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JOURNAL OF EDUCATION.

FOR THE PROVINCE OF NOVA SCOTIA.

THE following paper was written for the Teachers' Association recently held in this city. I, however, did not deem it expedient to read it at the time appointed. With the exception of some passages omitted, that it might not occupy too much space, it is now presented to those for whom it was designed:

These annual meetings of ours have always, I trust, proved interesting and instructive to those who have taken part in them. I know not what may be the popular idea of their character and usefulness, yet I cannot but think that the reflecting friend of education must look upon them with great interest. To the mind of such a one, our meeting must be associated with momentous considerations, and very properly so, if, as it is supposed, we come together with our minds attuned to the work we profess to have in hand.

Our ostensible and avowed object in assembling here is, by associated and combined effort, to advance the work of popular education. For what more important work could we be called together? When one reflects on what popular education means, there is really attached to these meetings—being, as they purport to be, voluntary assemblages of men and women—the advancement of one of the highest and holiest objects that an intelligent being can have in view.

Education in its popular significance, which I need not stop to define, has become a something of incalculable importance. Indeed it was so always, but of late its importance has, in the land we live in, as in many others, come to be in a greater measure felt and appreciated. I have qualified the expression by saying in a *greater measure*, because I believe that, even in the most enlightened communities, the advantages, the necessities, the blessings of education, are not even yet duly appreciated, except by the more deeply thinking few.

Its practical advantages are indeed now pretty generally admitted. People have come to see and feel that in every walk of life the man of education possesses great and numerous advantages over him that is ignorant and uncultivated. It is no longer safe for an uncultivated man to enter the pulpit as an expounder of divine truths; however earnest in his calling the defects of his education will certainly avert and chain the attention of his hearers in a way and to an extent which shall not fail to seriously impair his influence. So it is in all others of what is called the *learned* professions—although it is to be hoped that at no very remote day all will be alike learned.

The man who enters the profession of Law or Medicine with only such a smattering of education as just barely enables him to attain that position, has great difficulties and dangers to encounter when brought into competition with men who have had a sound education, and this disadvantage too under which such men labor, is increasing every year. The uneducated farmer, or mechanic, or merchant, now finds difficulties in carrying out his occupation, which were not experienced, or certainly not recognized, by former generations. This is a result of the great progress of civilization. Education, considered with regard to its practical uses, is thus ever creating a necessity for its own further extension.

Taking a broader view of the subject, we find that education does the work of legislation. Look at the work which engages our parliaments, and other legislative bodies by whatever name they are designated. If we examine into it in detail, we shall find that for the most part, it amounts to one continued battle against ignorance. Nothing is to be found worse than associated ignorance in any land, it is a vast and terrible power, and the more enlightened any nation or country becomes, the more fully and plainly it realizes this fact.

To contend against ignorance, to battle it, to destroy it if pos-

sible, has taxed the energies, and has been the principal aim and occupation of the wisest statesmen which the world has produced. Ignorance may almost be said to be the path to crime. It is indeed contended sometimes, and with some reason, that there is no necessary connection between the two. It is said: the better educated the man, the greater the criminal. It must be admitted that in the case of a man of an essentially evil nature, education enables him the more skillfully and successfully to carry out his evil devices, and may consequently be said to make him the greater criminal. Such cases as these, let us hope, are exceptional. We know that much of crime is directly caused by ignorance, and we know that ignorance is the most fertile of all the causes of those political convulsions and acts of national wrong, which have brought so much distress into the world. We know that in those countries where the greater attention has been given to popular education, we find the least crime. So easily demonstrable is this result, that we can with perfect confidence draw the inference that it *pay* to educate; it pays, because it lessens the expense of maintaining public order and good government. In short, on looking abroad to-day anywhere or everywhere what do we see as the great elevating cause to nations? Popular Education. And what the cause of their degradation? The neglect of that education.

Our system of education in Nova Scotia, upon which I propose making a few remarks, is one which affords us many grounds for congratulation, while it still shows room for improvement. Our system embraces colleges, academies, and common schools, and here in the city of Halifax we can boast of one school of science. Religious instruction will not be dwelt upon in the course of my remarks, for the simple reason that it does not belong to our provincial system of education, not that I undervalue religious instruction, on the contrary, we must regard it as fundamental in any complete system. It must be fundamental, because it has to do with man's spiritual interest, and this transcends all others. Our common schools do not provide this religious instruction, and this fact should stimulate all religious bodies to efforts in that direction. Such instruction is of course largely supplied in our churches and Sunday schools, and were it not for this, the school system of Nova Scotia as a whole, would be deficient in an element of value, for which no possible substitute can be provided.

At the top of our educational system we have six collegiate institutions, imparting instruction in the higher branches usually taught in colleges elsewhere. The denominational character of most of these institutions has led to a controversy over which the public mind is, in no slight degree, excited. There are those who believe that the existing colleges should be upheld, independent of each other, and as their denominational founders intended them to be. Others maintain that, while so many colleges are thus kept up, none of them can be efficient, and that the efforts and means now scattered over six, should be concentrated upon one Provincial University. Whatever may be the final result of the controversy, it is very desirable that the public mind should be at rest about it. Until it is, the collegiate institutions which we have, must suffer. For, many persons who do not believe in their efficiency, send their sons out of the province to be educated at institutions of unquestionable standing. That must be a regrettable state of affairs that causes such steps to be even supposed necessary. A number of our common school pupils are, through these colleges, enabled to obtain a higher class education. Inducements should be created and urged to increase this number, for all professional education *at least*, should have as an underlying ground work, a sound collegiate course.

As to our academies, if they are worth having at all, they are

worth having done for them all that can be done to make them efficient. Some urge that these institutions should be discontinued or sustained by a tax or tuition fee upon pupils. To discontinue them, would at once remove all public means for higher class education—for an education above that of the common schools. To provide for that support by a tax, would make them too expensive, and therefore defeat the purpose for which they were intended. They ought certainly to be efficient, and should accomplish the design of the government to provide, to a certain extent, for advanced education. It might, in the main, be desirable to limit their number; for a few, duly equipped, well sustained, and managed in strict conformity with the original design, would no doubt meet the necessity of the case. Whenever this is decided upon, no expense should be spared on the part of the people to make them centres of high instruction for the youth of intelligent communities.

Our common schools in Nova Scotia are established upon a safe and sound principle. What remains to be done is to devise what will most conduce to their improvement whilst in practical operation. What will promote this general efficiency? What is the constituent of most importance in our common schools? Unhesitatingly I affirm, the *Teacher*. Have a school house as commodious, as costly, and as attractive as you will, fit it up and furnish it with all that is valuable as an institution of learning, unless you have a *Teacher*—not a school master or a master of a school, but a *Teacher*—your preparations for a school will be found to have been futile. And what constitutes a teacher? The elements are *health, moral character, amiability of disposition, education, love of profession*. Let a teacher have a fair combination of these elements, and if his school be in a wigwam, it will be a school, and a good one, in the well understood and accepted meaning of this term—a good school.

Immeasurably above all else, it is the teacher who makes the school, and what an immense deal is found to be comprised in that allegation, when we reflect for a moment, upon the extent to which the school makes the man or woman. To the teacher's care are entrusted, we may say, the lives of multitudes of children, at the age, when their every waking moment makes its impression upon their plastic and susceptible minds—plastic and susceptible indeed to receive, but nevertheless to retain those impressions indelibly through life. A parent may by a momentary act transmit his wealth, but education cannot be transmitted—the pupil obtains that by his own efforts aided by the teacher. You—the teachers—are their aids, the educators, the drawers-out, the assistants, in the mental development of your young charge. It is your privilege and your duty to trace and train their talents, and if you love your profession you will do so. The evidence of those talents speak from the bright eye of the boy or girl with whom you are in daily contact; it beams from the expanded brow and is found hidden in the frequent questions of childish curiosity and inquisitiveness. Learn then to trace the lineaments of genius where it has its home, for the childish interrogatory will often disclose to the ready ear of the thoughtful preceptor, the indwelling, latent power. The childish inquiry is genius asking favor and demands a helping hand. Upon the peril of offending the Giver of those rich endowments, the teacher withholds his aid, or becomes heedless to the voice of the youthful intellect seeking its own development. You cannot form too high an estimate of the work your country has entrusted to your hands, and when you accept the office of a teacher, you accept responsibilities second in weight to those of no secular work that falls to the lot of man.

Other essentials to the school which is intended to be in every way successful are, of course, suitable buildings, with corresponding fittings and apparatus. In addition to these, I must mention *Trustees* who will do their duty, and that duty is no passive one. It involves activity, intelligence, and good faith. The parents of the pupils also, can, by almost innumerable acts contribute to the success or non-success of the school, at which their children attend.

To all we would say, the public schools, as the means of educating the mass of the population do not appeal to the tax payer, as if they were asking public charity, or a gift from bounty, and a ready word to defend them. It is the spirit of the age—of that civilization, by whose means, and through whose power alone

property is made really valuable—that says to the rate payer, the public schools are your surest means for raising the value of your investment, for making secure, as well as valuable, your possessions. Guard them and watch over them—for your own sakes perpetuate them.

