

The Educational Review.

Devoted to Advanced Methods of Education and General Culture.

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THE EDUCATIONAL REVIEW.

Subscribers should promptly notify the REVIEW of change of address giving old as well as new address. Communications from New Brunswick should be addressed EDUCATIONAL REVIEW, St. John; from Nova Scotia and Newfoundland to W. T. Kennedy, Academy, Halifax, from Prince Edward Island to J. D. Seaman, Charlottetown.

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WITH this number, is closed the Eighth Volume of the REVIEW. Of many educational journals that have seen the light since the REVIEW was established, some have been short lived, others are struggling on with a precarious existence, while others have been prosperous and useful. The REVIEW belongs to the last class. Its progress has been steady, every year showing an increasing list of subscribers, while its columns have faithfully represented our educational progress during the last eight years. It has not yet reached our ideal of an educational journal, but we hope to draw nearer to it every year.

WE are obliged to hold over for the next number, several articles, including book reviews, editorial, answers to questions, and other matter, that should have appeared in this. Again we would ask our contributors to study brevity.

THE Dominion Educational Association will probably meet next in the Maritime Provinces. Let us hope that it will grow each year more distinctively Canadian and national. The Montreal meeting in '92 promised well in this respect; the '95 meeting less so, because it was nearly absorbed by the Ontario Association. Let us hope that the meeting of '97 or '98 will carry out its

purpose more fully than any yet. No provincial association should aspire to carry the Canadian Association on its back even in its years of infancy.

THE Sackville *Post* suggests that we should not wait for the establishment of agricultural or technical schools in New Brunswick. These may come in the future, when the necessity becomes greater and the field larger. In the meantime it urges that schools of agriculture should be established in the colleges and at the normal school.

AT a recent meeting of the executive of the St. John County Teachers' Institute, it was decided to hold the next session on September 27th and 28th, during the Exhibition. To some, at first sight, this may appear a risky proceeding, but a little examination will demonstrate the wisdom of the selection of that time. During the time of exhibitions, the attendance of pupils at the schools is very much broken. For the city teachers there is no particular inducement to visit the Exhibition on those two days, as it lasts a fortnight; while for the county teachers the Institute combined with the Exhibition, will prove irresistible. They can attend the former during the day, and the latter during the evenings and on Saturday. Teachers and school officers from other parts of the province will also likely be in St. John at this time, and will no doubt be glad of the opportunity of attending such an important Institute as that of St. John County. Another reason which influenced the executive in making the choice was, that the programme consists largely of practical work, to carry out which, classes of pupils will be brought from different sections of the city. It was thought that at the usual time of session—December—when the weather is cold and Christmas at hand, that it would be difficult to do this. There is also a feeling on the part of many of our teachers, that the end of the term, while possessing some advantages, is not the best time for a live and progressive Institute.

It is expected that Mr. John Brittain, of the Provincial Normal School staff, will be present and give instruction.

PROMOTION OF PUPILS.

In reference to the point raised by our correspondent, B. D. B.:

In graded schools, pupils who have failed to reach a certain arbitrary percentage in their grading examinations, are generally required to go over the same work again. They soon lose all interest, and fall into idle habits, from which but few of them recover. It adds to the evil that they find themselves competing with younger pupils who make more rapid progress because the subjects to them are new and interesting.

Two boys may be quite equal, yet from some accidental cause one may be a unit below the passing mark, the other as much above it. The latter is promoted, and the school life becomes a success. The former probably loses all ambition, and becomes one of the backward big boys found in such numbers in some schools.

It frequently happens that the department above is crowded, and only a limited number can be advanced. To avoid the resulting evils, one or both of two courses should be followed according to circumstances.

1. Use supplementary or parallel courses. For example: if the pupil has read the first Royal Reader once as carefully as he should have done, and is still found to be unprepared for advancement, let him read the first Maritime Reader, instead of reviewing the first Royal Reader. Thus he will gain in interest and self-respect—not to mention other important benefits. When he has read the Third or Fourth Readers, utilize his text book in geography as a supplementary reader, if no better can be found. It will be much better used to supplement the reading and the oral lessons in geography than as a lesson book from which to memorize geographical facts. It is thus used in several of the best schools that we know.

2. Take up some subject closely allied to the one in which the pupil has failed, or if the same subject has to be studied, let it be treated so differently that it will seem like a new subject. The defects found in the pupil's first study of the grade can then be gradually remedied by incidental teaching without the risk of creating a dislike for study and without those intermittent periods in which little effort is required because the pupils is already familiar with certain parts of the subject. For the incoming grade, this changed treatment of the course may be quite as useful as the usual routine—to the teacher it will be more useful.

In many cases, it will be found impossible to advance pupils to the department above, because it is overcrowded, and yet the pupil is prepared to advance. This necessitates an increase of the number of grades. Well, this is not an unmixed evil. We do not find that the pupils

learn much more rapidly in schools where the teacher is confined to one grade or to a part of a grade, than they do where one teacher has the work of several grades. In the latter case there are two manifest advantages; the pupils become much more self-reliant, and the teacher becomes much better acquainted with each pupil, and therefore more interested in him. This partly accounts for the fact, that pupils from country schools, when in the higher grades, so frequently excel those in the city.

Therefore, though pupils should have a weekly or monthly review, yet they should always be kept moving on, and should not be thoughtlessly subjected to the disheartening process of going again over the same work, and that with younger pupils.

THE NOVA SCOTIA EDUCATIONAL ASSOCIATION.

The *Journal of Education* for April and the new manual of the school law have just come out, from which it appears that the constitution of the Provincial Educational Association of the province has been slightly changed by adding to the range of both *ex officio* and *ordinary* members. This is how the regulation referred to now reads:

REG. 2. The membership shall be, (a) *ex officio*, the Superintendent of Education, the Principal and Professors of the Normal School, the Provincial Examiners, the Inspectors of Schools, the Presidents of Colleges within the province, and one representative, chosen annually by each district institute for every twenty-five enrolled members present at the annual meeting of each institute; and (b) *ordinary*, all licensed teachers, professors and instructors in colleges and seminaries, trustees and commissioners of schools, by enrolment and the payment of such fee (not exceeding one dollar) as the Association itself may determine.

From the *Journal* it appears that the Association is to meet in the Normal School buildings at Truro, about the time of the opening of the institution, the middle of October. Attendance at the Association is under the regulations equivalent to a period of three days' teaching, so far as the Provincial and County grants to schools and teachers are concerned. We always thought that the meetings of such an Association are more useful when held at or near the commencement of the school year instead of after the end, when teachers are wearied, and will not for some time be able to put into effect, immediately, any new enthusiasm imbibed.

I find the EDUCATIONAL REVIEW a valuable assistant. In fact, I could not get along very well without it; for besides giving valuable hints about school work, and informing me as to the doings of my fellow-teachers, it has solved many knotty questions for me. E. A. H.

RECENT ARTICLES ON EDUCATION.

The work and progress of the public schools is discussed by U. S. Commissioner W. T. Harris, in the April number of *Harper's Magazine*. In the twenty-four years since 1870 the attendance at the public schools has increased from 7,000,000 to 13,500,000. The expenditures have increased somewhat more — namely, from \$63,000,000 to \$163,000,000 per annum, an increase from \$1.64 to \$2.47 per capita. To account for this *pro rata* increase of 50 per cent in the cost of the common schools one must allow for an increase in the length of the term and an increase of enrolment of from 17 to 20 per cent of the population. But the chief items of increase are to be found in teachers' wages and the cost of expert supervision. The remainder is due to better apparatus and more commodious school buildings.

Mr. Harris argues that great advancement in the average skill and efficiency of teachers has resulted from their professional training in normal schools. "Briefly the population is becoming urbane, the schools are becoming 'graded,' the pupils of the lowest year's work placed under one teacher, and those of the next degree of advancement under a second teacher," thus making a division of labor greatly to the advantage of the schools.

In the April *Scribner's* Mr. Robert Grant discusses "Education" from a parental and domestic point of view. He pokes fun at the worthy American citizen who takes every opportunity to affirm our public schools the bulwarks of freedom and civilization, while he is practically certain to refrain from sending his boys to them if he can afford to get them into a private school. So long as school boards, from the Atlantic to the Pacific, are composed mainly of political aspirants, without experience in educational matters, and who seek to serve as a first or second step toward the White House, our public schools are likely to remain only pretty good so long as people with axes to grind, or, more plainly speaking, with text-books to circulate, are chosen to office, our public schools are not likely to improve.

Speaking of girls' high schools, he says, "I am confident—at least if we as a nation really do believe in obliterating class distinctions—that it won't be long before those who control the public schools recognize the value of manners more universally and the other traits which distinguish the woman of breeding from the woman who has none." When that time comes the well-to-do American woman will have no more reason

for not sending her daughters to the public schools than her sons.

