

THE EDUCATIONAL REVIEW.

FOR THE ATLANTIC PROVINCES OF CANADA.

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ST. JOHN, N. B., JULY, 1896.

WHOLE NUMBER, 110.

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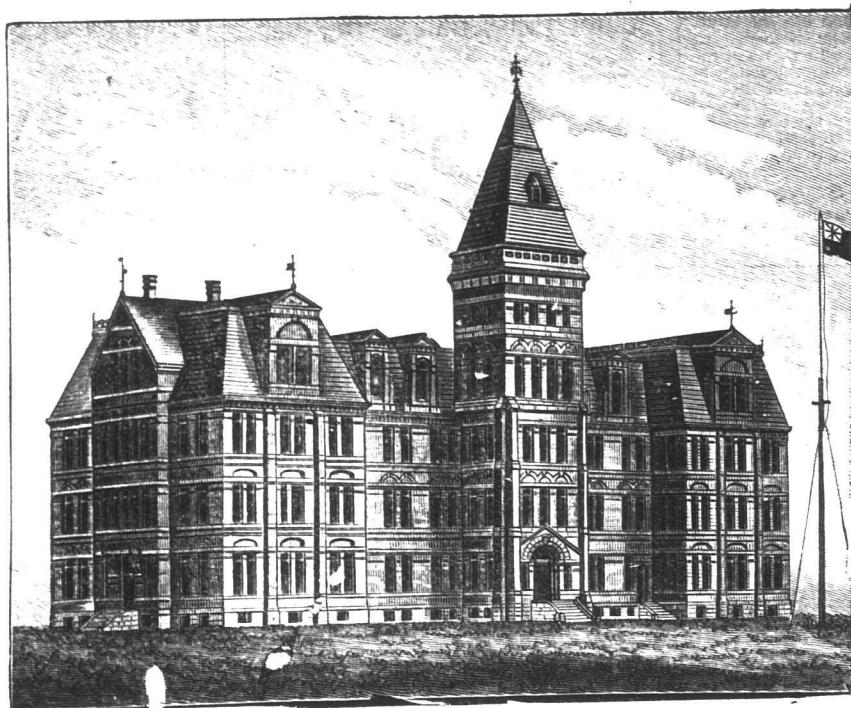
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Devoted to Advanced
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G. U. HAY,
Editor for New Brunswick.

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Editor for Nova Scotia.

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Editor for P. E. Island

THE EDUCATIONAL REVIEW.

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THE wisdom of the change by which new pupils have been prevented from straggling into the schools from March to June to their own detriment and that of the pupils already there, has been fully exemplified. The primary grades, always full in the spring, have not been overcrowded and constantly interrupted by pupils, who come when they would generally be the better for waiting another year. These pupils beginning at the same time and sure of the teacher's undivided attention, are given constant and profitable employment and exercise. They do not become weary of school in the first few weeks, and do not infringe upon the rights of others. It is a case of the greatest good to the greatest number. Parents, too, have fallen very naturally into the present arrangement, and when it is explained to them consider it the better way. The slight opposition that has been shown to it has not been caused by parents so much as by one or two officious school officers, who raised objections and gave permits without any authority whatever, even from their own boards.

THE July number of the REVIEW is published earlier than usual in order to reach teachers before the vacation begins.

ATTENTION is called to the notices of the N. B. Educational Institute and to the Summer School of Science. It is expected that both meetings will be largely attended.

WE again remind our readers to give us early notice of any change of address made necessary by their removal to new scenes of labor, so that the REVIEW for August, which will contain many helpful suggestions on beginning their work, may reach them without delay.

THE closing examinations and exercises of the New Brunswick Normal School took place in the early part of June. The year's work was very successful and the industry and application of the majority of the students is spoken of in very high terms. For excellence in professional work the senior class medal was awarded to Miss Ida Hanington, of the Girls' High School, St. John, and the junior class medal to Miss Edna Floyd, also of St. John. Miss Maud Narraway of the Girls' High School, St. John, conducted the examination in reading. We congratulate the normal school staff on the successful work of the past year.

IN 1889 a movement was set on foot to have prepared a text-book on Canadian history, to be written from a Dominion standpoint. Manuscript from fifteen competitors were handed in last July, each competitor writing under a *nom de plume*. The committee appointed to decide on their merits met in Quebec the same month. After selecting what they considered the best four, they continued the work at home. The result was recently announced as follows: First prize, consisting of a royalty of ten per cent on the retail price of all books sold (estimated at from \$25,000 to \$50,000, if the book be adopted by the different boards of education throughout the Dominion), won by Mr. W. H. P. Clement, B.A., LL.B., barrister, Toronto. Prizes of \$200 were awarded to Miss Emily P. Weaver, Toronto; Dr. E. T. Eede, Leamington, Ont.; and Prin. J. B. Calkin, Truro, N. S.

THE appointment of Rev. Dr. Macrae, of St. John, to the principalship of Morrin College, Quebec, is one which gives the greatest satisfaction, except, perhaps, to the congregation who thus lose the services of an eloquent, large minded and genial pastor and friend. Prof. A. E. MacIntyre and Prof. Gunn, both of St. John, have been appointed to chairs in Morrin College, the one in chemistry, the other in modern languages.

Public Schools and College Closings.

The stand taken by the pupils of the public schools in the various college closings is especially gratifying to their friends, and should be equally convincing to their critics. In colleges and examinations for entrance into most professions, the public school concentration competition with the private, as most wealthy people choose to send their boys and girls to the latter. There is this difference, however, that while the best products of the public schools may not, from various causes, reach the competing ground, the best students of private schools are the ones who are certainly to be met with, as they are not necessarily hampered by lack of means. In all such competitions, whenever held, the pupils prepared in the public schools have demonstrated their ability to keep fully abreast, if not in advance of those instructed in the private. Many instances might be pointed out but it would scarcely be the good taste to particularize.

This much might be said, however, that very little notice seems to be taken of these achievements of pupils of the public schools by those who are most ready to criticize them for any supposed failure. Last year's law examinations may be instanced as a case in point. The public schools were not responsible except for those who made best the shew, but that did not prevent censure.

While no fault can be found with lauding the successes of the private schools, it is only fair to expect similar mention of successful students as coming from the public schools.

The Institute at Fredericton.

The following is for the information of teachers and school officers who propose to attend the approaching meeting of the Educational Institute at Fredericton. When buying railway tickets teachers should always ask the agent for a standard certificate properly filled in and signed by him, in order that they may be able to secure their return free, or at a reduced rate. A part of the journey is by one line and part by another, be careful not to buy a through ticket if you start at the starting point on each line and use the first line's certificate at each. Apply for these certificates in good time, so that the agent will have time to fill them in before the train starts. Any railway agent who does not issue certificates will accept of them from the secretary of the Institute.

The International and most of the other railways grant a free return to members of the Institute, but the Canadian Pacific requires a first class ticket

going and on third or one half of that amount for return fare. The Star Line of steamers will issue return tickets between St. John and Fredericton for one fare one way and for whole distance and return.

On Dominion Day besides the regular sports and amusements of the day, special arrangements will be made to enable the teachers to pass the time pleasantly and profitably. Various cheap excursions have been planned for the day. In the evening a conversazione and promenade concert will be held in the Normal School building.

Examinations.

Some time since our public schools were found fault with because a number of students were badly "plucked" at a certain professional examination. The grotesque answers made by some of the students were held up to ridicule. But because a few students—and it was not known that these graduated from the public schools—made careless and ridiculous blunders, it was certainly unwise to condemn the schools or the teachers of these young men.

It is a case of women, perhaps disgust, sometimes to an examiner to read the answers to papers by students whose wits for the time have evidently gone a wool gathering. Here is a case in point. A student of German history, who had been under a clever and skillful teacher, thus grappled with the problem: "Write a brief note on Delphi." The answer was: "Delphi was a philosopher who lived in the early part of the nineteenth century." Can such an answer admit of explanation other than carelessness or stupidity on the part of the pupil? A German pedagogue placed on the title of a school book he had written the motto: "It is not possible to over-estimate the stupidity of your pupils." A few of our pupils would protest against this, there is reason in it, and the teacher might apply it to himself in this wise: "It is not possible to make the work too plain for pupils."

But another view may be taken of some answers to examination questions, and the remarks thereon of William Hawley Smith, author of the "Evolution of Drama," are interesting.

Some of the errors that the children made were as follows:—"Along these is a system of mountains."—"Con- (20th) to a mountain."—"I have a man who likes a good winter."—"The leopard is watching his sheep."—"The strawberry crop was magnanimous."—"Ben Johnson is a good Shakespeare in some respects."—"An error is a mark as the distance on the keyboard, from the prime to the next."—"Elocution is opening the mouth wide."—"The theory that intuitive truths are

discovered by the light of nature originated from St. John's interpretation of a passage in the gospel of Plato," etc., etc.

Taking these samples as they stand, it is not very difficult to see how they have come about. "Aborigines" looks and sounds a good deal like Alleghanies; and it does not seem to me as either the strangest or the funniest thing in the world, that a child should get the two mixed up, especially under the galling fire of a written examination. And so "conjugate" and corrugate are ever so much alike, and "ipecae" and epicure are not strangely different, when considered as mere words, which is all that either of them can be to most of the children in the schools.

And so "leopard" and shepherd sound very much alike, and "magnanimous" means generous, which in the synonyms is set down in the same row with bountiful, which is probably what the poor child was feeling for when he or she made this blunder. So surpassed was what was meant for "survived;" and nearly every other word blunder in the whole list can easily be traced.

You have seen blunders such as these, made by pupils who had the *very best* of teachers, have you not? I have many, many times. To be honest, I have had the like happen to me, both as pupil and as teacher! Haven't you?

Because some one does not know just what you and I know, that is no sign that that some one is a fool; and yet how prone we are to set such people down as foolish, especially if we can trip them up on something we are especially pat on.

Is it human nature that makes us like to do this, or is it the devil? Surely it is not the spirit of the Master in us that leads us to be guilty of such graceless actions.

And it is so easy for us all to go astray where we do not know.

