## THE EDUCATIONAL REVIEW



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Educational Review $\oiint u p p l e m e n t . ~$ Day, 1907.


# The Educational Review. 

Devoted to Advanced Methods of Education and General Culture.
Publishrd Monthly.
ST. JOHN, N. B., MAY, 1907.
31.00 prr Ybar.

G. U. HAY, | Editor for New Brunewick. |
| :---: |



The Review is requested to state that all educationists visiting England during the week of the Federal Conference on Education in London, from May 24th to June Ist, will be cordially welcomed to its meetings.

The picture sent out with the Review this month is a copy of the well-known painting by West, "The Death of Wolfe." A prize is offered for the best composition on this picture. All papers must be sent in on or before May 14th to Mr. Hunter Boyd, Waweig, N. B. Competitors are requested to note that the composition is to be written on the picture, and not on the incident, as related in history.

A forestry convention will be held in Yarmouth about the end of this month. President R. H.

Campbell, of the Dominion Forestry Association, has signified his intention to be present.

The Eastern Teachers' Association of Prince Edward Island will hold their eighth annual convention at Georgetown on June 27th and 28th. An attractive handbook announces their programme.

We have received the calendar of the Harvard Summer School, which opens on July and and closes August 9th. Courses are offered in over thirty subjects, and special facilities are given to teachers.

The provisional programme of the Dominion Educational Association, which meets in Toronto, July 9-12, has been received. The meeting promises to be of more than usual interest, including, as it does, sessions devoted to different depart-ments-kindergarten, elementary, high school and training, and discussions and papers on matters of general interest in education. A full programme will shortly be issued. All meetings are to be held in the university building.

We have received the very interesting report published by the Department of Mines of Nova Scotia on the Provincial Museum and Science Library of that province. The report deals principally with the collections of minerals and mineral products, and with the exhibition made in the Mines' building during the last Dominion Exhibition at Halifax, where 226 separate exhibits were shown, including coal, gold, iron, copper, lead and manganese ores, and many other minerals and mineral products. A full account is given of the finding of tin ore near Lake Ramsay, Lunenburg County, a most interesting discovery, tending, when taken with other indications, to strengthen the hope that workable deposits of tin occur in the province. There has been a noteworthy addition to the collection of fish. A tarpon measuring over five feet in length was taken in Harrigan Cove, Halifax Co. This fish, so well known to sportsmen in Florida, has not been taken before, so far as is known, on our coasts. The science library has received a great many accessions during the past year, and a completed card catalogue adds greatly to its usefulness.

The American Institute of Instruction will hold its seventy-seventh annual convention at Montreal, July ist, 2nd, 3 rd and 4th. General sessions will be held in the morning, followed by department sessions, which will be addressed by special authorities on the different subjects, both English and Canadian. The Provincial Teachers' Association and other educational organizations will join with the institute in this convention. Excursions to Ottawa, Niagara, Quebec and other points have been arranged for.

A writer in the School World for April discusses the very large preponderance of women teachers over men in the United States under the heads of ( $a$ ) the effect on the curriculum, and (b) the influence on the character of boys. He quotes from different writers on both points. It is stated that women take less interest in scientific subjects than men, and that "the steady decrease in the proportion of boys who are studying chemistry and physics is due, in large measure, to the meagre scientific equipment of women teachers." It is often said that boys will learn refinement and selfcontrol from women teachers, but this is said to have no support in facts. An editorial in the New
\& York Churchman points out that the task of controlling and guiding the energetic impulses of the boy can only be accomplished by a teacher who has himself experienced them. The woman teacher, on the other hand, is in the boy's world an alien, and is respected for her good qualities without being recognized as a pattern to follow. The conclusion reached by the writer of the article is that the employment of an excess of women teachers has no reason but an economic one. Women can be had cheeaper than men.

The Winnipeg Free Press contains full reports of the Manitoba Educational Association, which took place in Brandon, April 3rd, 4th and 5th. This association has grown out of the Provincial Teachers' Association, which, in changing not only its name but its constitution, has enlarged its scope, and aims at attracting all friends of educational progress. If we may judge from the list of speakers, and the interest of their speeches, this end has already been reached, for the addresses were not all by professionals, nor addressed to teachers alone. Among the topics discussed were: "Primary Education," "Municipal School Boards," Physical Training," and "The Aims of the High School." The burning question of "teachers' salaries" came
up. One speaker said that so long as the teaching profession continued to be only a passage to other professions, so long would there be a rush of young men and women in and out of teaching; and so long as that condition remained the salaries would never be worth talking about. This condition will remain as long as it is easier, quicker and cheaper to qualify for the profession of teaching than for any other profession.

## Arbor Day.

Referring to a circular issued by the United States Department of Agriculture, the Outlook says:
The diversion of setting out a few trees and the exercises by which school hours are enlivened should be regarded as a means to an end rather than the end itself-an intelligent and lasting impression in the mind of the child. While isolated trees along the country roadside or in the city streets please the eye and cool the air with refreshing shade, the true message of Arbor Day is found in the forest, where wood is grown to supply material for houses, fuel, and industries, where the tree-protected soil is storing the waters for streams, to be used for quenching thirst, irrigating land, driving mills, or filling rivers deep so as to bear traffic. The forest is thus the producer and custodian of the necessaries of life. The science of forestry is based on the idea that exact knowledge makes it possible to co-operate with nature in bringing the forest to its fullest usefulness as a source of wood, as a protection to the soil, or as a natural resenvoir. Arbor Day should be the occasion of imparting to children some simple forest laws; the planting of a few trees, without reference to the forest's productive value and commercial utilities, is certainly but a small part of the day's work. The normal child always loves the forest. Its mystery fascinates. It is the home of wild life. As every child is a natural investigator, the forest is an object of prime curiosity. But on Arbor Day the child needs to begin the study of forestry economics. As practical object-lessons those suggested in the circular of the Forest Service are valuable. For instance, what child has not seen a muddy freshet?-a sight common at this time of year. The stream is discolored by earth gathered from the soil, and rushes with force where there has been no forest cover. An experiment is suggested with fine and coarse soils stirred quickly into a tumbler of water and then allowed to settle, as explaining how a stream continues muddy while it runs swiftly and how it clears again as it slackens on more level stages, dropping the soil to the bottom. Again, flowers and seeds of trees are suggested as subjects of investigation. Many earlyflowering trees mature their seeds before the school year ends. It is interesting to note the adaptations by which the trees secure seed distribution; as, for instance, by winds, stream-currents, birds, animals. Hence, the world of flower and seed conveys nature's purpose to renew the forest and carry it undepleted from one generation to another. Finally, the circular contains practical suggestions as to planting. If every school-teacher should follow out the ideas as outlined by the Forest Service, the whole nation would be the gainer.

## William Henry Drummond.

It is with sincere sorrow that we record the loss that Canada has suffered in the death of Dr. Drummond. Many a greater poet has been less mourned by his readers than this interpreter of the simple lives of the French Canadian peasant and farmer, this singer of the woods and streams of our own land. If we look for the secret of his successful appeal to all hearts, we shall find it in a comment made by a recent American writer: "Dr. Drummond had a wonderful faculty of idealization. Nothing that was human seemed mean to him." $\mathrm{His}^{\text {p }}$ poems are never merely funny, full of spontaneous humor as they are. There is always an appreciation of what we can recognize as best and highest in human nature, in his sketches of men and women. In his introduction to "The Habitant," he disclaims the idea of writing the verses as examples of a dialect, or with any thought of ridicule. He says:

Having lived, practically, all my life side by side with the French Canadian people, I have grown to admire and love them, and I have felt that while many of the Englishspeaking public know perhaps as well as myself the French Canadian of the cities, yet they have had little opportunity of becoming acquainted with the habitant, thenefore I have endeavoured to paint a few types, and in doing this, it has seemed to me that $I$ could best attain the object in view by having my friends tell their own tales in their own way, as they would relate them to English-speaking auditors not conversant with the French tongue.
The Canadian poet, Louis Fréchette, says of Drummond: " That in using the French Canadian dialect he has made an audacious attempt, but with that success which boldness often wins, that he is true to life without ever falling into vulgarity, and piquant without bordering on the grotesque." Mr. Fréchette also transfers to his friend the title of " pathfinder of a new land of song given to the French Laureate by the poet Longfellow."
Dr. Drummond made the following statements not long ago about his early life:
I was born in the West of Ireland, and came to the Province of Quebec at ten years of age, in the yean 1864, when the lumbering interest was at its height. I lived in a typical mixed-up village-Bord à Plouffe-composed of French and English-speaking reftsmen or voyageurs-the class of men who went with Wolseley to the Red River and later accompanied the same general up the Nile-men with rings in their ears, daredevils, Indians, half-breeds, French-Canadians, Scotch and Irish-Canadians-a motley crew, but great river men, who ran the rapids, sang their quaint old songs-"In Roulant," "Par Derrière chez ma Tante," and "Dans la Prison de Nantes;" songs forgotten in France, but preserved in. French-Canada. Running the rapids with these men I learned to love them and their
rough ways. As a boy I was always very fond of outdoor sport, fishing, shooting, etc., and have never "lost touch" with the class of men referred to. I wrote a lot of stuff in the way of verse, but never seriously, and much of it was lost.

Dr. Drummond was not, as we have seen, a Canadian by birth, but was born in County Leitrim in 1854, the son of an officer of the Royal Irish Constabulary. He was educated at the Montreal high school and at Bishop's College, Lennoxville. He graduated with honors in medicine in 1884, and began the practice of his profession. Of late years he has been devoting much of his time to business, and especially to the development of mines at Cobalt. His practice of reading his own verses in public made them much more widely and better known, and gave Canadians in different parts of the country an opportunity of meeting him. His best known poems are probably "The Wreck of the Julie Plante," "How Bateese Came Home," and "Johnny Courteau." He did not confine himself to dialect verse, though unquestionably his finest work appears in that medium.

## New Brunswick, I Love Thee.

New Brunswick, I love Thee, the land of my birth;
To me Thou'rt the fairest, the dearest on earth.
The charms of no other with Thee can compare-
So lovely the landscape, so bracing the air.
Liberty's banner wide o'er Thee is waving,
No cold-hearted lord from the peasant is craving.
The ploughman is lord of the fertile domain,
And Peace and Prosperity o'er us do reign.
I love Thy green hills, and I love Thy green valleys, Where beauty and pleasure the spirit inhales. Thy woodlands are gushing with music and song, And zephyrs are bearing the sweet notes along. I love Thy long evenings, when round the old hearth The family assemble with friendship and mirth. Go search where you will through America wide, Nowhere do the moments so peacefully glide.
Nor tell me of lands that are richer in gold;
To many this story has often been told,
And allured them away from their own happy home Among strangers to toil and forever to roam. New Brunswick, my country, there's gold in Thy soil, If only we for it would contentedly toil.
And pleasure and plenty shall crown all our days, And glad-hearted people shall sing to Thy praise.
[Sent by Miss Albina C. London, Upper Woodstock, N. B. (author unknown.)]

Your paper contains many valuable suggestions, and if I have made any success of teaching it is largely due to reading the Educational Review. Shediac Cape, N. B.
H. S. P.

## Nature Study for May. Protection of Native Plants and Birds.

 By G. U. Hay.In the last number of the Review reference was made to the importance of forming among the pupils of our schools clubs for the protection of our birds and plants. In the neighborhood of large towns and cities many beautiful and interesting native plants have been almost exterminated by the practice of picking and exposing them for sale on the streets and on railway trains. Among these is the Mayflower, which has a charm for everybody on account of its delicate beauty and fragrance. In many cases its runners are pulled up bodily, the flowers picked off and the runners left to perish on the ground. This is a needless waste even where the Mayflower grows in profusion. It is a slow grower, very difficult, if not impossible, to cultivate. There is no necessity, in picking the flowers and a few leaves, to disturb the runners which would thus grow on from year to year and yield fresh beauties to delight children and grown people for generations yet to come.