In the *Century* for April is an article on "Religious Teaching in the Public Schools," which deals with the subject from a liberal standpoint. It is by Lyman Abbott. Among other principles, he lays down the following: That the State cannot relegate the duty of public education to the church or to private enterprise; that if it is the primary right and duty of the State to give whatever education is necessary for good citizenship, it is self-evident that it is primary right and duty to give education in moral principles, and training to the moral impulses and the will; nor is it possible to give such moral instruction and training without involving something of the religious spirit, if not of religious education. This recognizes the fact that "the public school is a moral institution; that no one but persons of a profoundly moral nature have any right to appointment on the school boards or as school teachers; that moral power is a first requisite of a school teacher." A quotation appended to Dr. Abbott's article is as follows:

"A school is not made a Christian school by taking up a good deal of time in doctrinal instruction, or in devotional exercises. . . . What above all makes it a Christian school are the moral atmosphere, the general tone, the surrounding objects, the character of the teachers, the constant endeavor, the loving tact, the gentle skill, by which the light and spirit of Christianity—its lessons for the head, for the heart, for the whole character—are made to pervade and animate the whole school life of the child, just as the good parent desires they should animate his whole future life in all its manifold duties and relations as man and as citizen. This is the kind of school which a parent, anxious, as in duty bound, to give his child a thorough Christian training as possible, will naturally choose."—*Right Rev. John J. Keane, "Denominational Schools," p. 9.*

"The Basis of Our Educational System, by James Jay Greenough, the well known author of Latin textbooks, is the title of an article in the April *Atlantic*, of which it is impossible to give the gist in a few sentences. It is thoughtful and full of sound educational maxims. He would have the ancient classics remain as the basis of our educational system, because no other branch of study contributes so fully to give mental power and breadth as these do. But he points out clearly that the old methods of studying Latin and Greek must give way to methods more in unison with the spirit of modern teaching—that other essential topics of study need not crowd the classics from the schools, but time must be so economized that every sentence of Latin and Greek translated by the student must afford him material for constant gain in thinking power.

TALKS WITH TEACHERS.

This is the age of the newspaper; and there is an unlimited amount of educational literature at the disposal of the teacher, abounding in all manner of resorts and devices for elaborating his work. Be careful not to adopt many, however ingenious and attractive they may appear, and do not take up any without inquiring carefully into the principles on which they are based and the end to be reached. There is a lot of educational rubbish published. Be careful to sift the wheat from the chaff.

There is a great deal of the space in educational papers just now about "apperception," "concentration," etc., etc. Do not be mystified—they are only new terms for very old ideas. We have been apperceiving all our lives, and I think many of our teachers do considerable concentrating. If I may be pardoned for venturing to explain the latter term by an example. In giving a simple sentence it is preferable to give "Champlain founded Quebec" than "John struck the table." You thus combine history with grammar. In giving examples in arithmetic, it is preferable to give actual statistics and problems their abstract figures, but I think, after all, the subject in hand is the all important one. One journal which is disposed rather to ridicule such high sounding words, asks if when a child is reading in the first reader, it is best to ask him to count the letters in each word in order to teach him arithmetic; and whether it would be a good plan to explain to him the process of printing and paper making?

There is considerable chaff and very little wheat in all this.

Would it not be a good resolution for each teacher to adopt and adhere to as the next term approaches, not to take a school in another district at a lower salary than his predecessor?

If the trustees demur, ask them if they expect inferior from you. If not, what is their reason for making the request?

Arbor day comes earlier than usual, this year, in some parts of the province. Do not fail to observe it. Be interested yourself, and interest others. There is much to do in every district. What you do, do well. First, impress upon your pupils by interesting exercises, the importance of the day. Second, plant trees if you have a chance, and do not do it in a perfunctory manner. Third, clean up inside and outside, and get the rate-payers to interest themselves in the premises.

For the REVIEW.]

New Brunswick Schools of the Olden Time.

By W. O. RAYMOND, M. A.

(Continued.)

PRIVATE SCHOOLS.

In the very early days of New Brunswick, the establishment of schools was largely a matter of private enterprise, particularly in the towns and villages. No uniform plan or method of instruction was adopted—each teacher doing what was right in his (or her) own eyes. The books used in all the schools were, however, of necessity much the same. In these days of mutual good fellowship, it is hard to realize the keen rivalry that once prevailed among school teachers. But this was a very natural thing, for in olden times the success and reputation of a teacher depended upon attracting a large number of pupils. Great efforts were accordingly put forth to proclaim the merits of the various systems adopted by the rival teachers, and probably the most enterprising advertisements in the old newspapers are those which expatiate upon the advantages parents will derive by intrusting their children to this or to that teacher, to be instructed in accordance with their individual methods.

This point will be the better illustrated by reference to a number of old school advertisements, and we shall start with the first that appears in print after the landing of the Loyalists, and which antedates the formation of the province.

JOHN SINNOTT begs leave to inform the public, that he has opened school at No. 131 Charlotte street (he having received encouragement from several gentlemen for that purpose) to teach youth reading, writing, arithmetic, book-keeping, gauging, geometry, surveying, dialing, etc., on the most reasonable terms.

Said Sinnot assures such person who may please to send their children, that every possible attention will be paid them, not only with respect to their instruction in the above particulars, but to their morals and behaviour.

N. B.—A generous price will be given for a pair of good globes.
Parr, June 30th, 1784.

Mr. Sinnott's school was situated on Charlotte street, directly opposite the south-west corner of Queen square. It was quite a pretentious school, as shown by the advertisement above, and its locality indicates, that in the rivalry between the Upper and Lower Coves, the latter in educational matters, was well to the fore. John Sinnott came out from Ireland in 1781, and for a year or two lived upon a farm of 200 acres near Gagetown, which he leased of the original proprietor, John Smyth of Dublin, in Ireland. After clearing a little land, he seems to have decided to retire from farming, and take up the school master's calling, for which there seemed a promising field in the city that had so suddenly sprung into existence at the mouth of the river St. John.

He was not long without a rival, and again it is the Lower Cove that is to the fore; witness the following:

WILLIAM GREEN will open an English school for the education of youth, on Monday, 20th April, (1787) at his house, Brittain Street, near Captain Elme's. There will be taught the following branches of Literature in the most approved order, from the best authors used in the principal Academies of Great Britain and Ireland, namely :

Reading, per quarter,.....	£0 7 6
Reading, with English Grammar and proper accent,....	10 0
Writing,	10 0
Arithmetic,.....	12 6
Book-keeping and Merchants' Accounts.....	17 6

Geometry, Surveying, Navigation, Dialing, and other parts of Mathematics, according to agreement. Also the use and projection of Maps and Charts, after a natural, easy, and concise method, without burden to the memory.

N. B.—Those parents that will give him a preference in the tutorage of their children, may depend on the strictest attention being paid to their natural genius and their moral abilities. **WILLIAM GREEN,**
Saint John, N. B., 6th April, 1787.

Mr. Green was a Loyalist and a grantee of the City of St. John. He seems to have been a good mathematician, and was the compiler of the British American Almanac, one of the earliest of New Brunswick Almanacs, printed at St. John, by Christopher Sower and J. Ryan. (One of these will be found in the Lawrence collection of almanacs, lately donated to the St. John public library.) About 1790, Mr. Green removed to the island of Campobello, where he taught school with good success.

The keen competition amongst those who sought to secure patronage for their schools, led at quite an early day to the establishment of night schools, and the following advertisement refers to one of these:

EVENING SCHOOL.—The Subscriber, ever grateful for past encouragement, proposes to commence an evening school on the evening of the 6th of November (1797), where pupils may be taught arithmetic, either vulgarly or decimally, Book-keeping by double entry, Geography, Chronology, and the Doctrines of the Globes—the Elements of Geometry and Trigonometry with their application in any of the following branches of Mathematics, viz.: Mensuration (in lineal, superficial, and solid measures), Gauging, Surveying, Navigation, Dialing, Construction of Charts, &c. Terms may be known by applying to the Public's most obliged humble servant,
WILLIAM JENNISON,
St. John, October 20, 1797. *Philomath.*

Among the most curious of old advertisements are those of a Mr. Marriott in the St. John City *Gazette*. This gentleman seems to have been rather too versatile to leave any very definite impress upon the community in which he figured. The city *Gazette* of January 18, 1799, contains an advertisement, in which "Mr. Marriott begs leave to inform the public of St. John, that he sells *Soups, Broths, Beef, and Mutton Steaks*, at the lowest prices, at a minute's warning. *Dinners* are dressed and sent out at an hour's notice. *Suppers*, do. *Turtles* dressed in the English mode, etc. etc. * * * Also *Shaving, Hair-dressing*, etc., on the most reasonable terms."

A little later we have the following:

M. R. MARRIOTT respectfully informs the ladies and gentlemen of St. John and its vicinity, that he intends opening a *SCHOOL* on Monday, the 6th of March, (1799) to teach the English Grammar with exact precision in an entire new mode and conformable to the instructions of our modern authors. Mr. Marriott will also undertake to teach young gentlemen to *read and speak* emphatically in order to complete an UNFINISHED EDUCATION during his evening avocation, in private, either at home or abroad.

WRITING and CYPERING included. **DRAWING and FENCING**, if required, on advanced prices. Mr. Marriott, from a thorough knowledge of the English tongue, flatters himself with the idea of accomplishing his pupils in a short time with those rudiments necessary for education.

TERMS.—One dollar entrance, and three dollars per quarter, each, for Reading, Writing, and Cyphering. Drawing, one dollar entrance, and six dollars per quarter. Fencing, ditto. Also, Latin, if required. Lilley's Grammar coercive with Dilworth's.

In a very few weeks, however, after the appearance of this school advertisement, our versatile friend "Respectfully informs the ladies and gentlemen of St. John, he is enabled to get up a whole play and a concert of instrumental music." Amongst the attractions promised, are "A Bengal Light, by which the audience will be able to discern 2,000 faces and persons in the *dark*;" a Scots song called "To the Green Wood," by a lady of St. John, the whole entertainment to conclude with a grand artificial fire work. The play to be presented at the Exchange Coffee House, and several gentlemen have promised to form a band of music for the occasion.