There was once a doctor of divinity driving through the woods, and pondering a sermon as he went. His horse shied, and ran his buggy against a stump, and broke a shaft. The D. D. was at his wits end. He could argue out the salvation or damnation of a race, to a fraction of a unit, but to mend a broken shaft, that was too much for him.

Just then a little negro boy came along, and to him the D. D. said: "My boy, you doubtless observe the unfortunate predicament in which I am placed. Can you suggest anything to relieve the perplexity of the situation?"

To whom the colored youth replied: "Lord, I do'n' kno' nuffin' bout dat, Boss; but I reckon I ken men-

dat shaft!" And he whipped out his pocket knife, cut a sapling, which he cut down the middle, then took off the halter-strap and put the shaft into splints in five minutes.

As he was working away, the doctor said: "Now Samuel, I am a much more erudite person than you are have had far greater advantages; and yet you can mend that shaft, and I cannot. How do you account for that?"

And the boy said: "O, Lord, Boss, dat's easy 'nuff. Some folks knows more'n other folks, jes' natcherul!"

And that's just it! Neither the boy nor the man were fools! But each was strong in his own way. When will we learn, in our public schools, to examine the D. D.'s in theology, and Sambo's on splinting broken shafts? When we do that, no one will write a book on the blunders of examination papers, for there will be no blunders to write about. Meantime, let us be merciful before we "get gay," lest we prove ourselves to be more foolish than the supposed fools we laugh at.

TALKS WITH TEACHERS.

Before school closes each teacher in charge of a school library should see that all books are called in and the library secured until school re-opens. The library book and catalogue should be left where the next teacher, if there is to be a change, may have ready access to them, in order that he may see where his responsibility begins. Books loaned during the vacation are much more liable to be lost than during other times. If any books need repairs it would be a good time to have it done, and the vacation is also a convenient season in which to look around with a view to adding to the library.

This is the time of change, and there is one advantage teachers have now that they did not enjoy formerly. They have the whole vacation in which to locate themselves, and have not to pack up at short notice, and perhaps then lose considerable time. Most teachers are aware that unless their agreements specify that the contract is to terminate in June of that year, that it does not terminate until the end of the year, but I would strongly advise any teacher who feels that his services are no longer agreeable to the district not to insist upon the strict letter of it, and not to render his position uncomfortable and injure his reputation as a teacher, perhaps, by remaining. Above all things do not apply in a district where you *know* there is to be no vacancy, and do not offer to teach for less than your predecessor.

There seems to be some misapprehension among teachers and school officers regarding notice to quit.

Some secretaries take it upon themselves to notify teachers without consulting the board, and perhaps against the wishes of the majority of them. Such notice is of no account. To discharge a teacher, a trustees meeting should be called to give an opportunity for all to be consulted. If a motion to dismiss the teacher be carried, it may be entered in the minutes and the secretary instructed to act upon it, or a written order may be given to him to act upon it, or, as is usual and the better plan, a notice should be sent the teacher signed by the trustees, or a majority of them. If this notice is signed by only two of the board, it will be invalid if the third has not been consulted.

This is the term in which teachers are most plentiful, and some, no doubt, will have difficulty in obtaining situations. At this season the inspectors have numerous applications, and probably will be able to place some of the applicants, though not by any means all. They naturally will endeavor to place first those teachers of tried experience. It must not be supposed, however, that the inspectors have to do with all the vacancies in their districts. Some school boards always consult them, others listen very respectfully, and will appoint, if they are cheap enough. Some boards seem to enjoy the exclusive dispensation of patronage, others have friends or relations whom they wish to appoint, and there are still others who always want the cheapest. Do not expect an answer by return mail. Do not ask for a list of all the vacant schools in the district. Do not ask for an open certificate, but rather refer the trustees to the inspector for information. Do not fail to notify the inspector, if you have applied to him, of your acceptance of another position, in order that he may take your application off the file. Do not omit to enclose a stamp or postal for reply.

Permit me to wish you all a most pleasant and enjoyable vacation.

No teacher can expect to accomplish as much in *book learning* during the hot days of June as during other and cooler months. There is a lassitude of body accompanied by a corresponding languor of mind which puts study out of the question. The mind must be aroused from this lethargy, but dull lessons will never do it. The soiled, much thumbed school books, should frequently be laid aside and the fresh, wonderful living book of Nature opened in their stead. Go with the children, if only for a few moments, out into the fields, the woods afford even greater pleasure if you are so fortunate as to be near them, making friends with the birds and flowers. Drink in Nature's life and freshness and grow stronger thereby. *Exchange.*

For the Review

Arithmetic.

A rule in Humblin Smith's Arithmetic, "Multiply the compass of a room by its height to find the area of the four walls" may be illustrated by means of a half sheet of foolscap.

Fold the paper so that the two shorter edges meet in the centre on the same side. Then fold again by bringing the two ends together again. Open the paper and fold again so as to form a hollow prism. The four walls of the room would be represented by the paper. Open the paper and a rectangle is shown, the area of which is found by multiplying height by the breadth (the sum of the two ends and two breadths of the room, or the compass).

Place blocks to represent the walls of a building. Move the blocks outward by taking one side and placing it in line with the next until the four sides or walls are in line, then the cubic content can be found by multiplying the compass by the height and the product by the thickness. Cut openings in the paper to show the place of doors or windows. Fold the paper to show that a twelve inch cornice need only to be considered as diminishing the height by that much, if the walls are to be papered.

It is sometimes helpful to the scholars to be shown that $8 \div 9$, $8 \div 9$, $\frac{1}{3}$ of $\frac{2}{3}$, $8 \div 9$ have the same value and are only different forms to express the same idea. If the expression can be readily expressed decimally it might also be added.

How many teach that square measure is derived from long measure, and that areas of all rectangles are found by the same rule? Start with the window panes. So many panes in width, so many in height, how many altogether? The desks next, the seats, rows of books on shelves, then squares, so many inches long and so many wide. But I am afraid I am only writing old ideas and occupying space that would be otherwise better filled, but these things are new to me. *LEX.*

MARKING LESSONS; A BAD HABIT. Daily marking in the presence of the class, and indeed daily marking in any form, is small business. Marking should be done at leisure and with some degree of perspective, hence not too often. Marking once a week, or perhaps once a month, gives the instructor an opportunity to make a juster estimate of a student's proficiency than a daily mark made in class.

On the other hand, well prepared memoranda of queries, of students to be called on, of notes to be given in assigning the next lesson, and of *agenda* in general, give one respect for an instructor. *Inspector Titon.*

Teachers' Institute of Cumberland and North and West Colchester.

On Wednesday, May 6th, the delegates to this institute gathered in the little town that lies beautifully situated between the Cobequids and the Basin of Minas. The bright sunshine whitened over the houses of the contented community of Parrsboro. The fine weather continued throughout the convention. In the evening the delegates proceeded to Smith's Hall, where they were received by the local teachers and the citizens. A welcoming address was given by Principal McKay of Parrsboro, and was replied to by Inspector Craig and Mrs. Leonowens. Music, readings, refreshments, and the flow of social intercourse, all contributed to make the evening a very enjoyable one.

The eight departments of the school were held in session for a short time on Thursday morning that the visiting teachers might learn some of the methods of the local staff. After Inspector Craig had formally opened the institute, he called on Principal Ruggles of Acadia Mines, to read a paper on the "Practical Teaching of Grammar." He deplored the fact that the necessities of examination by the education office required the use of the text-book in grammar. However, let the definitions be studied orally, and the reading book be used to illustrate the various parts of speech. Let the pronouns be studied with especial care in order to elicit rules of government and syntax. It is essential to give abundance of written work in order that the pupil may have a practical grasp of the subject. Five minutes in writing sentences containing past tenses and past participles will be more helpful than half an hour of study of the text-book. Only the most general principles of parsing and analysis should be taught in grades VII and VIII. As there are many debatable points in grammar, these may be used for the purpose of inducing the pupils to weigh facts pro and con, as he must afterwards do in real life. Other speakers forcibly condemned the use of the text-book in grammar. Some thought that English could be taught more effectually on the play ground and at the breakfast table than in the school-room. One speaker dwelt on the desirability of inspectors putting into practice during their visits to the schools the above theories, on which they had set their mark of approval.

The rest of the morning was devoted to methods of teaching English composition. Miss Archibald's method was as follows: During the reading of Mr. Ruggles' paper, she had dictated a passage of simple English to a class of pupils in another room. She then brought these before the institute, had two of the best compositions read, and noted from the exercises of the others

some of the principal faults to be avoided. She wrote the faulty sentences on the board, and made the pupils notice the errors and suggest the correct methods. In the discussion one teacher explained a convenient method of calling the pupils' attention to errors in their exercises. In correcting them use abbreviations such as W. S. for wrong spelling, W. F. for wrong form. This both saves the teachers' time, and arouses the scholars' interest by making them find out through the symbol what the mistake is. The too frequent use of the conjunction can be avoided by means of frequent drill. After practical work in English in the common schools, the study of grammar will be a pleasure to pupils in the high school. The council of public instruction should proscribe grammar up to grade VIII, instead of prescribing it.

