

The Educational Review.

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THE EDUCATIONAL REVIEW.

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THE annual meeting of the Royal Society of Canada will be held at Ottawa on the 15th of May.

WE have received a catalogue of books for public school libraries for New Brunswick, compiled by the Chief Superintendent of Education, Dr. Inch. It embraces a large and varied list of works, and it will greatly aid teachers and school trustees in choosing books suitable for their libraries. The catalogue seems to have been compiled with great care, and at considerable labor. A copy may be had by addressing Dr. Inch, Chief Superintendent Education, Fredericton.

THE official notices, on another page, will interest those teachers who have pupils preparing for the terminal examinations.

PROF. ROBERTS, of Kings College, Windsor, it is understood, is engaged in writing a history of Canada. The Halifax "Chronicle," in speaking of a lecture recently delivered in that city by Professor Roberts, says: "Seldom has the story of the early days of Canada been told so clearly, so vividly and so interestingly, as by Prof. Roberts last evening. Throughout his address rang clear and true the tones of manly patriotism. The closing portion of it dealt with two chapters of Canada's history of which Canadians are pardonably proud."

ARBOR DAY has not yet been definitely announced for New Brunswick. According to present appearances the spring will be sufficiently advanced to observe it a little earlier than usual. It is better to name an early day than a late one. How would Friday, the 10th of May, do?

On another page will be found hints and selections which will be of service to teachers in making up a programme. We hope all our teachers and scholars will make preparations to observe the day in some practical shape—by planting trees, beautifying and clearing up the school grounds, and by giving useful and inspiring lessons on plants.

ON another page will be found the notices of the meetings of the Summer School of Science for the Atlantic Provinces, and the Summer School of Harvard and the Lawrence Scientific School.

A TRIP TO EUROPE is an event in a lifetime. It is an investment that will pay a teacher in the additional mental and physical vigor, breadth of ideas, stores of information that it will bring. Consult Miss Crowe's advertisement in another column where you will find an attractive programme that can be carried out at a comparatively small cost.

THE Report of the Chief Superintendent of Education for P. E. Island has been received, but too late to make any detailed statement from it for this number. The report shows an increase in the number of schools and teachers, but a decrease in the number of pupils in attendance. Satisfactory features in the report are—the gradual increase shown in the relative number of higher class teachers engaged; the increased number of pupils under instruction in nearly all the subjects included in the common school course; increased interest and liberality on the part of rate-payers and trustees, in providing improved buildings; greater regularity in keeping schools in operation; and a largely increased attendance at the Prince of Wales College and Normal School. The total amount paid for education from all sources, was \$159,931.58; average cost per pupil, \$7.19; number of teachers employed, 553, less than one-half of whom were females,

COMPULSORY EDUCATION.

Nova Scotia now stands prominently in advance of every other American state or province in her compulsory school laws. By an act of the recent legislative session the compulsory age is from six to sixteen, and the minimum days' attendance is 120.

At the age of twelve a pupil may pass an examination in Grade VII and be exempt. At thirteen he may work the rest of the year if he attends for sixty consecutive days. From fourteen to sixteen he must attend school, unless he is at work with the approval of his parents. This law is compulsory in Halifax, and becomes compulsory in incorporated towns by a vote of the town councils. It has been adopted in Dartmouth and has worked to the satisfaction of every one. In some cases even those who were prosecuted wrote letters to the council, thanking them for the interest taken in making education universal.

ENLARGED SCHOOL SECTIONS.

In a former number of the REVIEW, we referred to the advantage of the Township system of managing schools, as it is now being introduced into the United States. A change in this direction in the Maritime provinces would do much to improve the schools in rural sections and raise the status of the teachers there to an equality with that of the city teachers. We are therefore glad to see that this subject has been introduced into the Nova Scotia Legislature by the Hon. W. H. Owen of Bridgewater, from whose speech we quote the following judicious remarks:—

“There are some two thousand school sections within the province. Many of the residents therein are in very poor circumstances, and their property of little value, and they find it almost impossible to realize the amount necessary for their schools. Under the existing law there are three trustees in each district, or about six thousand for the province. Many of these trustees are illiterate, especially in the outlying sections, and are incapable of performing the duties devolving upon them. Frequently, they have very inefficient teachers, and in other respects the requirements of the sections are not properly looked after. In the state of Maine, New Hampshire and Massachusetts of late years they have been combining many of their sections, and forming them into school districts, and placing those districts under the control of what they call “town boards” who exercise supervision over such districts in place of the trustees. The system there has been found most satisfactory, and it seems to me that some such system as that might be adopted in this province, and might prove to be much more effective than that now existing. It occurs to me for instance, it might be advisable to combine a number of existing school sections in each county

and form them into school districts, and appoint a school board which could be elected at the same time as the municipal councillors are in the different districts, so that no great additional cost would be entailed. This school board having the whole control and management of the district would be in a position to administer the system more efficiently than it could be under the present arrangement. They could find out the amount required in the various school sections and apportion the money raised in the district in accordance with the scale to be prepared by them, so that the proper districts might get the benefit of a portion of the taxes paid by the wealthier classes. If this were done, the education in many outlying districts would be more efficient than it is at present; the affairs of the proposed districts would be conducted in a more business-like way under the control of a more competent school board. It would cause equalization of school taxes; the inferior schools would become part of an efficient system; and under more efficient management, the taxes could be more equitably adjusted.”

We expect that next session, Mr. Owen will introduce a bill to carry out his ideas. In the meantime we will be glad to hear from our correspondents regarding the system.

SECURING HABITS OF INDUSTRY.

In the effort to make school life pleasant we are apt to overlook one of the most important functions of the school—the overcoming of the pupil's dislike for hard work. On the plea that the attention of young children can be held but a few minutes continuously on one subject there is a constant change of exercises. Much time is devoted to amusing them by story telling, by games and so-called kindergarten plays, in all of which the teacher is working while the pupils are more or less passive. Gradually, but not too slowly, young pupils should be trained to face hard work bravely. If at the first they acquire the idea that school life is largely play, it will be difficult afterwards to secure those industrious habits which are necessary both in their advanced studies and in the struggle of life in which nearly all must engage. When one has read light literature for some time, it is difficult, sometimes impossible, to settle down to anything more solid. It is not wise to accustom children to a butterfly life in school. Let them be as happy as possible ere the period of real toil and labor begins; but let it be a happiness mixed with the necessary modicum of effort to prepare them for the duties of life.

It has been conclusively demonstrated that crime is disappearing with the advance of education, and that the increased expenditure on the schools is more than met by the decreased expenditure on criminals.

SOME NECESSARY REFORMS AMONG GRADED SCHOOLS.

Last month the REVIEW indicated a few changes for the better that might be brought about at the hands of the N. B. Provincial Legislature. "The mills of the gods grind slowly," and there can be no doubt but that all the reforms mentioned will come to pass in time. It is just possible that the excellent suggestions which the REVIEW is about to make to city boards, may not all be adopted at once, as "great bodies move slowly," but in this case it is equally certain that the changes will be made.

There is a regulation requiring a teacher to be present in his room at least twenty minutes before the beginning of each session. No fault can be found with this, but it bears particularly hard upon those teachers who live at a distance from their schools. The present length of the noon recess in most towns is one hour and a-half. Deduct twenty minutes from this, and there remains but one hour and ten minutes for the teacher to be absent. Teaching is not an ordinary occupation—those who engage in it are prone to nervousness and dyspepsia. A hurried dinner, and a still more hurried walk after it, has a very injurious effect upon many teachers. Would it not be preferable to do in all towns as is done in a few of them? Make the noon recess two hours and dismiss at four, instead of as at present at half past three? There can be no doubt but that the parents would welcome the change, and it would be one means of diminishing tardiness. Until such a change could be brought about, would it not be well to regard ten minutes before the beginning of the afternoon session as sufficient?

On stormy days, and perhaps for other reasons, it is at times necessary to hold but one session of the schools; indeed there are some who favor one session for every day. An ordinary session consists of five hours for all pupils, save those in the first two grades, who are dismissed an hour earlier, thus making their attendance four hours. On "one session" days all pupils, including these primaries, are detained until one o'clock. A continuous session of three hours is considered too long by many who know, for very young children, but when it comes to four hours, all will agree that it is too long. Why should not the youngest people be dismissed at twelve on these days? Any primary teacher will certify that no work of any value is done between twelve and one o'clock. The pupils are hungry, nervous and restless, and should be dismissed as on other days—an hour earlier than the others.

Which town will be foremost in providing its pupils with stationery, pens and pencils? Ink is already supplied by many of them, and to furnish the articles mentioned is only another step in the same direction.

It goes without argument that such a provision would advance the educational interests of the schools along those particular lines, and would greatly cheapen those articles to the rate-payers. It may be a step toward free text books; that is only another argument in its favor, as all thinking and progressive people believe free text-books desirable.

It may be that school boards have not power within themselves to introduce these changes, but a little earnest advocacy will be all that is needed to bring them about if they are for the best. Let them be considered.

TALKS WITH TEACHERS.

