

PAGES

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The Educational Review.

Devoted to Advanced Methods of Education and General Culture.

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G. U. HAY, Ph. B.,
Editor for New Brunswick.

A. McKAY, Supervisor Halifax Schools,
Editor for Nova Scotia.

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G. U. HAY, St. John, Managing Editor
W. T. KENNEDY, Halifax, Business Editor for N. S. and Newfoundland

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We wish our readers A Happy New Year; and hope that the REVIEW may be able to record greater progress in our educational life and thoughts.

This number of the REVIEW is sent to many persons who are not at present subscribers. We feel confident that, if its pages are carefully read, they will decide that it is the educational paper best suited to their needs.

The advertisements of the first-class business firms and educational establishments found in the REVIEW are interesting reading. Subscribers are requested to mention this paper in corresponding with advertisers.

WANTED.—Nos. 4, 8, 10, 15, 18, 21, 22, of the N. B. *Journal of Education*, published in 1886-87. Persons having these, or a whole set of the *Journal*, can find a purchaser by addressing the editor of the REVIEW, St. John.

ON Thursday, Dec. 30th, the usual semi-annual conference of the Chief Supt. with the Inspectors was held in the Education Office at Fredericton. All the Inspectors were present.

THE REVIEW briefly noticed a few months ago an article entitled "Limæ Labor" in the *McMaster University Monthly*, Toronto, from the pen of Dr. Rand, formerly superintendent of education in New Brunswick. A recent number of the *London Athenæum* reviewed the article appreciatively and copied a portion of it, and Lord Tennyson, the subject of the sketch, has sent an autograph letter to Dr. Rand thanking him for the kindly article.

THE meeting of the Executive Committee of the Provincial Teachers' Institute was held in the library of the Normal School, Fredericton, on the evening of December 29th last. There was an unusually large attendance.

The usual routine business was transacted, Mr. H. C. Creed was re-elected secretary and treasurer. St. John and Fredericton were both proposed as places for the next meeting which is to be held on the last three teaching days in June, 1892. St. John was chosen. A list of subjects to be dealt with was fixed upon. Before the meeting Dr. Inch entertained the members of the executive and a few others at a dinner at the Queen Hotel. A very pleasant time was spent.

The Calendar of the Summer School of Science, of the Atlantic Provinces has been published, and copies of it can be obtained on application to W. T. Kennedy, Secretary, Halifax, or to E. Thompson, Local Secretary, St. John. As our readers are aware the school assembles in St. John July 4th, immediately after the meeting of the N. B. Educational Institute. The programme is more varied than that of any previous year, and gives promise of increased advantages to the students who may attend.

The plea of Chief Supt. Inch at the St. John, Teachers' Institute for more individuality among teachers and that of Supervisor Metcalf for a closer study of nature, are worthy of being carefully thought out and acted upon.

THE publishers of the *St. Croix Courier* have sent out a circular asking for traditions and documents bearing upon the history of Charlotte County, N. B. In the introduction to the circular is a bit of historic writing that bespeaks an interesting work if the writer is to be the future historian of Charlotte County.

ARE EDUCATIONAL PAPERS TEXT-BOOKS?

Are educational papers text-books, and do teachers rely upon them to take the place of text-books? Are the lessons with which some of the so-called educational papers are filled from title-page to the end, taken, and with little or no preparation on the part of the teacher, made to serve the purpose of the text-book?

These questions are suggested by looking over the legion of "practical educators," for which teachers are asked to subscribe. One of thirty-eight pages before us has lessons so arranged that the teacher, if he is weak or lazy enough to avail himself of such "helps," may teach almost every subject found in a school course. Can it be possible that teachers spend their leisure out of school without diligent and constant preparation of the lessons of the following day, and at the last moment seize an educational journal (*sic*) and come before the class, perhaps with paper in hand, and give the lesson from it?

Now, every intelligent teacher knows that nothing can take the place of conscientious and diligent preparation of the lessons he is to teach, and that any patched up lesson, made for him by another, is a delusion and a snare. The conscious power that a teacher gets from mastering the subjects he is to teach, adding something fresh and new every time he has to teach it, will give him an enthusiasm that will soon infect the class, while children will soon detect the imposition of a patched-up lesson upon them, and resent it with restlessness, and perhaps open mutiny. Give the children grain, not husks, especially husks sampled out by some one in the trade, sorted and labelled and sent to you by mail.

GRADING PUPILS.

"The city teachers, at a meeting at the residence of Hon. A. F. Randolph, discussed several matters affecting school interests. Strong objections were taken to the manner in which the examiner has been grading the pupils, passing many of them to grades for which they are entirely unfit, and thus handicapping the teachers and making it difficult for them to do justice to their other pupils. A resolution was passed expressing the opinion that five years was too young an age to send children to school, and recommending that the law be altered to require children to be six years old before being admitted.—*Fredericton Correspondent St. John Globe.*

Bad grading is not confined to Fredericton, but as the Model Schools are there and the principal of the Normal School is the examiner, the highest ideal should be attained in that city.

The teachers and the pupils themselves have the most accurate idea of the attainments and qualifications of those seeking promotion. The judicious

examiner for grading will always take the teacher into his confidence, and if he believes her conscientious will consult her as to the pupils she deems fit to advance. A good plan, and one which has worked satisfactorily in some of the towns of the province is, to have the grading done by the teacher into whose room the pupils are to pass, in conjunction with the teacher of the room, subject always to the approval of the trustees. This deprives the teacher who gets the pupils of the luxury of grumbling.

The greatest drawback to good grading is the pressure of numbers from the lower grades for which room has to be made in the next higher. To do this the standard for grading has to be lowered and many pupils are thereby permitted to grade who are not at all fitted to do so. Much time has consequently to be spent by the teacher who receives these pupils in working them up, to the great detriment of the proper grade work, and the hindrance of those pupils who are fit to go forward with the work of the next grade.

This evil can only be removed either by providing more teachers or by giving to each teacher fewer pupils, which amounts to the same thing. A teacher in most graded schools is not considered to have work enough to employ her unless she has an enrolment of sixty pupils and often a greater number. An enrolment of forty pupils is sufficient for any graded school. This would insure better work and make the schools more expansive in case a greater number of pupils than usual fails to grade.

THE WORLD MOVES.

From late English papers we learn that the British Consular reports from different parts of the world show that British manufactures and exports are handicapped in competition with those of France and Germany, on account of the exclusive adherence to the English nomenclature of weights, measures and prices. Nearly all the countries in the world except the English people have adopted already the simple *metric*, *decimal* or *world* system. Customers find it more convenient, when there is little difference between English and German manufactures, to order the latter as the quotations are more clearly intelligible to them.

Now we find a commercial congress of representatives from the leading commercial centres of the empire is called to meet in London, for the purpose of discussing trade and cognate questions. One of the points in the programme, which is to engage the attention of this congress, is the introduction of the *metric* system. In Britain, Canada and the United States it has been legalized (but not popularized) for some years, and finds a place in arithmetical text

books—towards the end. The duty of the hour is to place it at the beginning of the arithmetic, and to drill the younger class in the weights and measures themselves and in calculations with them. Those who move first will have the pleasure of leading a movement which will soon be compulsory within the Empire and the United States.

Educational Value of the Typewriter in Schools.

In a recent number of *Education*, the editor, Wm. A. Mowry, Ph. D., of the Boston School Board has an article in which he very clearly and forcibly sets forth the educational value of the typewriter. He declares that from personal experience and observation, he "has no hesitation in saying, that one good type-writer in every room of say fifty pupils, in a grammar school or high school, will prove an important time-saver, and that by its use the ability to write correctly and rapidly the English language will be acquired in far less time and with much less effort than by other means." This may seem somewhat surprising to those who have not yet dreamed of its introduction in schools, except as a preparation for office work, or for copying school programmes, examination papers, etc. But Dr. Mowry proceeds to fortify his statements from the testimony of educational experts. A few of these are appended:

"The habits of care, neatness, accuracy and skill necessary to a successful manipulation of the typewriter enter into the intellectual make-up of the pupil, and re-appear in whatever he may undertake to do. One of the most obvious advantages is a more perfect mastery of the English language. If he uses the typewriter, the student must give attention not only to spelling, capitalizing, punctuating, sentence-making and paragraphing, but also to the weightier matters—thought and style. Poverty of ideas and infelicities of style are more apparent on a printed page than when disguised in poor chirography or venerated with elegant penmanship."—*Gen. Thomas J. Morgan*.

"I think that typewriting should be taught in public and private schools. Not that it is probable that every one who learns would take up typewriting as a business, but spelling, punctuation, capitalizing, paragraphing and, greater still, prose composition, could be a dozen times better taught with the machine than without it. I am confidently looking forward to the time when school boards throughout the country will appreciate this fact, and the typewriter be universally adopted for this purpose. And even from the money-getting standpoint, I remember that Charles Read is reported to have said in a certain essay, 'I advise all persons to have their boys and girls taught shorthand and typewriting.' A stenographer who can typewrite his notes would be safer from poverty than a great Greek scholar."—*The North American Review*.

"It is the testimony of educators who have tried it that, no other device in the hands of the pupil contributes so much towards a knowledge of correct business English. Its use calls immediate attention to business forms, to the correct

use of capitals, to correct spelling, to neatness, to accuracy of expression—in short, to everything that should characterize English composition. But is such knowledge worth anything? A gentleman from a distant city, who often finds business situations for young people, recently told the writer that he could secure desirable places for any number of young men and young women at \$15 per week, if, having other qualifications, they could write good English and spell correctly.—*Report of Bennington, Vt., Schools, 1890.*

A number of other opinions equally strong are given by Dr. Mowry—statements that might seem to exaggerate the utility of the typewriter in the school did we not consider the disposition of a boy or girl. The click, click, of the ingenious piece of mechanism, the enthusiasm which leads him or her to follow up every step until a perfect mastery of the machine is acquired, and the pride which is taken to make the page as free from blemishes as the printed page, are all powerful incentives to improve in manual work, and to use good English.

LOSS TO THE PROVINCE.

All who know Miss Jennie Lyle, and there are few teachers in New Brunswick to whom she is not known by reputation at least, will regret to learn that she is about to give up teaching here and remove to the United States.

Miss Lyle is a native of Moore's Mills, Charlotte County, and obtained the larger part of her education at the excellent school which that enlightened community has always maintained. In 1875 she attended the Provincial Normal School, where, in the words of Principal Crocket, "She gave promise of becoming a teacher of superior tact and skill." She obtained a first-class license and was first employed by the trustees of the Town of Portland, where she taught for one term in the Winter street school. A vacancy having occurred in the Model school, at Fredericton, Miss Lyle was at once offered the position and accepted it. While in Fredericton she gave the highest satisfaction to all connected with or interested in the work of the Model school, and, when after six or seven years service there, she resigned to take charge of one of the primary schools in St. Stephen, near her native place, general regret was expressed. Miss Lyle has been equally successful in St. Stephen as in the other places she has taught, and the Board and citizens generally deeply regret her departure.