In the *Gazette* of April 19, 1799, Mr. Marriott "respectfully informs his friends, that having a commodious room for the purpose, he intends opening a *SPOUTING CLUB* on Monday, 22nd April, for the amusement of such gentlemen as shall honor him with their support during the summer season." His proposal, which is elaborated in his advertisement, recalls Champlain's famous *L'ordre de bon temps* in the early days of Port Royal. Mr. Marriott, in closing his advertisement, says, that "Having attempted every mode to gain a winter subsistence with the worthy inhabitants of Saint John, he humbly hopes his summer endeavors will not prove fruitless."

FOR THE REVIEW .

The Planets in May and June.

All the planets that the naked eye can see, will be in sight during these months, and all of them in the evening.

For one of them, there is no need to wait until evening. Venus will not be at her greatest brilliancy for three months yet, but she has more than enough of it already to be easily visible in the daytime. The more exactly the observer knows where to look for her, the more easily his eye will find her, a lovely white spot on the background of blue; but as she is now, and as she will be for the next three months, a mere random search anywhere in her neighborhood, can hardly fail to find her even at noonday. It is generally easiest to do this about the time she is on the meridian, but at present she makes her meridian passage so very high up that it is much more comfortable for the neck of the observer if he chooses two or three hours before or after that passage to have his daylight peep at her. A particularly good time to get such a peep will be in the middle of the day, on May 27, when she will be a little to the south of the three-day-old moon; and another on the afternoon of June 25, when she will again be near the white crescent.

Jupiter can also be seen in daylight during May, and until after the middle of June, but not so easily as Venus. With him it is best to use a field glass, and it is much more necessary to know exactly where to look than it is with Venus. But on May 18, she will find him for you. The two planets will then be in conjunction. Go out at noon on that day, if the sky is clear, and pick up Venus with your eye. Then put your glass on her and move it south a little, until she passes up nearly or quite out of the field. You will now have Jupiter either in or very near the centre of the field. It will be a fine sight, and well worth taking a little trouble to see. The two differ much as seen in the evening; they also differ much as seen at noon, but it is a different sort of difference, and one that is apt to make a much more striking impression when seen for the first time. If you could next turn your glass on the Dog-star—and the thing can be done then, I have done it later in the season than May 18—you would see the finest specimen of a third kind of sight which the sunlit sky of day has to show, and the sparkling loveliness of the mere needle-point of light would delight you all the more after looking at the lustreless dulness of the daylight disc of Jupiter.

* * * * *

Some time ago, a correspondent wrote to say that his almanac told him that Venus would be at greatest elongation from the sun on July 11th, and at her greatest brilliancy on August 13, but it did not tell him some other things that he would like to know about her. These were—(1) When she would be above the horizon for the longest time, and how long; (2) When she would set at the latest hour, and how late; (3) When she would stay up for the longest time after sunset, and how long.

I assume that the queries refer to the present year. Venus will be above the horizon for the greatest number of hours per day on May 15. This is for the northern hemisphere. To the north of latitude 64° she will not set at all then. In 60° she will be up for $19\frac{1}{2}$ hours, in 50° for $16\frac{1}{2}$, in 40° for 15, and so on down to the equator where, as is always the case there, she will be up for 12 hours. In latitude 44° the time will be 15 hours and 40 minutes, in 45° ten minutes more, and 16 hours in 46° .

For latest setting and longest staying up after sunset, the dates as well as the hours will be different for different latitudes. But for the Atlantic Provinces, none of these items will differ very much from what they are for the latitude of Yarmouth, which is very nearly 44° . Here the interval between sunset and the setting of Venus will be longest between May 15 and May 20, and its length will be 3 hours 20 minutes. At the

beginning of April, it was $2\frac{1}{2}$ hours, and it will be down to the same again at the end of June. The latest setting will occur here at the end of May, the hour being 10.40 (mean time) for the last three or four days of May, and the first three or four of June.

* * * * *

Whenever a conjunction of Venus and Jupiter occurs, people fall to quarrelling about how the event comes to happen. They will do the same thing this time. Some will say both planets are moving west, and that Jupiter overtakes and passes Venus. Others will say both are moving east, and that Venus overtakes and passes Jupiter. A third party will say, that Venus is moving east and Jupiter west, and so they meet and pass each other. If the disputants appeal to the astronomical notes published in their favorite newspapers or magazines, each party will probably be able to prove to its own satisfaction that it is right, and that the others are wrong. If appeal be made to observations of the objects themselves, it may be found that all three parties are right. A few minutes' observation is enough to show that both planets are moving west, or that they seem to be doing so—and if this observation is repeated for a few evenings, it will be found that in this respect Jupiter is gaining on Venus. On the other hand, if the position of each is compared for a few days with the sun's position, Jupiter will be found to be moving towards it, and Venus away from it, and so a second party will feel satisfied that their theory is the right one. The third party should compare the positions of both planets with the stars near them, and a couple of evenings of such observations will suffice to show that both Venus and Jupiter are moving east. They are among the stars of Gemini now, and quite near some fairly bright ones. Venus will pass to the south of Eta and Mu a few days before her conjunction with Jupiter on the 18th. Then on the evening of the next two days—19th and 20th—she will be very close to Epsilon, a third magnitude star. Jupiter will pass the same star ten days later, but he will keep off 2° to the south of it, instead of grazing its north edge as Venus did on the 20th. At the beginning of June, Venus will be in the east end of Gemini, and on the 5th will overtake and pass Mars at a distance of less than a degree.

* * * * *

Besides Venus, Jupiter and Mars, we will have Mercury in the western sky during these two months. He will be lower than the others, and will set before them, until June 8, when he and Jupiter will be near each other. In the middle of May, his brilliancy is greatest, and he remains above our horizon for over an hour after sunset. At the end of the month, he will stay up for two hours after sunset, and the naked eye

will be able to see him easily until well on into the first half of June.

* * * * *

The other naked eye planets are Saturn and Uranus. Saturn is the conspicuous yellowish object which is now following the bright white star Spica. If you can beg, borrow, or steal, or procure in any other legitimate way, anything in the shape of a telescope, do so by all means, and have a look at the wonderful ring which encircles this planet. It is the finest sight in the heavens, and this is the best season this year for seeing it.

For Uranus also, May and June are the two best months this year. He is east of Saturn in the constellation Libra. The naked eye will find little difficulty in seeing him if it looks in the right place, and if the moon is not making too much of a nuisance of herself. As to the right place—first find Alpha Libra; then look for a little group of two or three stars of about the fifth magnitude, due east or nearly so, and distant about 3° or 4° from Alpha (use an opera-glass when doing this for the first time). Watch this group for a few evenings, and you will find one of the objects drawing away from the others, moving next towards Alpha. That is Uranus.

You may have heard or read, that neither Mercury nor Uranus can be seen "without the aid of a telescope." Learn where to look for them, and then go and look at them before you decide to believe this.

A. CAMERON.

Yarmouth, N. S., May, 1895.

For the REVIEW.]

The Importance of Arbor Day.

Arbor Day is not merely a day for beautifying the school grounds and saying pretty things about the beauty of the trees and forests. Its greatest value is lost if we do not make the annual arbor day exercises a means of instructing the people in the importance of giving more attention to the preservation of existing forests as a source of wealth.

New Brunswick is a forest country. We often hear it said that the lumber is almost done; but what remains of our forest wealth is still of very great value. This should be impressed upon our people on arbor day, and whenever opportunity offers. The value of wood products is increasing, and must increase, and we should stand ready to reap the benefits of that increasing value; but the time will certainly come at last, under present methods of lumbering, when it may be truly said that our timber supply is almost exhausted. The one thing that can avert it is for you and me, and everyone, to learn and to recognize the fact, that it is not necessary to destroy a forest in order to make it pay.

Our knowledge of the influence of forests upon climate, is vague and incomplete. The whole question lacks immediate interest to us. Immediate profit is the first consideration; and probably no lumberman in North America ever thought of such a thing as cutting over a tract of timber, and leaving it in as good condition as he found it. It is his business to take away as much as he can with profit, not to provide for future growth or for the permanent interests of the country—and he attends strictly to business. Furthermore, with our wasteful methods, the amount carried away is even less than the amount cut down and left to perish. Many lumbermen recognize the need of a change; but the change will not come until we all have learned something more about the need of it. It is not sufficient for three or four persons, or for three or four hundred, to realize that our forests are in imminent danger, and that much of the fertility of our farms goes with them; it must be realized by our people at large.

The total consumption of wood and timber in the United States is placed at \$1,000,000,000, annually, and we scarcely need to be told that there the timber forests are almost a thing of the past. The great fires of last year have swept the timber regions of the north-western states, destroying what little the axe had left. There is no hope that these great forests, which have been wasted as forests never were wasted before, will ever be reproduced. Their disappearance ends the prosperity of that part of the country, and lumbermen who went from here to Michigan, Wisconsin, and Minnesota, are removing to the pine belts of the Southern states or to the Pacific coast. The supply there, too, is limited; and what remains of our own forests, is therefore rapidly advancing in value as a source of supply for the future. It is of the first importance to us that their preservation and improvement should come to be a matter of public interest and concern. We need stringent laws for the preservation of the spruce and pine; but we shall never get these laws until we know that we need them.

Let arbor day exercises, then, encourage the study of trees and forests, because there is much about them that is worth learning; because the study will widen our appreciation of the beauties of nature, and add much to the enjoyment of life; because it will improve the mind; but if none of these reasons are urgent, let us call for serious attention to the subject, because the last hope of the continued prosperity of our province—whatever mines and minerals may be developed, and whatever improved methods of agriculture may be introduced—the last and surest hope for the future lies in the conservation and improvement of this forest wealth, the most valuable and most easily destroyed of all our natural resources.

J. VROOM.

St. Stephen, N. B.