I propose this month to take as the subject of my "talks," mental arithmetic. There has been a revival in the teaching of this subject during the last few years, but it is not yet dealt with in the most profitable manner. I may say in this connection that it was a mistake to do as was done in taking this subject from the requirements for license. Since that time it has languished in a great measure, and it is only recently that its importance has become generally recognized by our teachers.

Mental arithmetic is important, first, because it brings, like all other oral work, the teacher into closer touch with the pupils. It develops independence and self-reliance, because each pupil has to stand on his own feet. It produces accuracy and quickness of thought—two very important qualities. There is no better exercise in oral composition, as the "answer" is of little importance in this exercise, but the method of arriving at results is everything.

Teachers often ask: What text book shall I use for mental arithmetic? I would say that while a text is suggestive, it is not essential. No teacher should come before his class in this subject, as in all others, without having prepared his lesson beforehand. The mental work to be given should be based primarily on the principles bearing upon the arithmetic to be taken up for that day. A short time should also be devoted to general review. A judicious teacher will by means of mental arithmetic keep his pupils fresh in all review work.

Now as to the nature of the questions, I am not sure but that in many cases the practical is sacrificed for the mechanical. How common it is to hear teachers give

again and again questions of this kind: "Add 9, 8, 6, take away 12, multiply by 6, divide by 3, etc., etc., The pupils will solve them with marvellous rapidity, and they may be beneficial, but such questions give me the cold chills. Another very common sample is—48 is $\frac{2}{3}$ of how many times 9. An occasional question like either of these is not objectionable, but to follow them up day after day, is a waste of time.

Some of you may say: What kind of questions would you give? It would depend upon the subject to come before the class. Let us suppose it to be mensuration. I would first obtain the pupils' idea of an inch, foot, yard and rod, by getting them to draw them on the board or floor, and testing them by the foot rule. The next step will be to draw the square inch, square foot, and square yard. The pupils can then estimate the square inch on the surface of books, slates, desks, and black-boards. How many square inches in a pane of glass 12 x 9? How many square feet in a black-board $3\frac{1}{2}$ x 5? What would be a convenient size in rods for a school lot containing one half acre? How many square yards in the floor of the room? Carpet it with carpet $\frac{3}{4}$ yard wide? Paper the walls and plaster the ceilings! From the inside of the school room you can go to the outside and estimate on boards, shingles, clap-boards, etc. Mechanical accuracy is important, especially in the earlier grades, but the development of thought is the primary object of mental arithmetic.

For the REVIEW.]

Our Four Brightest Stars.

This is the best time of year for seeing all four of them up together in the evening.

Not *the* four brightest, because there are two of these that we cannot see at all. And *stars*, not *planets*, for this article does not condescend to notice mere solar appendages, notwithstanding the fact that some of them make a much more dazzling display of splendor with their second-hand light than do the brightest of the self-luminous stars—vastly larger than our planets, but infinitely farther off.

The twenty brightest stars in the sky are classed as being of the first magnitude, but all the twenty are not equally bright. The Dogstar is an easy first in the matter of brilliancy, and, according to photometric measurements, he is twelve times as bright as Fomalhaut, the faintest of the twenty. Second and third in order of brightness come Canopus and Alpha Centauri. Like the Dogstar, these belong to the southern celestial hemisphere, but, unlike him, they are too far south to be visible from these latitudes. Alpha Centauri is famous as being the nearest of all the stars—so far as

known—to our solar system. Canopus is 36° nearly due south of the Dogstar, and just grazes the southern horizon 6° to the south of Yarmouth. Next to these come the three great northern stars, Arcturus, Vega and Capella; and they, together with the Dogstar—which is also called Sirius, are our four brightest stars.

To all places north of latitude 44° Capella is always above the horizon. In that latitude Vega spends nineteen hours above the horizon and only five below, out of every twenty-four; Arcturus, a little under fifteen above and a little over nine below. Farther north, these two spend more time above and less below. With Sirius the case is different. Being a southern star he favors southern latitudes more than northern. If there are any astronomers living within 16° of the south pole they have this grandest of all the stars above their horizon all the time. In north latitude 44° we have him with us for only nine and three-quarter hours out of the twenty-four, and farther north his daily visits are shorter still.

Of course they are not always visible when above the horizon, for in the day-time the light of our own star—which takes only eight minutes to reach us—quenches the light of their rays, thinned out by distance and perhaps enfeebled by their years of travel. And yet this is not altogether true of *these* stars. It is not a very difficult matter to see Sirius with the naked eye in the full glare of sunlight—not at midday, as we can easily do with Venus, but while the sun is low in the east or west. And with a common field-glass I have often seen him on or near the meridian when the sun was higher in the sky than he was. This is one of the two best seasons of the year for this kind of observation, but no one need hope for success at it unless he knows exactly where to look for his star. If the observer does succeed he will be delighted with his glimpse of the tiny needle-point of light sparkling like a splinter of diamond in the sunlit blue. It is not nearly so easy to see any of the other three in daylight, but if stargazers will only take the trouble to try, they will find that they can see them without much difficulty,—if not in full daylight, at least in twilight so strong as to be scarcely distinguishable from it.

At nine o'clock on any evening there will be at least two of the four in sight; and, if only two, they will be Vega and Capella, or Sirius and Capella. Arcturus is never above our horizon except in company with at least two of the others, and when Sirius and Vega are up together, Capella at least is always there to watch them. For more than half the year there are three of them above our horizon at nine in the evening, and of course Capella is always one of the three. To see the whole

four at this hour is only possible for us during April, and the middle of the month is the best time for it. Go out on the first clear evening and have a look at them.

If it is about the middle of April, and if the hour is about nine, you will find Sirius above the south-west horizon. You can't possibly mistake him. None of the brighter planets are allowed to wander in his neighborhood, and no star near him — or anywhere else, for that matter — can at all approach him in brilliancy or in the splendor of his flashing, as he

“Alters hue
And bickers into red and emerald.”

The nearer he gets to the horizon the lovelier are the color effects which his twinkling and sparkling present to the eye, and if a glass is used they become still more lovely. Before he gets too low, note how he lies with respect to the three stars in Orion's belt, and then when you find him rising above your horizon again in the fall evenings you will readily know who he is.

Now turn round to the north-east and look at Vega. At our chosen hour she is just about as far from the horizon as Sirius is, and looks in every way much like a smaller copy of the grand southern star. Not such sparkle and play of color, but the general color is the same — white, with a dash of blue. And the spectro-scope tells us they are as much alike as they look, being the two chief members of a class of stars that differ very much from our sun. Those that resemble the sun in appearance and physical constitution are called Solar stars; the white ones like Sirius and Vega are called Sirian stars. It would spin this article out too long to enter upon the different characteristics of these two classes and to tell how the New Astronomy of the spectro-scope and the camera and the laboratory has discovered these characteristics, but the subject will keep and may be taken up some other time.

Sirius will pass from the evening sky in a few weeks, but Vega will be found there until the close of the year. Not always where you now see her, however, and so you had better learn how to distinguish her in whatever part of the sky she may happen to be. Note the two small stars near her and how they form with her an equilateral triangle. Get your eye familiarized with the group and you will ever after recognize it, whether low in the north-east or up near the zenith or curving down to the north-west horizon. Put your glass on the two small ones and see what it tells you about them. Even at the present low altitude it will easily double one of them. When higher up try if it can't double the other also.

To find Arcturus and Capella all you have to do is to look for the two brightest of the yellowish or reddish

stars. Arcturus is well up in the east, and Capella in the north-west. Just at present (9 p. m. mid-April, 1895,) there are brighter objects in the west and north-west than Capella, but they are not stars and they are not red or yellow (except when very near the horizon) and they are lower down than Capella. On the east side of the meridian there is nothing that can be mistaken for Arcturus at this hour, unless you look too low and too far south. But, to be quite sure, and to have a convenient sign-post for him at all times, note how he is situated with respect to the Bear's tail. If you don't know the Bear's tail, take the handle of the Dipper, and that will do as well.

Capella and Arcturus belong to the solar class of stars, and Capella is the one of them all, so far examined, which most closely resembles the sun. This is only one of many interesting discoveries that have been made about these stars, but there is no room here to say anything more about them at present.

A. CAMERON.

Yarmouth, N. S., April, 1895.

For the REVIEW.]

Promotion of Pupils.

In an article in the February REVIEW, on the “Promotion of Pupils,” the writer says: “The pupils not graded go on with their studies from their present standing and are not required a second time to go over work which has already been fairly well done, simply because it has not been found convenient to advance them to another grade or class.” If the work has been “fairly well done,” why should it not be found convenient to advance them? Shall the teacher in whose room these pupils remain be required to take up the work of the higher grade having thus the same work carried on in two departments? It seems to me that the above sentence requires a little further explanation, notwithstanding the assurance that “this plan has been thoroughly tested and found to be a great gain intellectually and morally.”

B. D. B.

Gloucester County, N. B.

