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MISSING

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THE EDUCATIONAL REVIEW.

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In some of our schools, savings bank have been started in the past, but of late we have not heard much about them. The plan is a good one of encouraging thrift. Pupils should be taught that it is a duty they owe to themselves, not to spend money idly and foolishly, but to learn habits of economy and saving. The practice of giving prizes of a bank-book with an amount to the credit of the prize-winner, might not be a bad plan to introduce into our schools. It is certainly a more sensible plan than the giving of medals.

THE most successful teachers that we know—successful in the wider sense of the term—are those who are alive to the life that is about them. Such teachers do not let their light shine beneath a bushel. They permit the good that they do to be known, that it may stimulate others and benefit themselves by its reflex influences. The modesty that keeps your light to yourself is another name for laziness. If your pupils are doing good work, or if you have discovered new methods in teaching, allow them to be known that others may be benefitted and your own pupils encouraged. You cannot be a living fountain of knowledge to your pupils unless you take the papers and read them. You cannot be in touch with the community in which you live unless you take the local papers.

NEWS of the death of ex-Governor Haviland, of P. E. Island, although not unexpected, was heard with sadness and regret wherever he was known. A man of large sympathies, active and generous, his life was replete with deeds, having for their object the good of his fellows. An active politician for the greater part of his life, he was always found, irrespective of party, advocating what he deemed to be the best interests of the people. From first to last he was a warm friend of a free education for every child in the land. Since his retirement from public life he continued to evince his interest in matters educational, and at the time of his death was a patron of the Summer School of Science, and of Prince Street School, Charlottetown.

We regret to have to record the death of John Balderston, Esq., Inspector of Schools for Queens County, P. E. Island. He died at his father's residence, Melville, Lot 60, on the 16th of September, after a brief illness. He was in the thirty-fourth year of his age. Previous to his appointment as school inspector, he had been a school teacher in his native province, and as such bore an excellent reputation. From the time he was appointed inspector, in 1893, he devoted all his thoughts and energies to his large and difficult inspectorate. He was a man of noble qualities and honest principle, and always secured the respect of those with whom he became acquainted. At the recent Teachers' Convention, of which he had been a valued member, the following resolution, attesting the esteem in which he was held by the members, moved by Inspector Murphy, was adopted by a standing vote:

Whereas, It has pleased Almighty God to remove by death from our midst John Balderston, Esq., Inspector of Schools for Queens, and a member of this association, we, as teachers, realize that in Inspector Balderston we have lost a good friend and counsellor, one that ever sought to raise the standard of the schools of his inspectorate. As members of this association, we regret his loss on account of the warm interest taken by him in all its meetings;

Therefore resolved, That we place on record this expression of our regard for our departed member;

Further resolved, That a copy of this resolution be forwarded to his bereaved wife and family.

Religion in the Schools.

Many clergy and a few laymen have of late been more than usually demonstrative in their denunciations of what they call godless schools. This has been going on for a long time, and were it not that an influential portion of the press has taken it up, this outcry would call for but little notice. It is creditable to the press that it has not been deceived in the matter, and almost without exception the newspapers are in harmony with the general sentiment of the people. It is somewhat astonishing to find that after so many years of railing at the absence of doctrinal teaching in the schools, that not one of its exponents has formulated any plan, let alone a feasible one, for the solution of the difficulty complained of.

It is well known to all, except those who never visit our schools, and who have never sent their children to them, and these seem to be the chief complainants, that the principle of sound Christian morality are inculcated in all our schools and that it is the teacher's privilege also to read the Bible there. It is equally well known that our teachers as a body are well qualified to give such instruction even when brought into comparison with such instructors as the clergymen themselves. The only danger of secular schools ever being established arises from these agitators for doctrinal teaching, who in their zeal to impress their own ideas of religious teaching upon them may destroy what we now enjoy. It appears somewhat like shirking a duty on the part of those clergymen, who with the aid of the Sunday school and other church influences wish notwithstanding to impose religious instruction upon the day school teacher. It is certainly a great compliment to the teachers, but implies a great want of faith on the part of the clergy in themselves, their co-workers, and their surroundings. Fortunately not by any means all the clergy voice these opinions, and most of those who do, do not voice the sentiments of their congregations. The same or similar statements will be made each year as the years go round, but doctrinal teaching will never find a place in our schools as long as they are called free schools.

Academic Education in Nova Scotia.

Not many years ago academic work in Nova Scotia was confined mainly to two or three centres. Now it is extending in all directions. Fine buildings artificially ventilated and fitted up with scientific laboratories have been built in many places. These new centres have outstripped some of the older centres, though all have increased in numbers and efficiency.

As a striking example of this advance let us trace the progress of Kentville Academy. Ten years ago it had only ten academic students. In 1886 an addition consisting of two rooms was built. The eighth grade was taken out of the academic department to form with

the seventh grade a preparatory department. Steadily the attendance increased until in '90 another grade "A" teacher had to be employed. The better pupils from the surrounding sections began to come in, thus enabling a town of only 1650 inhabitants and four common school departments to draw an academic grant of \$1,000.

As the results of the provincial examinations always showed to the advantage of the school the attendance kept on increasing. The academy received fresh impetus from the recent changes in the school law and in the course of study. To meet the requirements of the new course of study a large and well equipped laboratory was indispensable. In the summer of 1894 another addition was therefore built consisting of four rooms, two of which were finished, one for a laboratory, the other for a class room. An adjoining field containing about five acres was purchased for the benefit of the school. During the year, the number enrolled reaching 103, the attendance was inconveniently large for two teachers. Last July the spare room had to be furnished and an additional grade "A" teacher was secured for the current school year. The increase in the teaching staff made it possible to have an "A" class.

The number enrolled in the academic department has already reached 100. Of these 18 are in the "A" class, 15 in the "B," 30 in the "C," and 37 in the "D." Quite a number are expected to join the "B" class when the second quarter begins. The number of students taking the optional subjects are as follows: Latin, 96; Greek, 17; French, 70; German, 32. The probabilities are that the \$1,500 academic grant will be secured for this year.

Other equally striking examples of the advance in high school education might be given from sections in which there is not even the stimulus of a special grant. It will be noticed in the case given above that 96 out of 100 students are taking Latin, though it is an optional subject.

Drawing and Book-Keeping.

The results of the recent provincial examinations in Nova Scotia demonstrates that drawing and book-keeping are still neglected, or badly taught in the majority of the high schools of the province. The average number of marks obtained on these subjects was probably only about 30 out of a possible 100. Perhaps not more than 10 per cent of the candidates showed any ability to plot simple triangles. This is surprising when the simplicity and utility of these accomplishments are considered. It is by the drawing of angles, triangles and other figures to scale that the child's first definite ideas of geometry are obtained and his interest secured. Every pupil in the eighth grade should be perfectly familiar with the use of the compass and protractor— instruments which may be made by the pupils or purchased for a few cents.

Freehand drawing is still more important — for not only is the hand trained, but the judgment is strengthened and the taste improved. As a mode of expression it is accurate and economical. Seeing that this study is begun in the lowest grade and continued throughout, some pretty good work should be expected in Grades IX and X. Every pupil should be able to give correctly the outlines of a few familiar objects, a few plants and a few common animals. He should be able to see the few important lines which give to every object its character, and should be able to distinguish them from the unimportant ones.

Book keeping, as an educational subject, is not so important, but it is deserving of more attention than is usually given to it — more particularly as it is one of those subjects which lend themselves largely to incidental teaching. Penmanship, spelling, arithmetic and neatness may all be taught under the name of book-keeping. Practice in book-keeping should be kept up until the pupil acquires the habit of keeping accounts without feeling it to be a drudgery. If this were done the formation of extravagant habits would be checked and honesty and thrift encouraged.

There are no subjects in the curriculum which, for the same expenditure of labor, would yield so many points at an examination as the subjects which we have named, and this is one reason among better ones for giving them more attention in the future.

A Subject for a Lesson on Patriotism.

If you would teach your pupils to love their country, do not forget to make them familiar with the names of those of their countrymen who have been most distinguished. Associate such names with some college. Take, for example, Acadia College at Wolfville, which is neither the largest nor the oldest of the Maritime colleges. Yet it can boast of a surprising number of great men in the higher walks of life.

President Schurman, of Cornell University, is the most distinguished of eight college presidents who have graduated from Acadia. Prominent among others who were educated there are Dr. Elder, of Colby; Dr. Rand, of McMaster; Hon. J. W. Longley, Attorney-General of Nova Scotia; Prof. DeMille, Dr. Silas T. Rand, Prof. Hart and Sir Chas. Tupper. Many others might be mentioned, but some knowledge of the life-work of even these would greatly inspire our pupils with a love of learning and of country.

The other colleges would supply other great names for subsequent lessons. The study of Canadian history would be made more interesting and light would be thrown on many other subjects.

Uses of Object Lessons.

