords her. If by one grade, one class for the whole school is meant, then a teacher can manage two grades as well as one, and I would advise school officers to impose two grades as soon as possible. Suppose there are fifty pupils in one grade in a room, should forty-nine be kept listening while one is reading, until the whole or a portion of them have read? I think not. Should the class be divided into two sections of twenty-five each, simply because it is too unwieldy? Ithink that one class of fifty is too large but that is only one of many reasons in favor of two or more classes. Eaeh teacher has many bright, attentive and regular, and only a few, let us hope, of dull, inattentive and irregular pupils. These latter pupils can not advance with the same rapidity that the other pupils can, they require more drill and attention from the teacher; should they be incorporated with the best pupils to be a clog upon their advance and to be discouraged by the effort, or should they be putin a class by themselves? I think they should be separated, but always with the opportunity afforded for promotion if it is deserved. On the other hand if a pupil fails to keep up with his work there is the opportunity of putting him where he belongs. A teacher will thus have a powerful lever to aid her in her work. With only one class in each room an indifferent teacher will have much idle time on her hands. This should not be The tendency is to put the most effort upon what is "class a," called the grading class, and to slight "class B." Do not do it. The conscientions and skilful teacher is not marked by the few brilliant pupils. but by the few unprepared pupils she has. It may be that the attainments of the few show the opportunities of all. Yes, minus industry on the part of the teacher. Take care of the weak ones and the strong ones will take care of themselves.-The Educational Re
view. view.

In order to produce a certain external appear ance of good conduct, fear and punishment will succeed; but the inward sentiment cannot be gained in the same way.-Bain.
Those teachers who are looking for some profitable occupation during the summer will do well to get agent's terins from the Equitable Savings, Loan and Buliding Association, whose advertisement appears in another column. post-card will get the desired information.
A school depends upon what kind of a person the teacher is; not on appliances. The smooth
side of a slab for a seat in a log school-house, if side of a slab for a seat in a log school-house, if polished cherry in a palatial building prable to over by perfunctory hearers of recitations. A pupil will learn more astronomy from a stick and an apple in the hands of a teacher than from the most expensive apparatus in the hands of a heargr of recitations.-Teachers' Institute.
A Large selection of stersoscopic views from every country of the globe gives opportunity for employment during vacation to teachers who wish to improve their time. To such the $\stackrel{a d v e r t i s e m e n t ~ i n ~ a n o t h e r ~ c o l u m n ~ o f ~ M r . ~ J a m e s ~}{M}$ M. Davis, 320 Adelaide Street West, Toronto, should be of interest.

A Company's Prompt Action Highly Commended.

Not long ago it was customary for life insurance companies to defer the payment of claims under their policies for a considerable time, but it is pleasing to note that that practice has been abolished by a majority of the companies.
The pioneer company to introduce the immediate payment of death claims, on satisfactory completion of proofs of death, was the North American Life Assurance Company.
It still continues to adhere to this ex cellent and generous practice, as will be seen from a perusal of the following let ter, lately received from the beneficiary of a deceased policy-holder :-

## "Seaforth, April 30, 1894.

"To Wm. McCabe, Esq., Managing Direc tor North American Life Assurance Company, Toronto :
' Dear Sir,-I desire to thank you very much for your kindness in so promptly sending me a cheque for the full amount of the policy on the life of my late husband, Samuel Kestle. Such prompt settlement is more satisfactory than you may probably be aware of, and I have much pleasure in commending you for your generous treatment.
"Thanking you again for your promptness, and assuring you that I shall not soon forget your kind action, I remain,
" Most respectfully yours,
"Maria Kestle."

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