“Truth” relates this bright little school-room story: A little girl who was just beginning to spell was asked by her teacher to spell “bee,” which she did, enunciating the letters very distinctly. Her teacher corrected her, saying: “Jane, when you come to two letters just alike, as ‘ee’ in bee, pronounce them ‘double-e,’ not separately.” A few days later she was called upon to read a line in the first reader which ran as follows: “Up, up, Mary, the sun is high.” Mistress Jane studied over it a minute and then, partly remembering the rule that her teacher had given her, read: “Double up, Mary, the sun is high.”

For the REVIEW.]

New Brunswick Schools of the Olden Time.

BY W. O. RAYMOND, M. A.

(Continued.)

THE OLD GRAMMAR SCHOOLS.

In the course of these articles on the progress of our educational institutions in the early days of New Brunswick, it has been shown that so early as the 13th December, 1785, a memorial had been presented by Dr. William Paine and others to the Governor in Council, praying that a charter of incorporation be granted for the institution of a Provincial Academy of Arts and Sciences; and that by successive steps the academy established at Fredericton was eventually incorporated by provincial charter in the year 1800 as the College of New Brunswick. The academy at Fredericton filled the place of a grammar school for the County of York until the days of Sir Howard Douglas, when the institution enlarged and extended in its scope was incorporated by Royal Charter as Kings College, and removed from its humble surroundings in the old building on King street to the new stone edifice erected for its accommodation on College Hill, at the rear of the town—the same building which (enlarged and improved) is now occupied by the University of New Brunswick. After the extension of the work carried on by the college at Fredericton, in consequence of the erection of the new building and the increased grant made towards its support under the Royal Charter, the present Collegiate School was established at Fredericton to supply the place of a grammar school for the County of York and to serve as a feeder of the college.

Col. John Coffin, on the 16th February, 1803, brought in a bill (as we learn from the Journals of the House of Assembly) for establishing a public grammar school in the city of St. John. The bill did not become law until two years after, when it passed with the rather ambitious title, "An Act for Encouraging and Extending Literature in this Province."

In the year 1816 (March 11th) the Legislature passed an act for the establishment of a grammar school at St. Andrews, in the County of Charlotte, and at the same session an act was passed to establish grammar schools in the remaining five counties, namely, Sunbury, Queens, Kings, Westmorland and Northumberland. The general provisions of this act have appeared in a previous number of the EDUCATIONAL REVIEW and need not now be recapitulated. Grammar schools were shortly established in the Counties above referred to, and some facts connected with them will be given when we come to consider, under the head of the respective counties, the schools taught in the province

down to the year 1825. (It is the intention of the writer to make a list for each county of the parish schools in existence during that period, with the names of teachers, as far as they can be determined from old records in his possession).

It may be of interest here, however, to compare the dates at which the means of promoting secondary education first became available in the several counties.

The first master of the academy at Fredericton appears to have been appointed in the year 1786. At St. John there existed about the same period some private schools in which the classics and higher mathematics were taught, but not until the founding of the grammar school in 1805 was there any public institution for promoting secondary education.

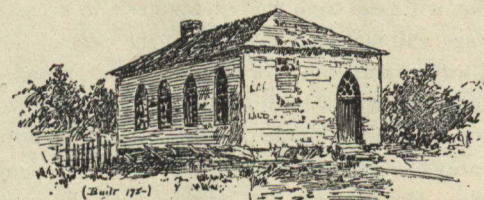
The St. Andrews grammar school was opened June 1st, 1819, the Rev. John Cassel, master. The course of instruction, terms, etc., are given in the St. John "City Gazette" of July 7th, 1819.

The Westmorland County grammar school was opened September 6th, 1820, the Rev. C. Milner, master.

The Northumberland County grammar school was opened about the year 1822; Archibald McQueen, master.

The Sunbury and Kings County grammar schools were opened in the year 1823, the former at Sheffield and the latter at Kingston. The Queens County grammar school was opened at Gagetown the following year.

The grammar school-houses were built by individual subscriptions, supplemented usually by a government grant of £100. In almost all cases they were low, homely looking buildings, with no pretensions to architectural beauty. That at Gagetown is still standing; for the use of the cut here given we are indebted to the kindness of the publishers of the "New England Magazine."



The Old Grammar School-house at Gagetown.

It was in this old building that Sir Leonard Tilley, late Minister of Finance for the dominion and ex-lieutenant governor of New Brunswick received his early education.

The first master of the St. Andrews grammar school, Rev. Mr. Cassel, appears to have been a Presbyterian minister. Several of the masters of the other grammar schools were clergymen of the Church of England. The

combining of the duties of school master and parish minister, as seen in the light of history, clearly was not beneficial to the interests of the churches to which these clergymen ministered, and on the other hand it appears to have been equally unsatisfactory from an educational standpoint.

An agitation was commenced against the continuation of the system, and in the year 1827 the House of Assembly on the 29th of February passed a resolution:

"That it is the opinion of this House that the trustees of grammar schools in the different counties shall yearly forward to the secretary of the province a specific statement of the condition of the school house, the name of the master, whether he be in Holy Orders, the number of scholars in each school, with the number of free scholars and their names, with the reason of their being admitted as such, with the rate of tuition money paid by scholars and by whom received."

At the next year's session of the legislature the committee on schools, Messrs. W. Crane, Alex. Rankine, Thomas Wyer, E. B. Chandler and John W. Weldon, reported —

"That it appears to them, from facts which have come under their own observation and from information they have received from respectable persons residing in different parts of this province, that the very liberal grants of money appropriated and paid by the legislature in support of grammar schools in this province have not produced that beneficial effect which was expected to result from those establishments."

The discussion that ensued resulted in the passing of an act which provided that —

"From and after the 1st day of January, 1830, no benefited clergyman of the established church or minister of any sect or denomination of Christians having charge of a congregation shall be eligible as master or usher of any grammar school."

In addition to the establishment of county grammar schools, other efforts were put forth from time to time for the encouragement of secondary education; one of the earliest of these was that of the Rev. Oliver Arnold of Sussex, a gentleman who throughout his life took the greatest interest in educational matters. The particulars in the instance here referred to may be gleaned from the following advertisement in the "Royal Gazette," dated March 26th, 1793:

ACADEMICAL INSTRUCTION. The pleasing success and apparent reputation of the public school at Sussex Vale, together with the solicitations of a number of respectable gentlemen, have induced the DIRECTORS to engage accommodations for a larger number of scholars than have heretofore attended. The accommodation will be in readiness on the 1st of May next for the reception of any young gentleman who may be sent to the said school, where he will be taught READING and WRITING, MATHEMATICS and NATURAL PHILOSOPHY, LATIN and GREEK LANGUAGES.

Any gentlemen who may wish to send their children to said school for education may be assured that good accommodations are provided in decent families, that strict attention will be paid to their morals; and that it may reasonably be presumed their progress will equal the most sanguine expectations.

The whole expense for the English scholars, including boarding, lodging, washing and the tuition, will amount only to eighteen pounds currency per annum.

A separate agreement will be made with those who may wish to be taught navigation, surveying, the Latin or Greek languages.

N. B.— It is well known to every gentleman who has visited Sussex Vale that its local situation is central, and such as to render it very pleasant and easy of access from every part of the province.

Any letters on the business of the school may be directed to the Rev. Mr. Arnold.

Doubtless the modern boarding school has made a very marked advance on the facilities provided in this pioneer boarding school established by Sussex enterprise so shortly after the settlement of the country, but it is at least questionable if the modern boarding school will ever be able to rival the old Sussex school in economy of management. Boarding, lodging, washing and tuition, with "strict attention to the morals" of the pupils can hardly be hoped for in these days at the rate of £18 currency per annum.

It may be here noted that the Rev. Oliver Arnold petitioned the House of Assembly at the session in February, 1816, for aid towards establishing a grammar school at Sussex Vale. The grammar school, however, went to Kingston, then the shiretown of Kings County.

Another project, looking to the providing of higher education for girls, was started in St. John about the year 1816. Mr. Thomas Millidge, a member for St. John County, on February 20th, 1817, presented the petition of the mayor of St. John and others, praying for aid towards establishing a Seminary at St. John for the education of young ladies, and the House of Assembly on the 15th March following voted to commissioners, to be appointed by the Governor in Council, the sum of £300, to be by them expended "in aid of individual subscriptions" to establish the proposed seminary at St. John. The seminary for young ladies does not appear to have been a success and its existence was brief.

EVERY professional and business man has felt the need of some kind of a receptacle, in which could be placed and constantly within reach, reference books such as he uses daily. Just such an article has at last been invented, and is shown and described in another column in this paper. We have tried it and found it satisfactory.

For the REVIEW.]

Our Birds.