The first and most important is to teach the children to observe, compare and contrast; the second is to impart information; and the third is to re-enforce the other two by making the results of them the basis for instruction in language, drawing, number, modeling, and other handiwork. There are, however, other important uses of good object teaching. It makes the lives of children more happy and interesting by opening up an easily accessible and attractive field for the exercise of the brain, hand and eye; it gives the children an opportunity of learning the simplest natural facts; and directs their attention to external objects, making them less bookish. It further develops a love of nature and an interest in living things, and corrects the tendency which exists in many children to destructiveness and thoughtless unkindness to animals, and shows the ignorance and cruelty of such conduct. The value of the services which many animals render to man should be dwelt upon, and the importance of kindly treating them should be pointed out. By these means, and in other ways, good object-teaching may lay the foundation for the right direction of the activity and intelligence of the children throughout the whole school.

TALKS WITH TEACHERS.

It has recently been my privilege to attend the teachers' institute held in St. John, and what I saw and heard there being uppermost in my thoughts, I will confine my "talks" this time upon that subject.

I must first remark upon the earnestness, attention and punctuality of the teachers, almost without exception. Anyone who had doubts of the success of the institute on account of the counter-attraction — the exhibition — must have had them fully dispelled. While I have attended many institutes before, and some of them very good ones, I think the last one the best. I have been asking myself the reasons for this superiority, and rightly or wrongly have concluded that it is due — (1) To the character of the programme; (2) To the faithfulness and ability of those who had in hand the execution of the programme; (3) To the promptitude and executive force of the president and committee.

Teachers were interested because the work brought before them was the work they have to do every day, and that this was well done made it all the more attractive. All the teachers who listened to the practical lessons given will go away with very exalted ideas of at least a part of the St. John teaching staff. The lessons were not "cut and dried," but the pupils came before the teach-

ers entirely without rehearsal of any kind, and Mr. Brittain was placed upon the same footing as the other teachers. That the teachers themselves had carefully prepared their work was evident, and it was equally evident that the lesson when given was effective. Few who have never done so can appreciate properly the effort it is for a teacher to come before a large body of his co-workers. It is not the amount of work to be done, but it is the dread of failure and sensitiveness to criticism that hangs like a nightmare over many until the lesson has been given or the paper read. It is certainly a distinction to teach a successful lesson, and all good and conscientious teachers should regard it as a duty to "let their light shine," but it often seems as if we were not properly appreciative of such efforts. This, I think, is not the case, for as a body we are not demonstrative.

Fault has been found with teachers, and with reason, for coming in late and going out early; but officers who prolonged the sessions, and this has happened quite as frequently, have usually escaped censure. An admirable feature of this institute was the promptitude with which the hours were adhered to. Teachers knew exactly when the sessions would end and made arrangements accordingly, nor was any one disturbed because they departed before adjournment.

Now what were the tangible results of the meeting, aside from the excellent papers and lessons? I inferred from the three excellent papers read on the subject that moral teaching was far from a dead letter in our schools, and I noticed a disposition on the part of the teachers to strike back at those who assert that the schools are lacking in this respect. So, possibly, the accusation may be a blessing in disguise. I inferred that word-building and the knowledge of words have not been lost sight of in teaching the first steps in reading in all of our schools, as I fear they have in a few of them. I think a strong impetus was given to the teaching of geography without a slavish adherence to the text-book. I think I noticed that vertical writing has come to stay, and that many of our teachers have already adopted that system. I believe that more natural history teaching will be given with the use of specimens and apparatus, and possibly some missionary work may be done in the rural districts along those lines. I noticed the first united institute was a decided success. What about others of a similar kind?

It is reported that the great Catholic university at Washington has adopted co-education, and that hereafter women will be admitted to all the classes but they will not receive degrees. The object is to furnish a supply of highly educated women able to keep the convent schools up to the highest point of efficiency.

Memorizing.

For the sake of increasing the pupil's vocabulary, of storing his mind with choice English idioms, but more especially for its moral effects, every teacher should see to it that good selections from the best authors are committed to memory by all his pupils. "A fine quotation is a diamond on the finger of a man of wit." "Aphorisms are portable wisdom."

We know a teacher whose pupils select, according to their various tastes, choice passages and recite them regularly once a week. Each pupil's stock of condensed wisdom thus gained in the course of the year is very considerable. We have had very much pleasure in listening to the children from time to time go through with their exercise. It seemed greatly to increase their power of expression. As nearly all the pupils select different passages, each pupil, from hearing the others recite, becomes more or less familiar with a very great deal of the best thought in our language. When meeting these quotations in their reading they seem as pleased as if they met old friends. The strengthening of the memory is another very great advantage. Systematic practice of this kind produces remarkable facility.

We give a few suitable selections.

It is better to receive than to do an injury. — *Cicero.*

Act well your part; there all the honor lies. — *Pope.*

A fool and his money are soon parted. — *Proverb.*

Help yourself and heaven will help you. — *French Pr.*

All healthy things are sweet tempered. — *Emerson.*

A man in the right, with God on his side, is in the majority though he be alone. — *Am. Pr.*

An honest man is the noblest work of God. — *Pope.*

A royal heart is often hid under a tattered coat. — *Dan. Pr.*

A straight line is the shortest in morals as well as in geometry. — *Rabel.*

A thing of beauty is a joy forever;

Its loveliness increases;

It will never pass into nothingness. — *Keats.*

A true genius may be known by this sign, that the dunces are all in confederacy against him. — *Swift.*

A word and a stone let go cannot be recalled. — *Pr.*

A young man idle; an old man needy. — *It. Pr.*

Beauty when unadorned, adorned the most.

— *Thompson.*

Behind a frowning providence

God hides a shining face. — *Corper.*

Books, like friends, should be few and well chosen.

But pleasures are like poppies spread,

You seize the flower, its bloom is shed,

Or like the snowfall on the river,

A moment white then melts forever. — *Burns.*

Calumnies are sparks which if you do not blow them will go out of themselves. — *Boorhoove.*

Actum ne Agas.

We fear that there is an unwise neglect of this valuable precept of the learned Cicero: "What has been done, don't do over again." After a pupil has read his book through once, it is largely a waste of time for him to go over it again for the sake of accuracy. When going through it the first time, his interest should be so aroused and the work should be so well done that he has a fair knowledge of it. It is only the exceptional teacher who can for the second time arouse that interest that should go with every subject studied.

Recently an inspector remarked to one of his best teachers: "I suppose you are reviewing the third book of Euclid which your pupils read before holidays?" "No," he replied, "my pupils do their work fairly well as they proceed. We are now well advanced in the fourth book. What my pupils lack of their past work is taught incidentally. Steady progress, ever onward, is the secret of fresh living interest." This teacher's pupils find their keenest interest in that schoolroom. When a pupil has read his third or fourth book, or even his primer, his review should consist in reading the third or fourth book, or primer, of another series, with entirely different selections. This principle does not, of course, conflict with the memorizing of choice selections, paradigms, or tables.

The true education does not deal so much in the results of scientific discovery as in its methods. These methods are: first, the observation of objects, by which facts are obtained, and the observing powers cultivated; second, the expression of these facts in oral and written language, by which process the facts become clearly defined and permanently retained; third, the observation of relations, by which comparison and generalizations are made, and general principles reached; and fourth, the application of these principles, by which the more subtle relations are discovered and the reasoning powers are fully developed.—*G. L. Farnham.*

The phonic analysis of words should have no place in the primary schools. Until the habits of thought, reading and correct spelling are well established, such analysis is a positive evil. It makes the child conscious of the oral elements of words, and, as these do not correspond with the written elements, a double evil ensues; the mind has become directly conscious of language which it uses unconsciously, or nearly so; and it introduces a new set of elements antagonistic to the ones used in the graphic expression.—*G. L. Farnham.*

NATURE LESSONS.**FUNGI—II.***Agaricus Coldwelli.*

(A white-spored Agaric found growing on a whale's bone, in the museum of Acadia College.)

T. Now let us look through our collection of *Fungi* in order. Where shall we begin?

S. With the "Gill-caps."

T. And, pray, what is a "gill-cap," according to your way of looking at it?

S. The top of the stalk spreads out like a cap generally, and beneath there are "gills," or leaves, crowded all over, forming a very large surface, if it were all spread out in one sheet, on which the spores or dust seed of the fungus grow in millions before they fall to the ground or are carried away in the wind.

T. Very good. The botanists call that great tribe the AGARICINI. An English name made from this long word is "Agaric." If you like you can call them the "agarics." But your own name, "gill-cap," is just as good science as the Latin or English name, if you only know what an Agaric is. And what makes any fungus an "agaric," or one of the AGARICINI, is simply that the thin spore-growing sheet is spread over numerous folds-like leaves, or "gills," as you call them, so that there may be a great, extended surface for the spores to grow from.

Now we have had these caps with their "gills" downward on white paper, so that we might see if their spores, which are most beautiful objects under a powerful microscope, if we had one to look through, are all of the same color. If they are of different colors, we can sub divide all the gill-caps into as many different kinds as there are colors.