Ex-Chief Superintendent of Education Crocket, than whose no testimony is more valuable in the province, says, concerning Miss Lyle, "The reports of the school inspectors to this department invariably testify to the excellence of her work—a testimony which, from my own personal knowledge of it, I know

to be correct. I regard her as one of our best teachers."

In another column the loss of one of our best primary teachers is mentioned. She does not propose to give up teaching, but another country is to reap the benefit of her skill and talents. Primary teachers possessing the necessary tact and sympathy are priceless. When will our boards of trustees learn to appreciate them properly? It is a want of knowledge that our schools and children are paying dearly for. It is satisfactory to the teachers, at least, to know that school boards in far off places are awakening, if they are not already awake, to a proper appreciation of their merits.

NOVA SCOTIA EDUCATIONISTS IN CONVENTION.

The school inspectors of Nova Scotia and the staff of the Normal school were called together by Superintendent MacKay for the discussion of all questions relating to their work. There were no absentees and several of the meetings were attended by Premier Fielding. The inspectors were able to furnish the Superintendent with much valuable information which could not have been so well obtained in any other way. The boundaries of school sections were to be more exactly defined and small sections to be absorbed into larger ones where it could be done to the manifest advantage of all concerned. It was suggested that some time in the more or less distant future several sections might be managed by one board of trustees.

It was agreed that inspectors should have increased powers in dealing with inefficient teachers and penurious trustees, of whom there were reported to be several throughout the province. More frequent visitations; the requiring of trustees to visit their own schools with the inspectors; diminishing the government and county grants, were some of the means suggested for dealing with teachers who had degenerated into lesson hearers, or with trustees who failed to supply comfortable school rooms and suitable apparatus.

Several simplifications of our present complicated tables of school statistics were asked for by the inspectors. Improvements also in the methods of paying teachers were called for. The object was to give the inspectors as much time as possible for the work of visitation, which was looked upon as the part of their duties most productive of good in vitalizing and energizing the schools.

We understand that the meeting was unanimously in favor of having the school year begin on the first

of September and end on the last of June, thus articulating better with the colleges. This change would be a great convenience to intending matriculants to colleges and to candidates for teachers' licenses. It would give teachers an opportunity to make arrangements for the succeeding year's work and for self-improvement; enable parents to utilize the labor of their children and afford to over-worked pupils sufficient time to recuperate their exhausted energies.

Instead of the Harrington Compulsory Attendance Bill, it was proposed to have all children of school age in the section enrolled and to have the loss to the section of county grant, caused by non-attendance, made up by the parents of absent pupils being required to pay as an addition to their poll tax the sum of one cent for each school day lost without good cause, as determined by the trustees. Instead, therefore, of being subjected to the odium of enforcing fines, they would have the more pleasant task of exempting the deserving.

It was generally agreed that the Council of Public Instruction should undertake to examine academic pupils of the various years—those passing the first year's work to receive a license entitled academic Grade D; second year's work, an academic C; third year's work, academic B; and fourth year's work, academic A. These licenses, when supplemented by a couple of weeks professional work, to permit the holder to draw government Grade D grant for one year. For a further continuance in the profession the academic licenses, C, B or A, would have to be further supplemented by a corresponding professional diploma from some accredited Normal school.

It was suggested that the Institute work desirable for a first year's teaching could be most economically obtained at the county academies. For one fortnight before the end of the year the academic departments would be in session only for three hours each forenoon. The afternoon would be devoted to Grade D professional work conducted by the inspectors, principals of the academies, or any other most suitable person. Any Grade D teacher taking a three months professional course at the Normal School might be allowed to teach two years on that grade. A minor, but very important, benefit derived from this system would be the stimulus given to professional study by those conducting such institutes.

The Normal School, it was agreed, should be relieved from academic work now required of it. All its students would, before entering, hold academic diplomas from the academies or high schools of the province. Psychology, the history of education, drawing, manual training, laboratory practice, elocu-

tion, tonic sol-fa, and calisthenics, would take all their time.

Full consideration of the course of study, and of improved text-books, had to be deferred for want of time. It is to be hoped that some, or perhaps all, of the above changes recommended by the inspectors may be agreed to by the Council of Public Instruction and carried out at a reasonably early date.

At the close of these meetings the members of the government, the professors of Dalhousie College and of the Normal School, and the inspectors, were entertained at the Halifax Hotel by Premier Fielding.

TALKS WITH TEACHERS.

When visitors come to the school greet them courteously and proceed at once with the work in hand. Do not stop to enter into a conversation concerning other matters.

At a meeting of a School Board not long ago one of the members moved that the teachers be supplied with pens and ink. He urged as a reason that at a recent visit to the schools few of the teachers had pens and ink on the desk fit to write his name in the register with.

Read educational papers and attend your County Institutes. No teacher can be continuously progressive who fails to do either of these things. It is commonly the teachers of the old regime who "know it all," that think lightly of the institutes and educational papers, and it is needless to add that most School Boards are fully conscious of this fact.

Change your time table whenever you change your working programme. Do not keep a time table posted as a matter of form, but follow it as a matter of duty. No work can be well done without system as well as method.

The mark of the good teacher is not the proficiency of a few brilliant pupils but the excellence of the school as a whole. The first indicates bright pupils, the second faithful instruction.

Lift your hat reverently when you pass the teacher of the primary school. She is the great angel of the republic. She takes the bantling fresh from the home nest, full of pouts and passions—an ungovernable little wretch whose own mother honestly admits that she sends him to school to get rid of him. This lady, who knows her business, takes a whole carload of those little anarchists, one of whom, single-handed and alone, is more than a match for his parents, and at once puts them in a way of being useful and upright citizens. At what expense of toil and patience and soul weariness! Lift your hat to her!—*New York Recorder*.

NATURE LESSONS.

THE SCHOOL-BOY BOY ZOOLOGIST IN ATLANTIC CANADA.

I

It is winter. We cannot net the butterfly nor trap the night-loving moth. The streams and ponds are frozen over, and their denizens have no fear of the boy whose steel shod feet or flattened noses move in tangents to the opposite and upper surface of the ice. Let us then look at our native animals which claim more of kinship with ourselves; animals which like ourselves have a framework of substantial bone mineralized with calcium phosphate, and surrounded with plump muscles of flesh which by their orderly and separate contractions, moves them whatever way desired. All four-limbed, though often so different. All with jointed back-bones from which ribs run out in front in order to form a capacious cavity in which the animal unceasingly stows away what it considers the good things of this life, to enable it to grow, and work, and fight if necessary. All with jointed back-bones on the opposite of which a smaller cavity is formed enclosing the spinal cord, which at one end becomes so large as to require a great bony case called a skull, to cover it in. Two eyes, and two ears, and two nostrils open out on the surface of this brain box, so that the brain can hear, see and smell. All lung breathers, warm blooded and red blooded are these animals too. They bring forth their young and feed them first on milk which is provided naturally by the parent. Were their bodies dissected many other similarites in their make-up would be seen. And they are all covered with a skin which when it grows any covering it is always hair, fine or coarse, but never feathers, scales, or anything else than hair.

Here they are, all of them known to be in Nova Scotia, New Brunswick or Prince Edward Island. They are called *Mammals*, from a Latin word *mammæ* which means "milk-bearing teats." But not only has every animal in our list teats, but a hair-bearing skin and every other point mentioned above, and many more.

Mammals of Atlantic Canada.

ORDER I. Family I (1) Man.

ORDER II. THE FLESH-EATERS.

Cat Family; (2) Cat, (3) Panther, (only in N. B.), (4) Wild Cat, (5) Lynx.

Dog Family; (6) Dog, (7) Wolf, (8) Fox.

Weasel Family; (9) Least Weasel, (10) Common Weasel, (11) Mink, (12) Black Cat (Pekan), (13) Pine Martin (Sable), (14) Wolverine, (only in N. B.), (15) Skunk, (16) Otter.

Bear Family; (17) Brown Bear.

Racoon Family; (18) Racoon.

Seal Family; (19) Harbor Seal, (20) Hooded Seal, (21) Harp Seal.

ORDER III. THE HOOFED MAMMALS.

Pig Family; (22) Pig.

Cattle Family; (23) Ox, (24) Sheep, (25) Goat.

Horse Family; (26) Horse, (27) Ass.

Deer Family; (28) Reindeer, (29) Moose, (30) Virginian Deer.

ORDER IV. WHALE-LIKE MAMMALS.

Three or four families, including Dolphins, Porpoises, and several species of Whales, in all perhaps 20 species of Cetaceans, as they are called, have been observed off or on our Atlantic Coast. All these are really cattle adapted to live in the sea. They are not fish although they have the external form of fish. Perhaps we need not give their names here.

ORDER V. THE BATS.

Bat Family; (51) Hoary Bat, (52) Red Bat, (N. B. only), (53) Little Brown Bat.

ORDER VI. THE INSECT-EATERS.

Mole Family; (54) Star-nosed Mole, (55) Hairy Tailed Mole, (N. B. only), (56) Common Mole.

Shrew Family; (57) Little Shrew, (58) Narrow-Headed Shrew, (in N. S.), (59) Mole Shrew, (60) Hoy's Shrew (in N. S.), (61) Cooper's Shrew (in N. B.), (62) Common Shrew, (63) Forster's Shrew, (N. S.), (64) Water Shrew, (N. S.)

ORDER VII. THE GNAWERS.

Squirrel Family; (65) Flying Squirrel, (66) Gray Squirrel, (N. B.), (67) Red Squirrel, (68) Ground Squirrel, (69) Wood Chuck.

Beaver Family; (70) the Beaver.

Mouse Family; (71) Common White Footed Mouse, (72) Long-Eared Mouse, (73) Meadow Mouse, (74) Common House Mouse, (75) Brown Rat, (76) Musk-rat.

Jumping Mouse Family; (77) Common Jumping Mouse, (78) Rare Jumping Mouse, (N. B.)

Porcupine Family; (79) Canada Porcupine.

Hare Family; (80) American Rabbit.

How many of these eighty have you heard of? How many have you seen? How many may be found in your neighborhood?

LESSONS ON MINERALS.

For the information of our readers we give the following extract from a little book, "Thirty-six Observation Lessons on Common Minerals," by Henry Lincoln Clapp, Master of George Putnam School, Boston, Mass. The author acknowledges obligations to Prof. Frank Eaton, of the Nova Scotia Normal school.

Lesson I.

This lesson being preliminary, should be given in a general way, by explaining the plan of study given below and illustrating the meanings of the words in it by means of appropriate objects, not necessarily minerals.

PLAN FOR THE STUDY OF MINERALS.

1. *Hardness*—1, 2, 3, 4, 5, 6, 7.
2. *Color*—grayish-white, yellowish-white, reddish-brown, etc.
3. *Streak*—(color of the powder) words similar to those used under *color*.
4. *Lustre*—metallic, glossy, dull, pearly, resinous, silky.
5. *Structure*—fibrous, granular, compact, laminated or plated, radiated, scaly, cleavable.
6. *Other properties*—transparent, translucent, opaque, elastic, flexible, brittle, tough, malleable, ductile, light, heavy.
7. Where you found the specimen, or where it may be found, if you know.
8. What it is used for.
9. Name of the specimen, if you think you know it.