In the June REVIEW of 1889 there is a classified list of the orders of birds found in these provinces, with a note of the number of species in each. The list enumerated all the birds which at the time were reported to be found within the said limits, including the very rare as well as the more common. The orders were given according to the scheme of the American Ornithological Union, but with suggestive English names. We give the following as a useful summary for the use of those who wish to explore the bird fauna of their respective school sections :

ORDER.	NUMBER OF SPECIES.
1 Diving Swimmers,.....	14
2 Long-winged Swimmers,.....	20
3 Tubed-nosed Swimmers,.....	7
4 Full Web-toed Swimmers,.....	7
5 Lamel-billed Swimmers,.....	35
6 Knife-billed Waders,.....	9
7 Long-toed Waders,.....	6
8 Slender-billed Waders,.....	36
9 Terrestrial Scratchers,.....	2
10 Arboreal Scratchers,.....	2
11 Birds of Prey,.....	27
12 Kingfisher and Cuckoos,.....	3
13 Yoke-toed Climbers,.....	8
14 Strong-wings,.....	4
15 The Perchers,.....	102
Total,.....	282

Perhaps 200 might be the proper number to speak of as the birds more or less common to the provinces, while 100 would be a very creditable number to be catalogued as visiting one school section on an average. But some portions of the country are much more attractive to a number of species than others. The boy who masters a fair knowledge of one hundred of our native birds may be put down as an ornithologist of no mean acquirements. The perchers are the most numerous, and the spring is a good time to commence their observation. They are found everywhere, but from their small size and shyness it is not very easy for beginners to identify them without a great deal of patience. Perhaps we may give a classification of the perchers into families in our next, if our readers are not already tired of such outlines for reference. We have had lessons upon a number of the order in previous numbers of the REVIEW.

THE SONG SPARROW.

The Song Sparrow is the first sweet singer of spring. It is always here early in April, sometimes before the end of March. This year it will very likely not be seen in many places until April, as March may have been too wintry for it. It is a typical sparrow, one of the

largest family of the perchers—the largest family of birds in any order. Its length is from six inches to six and three-quarters. It is one of the grey, brownish birds, is much streaked above on the breast and sides; below whitish. An indistinct greyish line divides the crown in the middle. A greyish light curved stripe runs along the side of the head, just through or over the position of the eye, and another one concave to the eye separates the cheek from the throat. It may stay with us until the end of October. Its song resembles the beginning of a canary's song—is very short, but exceedingly sweet and frequently repeated. Its nest is built in the ground under a tuft of grass, lined with horse hair and other material. The eggs are four or five, of a bluish white, thickly sprinkled with reddish-brown spots.

For the REVIEW.]

School-room Chats.

Verbs have not only voices as pointed out last month, but they also have moods. So, too, unfortunately, have teachers. In English-speaking countries verbs have only three or at most four moods in a life-time, but there are teachers who can beat that record in half a day.

Verbs do their indicating by one mood called the indicative, and the information imparted is neither more nor less than is intended. But some teachers do their class-room indicating in a number of different moods, all of which indicate, in addition to what the words express, one and the same thing—character. A mood in teachers is a state of feeling. Encouraged, it becomes a habit of mind. Persisted in long enough, it becomes a part of character. Thoughts, states of mind, are possible but undeveloped deeds. "Action is but coarsened thought." Thinking and doing are essentially one.

"A deed knocks first at thought,
And then it knocks at will;
It then goes out in act,
Or is entombed so still
That only to the ear of God
Its doom is audible."

Have you ever allowed yourself to become the creature of a mood which ought to have had that inaudible doom?

Mood in verbs is the mode or manner, etc. So also in teachers it is the mode or manner in which the teacher thinks, speaks and acts in the class-room. Which of the verb-moods is best for the teacher's use? Certainly not the subjunctive. There must be very little of the *conditional* or *doubtful* about class-room methods. Know in every case exactly what you are going to do;

know in every case exactly how you are going to do it; and do that thing in that way. A poor method worked out with force and confidence, is better than a good one followed in a weak and doubting manner. Let your confidence in your mode of working be such as to inspire confidence.

Do not make conditional threats. In fact, do not threaten at all. If a pupil does a wrong do not say, "If you do that again I'll punish you," but if the act deserves punishment, either punish or fail to observe what occurred. Never excuse a first offence. Just as wise to let the first Russian thistle go to seed. See that the pupils have clear and correct ideas of right and wrong. Then as every possible action is either right or wrong, no rules, as such, will be needed. A code of rules often does harm. When children get into trouble they think only of having "broken a rule" instead of realizing that they did what was wrong. When a fault is spoken of at all, let it be shown to be an offence against *right*, and not merely an act which happens to be contrary to the whim of the teacher.

The great mood for the teacher is the *indicative*. When a number of persons are walking over a rough and unknown part of the country, the guide *indicates* the right road and clears away any difficulties that may be in the way. To do this the guide must be one of the party, and not like King Edward who watched the battle of Crecy from a wind-mill, or Xerxes who viewed the fight at Salamis from a promontory. Let the teacher in all the studies be one of the party of workers, trudging along with the class. Let the gentle imperative mood "come" be often used, but the sterner "go" seldom or never.

Carry no disagreeable or even peculiar moods into the school-room. I once knew a Scotch lad whose disagreeable temper, one day, caused him a severe flogging. His aunt who had been reading to him of a sect that baptized its members in a running stream so that the current might carry away their sins, said to him, "Dan, if I were you, I'd send away that bad temper with the brook." Next morning, Dan having met with some annoyance, started to school in a very ugly mood. It was in the month of April. In about half an hour he returned home cold and dripping, and told his aunt that he had "put the pouts away with the brook." If you, fellow-teacher, cannot go to the class-room in a mood that is perennially pleasant, take a cold plunge on the way. Then go home and stay there.

The next annual meeting of the Manual Training Teachers' Association of America, will be held at Armour Institute, Chicago, Ill., July 16, 17, 18, 1895.

Nova Scotia School Report.

(Continued.)

The report deals with many interesting points relating to several subjects in the course of study. They are divided into two classes: (1) The nerve exhausting, and (2) The recreative subjects. Though the recreative subjects require but little time, yet, like flavoring in food, they are very important in the proper assimilation of the rest. The Chief Superintendent points out that

"There is yet a great lack of skill on the part of most teachers in utilizing them so as to break the monotony and weariness of the school, correct bad habits of body and form good ones, and practise the expression of thought in good English in the most interesting and rational way possible—the description and explanation of what pupils see and understand in their surroundings. In the common schools the best English will be found, as a general rule, where the best object and oral lessons are given. Language can be correctly learned only as it is used for the expression of ideas which are distinctly comprehended. The recreative exercises, besides relieving the pressure, interesting the intelligence and promoting health of body and mind, will enable the pupils to do better work in the old and staple subjects than was ever generally possible without them."

The number of pupils taking Latin in Grades X and XI shows a decided increase.

The great advantages of the provincial high school examinations are made clear. They serve the purpose of testing the scholastic qualifications of would-be teachers, they are generally accredited certificates of scholarship, and they help to admit students to colleges of various standards of entrance. In defence of a thorough high school course it is said that if we should depart from the course adapted to the average, it would be better to have it suited to the abler rather than to the duller students. Otherwise the better students would be kept back and would acquire idle habits—a danger wherever pupils must be taught in large classes. Ill fares the country that does not encourage ability and genius. In the schools there may be sometimes over-pressure, just as in all departments of life there are those who from various motives press on beyond their strength. Those things, whose general tendencies are good, cannot, however, be banished because a few go to excess in them. The high school course of study is shown to be a gradual growth to which the Educational Association and various expert committees have contributed. It is the result of a general consensus of the opinions of those best qualified to frame a course of study for the province.

An analysis of some of the statistical tables would be very interesting. In the meantime we shall only refer to a part of one of these tables, viz., No. XIX. There

it is shown that Halifax has as many academic pupils as Annapolis, Digby, Yarmouth, Shelburne, Queens, Lunenburg and Hants taken together. In Colchester the cost per pupil in the academy is \$20, in Halifax \$35, in Yarmouth \$56, and in Cape Breton \$75. The educational status of each county is fairly well shown by taking the proportion of its pupils engaged in high school work. In Annapolis we find 1 : 9, Kings 1 : 10, Hants 1 : 14, Pictou 1 : 15, Colchester 1 : 19, Cape Breton 1 : 21, Queens 1 : 21, Shelburne 1 : 21, Yarmouth 1 : 22, Antigonish 1 : 24, Halifax 1 : 28, Digby 1 : 29, Guysboro 1 : 36, Cumberland 1 : 39, Lunenburg 1 : 47, Richmond 1 : 59, Victoria 1 : 61, Inverness 1 : 164.

Principal Calkin reports from the normal school 130 students enrolled, of whom 123 received diplomas. He claims that as the result of the changes, making the work mainly professional, "the students gained a more complete and thorough grasp of the principles underlying good teaching, and attained to higher skill in the application of those principles to practical work in the presentation of knowledge and in class management." The practical skill in teaching and class management attained by these 130 normal school students was obtained in the model school, which averages seventy-nine pupils, and in the model lessons given by the students to each other. The manual training department, under Professor Russell, "was very popular and excellent work was done." The kindergarten department, conducted by Mrs. Patterson, was very successful. There were three graduates, one of whom now occupies an important position in Newfoundland. Professor Smith, of the affiliated agricultural school, has classes in microscopy, botany, advanced chemistry and agriculture. By this means scientific agriculture is receiving some of the attention which it deserves. Several graduates of this school have established "local agricultural schools."