S. Yes, there are lots of different colors when you lift the caps from off the paper.

T. Well, let us begin with the white and take the colors in some sort of order, ending with the darkest.

S. 1, White-spored; 2, rosy-spored; 3, brown-spored; 4, purple-spored; and 5, black-spored.

T. Well, here we have a few of the white-spored agarics. Here is the large yellow-skinned, wart-covered

toadstool called the "Fly Amanita." It is a deadly poisonous one, referred to in our previous lesson as being used to poison flies.

Then here again is the beautiful orange *Cantharellus*, with its cap curled up so as to make it funnel shaped. The gills are thick, rounded and small, not like leaves at all. But although every part of the plant is so perfectly orange, the spores are pure white. A species of this genus is considered to be one of the most delicious of all the edible fungi in England, and probably this species is also. But we must be very careful in testing them, unless we are very well up in the knowledge of the subject.

Then here again is a species of *Lactarius*, so called, because when you cut or break one of the gills a small drop of a milk-like fluid oozes out. "Lac" is Latin for milk. Some of this genus is good for eating, but others are poisonous. The milky juice of some of them taste as hot as cayenne pepper nearly.

And we have still here some which are quite firm and leathery, and instead of capping a stem, some of them grow out of the side of an old limb or trunk like a small stout fan, some with the gills toothed, others with the gills split, and still others with the gills running into each other. These corky, white-spored agarics are very easily preserved, and shrink very little in drying, and make very pretty specimens. Some like *Lenzites*, zoned with beautiful tawny serfircles, and some with zones of many colors.

S. We have not many specimens of the rosy or salmon colored spored gill-caps?

T. But we have quite a number of the brown spored. These violet-tinged white-caps and stems belong to the genus *Cortinarius*.

S. The proper Mushroom belongs to the purple-spored.

T. Yes. The botanists call the common or proper mushroom, *Agaricus campestris*; and its next relative, the Horse Mushroom, is called *Agaricus arvensis*. They are both good species of mushroom for eating. But there are a great many more purple-spored fungi which are of no use for food.

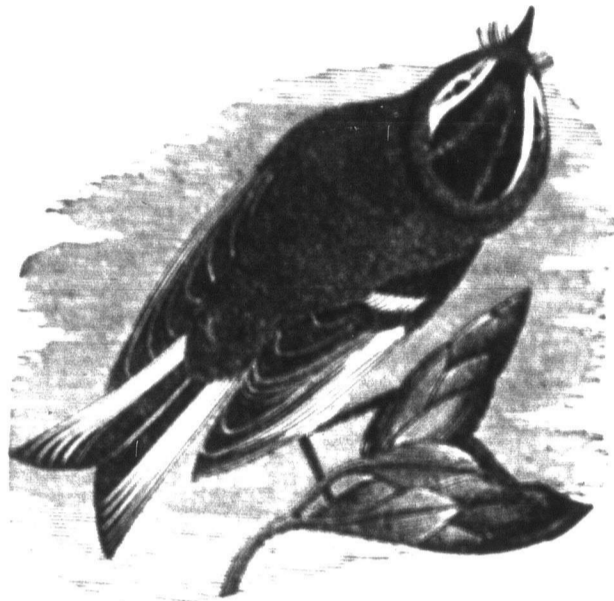
S. See! This toadstool has dissolved into ink, nearly altogether.

T. Quite true. That is a *Coprinus*, one of the black-spored gill-caps. All the genera of this group do not dissolve so readily as the *Coprinus*. And this one which dissolves so rapidly into this black slime is probably the species which in other countries is used as food when it is quite fresh and crisp.

But we have taken so long a time that we must leave the "Spore-Caps" for another lesson, as well as all the other curious kinds.

For the REVIEW

The Golden-Crowned Kinglet.



REGULUS SATRAPA (About four inches in length.)

He comes in his coat of olive green,
With wings and tail of a darker sheen.
O'er his white browed eye, with black is set
A gold and orange coronet.
For he, you know, is a little king,
The golden crowned satrap of the spring.

With the Brown Creeper, Nuthatch, the Chickadee, and some of the warblers, the Golden-Crowned Kinglet visits us in spring; and it is an active and interesting little insect-eater in our orchards. It is very small, as will be seen from the dimensions given above, being even smaller than the Chickadee, only about four inches. His color is described above with the exception of the under parts which are whitish. The centre of the crown is a bright reddish orange, bordered by yellow and then by black which is bounded by the whitish line running over the eye. When fluttering in the air it has often been seen opening and shutting the orange and yellow feathers of its crown very dexterously, thus making their bright color very conspicuous. The female has only yellow without the orange in the centre of its crown. Its common call, *tee-tee*, is very high-pitched so as not to be heard by some people easily. It is said to nest generally in coniferous trees some height from the ground. Eggs, nine or ten, from muddy cream to whitish, blotched with pale wood brown or even lavender. Average diameter, half an inch.

The Ruby-Crowned Kinglet (*Regulus calendula*) is a very much rarer bird in these provinces. It is distinguished from the last by a partly concealed crest of bright red on the crown, and no black about the head.

These two species are our only representatives of the family *Sylviidae*, sometimes called the Old World Warblers, which includes (chiefly on the other side of the Atlantic) nearly six hundred different species, among which is the celebrated European Nightingale.

In a "June Ramble," on page sixty seven of the last (September) issue, a few names have been misspelled by the printer, namely, *Turdus aonalaschka* and *Zonotrichia albicollis*. The most common full song of the latter, the White-Throated Sparrow, should be given thus:

S: | T: | 1:1:1 | 1:1:1 | 1:1:1 |
 "Oh my Canada, Canada, Canada."

When the song is not full it often takes the form,

S: | T:—:— | 1: |

The modifications are pretty numerous, yet the quality of the notes are such that if only two of them are sung their origin is instantly and unmistakably identified. The cadence of even a single note may be enough.

For the REVIEW.]

Clouds—I.

TEACHER. Well, there were very fine clouds yesterday. Let me see what you have observed about them on your way home from school, as you had agreed to study them. Was the sky very blue to you all—to those who went down the brook as well as those who went over the hills?

CHORUS. Yes, quite blue.

T. Now what did you think the clouds were like? You?

S. They were in great big heaps, rolling one after another very slowly over the sky.

T. Very good. They were just "heap" clouds. They have been called that already for nearly one hundred years by people who study the weather, only they give it the Latin name, *cumulus*, which means a "heap" or "pile."

S. O yes! They were piled up in great heaps over the mountain, just enough to make one afraid.

S. But there were many very pretty ones, small ones, white and fleecy, for all the world like fairy sheep grazing on a great blue meadow.

S. I saw one on the horizon rise up like a great mountain with fearful precipices; and the sun touched its margin with white and gold. The gold graded into a fiery smoke, and this again into black. Domes and towers arose until it became a giant castle in the air, and then an awful roll of the blackest smoke burst forth. But this soon became gilded with gold and the castle changed into a sunlit range of mountains.

S. And I saw lightning flashes from them in the evening.

S. I think I heard thunder, too.

S. Very well. I am glad you are watching so closely. These "cumulus" or "heap" clouds take on themselves most interesting forms.

S. I saw one like a lion and it gradually changed into a pig.

S. Don't we sometimes have thunder storms from such clouds? I think I remember of seeing just such great clouds before thunder and lightning?

T. Quite right. Very likely the electric charge of such clouds has something to do with their rounded and curious forms. But you have also noticed that they moved very slowly. Now why do you think they should?

S. I don't know.

T. If were to get three boys who can run with the same speed, to run around the school-house, one quite near it, the other twenty yards off, and the other half a mile off, which of them would appear to pass across the window most rapidly?

S. The nearest would appear to pass most rapidly, and the most distant would seem to move very slowly across.

T. Well, might it not be the same with the clouds?

S. Yes. But are the "heap" clouds very much further off than other clouds?

T. Those who have learned to measure the height of the clouds tell us that they may be sometimes several miles high, while the low "sheet" cloud that is so very common is generally not over two-thirds of a mile high.

S. Oh, yes. Sheet clouds are those that spread over us in a great sheet, so that you cannot tell one part from another.

T. Right. The Latin name is "stratus," which means a layer, or a sheet. And the people who study the weather speak of such clouds as the *stratus* cloud. You see that Latin names are all more easily pronounced than English names sometimes are. They are pronounced as they are spelled.

S. They are then spelled as they are pronounced, I suppose.

T. Yes. I suppose you are glad of that. But I may as well give you the name of another kind of cloud which you have noticed, and which you must now be on the watch for. This is the highest kind of cloud. In summer time it may be even higher than five miles from the earth. It is like fine tufts of hair, and is so far distant that it appears scarcely to move at all. Have you seen it?

S. I think I have often. It is a thin, gauzy, wispy, feathery cloud.

T. Correct. You may call it the "feather" cloud; and its Latin name is *cirrus*. Now you have got the three different kinds of clouds which have been named about the beginning of this century. And they are yet the three principal kinds, although there are variations which we shall some day consider. Now give me the

names of the three principal varieties of clouds, beginning with the highest.