The afternoon session was opened by an address on drawing by Mrs. Leonowens, of Halifax, formerly governess in the imperial court of Siam. Enthusiastically and eloquently she discussed her great subject. Cave dwellers, she pointed out, were known chiefly by their drawings of objects. Adornment came before writing. Decorative art has been developed in every pre-historic race before the useful. The first writing of the Egyptians was by means of hieroglyphics. The hieroglyphic for a young man is the figure of a goose. All this is evidence of a most conclusive nature that drawing is an instinct in the human race. Pupils can be taught to draw before they write. Drawing from flat representations destroys the power to draw. Let us then take advantage of the inborn instincts of our children which are inherited from European ancestors, to whom great works of art were familiar, and begin in the kindergarten to draw objects. Our system of drawing from the flat may be compared to the Chinese custom of binding their women's feet. Raphael made his first drawing by sketching his sister's shoe. The Boston schools after fifteen years of drawing from the flat, have cast away this plan and have taken models. We should make our drawings from fruits, vegetables, busts, etc. The teacher should be able to draw every object he or she sees. Training might be given in the Summer School. The Boston national drawing course has a course of models. The expense in the long run would be much less than that of the present drawing books. A farther result would be the transformation of our villages with architectural buildings. There is, moreover, a great demand for boys who can draw, as skilled workmen. Such are led into every art and industry. Teachers in Germany and Russia, in teaching their nature lessons, cover the boards with the drawings of insects and dissect the same on the board to the intense delight of their child-

ten. The full and perfect development of a child is a divine trust to the teacher. Drawing has high moral value in keeping the draughtsmen, whose hand is filled with an ideal of duty, from coarse pleasures. We must make our pupils work the highest and most absolute play. In the discussion of the address, Inspector Craig stated that the net result of the teaching of drawing in our schools is very small. The previous speaker said that the proper way to prevent mistakes is by drawing guide lines. Let them study the light and shade in objects. Designing should come in after a course in modelling.

Miss Grant continued the treatment of the subject by giving the results of her experience. Convince the pupils of the vitality of the subject by making a drawing of an object and writing a description of it. Ask them which method would give a better idea of the object to a distant friend. The suitable materials for our present course are a lead pencil H. B., which must not be used for ordinary school work, an eraser, which is stroked only in the direction of the line to be erased and only employed for the purpose of removing unnecessary marks before lining in, and the edge of a piece of paper to test the accuracy of the measurements of the eye. The main thing is the accurate copy, but our curves should not be too stiff or formal. Clean lines may be taught by having the pupils sharpen the lead pencils before the lesson begins, by their having clean hands, and by their only using the eraser as stated above. For each individual lesson we should obtain the name of the design, notice the position in the field, the relative length of guide lines, and what model the object approaches. The two subjects of drawing and manual training are taught in school so as to form one.

By noticing the position of an object in the field, the book will present an evenly balanced appearance, and neatness will be promoted. In order to be able to represent the figure on any required scale it is necessary to know the relative lengths of lines in the objects. To keep up the interest encourage the pupils to make copies of any pretty designs. They often show surpassing originality in making designs of their own. The speaker said she had finished book No. V of the new course by giving three hour lessons a week during two and a half quarters. All pupils took the same lesson on the same day. Any work missed was done after hours. The inspector held that the people were against drawing, because its utility had never been successfully demonstrated to the pupils.

Miss Jean McLeod, of River Prince, read a paper on the subject, "How we try to keep up with the Times." At present, she stated, every nation is adding some

thing to the new subjects which are studied in our schools. Let us endeavor to get away from the book, and draw out of the child that which will fit him or her for future usefulness. We can teach them politics, not as expounded at the street corners, and we may induce the children to study the great subjects of the day. Every teacher might profitably subscribe to a daily paper. Connect the geography lessons with the study of the great events of the day. By arousing the interest of the pupils in their occupations and local industries, these may be raised to a higher plane.

One teacher in discussing the paper held that we should imitate the Americans, to a certain extent, in their attachment to their country. He took newspapers to the school, and gave lessons on current events on Friday afternoons. Another teacher recommended strongly debates on subjects arising from the great events of the day as a means of informing the pupils, and enabling them to express themselves fluently.

On Thursday evening a public educational meeting was addressed by Dr. Mackay, Superintendent of Education for Nova Scotia, and Mrs. Leonowens. Dr. Mackay considers that trustees who try to prevent their teachers attending institutes chase the penny and lose the pound. People who ask why we do not confine ourselves to the three R's do not consider that the educational authorities would not be likely to impose unnecessary subjects on the country. The teacher requires more all round qualities to please and lead humanity than the follower of any other profession. Drawing trains the muscles of the hand, so that the person who has trained his hand for drawing, has trained for every manual art. One who can draw is more likely to see everything about him. In competition with such persons we have no chance. As was the case with the study of the dark lines on the sun's spectrum, it pays to give attention to deviations from the general rule. Hence the value of a study which stimulates close observation. The metric system needs to be more thoroughly understood by our people. It is a decimal system, and is so arranged that if, for example, we know the capacity of a body we can easily calculate its weight. The meter is a good stride, the decimetre, a hand-breadth, the centimetre, the width of the nail of the little finger, the millimetre, the thickness of the thumbnail. Almost all the important countries of the world use the system, except Great Britain and the United States, while in these countries acts have been passed legalizing its use. A committee of the United States Senate has reported favourably on a bill making the metric system the only legal system after the year 1900. We must prepare for the change that is coming.

a change that will sweep out of our schools reduction and all compound rules. Reading, writing and arithmetic give power, but not a tendency. The old education overstocked the learned professions, the object of the new should be to increase the number of our industrial employees. The teacher may not know the names of some of the natural objects around her; but it is more important to know the objects themselves. It is at the school that the child first comes in contact with the outside world. There he or she is taught, "You must do to others, as you would have them do to you." This spirit may be encouraged by inducing the child to beautify the school room.

Mrs. Leonowens spoke on "The Need of Greater Public Interest in Education." Parents can help the teacher by watching the associations of their children, by enforcing church attendance, etc.

In Germany, the parent on bringing the child to school enters into a covenant to train it properly. This covenant is renewed whenever the pupil commits an offence. The general manner and character of the teacher is more important than the highest education. He teaches by the silent influence of his own personality; and should not be satisfied with pressing the pupil to pass examinations, but should inspire a love of knowledge for its own sake. Let the teacher's motto be, "Pure thoughts, pure words, pure deeds." While the teacher has little control over the associations of the child, he can make some efforts to keep the better children away from the more degraded. The teacher should make the child feel that the universe is his play ground, and that he must be familiar with every inch of it. In Germany, each child makes a collection of some one class of objects. Finally Dr. Thring had said, "It is not the children that I select for my pupils, but the parents I choose first."

On Friday morning, a series of five papers on the subject of arithmetic was read. The following are some of the more important points brought out in the treatment of this subject: Why should arithmetic be taught? It gives the ability to reason which will afterwards be of use in real life, it produces intensity and precision of thought, strengthens the memory, weakens the tendency to take things for granted, and strengthens the reflective powers. The practical value of the subject is very great. Indeed it has been degraded too much to mere utilitarianism. Our course of study would be weakened by the omission of a subject which leads to clear-cut thought. The idea of number is a product of the mind which, ruling the material, discriminates objects and forms an idea which has no reference to their appearance or composition. By examinations in

this subject the pupil loses conceit. As in a new country, roads are made which are sometimes not completed or not kept, so that they are soon grown up with bushes, such are the minds of pupils who have been taught in a fragmentary way without proper drill. Every time a child is trained to think logically, he forms a sequence of thought to be used in after life. Young children are better able to work with concrete numbers than with abstract. They have but little reasoning ability and will fall into mechanical methods, in which they should be thoroughly drilled. They often have difficulties with particular combinations of numbers and should be drilled in these. Let them make exercises of their own. No child can work to his satisfaction unless he can rely on his perfect accuracy in the fundamental processes. Arithmetical studies as well as the rest of a child's environment have an influence on the moral character. They are fitted to teach pupils obedience, fixed attention, and honor. Axioms of arithmetic are immovable laws. The moral man is one educated to submit rationally to higher authority. In the study under discussion, the child has to depend on reason alone. If a pupil does work without understanding the rule, or does it by obtaining help from another pupil, he suffers a great moral injury. The superintendent attached great importance to mechanical accuracy in arithmetic. He thought it wise to give little or no value to answers containing such inaccuracy. One teacher had made out a large number of different sets of questions on card-board. One of these was given to each pupil, and changed on the following day. In this way copying was made impossible.

Miss Sproul read a paper on "Nature Work." As more than ninety per cent of the children leave school without reaching high school work, there is a great deal of work left for the teacher of the common school in developing an intelligent interest in the world of nature. Unless there is careful preparation the results of the lesson will not be recreative, nor will it assist in developing accurate observing power. Only a genius can teach a subject of which he knows nothing. The teacher must have a direct knowledge of nature, supplemented by books; but a joyous interest in any branch of natural science cannot be aroused in the childish heart by teaching scientific terms and detached paragraphs from text-books. A branch of nature study which for this purpose cannot be neglected, is the study of the little ones under our care. Particular seasons of the year should be devoted to the study of particular sciences. Use scientific names; but do not treat every peculiar feature of a plant as if that feature had been

planned for the sole purpose of giving it a hard name. The living plants in the wood, a spider or mass of frogs eggs in a jar will create the most intense interest. Where is the propriety in spending weeks or months in drilling the children in capes and coast waters, and leaving always untaught the natural resources of one's own country. The observance of an occasional Arbor Day is hardly sufficient to call attention to the importance of our forests. It is wonderful how much can be done in the way of making apparatus with very simple tools. The world is transfigured to anyone who can read the glories of nature with an understanding heart.

On Friday afternoon, the highly important subject of superannuation of teachers was taken up. Principal Lay, of Amherst, read a highly interesting and convincing paper on the subject. There was no provision at present for aged teachers. The crown land grant was only open to those who had taught before the inception of the present school law. If any one deserves well of his country, it is the earnest and faithful teacher of its youth. The winners of the victories of peace fall without the reward that the victors in war have. In Chicago, female teachers are superannuated after twenty years of service, males after twenty-five years. The fund is made up of donations, legacies, and 1 per cent of the teachers' salaries. The maximum allowance is \$500. In our own province, the salaries of the teachers are wretchedly small. The salary of the writer was once £140 a year from all sources. The unjust rivalry, the under-bidding of each other, the ease with which the right to teach is won, the impossibility of getting rid of the poor teacher, all contribute to lower salaries. By the new fund two things would be gained, the removal of a faithful servant from a position faithful to him and injurious to him, and the way opened for a better service. The only feasible plan proposed yet, is that of Mr. Irving of the Education Office, and it is to the effect that all teachers of a certain age, who have taught the requisite number of years should continue after superannuation to draw their government grant till death. This would decrease the government grant slightly to those teaching, but the plan is to be admired for the ease and simplicity with which it could be carried into effect.