Nature produces her flowers in such profusion that they may be picked year after year without injuring the plants, if gathered without disturbing the roots or taking too many leaves. It is by their roots and leaves that plants are able to take raw materials from soil and air and make food for themselves in the sunlight. If roots are disturbed and too many leaves picked off, the plants either perish or become puny and sickly looking.

Great destruction is caused among evergreen trees by cutting them for decoration at Christmas in churches and houses; and of late years great quantities of fir and spruce trees have been exported from these provinces to the larger cities in the United States for Christmas decoration. It is only the most shapely trees that are taken, and this cutting out, if the demand for such trees increases, will seriously affect our young forest. This is especially true of the regions near our towns and cities where the ravages are seen, in the growing scarcity of shapely evergreens as well as of the daintiest of the wild flowers.

- "My little girl so loves wild flowers that she can't resist the temptation to pick all she can find," said a fond mother to me one day as we were walking among some rare wild flowers in a chosen spot. I said nothing, but thought that the "little girl" (about ten years of age) was depriving others who should visit the spot of seeing these rare flowers and enjoying their bloom.

This is one instance of mere thoughtlessness on the part of those who gather the choicest of our wild flowers. They do not think that these, if left growing, would afford enjoyment to other passersby, and preserve for weeks the beauty of some chosen spot in nature.

Such flowers as the violets, dandelion, fawn lily (adder's tongue), trilliums, spring beauty, bluets, and others may be gathered in more or less abundance, especially such weeds as the dandelions, bluets and daisies, which are such favorites with children. But it is well that children and many grown people should know that it is considered an act of vandalism to pick too many of the rarer wild flowers which adorn the beautiful places in nature, wherever they are found, and which would add to the comfort and enjoyment of many other people as well as themselves. Take just a few and leave the others. They will look much prettier on their stalks than if picked and perhaps scattered along the roadside to wilt and die.

In Massachusetts, where the extermination of rarer wild flowers is more threatening than it is with us, societies are being formed for the protection of native plants. Leaflets may be obtained by addressing Miss Maria E. Carter, Society of Natural History, Boston, giving information as to the objects of such a society. In one of these leaflets Professor George Lincoln Goodale, of Harvard, says:
It is difficult for persons who are unacquainted with the facts to realize how rapidly certain species of plants and animals can be driven out even from favored localities. The almost complete disappearance of our wild pigeon, which was formerly common throughout large districts in New England, shows that the balance of nature is easily disturbed. Many species of our most attractive plants are likewise threatened with at least local extinction, and these plants have not the forlorn resource of migrating on wing or foot to escape their enemy, man.
It. seems very strange that the danger which threatens these charming plants, such as our Mayflower, two of our gentians, some of our orchids, and the like, should spring from the fact that they are charming beyond their companions. They form such wonderful masses of color when grouped together as cut flowers that it is hard to resist the impulse to make these masses as large as possible. But .....those who are true lovers of flowers will content themselves with a lighter draft on the fields and meadows.
In many parts of Great Britain and the continent, local associations have been formed to protect the wild flowers which are on the verge of extinction. In Switzerland the success of such combined action has been marked, and there are now very few malcontents. It is generally recognized that the appeal to protect the rarer flowers was based on sound judgment.

In New Brunswick, where thirty or forty years ago there were great flocks of wild pigeons, only a few scattered ones may now be seen. Dr. J. Orne

Green, in a recent paper read before the Natural History Society of New Brunswick, on the gamebirds of Miscou Island, N. B., records that all varieties of birds are much less numerous there than formerly, while some have almost abandoned the ground. One cause of this is indiscriminate and injudicious gunning. He also states, on the authority of Mr. Chas. Wilson, that " eighty years or more ago wild geese bred upon the barrens, and it was the custom of the Miemac Indians to visit the island during the moulting season and destroy large numbers of them with clubs when they were unable to fly. After one such raid, more determined than usual, the geese as a body abandoned the island as a breeding ground." Other game-birds, and the beautiful snipe found along our shores, are threatened with extinction, owing to the indiscriminate slaughter of "pot-hunters" and thoughtless sportsmeń (?). These should be protected.

## Rise Above Children's Pooms.

We are doing wonderfully well the work of interesting the children in stories and poems adapted to their life, but we do not follow this up, as we should, in such a way as

- to lead them to love adult poems and other writings. Transferring the child to manly interests and taste in reading, the most difficult of all achievements.

Unwillingly we cultivate arrested development in the literary taste of children, and the remedy for this is not easy. There must be a remedy, and it must be found, regardless of the difficulties in the way. It signifies little that children like poems for childhood. They must in some way be led to love literature for adu:'ts when they become adults.

This can be done if they are led to choose for themselves from all the writings of an author. We send a child to a dictionary which has hundreds of thousands of words that he will not use. We no longer allow a student to use a "simplified" vocabulary in the back part of his Latin book, but make him go to the complete lexicon and select for himself the meaning of the word in this connection.

Providing a child with a book of selections adapted to his grade, or providing him with specific selections, will never lead him to read anythng in after life that is not selected for him and served up to him. Let him look over the poems of Longfellow until he finds what he likes and appreciates, and then all through life he will do this and will select poems of his adult interest as he now selects those of child interest.

In all phases of school work we are inclined to serve cheap feed to the children. We are grading all initiative out of their life. Some radical reform is necessary. This is a good place to begin.

We heartily echo the main contention of this extract from The Journal of Education, but we think that the words that we have italicised suggest where the difficulty lies. No transference of taste and
interest ought to be necessary. Interest the child from the first in poems and stories that he will find interesting later on.

## See What Children Saya

How many teachers can match these stories from their own experience?

## Whiskers.

The teacher of the Sunday-school class was telling the little boys about temptation, and showing how it sometimes came in the most attractive form. She used as an illustration the paw of a cat.
"Now," said she, " you have all seen the paw of a cat. It is as soft as velvet, isn't it?"
"Yesem," from the class.
"And you have seen the paw of a dog?"
" Yesem."
"Well, although the cat's paw seems like velvet, there is nevertheless concealed in it something that hurts. - What is it?"
'No answer.
"The dog bites," said the teacher, "when he is in anger, but what does the cat do?"
" Scratches," said a boy.
"Correct," said the teacher, nodding her head approvingly. "Now, what has the cat got that the dog hasn't?"
"Whiskers!" said a boy on the back seat.-The' Alliance.

Pounding Grammar into Him.
A certain little boy in a village school had fallen into the habit of saying 'I have wrote' and 'I have went.'

The teacher tried in several ways to break him of the habit, but all in vain. So one day she had him remain after school and write the two phrases one hundred times each, thinking that in that way he would surely remember to say 'I have written' and 'I have gone.'
A few minutes before he had finished his task the teacher was called out of the room. She told him to remain until she returned. When she returned she found on the desk the phrases correctly written one hundred times and beside them a note saying:
"Dear teacher-I have wrote "I háve written" one hundred times and I have went home.'-Judge's Library.

I can see a steady improvement in your valuable paper. Loyalty to our own schools ought to demand that our teachers take the Review first.
-Subscriber.

## THE EDUCATIONAL REVIEW.

## May Days.

## By Eleanor Robinson.

Victoria Day is our "May Day" in this part of the world, bringing with it not only thoughts of our Queen, of happy memory, but also the rejoicing at the return of spring, celebrated by a rush to the country of all town dwellers. The May day of literature, the first day of the month, is, in our climate, generally more reminiscent of winter than prophetic of summer. The trees are still bare, flowers are hardly to be found, often a snowbank lurks here and there in spots sheltered from the sun. We have to shut our eyes to our surroundings in order to enter into the spirit of the poets of lands where spring comes earlier, where they sing of "Sweet May, the month of flowers," "May that mother is of Moneths glad."

The celebration of the return of warmth, long days, and vegetation, on or about the first of May, is a very widespread custom. The Romans had games in honor of Flora, the goddess of flowers, beginning late in April and going on to the first few days of May. The northern Celts had rejoicings in honor of the return of the sun, which took the form of lighting fires on the hill tops, and singing and playing games about them. Among the English, we find the custom prevailing among people of all classes of going forth to the woods and fields, either on the night of the 30th of April or early on May morning, and returning carrying boughs and flowers, with which they decorated their houses, especially the doors and windows. The earlier poets, especially Chaucer, are full of references to this "doing observance to May." In many places a May Queen was chosen from among the girls, usually one noted for beauty and goodness. This custom is commemorated in Tennyson's "May Queen," and in one of Maria Edgeworth's stories. The Maypole, round which dances and games took place, was a permanent erection in many English parishes. One of the London churches, St. Andrew, Undershaft, actually took this name from the fact that the Maypole raised in front of it overtopped the church steeple. A very famous Maypole was that which stood in the Strand, and was I34 feet high. The Puritans opposed the May day customs, as they did all games and festivities among the people. And no doubt abuses had crept in, and undesirable practices had become part of these celebrations. Many Maypoles were destroyed in Cromwell's time, but the Strand Maypole was taken down and kept in safety until the Restoration, in

1660, when it was put back in its place with great ceremony and rejoicing. In 1717 it was found to be decaying, so it was taken down and presented to Sir Isaac Newton.

Pope mentions it in the lines:
"Amidst that area wide they took their stand, Where the tall Maypole once o'erlooked the Strand."
And a humorous poet of the eighteenth century writes:
"What's not devoured by Time's all-conquering hand? Where's Troy? And where the Maypole in the Strand?"
After the Restoration the May day festivities were revived, but they gradually fell into disuse among the better classes, and were celebrated only by village children, milk maids and chimney sweeps. In some places the children dressed a doll as May Queen, and carried her about in a sort of bower, singing songs and begging small contributions. This custom also prevailed in France.

In all the colder countries of Europe, May day games were usually more or less typical of the contest between winter and summer. In some parts of England they were connected with Robin Hood and his band.
The 29th of May used to be called Oak Apple Day, and to be celebrated in memory of the Restoration of King Charles the Second, and of his escape by hiding in an oak tree. After the battle of Worcester, in September, 1651 , the King attempted to escape into Wales, but was forced to lie in hiding at Boscobel, in Shropshire, where he and one of his officers spent a whole day among the branches of an oak, whose thick leaves concealed them from the parliamentary troopers who were riding about in search of them. Tennyson, in "The Talking Oak," speaks of
"That remembered oak
Wherein the younger Charles abode Till all the paths were dim,
And far below the Roundhead rode, And hummed a surly hymn."
The 29th of May was the date of King Charles' entrance into London in 1660 . It used to be observed in the church by one of the "state services," which were discontinued in 1859. It was a common custom for men to wear gilded oak leaves or oak apples on that day. A writer in Blackwood's Magazine, writing as late as 1857, says:
Never forget, if you wish your children and grandchildren to be dutiful. and good, to keep the twenty-ninth of May as a festival in your family, and never let them go abroad without a gilded oak-apple in their button-holes.

## Nature Study for Teachers in Vacation.

By J. Brittain.

In the leafy month of June you must decide where you will spend the summer vacation. Many will go to the country, or remain there for a few weeks. But how to spend your time there is the more important question.

You will do some reading, but don't do too much, and let us hope that it-will be well chosen. You will take pleasant drives, and enjoy the country air and scenery. You will take a friendly interest in the life and occupations of the country folk. But if you wish to make the most of your vacation, both of refreshment and vigor, physical and mental, you will try to get down close to nature in some of her forms or phases-see them without being shown, and interpret them without being told. Select one or two subjects of investigation, and follow these up closely, but not to the point of fatigue. You hear a bird singing in the trees near the house on several successive mornings. Study this bird. Get close enough to it to see its colors and their distribution. Find what it eats. Discover its mate and their nest. Observe the habits of the bird family till the young leave the nest and depart.
A neighboring pool will furnish interesting studies in plant or animal life. Many wonderful adaptations to a limited and special environment may be mada out. The inhabitants of the pool may be studied as a community, or a few species may be selected for thorough investigation.