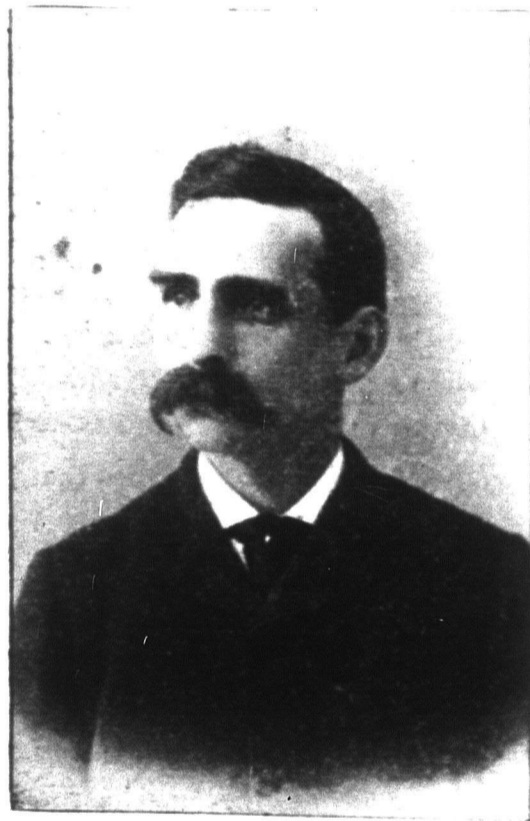
CHORTS. "Feather," "heap" and "sheet" clouds.

T. Perhaps you can give the Latin or scientific names, which it may not be wrong to know, as they are so easy.

CHORTS. "Cirrus," "cumulus" and "stratus."

T. Very well. When you are coming to school and going home you may have a good time making out these three forms of clouds. I will examine you on them next lesson. After which we shall notice other varieties and then study the causes of clouds and their different forms.

Sketch of Principal Mullin.



We present our readers with an excellent likeness with sketch of Principal Mullin, of the N. B. Normal School. Mr. Mullin was born at Gagetown, Queens Co., in December, 1849. He comes from an educational stock, his father and grandfather being teachers. His education, begun in Prince William, York County, was continued at Fredericton, Jemseg, and the Grammar school, Gagetown, then under the principalship of J. J. Milledge, Esq., a thorough classical scholar and a dignified and courteous gentleman. Mr. Mullin matriculated with the University of New Brunswick in September, 1864, winning the Queens County scholarship with strong competition. He attended lectures for two years, winning distinction in classics, English and history. Dr. Parkin, Principal of Upper Canada College, was a classmate. He left college in 1866 and attended the Normal school in St. John, then under the principalship of Mr. Wm. Mills. He taught for several years in

Queens, Kings and Westmorland Counties. After teaching the Havelock Superior school for five years, he passed a successful examination for grammar school license. In 1879 he was appointed inspector of schools for District No. 7, embracing York County and three parishes in Carleton County. In 1881 he completed his undergraduate course at the university without attending lectures, graduating sixth in a class of seven-teen, among whom were Bliss Carman, Inspectors H. V. B. Bridges and W. S. Carter. At the close of the year Prof. Fletcher (now of University College, Toronto,) wrote the following unsolicited statement: "Mr. Mullin was prevented by his professional duties from attending the lectures of the senior year, but, notwithstanding, at the examinations on the work of the classical lectures, he invariably took first rank either in Latin or Greek. In the first examination he led in Greek, in the second in Latin, and in the third was first in Greek and second in Latin."

Mr. Mullin was appointed provincial examiner for license in the subjects of language and literature to succeed Prof. Fletcher. On the resignation of Dr. Rand, Chief Superintendent of Education, in November, 1883, and Principal Crockett's elevation to that position, Mr. Mullin was appointed principal of the Normal school, and entered upon his duties November 23rd, 1883. In 1884 he took his M. A. in course, and is now preparing to take his examination for Ph. D.

Mr. Mullin represented New Brunswick as educational commissioner at the Indian and Colonial exhibition in 1886, and wrote a report on the educational exhibits there. He has acted as examiner for the Board of School Trustees for the city of Fredericton since 1883, thus keeping in close touch with the work of the public schools. He took an active interest in and was the chief promoter of the Interprovincial Institute held in St. John in 1887. He has served on the Council of the Associated Alumni of the University of New Brunswick almost uninterruptedly since graduation, and is a vice-president of the society. He was selected to deliver the alumni oration in May, 1895.

In the course of an active professional career, Mr. Mullin has been brought into intimate relations with every phase of educational work. He is a ready and vigorous writer, a skilful debater, and is thoroughly in sympathy with our common schools. He has devoted himself unreservedly during the past twelve years in building up the external and internal equipment of the Normal and Model schools, and has been unsparing in his efforts to maintain and increase their usefulness. He is a firm believer in the soundness of the theories on which our educational system is based, and while he recognizes deficiencies in its practical working he ever maintains a hopeful view of its possibilities and is tireless in devoting his energies and abilities to the task of realizing its ideals.

For the REVIEW.]

Dr. J. G. Fitch on Education and the State.

The July number of the *Contemporary* contains Dr. J. G. Fitch's presidential address before the annual congress of the Teachers' Guild. Its subject is "Education and the State." It is of more than local interest. After an interesting sketch of the history of the part which the State has played in the education of the English people, Dr. Fitch considers the question: "What, having regard to the idiosyncrasy and genius, the past history and traditions of our people, and the composite structure of our social life, is the form in which corporate and imperial influences may wisely be made available in England for the better organization of public instruction." His remarks upon the answer to this question are applicable not merely to England, but to English speaking communities. The French system of public instruction, with its systematically graded schools, its logically ordered courses of instruction, its officials, teachers, inspectors, appointed, removable, and paid directly or indirectly by the State—in a word, its entire system ordered and controlled from a central bureau—is in many respects to be admired, and is suited to the soil of France. Englishmen, however, though "they recognize that logical completeness is a good thing, have convinced themselves that there are better things still, and that freedom, variety and enthusiasm are worth purchasing at the expense of symmetry."

"One cannot look forward with any enthusiasm to a time when law shall formulate the work of every school, or lay down programmes of primary, secondary and higher education, which shall be applicable to all places and all local circumstances alike."

"Nor can we hope much from any attempt on the part of the central authority to decide what books shall be used in all institutions recognized as public schools."

That book is best for each teacher from which he can teach most effectively, which corresponds to his ideal and fits the special character of his own lessons. To force upon all teachers alike the use even of a good book would be to repress originality, to stereotype mere routine, and to deprive the best teachers of much of their interest in their work."

"Let us grant that it is the first business of a university to produce cultivated and well-trained men; there is also a secondary object to be fulfilled, the ennobling of the higher professions, the establishment of right relations between the liberal and formative studies proper to a seat of learning, and the claims of active, professional life. What we need is another faculty, that of didactics or of education. Considering

how large and increasing a number of undergraduates look forward to the teaching profession, it is not too much to hope that ere long all the universities of the United Kingdom will recognize the business of teaching as one of the learned professions, on the same footing as law, divinity and medicine, and will make such public provision for the future practitioners as may justify the State in confiding to those great corporations a large share of duty in the organizing of a completer system of public instruction."

"On the very practical question of the relative merits of inspection and examination as alternative methods of estimating a school, the last word has not yet been spoken. . . . The object of examination is to test the proficiency of the scholars and the thoroughness of the teaching. The object of inspection is to observe and criticise methods and organization, and to see that a given programme is carried out. Now the first duty requires for its fulfilment knowledge, accuracy, skill in questioning, and perfect fairness of judgment. But inspection requires higher qualifications—insight, tact, sympathy, a full knowledge of many methods, perfect freedom from "fads" and prejudices, and a determination not to be misled in a final estimate by superficial impressions. These qualities are much rarer than the others, and, taking the average of human instruments, you are in far greater danger of an unsound or inequitable judgment from a general inspection than from a detailed examination. Inspection implies a criticism of methods; examination seeks only to ascertain the progress of the scholars. . . . Probably it is rather by a wise combination of both processes than by exclusive reliance on either, that an equitable and efficient test of school work can best be secured." M.

For the REVIEW.]

The Teacher.

[By Henry Harvey Stuart, Principal of the Benton, Carleton County, Graded School.]

The school-teacher occupies a most exalted position in society. The importance of his office is scarcely second to that of the parent and religious adviser. Between the ages of four and six the majority of the country's children come to him to be educated. The parent resigns, for about thirty hours a week, all control of his children to the teacher. Coming to him at that tender age, when their wills have scarcely begun to develop, a vast responsibility is thrown upon the teacher's shoulders. He has the moulding of the characters of the rising generation of men and women in his hands. How glorious a task to attempt the development of their minds and bodies in the right direction! How infamous for a teacher, intentionally or otherwise, to divert those young minds from the path of honor and

duty! How careful he should be that he sets an example, at all times and in all places, worthy of his pupils' imitating!