A resolution approving Mr Irving's scheme was lost by a vote of 32 to 36. The convention then adjourned.

There is in the teacher's profession the same difference which is observable in all human employments between the skilled and the unskilled practitioner, and that difference depends, in a large measure, on a knowledge of the best rules and methods which have to be used and the principles which underlie and justify these rules. *J. G. Fitch.*

Pensions for Public School Teachers.

From the N. Y. School Journal.

The question of pensioning teachers is being widely discussed just now. Friends and opponents of the idea are equally active to influence public opinion with their arguments. * * * The acknowledged model of modern systems of pensioning state officers in general, and public school teachers in particular, is that of Germany. The details of this plan, the reasons for it, the manner of raising the necessary funds, etc., are fully and clearly described in the new book by Dr. Levi Seeley, entitled, "The Common School System of Germany and its Lessons to America." This work, which is crowded with practical suggestions of highest value to teachers and school officers in general, contains also a chapter on "Pensions for American Teachers," which is here reprinted.

PENSIONS FOR AMERICAN TEACHERS.

Application of Pensions to America.—It is obvious that pensions according to the German method would not answer for present conditions in America. The insecurity of the teacher's position and frequent changes connected therewith, the lack of any systematic scale of salaries, and the comparatively insufficient salaries paid are factors that do not arise in Prussia. Instead of engaging in a work and carrying it out for a life time, or until called to a better position, as is the case with the German teacher, the American teacher is reappointed from year to year, when no adverse political or other influence prevents, but never has any security whatever of holding his place, however faithful, efficient, or successful he may be. Consequently the average length of the teacher's service with us is only about five years, instead of twenty-five, as in Prussia. There can never be a thoroughly successful school system in America until this is corrected.

Need of Pensions not so great with us.—Then, too, the need of pensions for American teachers is certainly not so great as is the need for German teachers. The salaries paid in America, while by no means what they should be, certainly in most cases admit of a comfortable living, and do not exclude the idea of saving something against the time of need. So there is not the need of pensions in any such sense as in Germany. Another fact must be taken into account in the discussion of this question. Prussia pensions not only her military but also her civil officials on a plan similar to that of the teachers. All railway and telegraph employes on the lines belonging to the state, all secretaries and government clerks, all post officials, of whatever kind, are entitled to pensions. With us pensions are chiefly limited to the army and navy, therefore the subject of pensions is regarded quite differently in the two countries. But the same reasons exist for pensioning these other classes in Prussia that exist for pensioning teachers, though not in the same degree, for the teachers are poorest paid of all state officers. And that reason does not exist in American civil relations, nor are civil officers continued long enough in service to warrant a pension.

Still pensions needed in America. But in spite of these different conditions it is certain that pensions for teachers is but just to them, and would work great good for the schools. The recent movements in various cities and states show that the subject is securing attention, and doubtless a solution will be found. It will not pauperize the teacher any more than it pauperizes the soldier in America, or the teacher in Germany. When teachers are recognized as state officers, and given permanent positions, as we have elsewhere demanded, the greatest difficulty, that of adjustment, will be removed. When teachers have met the requirements of the state and are admitted to the rank of permanent teachers, a pension could be granted them dependent upon the length of service, whether it be in one school or several. As in the army there are different grades of pensions for officers of various grades, and for privates, so in the teaching profession there should be different pensions for different ranks of teachers. * *

PRINCIPLES GOVERNING THE PENSION QUESTION.

1. The common school teacher should be entitled to the minimum pension after ten years' service, reckoning from the time of entrance into the rank of permanent teacher, without regard to the salary received, and this should increase from year to year.

2. The teacher of the advanced grade should be entitled to a larger pension than the above under the same conditions, his time to count from the time of his entering service after obtaining the advanced certificate, regardless of whether that service be in the common school or in higher work. This would be a proper recognition of those who have taken the advanced preparation and have not been able to secure work in the higher schools.

3. Principals, superintendents, and other school officials, upon whom greater responsibility rests, should be entitled to the pension of the high school teacher from the time of acquiring that rank, under the same conditions as No. 1, and an additional sum beginning with the time of their induction into the higher office. This should also increase with the years of service, and might again be granted as follows: 1. Principals. 2. Superintendents in cities under 10,000 inhabitants. 3. Superintendents in cities from 10,000-100,000. 4. Superintendents in cities of over 100,000. Provision should also be made for assistant superintendents, district school inspectors, etc.

4. The pension of female teachers should be two-thirds of that of male teachers of corresponding rank. This difference is necessary because upon the man devolves the responsibility of providing for a family.

5. The teacher should have the right to retire at the age of 60 as pensioner. If he withdraw before that time for any other cause than physical or mental disability, all right to pension should cease.

6. Pensions should be assumed and paid by the state. No other plan could be devised which would satisfactorily meet the present conditions and those that are likely to exist for some time to come.

The state to assume the responsibility of pensions. If left to the community, no teacher well along in years could obtain a position, as every community would be

bound to avoid saddling themselves with those who would soon become pensioners. Thus the service of the ripest and best years of a man's life would be lost to the state. Then, too, with so many changes of teachers, it would be difficult to decide to what community the burden of a pension belongs, or what part of such burden. Again, it would be a constant source of friction between teacher and people. The state alone, therefore, can best assume this responsibility, and it is proper that it should do this, as the teachers are its servants.

DUTY TOWARD PRESENT TEACHERS.

This plan marks out an ideal for the future, and is based upon the preceding reforms proposed. Until these reforms are inaugurated, what is to be done with those now in service who have given their lives to the state and to the training of the youth? These faithful men and women must be recognized, and some compensation rendered for their years of faithfulness and efficiency without adequate pay. The same general principles above indicated could be applied, the chief difference being in the grades of teachers. This, however, could be adjusted so that teachers of lowest grades should receive the minimum pension, which would be increased with the years of service. Perhaps no pension should be given unless the teacher has been at least twenty years active, and the amount would necessarily be less than in the above case, where broader preparation is demanded.

In so far as teachers have now met the requirements marked out as the ideal to be sought in the state, they should be entitled to a pension under that plan, and this should be continued until gradually all teachers will become entitled to such participation.

BENEFITS TO COME FROM PENSIONS.

Let us look at some of the results that might be expected from the adoption of pensions for the American teachers based upon some such plan as has been outlined:

1. It would encourage men and women to enter teaching and devote their whole lives to it, thereby increasing the number of teachers of experience and maturity.

2. It would give a permanency to the calling of teaching now sadly lacking, in that it would offer an added incentive to those who have begun to continue in the work.

3. It would give assurance which would remove anxiety concerning the future, and thereby enable all the powers of mind and body to be devoted to the school-room and to the interests of the pupils.

4. It would recognize the teachers as state officers, thereby adding to their influence in the community.

5. It would tend to systematize educational interests, and thus add to their efficiency and success.

6. It would necessitate the fixing of a definite standard of fitness for those who are to have the benefit of pensions, as the state would necessarily require a return for its investment; this could be assured only by high requirements of preparation and pedagogical fitness.

JUSTICE OF PENSIONING TEACHERS.

It may be urged that pensioning teachers savors too much of paternalism, and that the teacher should be paid a salary sufficient for his present wants and to enable him to save for the future. The teacher, like the pastor, must devote his life for the good of his fellow-beings, and therefore he is withdrawn from many active phases of life which would enable him to make and save money; he does not acquire business habits, nor does he have business opportunities that other men do. It seems that this must always be so if the teacher, like the pastor, is to be of greatest use to the community. Therefore let the state, which the teacher serves, do for him what the church, which the pastor serves, does for him. All churches have funds for the help of their old pastors who have given their lives for her; let the state do the same for the teachers who just as truly have devoted their lives for its interests.

Pensions are just to the teacher, and the state should recognize this obligation, thereby assuring its servants in their old age from want, and showing proper appreciation of a class of men and women who perhaps have done more than any other class in the establishment of the foundations of the state, which in a republic are laid in the intelligence and morality of its citizens.

School Examinations.

Much has been said for and against examinations as an educational means to an end, and there is no doubt that many pertinent things difficult to answer can be brought forward to show their inefficiency as tests of a student's ability in its highest sense. At the same time, however, there is no doubt that, until something better is found to take their place, examinations must form an element of every efficient system of instruction; for the object of instruction is not merely to place knowledge before a pupil, but also to see that he grasps the knowledge so presented to him and understands it aright. It is in this last connection that the usefulness of examinations is apparent. But there is another purpose which these so-called inquisitions are made to serve: they are frequently, perhaps always, for it is difficult to eliminate the competitive element, considered as tests of superiority. Though this latter element is not to be considered as the better one, there must be a judicious admixture of the two in every properly conducted examination. For, taking human nature into account, some advantage must attend success if the energies of the candidates are to be incited to their fullest.

Among the various school studies, it will be readily seen that some are better adapted for purposes of examination than others. For instance, in the case of subjects like classics or mathematics, where the pupil is required to do something, an examination is nearly always a good test; while in the case of others, such as

history or geography, where it is a matter rather of memory, unless the questions are well selected they are of little practical value. Yet, even in such subjects, an experienced and judicious examiner can set a paper that will be a fair test of the candidate's thoroughness of preparation. And here, more than anywhere else, perhaps, should be tested their knowledge of English composition and grammar. Lists of names, of kings or battles, of rivers or lakes, should be asked for in moderation, and should be replaced by short essays on topics connected with the subjects under discussion, the accuracy of the facts given being also taken into account in making the awards.

An examiner such as has just been referred to, never stoops to the perhaps too common practice of asking about unimportant things little likely to be known, or of giving prominence to details best left in books, to be sought there when wanted; in other words, he does not ask "catch questions."

One of the things often urged against the efficiency of examinations in general, is the fact that many pupils have a happy faculty for "getting up" just what is required shortly before the examination. It is said that they derive no benefit therefrom. No doubt there are such pupils, and, more than that, there are teachers who, having, as it were, made a special study of the chances of examinations, are able to "get up" a whole class for the ordeal, and have them pass with flying colors. But this is not altogether the fault of the examination, and even this aptitude is not without its value, for it shows a power of acquisition and retentiveness not to be entirely overlooked.