In following this plan of work the pupil does not devote his energies to finding out the name of his specimen, as he too often does when he work by analysis tables; but his aim is to scrutinize his specimen closely and state the exact truth in an orderly way. Analysis tables too often bias the pupil's judgment in favor of names, and tempt him to guess, as every one knows who has tried to find out the names of plants, by the analysis table.

For the REVIEW.

Practical Chemistry.

J. BRITAIN, NORMAL SCHOOL, FREDERICTON.

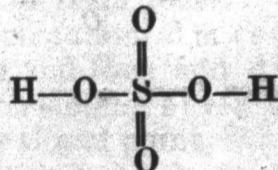
LESSON VI.

(Continued from December number).

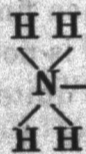
Compare the formulas H_2O and HCl . In the second molecule, one atom of Cl has bound to itself, by the force of chemical affinity, one atom of H . In the first molecule one atom of O has bound to itself two atoms of H . The oxygen atom has shown itself capable of binding twice as many atoms of H to itself as the chlorine atom has. Hence, chemists say that the *valence* (Lat. *vales*, I am strong) or *quantivalence* of oxygen is twice that of chlorine. Since the attraction is mutual, the valence of hydrogen is the same as that of chlorine, one atom of Cl uniting with one atom of H . As no element has a valence below that of hydrogen, it is taken as the standard. A hydrogen atom is said to have one *bond* and hydrogen to be *univalent*. Similarly a chlorine atom has one bond, an oxygen atom two bonds. Chlorine is *univalent*, oxygen is *bivalent*. These bonds are represented by dashes which extend from the symbol of the element in any direction. Thus $-O-$ or $O=$ signifies that

an oxygen atom has two bonds. A formula in which the bonds of the different atoms are thus represented is called a graphic formula. The graphic formula for water is $H-O-H$. In this formula the symbol for each hydrogen atom has one dash extending from it, indicating that each atom of H has one bond, while the symbol for oxygen has two dashes running out from it, indicating that an oxygen atom has two bonds. The two bonds of the oxygen atom are said to be *satisfied* by the one bond of each of the two hydrogen atoms. In a graphic formula, then, one dash represents two bonds, *satisfying* one another, one bond of each of the atoms between whose symbols it is placed.

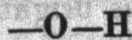
The graphic form for sulphuric acid (H_2SO_4) may be written thus:



Here the atom of sulphur is represented with six bonds, which are satisfied by six bonds of the oxygen atoms, the two remaining bonds of the oxygen atoms being satisfied by the bonds of the two hydrogen atoms. Radicals have valence the same as elements. The graphic formula for the radical ammonium, NH_4 , is:



Here the five bonds of the nitrogen atom are satisfied by the bonds of four hydrogen atoms, and one bond is left unsatisfied. Ammonium has one *free* bond, and is a *univalent* radical. The radical hydroxyl is also univalent as may be seen from its graphic formula:



When these two radicals unite, each satisfies the free bond of the other forming NH_4OH , ammonium hydrate, the base used in two of our experiments.

Spelling "Kitten."

A dear little girl,
With her brain in a whirl,
Was asked the word "kitten" to spell.

"K-double i-t-
T-e-n," said she,
And thought she had done very well.

"Has kitten two i's?"
And the teacher's surprise
With mirth and impatience was blent.

"My kitty has two,"
Said Marjory Lou,
And she looked as she felt—quite content.

—December St. Nicholas.

Astronomical Notes.

Some say they have tried and tried to find Neptune with their field-glasses and can't succeed. Well, try again; here's a map to help you.

Find the Hyades, that V-shaped cluster to the south-east of the Pleiades. Then, with the help of the cut, find the little star marked A. It is in line with Aldebaran and Epsilon Tauri and a third or fourth of the distance between these two beyond the latter (Epsilon Tauri). It is only of the 8th magnitude, but any field-glass, or even opera-glass, will show it in a



clear moonless sky. Then find B—and C if you can. B is as easy as A, but C is not? If you can't find C, never mind, you can do quite well without it. But make sure of Epsilon and A and B, and notice that they form a little equilateral triangle with AB as base and Epsilon at the apex. Pay no attention to anything else in the field of your glass—except one thing, and that is Neptune. The small letters on the map from *a* to *e* show his position on the following dates: *a* Jan. 12; *b* Feb. 15; *c* Mar. 20; *d* Apr. 1; *e* May 1. Neptune is not quite as bright as A or B, but he is brighter than C. I have never failed to see Neptune when I could see A and B, but I have often seen Neptune when I could not see C.

The conjunction of Venus and Jupiter on February 6th is *the* astronomical event of the season.

In the middle of January there will be a little over 20° of sky between Venus and Jupiter. This distance will decrease a degree a day until conjunction. To a careless observer this will look as if the two planets were moving to meet each other; but closer observation will show that this is not the case. If Venus is observed with a glass on the evening of January 13th she will be found nearer Delta Capricorni a 3rd magnitude star. On the same evening Jupiter will be very near Phi Aquarii of the 4th magnitude. Venus

will pass Phi on February 1st and will overtake Jupiter five days later at a spot about 4° east of Phi. So it is not a case of their meeting, it is a case of Venus overtaking and passing Jupiter.

When they are closest together on the 6th it will require a telescope to show any sky between them; to the naked eye the two will form one star—and what a beauty that one will be! But not for us, unfortunately; the planets will not be above our horizon at the time. It will be early evening in Japan and on the east side of Australia, and there the conjunction will be seen in all its glory. It will be afternoon in Asia and forenoon in Europe and Africa, and there the phenomenon can be seen through telescopes. But here it will be 6.15 a. m. (60° time) when the celestial pair are blended into one, and as they won't be above our horizon until nearly three hours later, it would be quite impossible for us to see this most interesting phase of the event, even if we were armed with telescopes that matched Sam Weller's million-magnifying gas microscope o' hextra power. "Tis true, 'tis pity; and pity 'tis 'tis true."

But by that time Venus will be bright enough to be seen in daylight even with the naked eye if one knows very nearly where to look for her. And, having found Venus, a good field-glass should show Jupiter (during the forenoon of the 6th) as near to Venus as Alcor is to Mizar. Failing this daylight sight, we must be content with the appearance of the planets on the evenings of the 5th and 6th. Just before setting on the 5th they will be 24' apart; at sunset on the 6th their distance will be 28'—both distances less than a moonbreadth. This will not be nearly so fine a sight as the Japs will have on the evening of their 6th, but it will be fine enough and grand enough and rare enough to take a good, long look at—if the weather-fiend will only leave us a clear sky then.

The January moon will reach her greatest altitude on the 12th (the day before full moon) at 11.15 p. m. She will run lowest in the forenoon of the 27th. The difference between her meridian altitudes on these two dates will be 53°—three-fifths of the distance from the horizon to the zenith.

If clear about moonrise on January 19th, see if you can find Gamma Virginis; and, if you do, try how close to the moon your eye or your glass can hold the star.

The February moon will be twenty-nine hours old at sunset on January 30th, quite old enough to show herself to the naked eye, and quite young and lively enough to be well worth looking for. Next evening she will not need to be looked for; she and Venus and Jupiter will then demand attention from all. On February 5th she will be nearer the Pleiades, on the 9th and 11th near Pollux. When full on the 12th she will pass close under Eta Leonis. She will occult Eta to places to the south of us,—indeed it may be an occultation here, but an occultation of a 3½ magnitude star by a full moon is not worth the figuring that would be required to settle the question.

Yarmouth, N. S., Dec. 29th, 1891.

A. CAMERON.

For the REVIEW.]

Notes for Teaching Music by the Tonic Sol-fa Notation.

SIXTEENTH PAPER.

Remember that the mental effects of the tones are cumulative—the more they are studied the more they are felt and the more they help the production of the true tones. Many adults, not naturally musical, say that they can only get the tones by thinking upon the character of the tones. When d is frequently repeated in a strain its effect is more clearly felt than when the three tones d m s are sung.

The teacher may help the pupils to catch the effect of these three tones, or impress the effect, if they have already felt them, by such phrases as these sung to lah slowly:

- Key F—
1 | d : d | d : s₁ | d : — | d : s | d : m | d : d | d : — ||
- Key E—
2 | m : m | m : d | m : — | s : m | m : d | m : m | m : — ||
- Key D—
3 | s : s | s : m | s : — | s : m | d : m | s : s | s : — ||

Ask the pupils to describe the character of each and next to note the tone most frequently repeated in each, and what therefore must be the nature of that tone. When a tone is incorrectly sung, refer to the mental effect and try again, and then let the teacher pattern carefully.

Teach the more difficult intervals of this step, making use of the help of the mental effects. The teacher may pattern and point on the modulator.

- Key D—
d' s m — d' m, m s d' — m d'
- Key F—
s₁ d m — s₁ m, m d s₁ — m s₁
- Key C—
s d m' — s m', m' d s — m' s.

It is well not to hurry to the second step until the first is well mastered.

When the class is ready begin the second step, which takes up the SOH chord with the new tones, Te the seventh tone of the scale and Ray the second tone.

Give the pupils some exercise in naming the tones of the first step when sung by the teacher to lah.

Sing to lah d s m d and get the tones named. Then sing to lah d s m r and the pupils will at once discover the new tone. Let the teacher sing a number of phrases with r frequently repeated. Ask them what kind of water this new tone would represent if m represents a quiet sheet of water with the moon shining on it and s water flashing in the sunlight, and the pupils will say it is noisy running water. Ray may be called the rousing, hopeful tone. Let the children discover that it lies between m and d. Let the teacher indicate its place on the modulator, a very little nearer m than d.

Let the teacher next sing to lah d m s t₁, — d m t₁. The pupils will feel the tendency of t to be followed by d. It leans to doh and is called the leading tone. Next develop the tender character of t when it is a low tone. Then sing d m s t and the class will feel the tendency to go to d' above. Then develop the piercing effect of this tone when high its pitch. Mark Te on the modulator. The teacher may let the pupils discover that r has more tendency to go to d than to m. These r and t are two leaning tones.

After the pupils can detect these two tones when sung to lah, then these new tones should be taught in the chord str. Do it thus: Let the pupils sing d m s, key C, then change s into d and sing up d m s, pointing to these tones written to the right of Soh, Te r'. Sing these same tones to lah and then point to and sing str' to same tones. Now take these tones and point on modulator d m s t r' t s. Repeat these several times and then add d' s m d. Be sure to go back to d' after singing str' r' t s before singing m. Then take key G and point

d m s s m d d s₁ s₁ t₁ r r t₁ s₁ s₁ d
s₁ t₁ r s₁ t₁ r m r d t₁ d m r r d.

Introduce these new tones as passing notes for some time. Teach the class such simple exercises as

Key G. Round in four parts.
: s₁ | d : d | r : r* | m : m | r
The lit-tle bell at West-min ster
: r | d : — | t : — | d : s₁ | s₁ ||
goes ding, dong, ding, dong, dong.
D.C.

The difficult intervals of this step are:

sr, rs, s₁r, r s₁, m t₁,
t₁m, m t, t m, s₁t, t₁s.