"The work of these schools is something of which our province should be proud. With so many pupils studying agriculture, with the lectures and advice of these teachers, with their success upon their own farms, with their assistance to the local agricultural societies, they are doing a work hard to appreciate at its full value."

Principal Fraser, of the Halifax School for the Blind, says that one of the chief difficulties with which he has to contend is that many of the best years for educational work are lost. The pupils of that institution enter the school at ten years of age. In some homes the blind child is the victim of ignorance and neglect—in others it suffers from something more agreeable, but oftentimes more pernicious—over indulgence. The most of the blind children of these provinces suffer physically, mentally and morally before they reach the age of ten years, so Principal Fraser's suggestion that children should be allowed to enter the school at the age of six years would seem to call for the careful attention of the governments of the Maritime provinces and Newfoundland.—["Progress."

Nova Scotia Normal School.

This institution will have for the current year a larger attendance than ever before. A very considerable number are of the higher grades—among them several college graduates. Every effort is being made to increase the amount of practice in teaching. By sub-divisions of the two or three departments of the model school, and by practice upon the junior grades of pupil teachers, the practical work has been greatly extended. Scholastic work has been almost wholly displaced by purely professional work, and the result is in the main good. Psychological and educational questions are more freely discussed than formerly. There is more original research, more mind development, and less memory work. Sloyd benches and laboratory stands afford greater opportunities for that muscular activity which develops brain power, self-reliance and a general mental alertness. These are the qualities that give success both in the little world within the school-room and in the greater world without.

In object drawing Miss Smith gives an admirable training of the faculties of observation and judgment. The powers thus gained are largely utilized by the other professors in illustrated science lessons.

The students are made familiar with apperception, concentration and Herbartian ideals in education, so that as they obtain fuller practice in schools of their own these germinal principles grow upon them and they themselves are not in danger of that arrested development which so often blights the promise of better things in those who have not studied the psychological and historical phases of education.

Dalhousie College Lectures for Teachers.

The course of lectures on educational subjects given in Dalhousie College was closed in March by Dr. MacKay, Superintendent of Education. The "Chronicle" has the following report:

A very large audience assembled to hear Dr. MacKay's address on the "Co-ordination of Studies." The object of the lecturer was to explain the principles upon which a course of study should be drawn up. He confined his attention chiefly to courses of study for secondary schools. The first subject which he considered was that of compulsory subjects, what subject should every pupil be required to study? English and mathematics should form the backbone of such a course. In addition to these some science and some history and geography should be required. He here entered into a discussion of the arguments for and against making languages, especially the classics, optional. Spencer and others were quoted in favor of shifting the centre of school work from the classics to science, and other subjects more suited to the needs of the age. He sketched the

history of the changes in the courses of study in Nova Scotia. He called attention to the fact that though Latin was an optional subject, recent reports show a decided increase in the numbers studying that language in the schools.

The next subject considered was the order of the arrangement of studies. There are two methods of arranging studies—the successive or tandem and the simultaneous or abreast. The former proceeds upon the maxim of one thing at a time and that done well. This method is open to serious objections. It does not give sufficient attention to the fact that it takes a child's mind some time to grow. If too much attention and time be given to any one subject the teacher must necessarily proceed from the easier to the more difficult parts of the subject more quickly than the child's mind has grown in strength and capacity. Again, a course of study with a small number of subjects does not appeal to a sufficient number of interests. Variety is a condition of interest. Monotony, a want of variety, is almost synonymous with the uninteresting. Equally ineffective is such a course in developing all the pupil's capacities.

In this connection the lecturer considered the objection to the study of several sciences. He contended that the method of study was one, though the objects studied were many. The result was not a smattering of knowledge, but a single kind of training; for the object in view is not knowledge, but a way of thinking. Variety of objects is necessary for broadening the pupil's interests—for opening his eyes to many things and for counteracting the tendency to faddism. He also spoke of the marked improvement made in recent years in the teaching of science in the schools. The subject of examinations was also touched upon. The written examination is not the only means of testing work in the present system. The teachers as well as the inspectors' reports enter in the determination of the grading.

These lectures have been of very considerable interest and value, not only to the profession in Halifax, but also throughout the province.

They will be continued next year, but on a larger scale. The lectures leading up to the degree of Literate in Education, were attended by twelve students, five of whom will be graduates in the arts course for this year. They have, in the meantime, gone to the normal school at Truro, to receive further light in methods by a three months' exclusive devotion to practical work.

Could the trustees be induced or compelled (if necessary) to subscribe for one good educational journal—the EDUCATIONAL REVIEW for instance—for the use of the school and the teacher, at the expense of the section, payable out of the county fund or otherwise, the desired medium (between school officers and trustees and teachers), would be established, besides securing to the teacher and the school valuable and profitable articles and exercises without any appreciable burden to anybody.—[Inspector M. J. T. Macneil, N. S.]

Cut from a Criticism—Nature Lessons.

* * * It was very sensible for Dr. McKay to urge the importance of interesting children in "buttercup and butterflies," but it is one thing to sow and quite another to secure a crop. Out of fifty school teachers "who could exhaust all the adjectives of admiration over his opinion, not ten of them could tell you how 'toad stools' are propagated, or know a moth from a butterfly. To hear them, one would think they were so in love with nature, that they were stuccoed with quadrupeds and birds all over." I know that there is but a very little teaching of natural history in any of our schools. The reason is not far nor hidden. The teachers have neither adequate knowledge of the subjects, nor the enthusiastic aptitude to impart such knowledge. Very few of them have prepared themselves to make buttercup and butterflies interesting to children. This does not arise from lack of interest and curiosity about such things in children, but for the reason that the would-be instructors lack both the enthusiasm and the knowledge to open the way to the deeper enchantments of nature. It would be an easy matter for any teacher to pluck a squash blossom and hold it up for the admiration of children, and draw their attention to its unusual size, and notched corolla; but how many will call their attention to the two kinds of blossoms on the same vine, and show them that one produces pollen and the other does not; that one has a baby squash already set below the blossom, and the other has not; that, unless this golden dust of pollen is placed on the proper place within the other blossom, no squash will ever grow? Will they capture a bumble bee and show them that this little creature as he tumbles in and out of these blossoms for sweets, carries this dust on his hairy body, and thus performs a necessary service, and but for the like of him or some other insect the race of squashes would come to a sudden end? Will they show them that these honey-pots inside the flowers are apt contrivances that secure the visit of the needful bee? and so on, carrying the children with wide-eyed wonder into the temple of nature. The teacher must not say to the children that this "onion" I place before you is a provision meant for man; but explain that this was nature's provision for another onion; the food was not for us, but for the future plant. * * *

One might as well say the highest ambition of a beech tree is to produce beech nuts for squirrels and jays; or that the highest ambition of pine trees is to produce seeds for squirrels, since our "pine squirrels" could not winter without them. To show how far this is from the truth, come with me and let us open up, scale by scale, a pine cone before it is ripe, or we will

look in vain. Here are the seeds, each one with a wing, an outgrowth of the covering. This wing has but one meaning. The intention is for the seed to drop out of the ripened cone, when the scales turn up a little to let them out, and as they are set free the wind seizes upon the wing and sows the seeds here and there, thus increasing their chances of reproduction. The pine squirrel, or "red squirrel," does not say, "Lo, here is a tree whose highest ambition is to produce food for me and mine." On the contrary, he sees that the tree has taken means whereby he is not likely to get a taste. If he waits till the seeds are ripe he will not get any of them, so he "circumvents" nature, as Mr. Weller would remark; he climbs the tree when the cones are as green as leaves, but in the nick of time when the seeds are milky, but stored with nutritious food. He does not attempt to take out a seed, but cuts off the cones by hundreds and lets them fall. If he let them remain upon the ground they would soon dry, and the scales curl up and the seed would be lost to him. So he picks them up, and carries them away to his winter nest? No, he doesn't, but he tucks them always into a damp hole beneath a root or log or rock, or even piles them layer after layer in puddles of water. In that moist or wet condition the cone never opens itself; the seeds harden and keep for years. He remembers in winter where he has stored them, and goes from one place to another to drag them out and make a meal as he needs one. Both the trees and the squirrel have done their best to look out for themselves, and the squirrels have got the best of it. How long it took them to learn, or how the knowledge is transmitted are questions of surpassing interest in a legitimate and hopeful field of enquiry. Our teachers need not look in the books for this account I have given. It was learned at first hand and will perhaps illustrate a better method of learning than to run away with the notion that anything in the vegetable world has an ambition to supply our wants. Sheep know more than onions, but who would believe that they have any "ambition" to raise wool for our benefit? or that geese console themselves at the annual agony of feather plucking, that they are furnishing pillows for us? We must go to nature divested of all notions, and prepared to learn what she has to impart, and we will find that

"She never did deceive the heart that loved her."

There are so-called naturalists, who have never learned to love nature.