In spite, then, of all that can be said, not without some truth, to the contrary, examinations are valuable in at least three particulars. First, they act as stimulants to the doing of good work, though, of course, a danger lies here that scarcely needs pointing out. Second, they set a standard which may serve as a guide to a conception of what learning really is, hence that standard must not be too low. Then, most important of all, they incite the pupil to learn how best to produce his acquired knowledge, and how to express himself in a correct and logical manner. *Educational Record.*

A Pessimistic View.

From my own weaknesses, from what I know personally of teachers, and from what I read in educational papers, it seems to me that there is no other great profession in which, as among teachers, there are so many persons unintelligent of the real principles involved. We enter into the most risky of all callings with a jaunty assurance; we are confident that our common sense will carry us through; we feel that there is no competent judge about to estimate our work; we spoil and mangle; we dawdle and palaver; children grow in spite of our labors, not because of them. If the secret history of school management could be written, what a perfect record of stupidity, ignorance and nonsense would not my past (and present, maybe) and yours disclose? *N. O. McAndrew in School Journal.*

A Summer School at Home.

If you are able to attend a summer school, do so by all means, but do not feel that there is nothing to be learned at home, or wherever you may be located in vacation time. The field of research is so vast that one is obliged to concentrate upon some particular subject, and direct the energies toward it.

Some hints for summer work are here given, in the hope that some one may be benefitted by them. Success in teaching science depends not upon the material, but upon the close contact with nature to secure it. In botany, a study which affords wondrous resources, we may make the acquaintance with some flower families; for example:

Some members of them will be met with in the daily walks. Three or four teachers can form a botanical club, and send through the mail specimens of plants peculiar to the locality where they may be. The whole plant, roots, stems, leaves, blossoms, should be sent. Double or fold carefully and place in pasteboard box. Tie a little green moss around the roots, not wet, as wet things are not passed through the mail. If fresh when sent, they will be found in good condition for examination generally.

Some prominent families are these, identification being based on plan of flower generally. See how many of your specimens fall into them.

PLAN.

1. Ranunculaceae } 5's. Stamens on the receptacle.
or
Buttercup family }
2. Rosaceae } 5's. Stamens on the calyx.
or
Rose family }
3. Onagraceae } 4's. Flowers on a stalk like ovary.
or
Evening Primrose family }
4. Ericaceae } 5's. Anthers opening by chinks.
or
Heath family }
5. Labiate } Stamens four, two longer than the others. Square
or
Mint family } stems, opposite leaves. 2-lipped corolla. 4-lobed
ovary.
6. Scrophulariaceae } 5's. Stamens four, two longer than the others.
Round stem. 2-celled ovary.
7. Leguminosae } 5's. Like the pea flower. 1-celled ovary or 1 single
or
Pulse family } free pistil becoming a pod in fruit. Stamens
usually diadelphous.
8. Lobeliaceae } 5's. Milky. 2-lipped. Stamens united into a tube
commonly by their filaments and always by the
anthers.
9. Compositae } 5's. Flowers in heads with involucre or bracts around.
Stamens united by their anthers.
10. Rubiaceae } Plan of 2's. Leaves in whorls, or opposite, and
or
Madder family } stipules.
11. Cruciferae } Plan of 2's or multiples of. Ovary 2-celled. Stig-
or
Mustard family } mas 2's sessile. Six stamens, two inserted lower
than the others. The four petals form a cross.
12. Orchidaceae } 3's. Anthers on the pistil.
or
Orchids }
13. Liliaceae } 3's. Ovary free. Stamens 6.
or
Lily family }

A study of the wonderful distribution of seeds may be made. Gather, sort and mount specimens of all seeds found.

(1) Wind distributed, (2) self-sown or discharged by explosive power, (3) water transported, (4) seeds carried by man and animals, will be a good division to make.

The relation of the seed to the manner of its distribution will be well worth study. The use and disadvantage to agriculture will be seen.

In the case of the Russian thistle, lately introduced, see how well adapted it is to inhabit the land, regardless of the efforts made to exterminate it. It grows in round, bushy masses, about three feet high and six feet in diameter, furnished with prickles. These masses when dead and dry, but with thousands of seeds all ready, drift or are carried by the wind in enormous quantities. It is said that a single plant carries as many as two hundred thousand seeds.

An interesting study is that of the interdependence of plant and animal life, shown by the fertilization of flowers.

The various kinds of bees, moths, butterflies, wasps, flies, beetles, and some birds, all collect pollen and honey in one flower, and transmit it to another, thus producing cross fertilization.

Notice what kind of insects frequent certain flowers, as some are frequented by bumble bees, the willow by the andrena bee, Jack-in-the-pulpit by a kind of gnat, the thistle by many kinds of bees and butterflies, and so on.

See how large a list can be found during the summer. A list is given in "Elements of Botany," J. Y. Bergen, Ginn & Co., which, with many others there, will be found of value in these studies for comparison.

In mineralogy, everywhere specimens abound. Collect and identify if you can. Then those which you are unable to name can be submitted to an expert.

In meteorology the field is wide. The weather, its relation to climate and locality, will all pass under your notice. If you are at the seaside, you will notice the difference between the land and sea breezes; the fogs; if on the mountains, the air, its dryness and other features.

To those interested in the science of entomology, abundant material is available also. To find out the difference between a butterfly and moth, the day-flyers, the night-flyers, the connection between the color of plants and their visitation by insects, is extremely interesting.

A study of insects injurious to vegetation will be of value. To understand what the farmers have to contend with, this study will open one's eyes. Standard works on the subject and pamphlets published by the government can be had. *Adapted from Popular Educator.*

A Pedagogical Error.

Monday. "We studied an apple to-day, mamma,
I liked it, O, so well!
We all worked hard to find about
It's skin, it's form, it's smell."

Tuesday. "We cut an apple in parts to-day,
We studied it's pulp, O, my!
I got so tired, but then we must
Observe, and then classify."

Wednesday. "The seeds of an old apple to-day,
We studied their color well;
We talked about their form and size
But O! my interest fell."

Thursday. "To-day we modeled an apple, mamma,
I hate it all! You see
We talked and wrote so much of it,
I'm disgusted as can be."

Friday. "We painted and drew an apple to-day,
The lesson I could not heed,
I hope I'll never see again
An apple or a seed."

Ella M. Powers.

Nature Study Practically Applied.

The typical schoolboy has long been known as a fairly skilful malingerer when occasion demands it, but his shamming is usually confined to the more homely complaints of headaches and toothaches, which are capable of rapid dispersion when the crisis which necessitated their presence is past. The children of Nassington, a village in Northamptonshire, however, go more carefully and deeply to work in order to avoid the toils of school. On account of the number of children who were kept from school because of a rash on their bellies, Dr. C. N. Elliott, the medical officer of health of that district, was asked to examine them with a view to finding out the nature of the strange disease. His report showed that the whole affair was a case of malingering. The children, about twenty five in number, were suffering from no real disease, but in order to stay away from school they had rubbed their hands and arms with the juice of the plant called "Patty Spurge." The result of this was that a vesicular eruption appeared which in most cases resembled a herpes eruption, but in some there were blisters as large as a half crown. As the children appear to be studying the physiological effects of plants, a closer knowledge of the birch tree and its branches might possibly divert their energies into another channel, or at any rate, their keenness for practical botany. *Latent.*

Grading and Promotion.

A system of school grading which has attracted much attention all over the country is that inaugurated by Mr. W. J. Shearer, while superintendent of the schools of New Castle, Pa. The leading newspapers from New England to California commented upon it in lengthy editorial reviews, and letters of approval were received from college presidents and professors, school superintendents and teachers of every grade. Mr. Shearer's election last year to the superintendency of Elizabeth, N. J., gave him an opportunity to test the practicability of the system on a larger scale than was possible in New Castle where he first conceived and tried it. The results show that it is applicable in any school system. The high praise accorded it by the people of Elizabeth and several of the leading papers of New Jersey, and the readiness with which the teachers adopted it, have induced the school officers of other cities to investigate the plan with a view of introducing it.

Supt. Shearer had long been convinced that the method of grading and promoting in common schools was very unsatisfactory. Visits to many cities for the purpose of studying their systems, and circulars from many more, confirmed his opinion. He sought diligently, though for some time unsuccessfully, for a plan which would be more pliant than the present proustean method. Later, while superintendent of schools, at New Castle, Pa., he attempted to work out a plan by which it would be possible for children to advance just as fast as they should go, and no faster, so that the bright and dull pupils need not be yoked together during their whole school lives.

By the usual method of grading and promotion, owing to the impossibility of reclassification, the bright pupils are held back and the slow ones pushed ahead. As a result, the teaching becomes wholesale, and no allowances are made for difference in acquirements, aptitudes, physical endurance, home advantages, the rate of mental development, etc. The examination is *made the test* of fitness for promotion, and if a pupil fails to "pass," he must wait a year or a half year before there is another opportunity for promotion.

Supt. Shearer saw that the ideal system of grading would arrange for careful classification of pupils, according to their ability into small classes, with but a short interval between classes, so that when a pupil was ready he could pass to the next class. When the experiment was tried in New Castle, one grade was put in each room, and the pupils being carefully graded upon their ability to do the work. As differences began to appear, each school was subdivided into several small classes. Each division was expected to go as fast as it could, no exact amount of work being demanded in a given time. In the lower grades there were three or four subdivisions, in the higher, two or three. If any pupils came to the attention of the superintendent, or for other reasons, the superintendent gave them the extra help needed to keep them up with their class.

The examination, as a test for promotion, was abandoned, and the pupil's ability to do the work was determined by the record made day by day in his class work. In the primary grades the record was determined by the judgment of the teacher, and in the higher grades by written recitations, in which all had the same questions at the same time. These were given at irregular intervals and took the time of the regular recitations.

The monthly report was in such a form that the parent could see at a glance what was the character of the work done, and whether the pupil's work entitled him to promotion.