These intervals may be taught step-ways thus:

s m r d, s m r, sr, d r m s, d r s,
d t, d, d m d t, d, d m t, d, s m t, d.

This might be satisfactory for second standard.

1. Sing smoothly and sweetly three appropriate prepared school songs.

2. Follow the examiner's pointing, moving slowly the notes of the Doh chord and the Soh chord in different keys; also, such exercises as the following:

Key E—
d m r d d t, d r m s d r d.
Key A—
s₁ d t₁ d s₁ m r d r m s t₁ d.

3. Time Test. Sing to one tone such exercises as
1 | d : d, d | d : d | d : d | d, d : d ||
2 | d : — : d | d : d : d | d, d : d : d ||

4. When the examiner gives the notes of the doh chord tell the d, or s, or m in such phrases as these when sung to lah:

d m d s, d s m d s, s m s d, d m s s, d m s m,
and imitate such phrases as the following when sung to lah, without naming the tones:

d m r d, s m r d, d t, d r.

Truro, N. S.

JAS. ANDERSON.

For the REVIEW.]

The Philosophical Review.

THE PHILOSOPHICAL REVIEW, Vol. I., No. 1. Edited by J. G. Schurman, Dean of the Sage School of Philosophy, in Cornell University. Publishers: Ginn & Company, Boston, Mass.

The most effective method of introducing this magazine to the notice of our readers with the certainty of securing their cordial welcome would be to reprint the whole of the valuable "prefatory note," setting forth its aims and the reasons justifying its existence. In that "note" it is averred that while "scarcely a province of the entire realm of mind and scholarship is now without an official organ in America," . . . "there does not exist amongst us any periodical organ concerning itself exclusively with philosophy." At the same time it is claimed that, philosophically, "America is a land of great promise." A most ingenious and happily sustained parallel is instituted between the position of Greece of old as the "bridge connecting Europe and Asia," and the relation of this continent to the rest of the world in the present day. And the conclusion is arrived at that there is "every reason to believe that America will be the scene on which that master-demiurgus, the human spirit, will manifest its next world-phase of philosophical discovery, interpretation and construction."

Of the hope that this expectation may be realized, the magazine before us offers happy promise. Like Minerva in the ancient myth, it leaps into the arena of thought, arrayed at all points with armor of the finest intellectual temper, prepared to do friendly battle with all comers.

Its scope is wide. It proposes to "range over the field of psychology, logic, ethics, æsthetics, philosophy of education, philosophy of religion, metaphysics, philosophy of nature, and epistemology," and the first number affords ample assurance that the field thus defined will be skilfully cultivated. To us, as Canadians, it is a matter of pride—it ought not to be without significance—to note the extent to which the cultivation referred to promises to be due to men of our country. Thus, the editor of the *Philosophic Review* is J. G. Schurman, whose name as that of a scholar of world-wide repute it is necessary only to mention. The first article in this first number is from the pen of John Watson, of Queens, Kingston, Ontario, a professor known to the "initiated" to be "second to none" in philosophic acumen; and who, though Scotch, not Canadian, by birth, has resided so long in this Dominion that he may be justly regarded as "one of us" by adoption. His theme, handled

with consummate ability, is "The Critical Philosophy and Invention," in connection with a work just issued on the critical philosophy of Kant, by Edward Caird, of Glasgow, Scotland, of whom, it may be added, Prof. Watson was, many years ago, his most distinguished pupil. Among the shorter articles is a graceful notice by our own Prof. W. C. Murray of an essay on "Freedom as Ethical Postulate," recently published by Prof. Seth, of Dalhousie, Halifax, N. S. Thus, including brief review articles, some half a dozen in number, from the pen of Dr. Schurman, the larger portion of this magazine is the fruit of Canadian meditation. Nor do we, on that ground, dread comparison with the most noteworthy of European competitors. On the contrary, believing that the high standard of excellence secured at the outset will be not only maintained but surpassed, we do not shrink from predicting that this magazine will take its place with the worthiest in the ranks of philosophic periodicals. It would afford us pleasure to give illustrations from the articles referred to in proof of these allegations; but we must content ourselves by urging our readers to procure the *Review* and exercise their own most dispassionate judgment.

It may be added that the other articles, in addition to those already mentioned, are "Psychology as so-called Natural Science," by Prof. Ladd, of Yale; a most curious essay on "The Chinese Musical System," by Prof. Gilman, of New York; several book reviews and summaries of recent important publications, logical, psychological, ethical, etc.

The intent is to maintain absolute "impartiality and catholicity of tone and spirit." Receiving support, on this condition, from private endowments, the *Review* can afford to be issued at a price (three dollars per annum for six numbers), hardly equal to the mere cost of publication. On every ground, thus, of merit, of promise, of interest arising from the fact that our own countrymen are so largely concerned in its production, of its scope and purpose, of its cheapness, we unhesitatingly commend this periodical to the many—they are a rapidly increasing number—who desire to keep abreast of the age in the ceaseless movement of philosophic thought and speculation.

St. John.

D. MACRAE.

A Paradox.

If white be "all the colors combined,"
And black their "absence" be,
Then aren't the whites the colored folks,
The blacks from color free?

—*Christmas Century.*

For the REVIEW.]

Orthography for Native Names of Places.

The Royal Geographical Society, taking into consideration the present want of a system of geographical orthography and the consequent confusion and variety that exist in the mode of spelling in English maps, has adopted the following rules for such geographical names as are not, in the countries to which they belong, written in the Roman character. These rules are identical with those adopted for the Admiralty charts, and will henceforth be used in all publications of the Society.

1.—No change will be made in the orthography of foreign names in countries which use Roman letters, thus Spanish, Portuguese, Dutch, etc., names will be spelt as by the respective nations.

2.—Neither will any change be made in the spelling of such names in languages which are not written in Roman characters, as have become by long usage familiar to English readers; thus Calcutta, Cutch, Celebes, Mecca, etc., will be retained in their present form.

3.—The true sound of the word as locally pronounced will be taken as the basis of the spelling.

4.—An approximation, however, to the sound is alone aimed at. A system which would attempt to represent the more delicate inflections of sound and accent would be so complicated as to defeat itself. Those who desire a more accurate pronunciation of the written name must learn it on the spot by a study of local accent and peculiarities.

5.—The broad features of the system are that vowels are pronounced as in Italian and consonants as in English.

6.—One accent only is used—the acute—to denote the syllable on which stress is to be laid. This is very important, as the sounds of many names are entirely altered by the misplacement of this “stress.”

7.—Every letter is pronounced. When two vowels come together, each one is sounded, though the result, when quickly spoken, is sometimes scarcely to be distinguished from a single sound; as in ai, au, ei.

8.—Indian names are accepted as spelled in Hunter's Gazetteer. The amplification of the rules is given in the following table:

Letters.	Pronunciation and Remarks.	Examples.
a	ah, as in father,	Java, Banana.
e	eh, as in benefit,	Tel-el-Kebir, Oleleh, Medina, Yezo, Levuka, Peru.
i	English e; i as in ravine; the sound of ee in beet. Thus not Feejee, but.	Fiji, Hindi.
o	o as in mote,	Tokio.

Letters.	Pronunciation and Remarks.	Examples.
u	long, as in flute; the sound of oo in boot. Thus, not Zooloo, but.	Zulu, Sumatra.
NOTE.—All vowels are shortened in sound by doubling the following consonant,		
	Doubling a consonant is only necessary where there is a distinct repetition of the single sound.	Yarra, Tanna, Mecca, Jedda, Bonny.
ai	English i, as in ice,	Shanghai.
au	ow, as in how. Thus not Foochow, but.	Fuchan.
ao	Only slightly different from the above.	Macoa.
ei	is the sound of the two Italian vowels, but is frequently slurred over, when it is scarcely to be distinguished from ey in the English they.	Beirut.
b	English b,	Beilul.
c	is always soft, but it is so nearly the sound of s that it should be seldom used. If Celebes were not already recognized, it would be written.	Celebes. Selebes.
ch	is always soft, as in church, English d.	Chingchin.
d	English f; ph should not be used for the sound of f. Thus, not Haiphong, but	Haifong, Nafa.
f	is always hard. Soft g is given by j.	Galapagos.
g	is always pronounced when inserted.	
h	English j; Dj should never be put for this sound.	Japan, Jinchuen.
j	English k; it should always be put for the sound of hard c. Thus, not Corea, but.	Korea.
k	The Oriental guttural,	Khan.
kh	is another guttural as in the Turkish.	Daghu, Ghazi.
gh	as in English.	
l m n	has two separate sounds, the one, hard as in the English word finger, the other as in singer. As these two sounds are rarely employed in the same locality, no attempt is made to distinguish between them.	
ng	as in English.	
p	should never be employed; qu is given as kw,	Kwangtung.
q	as in English,	Sawakim.
r s t v w x	is always a consonant, as in yard, and therefore should never be used as a terminal, i or e being substituted. Thus, not Mikindany, but	Kikuyu.
y	Not Kwaly, but.	Mikindani.
z	English z,	Kwale.
	Accents should only be used where there is a very decided emphatic syllable or stress which affects the sound of the word: Tongatabu, Gal-a-pagos, Palawan, Sa-ra-wak.	Zulu.

J. M.

For the REVIEW.]

A City School.

It was a neat brick building with a good playground in which grew several fine trees. On entering the primary department of the school at half past ten the children rose to greet me. It was a pleasant room, 33x26 feet. The teacher's platform was on the west end of the room. The warm rays of the sun came in where they could through six large windows on the south side. I say where it could, because there were forty-nine flower-pots in these windows—all containing beautiful plants, some in blossom. The flower-pots were decorated with artistically ornamented colored tissue paper. Blackboards four feet wide formed a belt around the room. They were covered with beautiful colored pictures, made by the teacher to illustrate the various lessons. There were also all the letters, small and capital, and the figures as exact as in the copy-books, reading exercises and simple songs in the Tonic Sol-fa notation. The floor was scrupulously clean, not a scrap of paper on it. On every desk there was a piece of sponge of the size of a large apple.

Many of the children were from very poor homes, yet no one would suspect the fact—they were all so neat and clean. It does not cost much to provide combs and clean aprons and collars. The transformation effected by them on these children was charming. What an inestimable blessing this public school must be! Here for four hours during every school day these children are surrounded by these civilizing influences—some children who hear no gentle words and see nothing of beauty in their own homes, whereas here the teacher's words are as gentle as those of the kindest mother.

The two best classes had read before I entered, while the rest were writing on their slates. I examined the writing. It was remarkable for children of the first grade—every letter being of the right height and form, except in the case of five little girls whose work was somewhat crude.

The third class then read a lesson from Munro's Reading Chart, above and on which stood the finest ball frame which I ever saw—the invention of the Secretary of the school board. The reading lesson was about a *fan*. An interesting but short talk about it introduced the subject. The sounds of the word were studied and recognized in other words. New words in the lesson were analyzed phonetically until the pupil could read the whole page with ease. By combining simple sounds other words were formed. All this occupied about fifteen minutes. The interest of the children never flagged and they went to their seats feeling that it would be nice to know the next page.