For the REVIEW.]

The Schools of Old and New Scotia Compared.

BY A PUPIL OF BOTH.

While in many respects Scotland leads with regard to her public schools, there are some points in which I think we in Nova Scotia have the advantage.

The discipline in a Scotch school is certainly very good, owing in a large measure to the good training received by the pupils at home. Their methods of punishment, however, are, I am sorry to say, rather harsh—corporal punishment being used to a greater extent than here. A larger number of subjects are studied by the pupils of the corresponding standards or grades, but although they obtain a knowledge of them, there are too many to be properly digested.

Again, the average Scotch teacher has a very large number of pupils in her care. This lessens, and in some cases renders impossible, the individual work among the pupils. In these large rooms, although there are assistants, or pupil teachers as they are called, yet the responsibility of discipline and work falls entirely on the teacher. Besides her class-work, she has to teach her pupil-teachers certain subjects—having to come early in the morning and stay late in the afternoon for this purpose. These so-called pupil-teachers are required to be over fourteen years of age, and to have successfully passed an examination given by the principal or head master of the school which they attend. They are then appointed to teach as assistants in certain departments for a period of four years. During that time they have regular work to prepare every day, and at the end of each year, have to take examination to determine as to their fitness to enter on the next year's work. While apprentices, they are paid a nominal salary which enables them to support themselves while studying. At the end of the fourth year, if they wish to become certificated teachers, they have to pass another examination to enter the normal school. This examination is very difficult, as owing to the large number of candidates, they can afford to make it so. The normal training lasts for two years; at the expiration of which time, the teacher is full-fledged, and ready for work. A new code has been adopted this year, however, by which teachers are permitted to attend the universities instead of the normal schools, and for practical training they act as substitutes in city schools. The adoption of the regulation has caused a great deal of dissatisfaction, as the general idea is, that it will in a large measure lessen the attendance at the normal schools. The training which a Scotch teacher has to undergo, is, on the whole, I think, more severe than ours, and in some particulars really unreasonable.

Teachers here would open their eyes at the amount of fine white seam sewing and other needle work a normal student has to prepare in a term. Then they are compelled to take lessons and examination in "Domestic Economy," and on an appointed day, every week, have to produce samples of their cooking in some particular line as assigned by the instructress. Considering this, some of us will rather congratulate ourselves that our system so kindly exempts us from the needle-work and domestic economy; although, I daresay, a knowledge of either or both, would oftentimes prove very useful.

But to return to the comparison of the respective common schools, there is, without doubt, a vast amount of "cramming" done in the Scotch schools, owing to the system of bestowing the government grant. The inspector visits the school once a year and examines each pupil. According to his report, the pass-list is made, and by it the grant of the school is assigned. As the pay the teacher receives is increased or lessened by this, it follows that each class is certainly crammed for the occasion—I am afraid in a number of cases at least—without due consideration as to whether the work is understood or not. The pupils are told the facts, but the "whys" and "wherefores" are rather crowded out for want of time.

Speaking from personal experience, I know that although I passed through the highest standard in a Scotch school, I never really understood the principles of arithmetic until they were clearly and explicitly demonstrated to me in that splendid institution of which Nova Scotia may well be proud—the Halifax Academy.

On the other hand, however, there are some points in which Scotch schools have the advantage over us. For example—in the teaching of music and physical drill Scotland is far ahead of us, although educationists are laying a great deal of stress upon these now in this country, and are seeking to make them compulsory.

In a large town in Scotland, they manage the musical education of the pupils in this way: A singing-master is appointed, whose sole business is to teach the pupils of that town singing. He accordingly arranges his work so as to give the various departments a singing lesson of at least one hour per week. The Tonic Sol-fa method is used exclusively, and very young children learn to read music by it very quickly. Musical competitions are carried on, and pupils are awarded Sol-fa certificates and prizes for merit: thus stimulating and encouraging the culture of music among the scholars. For physical drill there is also a special master appointed, but each teacher is expected to drill his or her own

pupils besides. Dumb-bells and wands are provided and used in all the schools. Competitions are held in this also—town officials and other citizens offering prizes for the best drilled school or departments.

There are other privileges which I have only time to mention at present; such as the benefit of practical science classes taught by first-class teachers for advanced pupils on Saturdays and in the evenings; also the stimulus afforded by the offer of bursaries and other educational prizes; and the organization of school clubs for the study of their native poetry.

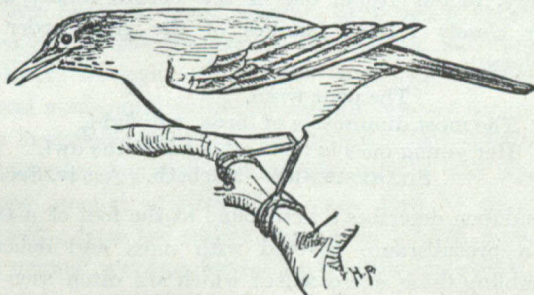
AGNES.

Halifax, N. S.

For the REVIEW.]

Proper English Names of our Common Perchers.

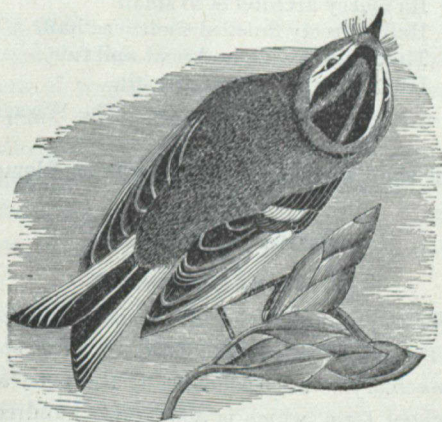
PROPER ENGLISH NAMES OF THE MORE COMMON BIRDS OF THE ATLANTIC PROVINCES BELONGING TO THE ORDER "PERCHERS" (*Passeres*), ARRANGED ACCORDING TO THEIR FAMILIES.



THE AMERICAN ROBIN.

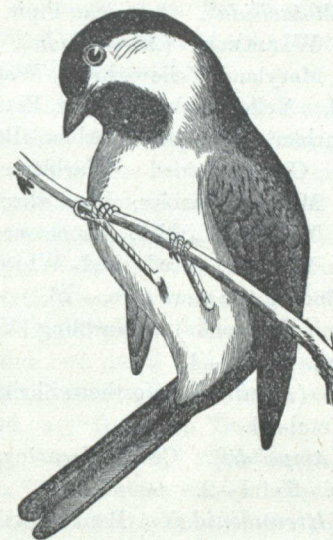
See EDUCATIONAL REVIEW, April, 1889—Vol. II., No. 11, p. 207. and April, 1894—Vol. VII., No. 11, p. 200.

THRUSHES (*Turdidae*). American Robin, Hermit Thrush, Olive-backed Thrush, Wilson's Thrush. Total species, rare and common,—6.



GOLDEN-CROWNED KINGLET. (About 4 inches long).

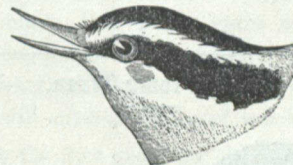
OLD WORLD WARBLERS. (*Sylviidae*). Ruby-crowned Kinglet, Golden-crowned Kinglet. Total—2.



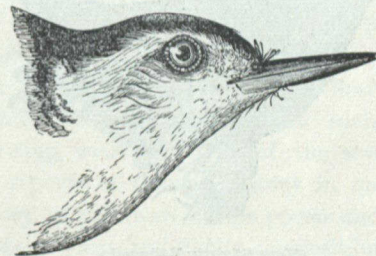
BLACK-CAPPED CHICADEE.

(See EDUCATIONAL REVIEW, August, 1894.—Vol., VII, No. 3, p. 50.)

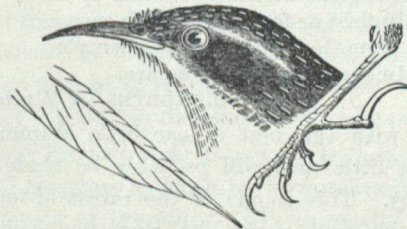
CHICADEES AND NUTHATCHES. (*Paridae*). Hudsonian Chickadee, Black-capped Chickadee, Red-breasted (Canada) Nuthatch, White-breasted (Carolina) Nuthatch. Total—4.



RED-BREASTED NUTHATCH. (Four and a half inches long).



WHITE-BREASTED NUTHATCH. Five and a half inches long.



BROWN CREEPER. Five and a half inches long.

THE CREEPERS. (*Certhiidae*). The Brown Creeper. Total—1.

THE WRENS. (*Troglodytidae*). The Winter Wren. (See elsewhere in this issue of the EDUCATIONAL REVIEW, cut and sketch of the Winter Wren), Catbird. Total—2.

WAGTAILS. (*Motacilidæ*). American Pipit. Total—1.

NEW WORLD WARBLERS. (*Mniotiltidæ*). American

Redstart, Maryland Yellow-throat, Water-Thrush, Oven-bird, Yellow Palm Warbler, Black-throated Green Warbler, Black-poll Warbler, Bay-breasted Warbler, Chestnut-sided Warbler, Magnolia Warbler, Myrtle Warbler, Black-throated Blue Warbler, Yellow Warbler, Tennessee Warbler, Nashville Warbler, Black and White Warbler. Total, including the more rare,—23.

THE VIREOS. (*Vireonidæ*). Warbling Vireo, Red-eyed Vireo. Total—4.

THE SHRIKES. (*Laniidæ*). Northern Shrike (Butcher Bird). Total—1.