Young children are very imitative, but they incline more to the cultivation of evil habits than of good ones. The evil seems to be a part of their nature, and can only be subdued or checked by the most painstaking and patient perseverance on the part of the teacher. Still, if the latter embodies in his own person those virtues and qualities necessary to a successful instructor of youth, his pupils will soon begin to fall in line with his example. If the teacher be pleasant, kind and courteous to his pupils, he will have a mighty influence over their manners and habits, for every child is susceptible to kindness and reasonable treatment. If the teacher shows himself interested in the pupils' work, they will be encouraged to proceed. If he sympathizes with them in their petty troubles and trials, and supports them in every laudable ambition, he will, slowly, perhaps, but none the less surely, win the way to their hearts. And once entrenched in their affections, he has acquired the power of moulding their lives in any direction he chooses. Of course, heredity, home influence and the child's surroundings outside of school may, in many cases, partially defeat the teacher's aim.

The greater part of the misery and evil in the world is due to ignorance. If education (physical, intellectual and moral) were compulsory and universal, the world, in a generation or two, would be revolutionized. If every child were thoroughly taught the interdependence of mind and body, and led to see that every time he broke a physical law he injured and weakened his mind, and that he decreased the power of his body every time he erred mentally, that child would not be apt to grow up very careless about matters of right and wrong. A child on whose mind the teacher has impressed a thorough knowledge of the evil influences of alcohol and narcotics is pretty sure to grow up temperate.

And so with other branches of learning. All are useful to fit the pupil for a happy and successful life. If a pupil is brought to know a thing to be true, he will put that truth into practice. The difficulty lies in getting him to perceive the truth. In order that any subject may be properly taught, the teacher must strive to make his instruction *interesting*. If possible, every subject should be presented *objectively*—at least in its early and middle stages. When the reason is somewhat developed, objective illustration may be gradually dispensed with. But nothing can be taught unless the pupil's attention is secured. To get hold of that the teacher must be able to put his instruction in as interesting form as possible, and he must have those personal qualities that win their way to the children's affection and respect. Education cannot be given by force. Self-control and unlimited patience are the prime requisites for teaching.

Teachers' Associations.

This is the season of teachers' associations. Many of the County Institutes of New Brunswick have been held. The Provincial Association of Nova Scotia, the attractive programme for which will be found in another column, meets October 16th. We are able to give but a brief outline of the meetings of those already held.

KINGS COUNTY, N. B., INSTITUTE.

About seventy teachers attended the tenth annual meeting of the Kings County Teachers' Institute, which was held at Sussex on Thursday and Friday, September 14th and 15th, 1896. The president, Miss Beatrice E. Dukes of Hampton, occupied the chair. The sessions were held in the Kings County Grammar School. The officers elected for the ensuing year were: President, Mr. Amasa Ryder; Vice-president, Miss Georgia Ricker; Secretary, Charles H. Perry; Miss Nellie Ryan and S. L. T. McKnight, additional members of Executive.

At the morning session Miss C. E. Blanche, of Sussex, read a thoughtful and well arranged paper on "Oral Composition." An interesting discussion followed, which was participated in by the President and Messrs. Hanson, Daye, Biggar, McKnight, Steeves, Perry, Ryder and Chapman.

At the afternoon session of Thursday the Institute divided into sections. In the Superior School section an excellent paper on "Latin" was given by Mr. S. J. Richie, while to another section of the Institute Miss Emma Robertson read a capital paper on "Kindergarten Methods," and Miss Phoebe Robertson followed with a splendid one on "Time tables in Miscellaneous Schools."

A public meeting was held at Oddfellows' Hall on Thursday evening. Stipendiary Magistrate G. H. Wallace, Esq., filled the chair very acceptably, and an interesting programme was carried out, consisting of vocal and instrumental music, and addresses by the Chairman, clergymen of Sussex, Inspector Steeves and G. U. Hay, of St. John.

On Friday morning the teachers, under the leadership of Mr. W. N. Gould, visited the manganese mines at Markhamville. It was one of the finest of September days, and proved most interesting and instructive to the excursionists.

At the afternoon session of Friday an admirable paper was read on "Physical Exercises and Music," by Miss Wetmore, and was spoken to by President Ryder and the retiring President, Miss Beatrice E. Duke, R. D. Hanson, Miss Wetmore, S. L. T. McKnight, C. D. Strong, L. E. Blanche, H. Snider.

Hampton was appointed as the next place of meeting, on the second Thursday and Friday in September, 1896.

ALBERT COUNTY TEACHERS' INSTITUTE.

The eighteenth session of the Albert County Teachers' Institute met at Dawson Settlement on Thursday and Friday, September 19th and 20th, President A. C. M. Lawson in the chair. Fifty-two teachers enrolled themselves members of the Institute, the largest number in the history of the county. The number is very large when it is remembered that there are only about sixty schools in operation this term.

Miss Eva Welling, of Pleasant Vale, gave a very excellent lesson on "Botany" to Grade III, ungraded course. A. D. Jonah, of Point Wolfe, opened the discussion, outlining how the subject of botany should be taught, and warning teachers of the utter futility of attempting to teach it without the specimens. The lesson and subject of botany was further commented on by W. M. Burns, Prof. Rhodes, Rev. I. B. Colwell, W. W. P. Starratt, Jerome Dawson, Misses Coates, Bray, Daly and Minnie Colpitts.

The afternoon of Thursday was spent very enjoyably in a natural history trip to the old manganese mines under the leadership of Messrs. N. W. Brown and President Lawson.

At the evening session Miss Martha Bray, principal of the Surrey school, read a carefully prepared paper on "Home Lessons;" Mr. Harry Burns, one on "Rewards and Punishments," and Mr. A. C. M. Lawson, one on the "Co-operation of Parents." An interesting and profitable discussion followed the reading of these papers.

At the Friday sessions papers and addresses were given on "Primary Work," by Miss Jane Moore; on "Botany," by A. D. Jonah; on the "Course of Instruction," and on "Prime and Composite Numbers," by Wm. M. Burns; on "Patriotism," by J. G. Dawson. The subjects, with a discussion on "Compulsory Education," which was strongly approved of, made a very complete and excellent educational bill of fare.

The discussions were freely participated in, not only by members of the Institute, but by Inspector Steeves, G. S. Oulton, Science Master of the Moncton schools, and C. R. Palmer, Secretary of the Moncton School Board. These gentlemen, with Hon. H. R. Emmerson and N. W. Brown, B. A., addressed a large and enthusiastic public meeting on Friday evening.

Election of officers resulted as follows: President, A. C. M. Lawson; Vice-president, Miss Mary Daly; Secretary-treasurer, J. G. Dawson. A. D. Jonah and Minnie W. Coates were appointed additional members of the Executive. The next session of the Institute will be held at Hopewell Hill on the first Thursday and Friday in October, 1896.

VICTORIA COUNTY TEACHERS' INSTITUTE.

The Victoria County Teachers' Institute met at Andover, September 19th and 20th. The meeting was opened by the President. Twenty-four members were enrolled, more than double the number present last year. Inspector Meagher was unanimously chosen President; Mrs. Kelly was appointed Vice-president; C. H. Elliott, Secretary; Mr. Rogers and Miss Barker additional members of the Committee of Management.

The Inspector made some very appropriate remarks on the duties of teachers in preparing themselves for their work. He recommended to teachers subscription to some educational paper, such as the EDUCATIONAL REVIEW, or *Teachers' Institute*. Libraries should be found in all schools. Flags for schools are also recommended.

A paper on "Composition, with Special Attention to Letter Writing," was read by Miss Fletcher. Beginners find difficulty in dividing a letter into suitable paragraphs, and in the use of proper stops. *Æsop's Fables* are useful as subjects for composition in the lower standards. In the discussion Mr. Rogers mentioned that it was the custom of inspectors in England to appoint topics found in the morning newspapers as subjects for composition in the higher standards. The President observed that naturalness should be cultivated. Get the pupil to describe things exactly as they occur. Much time should not be put on the consideration of stops beyond the comma and period, except the stops at the beginning and end of a letter. The correction of exercises is of great importance. The practice of using paper instead of slates is a good one.

At the afternoon session a very instructive paper on "Geography of Current Topics" was read by Mr. Rogers. Text-books should not be too rigidly adhered to by teachers. Rapid transit is the feature of the present time. The writer drew attention to the great public works of recent times, such as the great Russian railway, the Baltic canal, Panama canal, Suez, etc. Montreal owes its present trade to the deepening of the channel of the St. Lawrence as far up as the city. The life of the dominion depends in great measure on her water-ways. A general discussion followed, during which the plan of keeping good newspapers on file in the school was mentioned and approved of. Mr. H. C. Henderson remarked on the familiarity of pupils generally with past history and geography but comparative ignorance of modern occurrences.

Miss Barker gave a very well written paper on "Reading." Bringing out all the thought of a passage at once should not be attempted. Consider each sentence separately. A taste for good reading should be

cultivated in the pupils. A spirited discussion ensued. Many of the difficulties experienced in teaching reading to the lower grades were mentioned and talked over. The plan generally followed is to consider the sentence as a whole, and then drill the pupils on each word separately until they are able to distinguish them. After the close of the discussion the meeting was addressed briefly by Mr. Lawson, Rev. Mr. Archibald, of Andover, and Rev. Mr. Archibald, of Tobique.

At Friday morning's session it was resolved that the next session of the Institute be held at Grand Falls, if a suitable hall can be found in which to hold the public meeting; and if a hall cannot be found, the place of meeting be left for the Committee of Management to decide.