"They would peep and botanize
Upon their mother's grave."

And "verily they have their reward." As children we are full of curiosity about this wonderful world.

We wish to know how and why and the wherefore of all we meet, but we are met with dull ignorance smiling at our wonder, or stiff prudishness closing our lips, or cowardly superstition to flaming cherubim guarding the gates of divine majesty, which is only another word to hide a lack of knowledge. Thus are we subdued, the light of enthusiasm is quenched and at length the

"Man perceives it die away

And fade into the light of common day."

—[R. R. McLeod, in Halifax "Herald."

Arbor Day.

Committees may be appointed as follows: To invite parents and other residents of the district to assist in planting; to procure trees, shrubs, and flowers; to procure specimens of native woods to be exhibited on a table in the school-room; to decorate the school-room with grasses, leaves, evergreens, etc.

Lines for the black-boards:

Flowers preach to us if we will hear.—*Chris. G. Rosetti.*

Go forth under the open sky and list to nature's teaching.

—*Bryant.*

Whatsoever thy hand findeth to do, do it with thy might.

—*Bible.*

PROGRAMME.

1. SONG..... By the School.
2. SCRIPTURE READINGS..... By the Teacher.
3. ESSAY.....
- "On the first lines for the Blackboards.".... By a Girl.
- NOTE—Show how the flowers preach by referring us; giving us pleasure; adorning our homes, etc.
4. RECITATION.—"The Heart of the Tree" .. By a Boy.

What does he plant who plants a tree?

He plants a friend of sun and sky;
He plants the flag of breezes free;
The shaft of beauty towering high;
He plants a home to heaven nigh
For song and mother croon of bird
In hushed and happy twilight heard—
The treble of heaven's harmony—
These things he plants who plants a tree.

What does he plant who plants a tree?

He plants cool shade and tender rain,
And seed and days of bud to be,
And years that fade and flush again;
He plants the glory of the plain;
He plants the forest's heritage;
The harvest of a coming age;
The joy that unborn eyes shall see—
These things he plants who plants a tree.

What does he plant who plants a tree?

He plants, in sap and leaf and wood,
In love of home and loyalty
And far cast thought of civic good—
His blessings on the neighborhood

Who in the hollow of his hand
 Holds all the growth of all our land—
 A nation's growth from sea to sea
 Stirs in his heart who plants a tree.

—H. C. Bunner, in the Century.

5. MOTION SONG.....
 —“The Tree's Story”..By the Primary Class.

(Tune: “Comin' Thro' the Rye.”)

The trees lift up their branches tall;
 Their leaves dance in the breeze;
 “Oh, ho!” they sing, “for what care we?
 We're living at our ease.”

But presently the woodman comes,
 With axes sharp and bright,
 And choosing him a tall pine tree,
 He works with all his might.

“Oh, see! the tree is falling now,”
 It lies upon the ground;
 The ax cuts off each twig and bough,
 And round it chains are bound.

Two horses pull the tree along
 Until a stream they find,
 On which the tree floats to the mill,
 Where waits the miller kind.

He lays the log before the saw,
 And back and forth that goes,
 Until the mill is full of boards
 That lie in long white rows.

And then the children's father buys
 Shingles and beams and planks,
 To build his house, for which we must
 Give tree and woodman thanks.

—Grace Butterfield, in Little Men and Women.

6. ESSAY.—“The Second Blackboard Motto,”..By a Boy.
 NOTE.—Show how nature teaches from cloud and sun, sea and sky,
 forest and plain.

7. RECITATION.—“New Leaves.”.....By a Girl.

Mrs. Horse-Chestnut Tree said: “Oh, dear me,
 I must have a new gown, and what shall it be?
 On catkin trimmings the willows dote,
 The staid old oak wears a gay pink coat;
 Miss Birch is dressed in the prettiest taste,
 With a sash of green 'round a white satin waist.
 But I think I've guessed what pattern is best;
 Besides, it will be quiet unlike all the rest.”
 So a Japanese costume this morning she plans,
 All made of the softest of little green fans.

—Youth's Companion.

8. ESSAY.—“The Third Blackboard Motto,”..By a Boy.

NOTE.— Show the importance of doing the duty which is next to us,
 be it ever so small; the danger of delaying to do duty; the fact that
 the future does not belong to us, and that we must work now.

9. SONG.....
 —“Work for the Night is Coming.” By the School.

10. RESPONSIVE RECITATION.....
 —“Spring's Call to the Flowers,” By seven Little Girls.

NOTE.—Each girl should have a bunch of suitable flowers in her hand.

First Girl:

“Come, come,” said Mother Nature,
 “You must waken from your rest;
 Don't you hear the bluebird singing?
 And the robin is building his nest.

“Jack Frost has said ‘Good-by,’ once;
 But he may come back to know
 Which little flowers are afraid to start,
 And which will push up and grow.

Second Girl:

“Come, daffodil, you're brave and strong,
 Peep through the hard earth, my dear,
 And show Jack Frost, if he comes again,
 You're one of the first to be here.

Third Girl:

“And come, my crocus and pansy sweet,
 With your dresses of purple and blue.
 Last year you took an early start;
 I hope you will this year too.

“I must off to the woods and pastures wide,
 Where the little brooks laugh and leap;
 To the hedges bare and the hillside too,
 Where I left many seeds asleep.

Fourth Girl:

“And violet, dear, you're coming, I know;
 Come, peep from the grass, so shy;
 And the children, so glad to see you there,
 Will pick you as they pass by.

Sixth Girl:

“Then, dandelion, you're a hardy chap,
 With your face so sunny and yellow,
 But ere long, when the summer comes,
 You'll look quite like another fellow.

Seventh Girl:

“Dear honeysuckle, I pray you arise
 And peep from your nook in the rock,
 Where you bow your head when the breezes blow,
 And seem so plainly to talk.

“The other flowers will come later, I know;
 But the children love you best;
 For you come when the trees and hills are bare,
 And the robin is building his nest.”

—G. E. L., in Child-Garden.

11. DEBATE.....
 —Resolved, “That the Rose is prettier than the Lily.”
 Two Girls on each side.

12. SONG.....By the School.

13. ESSAY.—“What we owe to the Past.”..By a Boy.
 NOTE.—Show what the past has done for us—planted orchards, built
 school-houses, churches, etc.

14. ESSAY.—“What we owe to the Future.” By a Girl.
 NOTE.—We must do for the future what the past has done for us, and
 more.

15. CONCERT RECITATION.—“An Arbor-Day Tree.....
 By the Third-Reader Class.

Dear little tree that we plant to-day,
 What will you be when we're old and gray?
 “The savings bank of the squirrel and mouse,
 For robin and wren an apartment house.

The dressing room of the butterfly's ball,
 The locust's and katydid's concert hall.
 The school boy's ladder in pleasant June,
 The school girl's tent in the July noon.
 And my leaves shall whisper them merrily
 A tale of the children who planted me."

—*Youth's Companion.*

16. VOTE.—“On the Most Popular Tree and Flower...
 By all present.
17. COLLATION SERVED.
18. The school will march to the grounds, and planting
 will begin, under the direction of the board and
 teacher. Let trees and flowers be named after
 noted persons. Let each class volunteer to be
 responsible for the care of one or more trees.
19. CLOSING ADDRESS.—Subject: “Oh, the good we
 all might do while the days are passing by.”
 By the Teacher.
20. CLOSING PRAYER.—Asking God's blessing on the
 Work.
21. DOXOLOGY.....By the School.

Welcome Mothers as School Visitors.

No one who has ever lived in the country can forget Friday afternoon in the district school. It was visitors' day, and everything in the little old school-house, from the “warping floor, the battered seats,” to “the charcoal frescoes on the wall,” wore an air of importance. The visitors came—fond mothers who gazed with pride at their darlings while the banner classes performed wonderful feats of learning and the star pupils “spoke pieces.” It was a proud day for pupils and a proud day for parents. There may be scoffers so irreverent as to smile over the primitive custom, and some may criticise these methods. But smile and criticise as they may, there is one feature of that old-time Friday in the district school that might well be perpetuated: It is the active interest of mothers in the education of their children.

Whether from a lack of time or interest, or a feeling of timidity and fear of being unwelcome, the mothers of to-day practically ignore the public schools.

It is one of the strange anomalies of motherhood that a baby who is scarcely trusted out of his mother's arms until he is six years old, suddenly at that advanced age is pushed from the accustomed nest and taught to fly alone. He graduates from his mother's care and is utterly and confidently turned over to a teacher who never saw him before and has forty such little charges.

With all due respect to the teacher, it is rather too much to ask of her that she should at sight love and understand the little human phenomenon as well as his mother does. When before in all his guarded babyhood had he so great need of love and understanding as when the tendrils of his little mind are beginning to reach out and grasp at the outer world? His whole life hangs in the balance. Yet the ruthless mother abdicates her throne to a stranger, too often with a sigh of relief. Just here the roads of mother and child part never to approach so near again. It is the mother's fault, and gradual alienation of her child is her natural punishment.