A slight stroke of the bell and the word "eight" immediately centered the attention of every child in the room on the teacher. A simple exercise on the modulator showed the pupils familiar with the various characters of the notes of the musical scales. A tune was sung correctly from the Tonic Sol-fa notation, besides a song by rote.

A writing exercise came next. Every slate was quickly ruled with lines about one-fifth of an inch apart. The pupils of the best class were able to write any word from their reading lesson—every letter being correctly formed. Whatever they wrote throughout the day had to be done with the same scrupulous care and with the help of lines—so that no member of the class had yet, or was likely to, form the habit of scribbling. Writing was taught from the blackboard.

Recess bell rang. A few simple signals, and slates, pencils and books disappeared noiselessly—the children rose as one and to the tune of a lively song marched out of the room, followed by the teacher, leaving me to wonder why other teachers did not do likewise.

BEOBACHTER.

Halifax.

For the REVIEW.]

The Study of Modern Languages.

I read with great interest the remarks of Mr. Hyde upon the study of French, in your last issue, and can only congratulate the present generation of students that a rational system of tuition is now superseding the old "grammar and exercise" method. How well I remember the study of German in my school days! Grammar by heart, on the time-honored principle of teaching the classics, and the translation of exercises such as these:

"Have you seen the horse of the good baker?"

To which the courteous, but rather irrelevant, answer would follow:

"No, but I have seen the umbrella of the blind gardener."

And when the pupil was regarded as "advanced" enough, he was treated to literary extracts of the most repellent sort, for works like Schiller's *Thirty Years' War* are indeed "caviare" to the schoolboy mind, even when he succeeds in acquiring any idea as to the meaning of the lengthy periods. The famous German class, under Herr Stohwasser, described in "*Vice-Versa*," is a faithful description of most of the tuition in this period, to which Mr. Anstey added more recently as a no less delightful sketch in his tale "*The Pariah*" of a lesson from Moliere as given by an English governess belonging to the period before Girton had arisen. I had been reckoned, and perhaps had reckoned myself, an "advanced pupil,"

and had duly wrestled with Schiller's sentences, but when I visited Germany for the first time I found that my three or four years "study" availed nothing for conversation. If I had met Ollendorff's "good-baker," or "blind gardener," I might have asked after their supposed needs; but our mentor had not taught us how to ask a railway conductor about a train, or a hotel waiter about a dinner. So I had to begin almost at the beginning, and the plan I adopted may be worth describing. Having recently read Gustav Freitag's "*Soll und haben*" in an English translation, for at that time the original would have seemed hopeless, I determined to attack the German text without a dictionary. The recollection of the story's outline helped greatly, and I soon found myself guessing at words and somehow disentangling the sense of the dialogue. By the time I had reached the third volume all was easy, and when I had settled at Munich only a few weeks of constant talk in a German household qualified me to follow the less rapid lecturers at the university. It seems to me that the ideal system of instruction in modern languages would commence with the (so called) Berlitz method until a fair vocabulary was attained, and a tolerable knowledge of the construction of ordinary sentences. Then the teacher should boldly take up an interesting *modern* story or comedy, and he must know his work but indifferently, or be singularly unlucky in his pupils, if he does not very speedily find a circle of animated and intelligent hearers, soon capable of reading for themselves.

As for the method of attaining the third and highest stage, that of writing and speaking with perfect grammatical exactness, this I cannot (for the best of reasons) communicate to your readers; but it is no slight gain for people, whose school days are long behind them, to be able to add a new literature to their sum of possible attainments, and that without any great sacrifice of time.

Yours faithfully,

JOHN DESOYRES.

St. John, Dec. 11, 1891.

Have the Canadian schools ever passed through such a period of life and strife as that in which our own common school is struggling on? No one can believe it, looking at the grave, immovable aspect they wear today. They have certainly reached maturity, and many of their conclusions are exactly what we of the States are trying so earnestly to agree upon and urge into the mind of the lay public. * * We must acknowledge that our schools averaged up, are far behind those of Ontario. But exchange? Not yet. We want to see what is coming out of all this school turmoil. We would rather put our final conclusions off a little longer. Our hopes are still rooted in free evolution!—*N. Y. Teacher.*

Teachers in Council.

ST. JOHN COUNTY INSTITUTE.

The St. John County Teachers' Institute was held in the City of St. John, at the Centennial school building, December 17th and 18th. One hundred and sixty-one teachers enrolled. President Jas. Barry in the chair. After enrolment on Thursday morning, Geo. R. Devitt, A. B., read a paper on "The Teaching of History in Grades VII and VIII," some of the excellent points of which were discussed by Mr. G. U. Hay.

In the afternoon Supervisor Metcalf, of Boston, whose services had been secured by the Institute, gave an address on "Language." His remarks were closely followed and many useful hints were given the teachers. After intermission Mr. J. W. Harrington read a thoughtful and carefully prepared paper on "The Teaching of Fractions." A short discussion followed, which was taken part in by Messrs. Parlee and Montgomery. Dr. Inch, who had arrived during the reading of this paper, on invitation of the president, made a short address to the teachers.

In the evening a public meeting was held in the hall of the Centennial school building. Addresses were given by Dr. Inch and Supervisor Metcalf. On invitation remarks were made by Rev. J. deSoyres and H. J. Thorne.

At the Friday morning session Supervisor Metcalf resumed his language lessons, dealing chiefly with dictation. The discussion which followed was taken part in by Inspector Carter, J. Montgomery, Miss Hea, Miss Orr, Superintendent Hayes and W. H. Parlee. After intermission Mr. John Brittain, of the Provincial Normal School, gave a very interesting talk, illustrated with experiments, on "The Study of Nature in the Schools."

In the afternoon the question box was opened. Inspector Carter had charge and read off the questions, of which there were many. The whole number was disposed of, many being referred to Mr. Metcalf to answer. Mr. Metcalf then resumed his subject, dealing this time with "Grammar." A resolution expressing the appreciation of the Institute of Mr. Metcalf's addresses was then moved by Inspector Carter and carried unanimously.

The election of officers resulted as follows: President, Geo. R. Devitt, A. B.; Vice-President, Miss Iva Yerxa; Secretary-Treasurer, W. C. Simpson; Members of Executive, Miss Barlow and Miss Rowan.

The date and place of the next meeting were left in the hands of the Executive Committee. The Institute is considered by many to have been the best ever held in St. John.

YORK COUNTY INSTITUTE.

The York County Teachers' Institute convened at the Normal school, in Fredericton, December 17th and 18th. There was a large attendance. President Jas. Palmer in the chair.

Miss Thorne was elected Secretary, in the place of Mrs. Irvine, formerly Miss Francis I. Ross, who had retired from the service.

Mr. W. T. Day then opened the discussion on the subject of "Grammar." It was participated in by Messrs. Blake-

ney, Everett, Owens, McKnight, Inspector Bridges, Geo. A. Inch and others.

At the Thursday afternoon session an invitation was accepted from the W. C. T. U. requesting the attendance of the Institute at a social in the Temperance Hall, Friday evening. Prof. Stockley then addressed the Institute at some length.

A paper on "Modern Educational Errors" was then read by Mr. Jas. M. Palmer. Messrs. Inch, Foster, Meagher, Inspector Bridges and Prof. Stockley took part in the discussion.

On Thursday evening Prof. Duff gave a lecture on "Modes of Vibration," which many of the members attended.

On Friday morning an excellent paper was read by Frank Owens, A. B., upon "How Should the Teacher Test the Thoroughness of His Work." The paper was discussed by Messrs. Foster, Inch, Day, Mullin, Creed and Profs. Murray, Stockley and Duff.

HANTSPORT, N. S., COUNTY INSTITUTE.

This was held on the 17th and 18th December. The attendance was large—80 teachers being enrolled.

Miss S. B. Ford of Canning, read a paper on "Patriotism." She strongly emphasized the duty of the teacher in inculcating a true love of country and showed the best ways in which this could be done,—chiefly by making pupils familiar with the noble deeds of our greatest patriots.

Miss C. Mumford of Hantsport, discussed "Literature *versus* Grammar." She would not place the text book on grammar in the hands of the pupil before he entered the academy or high school. Instead of grammatical exceptions, parsing, and abstract definitions, she would have the pupils read suitable selections from the best authors, and frequently write composition exercises until they had acquired an easy use of their mother tongue. From the discussion that followed it was evident that the great majority of teachers would place grammar with logic and rhetoric in the high school grades where it belongs.

H. D. Ruggles, barrister, of Windsor, showed the close relation subsisting between the schools and the statutes in educating to a respect for law. The more education advanced the less the necessity for law.

Mr. L. D. Robertson of Berwick, made known the methods by which the school-room could be changed from a state of disorder to a state of happy industry;—school-room neat, comfortable and well ventilated; programme definite, carried out by signals, varied by music and calisthenics; plenty of work and no whispering.

Mr. E. W. Sawyer, B. A., of Horton Academy, advocated the teaching of Latin by the method now adopted for French and German. The pupils are to converse about ordinary things and events until they have acquired a command of common words and the most useful idioms. Constant drill on forms was also recommended, even in advanced work.

Mr. J. J. McLean recommended that Friday afternoons be devoted to such practical subjects, as current news, the explanation of commercial phrases and forms, calculations in frequent use by artisans, recitations, etc. "Method in Geometry" was treated by Principal Oakes, of Wolfville. The conceptions of an angle, triangle, line and point should be made as plain as possible by referring to the concrete. The

methods of Wormell and Wentworth were thought superior, especially in the systematic way in which they proved the equality of triangles. Original exercises should be worked as the pupils advanced. Mrs. Chute, of Berwick, presented a short paper on "Reading." A nature lesson was given by Miss Maggie Burton; she selected the Turtle for her subject and went somewhat into the classification of animals of that order.

Principal Smith of Windsor dealt with such "Odds and Ends" as, the best methods of keeping order in the halls, directing the amusements of the play ground, the teaching of thrift and economy, the building up of character by developing control of self in the pupil, thoroughness in work, etc.

In the evening the teachers and public were addressed by the new Superintendent of Education who made a most favorable impression. Teachers are attracted to him by his broad and deep sympathies with them in their work and his unselfish efforts for the advancement of education.

He was introduced by Principal Miller, of Hantsport, who is a ready and fluent speaker as well as an able teacher.

Inspector Roscoe has always been very successful in arranging for profitable Institute meetings, but on this occasion he improved upon all his former efforts.

A Funny Exercise and Test.

A few years ago frequent complaints were made by some high school teachers, principals and upper-grade teachers in the ward schools, that the pupils passing from the ward schools into the high school could solve problems correctly only after repeated trials; that, terrible to relate, they would persist in making numerous mistakes. It was even affirmed that in the most ordinary problems errors were very apt to occur. It was regarded as something inexcusable—a thing not to be tolerated. In short, it assumed something of the nature of "figure-phobia," and it became a question of how to deal with it in a pleasant and good-natured way. However, I decided to begin low down. In the third and fourth-grade classes I found that the children would add, subtract, multiply and divide large numbers with a good degree of accuracy; that is, that from 40 to 60 per cent. of a class would solve all such problems correctly at the first trial. This was regarded as fairly satisfactory.