When the time of active life shall have past, and from the confines of that world where all shall give an account of an earthly stewardship, it will not be among the least pleasing reminiscences of life, that in fostering and perpetuating a system by which the blessing of a sound education shall descend to generations yet to come, you aided to unfold the glorious purposes and plans of Him, who is all knowledge, and the fear of whose name is the beginning of wisdom.

I may now make a few remarks on a matter incidental to our general subject, I allude to *female education*. Our common schools are open alike to the sexes, and I am of opinion that our colleges and academies also ought to be, and in a few years, I think will be, open to females. Contrary to a long prevalent opinion, which, I trust, is now going out of date, or quite gone, the most highly cultivated intellect is requisite to train a child in his early years. It is most unsafe for the moral and intellectual, as well as for the physiological welfare of a young child, to trust it to the keeping of ignorant and uncultivated persons. Here is at once a reason why mothers should have the best education that the country can afford, for mothers must have charge, some of them the exclusive charge, of the earlier years of their children—an ignorant woman in such a position is a sad object to contemplate. There is besides a philosophical reason why women should have the highest mental culture. Intellectual faculties are believed to be transmitted more from the mother than from the father; the probability or even possibility of this being the fact, suggests a potent argument for educating—that is, developing—the female intellect to the highest possible degree. The opening of our colleges and academies to females, when it does take place, is sure to give a great *impetus* to the general educational interests of the country, for although an educated father may sometimes neglect the education of his children, we may be sure that an educated mother never will.

EDUCATION IN JAPAN.

THE Japanese people have begun a new civilization, on the principle that "education is the basis of all." Waking up from the lethargy of ages, the "Land of the Rising Sun" asks for the unshorn beams of the sun of knowledge. Seeking and desiring light for the thirty-five millions of her people, Dai Nipon has given new significance to her proud name. A glance at the old education and a sketch of the new, may not be uninteresting.

In order to get even a faint idea of Japanese culture and education, we must glance backward through many centuries. Japan received from China her alphabets, her literature, her science, and indeed almost her entire literary property and her civilization. One of the most interesting and sometimes the most difficult studies to a resident in Japan, is to distinguish between the pure Japanese and the China expressions and customs. Certain Japanese purists, who desire to disclaim as much as possible their indebtedness to China, assert that Japan anciently possessed a language and literature of her own. An alphabet called the *Kami* or god-letters, they assert, was formerly used by the ancient sages, which was given and taught them by the gods. It is also asserted that many of the ancient burial-stones in the temple-yards, in the sacred city of Maico, contain inscriptions in this character. This alphabet has two forms, one consisting entirely of straight lines, and small circles, the other of curved lines, and evidently used as the script or running hand. The writer has seen this alphabet printed in a Japanese book, which is written to disprove the popular idea concerning the "god-letters," and to show that they were brought from Corea at a comparatively late date, several centuries after the Christian era, and that the story of their having any sacred character is a fabrication. We have looked carefully in many ancient temples

and in many old burial-grounds and other places in Japan, but have never seen any inscriptions in this character, though Sanscrit inscriptions are found in nearly every cemetery

"The first knowledge of Chinese writing was carried to Japan by a prince of Corea in the year 284 of our era, and then, immediately after, the tutor to that prince, a Chinese named Wang Zin, having been invited, the Japanese courtiers applied themselves to the study of the Chinese language and literature." In the sixth century, the missionaries of Shaka, having overrun nearly all Eastern Asia, even to Corea, crossed over to Japan and spread the doctrines of Buddhism. "Then every Japanese in polished society, besides being instructed in his mother tongue, received instruction in Chinese also; consequently read Chinese books of morality, and aimed at being able to read and write a letter in Chinese.

"The original pronunciation of the Chinese degenerated early, and new dialects of it spring up which were no longer intelligible to the Chinese of the continent; but notwithstanding that, the Japanese remained able, by means of the Chinese writing, to interchange ideas not only with the Chinese, but with all the peoples of Asia that write Chinese. The Chinese written language has become the language of science in Japan. It will long remain such, notwithstanding the influence which the civilization of the West will more and more exert there."*

It will thus be seen that Chinese language and thought became imbedded in the greatly assimilated to the Japanese. For centuries it has been the sum of knowledge and culture to the educated classes. True it is, that the Dutch language was studied to a considerable extent, but it was "the monopoly of the fraternity of interpreters and a few literary men, who used this knowledge as a bridge, over which the skill of the west was imported and spread over the country by means of Chinese or Japanese translations."† The Dutch language was even for a time the court language of the country, and many Dutch words have become vernacular. From time to time the student is amused and surprised to find words which he may have casually heard along the Raritan or the Hudson, or read on the sign-boards of Amsterdam turning up in Japanese speech; while the names of chemicals, merchandize, etc., of Dutch origin are too numerous to detail. We have before us the catalogues of the schools and studies of the province of Yetsizen or Echizen, the foreign studies of which the writer has the honor of directing. There are three grades of schools, corresponding to our primary, grammar and high school. The Japanese boy is supposed to begin schooling at five or six years of age. He first learns the *kata* and *hira kana*, Japanese alphabets, which are respectively the text and the running hand. Each consists of forty-seven syllables, and though spoken of by the Japanese as "our kana," are altered or abbreviated from the Chinese. The Japanese alphabet, like the Chinese characters, is a syllaban. The hope of Japan spends five years in the *Sho Gaku*. During the first year he learns to read in their order, "Small Learning"—the moral duties of man; Confucius' Four Books of Morals; the Three-Character Book of Morals; the Book of Filial Duties; the Book of Great Lineage—ancestry of the Mikado; and the Entrance to Knowledge—duties of cleanliness, obedience, etc. By way of commentary, we may add, that the astonished polite urchins of Japan, returning home with their ink-bedaubed faces and bowing very low, as they invariably do to their foreign teacher, obey the precepts of obedience rather better than those of the virtue usually supposed to be next to godliness.

All these books are written in very easy Chinese characters. After being examined, the scholar begins his second year, the studies of which are: rudimentary Geography, a primer written in euphony; the writing of small Chinese characters; learning the names of all the Emperors of Japan, the names of the large cities, provinces and their local divisions, how to read the proclamations of the Imperial Government, the names of, and written characters for familiar objects; learning to write the characters of numerals, points of the compass, the seasons, names of countries, chronology, names of years, etc. It will be noticed that in the first year reading only is pursued. To go into a

Japanese school room, while the boys are learning their lessons, (study at home is a new idea in Japan) reminds one of the Congress at Washington or an hour on 'Change.

Our Jap, during the third year, learns the four fundamental rules of arithmetic and the use of the abacus; and here the mathematical education of most Japanese ends. He also reads the Book of Heroes—a reader containing accounts of model men and women, virtues and noble actions, etc. The third, fourth and fifth years are repetitious in kind of the first and second. Much time is devoted to the study of etiquette, how to walk, bow, visit, talk, etc. In this department we must confess the native of Japan is a peer to that of any other country. A peculiar fact which the American teacher in Japan notices, is this, that the keeping of discipline, which in America requires so much time, nerve-power and will, is entirely unnecessary in Japan, the boys being orderly and quiet to a remarkable degree.

The next school into which the pupil is now graduated, is the Middle School. It would be tedious to detail all the studies, but in substance, they are simply an advance in the same line of the studies of the small school. The scholars read the History of China, the Book of Rhetoric, or Composition in Chinese; a brief History of Japan, and a large "Book of Japanese Strategy," containing remarkable feats in war, narratives of heroes, etc. In writing, they learn the Chinese small text, and how to write private and official letters, both original and after models. In arithmetic, they again drill in the four fundamental rules and learn to solve problems, and to count large numerical quantities. They also read a brief universal geography, and study quite thoroughly the topography of Japan. The time occupied to complete the studies of the Middle school, is three years; during which time the pupil receives initiatory lessons in fencing, wrestling and riding.

Young Japan is now in his sixteenth or eighteenth year, and enters the Dai Gaku, or High School. Here he reads several histories of Japan; the first is from the Golden Age, and is to be brought down until "within the memory of men now living." The second is the history of ancient Japan, from the first Emperor, until the middle ages, and the third, written in very fine style, takes up the history of Japan at the middle ages, and continues it until the time of Iyoyas, in the early part of the 17th century. In arithmetic, vulgar and decimal fractions, the rule of three, involution, evolution, and progression are taught, together with a little algebra. Daily exercise in fencing and wrestling, and a monthly lesson on horseback, hitherto "completed" the education of the average educated Japanese. While many, by private study afterwards, far exceeded their school studies, the majority, especially in mathematics, never reached the maximum presented above.