A paper on "Geometry" was read by C. H. Elliott. In the propositions vary the figure as much as possible, and use numbers instead of letters. Exercises are of great benefit, and an effort should be made to get the pupils interested in solving them. In the discussion, Mr. White observed that teachers of the fifth and sixth standards might do much to help the teachers of the higher grades by having the pupils learn the simpler definitions, postulates, etc. The President recommended drilling the pupils in naming lines and angles before taking up proportions. He also touched on the analytical method of solving exercises, which he exemplified.

Mrs. Kelly next read a paper on "Singing." In school we need change, and plenty of it. A song now and then might keep the feeling of monotony from taking possession of the pupils. A song well chosen is sometimes a good means of discipline. After the discussion, it was suggested that the paper on "Patriotism" be read instead of being left till the afternoon, as arranged on the programme. As Mr. Stevenson, the writer of the paper, was unable to be present, Prof. Yuthill was requested to read it. Patriotism is the spirit that leads one to suffer or die in defense of his country. True patriotism embraces many virtues. Pride in our country and her great men's deeds should be stirred up. Flags will be found of great use in inculcating patriotism.

Mr. Rogers drew attention to the example of discipline and devotion set forth in the "Loss of the Birkenhead."

At the afternoon meeting pieces of paper were passed to the teachers, on which they might state difficulties or ask questions. These were read to the meeting by the President and discussed at length.

A public meeting in connection with the Institute was held in Beveridge's Hall on Thursday evening. The Inspector took the chair and opened with a short address on the objects of the meeting. Several speakers took part in the discussion of educational topics which

followed, among them Mr. G. Y. Baird, Mr. Lawson, Mr. Waite, Rev. Mr. Archibald, Mr. Beveridge and Mr. Baxter. Generally, the speakers considered our school system one of the best in existence. One or two, however, thought that too much is attempted, and that the multiplicity of studies is too great a strain on the pupils. Some were in favor of compulsory attendance. Organ solos, songs and recitations gave pleasing variety to the proceedings. At 10.30 p. m. the national anthem was sung and the meeting dispersed.

NORTHUMBERLAND COUNTY TEACHERS' INSTITUTE.

The nineteenth annual session of the Northumberland teachers was held at the Harkins Academy, Newcastle, on Thursday and Friday, September 26th and 27th, President McIntosh in the chair. About seventy teachers were present. The following were elected officers for the coming year: D. L. Mitchell, B. A., President; Miss Sarah Curran, Vice president; F. P. Yorston, M. A., Secretary-Treasurer; Misses Falconer and Mowatt, additional members of the Executive Committee. Mr. D. L. Mitchell, B. A., delivered an address on "Patriotism." If children are taught to be true and honorable in all things, they will be patriotic in the highest sense of the term, for a man cannot be untrue to his country without being untrue to himself, and, consequently, the foundation of national sentiment is a sense of personal obligation.

At the second session Principal Yorston, of Newcastle, delivered an excellent address on "The Most Effective Methods of Holding Attention," and Principal McKenna one on "Indolent Pupils." Both papers were well received, and were discussed at some length by the Institute.

At Friday morning's session a model lesson - "Minerals" - was given to a class of pupils by Miss J. Falconer. The practical character of the lesson was heartily recommended by the speakers who followed.

At the last session Inspector Mersereau, who took an active part in the proceedings of the Institute, gave an instructive address on "Supplementary Reading," outlining books that might be read and methods to be followed. Papers on "Scientific Temperance" were read by delegates of the W. C. T. U., and on Thursday evening a reception was held in the assembly rooms of the Harkins Academy. The Institute will meet next year at Chatham.

UNITED INSTITUTE OF ST. JOHN AND CHARLOTTE COUNTIES.

The joint meeting of the St. John and Charlotte County Teachers' Institutes convened in the Centennial School, St. John, on Thursday, September 26th, at

10 a.m. Inspector Carter in a few words introduced President Harrington, of St. John, and President F. O. Sullivan, of Charlotte. He expressed regret at the absence of the Chief Superintendent, Dr. Inch. President Harrington then gave an address of welcome to the visiting teachers, which was responded to by President Sullivan. Each Institute then retired to its own room for the purposes of organization and enrolment. In the Charlotte County section addresses were delivered by President Sullivan and Inspector Carter. In the St. John County section addresses were given by President Harrington and G. U. Hay.

The united Institutes assembled at 11 a. m. in the assembly room and most excellent papers on "Moral Teaching" were read by Mr. John McKinnon and Misses Annie M. Hea and Louise D'Orsay. The discussion which followed was very animated, and was taken part in by Inspector Carter, G. U. Hay, G. R. Devitt, Supt. March and Rev. Mr. Marshall. All the speakers eulogized the papers very highly and vigorously combatted the statements that have been recently put forward by a few of the clergy that our schools are godless.

At the afternoon session Miss Elizabeth Beatey gave an admirable lesson in reading in Grade II. to a class of very bright pupils. Miss Kate Lawlor gave an excellent lesson on word building to a very interesting class of little boys. Both lessons were most effective and were most attentively heard. Mr. M. D. Brown then gave a lesson to a class of pupils in Grade VI.—geography. Mr. Brown showed himself master of his work, as chalk in hand he rapidly and accurately sketched the work, and when he was done it was very evident that the pupils had mastered it also. A discussion followed and many questions were asked and answered.

The teachers again met on Friday morning at 9, when they divided into sections. Each section—short papers and practical lessons in writing. Section A—Grades VI., VII. and VIII. by Misses Emma Colwell and Amy Iddles. Section B—Grades III., IV., and V. by Miss E. Enslow. Section C—Grades I. and II. by Miss Harriet D. Gregg. All the lessons were most favourably commented upon. The writing of Miss Enslow's boys, done in the presence of the teachers, was highly praised by all. The discussion which followed developed a strong sentiment in favour of vertical writing. It was participated in by Mr. John Montgomery, Miss Grace Murphy, Mr. W. H. Parlee and G. U. Hay. Many questions were asked and answered. Mr. John Brittain, of the Provincial Normal School, then gave a practical lesson in plant life to a class of boys in Grade

IV. The discussion which followed was taken part in by Geo. J. Trueman, G. U. Hay, Thos. Stothart, Mrs. Dieuaide, and Mr. Brittain. Mr. Brittain expressed the opinion that the pupils would be better employed in botanical drawing than at the conventional forms now assigned them. In the afternoon session Mr. John Brittain gave a practical lesson to a class of girls in Grade VI. The class was provided with apparatus, and the lesson was most practical and effective. The singing of the girls was much enjoyed by the teachers. In answer to a question by Mr. Hay, Mr. Brittain stated that the interest and progress in this study (Natural Science) was somewhat discouraging. Inspector Carter said that in view of the average ratepayer's opinion of the utility of such teaching and other difficulties the teachers in the rural districts had to contend against, great results could not be obtained in a short time.

Before the assembly divided for the election of officers, Messrs. P. G. McFarlane and F. O. Sullivan, on behalf of the teachers of Charlotte County, thanked the officers and teachers of St. John County for their excellent programme and courteous treatment. They cordially invited the St. John teachers to Charlotte County. President Harrington courteously responded, accepting the invitation extended. In the Charlotte County section all the old officers were re-elected, except in the case of Mr. J. B. Sutherland, who was uneligible on account of non-attendance. Mr. G. M. Johnston, of St. John, was elected in his place. In the St. John County section the officers elected were: President, John McKinnon; Vice-president, Miss Iva Yerxa; Secretary-Treasurer, M. D. Brown; members of Executive, Miss Maud Narraway and Miss Stella Payson. Votes of thanks were tendered President Harrington and members of the executive, those who had contributed papers, the school board and the press. After adjournment the St. John teachers entertained the visiting teachers. Refreshments were passed around and a most enjoyable conversazione was held. Thus closed perhaps the most successful County Institute ever held in the province. The attendance in numbers surpassed that of many provincial institutes, being about 250, beside many visiting teachers. The interest and punctuality of the teachers was fully up to the attendance. These things, combined with prompt and business-like officers and carefully prepared and effective papers and lessons, produced an almost ideal institute.

P. E. ISLAND TEACHERS' INSTITUTE.

Two hundred teachers attended the Provincial Institute, held in Charlottetown, September 26th and 27th. All parts of the province were represented.

Owing to the illness of the President W. D. McIntyre, Esq., Vice-President Chas. W. Kielly, Esq., presided at the several sessions of the Convention.

After the appointment of committees and routine business John McSwain, Principal of Queen Square School, Charlottetown, addressed the Convention on the subject of "Nature Studies." In his address Mr. McSwain urged the teaching of the natural sciences as a means of cultivating the pupil's powers of observation, and aid to his other studies; he also urged the teachers to prosecute this study, as a source of satisfaction to themselves.