I prepared a problem in addition, twelve numbers in all, and each number contained twelve figures. This problem was given to three fourth-grade classes, and more than 50 per cent. of all the pupils solved it at the first trial; I next gave it to two seventh-grade classes, and 65 per cent. of them obtained the correct result.

The Saturday following I gave the same problem to thirty-two principals of ward schools, and high-school teachers, and four of that number only solved it correctly, that is, 12½ per cent. It is hardly necessary to add, that other subjects were deemed more appropriate for discussion at subsequent meetings.

REFLECTION:—*How inaccurate and exacting we mortals be.*—J. M. Greenwood, Kansas City, Mo., in *Western School Journal*.

Music in the Public Schools.

The value of the study of music in the public schools cannot be estimated. It elevates and ennobles, and therefore tends to bring out the finer qualities of the child's nature.

Singing to him is as natural as it is to eat. Eat he must to live; sing he must to give vent to his joys and sorrows. The babe begins by taking nourishment to sustain the little life God gave him, while he listens to the lullaby, softly and sweetly sung to soothe him to rest. Unconsciously he listens, and with the same unconsciousness his little voice is soon mingling with soft, sweet tones of his natural guardian.

Thus we find a singing bird in the heart of every child which should be fostered in our public schools, and if fostered in the proper manner will bring its reward with it. He should not be left by the wayside to gather in that which tends to poison, but instead should be environed by that which will feed his soul with life and beauty.

In the first year of the child's life at school his singing lessons are the most enjoyable. It may be hard for him to learn that two and two are four, or that c-a-t spells cat, but when the teacher says, "We'll sing," his little face brightens and straightens up with an air which seems to say, "I can sing."

These little songs learned at school are carried home and sung to the dear ones there. He delights in singing them and is ever on the *qui vive* for something new.

Music as a magnet has not only power to attract the child, but has power to reach out into infinite space and carry along all that it comes in contact with.

In many of our public schools, music is a new plant. In others it has not yet been planted. While in others it has taken root and has grown with great luxuriance.

"Music in the public schools" will eventually be the cry of every true educator and every true friend of humanity.—*N. Y. School Journal.*

Charlotte County Schools.

Charlotte County has reason to be proud of her schools and of her school teachers, for they are among the best in the province. The people of the county are alive to the necessity of giving their children a good education, and as a rule manifest a deep interest in the work and progress of the schools. This helps to encourage and stimulate the teacher, and at the same time incites the pupil to do good work. At least this is the experience in St. Andrews, and in other places in the county we might name. At the

present time the people here are singularly favored in having a good staff of teachers and a wide-awake, energetic school board, who know a good thing when they see it and are not disposed to let it out of their grasp. All the departments from the primary to the grammar school are managed by careful, painstaking teachers, who seem to have the confidence and esteem of the children to a marked degree. The compliments which were bestowed on Principal Brodie at the recent examination were none too extravagant. He deserved them all. Thorough, painstaking and kind, he has had wonderful success in his school, and he has ably sustained its reputation for excellence.—*St. Andrews Beacon.*

Mental Over pressure.

The re-opening of the school season recalls the importance of the consideration of the danger of mental overpressure in these days of keen competition. Scientific investigation has shown that continuous work is decidedly injurious to the brain. We cannot do better than quote some of the deductions from a paper, entitled, "The Working Curve of An Hour," recently read before the Congress of Hygiene in London, by Dr. Burgenstein, of Vienna, and urge upon our educationists the necessity of allowing liberal recesses to the pupils of our schools. The writer had for his object the study of the mental power of children, and he arranged his experiments with a view to demonstrating the functions of brain power in children during one hour's occupation with a familiar subject. Simple addition and multiplication sums were given to two classes of girls, of an average of eleven years and eleven years and ten months, and two classes of boys, of the average of twelve years and two months and thirteen years and one month. After ten minutes' work the sums were taken away from the children; after a pause of ten minutes the work was resumed, the alternation continuing for an hour, so that there were three periods of work. The results were interesting: During the whole experiment the 162 children worked out 135,010 figures, making 6,504 mistakes. It was found that the number of mistakes increased in the different periods, and that during the third period the quality of work was at the lowest. The general result showed, according to the investigator, that "children of the ages stated become fatigued in three-quarters of an hour; that the organic material is gradually exhausted; that the power of work gradually diminishes to a certain point during the third quarter of the hour, returning with renewed force at the fourth quarter." The recommendation was made that no school lesson should last longer

than three-quarters of an hour, and should be followed by a quarter of an hour's rest. Too frequently children are deprived of their play-time between hours as a punishment for inattention, when oftentimes the cause of the trouble is fatigue; the punishment only adds fuel to the fire, and "mental overpressure" is the result. Teachers should not have this matter altogether at their discretion, and parents should look carefully after the welfare of their children, so that they will not be spurred on when they require rest. — *Critic, Halifax.*

Work in Ungraded Schools

To the conscientious teacher this question is constantly repeating itself, "How can I do better work?" Especially is this true in an ungraded school. How can we overcome these obstacles? viz.: 1. Too many pupils. 2. Too many classes. 3. Limited time. 4. Too little "desk" work. 5. Too little change of position. 6. Irregular attendance. By *reducing* the number of classes.

This may be done (a) by joining, (b) by alternating. Join by taking the "reader" as the basis.

Let those in first and second be in the same arithmetic (D) and writing (B) classes. Teach spelling along with reading (by sight).

The same language lesson, busy work, and drawing for both.

Let those of the third and fourth be in arithmetic C., geography B. Write B, spell B, with the same language work, map-drawing, letter-writing, abbreviations and drawing for both. Let the fourth reader pupils form history class B, and the third reader take *definitions* at the same time.

Let history A pupils study physics, grammar A, book-keeping and arithmetic A. The fifth reader pupils arithmetic B, and grammar B. At book-keeping time let them take notes, bills, abbreviations and other work preparatory to that study, having them for both writing (a), constitution, geography (A), and spelling (A).

Allowing the "bright" ones to assist the "backward" will greatly lessen the labor.

Alternate those branches which may be most quickly learned or readily practiced in other studies, such as spelling, reading and writing, taught and practiced in every branch; constitution, which is short; physiology largely taught incidentally, and geography an observation study.

Make out a programme of recitations, time, and "desk" work.

Write it on the board, explain, and have the pupils copy. Then make them watch the time for changing books. If they don't know how, teach them "then and there."

The above with the following are suggestions, merely, not "dogmatic" rules.

1. Have "primary" classes first, before the little ones are tired.
2. Have arithmetic and bookkeeping classes in the morning, early as possible.
3. Have *advanced* classes after recess in the afternoon as the "little folks" are out of the way.
4. In alternating, have three days in the week those studies which need the most attendance.
5. Don't have writing immediately after recess, especially in cold weather.
6. Don't leave out—REST, or calisthenics.

PROGRAMME

FORENOON. STUDIES AND WORK AT DESK.

Order of Recitation.	Time.	1st and 2d Reader.	3d and 4th Reader.	5th and History.	Chart.
1. Chart	9.15	Read.	Arith.	Arith.	
2. 1st Reader	9.30	....	"	"	N. W.
3. 2d Reader	9.30	....	"	"
4. Arithmetic A	9.40	Read.	"	....	Words
5. Rest	10.00				
6. Arithmetic B	10.05	Arith.	Rd—Geo.	Bookkeep'g	Draw
7. Bookkeeping	10.25	B. W.	"	....	B. W.
8. Rest	10.45				
9. Chart	11.00	Lang.	Writ—Spel	Hist.	....
10. Arithmetic C	11.05	"	"	"	N. W.
11. 3d Reader	11.30	....	"	"	Words
12. 4th Reader	11.30	Read.	—C	Writ.	
Geo. B	11.30		—C	11.30	
13. 4th Reader	11.45	B. W.		Phys—Cons	B. W.

AFTERNOON. STUDIES AND DESK WORK.

Order of Recitation.	Time.	1st and 2d Reader.	3d and 4th Reader.	5th and History.	Chart.
1. Chart	1.00	N. W.	Def.—His.	Geog.	....
2. 1st Reader	1.05	....	"	"	N. W.
3. History A	1.15	"	"	"	....
4. 2d Reader	1.30	Read.	"	"	Words
5. History B	1.40	"	"	"	....
6. Writing A	1.50	Draw.	M. D.	Gram.	Draw
7. Rest	2.05				
8. Writing B—					
Spell	2.10	....	....	Gram.	....
9. Roll Call	2.25				
RECESS	2.30				
10. Phys Con.	2.45	B. W.	L. W.	....
11. Geography A	2.55	Dismissed.	"	....	D's'm'd.
5th Reader	3.10		Abbrev.	....
12. Grammar A	3.10		"	....
13. Grammar B	3.25		"	....
14. Spelling A	3.40		Draw.	....
15. Singing	3.55		"	....

In the above, writing, physics, constitution, and third and fourth readers are to heard twice during the week, fifth reader [including history A pupils] once; geographies A and B, also spelling B, have three recitations weekly.

While the fourth reader recites the third is studying language.

Book-keeping means that while fifth reader pupils are reciting [arithmetic B], history A pupils are at book-keeping.

Reading means that first reader children are preparing for the reading lesson while the second is reciting.—*N. Y. School Journal.*

EDUCATIONAL OPINION.

A good teacher should be a good scholar. No one can teach what he does not know. In practice a fountain does not rise *as high* as its source. But mere knowledge will not make a successful teacher. Discipline is necessary in the school-room. A school may be well governed and yet be a failure. Silence is not always desirable. School government is not an end, but only a means to carry forward the educational work. The teacher who devotes his best efforts to maintaining order, will not have a pleasant school. It is the duty of the teacher *to teach* and govern and yet have order. The best system of government in the school-room is self-government. Let no one expect to have his ideal school at once. Time is necessary in all reformations. Much can be accomplished by an earnest worker. The old adage is true, that, "As the teacher is, so is the school."—*Normal Index.*

The *Christian at Work* says: "Dr. Thomas Arnold was confessedly the greatest teacher England has ever produced. And he was greatest not because he made boys understand quadratics best, or rendered them most capable in translating a difficult Latin text or scanning a subtle Greek verse, but because he impressed upon their souls new and noble ideas of manhood, of truthfulness, of purity, of honor, of helpfulness, of lofty and abiding attainments. His students went forth with the fixed and resolute purpose to be something and to do something among their fellows. They felt the thrill of a restless ambition imparted from his pervasive and mighty influence, inspiring them to pursue high aims and to be willing to sacrifice selfish interests and passions in order to achieve those aims. Accordingly no school ever produced such men and so many of them in proportion to their numbers as did Arnold's. If only his mantle might fall upon all teachers, what a brood of youthful giants would soon spring up from our school districts!