Thus it will be seen that the entire education, as we out of compliment call it, of the Japanese boy was simply the knowledge of how to read and write Chinese, a few scraps of knowledge concerning other countries, the history of Japan and China only, a little of the simplest mathematics, and a pretty heavy dose of atheistic morals,—no education in its radical sense, only the training of the memory and the storing of the mind with a few facts and many precepts. We have every reason to believe that the state of education in Echizen, previous to the coming of a foreign instructor, was exactly the same as that in the best provinces of Japan. It must also be remembered that in many of the provinces, nay, in most of them, no government school existed, the few there were, being private; and further, none but the sons of the Samurari—the literary military class of Japan—were permitted to attend. Considering these facts, it is not surprising that although nearly every inhabitant of the cities in Japan can calculate on the abacus, can read and write the *hira kana* and *kata kana*, and read the government proclamations, yet concerning the facts and methods of the classified sciences, the normal Japanese was like a child that had not yet picked a single pebble from the boundless shore.

A single sheet of paper was recently made at Cohoes, N. Y., forty-four inches wide and a fraction over twenty-five miles long, and the weight was 10,050 pounds.

* Introduction to Hoffman's Japanese Grammar.

† Ibid.

HOW COMMON WINDOW GLASS IS MADE.

IF you ever visit Pittsburg, in Pennsylvania, you must go into the window-glass factories there; you will find them very curious. Their furnace, in the first place, is built in the ancient style; it has no chimney, and the smoke from the bituminous coal they burn, pours out in a cloud into the room. There are openings in the roof for it to escape through, and a continual draft of air from the door carries it upward, so that it is not so bad for the workmen as one would think. Besides, they do not begin to blow until the smoke is all burnt off.

There are five pots on each side of the furnace; and you will see five men in a row, blowing all at once, with the regularity of a file of soldiers exercising. Each gathers thirty or forty pounds metal on his pipe, which is very long and strong. They stand on platforms, to get room to swing the glass, as they blow it. The five men begin to blow and swing all together. Each blow a great globe of glass, which is stretched out gradually by the swinging motion into a cylinder, or roller, as it is called, five feet long. Then the five rollers are swung up towards the furnace holes, and five other soldiers spring forward with their guns—which are in this case iron bars that they set upright under the five blowing pipes to support them while the rollers are being reheated in the necks of the pots. The blowers blow in the necks of the pipes with all their might, then clasp their thumbs over the holes to prevent the air from rushing out again; in the meantime the end of the roller is softened, so that at last the air, forced in and expanded by the heat, bursts it outward. The glass is then a cylinder, open at one end. It is whirled in the heat until the edges become true, then brought away—the five iron supporters dropping to the ground with a simultaneous clang. The cylinders are laid on tables, where the imperfect spherical end about the blowing pipe is cracked off from the rest by a strip of melted glass drawn around it. The cylinder is then cracked from end to end on one side by means of a red-hot iron passed through it.

In the adjoining building is what is called the flattening oven. The cylinders brought there are lifted on the end of a lever, passed in through a circular opening just large enough to admit them, and laid on flattening stones on the oven bottom, with the crack uppermost. The oven bottom is circular, and it revolves horizontally. As the glass softens it separates at the crack, and lays itself down gently and gradually on the stone. The large cylinder is then a flat sheet, three feet wide and nearly five feet in length. There are four openings around the sides of the oven; at one the glass is put in, through another a workman sweeps a stone for it, a third workman smoothes it down with a block as it comes round to him, and a fourth, at the last opening, which is close to the one at which it was put in, lifts the sheet—partly cooled by this time—upon a carriage in the oven. This he does by means of a lever furnished with sharp, broad blades at the end, which he works in under the glass. When the carriage is full it is run through an annealing oven beyond.

The opposite end of the annealing oven opens into the cutting room. There carriages are pushed along a central track, and unloaded at the stalls of the cutters. The cutter has a table before him, with measure marks on its edges. He lifts one of the sheets, lays it on a table, and commences ruling it faster than a school boy rules his slate. His ruler is a wooden rod five feet long, and with pencil point as a diamond. Every stroke is cut. Not that it cuts the glass quite apart; indeed it seems scarcely to make a scratch. Yet that scratch has the effect of cracking the glass quite through, so that it breaks clean off at the slightest pressure. In this way the sheets are put up into panes of the required size.

I remember one workman told me that a single diamond would last him two or three years. It has fifteen or sixteen different edges, and when one edge is worn he uses another. South American diamonds, such as he used, cost, he told me, from six to thirty dollars each; and when they are worn out for his purposes, he sells them for jewels to be put in watches.

Never use a hard word when an easy one will answer as well
Never tell a pupil to do a thing unless convinced he can do it.

OWEN'S CHRONOGRAPHICAL CHART—WITH HAND BOOK.

WE have, though not designedly, omitted any especial notice of the above-named work. Last year this Chart was published by Mr. McKinlay, and by the Council of Public Instruction placed on the list of Books and Maps prescribed for use in the public schools. As Mr. Owen's work has been but a short time before the public, its circulation, as yet, is limited. It has, however, come under the notice of some, whose favorable opinion is a recommendation to any work. From these gentlemen we have heard but one expression, and that of high approbation.

Mr. Owen's work may be designated, a History of the World at one view, or a Map of Universal History. The author tells us that "the purpose aimed at in this Chart is to do for History what has hitherto been done for Geography, namely, to furnish a Picture of Time, as a Map does of Place." On this Chart, coloured lines represent the Population of Continents, and Countries. Parallel lines from right to left, embrace periods measured by centuries. The four thousand years before Christ, are divided into periods of five hundred years each, the two thousand years after Christ, are divided into eight periods, of two hundred and fifty years each: the Saviour's name is made Central.

Within the parallel lines are placed the names of distinguished men who flourished in these periods, so that we have presented to the eye at a glance, the time in which men renowned in history lived, from the earliest record of sacred history down to the present century.

We think the reverend gentleman has conceived, and to a certain extent developed, a most happy thought, for evidently the Chart is valuable not only for what it now is, but for what it most assuredly may be. The plan of this Chart may be expanded, and the more minute periods of history presented by parallel lines, so that not only the great names, but the time of great events, of history placed at once before the eye; and the pupil has at one view, the time when distinguished men lived and remarkable events occurred.

Should Mr. Owen's Chart obtain the circulation it so deservedly merits, he will doubtless bestow upon new editions of the work additional thought and care, and thus supply what may be regarded as a desideratum in literature, viz.: a work by which, without turning over volumes in long research, the student may see at a glance historic names and events, with corresponding dates in any period under consideration.

The Chart is a Nova Scotia work. The author is a native of this Province, a Clergyman of the Church of England, of long and honored standing, and has ever manifested a deep interest in the educational advancement of his country. The work well deserves a place in our families, colleges, and schools.

The author's address is Revd. H. L. Owen, Lunenburg, N. S.

SCOTLAND.—Efforts are being made for the promotion of science and art instruction in Scotland. The local papers report a series of meetings in the large town, which appear to have been fairly successful. Mr. Buckmaster has forcibly pointed out what is required in the education of working men and their employers; instead of teaching boys abstractions and metaphysical ideas, as if they were all to be parish ministers, they must be taught things. A knowledge of the laws and properties of matters, by which the earth is subjugated to our use, is the proper education of men who have to work on matter. Several local committees have been appointed to co-operate with the Science and Art Department in promoting scientific instruction in Scotland.

WEST INDIES.—In the new cemetery at Havana, a grand monument is to be erected in honor of Columbus, to which his remains will be transferred from the Cathedral in which they now lie.

GOVERNMENT GRANTS

In aid of Public Schools, paid to Teachers for the Term ended 30th April, 1872.

The Asterisk () marks those employed in Poor Sections.*

CO OF CUMBERLAND.

TEACHER.	Number of Teaching days employed.	Amt. paid to Teacher from Pro. Treasury.
GRADE A.		
George, F W	120	
GRADE B.		
* Atkinson, J H.	87	58 00
Angus, Nathaniel	120	60 00
Brownell, Geo W	119	59 50
Blatch, Fred K	121	60 00
McAnlay, Donald	120	60 00
Patterson, W G	120	60 00
Reid, Henry	120	60 00
Taylor, W F	116	58 60
Withers, Edward	111	55 50
GRADE C.		
Angus, Saml	120	45 00
* Atcheson, Michael	120	60 00
Bube, Annie P	65	21 37
Brown, Amy	119	44 62
Band, Annie	120	45 00
* Black, Oressa,	117	58 50
Canfield, Isaac G	61	22 87
* Charman, Eliza J	120	60 00
Creed, Annie D	120	45 00
Charman, Mary	100	37 50
Carter, Amelia	121	45 00
Camfield, W B	121	45 00
Downing, John R	121	45 00
Dobson, Mary	115	43 12
Elderkin, C M	119	44 62
Fowler, Bessie	120	45 00
Glennie Victoria	109	40 87
* Ibbitson, Clia A	80	40 00
Kerr, Alcida Y.	120	45 00
Logan, Ellen A	120	45 00
Logan, Rebecca,	120	45 00
Logan, Elizabeth C	104	39 00
McCarthy, John	103	38 62
McAlman, L	120	45 00
Paton, James	110	41 25
Peers, Maggie	121	45 00
Pipes, Thos. R	119	44 62
* Lingley, Sarah M	105	52 50
Robinson, Fred	121	45 00
Reid, Annie C	120	45 00
Stevens, Avad W	78	29 25
Stewart, W D B	117	43 87
Sherra, Lizzie	120	45 00
Skimings, Lizzie M	117	43 87
Skimings, Sasie	120	45 00
Treen, Geo R	120	45 00
Travis, Maretta	121	45 00
Tupper, Mary A	109	40 87
Travis, Annie J	121	45 00
West, Julia	117	43 87
GRADE D.		
* Aikenhead, Amelia	71	23 67
Bennett, L	100	25 00
* Brown, Eleanor J	87	29 00
Baird, Lucinda	100	25 00
Chesnut, Daniel S	118	29 00
Creed, Henrietta	121	30 00
* Chapman, Chas T	120	40 00
Dobson, Elija A	90	22 50
* Dobson, Janie,	110	36 67
* Finlong, Leydia A	113	37 67
Hunter, Olevia	119	29 75
Kerr, Lottie J	121	30 00