A near-by wood offers an example of an organized plant society-the dominant trees, the bark flora, the undergrowth of herbs, shrubs and young trees, and the subterranean flora. The interdependence of these zones or ranks upon each other demands careful observation and thought. A typical collection should be made from each. A bog or a marsh may be studied in the same way. If you cannot identify some of the animals or plants, send accurate descriptions of them, or specimens, to your local Natural History Society, to the Geological Survey at Ottawa, or to Dr. Fletcher, of the Central Experimental Farms. In the case of a bird, a description will be quite sufficient.
One such study may be enough for one vacation, and if pursued in a rational and thorough way must yield excellent results, both subjective and objective. The very fact of having a definite and immediate purpose for which to live and move is bracing and stimulating to body and mind. You will return to your school with a keener zest for attainment, and the research work you have done will make itself felt in your methods, especially in the nature lessons.

## Botany in Schools.

By John Waddell.
I have already contributed articles to the Educational Review on the study and the teaching of botany in our schools, I trust with some good results; but I feel that much further improvement is possible, and should be striven for.

Perhaps one of the most notable features of the papers sent in by candidates in the examinations of Grade IX in Nova Scotia is a lack of appreciation of what is required in the questions. An example showing this lack in an exaggerated degree was given in a reply to the request to describe any tree valuable for its wood under the following heads: bark, style of branching, leaf, flower and fruit. It is evident that the character of the wood was not involved; but one candidate's entire answer was on that point, and the information was of a novel kind, especially in the sentence, "The cedar is sometimes used for coffins, as it will rot easy."
Pupils should be trained to get at the intention of a question, and then to answer in the best way. A child that grows up in the country should learn to distinguish different trees in his neighborhood, and he should be able to describe the differences. Any boy or girl in the Annapolis Valley ought to be able to distinguish an apple tree from a cherry tree, and should know the main characteristics of each. In parts of the country where pine and spruce and fir are found, pupils in the schools ought to be able to describe these trees.

The subject of botany is too wide for pupils to cover the whole ground. The questions asked in Grade IX would constitute a different paper, provided the whole were to be answered; but there is always such a choice given, that the pupil having done reasonable work would find several questions that he should be able to answer quite enough to give him a high mark. Thus teachers are given considerable latitude, and if they are specially interested in any particular department of the subject, they may interest the pupils in that department. For the most part, flowering plants are taken up in the schools; but if a teacher is specially interested in non-flowering plants, he can devote himself largely to them. But it is required that the knowledge should be definite. If ferns are studied something more definite than that they are small plants with green branching fronds and no flowers is to be expected. The peculiarities of wood tissue, the mode of unfolding of leaves, the arrangement of spore cases, the method of reproduction, and other characteristics distinctive of ferns should be
thoroughly understood. It is not likely that ferns will be studied except in places where there are varieties of ferns, and the differences should be familiar to the pupils. What has been said about ferns applies, to a certain extent, to mosses, lichens and fungi. What peculiarities has the mushroom - that put it into the class of fungi?

It is hardly safe to depend entirely upon the nonflowering plants, though last July there were two questions upon them and fair answers to these, together with a reasonable reply to one of the three questions on physics, would ensure the minimum marks required of teachers, and might even reach full pass marks. Something should, however, be learned about the flowering plants, the general structure or the different tissues, or some of the important individual plants.

I think, and I believe it is the opinion held in the education department in Nova Scotia, that for the grade in which botany is the science required, observation of common plants, with a careful examination of the similarities and differences, is of the greatest value; but if it were found that some teachers took a special interest in physiological botany, and were able to interest the pupils in that part of the subject, in how the root grows and penetrates the soil, how sap flows, how the food is absorbed from soil and air, and how it is changed into the material of the plant, I feel sure that such teachers would receive encouragement by questions of that nature on the examination paper. What is wanted is that a fairly reasonable ground should be covered, and covered systematically. In order that teachers should learn how vague the knowledge of pupils frequently is, I know of no better way than to test them on some of the questions of the last few years. I should suggest that the class be given any of the recent papers, and each of the pupils asked to answer in writing in quarter of an hour the one question he can answer best. Let the answers all be examined by the teacher. Afterwards let each of the class answer the same question as before, but this time using ail sources of information available; if in the case of describing a plant, it will be best of all to have the plant before him, but let him use books as well. This might be a home exercise. Then the several questions should be gone over by the teacher in class, errors being pointed out and omissions noted. By this time there should be several questions that the pupils would know pretty well. Then other questions
might be taken up in a similar manner. If the papers of the last half dozen years were gone over in this way, using them as a test, and for the purpose of training in thought and expression, I am sure that the papers handed in at the provincial examination would show a marked improvement.
Don't try to cover the paper. Leave out the questions that are off the line of the work in the class. For instance, in a school where flowering plants are studied, leave out questions on flowerless plants. Where definite plants are described, see that distinctive characteristics are given.
If any reader imagines that I am providing an easy mode of passing examinations by cramming up answers to former examination papers, I may say that my object is quite otherwise ; and in examining the answers I should try, as far as possible, to prevent such tactics being successful. But it is well for the teacher to test his scholars along the lines on which he will be tested at the provincial examination, and old examination papers may be made educative. The thing the education department aims at, is that the subject should be properly studied, and that the pupil who studies properly should obtain a good standing. Any pupil who conscientiously went over the last half dozen examination papers, and tried to learn as much from them as possible, and who received the help of even a moderately helpful teacher, would, I venture to say, hăve a better knowledge of botany than ninetenths of the candidates now have; and I should hope that at the provincial examinations he would reap his reward. Only let him not try to guess at what he will be asked at the next examination, and strive to learn the smallest amount that will give a pass. In that case, I trust that he also will reap his just reward.

Three of the interests which are strongest during a child's early years at school are the interest in spoken language, the interest in finding out things, and the interest in making things, or construction. If this be so, then we should, during a child's early years at school, devote more time to narrating to him the history of his country and tales of adventure, and to getting him to repeat them in his own words. We should, in every possible way, give the child a knowledge of the world lying round about him; and there should be suitable manual occupations at every stage of the elementary school.Alex. Morgan, D. Sc., Edinburgh.

## - Geometrical Drawing: - V.

By Principal F. G. Matthew, Truro, N. S.
As stated in the December Review, the series of exercises in Practical Geometry was prepared for the last four grades of the common school. At the request of several teachers, who expressed a wish to carry such work into the first year of the high school, so as to form a direct connection with the study of theoretical geometry, the exercises given herewith were prepared. They are only samples of many such, and deal with proportion, areas and the ellipse.

Fig. I. To find the fourth proportional to three given lines.-Let $\mathrm{A}, \mathrm{B}$ and C be the given lines. Draw two lines OM and OQ, making any acute angle. Set off on them ON equal to A, OP equal to $B$, and NR equal to C. Join PN. Through $R$ draw RS parallel to PN. Then PS is the fourth proportional; A : B : : C : PS.
Fig. 2. To find the third proportional to two given lines.-Draw OM and OQ as before. Set off OP equal to A , and ON and OQ equal to B . Join PN, and draw QM para:lel to PN. Then OM is the third proportional ; or A : B : : B : OM.

Fig 3. To find the mean proportional between two given lines.-Let AB and C be the given lines. Produce AB to D , making BD equal to C . Bisect $A D$ in $O$. With centre $O$, draw the semicircle AED. At B erect perpendicular BE . Then BE is the mean proportional ; or $\mathrm{AB}: \mathrm{BE}:: \mathrm{BE}: \mathrm{C}$.

Fig. 4. To divide a given line into extreme and mean ratio.-Let AB be the given line. At B erect perpendicular BC equal to half AB . Join AC . With centre $C$ and radius $C B$, draw arc $B D$. With centre, A and radius AD , draw arc DE . Then $\mathrm{AB}: \mathrm{AE}:$ : AE : EB.

Fig. 5. 'To divide a line proportionately to a given divided line.-Draw the two lines parallel to one another, as AB and CD . Join the ends and produce these lines to meet in E. Join E with each division of the divided line EI, E2, etc. These lines crossing AB divide it proportionately or similarly to CD.
Fig. 6. To construct an isosceles triangle in which the angles at the base shall be double the vertical angle.-Given one of the sides 'AB. Divide AB into extreme and mean ratio at E . With B as centre and radius $B A$, describe arc AF. With $A^{\prime}$ as centre and radius AE, describe arc EF. Join AF and $\mathrm{BF} . \mathrm{ABF}$ is the triangle required.
Fhis and the following exercise are excellent
examples of the use of dividing a line medially. (Fig. 4).
Fig. 7. The same as Fig. 6.-Given the base AB. Bisect the base AB in C . Erect perpendicular CD equal to AB . Join BD and produce to E , making $D E$ equal to half the base. With $B$ as centre and radius BE , draw arc EF cutting CD produced in F . Join FA, FB. Then FAB is the triangle required.
This problem will be recognized as that employed in the construction of the pentagon. (Fig 20, Gr. VII).
Fig. 8. To reduce a given triangle to another triangle of given height, but equal area.-Let ABC be the given triangle, and D the given height. Draw EF parallel to AC at a distance from it equal to D . Produce CB to G. Join GA. Through B draw BH parallel to GA. Join GH. Then GHC is the triangle required.

Fig. 9. To construct a rectangle equal in area to a given triangle.-Let ABC be the given triangle. Draw perpendicular BD. Bisect BD in E. Through E draw FG parallel to AC meeting perpendiculars from A and C . Then AFGC is the rectangle required.

Fig. 10. To construct a square that shall be equal to the sum of two squares.-Let AB and C be the sides of the two given squares. At A draw $A D$ equal to $C$ and at right angles to $A B$. Join $B D$. Then BD is the side of the square required.

Fig. II. To construct a square that shall be equal to the difference of two squares.-Let AB and C be the sides of the given squares. Bisect AB in $O$. From centre $O$ draw semicircle ADB. From A as centre and radius equal to C , draw arc cutting at D . Join DB . Then DB is the side of the square required.
Fig. 12. To construct a square equal in area to a given rectangle.-Let ABCD be the rectangle. Produce AB to E , making BE equal to BC . On AE describe a semicircle. Produce $B C$ to cut the semicircle in F . Then BF is one side of the required square.

Fig. 13. On a given line to construct a rectangle equal to a given rectangle. . Let AB be the given line and ACDE the given rectangle. Join BE. Through $C$ draw $C F$ parallel to $B E$. Through $F$ draw FG parallel to AB , meeting a perpendicular from $B$. Then $A B G F$ is the rectangle required.
Fig. 14. To bisect a triangle by a line drawn parallel to the base.-Let ABC be the triangle. Bisect $A B$ in $O$. On $A B$ draw a semicircle $A D B$.

GEOMETRICAL DRAWING. $\bar{V}$.

| Fig. 1. | Fig. 2. | $F_{1 g} 3$ | Fig. 4 . |
| :---: | :---: | :---: | :---: |
|  |  | Fig 7 : | Fig 8 : |
| Fig. 9. |  | Fig 11 . | Fig. 12 . |
| $\text { Fig } 13 .$ | Fig. 14. | Fig 15 | Fis. 16. |
| Fig 19. | Fig. 18. |  | Fig 20. |

From $O$ draw OD perpendicular to $A B$. With $B$ as centre and BD as radius, draw the arc DE . Through E draw EF parallel to the base. The line EF bisects the triangle.

Fig. 15. The Ellipse.-Explanation of terms. ACBD is called the curve of the ellipse. O is its centre. Any line passing trhough O terminated at both ends by the curve is a diameter. AB and CD bisect each other in $O$, and are perpendicular to each other. They are the longest and shortest diameters, and are called the axes. AB is the major axis or transverse diameter, and CD is the minor axis, or conjugate diameter. If the distance AO be taken as radius, and from C or D as centres, arcs cutting $A B$ in $F_{1}$ and $F_{2}$ be drawn, either of these points is called a focus of the ellipse.

A line like EG at right angles to the transverse, but not passing through the centre, is called an ordinaté. EH is a double ordinate.