Some of the benefits of this system of subdividing grades are that while one class recites the rest can prepare their lessons. So closely are they graded that much of the instruction can be individualized, the teacher thus coming into such close contact with each pupil that the best work is secured. The recitations are short, and the attention of the pupil is held. The pupils lose the sense of being crowded, and the slowest ones often surprise their friends. The bright pupils are not kept back, waiting for others, but when ready are at once promoted to the next subdivision of their class which is only a few weeks ahead of their division. When a division finishes the work of its grade it is promoted to the next grade. As a result, promotions are frequent. Instead of the nine annual steps to the high school, Supt. Shearer's plan provides for from twenty five to thirty five short steps, to be taken according to the ability of the pupil.

Supt. Shearer estimates that out of one hundred pupils who take the course seven will save five years; twelve, four years; thirty five, three; thirty, two; and the rest will save one year or take the full term. This means an average gain of three years, and the city will save \$45 for each pupil, what it costs to educate a pupil for three years. If this is multiplied by thousands the financial gain of the system becomes apparent. *N. Y. School Journal.*

Military Drill in School.

It may be that military drill is neither so useful as its advocates represent it, nor so perilous in its effect upon character as those on the other side apprehend. But leaving the moral question out of the consideration, it may fairly be said that it is a mistake to urge military drill as a substitute for general athletics.

There is high athletic authority for the statement that military drill does not exercise the muscles properly, but strains them; that it promotes stiffness rather than grace of movement; that it does not produce erectness, but a stoop; and that it does not encourage a symmetrical, but a partial development.

It is significant that in countries like Germany, where the most is made of military drill, it is found necessary to require other athletic exercises to correct its defects. Whatever, therefore, may be the proper place of the drill, it should not crowd out general athletics. *Youth's Companion.*

Playing with Fire.

The *Chicago Dial*, in speaking of the measure now under consideration in Congress to promote a system of military drill in the public schools of the United States, has the following:

One of the greatest dangers to which our public schools are exposed is that of the raids so frequently made upon them by bands of well-meaning but ill-balanced riders of hobbies. One set of people gets the notion that some form of mechanical discipline in morals and religion is greatly needed, and moves heaven and earth to secure the introduction of Bible-readers or ethical catechisms into the school curricula. Another set becomes possessed of the fantastic idea that our children need more than anything else to be guarded against the danger of becoming drunkards, and drafts measures (like the monstrous legislation recently enacted in New York) for the compulsory adoption of what is called "scientific instruction in temperance," a kind of instruction which is usually repudiated by those who have a right to speak for science, and which proves to be temperate only in name. Another set of hobbyists finds in manual training a panacea for all social ills, and does its best to convert our schools into carpentry kindergartens. Raids of this sort upon public education have become alarmingly frequent of late. * * * It is desirable that the friends of education do everything possible to prevent such a bill as that now under consideration from passing into law.

The *Dial* goes on to show that the few hours of military drill that it would be possible to provide for in an already over-crowded curriculum would not go far to secure physical results or military training, and states on the authority of a military expert that "in Boston the effect of school drill has been to make boys round-shouldered and narrow-chested. I never saw a school company well set up in my life."

The *New York Nation*, commenting on the bill, goes even further and states that "it springs from the same senseless and brutal war-spirit that is making wreck of so many public reputations, and continually threatening to embroil us with other nations. What its promoters really have in mind is, not physical exercise, not parades and displays, but the spreading in childish minds of the idea that fighting is the noblest occupation of man, that we are all the while exposed to insults and aggressions, and must be ready to whip all creation on call. Now the boys have too much of this idea already. It is in their minds that the furibund patriotism of Lodge and Frye finds most admiration in fact, so far as we have observed, its only admiration. What they need, together with their fellow juveniles in the United States Senate, is, not military drill, but instruction in good manners, in the arts and love of peace, and in ambition to make the country decent and habitable instead of feared."

Famous Boys.

A Swedish boy fell out of a window and was severely hurt, but with clenched lips he kept back the cry of pain. The King Gustavus Adolphus, who saw the fall, prophesied that that boy would make a man for an emergency, and so he did, for he became the famous General Bauer.

A woman fell off the dock in Italy. She was fat and frightened. No one of the crowd of men dared to jump in after her; but a boy struck the water almost as soon as she, and managed to keep her up until stronger arms got hold of her. Everybody said the boy was very daring, very kind, very quick, but also very reckless, for he might have been drowned. The boy was Garibaldi, and if you will read his life you will find these were just his traits all through—that he was so alert that nobody could tell when he would make an attack with his red-shirted soldiers; so indiscreet sometimes as to make his fellow patriots wish he was in Guinea, but also so brave and magnanimous that all the world, except tyrants, loved to hear and talk about him.

A boy used to crush the flowers to get their color, and painted the white side of his father's cottage in Tyrol with all sorts of pictures, which the mountaineers gazed at as wonderful. He was the great artist Titian.

An old painter watched a little fellow who amused himself making drawings of his pot and brushes, ceased and stood, and said: "That boy will beat me someday." So he did, for he was Michael Angelo.

A German boy was reading a blood and thunder novel. Right in the midst of it he said to himself: "Now, this will never do. I got too much excited over it; I can't study so well after it. So here goes!" and he flung the book out into the river. He was Fichte, the great German philosopher.

Grading.

Grading on the results of terminal examinations was abandoned two years ago in the Halifax schools. Dartmouth has now followed the Halifax plan. Principal Miller, in advocating the change, gives the following arguments:

This subject has received a great deal of attention on my part for some time. Many serious objections are advanced by educationists to the methods of grading by written examinations. I give a few of the principal ones:

I. It puts a premium on "ramming," *i. e.*, memorizing the words of the lesson, as distinguished from true study which seeks to disregard the words used in the book, and to get a clear, accurate and sensible idea of the matter treated; the pupil by this method being required to compose sentences in which to reproduce the matter of the book. It is not an uncommon thing to have a pupil repeat verbatim a paragraph of history or geography and to have very confused ideas of the

real meaning of the words and sentences used. To know his lesson off by heart is still considered a criterion of a good student by others as well as pupils.

II. It is an unfair test at which the best pupils do not always succeed, nor the poorer ones always fail. A nervous, excitable child, under these conditions, will be beaten at the terminal examinations by one who is inferior in mental ability and scholarship, but who, because of freedom from nervousness and anxiety about the result is able to do his best, while the former is not.

III. It necessitates two weeks of heavy exhausting night work on the part of the teachers, in addition, and a prolonged mental strain on the pupils whose fate during this time is hanging in the balance, whether they will succeed and win a place in the next higher grade, or will fail.

IV. It is an incubus, always looming up in the distance, robbing school life of all pleasure and driving the machine at top speed, to the injury of both teachers and pupils.

V. It is wholly unnecessary, grading can be and is successfully done without any of the worry and strain attending written examinations.

Every One Should Learn to Sing.

No teacher is justified in saying of any voice that it is not worth cultivation; rather he should say he has neither the patience nor the time requisite for developing a poor voice.

Experiment has proved again and again that a poor voice may be so improved by careful training, as to be pleasing to its possessor and his friends; certainly an unpromising voice, coupled with the ambition to become a singer, will often outstrip a naturally brilliant voice whose owner is careless and indifferent. Of course, "everyone" cannot become a professional singer, but as in every other calling, there is always "oom" at the top, and the more the art of singing comes to be understood by the rank and file of men and women, the more intelligent will be the criticism from the audiences of church, concert hall, and theatre; then a higher standard of public singing will surely be demanded, and much of the shouting that is now applauded will cease to pass muster before people who themselves know something of voice production. * * * * *

Perhaps such universal education seems chimerical, and so it is so far as the present adult generation is concerned, but with but very little difficulty it could be brought about by means of our public schools. Granted that so called singing is already taught in all the schools, and since the introduction of the Tonic Solfa system, excellent work has been accomplished in educating the ear and in teaching the reading of music which must be productive of untold good in opening up a wider and better field of music for practice, but this is not enough. Of what value is it to teach children to sing songs, either by rote or scientifically reading them, if they have no conception how to sing them after the notes have been learned? I contend that the Tonic

Sol fa certificates, issued to teachers in the public schools should include an examination in voice culture, and that a teacher should be expected to teach her class how to produce pure tone, and how to sing the simple school songs intelligently and expressively, and without that hard mechanical ring so generally heard among school children. If this plan were adopted in our schools, hundreds of voices that now grow to be harsh and unpleasant, might be preserved in all the purity of childhood, and school singing would no longer be the misnomer it now is, but would be enjoyable and pleasant to listen to, as children's voices ought to be. *M. Stead in N. Y. Vocalist.*

Love of nature should be inculcated in the schools. It is not. We talk much of science, and flatter ourselves that it is claiming its rightful place in the schools, but it is not. The teaching of science has steadily decreased in ten years, in twenty years, even in twenty-five years. This is all the worse, because city life has deprived children of the knowledge of nature. All the investigations that have been made have proven conclusively that city children are lamentably ignorant regarding nature. Nor is this the worst of it. What science we do have has taken a miserable, mercenary, or commercial tone. We choose the sciences that mean the most financially, and we teach these in the way that will make them mean most commercially. Astronomy is the grandest of all the sciences. It reaches outward and upward with a majesty that no other science does, but it has no appreciable commercial value, and so the universities—even Harvard—have dropped it from their courses. Geology has largely gone from the universities to the special institution at Washington, because there is more probability of making the knowledge acquired "pay." The phase of geology that is most emphasized is mining, because it pays best. The phases of chemistry that the universities—some of the highest—teach most enthusiastically are those that the students sometimes the professors can make the most profitable. This makes the love of nature through the sciences an impossibility. There is less and less time given to science, less and less love of nature through science, and less and less real teaching of science. *Stanley Hall.*

PRIMARY DEPARTMENT.

Closing Exercises.