* McIntosh, Daniel	106	85 33
McDonald Cassie L	94	23 50
* McKenzie, Annie S	120	40 00
Mills, Phoebe A	115	28 75
Pagan, Mary Ann	110	27 50
* Phelan, Udevilla	99	33 00
Road, Bessie A	121	30 00
Ross, Maria	110	27 50
Stovens, Lamert	117	29 25
Smith, Bessie	109	27 25
Silliker, Sophia M	120	30 00
* Schureman, Olivia	120	40 00
* Ward, W D F	119	39 67
* Yattril, Nancy M	106	35 33

GRADE E.

Carter, Mary	118	22 12
Harpell, Mary	*110	20 62
Holmes, Emma J	110	20 62
* King, Mary Jane	116	29 00
Murphy, Mary A	59	11 06
* McNab, Mary J	118	29 50
* McIntosh, Isabella	116	29 00
Ross, Mary	120	22 50
* Taylor, Cassie	121	30 00

GRADE B.

Hannah, Robert	121	60 00
McCabe, James	120	60 00
Poole, John T	103	51 50

GRADE C.

Keith, A C	91	35 25
* Kerr, Fannie B	120	60 00
Layton, Emma A	105	39 37
Sutherlandgreen, A B	95	35 62
Sharpe, Sarah E	116	43 50

GRADE D.

Corbotte, Joan	117	29 25
* Roberts, O T	97	32 33
Smith, Emma A	65	16 25

GRADE E.

* Barnes, Kezia	82	20 50
* Hanning, Emily	104	26 00
Wheeler, S Jane	94	17 62
Wheeler, S Jane	117½	22 02

ASSISTANTS—GRADE C.

Finley, Aar.	109	27 25
Pipes, Jos. H,	30 00	
for last term		

CO. CAPE BRETON.

GRADE A.

GRADE B.

Armstrong, J N	120	60 00
Boyd, J C	119	59 50
Campbell, Malcolm	120	60 00
Carey, John	120	60 00
Dimock, W D	120	60 00
Dowling, Thomas	23	11 50
Dowling, Thomas	72	36 00
Fraser, John C	120	60 00
Kennedy Alexander	120	60 00
McDonald Alex	120	60 00
McDonald, Daniel	120	60 00
* McDonald, Joseph	120	80 00
McDonald, M B	118	59 00

McDonald, Murdock	119	59 50
McKinnon, Alex	120	60 00
* McKinnon, Michael	120	60 00
McLeod, John H	120	60 00
McNeil, John D	116	58 00
* McNeil, Roderick	120	80 00
Morrison, Alexander	114	57 00
Rindross, John A H	112	56 00
Ross, Aaron	119	59 50
Budderham, C W	105	52 50

GRADE C.

Anderson, Annie	120	45 00
* Anderson, Cassio	105	52 50
Archibald, Bessie	115	43 12
Bonnar, James	117	43 87
Garrety, Charles	57	21 37
* Garret, Charles	61	30 50
* Gillis, Donald	120	60 00
Hanrahan, Mary J	119	44 62
Harrington, Annie	119	44 62
Kerr, Duncan	120	45 00
Lemis, Francis	120	45 00
* McDonald, Alexis	114	57 00
* McDonald, Alex	120	60 00
McDougald, Philip	115	43 12
McKay, Charles	120	45 00
McKinnon, Joseph	114	42 75
* McLean, M J	120	60 00
McMillian, John	120	45 00
* McMullan, Mal'm	119	59 50
* McNeil, M A	120	60 00
* McNeil, Stephen	120	60 00
McSween, Duncan	120	45 00
Matheson, Murdock	120	45 00
Morrison, Donald	120	45 00
Norwood, Annie	120	45 00
Ross, John Y	120	45 00

GRADE D.

* Arbuckle, Neil	118	39 33
Beaton, John	71	17 75
* Cameron, Angus J	120	40 00
Cash, Collin	120	30 00
* Dowling, Patrick	118	39 33
Fergusson, Marion J	100	25 00
* Gillis, Hugh	108	36 00
Gillis, Margaret	85	21 25
* Hayes, Joseph	120	40 00
* Johnston, John	120	40 00
* Johnston, John J	118	39 33
Konthor, Geo A H	120	30 00
* McAnlay, Norman	95	31 67
* McDonald, Archib	120	40 00
* McDonald, Don- ald J	120	40 00
* McDonald, Dun- can	120	40 00
* McDonald, Neil	120	40 00
* McDonald, Joseph	105	35 00
* McDonald, Hugh	95	31 67
McDonald, Lavina	109	27 25
McDonald, Ronald	120	30 00
* McDougald, Annie	115	38 33
McDougald, D	120	30 00
* McDougald, James	120	40 00
McGilvray, Daniel	120	30 00
McGilvray, Joseph	120	30 00
* McIsaac, Daniel J	120	40 00
* McKegan, Alex- ander	96	32 00
* McKinnon, Joseph	100	33 33
* McKinnon, Neil	68	22 67
* McLean, Roderick	120	40 00
* McLellan, Ronald	103	34 33
McLeod, Catherine	120	30 00
* McMillan, Fannie	120	40 00
* McNevin, Archy	120	40 00
* McPhee, Isabella	119	39 67
* McPhee, James	70	23 33
* McPhee, Peter	120	40 00
McRay, Alexander	85	21 25
* McVicar, Archie	120	40 00
* McVicar, Donald	120	40 00
Martell, Julia	120	30 00
* Martell, Patience	47	15 67
Martell, Susannah	119	29 75
* Rabbit, Daniel	92	30 67
Walsh, Mary	120	30 00

GRADE E.

* Fraser, Margaret	120	30 00
Jackson, Eliza Jane	113	21 18
Holmes, Susan	101	18 93
McCuish, Rachel	118	22 12
* McLean, Christy	40	10 00
* McNeil, Ann	68	17 00
* Shepherd, Annie	120	30 00

GRADE D—OMITTED LAST TERM.

Gillis, Isabella	98	24 66
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ASSISTANTS—GRADE C.

McKeen, Ruth	116	29 00
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EVENING SCHOOLS.

GRADE B.

Carey, John	16	8 00
Kennedy, Alex	16	8 00

COUNTY OF DIGBY.

DISTRICT OF DIGBY.

GRADE A.

Alexander McRae,	108	
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GRADE B.

C G Gilliland,	101	52 00
G S Parker,	121	60 00
Valentine Landry,	119	59 50
N E Butler,	120	60 00
John W Walker,	112	56 00

GRADE C.

Wallace C Denton,	80	30 00
H B Shaffner,	107	40 12
Thomas Mildon,	114	42 75
J G Anbe,	122	45 00
J F Sanders,	83	31 12
Nellie Hogan,	118	44 25
Mary E Jones,	121	45 00
Adelia M Ruggles,	113	42 37
Mary R Cousins,	117	43 87
Amelia C. Vidito,	66	24 75
Jane Taylor,	107	40 12
Eleanor Cornwell,	112	42 00
C G Longley,	83	31 12

GRADE D.

William M B Dakin,	70	17 50
John Ross,	120	30 00
James Grant,	103	25 75
* Martha Pineo,	64	21 33
* Mary J Morchouse,	80	26 67
Mary Smallie,	108	27 00
* Augusta Small,	95	31 67
Annie E Saunders,	106	26 50
Almira Cornwall,	60	15 00
* Annie Hainey,	90	30 00

GRADE E.

Emma Smallie,	114	21 37
Harriet Johnston,	100	18 75
Nettie Copeland,	91	17 00

ASSISTANTS—GRADE D.