The points A and B are called the vertices. The distance of the centre from the focus, as $\mathrm{OFI}_{1}$, or OF 2 , is the eccentricity of the ellipse.
The most important property of the ellipse is that if any point K be taken in the curve, the sum of $\mathrm{KFI}_{1}$ and KF2 is equal to AB the transverse diameter.
Fig. 16. Given the lengths of the axes to draw the ellipse.-String and pin method. Draw $A B$ and CD the given lengths, bisecting each other and mutually perpendicular. With $D$ as centre and, $A O$ as radius, mark the foci Fr and F2. Drive a pin into each of the three points, C, FI and F2. Tie a string tightly round the three. Remove the pin at $C$ and insert in its place a pointed pencil. By carrying the pencil round, keeping the thread tight, the point will strike an ellipse through the points $A, B$, C and D .

Fig. 17. The same as Fig. 16.-Trammel method. Draw the axes as before. Take a piece of paper with a straight edge and on it mark EF equal to CO, and EG equal to AO. Place the strip as in the figure so that $F$ is on the major axis and $G$ on the minor. E will then be on the curve. By moving the strip round, always keeping $F$ and $G$ on the major and minor axis respectively, any number of points in the curve may be found. Sketch the curve freehand through these points.

Fig. 18. The same as Fig. 16.-Method of intersecting arcs. Draw the axes and mark the foci. Take any number of points between O and $\mathrm{F}_{1}$ or $\mathrm{F}_{2}$, and number them as in the figure. They should be close together near the focus and spaced wider near
the centre. Take the distance AI, and with centres $\mathrm{F}_{1}$ and F2 describe arcs at $a, a, a, a$. With dis tance BI and the same centres cut the other arcs. Take the distance A2 and B2 and form the focal points, make arcs intersecting at $b, b, b, b$. Similarly with distances $\mathrm{A}_{3}$ and $\mathrm{B}_{3}$ make arcs at $c, c, c, c$, and so on with the rest of the points. Sketch the curve through the intersecting arcs.
Fig. 19. The same as Fig. 16.-Method of intersecting lines. Draw the axes as before. Through ABC and D draw lines parallel to the axes, to form the rectangle $\mathrm{E}, \mathrm{F}, \mathrm{G}, \mathrm{H}$. Divide AO and AE into the same number of equal parts. From C draw. lines ; to the divisions on AE. From D draw lines through the divisions in AO until they meet the former lines, DI meeting CI, D2 meeting Cc, and so on. Through these points of intersection draw the curve CA, which will be one-fourth of the ellipse. Treat the other quarters in the same manner to complete the ellipse.
Fig. 20. Given the ellipse to find the centre and axes.-Draw any two parallel chords PQ and RS. Bisect these in T and U. Through TU draw the diameter VX and bisect it in O . This is the centre. From $O$ with any radius to cut the curve draw a circle EFGH. By joining these points a rectangle . will be formed whose sides are parallel to the axes. Through O draw $A B$ parallel to $F G$ and $C D$ parallel to EF . AB and CD are the axes.

The softly warbled song
Comes from the pleasant woods, and colored wings Glance quick in the bright sun, that moves along The forest openings.
-H.W. Longfellow.

Under the hedge by the brawling brook
I heard the woodpecker's tap,
And the drunken trills of the blackbinds shook
The sassafras leaves in my lap.

- Alice Cary.

The wild things of the wood come out, And stir or hide, as wild things will, Like thoughts that may not be pursued, But come if one is calm and still.
-Edward R. Sill
All things are new-the buds, the leaves,
That gild the elm-trees nodding crest,
And even the nest beneath the eaves-
There are no birds in last year's nest !
-Henry W. Longfellow
We sit in the warm shade and feel right well
How the sap creeps up and the blossoms swell;
We may shut our eyes, but we cannot help knowing
That skies are clear and grass is growing.
-James Russell Lowvell

## Self-Activity the Developing Force of Frobel's System. <br> Mrs. C. M. Condon.

Froebel has not only shown us that the recognition and application of this law of unity to education is a necessary condition of success, but he has also set in a very clear light the fact that the child, in conformity with its provisions, carries within himself the means of securing his own development. These are the natural instincts common to every child, and they reveal themselves, more or less satisfactorily, through his own self-activity.
But these instincts are, at first, blind, and often erring, therefore they need guidance, careful fostering, without undue interference. Nor must the physical instincts be alone guided, with the sole aim of first making "a good animal;" but we must take to heart the fact that the mental, moral and spiritual instincts of the child are just as implicit in his nature, and however dim and uncertain they may appear, they must receive attention, and be gently drawn out, and, by exercise, gain the strength necessary to raise them from blind, unreasoning instincts to conscious intelligence, to spontaneity, and to increasingly happy and fruitful action.

If this achievement by the child were an impossibility, he would be a startling exception to the law of unity, for every other form of life, vegetable and animal, can only be successfully reared by adapting our methods to the natural tendencies of the plant or animal which we are attempting to bring to perfection. Even crystals show their inherent qualities (inward nature) by their arrangement of planes and angles to a predestined form.

If, then, this universal fact of inward development, $\cdot$ by outward manifestation, be true of that part of the creation which bears the stamp of necessity, what reason have we to doubt that the same condition holds good in the child, who bears within himself forces, greater in number, power, diversity and aim? But the helplessness of the child blinds all eyes, but those of love and wise experience, to the forces that lie dormant, waiting for the impulse of his own self-activity, which must be gently led into the right path, until it acts intelligently and habitually with increasing foresight as to results. Repeated acts thus form right habits which crystalize into good conduct, and thus produce a noble character.

The stress laid by Frobel upon the right training of the child, from the very earliest period, ought to
seriously engage the attention of our teachers, because it was the matured judgment of a man who was gifted with marvellous powers of analysis, and who had closely and critically studied all the processes of education, beginning with schools, and proceeding to å survey of university methods, and then, going backward, through every preceding grade, in order to find out the weak spot in organized education, of which he was so painfully aware.
His was not a mere outside amateur view, but that of a teacher with a practical experience, who had taught in schools, and as a private tutor, who had been three years with Pestalozzi, then the cynosure of the educational world, and who in his own schools, where he had a free hand, so that he could rectify errors and supply deficiencies. But there was one obstacle that he saw must be removed, if human education was to justify itself in its products, not here and there only, but to prove itself a factor in the elevation of the whole mass of humanity. The kindergarten was his supreme effort to remove the obstacle that stood in the way of progress, by taking the child at a period, when he was usually left without regular training, being simply allowed to drift aimlessly until such time as the school received him to tax the patience and ingenuity of the teacher. This obstacle-neglect of early training-can never be entirely removed until mothers are thoroughly trained to the intelligent performance of their duty, at once so difficult and delightful. But the kindergarten bridges the chasm between home and school, and proves itself, at the same time, a corrective of many faults caused by neglect at home, and a most efficient preparation for the school. The truth of this statement will be confirmed by those teachers who have ever had the good fortune to receive their pupils from a wellconducted kindergarten.

The kindergarten develops the child's inner nature through and by the most varied methods of expression, in speech, gesture, song, circle games, gymnastics, most carefully arranged to exercise, but not to overtask the child's strength and interest.

The ceaseless activity of childhood is not allowed to run to waste, nor to display itself in mischief and destructiveness; but while the individuality of the child is most sacredly preserved, conditions are skilfully prepared and suitable material provided on which the little one can expend his exuberant vitality, in building with blocks, from which, incidentally, he is absorbing notions of form, size,
number, position, direction, and other qualities of matter which he is led to see and feel for himself. In this way he is led to observe, compare, see the truth of things; and since truth is always beautiful to the unspoiled nature, he learns to love it and to express it in accurate speech and little works of skill; for nothing gives us a more vivid apprehension of correctness in detail (truth) than the fixing of a mental image in a visible form in some product of handwork.

Then Frobel combines physical training and a sympathetic outlook by his dramatic games, in which the child is helped to represent the various activities of nature and man's work; thus by play, and in it, he learns to estimate the value and dignity of labor; to gain a sense of human society as one great whole, in which each must do his part, and he.p his fellows.
" From every point in nature," says Froebel, " a pathway leads to God." This deep conviction led him to bring the child into close and loving relations
with nature, by showing him her beauty, by giving the little ones each his own garden plot, and teaching him experimentally to care for plants and pet animals, thus leading him to see not only just how much he could do, but how much more he must patiently leave to the great Creator and Preserver of all things. Reverence and obedience to law must be the natural outcome of such a training.
The thoughtless may sneer at what they may consider "mere trifling play," but the shrewd observer who will spend even one session in a genuine kindergarten will descern in even the simplest play the nascent beginnings of all human culture; and he may well ask why the free, happy-earned spirit of the kindergarten should be so foreign to the school, where an air of constraint, even a spirit of antagonism, is often painfully apparent. As the same human nature is to be dealt with in both institutions, one may reasonably enquire why principles and methods which have worked so well in the kindergarten should be discarded in the school? If there ought to be no sharp divisions in the life of the individual, no chasms to be bridged in the course of training and instruction, as we all admit theoretically, but that each period should be connected with the preceding stage of culture, and be naturally joined to that which succeeds, if this theory be true, and it is, why should we persist in a course that gives results so disproportionate to the expenditure of money, time and service?

## Morning Talks for May.

Underlying thought-Happy days.
Name of the new month?
How many days has May?
To what season does May belong?
Name the other spring months.
What did March bring?
What did April bring?
What does May bring?
What season comes after spring?
How many summer months?
Name them.
What garden flowers blossom in May?
What wild flowers blossom in May?
Name the color of each.
How do the fields look?
What birds do we see?
What are they doing?
How can we help them?
What do the birds do for us?
Do we like to see the birds?
Are we glad when they come baek?
Where do birds build their nests?
Do all birds build their nests in trees?
Where does the robin build its nest? The bluebird? the swallow? the meadow lark? the woodpecker?

What trees blossom in May?
Are they in full bloom?
Are any in full leaf?
Any bare?
What is the color of the apple blossoms? cherry
blossoms? pea blossons? peach b.ossoms?
How many petals has each?
What is meant by "Arbor Day?"
What is done on Arbor Day?
Name some large trees.
Name some small trees.
Of what use are the trees to man, to animals?
What tree do you like best?
Poems: "It Is Not Always May," Henry W. Longfellow ; "There Is But One May in the Year," Christina Rossetti.-Selected.

## There was never mystery

But 'tis figured in the flowers;
Was never secret history -
But birds tell it in the bowers.
-Ralph Waldo Emerson

## THE EDUCATIONAL REVIEW.

## Van Dyck. <br> Miss A. MacLean

Anthony Van Dyck was born at Antw̌erp in 1599. In the Flemish school he is surpassed by Rubens only. At fifteen years of age he entered the studio of Rubens, and at nineteen he was admitted to the Painters' Guild of Antwerp - the youngest artist ever admitted.

Following Rubens, he first turned his attention to ideaI and sublime subjects. But though these showed great precocity, he was not great in composition and ideality as was Rubens. But when he later painted portraits, and especially single figures, he eclipsed Rubens, and many of his portraits are among the world's masterpieces.