Do not, I beg of you, give the last of your energies and these glorious June days to a wearisome drill for closing exercises. It needs the perfection of health, patience, sweetness, and every cardinal virtue under the sun for teacher and children to "get up" a school "occasion" with its everlasting *drill, drill*, and not show the worst side to each other. Don't undertake it. It yields no return worth the effort. I wonder if it would be a dangerous suggestion to allow each child to do what he likes best for the closing exercises. Child

ren never get tired of doing the things they do well. It is the teachers who become tired of the well-worn grooves. It is an old suggestion, but we make it right over again, that school work shall form a large part of the final exercises when parents are invited. You cannot please them so well as to show them what their children can do. A smile, a deferential spirit and a courteous manner from the teacher (do we always remember that?) will warm their hearts and make them ready to enjoy everything they see. *Primary Education.*

A Proposition.

Come let us reason together. For the last year or two most of the reading prepared for little children has been crowded with nature stories. There is no objection whatever to such stories. But one particular feature of them has become so prevalent, as to be wearisome, silly, and absolutely injurious in its influence. What is it? It is the habit of "making believe" that all nature is discontented and ready to quarrel. The oak tree wishes it were a pine, and the pine tree is fretting because it is not an oak. The lily wants to be a rose and the rose is "dying" to be a pansy, and so on and on *ad nauseam*. Here and there a story teller has grown zealous and ambitious enough to have these nature nihilists refuse to grow at all till they could have their desires granted. Every weakness and passion of humanity has been ascribed to these products of Nature till they have wept, moaned, scolded, been jealous, and "made up" like a lot of wayward school children. The object of this sort of a story has been to put Nature into harness to do ethical work—a kind of practical correlation that has called for a showy moral attachment at the end of each story.

In the first place such nature stories are not true to science. Plants don't "get mad" and stop growing, or spend their plant energies in idle wishes and speculation. What must our children think of a nature realm where everything is in a ferment of dissatisfaction? Anything elevating in such a "make-believe" as that!

Now for the proposition. Let us stop all this abnormal sort of story telling. That does not mean that our nature stories shall be without imagination. Let all Nature talk if you want to, but let it be of the sensible kind. Let us eliminate the discontent and the malcontents and find some other way of showing that vice is always punished and virtue is always rewarded. It will not be easy to give up such stories, for they are everywhere, and so interwoven with the beautiful and the artistic that it will be a sore temptation to keep along with them. And while we are about it let us see if we cannot speak of the wind as the *wind* simply, and not *Mr. Wind*. Let us call our birds, *birds*, and not *Mr. and Mrs. Bird*. Some things are better as they are than loaded down with human titles. *Primary Education.*

Leafy June.

Whoever first used the phrase "leafy June" put as much of essential description into a single adjective as is possible. The full and perfect leaf is the complete expression of June. The exquisite half-tones and intermediate tints are gone now. Even the dark pines and hemlocks send out their light green shoots abundantly in an effort to assimilate these trees to the green unity about them. The philosophy of June is monastic; she endeavors to express, to illustrate the creative oneness of the universe. The light green of the birches has been daily deepening to a lustrous darker tone; the red maples yield their drop of scarlet, and the unfolding of the oak leaves reveals them now completely green, no longer delicately stained with pink or purple. Everywhere the woods exhibit a grand and solemn renunciation of individuality; the single tree is lost in the divine mass. The naked branch, held out to us in beckoning invitation, is gone; we have the woods where were trees, and wholeness where there was division. But though this magnificent advance may well be called solemn, it is nevertheless joyous. It is the consummation for which the exquisitely varied tints of mid-May were but the thrill of preparation. It is beautiful in a high degree, it is the coming of the fullness of the summer—the glory of the year. Nor does Nature in the midst of it all forget her diversity, nor deny herself the luxury of color. The fields are now white with laisies, now golden with buttercups; the lady's slipper blushes under the pine trees, and the wild geranium tinges the edge of the thickets with rose. The great woods have marched on to their glory of greenness, but in their shadow the richest colors survive in lovely flowers. *Schools.*

SCHOOL AND COLLEGE.

Arbor Day was observed by the teachers and pupils of the Sussex, N. B., grammar school in such a way that should it be imitated generally the result would be to transform school grounds into gardens. We would gladly go on giving arbor day reports like the following until next spring if the excellent example of the Sussex school and its energetic teachers, Mr. N. W. Brown and staff should be imitated. A fine hedge of 359 white-spruce trees was set out on the grounds, with thirty-nine young trees of rock maple. On arbor day morning there was a flag raising, the flag being the gift of G. W. Fowler, M. P. P., and Hon. A. S. White, Solicitor General. The latter gentleman delivered a stirring address on Canadian loyalty. In the evening a school concert was given in Old Fellows' Hall, by which \$75 was realized, to be devoted to providing special apparatus for the school.

Miss Laura Boyd, teacher at Fair Haven, Deer Island, has, by means of two school concerts, secured sufficient means to furnish her school room. In this district also the house has been painted and the grounds fenced.

The trustees of Richardsonville, one of the most thriving and picturesque places on Deer Island, purpose building a new house this year and one which will compare favorably with any in that parish.

Miss Edith Boyd, teacher at Wilson's Beach, Campobello, has, by means of a concert, supplied her school with an excellent globe and blinds. An assistant has been engaged for this school.

One of the handsomest and best equipped houses of two departments to be found anywhere is that containing the superior school at Welchpool, Campobello. The house, which has been entirely remodeled, is very attractive in appearance, as are also the grounds, the result of Arbor Day observation. The interior is celled throughout and oiled and varnished. The floors are of hard wood, and the furnishing and equipment are of the very best. Great credit is due the school board and the principal, Mr. A. W. Hickson, who has been indefatigable in his exertions.

Mr. F. G. Calder, teacher at North Road, Campobello, has, by means of a concert, raised \$14, with which he has procured some excellent apparatus.

Miss Ida Cuptill, teacher at Two Islands, Grand Manan, has, chiefly through her own exertions, furnished her school with blinds, blackboards, and has had the walls tinted.

Mr. H. F. Perkins, teacher at Grand Harbor, Grand Manan, has, during the past winter, given two or three lectures in chemistry illustrated by experiments. Mr. Perkins has also collected and classified all the plants found upon the island, as well as made considerable observations regarding their growth and time of budding and flowering during his residence there.

The New Glasgow high school is under great obligations to Mr. H. S. Poole, of Stellarton, who has placed in its museum a large number of valuable and instructive specimens, illustrative of the mineralogy and geology of the county, as well as mineralogical exhibits from other places. Part of these are now in position in cases in the room in the new building set apart for library and museum purposes. Mr. Poole has promised additional specimens from time to time, and has also undertaken the arrangement of the exhibits. With his assistance so kindly offered, there would seem to be good reason to expect to have before long a museum which would be of great educative value, and one of the attractions of the town. We hope the school board will make ample provision for the institution. *Eastern Chronicle.*

For the REVIEW.]

Astronomical Notes.

FOR SUMMER SCHOOL OF SCIENCE, JULY, 1896.

When the Summer School met at Parrsboro for the first time, 1889, star-gazing could be, and was, carried on by day as well as by night. Venus was far out on the west side of the sun, and her brilliant white disc, set in the beautiful blue of the Parrsboro sky, was an easy and a lovely object to the delighted eyes of admiring gazers during those glorious summer afternoons. When the school was there again in the following year she was on the other side of the sun, and though not so brilliant as in the previous summer, was easily seen by all who took the trouble to look for her. And again in July last, when some of the summer schoolmen took a run down from Amherst to Parrsboro, they found Venus smiling down at them from the sunlit blue of a perfect Parrsboro afternoon.

We shall have no such good luck this year. Venus will be impossible to us either by day or by night. What the almanacs call "superior conjunction" happens on the 9th, the day the school opens. This is when the planet is farthest from the earth, away off about seventy million miles beyond the sun, and very nearly in the same line. It is this last fact that makes it impossible for anything but a telescope to see Venus at superior conjunction, or within about ten days on each side of that event. From ten to twenty days after it, a field-glass pointed at the right spot in a good sky will show her without much trouble. After twenty days the naked eye should see her about noon if the same two conditions hold good, but the ordinary star-gazer had better wait until August before trying for her, either at noon or evening.

With a good field-glass Jupiter may be seen in the early afternoon, if the sky is blue, if the observer chooses the right time to look, and if he looks in the right place. But these three conditions must be very exactly satisfied, and even then it will be a rather difficult job, for the big planet is getting very close to the sun's place in the sky. But he *has* been seen with a field-glass under less favorable conditions than will then occur, so we may hope to see him this time too. As to the right time and the right place to look, those who are interested had better apply to one of the star-gazing members of the school.

With the naked eye there will be no celestial objects visible by daylight, except the sun and the moon: the sun on every clear day, and the moon on every such day of the school session after the 12th.

All other kinds of heavenly observation and experiment must be made before sunrise, or after sunset.

On the 11th the sun's declination will be 22° north. Thus in latitude 45° north (which is very nearly that of Parrsboro) makes the day nearly $15\frac{1}{2}$ hours long. If there were no refraction, and if the sun were a mere point, and if everything and everybody were at sea-level, it would be almost exactly 15 hours 11 minutes. Refraction adds $3\frac{3}{4}$ minutes at each end of the day, and the sun takes $3\frac{1}{2}$ minutes to raise his disc above the horizon in the morning and to lower it below in the evening. Thus from the first peep of the sun above sea-level in the morning until his last flicker at evening there are 15 hours and 22 minutes.

That is when his declination is 22° N and when we are in latitude 45° N. For the same latitude when the declination is 20° N (as it will be on the 23rd) the values given in the last paragraph are in order, as follows: Very nearly 15 hours 14 hours, 51 minutes, $3\frac{3}{4}$ minutes at each end, $3\frac{1}{2}$ minutes, 15 hours 2 minutes.

But all the rest of the 24 hours is not available for star-gazing. Twilight has to be allowed for. From the time the sun disappears until the time when the faintest naked eye stars appear, we have all gradations of light from almost full day to almost deep night, and the same thing occurs in the morning in reverse order. One limit of twilight is well marked—it is when the upper edge of the sun's disc is on the horizon—the instant of sunrise or sunset. The other limit is not so easily determined, but it is generally taken to be when the sun is $18'$ below the horizon. For these limits the duration of twilight at each end of the day in latitude 45° N is about $2\frac{1}{2}$ hours when the sun's declination is 22° N as on July 11th, and about 2 hours when the declination is 20° N as on July 23rd.