Eleanor Saunders,	83	13 83
Miriam A Nichols,	61	10 16
D Smith,	120	20 00
Mary C. Landry,	109	27 25

DISTRICT OF CLARE.			CO. OF HALIFAX.			CO. OF GUYSBOROUGH.			CITY OF HALIFAX.		
GRADE A.			GRADE B.			GRADE C.			GRADE A.		
Eaton James H.	08	\$19 00	Chisholm, D.	112	56 00	Archibald M. A.	117	43 87	Ross, Wm B	120	
GRADE B.			GRADE C.			GRADE D.			GRADE B.		
Gandet, Fidile J.	116	58 00	Dill, Daniel	37	18 50	Archibald, Bessie	109	40 87	Boyle, Peter	120	60 00
*Nowlan, James P.	115	70 00	Freeman, N.	22	11 00	Archibald, A. M.	116	43 50	Cameron, Wm	118	59 00
GRADE C.			GRADE D.			GRADE E.			GRADE C.		
Angeli, Sister M.	112	42 00	Greenough, J. B.	60	30 00	Archibald, Julia	116	43 50	Cameron, John	106	53 00
Goldfinch, Geo. A.	73	27 37	Hogan, John P.	120	60 00	Bacon, Bessie	109	40 87	Cameron, Angus	104	52 00
John, Sister Mary	114	42 75	Hollis, John	114	60 00	*Ballantyne, John	67	33 50	Gillis, Alexander	12	6 00
Martina, Sister	114	42 75	McLean, John	118	59 00	Blackadder, A.	114	42 75	Knodell, James	105	52 50
Normandy, Helen	49	18 37	McCabe, Edwd.	95	47 50	Brown, Angus	112	42 00	McDonald, Michael	108	53 00
GRADE D.			GRADE E.			GRADE F.			GRADE D.		
Blin Elizabeth,	97	24 25	McCabe, Edwd.	95	47 50	Bruce, Annjetta	120	45 00	Cameron, John	106	53 00
Licensed LeBlanc.	116	29 12	McNab, G. J.	112	58 94	Bruce, Jane	120	45 00	Cameron, Angus	104	52 00
Blois Eliza,	116	29 12	Richardson, F. W.	117	58 50	*Campbell, Jessie	90	45 25	Gillis, Alexander	12	6 00
Boudreau, Maria M.	117	29 25	CO. OF HALIFAX.			Creed, E. P.	116	43 50	Knodell, James	105	52 50
Crowley, Margarot	110	27 50	GRADE B.			Cunnabell, W. W.	113	42 37	McDonald, Michael	108	53 00
Landry O. J. D.	103	25 75	GRADE C.			Deller, Sarah	93	34 87	Russell, Alex G	120	60 00
Thiriault, Monique	97	24 25	GRADE D.			*Deller, Samuel	107	53 50	Somers, John E	113	50 50
GRADE E.			GRADE E.			Falconer, Libbie	113	44 60	Waddell, Samuel J	118	59 00
German, Mina	102	19 12	GRADE F.			Forrester, Harry	119	44 62	Willoughby, J	120	60 00
Sullivan, Margaret	110	20 02	GRADE G.			Fox, Elizabeth	120	45 00			
ASSISTANTS—GRADE C.			GRADE H.			Hall, Sarah C.	80	30 00			
Gabriel, Sister M.	115	28 75	GRADE I.			Hefler, Annie	115	43 12			
Jeannie, Sister M.	112	28 00	GRADE J.			Hubble, Z. A.	43	16 12			
Vincent, Sister M.	115	28 75	GRADE K.			Kent, Anna	117	43 87			
GRADE D.			GRADE L.			Lay, Edwd. J.	117	43 87			
Lombard, Paulo	107	17 84	GRADE M.			Logan, Annie	115	43 12			
GRADE E.			GRADE N.			McKenzie, Jane	103	38 62			
Comeau, Mario	117	14 62	GRADE O.			Major Katherine	113	44 60			
CO. OF GUYSBOROUGH.			GRADE P.			Marshall, M. C.	112	44 20			
GRADE A.			GRADE Q.			Marshall, Lucy	112	44 20			
Ross, Wm B	120		GRADE R.			*Munroe, Susan	109	51 75			
GRADE B.			GRADE S.			Munro, Alico	82	30 75			
Boyle, Peter	120	60 00	GRADE T.			Murray, J. K.	115	43 12			
Cameron, Wm	118	59 00	GRADE U.			Reddy, D. J.	101	37 87			
Cameron, John	106	53 00	GRADE V.			Richardson, G. J.	120	45 00			
Cameron, Angus	104	52 00	GRADE W.			Richardson, Ch.	120	45 00			
Gillis, Alexander	12	6 00	GRADE X.			Romans, William	120	45 00			
Knodell, James	105	52 50	GRADE Y.			Stewart, M. E.	112	42 00			
McDonald, Michael	108	53 00	GRADE Z.			Tupper, Margaret	107	40 12			
Russell, Alex G	120	60 00	GRADE AA.								
Somers, John E	113	50 50	GRADE AB.								
Waddell, Samuel J	118	59 00	GRADE AC.								
Willoughby, J	120	60 00	GRADE AD.								
GRADE C.			GRADE AE.								
Archibald, Matilda	102	38 25	GRADE AF.								
Cameron, Jessie	120	45 00	GRADE AG.								
Sherbrooke	120	45 00	GRADE AH.								
Cameron Jessie	120	45 00	GRADE AI.								
Lochaber	120	45 00	GRADE AJ.								
Campbell, Catherine	118	44 25	GRADE AK.								
Cahoon, Susan E.	120	45 00	GRADE AL.								
Chisholm, Duncan	114	42 75	GRADE AM.								
Davidson, John	120	45 00	GRADE AN.								
Elliot, Jas F	116	43 50	GRADE AO.								
Francheville, Sarah E	120	45 00	GRADE AP.								
Fraser, Simon	112	42 00	GRADE AQ.								
Hingley, Samuel	16	6 00	GRADE AR.								
Kennedy, Finlay	120	45 00	GRADE AS.								
GRADE D.			GRADE AT.								
Kitney, Geo J.	76	28 50	GRADE AU.								
McDonald, Mary	120	45 00	GRADE AV.								
McIlfeff, Maggie	114	42 75	GRADE AW.								
McNaughton, Bella	85	31 87	GRADE AX.								
Pearl, Harriet J	99	37 12	GRADE AY.								
Pitblado, Colin	116	43 50	GRADE AZ.								
Sutherland, Kate	120	45 00	GRADE BA.								
Young, Jas W	114	42 75	GRADE BB.								
GRADE E.			GRADE BC.								
Christolm, Christie	117	29 25	GRADE BD.								
Dauphinee, N	114	28 50	GRADE BE.								
Deslauriers, Isidore	44	11 00	GRADE BF.								
Hart, Sarah H	120	30 00	GRADE BG.								
Hattie, Emma	119	29 75	GRADE BH.								
McFarlane, Alex	113	28 25	GRADE BI.								
McPherson, John	120	30 00	GRADE BJ.								
McDonald, Effie	100	25 00	GRADE BK.								
McGuire, Maria	112	28 00	GRADE BL.								
McLean, John	101	25 25	GRADE BM.								
Pearl, Emma M	108	27 00	GRADE BN.								
Quinn, Maggie	104	26 00	GRADE BO.								
Tory, Florence	113	28 25	GRADE BP.								
White, Fannie	101	25 25	GRADE BQ.								
GRADE F.			GRADE BR.								
Alexander, Annie M	97	18 18	GRADE BS.								
Ebler, Maggie E	102	19 12	GRADE BT.								
Grant, Cynthia	120	22 50	GRADE BU.								
Kirk, Libbie	61	11 43	GRADE BV.								
Taylor, Eliza	120	22 50	GRADE BW.								
GRADE G.			GRADE BX.								
Bacon, Amelia	66	16 50	GRADE BY.								
Ball, Mary	10	2 50	GRADE BZ.								
Bissett, Sarah	120	30 00	GRADE CA.								
Clark, Eliza A.	111	27 75	GRADE CB.								
Cruikshank, M. G.	71	13 31	GRADE CC.								
Cruikshank, Janet	115	21 56	GRADE CD.								
Downey, Mrs. C.	111	27 75	GRADE CE.								
Fraser, Ada	120	30 00	GRADE CF.								
Innes, Annie	112	21 00	GRADE CG.								
Joseph, Annie	95	23 75	GRADE CH.								
Lindsay, R.	99	21 75	GRADE CI.								
McLaren, Mary	119	22 31	GRADE CJ.								
Marvin, Amelia	110	22 50	GRADE CK.								
Nauffs, C.	120	30 00	GRADE CL.								
Stevens, Sophia	116	21 75	GRADE CM.								
Umlah, Isabel	108	27 00	GRADE CN.								
Wood, Maria,	105	28 38	GRADE CO.								
EVENING SCHOOL.			GRADE CP.								
GRADE B.			GRADE CQ.								
Chisholm, Duncan	15	7 50	GRADE CR.								
Hollis, John	21	10 75	GRADE CS.								
GRADE D.			GRADE CT.								
Mason, S. J.	21	6 00	GRADE CU.								
ASSISTANT—GRADE E.			GRADE CV.								
Bellefontaine, B.	119	14 87	GRADE CW.								
CITY OF HALIFAX.			GRADE CX.								
GRADE A.			GRADE CY.								
Prenergast, T.	71	\$37 36	GRADE CZ.								
GRADE B.			GRADE DA.								
Artz, James	113	59 47	GRADE DB.								
Christian Bro.	106	55 78	GRADE DC.								
Dakin G. W.	113	59 47	GRADE DD.								
Griffin, John P.	111	58 42	GRADE DE.								
McLean, J. D.	110	57 89	GRADE DF.								
GRADE C.			GRADE DG.								
Adams, Emma	114	45 00	GRADE DH.								
Archibald Amelia,	114	45 00	GRADE DI.								
Archibald, Geo.	114	45 00	GRADE DJ.								
Anne, Teresa, Sister	108	42 63	GRADE DK.								
Barnaby, E. R.	114	45 00	GRADE DL.								
Brennan, Jane	111	44 01	GRADE DM.								
Bell, Annie	114	45 00	GRADE DN.								
Bonavenature, Sister	84	33 15	GRADE DO.								
Benedicta, Sister,	110	43 42	GRADE DP.								
Caldwell, Mary	113	44 60	GRADE DQ.								
Creighton, Ida	27	10 65	GRADE DR.								
Clementina, Sister	107	42 23	GRADE DS.								
Camilla, Sister	108	42 63	GRADE DT.								
Clare M., Sister	106	41 84	GRADE DU.								
Cleophas, Sister	101	39 86	GRADE DV.								
Duncan, S. E.	114	45 00	GRADE DW.								
Eulalia, Sister	107	42 23	GRADE DX.								
Fidelis, Sister	103	40 65	GRADE DY.								
Graham C.	113	44 60	GRADE DZ.								
Gammell A. P.	114	45 00	GRADE EA.								
Gammell E.	114	45 00	GRADE EB.								
Johns, M. L.	113	44 60	GRADE EC.								
Julio, M. Madaun	108	42 63	GRADE ED.								
Johns, P. A.	114	45 00	GRADE EF.								
Keleher, David	111	43 81	GRADE EG.								
Lyons, J. N.	112	44 20	GRADE EH.								
McArthur, Kate	113	44 60	GRADE EI.								
McCloskey, B.	113	44 60	GRADE EJ.								
McGregor, H	114	45 00	GRADE EK.								
McArthur, J	114	45 00	GRADE EL.								
McPherson Emily	114	45 00	GRADE EM.								
McIntosh, Kate	114	45 00	GRADE EN.								
Miller, Catherine	114	45 00	GRADE EO.								
McDonnell, M.	111	43 81	GRADE EP.								
McPhail, Annie	114	45 00	GRADE EQ.								
Maxwell, Alicia	114	45 00	GRADE ER.								
Morinus, Bro.	100	42 04	GRADE ES.								
Michael, Sister	101	39 86	GRADE ET.								
Mary Anne, Sister	102	40 26	GRADE EU.								
O'Toole Moany S.	107	42 23	GRADE EV.								
O'Connor G.	112	44 20	GRADE EW.								
O'Donoghue, M. T.	35	14 01	GRADE EX.								
O'Banyoun, Jos.	114	45 00	GRADE EY.								
Payne, A. L.	114	45 00	GRADE EZ.								
Patrick Bertha,	17	6 71	GRADE FA.								
Paterson, Jane	114	45 00	GRADE FB.								
Ryan, Teresa	114	45 00	GRADE FC.								
Rousselle, Lillie	114	45 00	GRADE FD.								
Robinson, Sarah	114										