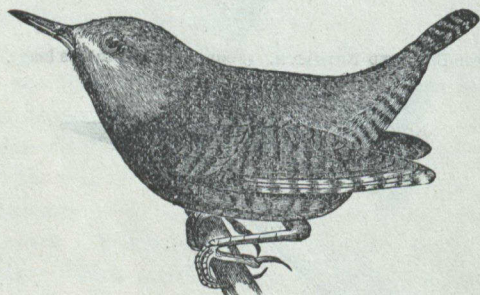
WAXWINGS. (*Ampelidæ*). Cedar Waxwing, Bohemian Waxwing. Total—2.

SWALLOWS. (*Hirundinidæ*). Bank Swallow, Tree Swallow, Barn Swallow, Cliff Swallow, Purple Martin. Total—5.

THE TANAGERS. (*Tanagridæ*). Summer Tanager, Scarlet Tanager. Scarcely ever seen in these provinces at present. Total, all very rare,—2.

(The remaining half of the "Perchers" to be given in our next).

The Winter Wren.



(Very Slightly Reduced.)

Among the dwellings framed by birds
In field or forest with nice care,
Is none that with the little wren's
In snugness may compare.

WORDSWORTH.—A Wren's Nest.

It is so with the nest of our little Winter Wren whose snug little nest will probably be ready by the end of May. This is one of the rarest of our little birds, and its small pouch-like nest, two inches or a little more in thickness, composed of moss or fine lichens lined deep with furry hairs and feathers, will very seldom be found. Its five to eight eggs are white, and marked with purplish-slate blotches and reddish brown spots.

When once seen this bird can never be mistaken again. It is about four inches long, and is well repre-

sented in the cut above. Its back is a deep reddish brown, darkest towards the head, brightest on the rump and the tail. Except on the head and neck it is marked with numerous short, dusky and often whitish interrupted bars. Wings dusky, dark-barred, and edged with reddish. Below, dark brown, with belly, flanks, and under tail coverts strongly marked with dusky and whitish. It is very shy, active, inquisitive and is ever on the alert. It darts in and out of cover, hopping, skipping, ever in motion, its little short tail, like a cockade, stuck straight out in the air.

Its song, too, is a marvel. For out of this small active bunch of brown feathers, the most exquisite melodies are fluently poured forth. The notes vibrate, melt to the sweetest plaintiveness, leaving on the memory the thrill of delightful emotion.

The Winter Wren (*Troglodites hiemalis*), which Latin name being interpreted means "The Winter Cave-dweller," is nearly related to the Warblers of which many species will be common during the month of May, to our Robin one of the Thrush family, and other closely related families of the great order of Perchers.

The poor wren,

The most diminutive of birds, will fight,
Her young ones in her nest, against the owl.

SHAKESPEARE.—Macbeth. Act iv. Sec. 2.

Audubon describes a nest found at the foot of a tree as "a protuberance covered with moss and lichens, resembling those excrescences which are often seen on our forest trees, with this difference, that the aperture was perfectly rounded, clean, and quite smooth. I put my finger into it, and felt the pecking of a bird's bill, while a querulous cry was emitted."

I took the wren's nest ;—
Heaven forgive me !
Its merry architects so small
Had scarcely finished their wee hall,
That empty still, and neat and fair,
Hung idly in the summer air.

D. M. MULOCK.—The Wren's Nest.

Report of the "Committee of Fifteen" on Elementary Schools.

Correlation of Studies.

THE SCHOOL PROGRAMME.

In order to find a place in the elementary school for the several branches recommended in this report, it will be necessary to use economically the time allotted for the school term, which is about two hundred days, exclusive of vacations and holidays. Five days per week, and five hours of actual school work or a little less per day, after excluding recesses for recreation,

give about twenty-five hours per week. There should be, as far as possible, alternation of study hours and recitations, (the word recitation being used in the United States for class exercise or lesson conducted by the teacher and requiring the critical attention of the entire class.) Those studies requiring the clearest thought should be taken up, as a usual thing, in the morning session, say arithmetic the second half hour of the morning and grammar the half hour next succeeding the morning recess for recreation in the open air.

The lessons should be arranged so as to bring in such exercises as furnish relief from intellectual tension between others that make large demands on the thinking powers. Such exercises as singing, as calisthenics, writing and drawing, also reading, are of the nature of a relief from those recitations that tax the memory, critical alertness, and introspection, like arithmetic, grammar and history.

* * * * *

AMOUNT OF TIME FOR EACH BRANCH.

An hour of sixty minutes each week should be assigned in the programme for each of the following subjects throughout the eight years: physical culture, vocal music, oral lessons in natural science (hygiene to be included among the topics under this head), oral lessons in biography and general history, and that the same amount of time each week shall be devoted to drawing from the second year to the eighth inclusive; to manual training during the seventh and eighth years so as to include sewing and cookery for the girls, and work in wood and iron for the boys.

Reading should be given at least one lesson each day for the entire eight years, it being understood, however, that there shall be two or more lessons each day in reading in the first and second years, in which the recitation is necessarily very short, because of the inability of the pupil to give continued close attention, and because he has little power of applying himself to the work of preparing lessons by himself. In the first three years the reading should be limited to pieces in the colloquial style, but selections from the classics of the language in prose and in poetry shall be read to the pupil from time to time, and discussions made of such features of the selections read as may interest the pupils.

After the third year the reading lesson should be given to selections from classic authors of English, and that the work of the recitation should be divided between (*a*) the elocution, (*b*) the grammatical peculiarities of the language, including spelling, definitions, syntactical construction, punctuation, and figures of prosody, and (*c*) the literary contents, including the

main and accessory ideas, the emotions painted, the deeds described, the devices of style to produce a strong impression on the reader.

Literary study—which should consume more and more of the time of the recitation from grade to grade in the period from the fourth to the eighth year. In the fourth year and previously, the first item—that of elocution, to secure distinct enunciation and correct pronunciation—should be most prominent. In the fifth and sixth years the second item—that of spelling, defining, and punctuation—should predominate slightly over the other two items. In the years from the fifth to the eighth, there should be some reading of entire stories, such as “Gulliver’s Travels,” “Robinson Crusoe,” “Rip Van Winkle,” “The Lady of the Lake,” “Hiawatha,” and familiar stories adapted in style and subject matter to the capacity of the pupils. An hour should be devoted each week to conversations on the salient points of the story, its literary and ethical bearings.

In teaching language, care should be taken that the pupils practise much in writing exercises and original compositions. At first the pupil will use only his colloquial vocabulary, but as he gains command of the technical vocabularies of geography, arithmetic and history, and learns the higher literary vocabulary of his language, he will extend his use of words accordingly.

Daily, from the first year, the child will prepare some lesson or a portion of a lesson in writing. We have included under the head of oral grammar (from the first to the middle of the fifth year) one phase of this written work devoted to the study of the literary form and the technicalities of composition in such exercises as letter writing, written reviews of the several branches studied, reports of the oral lessons in natural science and history, paraphrases of the poems and prose literature of the readers, and finally compositions or written essays on suitable themes assigned by the teacher, but selected from the fields of knowledge studied in school. Care should be taken to criticise all paraphrases of poetry in respect to the good or bad taste shown in the choice of words; parodies should never be permitted.

A good English style is not to be acquired by the study of grammar so much as by familiarity with great masterpieces of literature. We especially recommend that pupils who have taken up the fourth and fifth readers containing the selections from great authors, should often be required to make written paraphrases of prose or poetic models of style, using their own vocabulary to express the thoughts so far as possible, and borrowing the *recherché* words and phrases of the author, where their own resources fail them. In this

way the pupil learns to see what the great author has done to enrich the language and to furnish adequate means of expression for what could not be presented in words before, or at least not in so happy a manner.

Every recitation is, in one aspect of it, an attempt to express the thoughts and information of the lesson in the pupil's own words, and thus an initial exercise in composition. The regular weekly written review of the important topics in the several branches studied is a more elaborate exercise in composition, the pupil endeavoring to collect what he knows, and to state it systematically and in proper language. The punctuation, spelling, syntax, penmanship, choice of words and style, should not, it is true, be made a matter of criticism in connection with the other lesson, but only in the language lesson proper. But the pupil will learn language, all the same, by the written and oral recitations. The oral grammar lessons from the first year to the middle of the fifth year, should deal chiefly with the use of language, gradually introducing the grammatical technique as it is needed to describe accurately the correct forms and the usages violated.

There is some danger of wasting the time of the pupil in these oral and written language lessons in the first four years by confining the work of the pupil to the expression of ordinary commonplace ideas not related to the subjects of his other lessons, especially when the expression is confined to the colloquial vocabulary. Such training has been severely and justly condemned as teaching what is called prating or gabbling, rather than a noble use of English speech. It is clear that the pupil should have a dignified and worthy subject of composition, and what is so good for his purpose as the themes he has tried to master in his regular lessons? The reading lessons will give matter for literary style, the geography for scientific style, and the arithmetic for a business style; for all styles should be learned.

Selected lists of words difficult to spell, should be made from the reading lessons and mastered by frequent writing and oral spelling during the fourth, fifth, and sixth years.

The use of a text-book in grammar should begin with the second half of the fifth year, and continue until the beginning of the study of Latin in the eighth grade, and one daily lesson of twenty-five or thirty minutes should be devoted to it.

For Latin, we recommend one daily lesson of thirty minutes for the eighth year. For arithmetic we recommend number work from the first year to the eighth, one lesson each day, but the use of the text-book in number should not in our opinion, begin until the first quarter of the third year. We recommend that

the applications of elementary algebra to arithmetic, as hereinbefore explained, be substituted for pure arithmetic in the seventh and eighth years, a daily lesson being given.