It is not for an instant to be supposed that every mother should constitute herself a superintendent of public instruction. Neither should she be an officious wiseacre, meddling with what is out of her province and prescribing her pet remedies for every ill that may appear. Her duty in relation to the public schools is not to educate the teacher or even the wayward school board. Her principal duty is to educate herself. She should study the school that she may be in harmony with the purposes and methods of that institution, and that she may be in sympathy with her child and his work. Ideas on education have undergone a complete transformation in the last twenty years, and the woman who knows only so much about educational methods as she learned in her own school days might better know nothing at all. The class-room of to-day is the best possible training school for mothers. When a mother once understands what a teacher is trying to do and how she proposes to do it, she is a willing and valuable ally. But ignorant mothers are one of the greatest obstacles teachers have to contend with. They unwittingly frustrate the teacher's plans and retard the child's development. They work at cross purposes with the teacher, and the child suffers from it. The education of the school-room is at the best partial. The discipline and culture and development begun there should be carried on in the home, and the mother must be thoroughly acquainted with the workings of the school-room to be competent to take up the sceptre the teacher lays down. * * *

No woman who undertakes an investigation of the schools with the honest purpose of guarding the interests of her child, need fear that she will be unwelcome. The teachers are glad to have the mothers for allies. If the latter realized how much suffering they might save themselves and their children with a little oversight of their school lives, they would not begrudge the time and energy demanded by a conscientious attention to the subject.—[Exchange.

Two, Too, and To.

Nothing but most frequent and thorough drill will ever impress the distinctive meanings and uses of the words "two," "too" and "to" upon children, and unless they are understood they are certain to be constant stumbling-blocks. However it is possible to make the uses of the words so familiar as to render mistakes in writing but rare.

Before touching sentences explain the uses of the words in phrases, and obtain examples from the children :

two books,	two slates,
two horses,	two pencils,
two girls,	two plants,
two boys,	two hands, etc.

Then draw from the children the meaning of the word "too" and example :

too hot,	too sunny,
too early,	too sweet,
too late,	too heavy,
too short,	too thick, etc.

Following this, exercise on "to":

to write,	to sew,
to read,	to study,
to come,	to walk,
to run,	to ask,
to go,	to carry, etc.

After this a great number of sentences may be given in which are blanks to be filled with the right word. Beginning simply by using one of the words, the exercises should gradually increase in difficulty, until all three are necessary to the completion of the sentence :

I have—marbles.
Mary has—kittens.
My tea is—sweet.
That lemon is—sour.
I shall have—run,
Tom wants—read.

I went—the store and bought—oranges.
It is—cold for—little girls—go so far.
I went—far west and had—go—miles farther.
The—boys worked at their lessons until it grew—dark—see. — [Rhoda Lee in "Toronto Educational Journal."

Mr. Tyrell, of the Canadian Geological Survey, says that from the large body of water known as Wollaston lake emerge two almost equal streams, the one flowing to Lake Athabasca and thence by the Slave and Macenzie rivers to the Arctic ocean, and the other to Reindeer lake, and thence by the Reindeer and Churchill rivers to Hudson bay, the island thus formed comprising about one-third of the Canadian domain; and

directly south-east is another large island between Lake Winnipeg and Hudson bay, the result of a bifurcation in the little Sandy lake, which has an outlet to Hudson bay through the Severn river, and another to Lake Winnipeg through Family lake.

QUESTION DEPARTMENT.

W. J. M.—(1) From each of two stations, east and west of each other, the altitude of a balloon is observed to be 45° and its bearings to be respectively N. W. and N. E. If the stations be one mile apart, determine the height of the balloon.

Let BKA be a triangle with its sides nearly equal, and let BA be the base. Near the centre of the triangle take a point C and join it to the points AB and K. Now let B represent the east station, A the west station one mile away, K the balloon, and KC the height of the balloon.

BA runs east and west, CA north-west and CB north-east.

Then angle CBA = 45° , angle CAB = 45° , angle BCA = 45° .

$$\therefore \frac{AC}{AB} = \sin. 45^\circ = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2} = .7071 \therefore \frac{AC}{1} = .7071$$

$\therefore AC = BC = .7071$ miles. But angle KAC represents the altitude = $45^\circ \therefore KC = CA$.

\therefore The height of the balloon is .7071 miles = 3733 ft.

(2) The angle of elevation of a balloon from a station due south of it is 60° , and from another station due west of the former and distant a mile from it is 45° . Find the height of the balloon.

Using the figure given above, K will represent the balloon, C the point vertically below it, CA the distance to the station directly south, and AB the distance from the station due south to the one due west from the southern one and distant one mile.

Then angle KAC = 60° , angle KBC = 45° , angle CAB = 90° .

Let KC = x miles, the height.

$$CA = KC \cot. KAC = x \cot. 60^\circ = \frac{x}{\sqrt{3}}$$

Because KBC = 45° , KCB = 90° , \therefore CKB = 45° and BC = CK = x miles.

$$\text{But (I 47) } BC^2 = CA^2 + BA^2. \therefore x^2 = \frac{x^2}{3} + 1$$

$$\therefore 2x^2 = 3, \therefore x = \frac{1}{2}\sqrt{6} \text{ miles} = 6468 \text{ feet.}$$

What work on mineralogy would you recommend for the use of teachers wishing to make a thorough study of Canadian minerals? I would recommend any one wishing to get a collection of Canadian minerals suitable for illustrative lessons in school to send to C. P. Willimot, Ottawa, for their catalogue.

With the proceeds of an entertainment given Xmas times, we purchased a \$12.00 cabinet of minerals—100 specimens. I am highly pleased with the collection.

G. W. W.

We know of no better work than Dr. Bailey's Elementary Text-book on natural history, where our minerals are very fully treated. This, in connection with Crosby's "Common Minerals and Rocks," published by the Boston Natural History Society, (D. C. Heath & Co.,) and Mr. Brittain's recent lessons in THE REVIEW on minerals, should enable you to make an excellent preparation for classes.

T. E. M. — On page 139, Ex. 44, of Meiklejohn Short Grammar, is found given as an example of bad grammar the following sentence: "They are the two first boys in the class." On page 4 of same book is found the sentence: "The two first letters of the Greek alphabet are alpha and beta." If the latter phrase as used by the author be correct is not the former correct, and why?

Both examples given above are incorrect. *First*, from its meaning, precedes all others in numbering, the *first two* letters as well as the *first two* boys is the correct form. How ridiculous it would be to say "the five first letters of the alphabet;" and Meiklejohn is too good a grammarian to make such a mistake. In his "English Language," (D. C. Heath & Co., Publishers, 1887), page 7, Meiklejohn says: "The word alphabet comes from the *first two* letters in the Greek language." This is the sentence that our correspondent refers to on page 4 of the Short Grammar, where, evidently, some bungling proof-reader has been the cause of the error. This is not the only school book where bad proof reading is evident. How long will Canadian publishers of school books or any other books bring disgrace on the art preservative by sending out books with bungling typographical errors?

SCHOOL AND COLLEGE.

Miss Annie M. Hayter, teacher at Latimore Lake, St. John Co., has recently, by means of a school entertainment, been able to furnish her new school-house.

Inspector Carter expects to complete his work in St. John city during April and the first part of May. He will then take up his work in St. Stephen, Milltown and St. Andrews.

By the death of T. W. Peters, Esq., St. John loses not only a progressive and useful citizen, but a valuable member of the school board.

Miss Anna MacKay, the much esteemed teacher of the intermediate grade, White School, New Glasgow, has been granted leave of absence for the remainder of

the present school year. Miss MacKay's excellent ability and her experience as a teacher, combined with superior personal qualities, have caused her to be much beloved by the pupils of her school and have won the confidence and esteem of the parents and school officials. We wish Miss MacKay a very pleasant trip and in due time a safe return. Miss Minnie MacKay, lately of the Dartmouth teaching staff, has been appointed to take charge of this department of our schools as a substitute. — [New Glasgow, N. S., "Chronicle."

A correspondent in the New Glasgow "Chronicle" refers to the department for art and music recently opened in the High School, and then adds:—

"The chemical laboratory is a busy place during part of the day. Here, a score or so of boys and girls study science experimentally, questioning nature face to face instead of pursuing the dry and worthless task of memorizing printed facts. Accommodation is provided in the laboratory for thirty pupils, each of whom has his desk, his blow-pipe, glassware, alcohol lamp, and other necessary apparatus. One could not fail to remark the fact that the building is kept much cleaner than we have been accustomed to see school-rooms in this country. The floors and wainscotings undergo constant cleaning, and the building throughout is as clean as when opened in November. Altogether, the new school is a just source of pride to the enterprising people of New Glasgow."

The New Glasgow High School is beginning to stand out prominently as one of the foremost educational institutions in Nova Scotia. The foundations of its present wonderful progress were laid by Mr. Ebenezer Mackay, now of John Hopkins University. Principal Saloan, with his able staff of assistants, has built well on these foundations. The fates are working in his favor. Within a few years, New Glasgow will have a population twice as large as any other town in the province except Halifax.