In 1621 he visited Genoa, Rome, Florence, Venice, Turin and Palermo, and the letters of introduction he bore from Rubens opened all doors to him. His beauty, elegance, superior education and superb gifts made him welcome everywhere, and the best the world had to give was freely laid at his feet. At Venice he was so impressed by Titian and Tintoretto that for a time he seemed to lose the influence of Rubens. Returning to Genoa, where he was accorded a glad welcome by the patrician families of that city, he painted the fifty portraits still to be seen in the galleries there; portraits which alone would have made his name immortal had he painted no others. In 1625 he returned to Antwerp, and during the next six years he painted in his own country some of his most important works. In 1632 he went to England. Fortune smiled on him there as ever; King Charles I at once granted him permission to paint himself and family, and these works crowned his reputation. He was appointed court painter, knighted, given a yearly pension, apartments at Blackfriars, and a summer residence at Eltham was placed at his disposal. Accustomed to the elegant surroundings of Rubens, and having lived in the palaces of his patrons in Italy, he now lived in such splendor that his apartments became the resort of royalty, aristocracy, and the gifted of the land. The King and Queen employed him constantly, and about thirty-eight portraits of the former and thirty-five of the latter exist. The equestrian portrait of the King at Windsor and in the National Gallery, London, those of the Queen at the galleries of Windsor, St. Petersburg, Dresden, etc., and the groups of the royal children at Turin, Windsor, Berlin, etc., are unsurpassed.
With the exception of a short period in Brussels, Van Dyck and his pupils worked seven years in England. He painted portraits of all the principal
personages of the court of Whitehall. He followed Rubens' plan of having his pupils and skilled employees help him in his paintings. There are over 350 of his works in private galleries of Great Britain, and no other country can show as fine a collection of his paintings as England.
Rubens never made a specialty of portraiture, and is said to have suggested that field to Van Dyck. Rubens would not give enough attention to an individual sitter to enable him to see beneath the surface and paint a characteristic portrait. Van Dyck studied his sitters, saw the likeness, and made characteristic portraits. As compared with Rubens, he made the figures less stout, indicated fewer bones and muscles, and gave them less blood. He was never brutal, never gross, restrained, polished; he seems to have given to all the people who sat for him something of the graces of his own person; a noble air, a finer style in garments, and hands more regularly white and handsome. He had a taste for draperies well put on, silky stuffs, ribbons, jewels, plumes and ornamental swords. His handling was rapid and easy, after the manner of Rubens. He engendered a school, the English school-Reynolds, Lawrence, Gainsborough, and almost all the genre and landscape painters.
Percy Randell Head says of Van Dyck's portraits: "His portraits of men are, as a rule, more successful than those of women ; he evidently shared the deficient sense of the best characteristics of woman's beauty which marks Rubens and all his school."
Jules Guiffrey says of Van Dyck's portraits:
"Seldom or never is there any action. Do not seek in these impassive faces for any expression of joy or grief. All are shown preserving that calm, that imperturable serenity characteristic of the true Fleming."

Distinction seems to have been the ideal quality he sought; the quality which formed his individuality. No matter from what class his sitters came, they all were endowed by him with a distinguished mein. He never painted even his most intimate friends in the familiar unconstraint of daily life. All posed for their portraits. Van Dyck's order of precedence in the procession of great artists has never been accurately determined. He lacked creative genius, inventive instinct, that which constitutes a powerful individuality. In Rubens' studio he followed Rubens. In Italy he followed the Italians. On his return to Antwerp he combined in his works the best of all he had seen and learned. In England, more especially in his first years there, he reached a sureness, a power of execution which
makes many of his portraits of Charles I and family class among the most finished works of art.

There is an illustrative story told of a visit paid by Van Dyck to Frans Hals at Haarlem. As Van Dyck admired Frans Hals' portraits; he had made repeated calls on him, but Frans Hals was rarely to be found except at a tavern. However, on leaving word that a stranger wished to have his portrait painted, Hals arranged to meet him. When they met, Van Dyck said he wished a portrait of himself, and that it must be painted in two hours. Hals agreed, and painted the portrait in the given time. Van Dyck approved of it, and remarked that painting portraits seemed a very simple task, and said he would like to paint Hals' picture. Hals soon perceived that he had before him no ordinary painter. When he beheld the finished picture, he embraced Van Dyck, crying, "You are Van Dyck, nobody else could do as you have just done!"

And now, what shall we say of the man, Van Dyck? Or is it only of the artist we should speak? Well, let Fromentin say what he thought of the man, Van Dyck.
"It is thus I should imagine a portrait of Van Dyck, made, as it were, by a rapid sketch with a broad pencil: A young prince of royal grace, with everything in his favor-beauty, elegance, magnificent gifts, precocious genius, a rare education-and owing all these things to the advantages of birth; cherished by his master, himself a master among his fellow-students, everywhere distinguished, everywhere sought for, feted everywhere, in foreign parts even more than at home, the favorite and friend of kings, entering thus by right into the most enviable things of the world, such as talent, renown, honors, luxury, passions and adventures; ever young at a ripe age, never staid even in his last days, a libertine, a gamester, eager, prodigal, dissipated. . . . . . a man who abused everything, his seductions, his health, his dignity, his talent, ' ' ' ' a seeker of adventures, who at the end of his career married to order, as it were, a charming, well-born maiden, when he could no longer give her either strength, or much money, or great charm, or a secure life; a wreck of a man who, up to his last hour, had the good fortune, the most extraordinary of all, to preserve his greatness when painting; a man who was forgiven everything on account of one supreme gift, one of the forms of genius-grace; to sum up all, a Prince of Wales dying upon his accession to the throne, who was by no means fitted to reign."

Though only forty-two years of age, he died, old in many experiences, in 1641 .

## In Canada.

"In fair and growing Canada, that happy Dominion in which it is now my delightful privilege to live," were the words in which Earl Grey, the Governor-General, made reference to this country in his speech at the recent peace conference at New York. He proceeded to mention the law recently enacted by the Canadian parliament making it an offence for the forces of labor and capital to resort to a lockout or a strike without first having an investigation into the subject of dispute; and expressed the hope that the coming Hague Conference may not be prorogued until it has established rules which. will apply to the conduct of international disputes the same principle which has been adopted in Canada to avert industrial war.

It is well for us to realize at times that Canada is indeed a happy land as compared with others, and that our free self-government under the British Crown has enabled us, in some respects, at least, to make laws for the safety and welfare of our people which are worthy of imitation.

Comparing our laws and political institutions with those of our nearest neighbors on this continent, as is most natural for us to do, we need not deny to them the right to believe that their own are best. It is sufficient if we think that ours are better for us, and are bringing us better results.
When the United States was separated from British North America, in 1783, more or less confusion and disorder prevailed until the adoption of a written constitution as a bond of union. North of the new boundary line, where loyalty to the British Empire was the leading political principle, the only bond of union was the Crown, until, two generations later, the Dominion of Cariada was formed. Inevitably, in developing their political institutions, the British Provinces followed British precedent; and quite as inevitably the independent states endeavored not to do so. Hence it came about that when the confederation of the provinces took place, the principle of responsible government had long been firmly established with us, while it has not yet been adopted in the United States. In Canada, the people rule, and the government of the day is quickly changed in response to their will. The president of Canada, or prime minister, when called to office by the governor-general, must go to the electors and be by them returned to parliament as a necessary condition of his holding office. Failing in that, he must immediately retire. All the members of his cabinet must in the same way obtain
a seat in parliament after their appointment to office. And this president and his advisors hold office only so long as they can command the support of parliament in every measure they propose. The President of the United States may recommend to congress a certain measure, the congress does as it pleases about the matter, and he still remains president. His secretaries may have opinions, and express them when and where they will, without any effect upon legislation. When the Canadian cabinet presents a bill to parliament for some desired legislation, if the bill fails to pass, the defeated government resigns without delay, and a new prime minister and cabinet are chosen; or parliament is dissolved, if the government believes that the sitting members do not fairly represent the will of the people, and a new general election follows. The newly elected parliament, or newly elected government, as the case may be, enters at once upon its work. The United States plan of allowing representatives to keep their seats in the halls of legislature for a time after they have been defeated at the polls, or after their successors have been chosen, does not commend itself to Canadians; who look upon it as a restriction of popular government. Still more are they averse to the plan of continuing an administration in power after its policy has ceased to be the policy of the legislature.

Above the leader of the government, or head of the ruling party, there is in Canada the King, or his representative, the Governor-General, who is of no party, and represents the people as a whole. Of course there is nothing corresponding to this in the United States; but Canadians think that it makes for stability and good government, and helps to separate the ideas of law and order from those of party policy and political strife.

Judges and all civil servants represent the Crown, and not the party in power; therefore they hold office during good behavior, and not during the term of the administration, as in the neighboring republic.

Lynch law and mob violence are practically unknown in Canada, even in the mining regions. Laws are more swift and sure in their operation, and therefore life and property are safer than they are in the United States-or, at least, Canadians think so.

Our marriage laws are less elastic than those of the United States.

Military authority overrides civil law in the United States. In Canada, no officer in charge of troops could order his men to fire upon a mob, on penalty of a charge of purder, if anyone were killed
by the firing party, unless a peace officer had first called upon the nob to disperse. Unless the whole region has been declared under martial law, the civil law is supreme. In the United States, troops on duty in a disturbed district may shoot whoever opposes them, and no one questions their right to do so.

In Canada, mines and minerals are always more or less under government control, and are worked by lease from the Crown. No one, therefore, can hold such property for more than a limited time and refuse to work it.

These are some of the points in which we like to believe our laws are better than those of our neighbors. Our banking laws and our treatment of the Indians are admittedly better, and there are many others in which we think that we have the advantage.

## Wireless Message on Atlantic Coast Received in California.

On Sunday, March io, A. J. Millison, the operator at the wireless telegraphy station on Point Loma, in southern California, observed his apparatus intercepting a message. On investigation he asertained that a message was being sent from Washington, D. C., to Pensacola, Fla. He adjusted his instruments, which are the most delicate used by the United States government, and caught the whole message. At about the same time part of a message to the battleship "Connecticut" from Washington was clearly on the instruments at Point Loma.

Highly gratified, the operator sent messages to the Atlantic coast, and received answers from the operators at Washington and Pensacola. Later he wrote out copies of the messages that he intercepted on the Atlantic coast and sent them, with letters, to the operators there.

The distance from Pensacola to San Diego in an air line is about 1,800 miles, and from Washington to San Diego is about 2,400 miles. The matter has been reported to Commander H. C. Gearing, Chief of the Equipment Department at Mare Island navy yand, California. The messages sent by the operator at Point Loma to Washington were only faintly recorded on the instruments, but the"messages between Washington and Florida and part of a message from Washington to the battleship "Connecticut," 600 miles out in the Atlantic Ocean, were recorded clearly. The new appartus is partly the invention of Mr. Millison, and has been installed in the Point Loma station only few months. Some time ago the Point Loma operator succeeded in communicating with Tacoma, Wash.Scientific American.

Such a starved bank
Till that May morn;
Blue ran the light across-
Violets were born.-Browning
Gold cups o'er filling on a thousand hills; A calling honey-bee.-Helen Hunt Jackson.

## British Empire Statistics.

## By London Board of Trade.

The Board of Trade does its best, with limited resources and with little encouragement, to perform some of the work which ought to be done regularly, by a well-equipped census department, permanently established to be the eyes and ears of the government. Amongst its latest efforts is the excellent "Statistical Abstract of the British Empire," which has now reached its third annual issue. This valuable publication is the first attempt which has been made to give a statistical account of the British empire as a whole. It bristles with facts.
The volume opens with figures for area and population. It is fairly well known that the British empire has about $400,000,000$ people in its $11,000,000$ square miles. It is not so well known, and the Abstract does not tell us, that the total white population of the British empire is only about $56,000,000$, or less than the population of Germany. The Abstract tells us nothnig also of the races within the empire, but it ought to do so, for the questions involved are of tremendous importance, and those who rule an empire do well to remind themselves of the facts.

We are given, however, tables relating to the empire's chief cities, and there is no more extraordinary fact in the whole book than that about one-third of Australia's small population is crowded into four towns:

Population of Australia, 1905.
Total population .. .. . . . . . . . . . . .. .. . .4,057,000 Sydney .. .. .. .. .. .. .. .. .. .. .. .. .. 530,000 Melbourne .. .. .. . . . . . . . . . . . . . . .. .. 512,000 Adelaide .. .. .. .. .. .. .. .. .. . . .. .. .. 173,000 Brisbane .. .. .. .. .. .. .. .. .. .. .. ..... 128,000
Thus outside of these four urban areas the enormous continent of Australia contains but 2,714,000 people in its habitable fringe. Other great empire cities are Montreal with about 290,000 people, Toronto with about 220,000 people, Capetown with 156 ,000 people. These, with Hong Kong and Singapore, are the only towns which rank with the great urban congregations of the home country. The reader may be reminded that London Council had in 1905 4,721,000 people, while Liverpool had 739,000 , and Glasgow 836,000 people.