Penmanship as a separate branch should be taught in the first six years at least three lessons per week.

Geography should begin with oral lessons in the second year, and with a text-book in the third quarter of the third year, and be continued to the close of the sixth year with one lesson each day, and in the seventh and eighth years with three lessons per week.

History of the United States with the use of a text-book, we recommend for the seventh and the first half of the eighth year, one lesson each day; the Constitution of the United States for the third quarter of the eighth year.

The following schedule will show the number of lessons per week for each quarter of each year:

Reading. Eight years, with daily lessons.

Penmanship. Six years, ten lessons per week for first two years, five for third and fourth, and three for fifth and sixth.

Spelling lists. Fourth, fifth and sixth years, four lessons per week.

Grammar. Oral, with composition or dictation, first year to middle of fifth year, text-book from middle of fifth year to close of seventh year, five lessons per week. (Composition writing should be included under this head. But the written examinations on the several branches, should be counted under the head of composition work.)

Latin, or French or German. Eighth year, five lessons per week.

Arithmetic. Oral first and second year, text-book third to sixth year, five lessons per week.

Algebra. Seventh and eighth year, five lessons per week.

Geography. Oral lessons second year to middle of third year, text-book from middle of third year, five lessons weekly to seventh year, and three lessons to close of eighth.

Natural Science and Hygiene. Sixty minutes per week, eight years.

History of United States. Five hours per week seventh year and first half of eighth year.

Constitution of United States. Third quarter in the eighth year.

General History and Biography. Oral lessons, sixty minutes a week, eight years.

Physical Culture. Sixty minutes a week, eight years.

Vocal Music. Sixty minutes a week, eight years.

Drawing. Sixty minutes a week, eight years.

Manual Training, Sewing and Cooking. One-half day each week in seventh and eighth years.

We recommend recitations of fifteen minutes in length in the first and second years, of twenty minutes in length in the third and fourth years, of twenty-five minutes in the fifth and sixth years, and of thirty minutes in the seventh and eighth.

The results of this programme show for the first and second years twenty lessons a week of fifteen minutes each, besides seven other exercises occupying an average of twelve minutes apiece each day; the total amount of time occupied in the continuous attention of the recitation or class exercises being twelve hours, or an average of two hours and twenty-four minutes per day.

For the third year twenty lessons a week of twenty minutes each, and five general exercises taking up five hours a week or an average of one hour per day, giving an average time per day of two hours and twenty minutes for class recitation or exercises.

In the fourth the recitations increase to twenty-four (by reason of four extra lessons in spelling) and the time occupied in recitations and exercises to thirteen hours and an average per day of two hours, thirty-six minutes.

In the fifth and sixth years, the number of recitations increases to twenty-seven per week, owing to the addition of formal grammar, and the total number of hours required for all is $16\frac{1}{4}$ per week, or an average of $3\frac{1}{4}$ per day.

In the seventh and eighth years, the number of lessons decreases to twenty-three, history being added, penmanship and special lesson in spelling discontinued, the time devoted to geography reduced to three lessons a week. But the recitation is increased to thirty minutes in length. Manual training occupies a half-day, or $2\frac{1}{2}$ hours each week. The total is 19 hours per week, or $3\frac{3}{4}$ per day.

The foregoing tabular exhibit shows all of these particulars.

W. T. HARRIS, Chairman.
U. S. Commissioner of Education.

Teachers' Association.

The teachers of Hants and Kings greatly enjoy and are benefitted by their yearly meetings. On the 25th ult. they met in Windsor.

Miss Parker, of Berwick, read a paper on "The relation of the teacher to the moral well-being of the pupil." Both the paper and the discussions which it elicited were most valuable.

Miss Begg, of Kentville, and Miss Burgoyne of Windsor, explained the merits of the Tonic Sol-fa notation in music.

Miss Farrell, of Kentville, gave a practical lesson on "Patriotism," to a class of Grade VI pupils. Mr. E. Robinson, of Selma, followed up the subject by showing its connection with the teaching of history.

Principals McLeod, Robinson and Brown, advocated the making a holiday of Dominion Day. In this the teachers were unanimous.

The public meeting in the evening was very large, and enthusiastically enjoyed the exhibition of Tonic Sol-fa, and the stirring speeches of Mayor Wilcox, Prof. Roberts, and Superintendent MacKay.

On Friday, Miss Freeman exemplified her methods in teaching reading and Tonic Sol-fa, and Mr. Brown read a very able paper on grammar. Dr. MacKay, Prof. Roberts, Principal Combie and Nichols, occupied the afternoon in solving difficulties which had arisen in the experience of the teachers present.

Dr. MacKay urged them "to persevere in their noble work in spite of hardships, rebuffs, and misunderstandings which are peculiarly the lot of their profession, keeping steadily before them the reward of the future, which would be shown in the hearts and lives of those whom they had trained."

Delegates were chosen to the Provincial Educational Association, called to meet in Truro next October. The delegates are Principals McLeod of Kentville, and Smith of Windsor, and Misses Burgoyne of Windsor, and Willett of Kentville.

BRANCHES.	1st yr	2d yr	3d yr	4th yr	5th yr	6th yr	7th yr	8th yr
Reading	10 lessons a week.		5 lessons a week.					
Writing	10 lessons a week.		5 lessons a week.		3 lessons a week.			
Spelling lists				4 lessons a week				
English Grammar..	Oral, with composition lessons.				5 lessons a week with textbook			
Latin.....								5 lessons
Arithmetic	Oral 60 minutes a week		5 lessons a week with text-book.					
Algebra.....								5 lessons a week.
Geography	Oral, 60 minutes a week.		* 5 lessons a w'k with text-book			3 lessons a week.		
Natural Science and Hygiene.	Sixty minutes a week.							
U. S. History. ..								5 lessons a week
U. S. Constitution								*5 les
General History..	Oral, sixty minutes a week.							
Physical Culture..	Sixty minutes a week.							
Vocal Music.....	Sixty minutes a week divided into 4 lessons.							
Drawing.	Sixty minutes a week.							
Manual Training or Sewing and Cookery.								One half day each.
No. of Lessons ...	20+7 daily exer	20+7 daily exer	20+5 daily exer	24+5 daily exer	27+5 daily exer	21+5 daily exer	23+6 daily exer	23+6 daily exer
Total Hours of Recitations	12	12	12½	13	16½	16½	17½	17½
Length of Recitations.	15 m	15 m	20 m	20 m	25 m	25 m	30 m	30 m

* Begins in second half year.

Dominion Educational Association.

At the second (triennial) meeting of the Dominion Educational Association, just held at Toronto, the directors were advised by the association to hold the third meeting not earlier than 1897, about the first week of August, and somewhere in the Atlantic provinces, St. John and Halifax leading in point of favor.

It is probable that the proposed meeting will not only be a consolidation of the several provincial educational associations of Nova Scotia, New Brunswick and Prince Edward Island, but also of the proposed second inter-provincial educational convention of the Atlantic provinces. Possibly, also, Newfoundland may be represented at this great gathering, for it is at least two years in the future.

At the late Dominion Association meeting, Ontario, with a great mass of purely local questions, was specially predominant in the extensive suite of programmes for the various sections. The meeting to be held in the eastern portion of our Dominion will, it is to be hoped, be more specially characterized as a general Canadian one than any other yet held. Of the large number of educationists from the west, a great many will no doubt find a place on the programme, among whom will be some of the leading educationists of America.

The officers forming the board of directors are as follows:

President—Dr. A. H. MacKay, Halifax.

Vice-presidents—Hon. Colonel James Baker, minister of education, British Columbia; Principal D. H. Goggin, M. A., Regina; Hon. Clifford Sifton, attorney-general, Manitoba; John Millar, deputy minister of education for Ontario, Toronto; J. M. Harper, Ph. D., inspector of high schools, Quebec; J. B. Hall, Ph. D., Truro, Nova Scotia; Dr. J. R. Inch, chief superintendent of education, Fredericton, New Brunswick; D. J. MacLeod, chief superintendent of education for Prince Edward Island.

Secretary—Alexander McKay, supervisor of Halifax schools.

Treasurer—G. W. Parmelee, Esq., secretary department education, Quebec.

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May Song.

BY REV. GEO. BRUCE, ST. JOHN.

Wild flowers in the meadow,
Grass upon the lea,
Little streamlet flashing
Sunlight in its glee.

Bubbling o'er its pebbles,
Murmuring in its bed,
As it steals so slyly
Where the shadows spread—

Shadows of the branches
Of the grand old trees
With their thousand leaf-tongues
Laughing in the breeze.

Here and there the fleece clouds
Floating up on high,
Here and there through fleece clouds
Flecks of azure sky.

Over all the sun-light,
In a golden flood,
Deluging with life-power
Field and flower and wood.

While the joy of nature
Fills the glorious day
With the voice of gladness,
Singing—"It is May!"

Hints on Spelling and Composition.

I found myself in a very disorderly, ungraded class one wet morning. The pretty and refined young teacher was in real distress at the situation. She was struggling with a spelling lesson, the words of which she had written upon the blackboard. The class was inattentive and many things distracted their attention. Things were almost beyond control and but few of the pupils made any pretense of trying to recite well. One word was wharf and as most of the class were foreigners they found the word and its phonetic elements very troublesome. "That is a hard word to spell, boys, do you know what a wharf is? How many of you ever go to a wharf?" A great many hands were raised. "What did you ever see at a wharf?" "I saw a rope," "I saw a ship," "I saw a rat," "I saw a turtle," were among the quick replies.