GRADE B.			GRADE B.			GRADE B.			GRADE B.		
Smith, Jas. A.	47	24 75	McDonald, Angus	103	25 75	Adams, Henry	120	30 00	Brown, A.	120	45 00
UNLICENSED TEACHER.			McDonald, James	118	29 50	Archibald, Wm. C.	00	15 00	Freeman, S G	120	45 00
Brown, John T.	111		McDonald, Donald	110	27 50	Arnold, Sophia	85	21 25	Foster, L.	120	45 00
CO. OF INVERNESS.			McKenzie, Alex	120	30 00	*Aruberg, Rosanna	114	38 00	Freeman, H S	80	30 00
GRADE B.			McKay, Duncan	115	28 75	Browne, Lucio	120	30 00	Kempton, M S	60	22 50
Borden, Clement	120	60 00	*McDonald, John	113	37 67	Burne, Sarah	120	30 00	*Kerr, A.	114	57 00
Boyle, Donald	120	60 00	McIntosh, Donald	120	30 00	*Carter, Mary A.	108	36 00	*McDonald, W A	98	49 05
Carmichael, A G	115	57 50	McDougall, Lauchlin	119	29 75	Carl, John E.	120	30 00	McLeod, A	108	40 50
*Campbell, D S	117	78 00	*McDonald, Peter	115	38 33	Dunn, Susan E.	105	26 25	Morine, C	117	43 87
*Calder, James	120	80 00	*McLean, Lauchlin	118	39 33	*Foster Ada R.	85	28 33	*Parker, A M	120	60 00
Collins, Donald	120	60 00	*McLellan, Andrew	110	33 67	Guin, Simon P.	116	29 00	Parsons, A	120	45 00
Doyle, James	120	60 00	*McDonald, Chas	40	13 33	Heckman, William	114	28 50	Sr 'th, E Cole	07	36 37
Munroe, John	115	57 50	McMillan, Allan	120	30 00	*Heckman, Albert D.	120	40 00	Seldon, S L	119	44 62
McLean, A G	118 1/2	59 25	*McDougall, John	108	36 00	Histle, Sarah S.	120	30 00	Starratt, H	112	42 00
McKenzie, D B	115	57 50	*McDonell, Colin	110	38 67	Hubloy, Caleb F.	112	28 00	Steadman, C	120	45 00
McKay, Jas G	120	60 00	*McIsaac, Allan	60	20 00	Keane, Mary E.	120	30 00	Tory, S C	112	42 00
McLean, D E	85	42 50	*McNeil, Malcom	120	40 00	Lohmes, John	120	30 00	Welton, S	114	42 75
McDonald, Alex	120	60 00	*McLellan, Malcom	120	40 00	Lohmes, Janetta,	114	38 00	Waterman, J B	111	41 62
McPhail, D M	120	60 00	*McPhail, Alex	113	37 67	*Mam. g, Delia	120	40 00	GRADE D.		
*McLennan, Alex	120	80 00	McKeagney, Henry	120	30 00	Mosman, Isaac	109	27 25	Burnaby, S	117	29 25
*McKenzie, John	115	76 67	*McLellan, Alex	101	34 67	Newcomb, Bessie	118	29 50	Chesley, A M	120	30 00
*McIsaac, Angus	60	40 00	McFarlane, James	115	28 75	*Roland, Olivia C.	110	36 67	Harpur, E McI	81	21 00
*McIsaac, Angus	60	40 00	McDonald, Hugh	120	30 00	Silver, Louisa B.	83	20 75	Long, Ellen	59	14 75
McDermot, Donald	120	60 00	*McDonell, George J	111	38 00	*Silver, Frances	119	39 67	Ringer, J A	120	30 00
McLeod, M C	120	60 00	McMillan, Alex	117	29 25	*Uhlman, Eunice C.	119	39 67	Stewart, T	117	29 25
*McDonald, D H	112	74 67	*McLean, Peter	120	40 00	West, George H.	117	29 25	ASSISTANTS—GRADE D.		
*McMillan, Neil	120	80 00	McMillan, Neil	119	29 75	*Wile, Esther	112 1/2	37 50	McLeod, N	112	18 67
*McLellan, Donald	120	80 00	McMillan, Charles	110	27 50	Whitford, Annie S.	119	20 75	CO. OF SHELBURNE.		
Stewart, James	120	60 00	Ferguson, Meron	95	23 75	GRADE B.			GRADE B.		
GRADE C.			*Ross, Isabella	110	36 67	Bailey, Eugenia	120	22 50	ASSISTANTS—GRADE D.		
Campbell, John	51	27 00	Walker, Donald	120	30 00	*Brady, Regina A.	104	26 00	GRADE D.		
Colleville, Zephriam	120	45 00	GRADE E.			Foader, Annie	99	18 56	CO. OF SHELBURNE.		
Campbell, John	120	40 00	Cameron, Maggie	120	22 50	*Morgan, Margaret	60	15 00	GRADE B.		
Chisholm, Alex	120	45 00	*Dowling, Mary A	106	26 50	*Oxner, M. A. M.	120	30 00	GRADE C.		
Bartlett, J H	115	43 12	*Kennedy, Cath	115	28 75	Romkey, Louisa D.	115	21 56	Bowler, E. P.		
Bruce, Maggie	120	60 00	McLean, Flora	117	21 93	*Romkey, Emma A.	118	29 50	Colquhoun, Robt.		
Bruce, Maggie	105	39 37	McLean, Ann	120	22 50	*Smith, Rosanna	120	30 00	Doane, A. C. A.		
Cameron, J H	120	45 00	McPhail, Ann	120	22 50	Whitford, A. E.	80	30 00	Doane, Charles		
Flynn, Mary	97	36 37	*McLeod, Eliza A	113	28 25	CHESTER.			Godfrey, J. F.		
Gillis, J D	110	55 00	GRADE D.			GRADE C.			Golden, Thomas		
Hart, Phoebe	120	45 00	CO. OF LUNENBURG.			GRADE D.			Boyd, Martha J.		
Kenney, Angus	99	37 12	GRADE A.			GRADE E.			Brown, Zorah,		
McLellan, Joseph	40	15 00	Owen, Edward H.	118	5	*Ashe, Elizabeth	118	39 33	Covill, B. F.		
McDougall, Alex	110	41 25	GRADE B.			Corkum, Silas	90	30 00	Crowell, Maggie		
McKeen, Louisa	20	7 50	Andrews, Alfred	120	60 00	Crosskill, Sarah V.	75	18 75	Cunningham, M. J.		
McGuarrie, William	120	45 00	Brown, Alfred E.	119	59 50	*Barkhouse, Anna	116	38 66	Doane, Julia		
McDougall, John	116	43 50	Burhoc, Theophilus	120	60 00	Hiltz Agnes,	75	18 75	Doane, Carrie J.		
McLellan, Malcom	116	43 50	Caldwell, James E.	118	59 00	*Killan, Annie L.	120	40 00	Ells, Louisa		
McKinnon, Malcom	120	45 00	Cooke, Henry	109	54 50	Richardson, Mary R.	120	30 00	Fox, Olivia A. M.		
McKinnon, Neil	120	45 00	*Gates, Isaac	120	80 00	Wile, Helena	119	29 75	Goodick, J. D.		
McPhail, Arch	119	44 62	Gow, John M	117	58 50	CO. OF QUEENS.			Henry, Sidney		
McEachorn, John	116	43 50	McMillan, Duncan,	97 1/2	48 75	GRADE A.			Homer, Agnes		
*McIntyre, Peter	119	59 50	Parker, Joseph	120	60 00	GRADE B.			Laven, A. H.		
*McLennan, Hugh	120	60 00	Parker, Wilber	120	60 00	*Beckwith, Ella A.	120	30 00	Lyle, Emily R.		
*McDonald, Michael	120	60 00	Rieser, Daniel	102	51 00	Frederick, Louisa	118	22 12	Matheson, Daniel		
*McLellan, Alex	120	60 00	Smith, Nicholas	120	60 00	Oxner, Henrietta	120	22 50	Matheson, Wm. H.		
*McDonald, Flora	120	60 00	GRADE C.			Perry, M. Maria	73	13 68	Nickerson, M. H.		
*McDonell, Duncan	117	58 50	Bent, Lavina B.	119	44 62	CO. OF QUEENS.			Robertson, John		
McLellan, James	120	45 00	Maider, H. E. S.	116 1/2	43 68	GRADE A.			Van Norden, M. J.		
McLean, Alex	120	45 00	Martin, John E.	120	45 00	GRADE B.			Webster, Maggie		
*Peppy, Chas	110	55 00	*Murray, Millie A.	57	28 50	Wallace, J W	110	5	Doane, Clistio J.		
Smith, Maggie	115	43 12	Roland, Ada C.	100	37 50	GRADE C.			*Doane Rhoda		
GRADE D.			Stoddart, Maria,	119	44 62	GRADE D.			*Doane Augusta		
Beaton, Colle	120	30 00	Summerville, R. A.	100	37 50	GRADE E.			Downie, Benj.		
Cameron, John	120	30 00	*Wadsworth, G. Y.	120	60 00	GRADE A.			Forbes, Phoebe A.		
Campbell, Catherine	120	30 00	*Wile, Victoria M.	120	60 00	GRADE B.			Gavel, Joseph		
De' Carteret, J R	113	28 25	Wilson, George	120	45 00	GRADE C.			Harding, Allen		
*Dunn, Miles	110	36 67	GRADE D.			GRADE D.			Johnson, Fred		
Gillis, John	120	30 00	Acker, Carrio	118	29 50	GRADE E.			*Snow, John H.		
Gillis, Anthony	110	27 50	GRADE E.			GRADE F.			Snow, Deborah		
Gillis, Jno A	108	27 00	GRADE F.			GRADE G.			Swaneburgh, Hattie		
*Jamson, John	110	40 00	GRADE G.			GRADE H.			Wilson, Laura		
*Jamson, John	111	37 00	GRADE H.			GRADE I.			Wilson, Letitia,		
*Kennedy, John H	120	40 00	GRADE I.			GRADE J.			Allison, A		
*Ledbetter, Adeline	98	32 67	GRADE J.			GRADE K.			Crowell, Emma		
McLean, John W	116	29 00	GRADE K.			GRADE L.			Allison, A		
McDonald, Hugh	102	25 50	GRADE L.			GRADE M.			Crowell, Emma		
McDonell, Donald	118	29 50	GRADE M.			GRADE N.			Crowell, Emma		