The proposition of Dr. Ferguson, of London, Ontario, that there should be a quarterly sanitary inspection of the public school and scholars in that city is a good one, and the trustees there exhibited wisdom in adopting it. We would wish that the trustees in every school in Nova Scotia would adopt the same. The inspection of the scholars will, at best, be cursory, but the schools and surroundings cannot be too thoroughly investigated. Every teacher would be expected to co-operate in the endeavor to keep the buildings and play grounds in the most perfect sanitary condition, and to prevent the schools from becoming agencies for the circulation of disease. *Eastern Chronicle.*

The object of the common school, remember, is not industrial. It should not regard children as the raw material of craftsmen and aim at making infants mechanics. They are in the flower of life and the fruit will be had if you give the flower free play and do not expect it to be fruit or even incipient fruit. The aim of the school is to make children happy, healthy and natural; to give them a love for their country and for one another; to open their eyes to the beauty of nature and the meaning of life; to give them a love for reading and a taste that will enable them in some degree to discern good reading from bad; and to form in them habits that will make the end of their schooldays to be but the beginning of their education.—*G. M. Grant before the N. E. A.*

The increase of the salaries of the Brooklyn primary and grammar grade teachers shows the growth of a healthy public sentiment as to the value of school work in the lower grades. For ages no one has doubted that successful college and university professors deserve good pay, but until quite recently few have advocated that primary workers should have first rate salaries. The fact is that the "dames" of olden times received little because they gave little, but, with the advent of the kindergarden, a new order began. The best teaching work began to appear in the lowest classes, while the professors stuck immovable and tenaciously to the ways of their grandfathers. We are beginning to realize now that good pay should be given for good quality wherever it may be found, and we are also beginning to see that it pays to give the very best to beginners.—*New York School Journal.*

There has been a question of much concern of late and one that should seriously occupy the minds of our ratepayers and that is, how are the experienced and qualified teachers of our province to be retained as instructors of the youth of our land. The fact is evident to all, that very few of our most talented teachers remain very long among us, for after a short time they seek a situation in countries where the remuneration is larger, or engage in a more lucrative business at home. The teaching profession is not held in the high esteem, in this county at least, that it deserves. * * * There is no economy so penurious, no wrong so intolerable as that which cuts down the pay of a teacher, and simply because they with whom they have to do are only children. Then let every effort be made in future to keep our experienced teachers among us as instructors of our young.—*B. N. in the Bridgetown Monitor.*

TOPICS FOR THE SCHOOL ROOM.

The famine in Russia still continues and the suffering is becoming more intense and widespread. It is estimated that 30,000,000 people are in want of food, and fears of an insurrection are entertained. The government has prohibited the exportation of grain, but relief measures are very tardy and ineffective. It is thought by some that Russia must engage in war in order to distract public attention from the condition of the country. The government discourages measures for private relief, and has undertaken to deal with it from an administrative standpoint. It has been discovered that very little of means devoted to relief reaches its destined end, being appropriated by corrupt officials.

There is a rebellion going on in China and foreigners are being very badly treated. It is rumored that there is an alliance between China and England against Russia, who is encroaching on the Chinese frontier.

At the next session of the United States Congress applications for admission as States will be presented from Arizona, New Mexico, Utah and Oklahoma.

France and Morocco are disputing over the ownership of Touat, an oasis in the Sahara. The oasis is valuable, as it is on the route between Algeria and Senegal, both French possessions.

A recent survey of the Alaskan boundary line between Canada and the United States has shown that the line has heretofore been located too far east. This has always been the Canadian contention. The change will give Canada the most valuable mining privileges in Alaska.

Preparations for the World's Fair go on apace. Montana is to erect a miniature mountain and construct within it a vein of ore, shafts, tunnels, drifts and levels. On the outside will be trees and grasses native to the country. On one side of the mountain will be a miner's cabin and on the other side a waterfall. California is to exhibit ostriches. A proposition is made to construct an immense globe building resting on the back of a giant and capable of seating 10,000 or 15,000 people. From the ground to the top of the building is 450 feet. A balcony represents the equatorial line. The semi-circular ceiling will represent the heavens, with the stars placed as they were on the night of October 11, 1492. The outside is to be of glass, except the space occupied by the continents. When lighted by electricity from within a distinct outline of the continents and oceans of the world would be shown.

France and Bulgaria are quarreling. Bulgaria expelled a French newspaper correspondent for meddling in political affairs. France, instigated it is supposed by Russia, demands his recall, Bulgaria, encouraged by Germany and Austria, refuses.

The United States government is hurriedly getting its navy ready to cope with Chili. It is not thought that there will be a conflict between the two countries, but often the best way to secure peace is to prepare for war. How do the two countries compare in products, wealth and population?

The British have had a brush with some of the border natives in India. The locality is called the Pamir Territory, on the border of Russia, China and India, the boundaries of which have never been exactly defined at this point. Russian intrigue with the natives is supposed to have caused the conflict. The British were victorious.

Some Mexican rebels have taken refuge in Texas where they were attacked by United States troops. There are conflicting reports of the result.

QUESTION DEPARTMENT.

STUDENT.—In teaching English text-books available, I find a lack of clearness as to when we shall use the past tense, when the perfect. My custom has been to teach the pupil to use the past tense when the action occurred at a certain time now past, and the perfect when the time though past is indefinite. Will some of your readers give their method of dealing with the subject?

As several mistakes occurred in the solution of the following problem, sent by Mr. D. R. Boyle, West Arichat, C. B., in the November REVIEW, it is here republished: A says to B, if the number of my apples squared be added to yours it will be 40; but says B to A, if the square of mine be added to yours it will be 22. How many apples had each?

$$\begin{aligned} x^2 + y &= 40 & (1) \\ x + y^2 &= 22 & (2) \\ (1) \times y &= x^2 y + y^2 = 40y & (3) \\ (3) - (2) &= x^2 y - x = 40y - 22 & (4) \\ (4) + 4(1) &= x^2 y + 4x^2 - x = 36y + 138 & (5) \\ (5) \text{ Resolved,} &= x^2 - \frac{x}{y+4} = \frac{36y+138}{y+4} & (6) \\ (6) \text{ Comp. sqrs.} &= x^2 - \frac{x}{y+4} + \frac{1}{4(y+4)^2} = & \\ &= \frac{144y^2 + 1138y + 2209}{4(y+4)^2} & (7) \\ (7) \text{ Ext. roots,} &= x - \frac{1}{2(y+4)} = \frac{12y+47}{2(y+4)} & (8) \\ (8) \text{ Transp.} &= x = \frac{12y+48}{2(y+4)} & (9) \\ \therefore x &= 6 & (10) \end{aligned}$$

SCHOOL AND COLLEGE.

The following students of the Tonic Sol-fa system under Rev. James Anderson, M. A., have been awarded elementary certificates: Alberta Forbes, Malcolm McLeod, Hannah McDonald, Laura Roberts, Murray Harbor, P. E. I.; Emma McInnis, G. W. Dill, Harriet D. Gregg, Lydia E. Williams, Grace L. Orr, Mary G. Gunn, Annie M. Hea, Eveleen Enslow, Bessie Wilson, June W. Estey, Belle Thompson, Kate Cotter, Mary E. Hayes, Bessie G. Thompson, Sister Ann Teresa, Sister Mary Joseph, Sister Mary De Chantal, Sister Mary Marcellina, Sister Mary Bridget, St. John; and the intermediate certificates to Harriet D. Gregg and Emma McInnis, St. John. Emma McInnis, St. John, has also received an elementary theory certificate.

The School at Eel River, York Co., N. B., under the charge of Mr. Girdwood, has a library of over 50 volumes. A recent entertainment enabled teacher and pupils to add quite largely to the number.

Misses Brown, Ganong and Beattie have been appointed by the St. Stephen Board to take the places of Misses Dibblee, Bridges and Lyle.

Miss Bessie Williamson, of Fredericton, has been appointed to the principalship of the school at Lincoln, Sunbury Co., N. B., in room of Mr. D. L. Mitchell.

On the 4th of December a concert and basket social was held in the schoolhouse, Round Hill, Greenwich, N. B. The proceeds, which amounted to twenty-three dollars, are to be devoted to a school library. The concert was a very great success. Miss Hanson, who taught an excellent school in the above district, has gone to the Normal School.

Prof. Crocket, of Morrin College, Quebec, spent the Christmas vacation with his family in Fredericton.

Miss Kate Hughes and Miss Douglas, of York Co., have been appointed to the Milltown staff.

Mr. S. C. Wilbur, that popular and efficient principal of the Moncton High School, was recently presented with a handsome gold headed cane by some of his admirers. It is also said that the Moncton Board testified to their regard for his services by a substantial increase of salary.

Miss Mabel C. Hunter, Fredericton, who has had leave of absence for the past term, has resumed her duties in the Charlotte street school of that city, and Miss Mary E. S. Nicholson takes the place of Miss Hume, who has resigned her position in the Wisely school.

Miss Fanjoy, of Nerepis Station, has taken the primary school in Fairville. Miss Henderson, of Westfield Station, has been succeeded by Miss Simpson. Miss Howe, lately of Welsford, takes the school at Sutton, vacated by Miss Ida Dayton.

Miss Ida Mitchell, one of Charlotte County's best teachers, has retired, much to the regret of the people of Waweig. She will have the best wishes of all who know her in her new field.

Mr. J. W. Richardson, teacher in Bloomfield, K. Co., has recently been at work establishing a school library for his district. His efforts so far have been very successful.

Prof. Anderson has completed his work of instructing the teachers in St. John. He has been engaged at the Truro Normal School.

Mr. Herbert H. Shaw of Kensington, P. E. I., is taking the course of electrical engineering at McGill College, Montreal.

The new Science buildings of McGill College are nearly completed, and lectures are being given there to science students this winter. The number of students in the course is twice as great as that of last year, and in all the courses the number of students is in excess of last year.

Steps are being taken towards establishing a manual Training Department in connection with Horton Collegiate Academy, Wolfville. The friends of the institutions at Wolfville—and they are legion—will gladly hear of this and other advances in educational development. The matriculating class in the academy was large this year; the seminary is full to overflowing, and the college classes are large. The new seminary is approaching completion, and the buildings are being lighted by electricity.

Miss Kate A. Kerr has succeeded Mr. Edwin Frost in the principalship of the Peel street school, St. John.

Inspector D. B. Wetmore is again home from Boston. It is understood that he is much improved in health.

Teachers are again reported scarce by the Inspectors in New Brunswick; second class male teachers especially so.

After a six months rest Mr. A. E. Pearson, of Apohaqui, N. B., takes charge of the Buctouche superior school in place of T. E. Cohnan, A. B.

Mr. A. Weldon Colpitts, of Dorchester, has accepted a school at Jolicure, Westmorland County.

Mr. A. C. M. Lawson, recently of Deer Island, N. B., has been appointed to the staff of the St. Martins Baptist Seminary.

Mr. E. W. Lewis has been appointed to the principalship of the Campbellton superior school in place of Mr. C. P. Steeves, resigned.

Miss Creighton of Compton Avenue School, Halifax, so favorably known to many readers of the REVIEW as teacher of Botany in the summer school of science, will teach in the Academy during the rest of the current term. Her pupils at Compton avenue have been competing for a prize offered by H. Harris, Esq., for the best collection of native woods. The first prize was won by Miss Isabella Mabee, the second by Miss Ella May, and the third by Miss Marion Dalton.