## An Empire's Trade.

The Board of Trade show us the commerce of the British empire with foreign countries. That is to say, they eliminate all trade done between different constituents of the empire, and take only imports into the empire from foreign countries and exports
from the empire to foreign countries. Here is the result compared with the commerce of the United Kingdom only:

Commerce of (i) the United Kingdom with all places outside it; and (2) the British empire, with all places outside it, in 1905:


At first sight it may surprise the reader to find that the empire's imports are no larger than those of the United Kingdom; but in calculating the empire's trade the large imports into the United Kingdom from British possessions are, of course; excluded.

## Tie Empire's Minerals.

A wise man who handles this Abstract will quickly turn to the question of natural resources, and in particular coal.

We have at home but 121,000 square miles; the empire has $11,300,000$ or so. But when it comes to coal, the mother country is first and the big empire nowhere.
The British Empire's Coal Production, 1905.
Tons.
United Kingdom .. . . . . . . . . . . . . . . . . . .236,000,000
British India .. .. .. .. .. .. .. .. .. .. 8,400,000 Australia . . . . .. . . . . . . . . . . . . . . .. . . .. 7,500,000
Natal . . . . . . . . . . . . . . . . . . .. . . . . . . .. $\mathbf{4 , 1 0 0 , 0 0 0}$
New Zealand . . . . . . . . . . . . . . . . . . . . . .. $1,600,000$
Canada ${ }^{n} \cdot{ }^{\text {. . . . . . .. . . .. .. .. . . . . .. .. 7,800,000 }}$
Transvaal . . . . . .. .. .. .. .. . . .. .. .. 2,300,000
Total above and all other. . . . . . .. . . . . . .265,000,000
So long as industry depends on cheap coal so long there cannot be any very great industrial developments in the lands with little or no coal. Canada cannot rival the United States without more coal or an efficient substitute for it. Iron figures, of course, are dependent on the foregoing coal figures. We need not, therefore, be surprised to find that the pigiron at present produced in the British empire outside these is.ands amounts to only 471,000 tons.
Here is an interesting table of the chief mineral productions of the empire in 1905:


The coal and iron are almost entirely of Great Britain. The diamonds are South African. The gold is chiefly South African and Australia. (The United Kingdom produced $£ 21,222$ worth of gold and $£_{19,419}$ worth of silver in 1905). The silver is chiefly Canadian, and the copper is chiefly South African. The Malay States account for nearly all the tin .

The great diversity of production which characterizes the various British possessions in respect of minerals is as conspicuous when we consider other products: Here is the imperial wheat production (1905) :

## Empire's Wheat Production.

"Mill. Bushels.

| Canada | "Mill. Bushels. Io6 |
| :---: | :---: |
| United Kingdom | 60 |
| India | 319 |
| Australia | 69 |
| New Zealand | . 7 |
| Cape of Good Hope and Natal | . .. |
| Orange Colony .. .. .. .. |  |
| Cyprus .. .. . |  |

It is impossible to survey these pages without a growing wonder that a few men chiefly drawn from the United Kingdom should have accomplished so much. Here we have a record of over $11,000,000$ square miles of territory, containing some $350,000,-$ ooo people of hundreds of races and languages, administered and developed by a relative handful of white men only some $12,000,000$ in number.

The Natural History Museum, Union street, is to be congratulated on the fact that the private collection of insects made by the curator, Mr. William McIntosh, has been added to its other treasures. This represents the work of twelve busy years and is very valuable. As far as the insects of New Brunswick are concerned it is the largest collection in the world and it is much the largest in the Maritime Provinces, Thene are more than 20,000 specimens in the collection and many of them very rare specimens.

## 5,000 Facts About Canada.

A remarkable little booklet has been compiled under the above self-explanatory title by Frank Yeigh of Toronto, the well known writer and lecturer on themes Canadian. Perhaps no one in the Dominion is better qualified to make such a compilation. Its value is, as claimed, "worth its weight in Yukon gold or Cobalt silver." The idea is a clever one, viz.: a fact in a sentence; giving a wonderful mass of information in the smallest compass on every phase of our commercial and industrial life and our natural resources. The booklet is sold for 25 c . and may be had from newsdealers or from the Canadian Facts Publishing Co., 667 Spadina Avenue, Toronto.

## Empire Day Selections.

He serves his country best
Who lives pure life, and doeth righteous deed, And walks straight paths, however others stray And leaves his sons as uttermost bequest
A stainless record which all men may read.
-Susan Cooiidge.
Our country is a whole, my Publius,
Of which we all are parts; nor should a citizen Regard his interests as distinct from hers; No hopes or fears should touch his patriot soul But what affect her honour or her shame. E'en when in hostile fields he bleeds to save her, 'Tis not his blood he loses, 'tis his country's; He only pays her back a debt he owes.
-William Cowper.
There's a flag that waves over every sea, No matter when or where;
And to treat that flag as aught but the free Is more than the boldest dare.
For the lion spirits that tread the deck Have carried the palm of the brave; And that flag may sink with a shot-torn wreck, But never float o'er a slave.
Its honour is stainless, deny it who can; And this is the flag of an Englishman.

> —Eliza Cook.

Land of our Birth, our Faith, our Pride,
For whose dear sake our fathers died; O Motherland, we pledge to thee, Head, heart and hand through the years to be. - Rudyard Kipling.

## Play the Game.

There's a breathless hush in the close tonightTen to one and the match to winPumping pitch and a blinding light. An hour to play and the last man in. And it is not for the sake of a ribboned coat Or the selfish hope of a season's fame, But his captain's hand on his shoulder smote"Play up, play up! and play the game!"
The sand of the desert is sodden red, Red with the wreck of the square that brokeThe Gatling's jammed and the colonel dead, And the regiment blind with dust and smoke. The River of Death has brimmed its banks, And England's far, and Honor a name; But the voice of a schoolboy rallies the ranks: "Play up, play up! and play the game!"
This is the word that year by year, While in her place the school is set; Every one of her sons must hear And none that hears it dare forget. This they all with joyful mind, Bear through life like a torch in flame, And falling fling to the host behind. "Play up, play up! and play the game!"
-Henry Newbo.t.

## The Review Question Box.

G. C.-In the grammar used in Nova Scotia Schools, on page 33, it says: "An intransitive verb is made transitive by the addition of a preposition so closely united with it as to become a part of itself." Another authority states that a preposition is never put with the verb in analysis, but the preposition and phrase following it were put in extension. Kindly give your opinion in Review.
This is one of the grammatical questions on which authorities differ. West, in his "Elements of English Grammar," says "Prepositions following intransitive verbs may be regarded as forming with them compound verbs which are transitive. Thus, ' I laughed' (intrans.) at him.' Where the preposition at takes an objective case him, becomes 'I laughed at (trans.) him,' where the him is the object of the verb. The passive construction can then be employed, and we can say, ' He was laughed at.' So, 'we arrived at this conclusion' becomes in the passive, 'this conclusion was arrived at.' 'They came to this decision' becomes "this decision was come to.'".

But Mason, in his "English Grammar," contradicts West's statement in the following way :
The direct object of the verb is not indicated by prepositions. A substantive preceded by a preposition alvays constitutes either an attributive adjunct or an adverbial adjunct.
This statement is not invalidated by the remarkable freedom of English in the use of the passive voice. "I am speaking of you" is precisely analogous to the French "Je parle de vous," and the Latin "Loquor de te." Nobody would for a moment admit that loquor de makes a compound transitive verb, and that de has ceased to be a preposition and become an adverb united to the verb.
Mason, then, agrees with the second authority quoted in the question, and would put the prepositional phrase in the extension. He disposes of the argument from the construction of the passive voice as follows:
The word that is the object of the active verb must be the subject of the passive. In the strict sense of the above, only transitive verbs could properly be used in the passive voice, and only the direct object of the active verb could become the subject of the passive verb. This is in fact the usage in Latin and German. But English has blended the accusative and the dative in one case, the 'objective', and as a consequence of this allows (in most cases) the objective of either kind of object to become the subject of the passive I told him the news, becomes either he was told the news, or the news was told him.
This is an interesting point in grammar, and we shall be glad to hear arguments on either side. Mason's seems the simpler rule to put in practice; for, who is to decide whether or not the preposition is." so closely united with the verb as to become a part of itself?"

Esperanto: A cerrespondent from Steeves Mountain, N. B., writes in answer to Mr. Garland's question in our Aptil' issue: "Esperanto-in Twenty Lessons, with vocabulary, by C. S. Griffin, can be secured from A. S. Barnes \& Co., New York; price 55 cents by mail."
The following questions have been sent in for solution: Todhunter and Loney's Algebra. Ex. 39, No. 25; and Ex. 37, No. 27.

$$
\text { I. } \begin{aligned}
& 4 x^{2}-6 y z-\left(9 y^{2}+z^{2}\right) \\
= & 4 x^{2}-\left(9 y^{2}+6 y z+z^{2}\right) \\
= & (2 x-3 y-z)^{2}(2 x+3 y+z) \\
& 9 y^{2}-\left(4 x^{2}-4 x z+z^{2}\right) \\
= & (3 y-2 x+z)(3 y+2 x-z) \\
& z^{2}-\left(4 x^{2}+12 x y+9 y^{2}\right) \\
= & (z-2 x-3 y)(z+2 x+3 y)
\end{aligned}
$$

L. C. M. $=(2 x+3 y+z)(2 x-3 y-z)(3 y+2 x-z)$
2. $a^{2} x^{3}+a^{5}-2 a b x^{3}+b^{2} x^{3}+a^{3} b^{2}-2 a^{4} b$

$$
=x^{3}\left(a^{2}-2 a b+b^{2}\right)+a^{3}\left(a^{2}-2 a b+b^{2}\right)
$$

$$
=\left(x^{3}+a^{3}\right)\left(a^{2}-2 a b+b^{2}\right)
$$

$$
=(x+a)\left(x^{2}-a x+a^{2}\right)(a-b)^{2}
$$

$$
\begin{aligned}
& =(x+a)\left(x^{2}-a x+a^{2}\right)(a-0)^{2} \\
& 2 a^{2} x^{4}-5 a^{4} x^{2}+3 a^{6}-2 b^{2} x^{4}+5 a^{2} b^{2} x^{2}-
\end{aligned}
$$

$$
3 a^{4} b^{2}
$$

$$
=2 x^{4}\left(a^{2}-b^{2}\right)-5 a^{2} x^{2}\left(a^{2}-b^{2}\right)+3 a^{4}\left(a^{2}-b^{2}\right)
$$

$$
=\left(2 x^{4}-5 a^{2} x^{2}+3 a^{4}\right)(a+b)(a-b)
$$

(Apply \$126).
$=\left(2 x^{2}-3 a^{2}\right)\left(x^{2}-a^{2}\right)(a+b)(a-b)$
$=\left(2 x^{2}-3 a^{2}\right)(x-a)(x+a)(a+b)(a-b)$
H. F. C. $\quad(x+a)(a-b)$.
R. E. Fraser, Kouchibouguac. What is the least number that can be subtracted from 60 , that it may be divided by $63 / 4$ without remainder?

60 reduced to fourths $=240$
$63 / 4$ reduced to fourths $=27$
$240 \div 27=8$ times and 24 fourths over $=6$
$60-6=54$
$54 \div 6=8$ times.
Therefore 6 is the least number.
A thoughtful subscriber, desirous of severing his connection with the Review, writes: "As I see by the last issue of my paid-up subscription expires, with number 239, I would ask you to discontinue sending it, as I am not teaching now. I write this as I notice that you wish to be notified whether a continuance of the paper is desired or not." Sometimes our subscribers neglect this simple act of notification, and the result is loss and confusion.

Dandelions dressed in gold,
Give out echoes clear and loud,
To the oriole's story, told
With gay poise and gesture proud.
-Lucy Larcom

## THE EDUCATIONAL REVIEW.

## The Last Poem of Dr. Drummond.

Dr. Drummond's last public appearance in Montreal was at the annual dinner of St, Patrick's ISociety of Montreal, held at the Windsor Hotel, on the evening of Monday, March 18th. The well-known writer was received with great applause on that occasion, and told his audience a number of good stories, and finished by reading a poem which he had composed for St. Patrick's Day, and which was very warmly received. The poem is as follows:

## We're Irish Yet.

What means this gathering to-night, What spirit moves along
The crowded hall, and touching light Each heart among the throng
Awakes as though a trumpet blast Had sounded in their ears
The recollections of the past, The memories of the years?