Richardson, Mary	65	12	17	McLean, H K	120	60	00	McLean, Dolina C	110	41	25	McKay, Daniel	120	30	00
Swain, Maria L.	101	18	92	McLennan, John	120	60	00	McLean, Sarah J	80	32	25	McKay, Allan,	120	30	00
				McRitchie, John	120	60	00	McLean, Victoria G	70	26	25	McLeod, George	117	29	25
CO. OF VICTORIA.				GRADE C.											
				Anderson, Elizabeth	93	31	87	McMillan, Angus	119	44	02	Matheson, Angus	85	21	25
GRADE A.				McDonald, Angus	87	32	62	Matheson, Maggie	120	45	00	McNeil, Neil	120	30	00
McLean, T S				McDermid, Unice	120	45	00	Nichols, Neil	120	45	00	McNeill, Stephen B.	120	30	00
GRADE B.				Harris, Thresa E	120	45	00	Newton, James	105	39	37	McNeil, John	97	24	25
Buchanan, Hugh	120	60	00	Hart, Elizabeth	120	45	00	McNeil, John II	120	45	00	McFarlane, John	120	30	00
W B						McIves, Henry	120	45	00	McRae, John	110	41	25	McRae, Murdock	120
Cook, Thomas	90	45	00	McKenzie, Annie	120	45	00	GRADE D.				GRADE E.			
Innis, Michael I.	103	51	00	McLeod, John	97	30	37	Buchanan E. Isabel	110	29	75	McLean, Sarah	116	21	75
McKenzie, John	118	59	00	McLeod, Norman	118	41	25	Burton, Malinda E.	120	30	00	McLean, Sarah	73	13	68
				McLeod, John	120	45	00	Fraser, Christina M.	57	14	25	Morrison, Annie	120	22	50
				McLeod, Malcolm	112	42	00	Ferguson, Helan J.	83	20	75	McRitchie, Flora	92	17	25
				McLeod, Malcolm	100	37	50	Melvor, Angus J.	110	27	50	Matheson, Maggie.	114	21	37
								McKay, Norman	120	30	00				

THOUGHTS ON EDUCATION.

THE teacher has to avoid many dangers. One of these is the attempt to teach a class what it is not yet ready to learn; another is the use of a method unsuitable for immature minds; another is the tendency to make moral indignation against negligence, inattention, or obtuseness of apprehension, too largely encroach upon the sphere of sympathy and encouraging praise; another is the proneness in his own mind to run in beaten tracks and thus to narrow the field of variety which should attract and exhilarate the learner. But perhaps the greatest of all dangers is trying to teach *too much*. This is unfortunately a common mistake of teachers—in a great measure forced upon them, however, by the folly of parents—and a fatal defect in our present system of education. On this point, the following words of Herbert Spencer, a writer from many of whose views I differ widely, may well be weighed with care:

"It is a mistake, inasmuch as it assumes that the acquisition of knowledge is everything; and forgets that a much more important matter is the organization of knowledge, for which time and spontaneous thinking are requisite. Just as Humboldt remarks respecting the progress of intelligence in general, that 'the interpretation of nature is obscured when the description languishes under too great an accumulation of inculcated facts;' so it may be remarked, respecting the progress of individual intelligence, that the mind is overburdened and hampered by an excess of ill-digested information. It is not the knowledge stored up as intellectual fat which is of value; but that which is turned into intellectual muscle. But the mistake is still deeper. Even were the system good as a system of intellectual training, which it is not, it would still be bad, because, as we have shown, it is fatal to that vigor of *physique* which is needful to make intellectual training available in the struggle of life. Those who, in eagerness to cultivate their pupils' minds, are reckless of their bodies, do not remember that success in the world depends much more upon energy than upon information; and that a policy which in cramming with information undermines energy, is self-defeating."