In the evening a public meeting was held, addressed by Rev. Dr. Morrison, P. J. Trainor, Esq., His Honor Lieut.-Governor Howlan, and D. J. McLeod, Esq., Chief Supt. of Education. Dr. Morrison's subject was the "Necessity of Training the Will," in which he pointed out the difference between *Will* and *Intellect*, showing the possibility of a well-trained intellect being co-existent with an undisciplined will. He attributed many of life's failures to the opposition of the will to the conclusions of the intellect. The speaker urged the teachers to seek to develop will power as well as to secure the intellectual advancement of their pupils.

P. J. Trainor, Esq., urged upon his fellow-teachers the necessity of educating their pupils in the principles of true manhood and womanhood. Governor Howlan spoke a word of encouragement to the assembled teachers, and hoped that the time was not far distant when the remuneration of teachers would be greater than at present. Chief Supt. McLeod spoke of the advances being made in education in the province.

The Committee on Constitution reported recommending that the constitution be so changed that the control of the Association be secured to the teachers. Report adopted, and the Executive were instructed to procure incorporation for the Association, also to procure, if possible, representation for the Association on the Board of Education.

Thos. Callen, Esq., Vice-Principal of Queen Square School, Charlottetown, read a very excellent paper on "English." After the discussion of which the meeting adjourned.

Resolutions expressive of regret for the loss the Institute suffered by the deaths of late Inspector Balderston and Mr. T. Heath Haviland, also of sympathy with their bereaved relatives, were passed and ordered to be forwarded to their families.

A resolution recommending the Board of Education to change the hours of opening and closing school in the country districts to 9.30 o'clock a.m. for opening and 3.30 o'clock p.m. for closing for the entire school year, was passed.

Vice-President Kielly then opened a discussion on "The Course of Study," advocating that the course be amended so as to make better provision than at present for that large class of pupils who are not preparing for college, but leave school for the farm and workshop.

After the election of the following officers, and passing the usual votes of thanks the Convention was closed.

Officers: President, J. M. Duncan, Charlottetown; First Vice-President, Edwin Brown, York; Second Vice-President, Thos. Crafer, Alberton; Third Vice-President, Donald McKinnon, Montague; Secretary, Treasurer, J. D. Seaman, Charlottetown; Corresponding Secretary, Matilda McDonald, Georgetown; Executive Committee: D. F. Murphy, Red House; P. J. Trainor, Emerald; Kenneth McPherson, North River; Hannah Beattie, Summerside; Bessie L. Gregor, Charlottetown.

Out-Doors with the Birds.

The more varied the nature of the country the greater number of species you may expect to find inhabiting it. An ideal locality would be a bit of tree-dotted meadow with a reed-bordered pond or stream, surrounded by woods, rolling uplands, and orchards. Common sense will tell you how to act in the field. Birds are generally shy creatures and must be approached with caution. You must not, therefore, go observing or collecting dressed in flaming red, but in some inconspicuous garb and as quietly as a cat. Furthermore, go alone and keep the sun at your back—two apparently unrelated but equally important bits of advice.

The collector generally has the instincts of a hunter, and practice will develop them. The "squeak" is one of his most valuable aids. It is made by placing the lips to the back of the hand or finger and kissing vigorously. The sound produced bears some resemblance to the cries of a wounded young bird. In the nesting season its utterance frequently creates much excitement in the bird world, and at all times it is useful as a means of drawing bush or reed-haunting species from their retreats. One may enter an apparently deserted thicket, and, after a few minute's squeaking, find himself surrounded by an anxious or curious group of its feathered inhabitants.

The observer of birds will find that by far the best way to study their habits is to take a sheltered seat in some favored locality and become a part of the background. Your passage through the woods is generally attended by sufficient noise to warn birds of your coming long before you see them. They are then suspicious and ill at ease. But secrete yourself near some spot loved by birds, and it may be your privilege to learn the secrets of the forest. *From the Study of Birds Out-of-Doors, by Frank M. Chapman, in the Popular Science Monthly for September.*

Correlation of School Studies.

When the mechanical studies are made incidental to thought, the drudgery of school work is reduced to a minimum, and the school is changed from a sombre institution into a house of life and sunshine. The work being much enriched, the child leads a life abounding in ideas and ideals, and the spiritual atmosphere of the classroom is markedly improved. That this is not merely a theory may become clear, in my opinion, to any one who will visit schools where the principle of unification in instruction is observed. In regard to results, my personal observations have proved to me that the poorest reading and writing—I refer to written language in its broadest sense—are found in the schools where the instruction in language is made purely formal, by a rigid isolation of the elements; while the best results in reading and writing are obtained in the schools where the fundamental plan lies in giving the child ideas, and teaching language, to a considerable extent, incidentally, as a mode of expression and subordinate to ideas. *Dr. Rice, in Forum.*

Cost of Education.

Mr. George Johnson, Dominion statistician, has been investigating the cost of education in the several provinces of the Dominion, data having been collected for comparative purposes for the years 1888 and 1893. The figures show that Manitoba expends proportionately more upon education, that is, for public schools, than any other province in the Dominion. Making a comparison between 1888 and 1893, it is shown that in Ontario expenditure upon public schools has remained stationary at \$1.87 per head of the population. In Quebec it has increased from 81 cents to 87 cents. In Nova Scotia it has fallen from \$1.51 to \$1.45. In New Brunswick the expenditure in the year 1888 was \$1.26 per head, and in 1893 it had increased to \$1.31. In Prince Edward Island it rose from \$1.36 to \$1.40, and in Manitoba from \$1.57 to \$2.02. British Columbia increased her educational expenditure in the same period from \$1.40 to \$1.87. In connection with the latter figures it is to be borne in mind that there is no public assessment for education in the Pacific province.

Taking the average of all the provinces, it shows that the people of the Dominion are now paying at the rate of \$1.56 per head of population for the purpose of public schools, an increase of 6 cents in the per capita expenditure since 1888. It appears also that Ontario spends 7 per cent of the total provincial revenue in government grants to schools. Quebec spends 4 per cent, Nova Scotia 23 per cent, New Brunswick 23 per cent, Mani-

toba 17 per cent, while in Prince Edward Island the grant to education is 54 per cent, or more than half of the total yearly revenue of the province.

The statistician has also made a computation of the proportion of educational expenditure which the Government and the people provided respectively. Thus he finds that in the Province of Ontario 93 per cent of the total expenditure on public education is paid directly by the people, 7 per cent only being contributed by grants from the provincial exchequer. In Quebec the proportion is 87 per cent by the people to 13 per cent by the province. In Nova Scotia the people pay 76 per cent and the province the remaining 24 per cent. In New Brunswick the proportion is 60 per cent and 40 per cent by the people and the Government respectively. The people of Manitoba pay directly in school taxes 21 per cent only of the cost of public schools, the Government contributing the remaining 79 per cent, and in Prince Edward Island the proportion is very much the same, viz., 23 per cent by the people and 77 per cent by provincial grant.

The man who makes two blades of grass grow where one grew before is reckoned a benefactor to his race. Such a man is Nikola Tesla, who has invented an electrical machine which gets two or three times more mechanical power out of coal than when it is used as a generator of steam. This means within the next thirty years a complete change in all transport and manufacturing machinery. Coal mines, waterfalls, and tides will be made to produce energy which can be distributed cheaply through copper wires to any part of the country where it may be needed. What would our old teachers of thirty years ago have thought of telephones, phonographs, or electrical cars! But still greater wonders will be the commonplaces of our pupils not many years hence.

To keep a prisoner in jail for a year costs \$91, to keep a convict in the penitentiary costs \$187, but to keep a boy in school costs only \$8.50. Nine-tenths of the convicts are uneducated. Would it not be cheaper to protect society by educating rather than by imprisoning? If all truant children were sent to proper reformatories or parental homes penitentiaries would scarcely be needed. Let the government combine humanity with economy in this matter.

By comparing the statistics of English and Scotch universities in a given year, it was found that Scotland, with a population of 3,725,000, had 6,500 university students, while England had only 6,000 students out of a population about six times as great.

QUESTION DEPARTMENT.

C. I. R., Arlington, June 6th. Can you tell me the names of these birds? The following are the descriptions as seen by my scholars:

1. Bird had grey breast, grey tail, back black and grey, under part blue and white, black spot on head, and white stripes over eyes.

Ans. — It may have been the white-throated sparrow, if the white over the eyes was yellowish, and the throat was white, and the bird was nearly seven inches in length. Or the chipping sparrow, if it were but little over five inches in length. The song might decide the question.

2. Another bird was seen which was all yellow, with black bars across its wings.

Ans. — There can be no mistake about this one. It is the male of the American goldfinch.

3. Another scholar describes a bird with grey breast, black back, red spot on head, under parts grey, wings dark.

Ans. Can this be a woodpecker which has a red spot on the back of its head? If so, the rest of the description is very defective.

4. Please solve from Kirkland & Scott's arithmetic, question 8, page 166 (examination papers for 1892). "A runs a mile race with B and loses; but had A's speed been one-third greater he would have won by 22 yards. Find the ratio of A's speed to B's."