O 'tis the spirit of the west, The spirit of the Celt,
The breed that spurned the alien breast, And every wrong has felt-
And still tho' far from fatherland, We never can forget
To tell ourselves with heart and hand, We're Irish yet! We're Irish yet!
And they, outside the Clan of Conn, Would understand, but fail,
The mystic music played upon The heart-strings of the Gael-
His ear, and his alone can tell The soul that lies within,
The music which he knows so well, The voice of Kith and Kin.
He hears the tales of old, old days, Of battle fierce by ford and hill,
Of ancient Senachie's martial lays, And race unconquered still-
It challenges with mother's pride And dares him to forget
That tho' he cross the ocean wide, He's Irish yet! He's Irish yet!
His eye may never see the blue Of Ireland's April sky,
His ear may never listen to The song of lark on high, But deep within his Irish heart Are cloisters, dark and dim,
No human hand can wrench apart, And the lark still sings for him.
We've bowed beneath the chastening rod, We've had our griefs and pains,
But with them all, we still thank God, The Blood is in our veins:
The ancient blood that knows no fear, The Stamp is on us set.
And so howcver foes may jeer, We're Irish yet! We're Irish yet !

## Nature Quotations for May.

Arranged by Annetta F. Armes in "Popular Educator."
Onward and nearer rides the sun of May;
And wide around, the marriage of the plants
Is sweetly solemnized.
-Ralph Waldo Emerson.
The voice of one who goes before to make
The paths of June more beautiful, is thine.
-Helen Hunt Jackson.

Hebe's here, May is here!
The air is fresh and sunny;
And the miser bees are busy
Hoarding golden honey.
-T. B. Aldrich.
Now the bright morning star, day's harbinger,
Comes dancing from the east and leads with her The flowery May, who from her green lap throws The yellow cowslip, and the pale primrose.
$\qquad$
And hark! how bright the throstle sings ! He , too, is no mean teacher.
Come forth into the light of things Let Nature be your teacher.

> -Wordsworth.

Among the changing months, May stands confest
The sweetest, and in fairest colors dressed.

> -Thomson.

Spring's last born darling, clear-eyed, sweet,
Pauses a moment, with white twinkling feet,
And golden locks in breezy play,
Half teasing and half tender, to repeat
Her song of May.

> -Susan Coolidge.

The scarlet maple keys betray
What potent blood hath modest May.

> -Ralph Waldo Emerson.

All day in the green, sunny orchard,
When May was a marvel of bloom,
I followed the busy bee-lovers
Down paths that were sweet with perfume.
-M. E. Sangster.

The robins sang in the orchard, the buds into blossoms grew,
Little of human sorrow the buds and the robins knew!
-J. G. Whittier
And hark! and hark! the woodland rings;
There thrilled the thrush's soul;
And look! that flash of flamy wings-
The fire-plumed oriole.
-O. W. Holmes.

And every little bird upon the tree,
Ruffling his plumage bright, for ecstacy,
Sang in the wild insanity of glee.
-Phoebe Cary.
And the swaying yellow bird,
Trilling, thrills each hollow stem,
Until every root is stirred,
Under their dropped diadem.
-Lucy Larcom.

## Canada Forever.

When our fathers crossed the ocean In the glorious days gone by,
They breathed their deep emotion In many a tear and sigh-
Tho' a brighter lay before them
Than the old old land that bore them,
And all the wide world knows now

- That land was Canada.

So line up and try us, Whoever would deny us The freedom of our birthright, And they'll find us like a wallFor we are Canadian-Canadian forever, Canadian forever-Canadian over all.
Our fathers came to win us

- This land beyond recall-

And the same blood flows within us
Of Briton, Celt, and Gaul-
Keep alive each glowing ember
Of our Sireland, but remember
Our country is Canada
Whatever may befall.
So line up and try, etc.
Who can blame them, who can blame us If we tell ourselves with pride

- How a thousand years to tame us The foe has often tried-
And should e'er the Empire need us, She'll require no chains to lead us,
For we are Empire's childrenBut Canadian over all.

Then line up and try us, etc.
-William Henry Drummond.

## Echoes From a Boy's Garden.

Lodise Klkin Millpr in N. Y. Schonl Journal. (Concluded.)
A few weeks later:
"Can you tell me what is the matter with my squash vine?" said Carl, coming with a large, brilliant orange blossom in his hand. "I have hoed it, put some commercial fertilizer around it, and picked off every squash bug I could find, and only a few of the blossoms have squashes on them."
"That is a very natural question to ask. Who planted cucumbers?"
"I did," answered Hugo.
"Will you please go to your garden and see if you can find any difference in your cucumber blossoms. James, examine your pumpkin vines."
In a short time the boys returned with the different kinds of flowers, much to the gardeners $s$ astonishment.
"Robert; you may bring me the small cornstalk from your garden. We will examine the squash, cucumber and pumpkin blossoms first. Joe, put cucumber and pumpkin which has no squash.
your finger in the blossom when
" It is covered with yellow dust," exclained Joe.
"Can you find yellow dust in the other flower?" I asked, watching him make the trial.
"No," he responded, "the inside of the flower is a different shape and it is sticky."
"Shake the yellow dust or pollen into that flower. What happens?"
"It sticks fast. What is that for?" opening his eyes in astonishment.
"The flower that bears the yellow dust is called the staminate flower. These little things that hold the pollen are the stamens. The other is the pistillate flower, and has the parts that will develop into seeds. We will cut through the flower 'that has the squash.'"
"Look at the little seeds!" cried Henry.
" Oh, they're not seeds," said Mike. "Would you like to plant them? No use. They wouldn't grow. They are not ripe."
"You are quite right. They are not seeds, but ovules which will develop into seeds. Do you see that bee coming from that flower with his legs and body covered with polien? Watch him."
"I wonder if he will find a flower with a squash. Yes, there he goes," said Fred.
"Let us go and watch him," said Robert, much excited. "Don't frighten him away. He seems to know just where to find the honey. See how he crawls over the sticky surface!"
"Off he goes!" said Mike.
"Ah, there it is-the yellow dust he dropped!" exclaimed Dick.
"All that was very simple, but now the wonder begins."
"What is that?" inquired James, with eager, listening eyes.
"When a pollen grain drops on the stigma of the pistil, as the sticky surface is called, it begins to germinate, or grow, and send down a pollen tube to one of the little ovules which you see, giving it the help it needs to make it develop into a perfect seed. A little plantlet is formed in each seed, and, while the seed ripen, these parts begin to thicken to form a protection for the growing seeds. Hand me some beans, Mike, please. Each of you take one and carefully remove the seed coat and examine the inside."
"Just look at the little plantlet!" said Fred. "Isn't it wonderful?" said help of a pollen grain to make it a seed?"

## THE EDUCATIONAL REVIEW.

"Yes, think of all the seeds that will be found in the garden this summer. All" flowers are not alike. Each has its own secret, which is worth finding out."
"I suppose there is something interesting about this cornstalk," said Carl, looking at it.
"Who can find the pollen?" I asked, shaking the stalk.
"I know," exclaimed Dick; "in the tassel at the top."
"The ovules are all covered with these husks. How do they get the help from the pollen?" A queer expression was on the face of the boys.
"Let us remove the husks and-"
" Look at the silk!" interrupted Robert. "Why, each grain has a piece of silk. Oh, I know; the silk grows out beyond the husk and the pollen grain drops on the end of the silk," which was very good reasoning for Robert.
" But what a long pollen tube would have to grow to get down to some of the ovules," said Henry.
"Do you see any ovules that have not developed?" I asked, holding the ear up to view.
"Just look at the little grains around the top of the ear," said Carl, amused. "The silk was so short it could not get out of the husk, and did not get the pollen. Well, that is interesting."
"All go to your gardens and examine the flowers and pods of your peas and beans, and see if they have anything to tell you.
"You did good work while I was away, boys. The gardens look very well. They show who are the good workers."
"We have had such a good time and learned so many things," said Henry.
"Did you have any trouble with insects?" I inquired.
"Insects!" he exclaimed. "I should think so. We made a collection of the different ones we found-fifty-three."
"Which gave you most trouble?"
"Potato bugs, but we put 'bug death' on the vines and that finished them," he said, with great satisfaction.
"We find, if you want to destroy insects, you. must know something of the way in which they take their food," said Joe, repeating some information he had recently acquired.
"What do you mean?" I inquired.
". Well, a. potato bug has biting mouth parts and eats the leaves. If you put poison on the leaves they eat it, too, and that kills them."
"But," continued James, "a squash bug is differ-
ent. He has a little sucking tube he puts into the leaf and sucks the sap, and would not get the poison. He has to be killed in another way."
"Are you interested in insects, John ?" observing him listening to our conversation.
"Very much, and we have found so many different kinds. The lovely ground beetles, we were told, are predaceous, because they destroy wire worms and many bugs."
"Will you please look at my beets and carrots?" said Fred, from a distant garden. "I think they are fine!"
"What do you think of my squashes?" asked Henry, with pride.
"What have you done with all the vegetables you have raised?" I inquired, with interest.
"Ate some, sold some, gave some away, and these good things we are going to take to the fair," said Joe.
" I should like a list of the flowers and vegetables you raised, and one of the insects you found."
"Are we to have an exhibit at the fair?" inquired Dick.
"Yes, some special prizes are to be given for the products of the Boys' Garden. That will end the work for the year. Do any of you want a garden next year?"
"Yes, indeed!" "We all do." " May I have my same garden?" "About twenty more boys want gardens," was the hearty response.

## CURRENT EVENTS.

The new Province of Superior is as yet only a suggestion. It is not very probable that it will ever be more; but it expresses a wish of some of the residents of the northern part of Ontario to have that great province divided, setting off as a separate province the present districts of Nipissing, Algoma, Thunder Bay and Rainy River. This avea, now often called New Ontario, has a population of about 125,000, and comprises about three-fourths of the area of the present Province of Ontario.
Next year will bring the three-hundredth annivensary of the founding of Quebec; but the executive committee of the proposed tercentenary celebration have decided to postpone it to July, 1909, to give more time for the necessary preparation.
In the new battleship Aki, recently launched in Japan, the Japanese have the greatest battleship in the world, exceeding the British ship Dreadnought by 1300 tons.

Commander Peary will make another attempt this year to reach the North Pole. His crew will consist entirely of young Newfoundland fishermen who are members of the colonial naval reserve.

Beginning next year, a new direct line of steamers will run from Vancouver to Great Britain by way of New Zealand and Australia. This will divert to Vancouver much traffic that has formerly passed through San Francisco.

The Department of the Interior has issued a new atlas of Canada which is said to be the most complete publication of its kind ever produced in any country. Only one other country has issued an atlas giving such a diversity of information, and that country is Finland. This may be surprising information to many of us, who are inclined to think of Finland as many think of Canada, only as a country of ice and snow. Equally surprising will be the news that Finland is the first country in the world in which women have been elected to seats in the national legislature. There are nineteen women in the Finnish Diet.
One-fourth of the people of British East Africa depends upon the cotton crop for their living. Not only will British possessions in Africa soon supply all the cotton needed in the mother country, but will supply it at a price, it is hoped, that may enable British manufacturers to supply the American market.
The Wakamba, a Bantu tribe of Uganda, are the most highly civilized black race in Africa. When first visited by white men, they had a decimal system of calculation and understood the working of iron.

Potasimite is a new explosive in use in Mexico. It is pronounced safer, cheaper and more powerful than dynamite; and, still more important for mining operations, it produces no noxious gas.