I sent each boy who had answered to write his answer on the board, making him complete his sentence by "at the wharf." I told them to look and see how wharf was spelled. I let each one who wrote, or any others who could do so, tell something about the ship, the rope, the rat, the turtle, and then we connected objects in a short story; we got up a most absorbing interest which we kept within bounds by as many ways of expressing it as was practicable, and within two

minutes we had all those distracting energies which had threatened to destroy the accomplishment of the lesson and the peace of the school concentrated upon the lesson itself.

Soon there were sentences in which the word wharf was correctly spelled by all, and time was too short to hear what those boys could tell from their own observation about the various objects about a wharf. We had some excellent contributions about the turtle and the crab, and I sent the teacher next day some very good pictures and studies which interested the class and called out still further observation and reports. That teacher never ceased to thank me for the help I gave her and dated her success afterward as a teacher to that revelation of the inter-relation of subjects of study and the natural suggestions of interest which can be deduced from the most unpromising lesson and class.—Louisa Parsons Hopkins in "N. Y. School Journal."

How to Make a Mimic Volcano.

All teachers recognize the fitness of illustration in geography and are pleased with every opportunity which offers tangibility to this usually abstruse branch of instruction.

An interesting thing in this line is the mimic volcano which is made as follows: Build a miniature mountain, about eighteen inches high, of sand or earth, and insert a one-and-one-half inch tube of coarse paper through the centre. Fill the crater with granulated sugar and chlorate potassium equally mixed and of the same consistency. A drop of sulphuric acid does the rest. The room should be darkened and proper care taken to avoid igniting any articles near by, although there is but little danger of this, and the effect is highly entertaining and profitable. The experiment should be preceded by a talk with the pupils on the subject.—[Prin. Joe E. Herriford, in "Popular Educator."

Language Lessons.

- (1) Write the names of:
 1. Ten kinds of vegetables.
 2. Five kinds of grain.
 3. Eight kinds of metal.
 4. Ten wild animals.
 5. Five kinds of fish.
- (2) Write ten words, each one ending in *ing*.
- (3) Write the following adjectives in a column, and after each write a word meaning the opposite:

thick,	late,	deep,
soft,	wide,	sharp,
cool,	fast,	even,
right,	smooth,	large,
high,	old,	broad,
- (4) Change these sentences to express *past* time:
 1. I lay the book on the desk.
 2. We lie down to sleep.
 3. The mason lays the bricks.
 4. The cows lie in the shade.
 5. The old man lies on the floor.

—[Journal of Education,

QUESTION DEPARTMENT.

E. M. L.—(1) Hamblin Smith's Arithmetic, page 273, Ex. 138:

A	makes	50	when	B	makes	45
A	"	100	"	B	"	90
A	"	50	"	C	"	40
A	"	100	"	C	"	80

Therefore B makes 90 when C makes 80; that is B can give C 10 points.

(2) Hamblin Smith's Arithmetic, page 273, Ex. 140.

Cubic feet of water used altogether = 14 m. 6 fur. × 48 ft. × 1 in. = 311520 cubic feet. Cubic feet of water used for each barge = $80 \times 12 \times 8\frac{1}{2} = 8160$ cubic feet.

$$\text{No. of barges} = \frac{31150}{8160} = 38 +$$

QUERIST.—(1) I forward to you by this mail a box containing a specimen rock. Would you please tell me what it is? Its streak is similar to manganese, and it won't burn nor melt in a blow pipe flame, but it lacks a bright metallic lustre.

It is shale, or clay mud rock. The laminae have been distorted by pressure, and so are uneven and waving. The little whitish grains in it are crystals that have been developed in the mass, probably they are feldspathic. The rock might occur in slightly metamorphic strata.

2. In the sentence, "The public is not satisfied with the minister's statement," in what part of the analysis would the last four words be placed, and why?

An adverbial adjunct of manner, respect, (with = in regard to).

(3) In the sentence, "An act was passed for preventing obstruction in Parliament," which is the better way to analyze the last, "for preventing obstruction." First, as adverbial of reason, telling why the act was passed; or second, in the enlargement of the subject, telling really what the act was.

As enlargement of the subject.

E. A. H.—Where can I obtain the information necessary to teach events since confederation? If you will inform me where to procure the necessary means (not too expensive) you will confer a favor.

The History of Canada, by J. Frith Jeffers, M. A., is very much used by some of our teachers and is well liked, especially for the period since confederation. It may be obtained from E. G. Nelson & Co., St. John, and costs 30 cents.

SUBSCRIBER.—Please solve the following question from Hall & Knight's Higher Algebra, page 3: "A vessel contains *a* gallons of wine, and another vessel contains *b* gallons of water; *c* gallons are taken out of each vessel and transferred to the other; this operation is repeated any number of times. Show that if

$c(a+b) = ab$, the quantity of wine in each vessel will always remain the same after the first operation."

Let A = gals. of wine in first cask after any of the operations.

Let B = gals. of wine in second cask after the same operation.

Then, at the next operation, there will be taken from first cask $\frac{A}{a}$ of c gals of wine, *i. e.*, $\frac{c}{a}A$

\therefore there will be left in first cask $A - \frac{c}{a}A = \left(\frac{a-c}{a}\right)A$ gallons of wine.

And there will be added to this cask from the other $\frac{c}{b}B$ gallons of wine.

\therefore total wine in first cask after *next* operation = $\left(\frac{a-c}{a}\right)A + \left(\frac{c}{b}\right)B$.

Let A_n = gals. of wine in first cask after n th operation, and similarly, for other operations, in both casks.

It is obvious that $A_1 = a - c$, and $B_1 = c$, and that $B_n = a - A_n$.

And we have, from above,

$$A_n = \left\{ \frac{a-c}{a} \right\} A_{n-1} + \left\{ \frac{c}{b} \right\} B_{n-1}$$

$$\text{And } B_{n-1} = a - A_{n-1}$$

\therefore after reduction,

$$A_n = \frac{ac}{b} + \left\{ \frac{ab-c(a+b)}{ab} \right\} A_{n-1}$$

And we are given $c(a+b) = ab$

$$\text{i. e., } ac = b(a-c)$$

$$\text{And " } ab - c(a+b) = 0$$

$$\therefore A_n = \frac{b(a-c)}{b} + 0 = a - c = A_1$$

And $B_n = a - A_n = a - (a - c) = c = B_1$. Q. E. D.

M. McD.—(1) Hamblin Smith's Arithmetic, page 185, Ex. III. 4.

Interest to be received each half year = \$250.

The interest on \$1 for 1 month = $\frac{1}{240}$. Therefore \$1 paid six months in advance would amount to $1\frac{1}{240}$, 5 months in advance $1\frac{5}{240}$, and so on for each of the other months.

That is \$1 would amount to

$$\left(1\frac{6}{240} + 1\frac{5}{240} + 1\frac{4}{240} + 1\frac{3}{240} + 1\frac{2}{240} + 1\frac{1}{240}\right) = 6\frac{21}{240}$$

$6\frac{21}{240}$ = the amount arising from \$1

$$\$250 = \frac{250}{6\frac{21}{240}} = \$41\frac{33}{87}$$

(2) Hamblin Smith's Arithmetic, p. 185, Ex. IV. 1. Present worth of debt = $\$6186\frac{2}{3}$ = the sum he had to hire.

Interest on $\$6186\frac{2}{3}$ for 8 months at 5% = $\$206\frac{2}{3}$

Amount = $\$6186\frac{2}{3} + \$206\frac{2}{3} = 6392\frac{2}{3}$

Gain = $\$6400 - \$6392\frac{2}{3} = \$7\frac{1}{3}$

(3) Hamblin Smith's Arithmetic, p. 188, Ex. 7.

$$1 \text{ part} \times 2 \text{ months} = 2$$

$$2 \text{ parts} \times 3 \text{ " } = 6$$

$$3 \text{ " } \times 6 \text{ " } = 18$$

$$\text{Equated time} = \frac{26}{6} = 4\frac{1}{3} \text{ months.}$$

(4) Hamblin Smith's Arithmetic, page 215, Ex. 55.

$$3\frac{3}{4}\% \text{ of the capital} = 3\% (\text{capital} - \$1200000) + 5\% \text{ of } \$1200000$$

$$\text{Therefore } \frac{3}{4}\% \text{ of the capital} = 5\% \text{ of } \$1200000 - 3\% \text{ of } \$1200000$$

$$\frac{3}{4}\% \text{ of the capital} = \$24000$$

$$\text{Capital} = 3200000$$

(5) Hamblin Smith's Arithmetic, p. 217, Ex. 5.

[NOTE.—Which exercise, III. 5 or IV. 5 ?]

(6) Hamblin Smith's Arithmetic, page 218, Ex. 4.

Amount of stock bought, \$18000. Sold \$12000 of stock for \$11220, and \$6000 stock for \$5100, in all \$16320, being a loss of \$60.

$$\text{Original income } \$\frac{18000 \times 3}{100} \quad \text{New income } \$\frac{16320 \times 4.5}{100}$$

$$\text{Gain } \$720 - \$540 = \$180$$

1. The chord of a circle is 170 ft. and the height of the chord is 22 ft. What is the length of the circular arc?

Find the diameter by (Euc. III. 35), also the apothem and radius. Then by trigonometry find the degrees in the circular arc and from that its length.

$$\frac{85 \times 85}{22} = 328.4; 328.4 + 22 = \text{Diam.} = 350.4$$

$$\text{Radius} = 175.2; \text{apothem } 175.2 - 22 = 153.2$$

$$\frac{153.2}{175.2} = .87442 = \text{Nat. cos. } 29^\circ - 1'$$

$$\text{Angle subtending required arc} = 58^\circ - 2'$$

$$\text{Circumference} = 350.4 \times 3.1416 = 1100.8 \text{ ft.}$$

$$\frac{1100.8 \times 58\frac{1}{3}}{360} = 177.4 \text{ ft., length of arc.}$$

SCHOOL AND COLLEGE.