At a recent meeting of the executive committee of the St. John County Teachers' Institute a programme was drawn up which differs somewhat from those of former institutes.

A lady correspondent, under date of February 6th, from the "Wilds of British Columbia," after wishing THE REVIEW unlimited success, says: "Now it strikes me that that expression 'wilds, etc.,' might lead to misconception. Well, we are in a place from which we can reach Vancouver in two hours, where trains are constantly coming and going and stopping; where there are two churches, a Presbyterian and a Methodist, and an educational institution, including a high school and

embracing within its fostering care between one and two hundred children. The weather has been rainy up to date but this morning we opened our eyes upon Mount Baker bathed in sunshine. The robin's note has been heard and this tells us that spring is come."

On Tuesday evening, April 2nd, Mr. G. U. Hay delivered a lecture before the University of New Brunswick, on "Popular Education: wherein it has failed, wherein it has succeeded." Dr. Inch, Chief Superintendent of Education, presided. The lecturer pointed out the many advantages of our present system of education. The system is not by any means perfect. It has defects which legislators, educationists, and the people at large should unitedly endeavor to correct. The education that our common schools should seek to give, is one that should in the largest measure form the character and train the individual to think and to do. No matter how perfect the appliances in our schools, if they fail to accomplish this in the individual they fail in their function. The mere imparting of knowledge, without making fact correlate with fact, without adequate expression of this knowledge and power to use it in the manifold requirements of life, without making all school exercises help to form character, is one great cause of failure. But there are hopeful signs that more teachers are making education a study, that they are aiming to sift the important from what is less important in our courses of study, and that examining bodies are trying to find out what power the student has gained, rather than how many facts he may be ready to deliver to their inquiries.

The discussion which followed, lasted for two hours, and was taken part in by Profs. Davidson and Stockley, Dr. Bridges, Dr. Bailey, Prof. Dixon, Chancellor Harrison, Dr. Inch; by Mr. Brittain of the Normal School, and by Messrs. Allen and Hoben, students of the university. Many practical hints and suggestions were given during the discussion bearing on the material improvement in our system, especially how the system of examinations might be changed for the better. Mr. Brittain would make them tests of power by giving plenty of time to the student, and framing the questions in such a way that training would count for much. Chancellor Harrison said that students came to the University better prepared in mathematics than in former times—a strong argument for the present system, as the schools of former years gave much time to mathematics. The remarks of Messrs. Allan and Hoben were full of instruction, as showing how the rostrum and its occupant may gain the genuine and lasting respect of pupils—or otherwise.

Recent Papers by Atlantic Province Men.

The "American Geologist" for March contains an article by Dr. Geo. F. Matthew of St. John, in which the researches of M. Cayeux of Paris among the early protozoa are described. These discoveries are genuine, and it is now found that foraminifera, sponges and other protozoa occur in the pre-Cambrian rocks of St. John.

Dr. W. F. Ganong, of Smith College, Northampton, Mass., has an article in a recent number of "Science," New York, read before the American Society of Naturalists, Baltimore, December 28th, 1894, on "Laboratory Teaching of Large Classes in Botany." The necessity of individual instruction is urged, and this can be secured by appointing as assistants those who intend to be teachers.

"A Cheap Form of Self-regulating Gas Generator" is the title of a paper, with cut, published in the "Journal of the American Chemical Society," for April, 1895, by Prof. W. W. Andrews, of Mount Allison University, Sackville. "This form of generator is so cheap and easily set up that it makes it possible for every teacher and experimenter in chemistry to have, at practically no expense, a set of generators capable of yielding, whenever called upon, a supply of hydrogen, chlorine, carbon dioxide, etc." Prof. Andrews will have one at the Summer School of Science in July.

The April Magazines.

Two papers of educational interest in the "Atlantic Monthly" for the current month are The Expressive Power of English Sounds, by Professor Albert H. Tolman; and The Basis of our Educational System, by James Jay Greenough. In "St. Nicholas" a cruise along Newfoundland and Labrador, and the occupations of the people in that desolate region, are described by Gustav Kobb, and Prof. Brander Matthews furnishes a genial criticism of Henry Wadsworth Longfellow for his series of sketches of great American authors. In addition to the Napoleon history, the April "Century" has a variety of interesting articles, notable among which is that by Lyman Abbot on Religious Teaching in the Public Schools. The "Popular Science Monthly" has several valuable educational articles, among which are Prof. Sully's Studies of Childhood, and Manual Training, by Dr. Henderson. A paper of great interest to students of geography is the admirably illustrated article on Picturesque Papua in the "Cosmopolitan." The March issues of "Littell's Living Age" give 315 pages of the choicest periodical literature printed in the English language. In all, these five weekly numbers contain thirty-six articles, of which, perhaps, the most valuable are The Court of Ferrara in the Fifteenth Century, Erasmus and the Reformation, The Evolution of Cities, Rural Scotland in First Half of last Century, An Unpublished Page in Madagascar History, Gen'l Boulanger: an Object Lesson in French Politics, The Crimea in 1854 and 1894. The "Chautauquan" for April, is an excellent specimen of this educational magazine. There is a good article on "What the Stars are Made of," written in a very popular and untechnical way, by Garrett P. Serviss,

OFFICIAL NOTICES.

Departmental Examinations, July, 1895.

The usual Normal School Entrance, Junior leaving examinations, and Junior matriculation examinations, will be held in accordance with the provisions of Reg. 31, 3, (1) and Reg. 45 of School Manual, on the second day of July next, beginning at 9 o'clock, a. m., at the following places: Fredericton, St. John, Sussex, Moncton, Chatham, Bathurst, Campbellton, Woodstock and St. Stephen. Examinations will also be held at Andover, and Hillsboro, provided at least ten candidates apply for examination at each of these stations.

1. NORMAL SCHOOL ENTRANCE.—All candidates for admission to the Normal School in September, 1895, and all holders of second or third class licenses who propose to enter the Normal School in January, 1896, or to become eligible for examination for advance of class in June, 1896, are required to pass the preliminary examinations in July, 1895. (See School Manual, Reg. 31, 3, and Reg. 38, 6.)

Application for admission to the Normal School Entrance or preliminary examinations should be addressed to the inspector within whose inspectoral district the candidate wishes to write, not later than the 24th day of May. Forms of applications may be obtained from the inspectors, or from the education office at Fredericton. An examination fee of one dollar must be forwarded with each application.

2. JUNIOR LEAVING EXAMINATION.—This examination will be based upon the requirements of the course of study for grammar and high schools as given in the syllabus for Grades IX and X.

The pupils of any school in the province are eligible for admission to this examination upon giving notice on or before the 24th of May, to the inspector within whose inspectorate he wishes to be examined, and enclosing an examination fee of two dollars. (See Manual, Reg. 45, 14). Diplomas are granted to successful candidates.

The English literature for the closing examinations for license in June 1895, and for the junior leaving examination, will be Shakespeare's "Merchant of Venice" and Macaulay's Essay on "Warren Hastings."

3. JUNIOR MATRICULATION EXAMINATION.—This examination will be based on the requirements for matriculation in the university of New Brunswick as laid down in the university calendar; (candidates will receive a calendar upon application to the chancellor of the university, or to the education office). Any high or grammar school pupil who has completed Grade XI of the high school course, should be prepared for matriculation.

In cases in which the language studies of the high school course are different from the language studies as indicated the university calendar, candidates may take either course by giving notice at the time of making application for examination. (See Manual, Reg. 45, 14).

4. SUPERIOR SCHOOL LICENSE.—Holders of first class licenses who wish to pass the Latin examination required for superior school license, will be examined at any of the above stations, on application to the chief superintendent not later than the last day of May.

Holders of first-class license who are graduates in arts may receive superior school license without further examination.

First class teachers now in charge of superior schools may retain their present positions until June 30th, 1896, without further examination.

5. SECOND ATTENDANCE AT NORMAL SCHOOL.—Holders of third class licenses who have spent only one term at the normal school are required to spend an additional winter term at the normal school before they can be admitted to the closing examinations for advance of class.

Holders of second class licenses who have passed the preliminary examination for first class, may be exempted by attending an additional winter term at the normal school from the special conditions as to professional classification and certificates of superior scholarship, or of having taught two full years, as required by Reg. 31, 5, (a) (b).

6. SCHOOL LIBRARY CATALOGUE.—A catalogue of books recommended for Public School Libraries has been prepared and will be mailed to teachers or trustees on application.

J. R. INCH.

Chief Superintendent of Education.

Education Office, Fredericton, N. B., April 8th, 1895.

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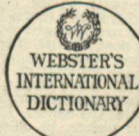
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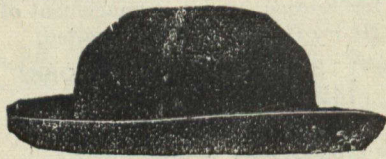
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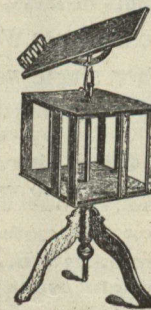
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