When the day is fifteen hours long it would seem reasonable to suppose that the sun should rise seven and a half hours before noon, *i. e.* at 4.30 a. m., and set at 7.30 p. m. And so it would if we kept time by a sun-dial, but we have outgrown that. The real sun is too irregular a time-keeper for the needs of the nineteenth century, and a 'mean sun' has been invented which gives us 'mean time.' On July 23, mean time is six minutes ahead of sun time, so the hours of sunrise and sunset are 4.36 a. m. and 7.36 p. m., and the afternoon is twelve minutes longer than the forenoon. But this again is true only on condition that, at every place where the 23rd of July has fifteen hours of daylight, the time kept is the mean time of the place, local time. But just as we outgrew sun-time about a century ago, so we have outgrown local time within the last dozen years. In Nova Scotia we keep the time of the 60th meridian, and as the longitude of Parrsboro is about $64'$, its clocks and watches are sixteen minutes fast by its own local time. And so on July 23rd, the hour of sunrise is 4.52 a. m. and of sunset 7.52 p. m. And on July 11th, these hours are 4.40 a. m. and 8.02 p. m. Then as there are from two to two and a half hours of twilight, and as the first half of evening twilight is of little or no use for star-gazing it will be best to begin this business about 9 o'clock.

The brighter stars and planets will be easily visible

before this hour, especially Jupiter, Saturn, Vega, and Arcturus. At the beginning of the session, Jupiter will set soon after 9, and an hour earlier at the end. Saturn will be up until midnight all through. The only other evening planet at this time is Uranus. He and Saturn are in the same constellation, Libra, Saturn being at the west side of the quadrilateral which is formed by the four chief stars, and Uranus between the two on the east side. In the middle of June he was very close to one of a pair of small stars in that quarter, so close on the 16th and 17th that the two objects seemed one to the naked eye, and in a field glass looked like a lovely little double star. He has now moved off to the right a little, and will continue doing so until the end of July. Saturn's motion is the same until July 16th, and then he stops and turns back.

Of the other planets, it has already been mentioned, that Venus is invisible because she is in conjunction with the sun. Mercury, Mars and Neptune are morning stars. Neptune is invisible at all times to the naked eye, and just at present is not worth searching for with a glass. Mars is easy enough and quite conspicuous among the stars of Aries in the early morning, but by and by he will be much brighter and can be seen before midnight. He will be in opposition in December and five times as bright as he is now. When the Summer School met in St. John in 1892, he was in opposition and was thirteen times as bright as now.

Mercury will be well worth turning out in the morning to see, especially between the 10th and the 20th. On the 10th, 3.45 to 4.15 a. m. will be a good time; on the 20th, 4.15 to 4.30.

There is little room left to speak of the stars and constellations that may be seen between nine and ten in the evening. About all that can be done is to give a list of the principal objects that should be, and that should not be, looked for. Don't ask to be shown Orion, or the Pleiades, or the Twins, or the Pog-Star. But, if you are not already acquainted with the following, do get some one to point them out to you. Arcturus, Vega, Altair, Antares, Spica, and the North Star; the Dippers, the Cross, Crown, the Chair, the Handkerchief, the Kite, Job's Coffin, Berenice's Hair, etc.; Virgo, Libra, Scorpio, Sagittarius, Capricornus, Aquarius, Pegasus, Andromeda, Hercules, Lyra, Cygnus, Aquila, etc., etc.

A. CAMERON.

Yarmouth, N. S., June 25, 1896.

BOOK REVIEWS.

COWPER'S SHORTER POEMS, edited with introduction and notes by W. T. Webb, M. A. Pages 147, price 2s. 6d. Publishers Macmillan & Co., London and New York. All the best of Cowper's poems are included in this neat little volume, which may be used for the class room.

CHOSEN ENGLISH, by A. Ellis, B. A. Pages 205, price 2s. 6d. Publishers Macmillan & Co., London and New York. This little volume contains selections from Wordsworth, Byron, Shelley, Lamb, and Scott, with brief but excellent biographies of these standard authors. The selections appear to be well chosen, and are accompanied with notes.

ELEMENTARY GERMAN READER, by O. B. Super. Pages 131, price 45 cents. Publishers Ginn & Co., Boston. This seems a very excellent little book for beginners in German. It contains many passages of very easy reading chosen for their simplicity, is intended for schools and private students, and is accompanied with notes and a vocabulary.

The Atlantic Monthly, in the course of its correspondence with representative successful public school teachers and superintendents, had the happy thought to ask a selected group of them to write out their professional autobiographies. Half a dozen of these "confessions" appear in the July *Atlantic*.

EDUCATION DEPARTMENT.

Teachers who propose to attend the Provincial Institute to be held at the Normal School, Fredericton, beginning on Monday, June 29th, will close their schools for the term on Friday, the 26th inst. The last teaching day of the term for teachers who do not attend the sessions of the Provincial Institute will be Tuesday, June 30th.

The first teaching day of the next term will be Wednesday, the 12th day of August, except in cities, incorporated towns, and other districts authorized to have a vacation of eight weeks, in which the first teaching day of the next term will be Wednesday, August 26th.

CHANGE OF TEXT BOOK.

At the beginning of the next term in August, Kennedy and O'Hearn's Common School Arithmetic, Part I, will supersede Hall's Elementary Arithmetic in the hands of pupils of grade III and IV. Hall's Elementary Arithmetic will continue to be used until further notice in Grades V to VI.

Educational Office,
June 19th, 1896.

J. R. INCH,
Chief Supt. of Education.

McGill University, Montreal, Faculty of Arts.

EXHIBITIONS AND SCHOLARSHIPS OFFERED FOR COMPETITION AT THE OPENING OF THE SESSION, SEPTEMBER, 1896.

N. B.—Three of the exhibitions are open to women; two of these to women alone, either in the First or Second Year. For special Regulations see the calendar, 1896, p. 17.

To Students entering the First Year, two Exhibitions of \$125, one of \$125, one of \$50 and one of \$25.

Subjects of Examination.—GREEK, LATIN, MATHEMATICS, EUCLID, ALGEBRA AND ARITHMETIC, ENGLISH.

To Students entering the Second Year, two Exhibitions of \$125, one of \$100, and one of \$125. (See also N. B. above.)

Copies of the Circular, giving full particulars of subjects required, and the Calendar for the Session 1896, containing information respecting conditions of entrance, course of study, degrees, etc., in the several faculties and departments of the university, as follows: Faculty of Law, Faculty of Medicine, Faculty of Arts, Faculty of Agriculture, Faculty of Engineering, Faculty of Applied Science, Faculty of Applied Science, including Departments of Civil Engineering, Mechanical Engineering, Metallurgy, Electrical Engineering, and Practical Chemistry, Faculty of Comparative Medicine and Veterinary Science may be obtained on application to the undersigned.

Address McGill College, Montreal.

J. W. BRAKENRIDGE, B. C. L., Registrar, Bursar, Acting Secretary.

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PROGRAMME.

NEW BRUNSWICK EDUCATIONAL INSTITUTE.

NORMAL SCHOOL, FREDERICTON.

June 29th to July 2nd, 1896.

MONDAY, 3.00 P. M.	Meeting of Executive Committee.	WEDNESDAY, (Dominion Day).—An Excursion will be planned for members of the Institute.
" 8.00 "	Public Reception Meeting.	
TUESDAY, 9.30 A. M.	Enrolment, Election of Secretaries and Nominating Committee	THURSDAY, 9.00 A. M. Elections (a) of Executive Committee; (b) of Representative to Senate of U. N. B.
" 10.30 "	Address by the Chief Superintendent.	" 10.30 " <i>Correlation of Studies</i> , by Eldon Mullin, M. A., Geo. U. Hay, M. A., Geo. J. Trueman, B. A., and E. W. Lewis, B. A.
" 11.30 "	<i>Secondary Education</i> , by A. B. Maggs, B. A., Principal of Queen's County Grammar School.	" 2.30 " <i>The Mutual Relations of the University and the Public Schools</i> , by Prof. W. F. Stockley M. A., University of New Brunswick.
" 2.00 P. M.	<i>The Problems of the Country School</i> , by Miss Bessie Fraser, Grand Falls.	" 3.30 " General Business.
" 3.00 "	<i>School Hygiene</i> , by Walter W. White, B. A., M. D., St. John.	
" 8.00 "	<i>Ethical Culture</i> , by Professor W. C. Murray, M. A., Dalhousie College, Halifax, N. S.	The usual arrangements for reduced fares will be made with railways and steamboats lines.

JOHN BRITAIN, Secretary.

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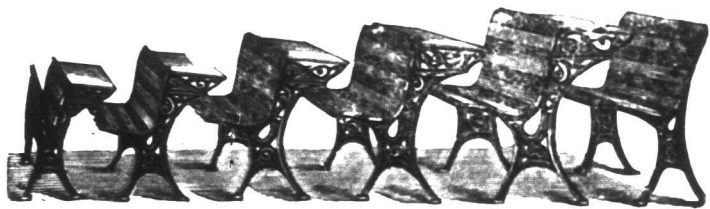
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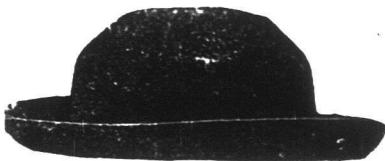
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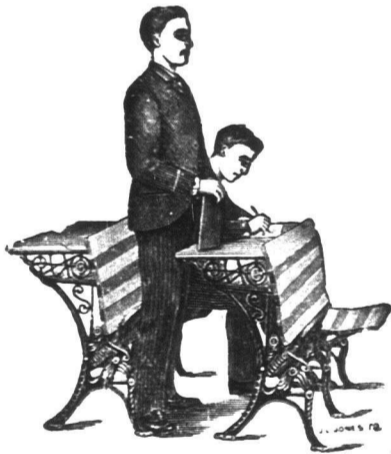
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