Principal Alward, of Fairville, and Principal Wallace, of Milford, St. John County, have made arrangements for the purchase of school flags.

Miss Agnes Boyd, teacher of Smith district, Charlotte County, has by means of a school concert further added to her school furniture and apparatus.

Principal A. W. Hickson of Campobello, Charlotte County, assisted by pupils and others, has added extensively to his school appliances.

Messrs. Gorman and Lockhart have been appointed school trustees in St. John in the place of Mr. John Connor, resigned, and Mr. T. W. Peters, deceased.

Inspectors Mersereau and Smith have appointed May 17th as Arbor Day.

Inspector Carter expects to visit the schools on the Islands of Charlotte County during June.

The St. John County Teachers' Institute will be held September 26th and 27th next.

Splendid inducements are given to those attending the National Educational Association of the United States at Denver, Colorado, in July next. For one fare and two dollar fee for membership, delegates can travel to nearly any portion of that interesting state and neighboring western ones, and back again. This mode of management should be a good pointer to the directors of the Dominion Educational Association which must sometime meet near the Atlantic and sometime near the Pacific and beyond the Rockies, in its triennial migrations.

A number of teachers of Hampton and vicinity met at Hampton on April 20th. A society, called the Teachers' Association, was formed, and Miss Jordan elected as its first president. It was resolved to hold a session each month, for the purpose of discussing the principles and art of education. The utmost enthusiasm was displayed by all present, and all are looking forward with pleasure to the next session.

The Executive Committee of the Charlotte County, (N. B.) Teachers' Institute is considering the advisability of a joint meeting with the St. John County Teachers' Institute in St. John during exhibition week in September next.

Prin. Geo. J. Oulton, of Dorchester, represented New Brunswick at the Dominion Educational Institute held in Toronto, Ont., 16th and 17th ult.

Prof. Stockley, examiner of English at the University of New Brunswick, recommends to students, Mac-Millan's edition of Macaulay's "Warren Hastings."

The convocation exercises at Mt. Allison University, Sackville, will begin on Thursday, May 23rd, and will continue one week.

Mr. William L. Tracy still has charge of the large school at Victoria, Carleton County. During the last winter the attendance has been good, especially by the young men and women of this village. Through the efforts of teacher and pupils a very fine flag staff has been erected and a Canadian ensign procured, which, I

understand, is the second school flag erected in Carleton County. The flag gives the school building a pleasing appearance, and we believe it will not fail in its main object, viz: to centre the interest of parents in the school work.—[COM.]

A correspondent, A. D. J., sends some valuable notes on birds observed in April, which we cannot find room for in this number. These notes together with those on the flowering of plants and the leafing out of trees will furnish valuable material for the secretaries throughout these provinces, of the Dominion Botanical Club.

At the recent annual convocation of the faculty of arts, McGill University, Miss Katharine H. Travis took the B. A. degree, winning first class honors in mental and moral philosophy, and the Prince of Wales gold medal; Miss Susan E. Cameron took the B. A. degree with first rank honors in English language, literature and history, winning the Shakespeare gold medal, after a keen competition and with one of the best examination papers ever submitted at McGill; Miss Margaret L. Holden, closed her second year with honors, and is bracketed with two others for first place in her class; Miss Muriel B. Carr won Sir Donald Smith's scholarship prize of \$100, with free tuition. Miss Carr leads the freshman class, winning, in addition, the Latin prize, and the "Coster memorial prize," awarded to the best student at McGill in the freshman year from the Maritime Provinces. These young ladies are from the Girls' High School, St. John. Miss Travis has been offered and has accepted the position of resident teacher at Trafalgar Institute, Montreal, being chosen out of twenty-six applicants. Miss Cameron has received an appointment on the staff of a ladies' seminary in New York.

Intending students of the Summer School of Science, should communicate with A. D. Ross, Esq., Amherst, N. S., who will procure board for them at reduced rates if applications are received by the first of June, prox. By attending to the above, confusion, disappointment, and annoyance, will be avoided.

Any persons desirous of taking advanced work in any of the classes at the Summer School of Science, which meets at Amherst, July next, are requested to communicate with the Secretary, J. D. Seaman, Charlottetown, at once, mentioning the subjects they wish to study. Unless a sufficient number of names is received beforehand, arrangements for advanced classes will not be made.

BOOK REVIEWS.

SHORT STUDIES IN NATURE KNOWLEDGE: An Introduction to the Science of Physiography, by Wm. Gee. Price, 3s. 6d.; pp. 307. Publishers, MacMillan & Co., London and New York. In this work, the author, a teacher, has expanded notes of his class lessons given for many years, and has included some of the results of recent travel and research, making a book that is especially valuable as a supplementary teacher in science, geography and history. The illustrations are especially admirable. We have seen no book that would make a more valuable addition to a school library than this.

SELECTIONS ILLUSTRATIVE OF ROMAN LIFE, from the letters of Pliny, by Chas. Haines Keene, M. A. Price, 1s, 6d. Publishers, MacMillan & Co., London and New York. This is published in the **ELEMENTARY CLASSICS** Series, in clear type, with vocabulary and notes. It will furnish good examples for sight reading Latin.

SELECTIONS FROM ERASMUS, edited with Notes and Vocabulary, by Victor S. Clark, Lit. B. Publishers, Ginn & Co., Boston, Mass. This book, published in the **SCHOOL CLASSICS** Series, conforms to other numbers in the same series, and is intended to provide supplementary reading in Latin. Besides its convenient form and neat textual appearance, it has several other good features, among which is the arrangement at the foot of each page of Latin synonyms of words used in the text. The sketch of the life of Erasmus in a fitting introduction to the selections.

FIRST LESSONS IN CHEMISTRY, by G. P. Phenix. Paper, price, 20 cents, pp. 41. Published by D. C. Heath & Co., Boston. This is No. 16 of the "Guides for Science Teaching," published under the auspices of the Boston Society of Natural History. It will be found especially valuable to the teacher of limited experience, and will prove a great help to one accustomed to provide his own apparatus.

HOME-MADE APPARATUS, with reference to Chemistry, Physics, and Physiology, by John F. Woodhull. Price 45 cents; pp. 72. Publishers, E. L. Kellogg & Co., New York. A help toward providing new full apparatus at but little expense. One objection to books of this

kind, is that the experiments and illustrations are separated from lessons on the subjects above named.

FLEURS DE FRANCE, par C. Fontaine, L. D. Price 60 cents, pp. 154, cloth. Publishers, D. C. Heath & Co., Boston. This is another text in Heath's "Modern Language Series. It is well printed, and the notes sdggestive.

The May Magazines.

In the "Popular Science Monthly" for May, Prof. James Sully in his Studies of Childhood passes from the ideas to the feelings of children, taking up Fear, which he shows is not always produced by the same causes in different children....Conspicuous among the contents of the May "Atlantic" is Percival Lowell's first paper on Mars. The subject is the Atmosphere of Mars, and it is treated with such skill that the reader finds new interest in the scientific information given....The "Century" for May contains a poem by Bliss Carman—"A Norse Child's Requiem." In this number the Life of Napoleon reaches the conclusion of the first great campaign in Italy....The four weekly issues of "Littell's Living Age," Boston, for April are as usual overflowing with the best things that current foreign literature affords, as may be seen by the partial table of contents here given:—"Some Recollections of Robert Louis Stevenson," "The Method of Teaching Languages," by John Stuart Blackie; "John Lyly and his 'Euphues,'" "Lord Randolph Churchill," by Sir Herbert Maxwell; "The Crisis in Newfoundland," "Women of the French Revolution," "The Romance of a Stuart Princess," "Two Modern Poets," with many other papers of nearly equal value, besides poetry and fiction...."The Criminal Crowding of the Public Schools" and "Crowded Schools as Promoters of Disease" are two subjects of pressing importance that will be taken up in "The Forum" for May....The Rt. Hon. J. G. Bourinot, Clerk of the Dominion Parliament, has written for the May "Forum" a very striking comparison of the Canadian and the American systems of government, to show why the American system does not commend itself to Canadians. He thus explains the absence of any influential sentiment in Canada....In the May "Chautauquan" "Great Acts of English Parliament," a rather difficult subject for popular treatment, is successfully presented in a brief article by Prof. Raleigh, of All Souls' College, Oxford. He shows the significance of several of the prominent landmarks in English legislation.

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M. CHAMBERLAIN, SECRETARY,
Harvard University, Cambridge, Mass.

OFFICIAL NOTICES, N. B.

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.

OFFICIAL NOTICE, N. S.

HALIFAX, MAY 1ST, 1895.

The number of "teaching" days in the last half of the present school year in Nova Scotia is 108; the number in the whole present school year is 216.

A. H. MACKAY.

Supt. Education for Nova Scotia.

SUMMER SCHOOL OF SCIENCE.

✦ ✦ NINTH SESSION. ✦ ✦

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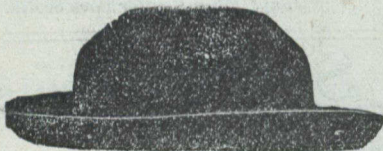
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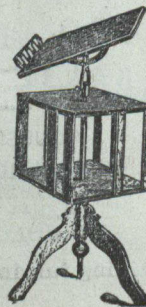


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