The Church School for girls, Windsor, N. S., closed last term with 81 pupils enrolled, of whom 61 were boarders. It opens this term in the new building with accommodations all taken up, for 84 boarders, ten teachers and ten domestics.

The public school at Grafton, N. S., under the efficient supervision of Mr. Herbert Best, is giving splendid satisfaction.—*The Berwick Register*.

In the town of Lunenburg there are six hundred pupils and twelve teachers. The academic department has been supplied with physical and chemical apparatus, and a fine set of mineralogical specimens presented by the geological survey department of Ottawa. The principal, B. McKittrick, B. A. (Dal), made his mark as an educationist in building up the Sydney Academy and attracting to it pupils from all the adjacent counties. He is now doing a similar work for Lunenburg.

A very handsome building has been recently put up by the School Trustees of St. John, adjoining the Victoria School, and serving as a second annex to it. The building is of brick, comfortable and commodious throughout, designed to accommodate four departments from the main building, leaving the upper storey of the Victoria for use as a public hall, and for museum and laboratory purpose. The departments withdrawn from the main building are those taught by Miss Williams, Miss Esty, Miss Adam and Miss Gregg. The parents of the pupils gladly welcome this change, as it does away with the necessity of young children climbing so many flights of stairs.

BOOK REVIEWS.

GREEN'S SHORT HISTORY OF THE ENGLISH PEOPLE, Part III. Price 1s. Publishers, MacMillan & Co., London, England. The third part of this excellent history has been received. No teacher could make a better investment than to expend one shilling each month for this handsomely illustrated work. As it comes out in parts the cost would not be felt, and in the end there would be in his possession one of the best works on English history extant.

FIVE SHORT COURSES OF READING IN ENGLISH LITERATURE, by C. T. Winchester. Publishers, Ginn & Co., Boston, Mass. This little book, containing courses of reading with biographical and critical references, will be found of great benefit to those who are desirous to undertake a systematic study of our literature.

DR. PICK'S FRENCH METHOD. Price \$1.00. C. W. Bardeen, publisher, Syracuse, N. Y. This method of acquiring a knowledge of the French language is simple and natural, and from beginning to end is adapted to train the reasoning faculties.

LE MISANTHROPE, par Molière, and DE L' INSTITUTION DES ENFANS, par Montaigne, are two cheap paper editions for students. Published by Ginn & Co., Boston, Mass

THE PROMETHEUS BOUND of Æschylus, with the Fragments of the Prometheus Unbound, with introduction and notes by N. Wecklein, Rector of the Maximilian Gymnasium of Munich. Translated by F. D. Allen, Professor in Harvard University. Price \$1.50. Publishers, Ginn & Co., Boston, Mass. This is another of the college series of Greek authors edited under the supervision of John Williams White and Thos. D. Seymour, which, with its careful editing and arrangement of full and convenient notes, have proved of such advantage to students. The typography and excellent binding of this volume are fully equal to any of its predecessors published by Ginn & Co.

THE STORY OF OUR CONTINENT; A Reader in the Geography and Geology of North America. For the use of schools; by N. S. Shaler, Professor of Geology in Harvard College. Publishers, Ginn & Co., Boston, Mass. This is an attempt by an author, thoroughly competent to perform the work, to combine what is known of the physical geography and geology of this continent. It is not a treatise on geography or geology, but an admirable blending of both, the aim being to present only those features which can be shown in their relation to the geological development of the continent. The teacher after reading this book can invest with new interest the study of the geography of the American continent.

A B C OF THE SWEDISH SYSTEM OF EDUCATIONAL GYMNASTICS. Price 75 cents. F. A. Davis, publisher, Philadelphia and London. This is a clear and practical handbook of the Swedish System of Gymnastics which has found such favor in the Boston schools. The book is illustrated, and the directions to the teacher as well as the reasons for each exercise are plainly stated and easy to follow.

SELECTIONS FROM OVID; edited by J. H. and W. F. Allen and J. B. Greenough. Price \$1.65. Publishers, Ginn & Co., Boston. This is another book of the excellent "Allen & Greenough series" published by Ginn & Co., and which are finding such favor with Latin scholars, both on account of the reputation of the editors and the admirable typographical style in which they are presented to the reader. The selections in this book have been carefully made, such as will best show the variety of Ovid's style and genius; the notes and vocabulary are full and the illustrations attractive to the student.

MOTHER'S PORTFOLIO. \$2.25. Alice B. Stockham Co., publishers, Chicago. This is a collection of articles on Kindergarten principles and praxis of great value to the primary teacher. We specially commend to their notice Col. Parker's article on Boston Kindergartens, Dr. Hailmann's articles, particularly that on Number. Some papers on the use of the Second Gift, Ball, Cube and Cylinder will open the eyes of even kindergartners. The book is beautifully illustrated, and its stories for little ones to read, or be told them, will prove richly suggestive.

NURSERY FINGER PLAYS, by Emilie Poulsson. Illustrated by L. J. Bridgman. Music by Cornelia C. Røskse. Alice B. Stockham Co., publishers, 277 Madison St., Chicago. Price \$1.25. This lovely little book for kindergarten and home is conceived and executed in a spirit and manner that would have delighted Froebel's soul. Eighteen songs are illustrated so aptly that any mother can learn to use them with her little ones to whom they will be a perpetual delight. "All For Baby," No. 8 has already fascinated thousands of children with its gay mimicry of things that even a baby can enjoy.

Current Periodicals.

The Century for January contains a portrait of Gounod and a paper by this celebrated French composer, which is one of a musical series which will make *The Century* attractive to lovers of music during the coming year. The stories and poetry of this number are especially interesting. . . . *St. Nicholas* for January is rich in verse and in beautiful illustrations. . . . *Garden and Forest* (New York) for Christmas week contained, as its leading illustration, a timely one of a Grove of Hemlocks whitened with lately-fallen snow, and in an editorial article the stateliness and grace of this northern evergreens are celebrated. There are pictures, too, of a rare Orchid in bloom, and cultural directions for growers of fruit and flowers. . . . *The New England Magazine* (Boston) for January contains an article which will prove especially attractive to readers, on Phillips Brooks—his youth, early manhood and work. Other poems and stories make up a very interesting number. . . . *Wide Awake* (D. Lothrop & Co., Boston) contains a description of the new Leland Stanford, Jr., University in the State of California—that tender and magnificent memorial to a bright and most lovable boy by his parents, Senator and Mrs. Leland Stanford. The number contains a series of bright stories interesting to old and young. . . . *The Academy Record*, published

(Continued on page 178.)

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by the students of Sydney Academy, Cape Breton, has reached the first number of the fourth volume. Its eight pages are mostly taken up with correspondence and an original poem of considerable merit. It would be well for some other academies to follow the good example of the Sydney boys, to stimulate original composition and to create a pride in their own intuitions by having their own paper. . . . *Grip* offers prizes of \$30, \$20 and \$10 for the best short, humorous article, story, poem, narrative or character sketch sent in before March 1, 1892. The prizes will be awarded not so much on literary merit, as upon the humor and aptness of the concept. Professional writers being debarred, there is a fair field for all of a literary turn. Here is a chance for young writers to test their abilities. See announcement in *Grip*. . . . *Littell's Living Age* begins with Jan. 2nd its one hundred and ninety-second volume. This standard weekly magazine grows more essential every year to readers who wish to keep abreast with the best current work in literature and science. For fifty-two numbers of sixty-four pages each (or more than 3,300 pages a year) the subscription price (\$8) is low; while for \$10.50 the publishers offer to send any one of the American \$4.00 monthlies or weeklies with *The Living Age* for a year both postpaid. Littell & Co., Boston are the publishers. . . . *The Popular Science*

Monthly (New York) for January has several excellent articles tempting to the student, such as "Communication with the Planets," "Our Population and its Distribution," "An experiment in Education," "The Population of the Earth," "Sketch of Elias Loomis," and others. . . . *Canada* for January, has a most interesting table of contents, and is ahead of any previous number; published by M. R. Knight, Benton, N. B. . . . *The Atlantic Monthly* (Boston) for January has a rich and varied table of contents, among which are "James Russell Lowell," by Henry James, "Birds and 'Birds,'" by Edith M. Thomas, "John Stewart Mill and the London and Westminster Review," "The greatest need of College Girls," by Annie Payson Call, "The Political Situation," "English Composition" and others. . . . The Christmas number of *The Argosy*, Mt Allison, Sackville, was bright and appropriate to the season. It contained portraits and sketches of Hon. Justice Burbidge, Prof. Mack, of the Conservatory of music, and Dr. Burwash. . . . The first number of *School and College*, published by Ginn & Co., Boston, has been issued. It is devoted to secondary and higher education, and is edited by Ray Greene Huhling. It gives promise of an excellent and useful career. . . . Thanks to that excellent journal *L'Enseignement Primaire*, Quebec, for New Year's greetings, which are heartily returned

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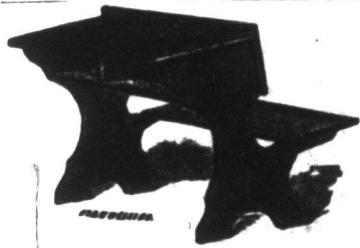
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- FACULTY OF APPLIED SCIENCE—Civil Engineering, Mechanical Engineering, Mining Engineering, Electrical Engineering and Practical Chemistry—(September 15).
- FACULTY OF MEDICINE—(October 1st).
- FACULTY OF LAW—(September 7th).
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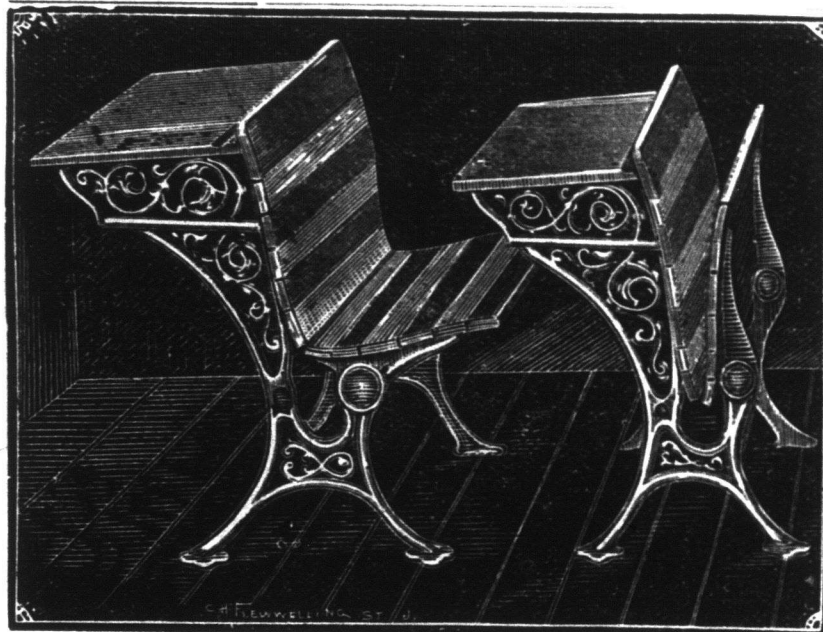
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