Ans. — When A's speed is one-third greater than it was at first, it is four-thirds of its original speed, and he covers 1760 yards when B covers 22 yards less, that is 1738 yards. Then 1760 divided by four-thirds of A's speed is the time of the race, and is therefore equal to 1738 divided by *once* B's speed. That is 1738 times the speed of the one equals 1320 times the speed of the other. The speeds are therefore to each other as 1320 : 1738. Reducing the ratio to the lowest terms by dividing by 22, we have the ratio 60 : 79.

SCHOOL AND COLLEGE

Thanksgiving Day — Thursday, November 21.

Through the efforts of Miss Eliza G. Crawley a fine flag has been procured for the school at Chamcook, Charlotte County.

Miss Mary J. Herbison, teacher at St. Croix, Charlotte County, assisted by pupils and friends, has been able to furnish her school room and to supply it with much needful apparatus.

Truro Academy seems to have led the province in academic work last year. This year it opened with 14 studying for Grade A, 31 for B, 59 for C, and 83 for

D in all 187. Of these 56 are from beyond the section several being from other counties or other provinces. There will yet be considerable additions to these numbers.

We regret to hear of the serious illness of Mr. T. E. Colpitts, principal of the grammar school at Alma, Albert County, N. B.

Classes in music are given in the New Glasgow high school by Miss Tweedie and Mr. Logan. Painting and drawing are taught by Miss Graham, whose work there last year was so much admired.

By means of a school concert, Miss Inez Maxwell, teacher at Hayman Hill, Charlotte Co., has furnished the school with blinds and some very useful apparatus.

Many of the school rooms in St. Stephen are very full of pupils and some changes have had to be made. A few rooms are very much needed.

An additional room has been provided in Milltown by moving one of the unoccupied school buildings from the Union.

The work of enlarging the school accommodation at Welshpool progresses slowly, but when completed two fine school rooms will be provided.

Inspector Carter will be engaged during the first part of October in Charlotte Co.; during the latter part of that month and during the first part of November he will be engaged in St. John and Kings Counties.

Several of the Charlotte County teachers remained over Monday after the Institute and visited some of the St. John Schools.

Mr. Michael Kelly, formerly on the staff of teachers in St. Martins, is a candidate for the provincial parliament.

Principals Soloan and Robinson are still at work in their old sections, New Glasgow and Berwick, N. S., respectfully. These sections are fortunate in having their schools under the management of men who have done such good work in the past.

A. J. Pinceo, A. B., so well known to many of our teachers in connection with the Summer School of Science for the Atlantic Provinces, has been lecturing in British Columbia (where he now resides) on his favorite subject — geology — the geology of the primeval world. He believed that cosmic development as he traced it, proved the truth of the evolution theory; but not evolution without a God.

Pictou Academy has the largest grade "A" class in the province. Her total enrolment up to date is 187; viz., 22 A's, 36 B's, 56 C's and 73 D's.

Philip Doherty, Grade A of Halifax Academy, has been appointed principal of the Lockeport, N. S., high school.

Mr. A. Morrison, who left the teaching profession to become a barrister in British Columbia, has been visiting his native province, Nova Scotia. He reports that a large number of the leading teachers of the Pacific province are graduates from the Maritime Provinces.

The teachers of Hantsport, N. S., for last year, owing to a general reduction of salaries, nearly all resigned. Miss Charlotte Mumford, who taught there for nine years with the greatest success, was presented with a very flattering address, largely signed.

Halifax Academy has entered upon this year's work under the most encouraging circumstances. As the result of last year's work she obtained at the provincial examination 35 Grade B's, 36 Grade C's, and 69 Grade D's; in all 140 passed. Of six scholarships offered for competition by Dalhousie College, she succeeded in getting three. There are enrolled at present 302 students; 64 studying for B, 115 for C, and 123 for D.

BOOK REVIEWS.

OLD SOUTH LEAFLETS ON PURITANISM. Seven new leaflets, published by the Directors of the Old South Work, Boston, have just been added to the Old South series, all relating to English Puritanism and the commonwealth. With these Old South leaflets, which are sold for five cents a copy, just enough to cover their cost, our students can come into immediate touch with the men of the English Commonwealth and the great scenes in which they acted.

ALGEBRA FOR BEGINNERS, by H. S. Hall and S. R. Knight, revised and adapted to American schools, by Frank L. Sevenoak, A.M., M.D. Price, 60 cents. New York and London, MacMillan & Co. This is but a rearrangement of Hall & Knight's Algebra, the order being determined mainly by two considerations: To bring in the practical side of the subject as early as possible, and in the second place that compound expressions and their resolution into factors should be postponed until the usual operations of algebra have been exemplified in the case of simple expressions.

BOTANICAL NOTE-BOOK, by H. B. Spotten, M. A., F. L. S., published by W. J. Gage & Co., Toronto. This Note-book, for use of high school students, will be found of great value in recording observations of plants.

MACMILLAN'S NEW LIBRARY READERS, Books I, II and IV—prices respectively 8s. 10d., and 1s. 6d. **MACMILLAN'S HISTORY READERS.** Book I. Price, 9d. Published by MacMillan & Co., London and New York. Bright and attractive in make up and interesting in contents.

SHAKESPEARE'S KING HENRY THE EIGHTH. Edited with Introduction and Notes by K. Deighton. Price, 1s. 9d. Publishers, MacMillan & Co., London and New York. This series of Shakespeare's plays is published in a cheap, convenient, and attractive form. The introduction and notes form a setting for each play of great value to the student.

TENNYSON'S GUINEVERE, with Introduction and Notes, by G. C. Macaulay, M.A. Price, 2s. 6d. Published by MacMillan & Co., London and New York. This edition of Guinevere is uniform with others already published, such as *Geraint and Enid*, *The Holy Grail*, etc. The introduction and notes are very full, the author excusing his profuseness in the latter by remarking, "I have found myself, and my own experience has been confirmed by others, that there is hardly anything which school-boys of fair intelligence are not capable of misunderstanding, and I have gradually, and rather unwillingly, become convinced that it is better to make the notes too many than too few." Granted—but can the "misunderstanding" be cured in that way?

A WORKING MANUAL OF AMERICAN HISTORY, by Wm. H. Mace, published by C. W. Bardeen, Syracuse, N. Y. A very full outline of events of American history.

HIGH SCHOOL PHYSICAL SCIENCE, Part I, by F. W. Merchant, M. A., Collegiate Institute, London, and C. Fessenden, M. A., Collegiate Institute, Peterboro, Toronto: The Copp, Clark Company, Limited. This book has been recently authorized by the Department of Education for Ontario. It seems almost an ideal book in physical science. No space is wasted on an introduction. It has the minimum of theory and the maximum of practice. Illustrations are abundant and excellent.

GEOMETRY TABLET FOR WRITTEN EXERCISES, price 20 cents; published by Ginn & Co., Boston. The neat and convenient arrangement of this exercise book will be found of great value to teachers and students of geometry.

PRESTON PAPERS, by Miss Preston's Assistant, cloth, pages 144. Chicago: Star Publishing Co. This is a series of letters written by a teacher, giving her experiences, which the live teacher would enjoy, and which might help the machine teacher to get out of ruts, provided the ruts are not too deep.

"CLEAR ROUND," by E. A. Gordon, with illustrations, maps, and an introduction from Max Muller; pages 332; cloth; price, 2s., 6d. London: Sampson, Low & Co., Publishers. This is a story of a voyage round the world, told by a lady in an unassuming style. It de-

scribes the countries visited in a very instructive way. Her pen pictures of Canadian scenery are picturesque, and her impressions of the people, and the historical, geographical and religious notes are lively and entertaining.

The October Magazines.

The Chautauquan has interesting educational articles as usual. The Republic of Mexico, by Arthur Inkersley, B.A., LL.B., is begun; there is an illustrated article on Hindu Carvings, by Lyman Horace Weeks; Literature as a Resource is discussed by Hamilton Wright Mabie.

In the *Popular Science Monthly* for this month Prof. James Sully devotes a chapter in his *Studies of Childhood* to Untruth and Truth, showing that there is something less dreadful than original sin to account for "children's lies." The October *Atlantic* is rich in good fiction. Among other striking contributions is one entitled "The Genius of Japanese Civilization." The four weekly issues of *Littell's Living Age* for September are replete with the choicest gleanings of the British reviews and magazines. With the October number the *Century* closes its twenty-fifth year and fiftieth volume, and in celebration of this event special pains is being taken with the November number, which will have some notable features.

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SESSION 1895-6.

The Calendar for the Session 1895-96, contains information respecting conditions of entrance, course of study, degrees etc., in the Several Faculties and Departments, of the University, as follows:

FACULTY OF LAW. (Opening, September 2nd).

FACULTY OF MEDICINE. (September 24th).

FACULTY OF ARTS, OR ACADEMICAL FACULTY.—Including the Donalds Special Course for Women. (September 17th).

FACULTY OF APPLIED SCIENCE. Including Departments of Civil Engineering, Mechanical Engineering Mining Engineering, Electrical Engineering and Practical Chemistry. (September 18th).

FACULTY OF COMPARATIVE MEDICINE AND VETERINARY SCIENCE. (September 29th).

MCGILL NORMAL SCHOOL. (September 2nd).

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