The supposition that, the gold of Ophir, with which Solomon enriched the temple in Jerusalem, came from Mashonaland, in South Africa, is discredited by late investigators. The distance is said to be far too great; and the architectural ornaments found in the abandoned gold mines are too crude to have been made by the workmen of King Solomon.
The new railway recently opened for traffic across the Isthmus of Tehuantepec reduces the distance from New York to Honolulu to five thousand seven hundred milesnearly a thousand miles less than by way of Panama.
The Russians and the Japanese have completed the evacuation of Manchuria, and the vast region is again under the government of China. The policing of the country and the repression of the Chinese bandits have been turned over to Chinese troops.
In calling the second Hague Conference, the Russian government has proposed the following subjects for discussion: The settlement of international disputes by an international court; the laws and customs of warfare on land, especially as to the opening of hostilities and the rights of neutrals; the laws and customs of maritime warfare, and the adaptation to maritime warfare of the principles of the Geneva Convention of 1864.
It is remarkable that at the colonial conference in London both Canada, the premier colony of the Empire, and the Transvaal, the youngest colony, are represented by men belonging to races formerly not owing allegiance to the British Crown. Both Sir Wilfrid Laurier and General Botha have been enthusiastically received. The former, though British born, as we all know is of French-Canadian thoug Brish born, as
descent; the latter, born in the British colony of Natal, is of Dutch and French Huguenot origin. Sir Wilfrid represents six million Canadians; Alfred Deakin, premier of the Australian Commonwealth, represents oun four million fellow subjects in Australia; Dr. Jameson, two and a half million in Cape Colony; Gen. Louis Botha, more than half that number in Transvaal; Premier Moor, over a million in Natal, and Sir Joseph Ward nearly as many in New Zealand; while Sir Robert Bond represents about a quarter of a million inhabitants of the ancient colony of Newfoundland. The message which Gen. Botha brings from the Transvaal is that the new colony wishes to strengthen the bonds of co-operation and love and unity of the Empire; and Dr. Jameson expressed the hope that the next conference would see all South Africa ranged with the Dominion and the Commonwealth, and represented by one federal minister. A practical outcome of the confererice is the creation of a general staff to take command of all the military forces of the Empire.

On the 26th of April, three hundred years ago, three small vessels cast anchor on the coast of Virginia, bringing the few persons who later founded Jamestown and established there the first permanent English settlement on this continent. On the same date this year, the fleets of the leading nations of Europe were anchored near the spot, to celebrate the tercentenary anniversary of that event, as the guests of the great American nation that has sprung from that beginning. The British squadron is the most powerful of the visiting fleets. After taking part in the opening ceremonies of the Jamestown exhibition, it will visit Quebec, where it will arrive on the 12th of June and remain until the 24th.
King Edwand's visit to Spain is said to mark the conclusion of an agreement between the two nations by which British ships shall have the use of Spanish ports, and British squadrons guarantee the security of Spanish coasts.
It is understood that an arrangement has been made between Great Britain and Canada whereby British newspapers and periodicals will come to Canada at greatly reduced postal rates.
The custom of flying the national flag over school buildings is one that we have learned from our New England neighbors. The provincial board of education is to urge upon trustees the desirability of flying the Canadian flag. over every school building in New Brunswick. If the school district can not afford to buy a flag, the board of education will assist.
An amusing and rather significant incident in connection with the recent little war in Central America was that a party of United States marines compelled the leader of an insurgent band to apologize for an insult to the British flag.

## SCHOOL AND COLLEGE.

Walter W. White, M. D., has been appointed a member of the Senate of the University of New Brunswick, in room of Hon. L. J. Tweedie, resigned.
At a meeting of the Board of Education in Fredericton, on April 13th, the sub-committee appointed to investigate the cost of text books for schools, composed of Dr. Inch, Chancellor Jones, and Solicitor-General Jones, submitted a report, in which they recommended that text books be sup-

## THE EDUCATIONAL REVIEW.

plied to pupils free of charge. Consideration of the report was deferred until a future meeting.
Fredericton is to have a new normal school building, as the present quarters are overcrowded. The new building will be three stories high, and will be fitted with all modern improvements, with facilities for manual training, domestic science, and nature study. Provision will be made in the grounds, which are to be enlarged, for school gardens.
On May 3rd, Dr. Inch will sail for England, and on the 24 th will attend ${ }^{3}$ an educational conference, which will be held in London under the auspices of the League of the Empire. The leading spirit in the league is Lord Meath, and its purpose is announced to be the closer union of all countries subject to King Edwand. The League of the Empire is best known in this country by its work in promoting correspondence among school children of widely separated British colonies. There are many schools in this city and province, the scholars of which are writing to the children of far-away Australia or South Africa. In a recent annual report, Dr. Inch said: "The League of the Empire is an association of prominent statesmen and educationists who are aiming to bring into closer relation all schools, colleges and universities of the British Empire for purposes of co-operation and mutual benefit. The president of the league is Canada's high commissioner, the Right Hon. Lord Strathcona and Mount Royal, G. C. M. G. Its vice-presidents and members represent every part of the empire." Besides its correspondence branch, which numbers many thousands among its members, the league employs a large staff of practical lecturers, who give lectures on the colonies in schools and public halls throughout England. Exhibitions representing the schools of the empire have been held in the Crystal Palace at which all kinds of school work are shown. Time tables and photographs, presented by the colonies, are on exhibition in the league's headquarters, Caxton Hall, Westminster. During his stay in England, Dr. Inch will visit different classes of schools with a view of acquiring ideas to be applied in his work here. He will in a measure return the visit of the English school teachers who visited New Brunswick schools in December.
McGill University, and through her the whole Dominion, have suffered heavy and irreparable losses by fire during the last month. Within two weeks from the occurrence of the fire which destroyed the fine science buildings, the medical building of the University was burned. In both cases, much has been destroyed that can never be replaced, and while the money loss in the destruction of the buildings themselves is very severe, it is comparatively nothing beside the loss of the museum. The collections contained many priceless specimens, which have been collected during three-quartens of a century. Also, Dr. Sheppard's anatomical collection, which was famous throughout America, and represented a life time's work, was entirely destroyed. 'It is a matter for congratulation that the magnificent medical library escaped the flames.

## RECENT BOOKS.

From the Macmillan Company of Canada, we have received: "The Persistent Problems of Philosophy," an intnoduced to metaphysics through the study of modern systems, by Mary Whiton Calkins, Professor of

Psychology and Philosophy in Wellesley College (price \$2.50 net): Also an "Elementary English"Composition," by T. F. Huntingdon, a book that will certainly hold its own by its many excellences, among the many good textbooks on this subject. We are glad to notice that a good deal of space is given to oral composition, and especially that the importance of practice in pronunciation is insisted upon (price 60 cents net.)
Ginn \& Co. are well known for their co-operation in the movement for the better teaching of English. Their attractive editions of English classics are a great aid to the teacher. We have received from them copies of Scott's "Quentin Durward" ( 504 pages, mailing price 60 cents). and Goldsmith's "Deserted Village," (pp. 32, mailing price 30 cents), both issued in their "Standard English Classics" series. Hudson's edition of Shakespeare's plays is too well known to nced comment here, but Ginn \& Co. are now bringing out a new and revised Hudson's Shakespeare for school use. "As you Like It," and "The Merchant of Venice," have already appeared. The introductory matter is valuable and not too diffuse, and the chronological chart is a useful addition. The notes are good and have the advantage of appearing at the foot of the page. We cari heartily recommend these little ${ }^{\dagger}$ volumes. (Mailing price 55 cents.)
The same publishers send us two laboratory guides, one on zoology, to accompany Linville \& Kelly's "Text-book in General Zoology," and the other "Exercises in Chemistry," by McPherson and Henderson, to accompany their "Elementary Study of Chemistry;" (mailing price 45 cents each). The former hand-book would be useful to the younger members of our Natural History Societies, and to the teachers whose nature study lessons include forms of animal life.
Messrs. Geo. Philip \& Son, London, publish "A Junior Course of Comparative Geography," to be used with their "Progressive Atlas." The very full sets of questions and exercises and the use of plates and pictures, are noticeable features of this attractive volume (price 2 s .6 d .)

Messrs. Geo. Philip \& Son, 32 Fleet Street, London, E. C., publish a handy volume Atlas of the World, price 3s. 6d., with very plain maps and much valuable statistical matter carefully revised to date.

## RECENT MAGAZINES.

The Delineator for May sets a great variety of reading before its subscribers, as well as the usual number of pages devoted to fashions and household matters. Two delightful serials are running in this magazine. "The Chauffeur and The Chaperon," and "Fraulein Schmidt and Mr. Anstruther," a story which qưfite sustains the reputation of the author of "Elizabeth and Her German Garden."
The Living Age can be relied upon to furnish interesting reading on the affairs of foreign nations, and on topics of the day. For instance, the issue for April 6th contains an article on "The Second Duma" and one on the situation in Germany, while that for April I3th has a most readable and informing paper on "The State Children of the House of Lords."
The University Magazine, published by the Macmillan Co., is a continuation of the McGill University Magazine;
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its main purpose is avowed to be that of expressing an educated opinion upon questions immediately concerning Canada. Accordingly, we find in the February issue, an interesting paper entitled "What will the West do with Canada," and an article on Canadian Art and Artists. All the papers are of a high order of literary merit, and the whole appearance and tone of the magazine are admirable.

## Educational Department New Brunswick.

## OFFICIAL NOTICES.

Department Examinations, 1907.
(a) The High School Entrance Examinations will begin at all Grammar and Superior Schools on Monday, June 17th.
At these examinations the Lieutenant-Governor's Medals are to be competed for, in accordance with instructions issued from the Education Office.
(b) The Normal School Closing Examinations for License will be held at the Normal School, Fredericton, and at the Grammar School buildings, Chatham and St. John, beginning on Tuesday, June IIth, at nine o'clock, a. m .
(c) The Normal School Entrance Examinations and Preliminary Examinations for Advance of Class, the High School Leaving Examinations and the University Matriculation Examinations will be held at the usual stations throughout the Province, beginning at nine o'clock, a. m., on Tuesday, July and.

Examinations for Superior School License will be held both at the June and July examinations.

For further details in regard to the Departmental Examinations, see School Manual, Regulations 3I, 32, 45 and 46.

Close of Term.
The number of Teaching Days in present Term is 121 , except in the City of Saint John, whene the number is 120 . The last teaching day of the Term is Friday, June 28th.

The First Teaching Day of next Term will be Monday, August 12th, except in Districts having eight weeks' summer vacation, in which Districts the schools, will open August 26th.

English Literature For High Schools, igo7-8.
Grade IX. Selections from Reader No. V, and Scott's Lady of the Lake.

Grade X. Macaulay's Lays of Ancient Rome. Hawthorne's Tanglewood Tales, Part I, Scott's Ivanhoe for Supplementary Reading.
Grade XI. Shakespeare's Henry V. Milton's Lycidas, Il Penseroso and L'Allegro. Dickens' Tale of Two Cities for Supplementary Reading and Essay Work.

The Literature for Grade XI will be used in examinations for Candidates for First Class, Matriculation and Leaving Examinations in 1908.

## J. R. Inch,

Chief Superintendent of Education.
Education Office,
April 25th, 1907.

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The School of Fine Arts at Yale Uni versity has several unique collections, among which the Trumbull Collection of historical paintings is of special interest to teachers. A special plan for making this and the other art collections of use to teachers has been adopted for the coming Summer School. The instructors who give the regular courses in drawing and painting are to exhibit and discuss these paintings with any of the members of the Summer School who may wish to avail themselves of the opportunity.
Dr. E. E. Brown, United States Commissioner of Education, is to deliver fivé lectures on the historical development of Connecticut education at the Yale Summer School.

Superintendents Van Sickle, Carroll, Hine, and Beede are also among the instructors and will give courses in School Administration and Methods.
A unique course in Geography is to be given in the Yale Summer School this year. Professor Gregory, who is one of the directors of the Connecticut Geological Survey, has arranged to take a class of teachere to the various parts of the States where the most typical formations are to be found, and will lecture in the field to the class. Almest every type of geographical formation will thus be examined and studied in a very practical way.


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