To this strong and just remonstrance I have nothing to add. The truth of these statements is borne out by our every day experience. Nor does the true scholar ever so waste his energies, and aim at cultivating the mind to the utter neglect of the claims of the bodies. Wise old Roger Ascham, tutor to Lady Jane Grey and Queen Elizabeth, and friend of that great German teacher, Sturm, was very sensible of this, and presents it in his *Toxophilus* as an especial argument to students in favor of the use of the good old English long-bow. "Pastymes for the mynde onelye," says he, "be nothing fit for studentes, because the body, which is moost hurte by studie, shuld take away no profyte thereat. This knewe Erasmus verye well, when he was here in Cambridge: which, when he had been sore at his boke (as Garret our booke-bynder hath verye ofte told me) for lacke of better exercise, wolde take his horse, and ryde about the markette hill, and come agayne."

The English universities give full scope for physical exercise, with their boat-races, fencing, boxing, and other manly exercises; and in this country, at most of our educational institutions, there

are games of all kinds, and gymnastic schools affording ample means for such relaxation from intellectual effort as the student needs. But in England and in this country alike we hear the constant complaint,—and I believe it is too often a just one,—that the best men intellectually do not make use of these facilities for physical exercise; and this, for the very sufficient reason that to them they are not facilities. In the race they have set themselves to run there is no breathing space. They have literally no leisure to care fitly for the body. The mass of studies pressed upon them in each separate department is too great, the demand upon their time too exacting, to permit them to turn aside and seek refreshment. And so, with straining eagerness they press forward, some to break down midway in their course, some to come in at the close with flagging energies and utter indifference as to any further ambitions, some to find when all is over and they are fairly ushered into life that the race was hardly worth the running, since far other qualities and different forms of knowledge are needed for the real activities of mature manhood. The true man then educates himself over again, greatly aided, it is true, by previous intellectual discipline. The weakling, however apt in mechanical acquirement of knowledge, makes some futile efforts, and at last, disheartened, succumbs to his fate, and, ten to one, becomes a teacher, of the same mechanical sort as the present system invites his late instructors to be.

This system calls for remedy; and the remedy I would suggest is, that we teach less and make our teaching fill a wider field.

The scope of culture, at least in all our higher schools, should be *large*. This statement does not at all conflict with the strictures I have made upon the tendency in our schools to teach too much. In fact, the attempt to teach too much is just what prevents the scope of teaching from becoming a wide one, embracing a range of studies sufficiently extensive to insure that variety which at once cheers the student and opens his mind to truly liberal views.

The old struggle and rivalry in English universities used to be between mechanical and classical studies; and the partisans of each were both ignorantly and illiberally bent to cry down the studies in which they were not specially versed. There were in those days some few who were proficient in both branches of learning; and these could not fail to see how much true culture was advanced by the double training and the fulness of knowledge acquired. Of such—to name a single instance—was that great divine and true man, Barrow.

But, as the nature-questioning philosophy of Bacon began to bear fruit, large fields of investigation were mapped out, science after science added to the domain of intellectual effort, and every department of human thought more and more illustrated, enlarged, and rounded into better symmetry by each new secret won from the grand law-governed complexity of the external world. Countless additions to the comfort of mankind, countless new forms of employment given to the thronging masses of mankind, who would else per force be "food for powder," are the more patent results of physical science. But the great group of physical sciences must be credited with more than this. To say nothing of the manifold forms in which they furnish that discipline to the mind which is so precious, indeed, so indispensable, in all rightly directed education; they have, by their processes of

reasoning, taught the only method by which languages can be compared and grouped, dissected separately, and by the light of one another traced to their sources, and made to furnish their share of information to the history of races and the varying life of mankind, through the ages of which engraved or written records tell nothing. They have helped by their ceaseless and unwearied spirit of inquiry, quite apart from merely utilitarian purposes, and by the immense fund of actual knowledge of natural forces which is now an armory from which new weapons of search are furnished, to throw a flood of light upon the literature, the history, the manners and customs, the mythology and the ethics of those very ancient nations, the neglect of whom is too often charged by scholars as due to the modern spirit of material investigation.

These physical sciences, then, have arisen since the days when pure mathematics, the classics, dogmatic theology, and a little logic and rhetoric occupied the scholastic halls; and they come with just claims to a large place in the curriculum of every training school. In Germany and in France and in the university of Lombardy they have for some time held all the rank and estimation they deserve. In England the conservative spirit of the great schools long resisted their invasion, and the training schools were in a large measure forced to follow the lead of Oxford and Cambridge. But the force of public opinion—based, it is true, upon the merely material successes of the new sciences—the manifest absurdity of holding aloof from forms of culture which the whole civilized world was acknowledged as at least equal in value to merely classical scholarship, the great names which England was proud to own in the advances of the physical sciences, and the able and earnest protests of some of the most eminent of the Fellows of the two great universities, have been slowly but surely bringing the English schools to open their doors to a larger training.

In this country the utilitarian spirit, so rampant for many years past, has made the way easy for the admission of the physical sciences into our schools. But the difficulty almost everywhere on this side of the Atlantic, has been that the very plea for scientific study—that “there’s money in it”—has availed to make training of all sorts somewhat too superficial. There are many causes, it is true, tending to produce this result. The country is pestered with denominational institutions, in their very essence destructive of all liberality of thought, all catholicity of culture. There are too many small colleges. Those in which there are signs of life and promise, are very poorly endowed, and the teachers pitifully and parsimoniously paid. Young men come to the higher institutions for the most part wretchedly prepared, and ignorant often of their native tongue. The years spent in study are too few, because there is a premature of ostensible manhood, and a consequent eagerness, full of haste to the whole community, to begin life. The departments of study are few, and are crowded with too much work for the three or four years of university life, and the corps of professors is in perhaps every institution in the land a mere handful of men, compelled to do poorly, when working at their best, the work which should be distributed between two or three times their number, to be done thoroughly and heartily.

This sounds like very sturdy grumbling, but I suspect if every thoughtful professor in the country, in any way familiar with the superior machinery of the great institutions abroad, were asked his opinion, it would prove very much to the same purport.

What then would I have? The prejudices and rivalries of sects will always keep a nest of denominational schools in every corner of the land. Governmental patronage is always dangerous, and never liberal with the purse, without being at the same time illiberal toward opinion. Endowment by wealthy individuals is the growth of time and of enlarged views on the subject of education, and cannot be expected to make great schools in a moment, as Little Two-Eyes in the fairy tale was able to sling a plentifully decked table from the ground before her hungry little mouth. Many years must elapse before the public schools and private schools of the country shall begin to send only well-prepared youngsters up to the higher institutions. A great deal that is merely elementary must long be a part of the training work of those teach-

ers whose proper functions should be the thorough teaching of some special study, to which years of labor have been devoted, and to which all other study has been subsidiary. The perfect ideal of a university is then for the present unattainable.

But what is to be done meanwhile? Must we rest content with our present defective systems, and not strive to better them at all? By no means. It may be that the perfect ideal of a university is forever unattainable. I am no such mad optimist as to believe that anything absolutely perfect is attainable on earth. But improvement is always possible, if we do but go at it in the right way, and with the right will. We can at least approximate more and more nearly unto that which we conceive to be a perfect ideal. Now, there are some things which we can do toward the improvement of the curriculum in our higher institutions. We can limit the amount of matter given to each department, and enlarge the scope of actual studies. In the department of pure mathematics, I am too much of a stranger to make a single suggestion; but I have heard mathematicians aver that a portion of the mathematical course usually pursued in our higher schools was not necessary, nor specially useful, in the way of application to the sciences. Now, it seems to me, that when so much of mathematical training as can be applied in the study of the physical sciences has been given, there has been sufficient training of that sort for the general student. A more complete course should always be open to the student who desires special training in that department. So it is with the classics. Valuable as is the study of Latin and Greek for mental discipline, and as an historical and ethnological *discrimen* to mark the essential distinction between the culture and thought of the past and those of the present—a subject admirably presented in an article in the *Charakteristische Difference between Ancient and Modern Civilization*, by Walter Blair, in the periodical now known as the *Southern Magazine*—it is most valuable for purposes of general culture, because of the wonderful literature, original and embodied in these two tongues. In my view the aim of special instruction in this department should be to dwell far more than has hitherto been the case upon the mere grammar of the languages, and to encourage the student to read with more interest in the literary production before him, choosing the most entertaining writers, and illustrating the text as copiously as possible with every form and fashion of knowledge which may tend to throw light on the author’s meaning, or add to the interest of the reader. That sound scholar, Roger Ascham, said long ago, in his *Schoolmaster*, “Yea, I do wish, that all rules for young scholars were shorter than they be. For, without doubt, Grammatica itself is sooner and surer learned by examples of good authors, than by the naked rules of grammarians.”

It is true, we are not so much plagued by the arbitrary rules of grammarians now-a-days, and philosophy has proved to us that a great many of them were sheer nonsense. But there is still an undue stress laid upon this part of classical training, and we teachers are all perhaps a little too prone to lose sight of things in our analysis and synthesis of words. If the object fairly put before our eyes were the teaching of ancient literature, rather than the teaching of language, perhaps we should not err so readily in this direction.

Now, as to the physical sciences: Undoubtedly provision should be ultimately made for the teaching of each and every established science to such as desire special training. But, meanwhile, provision can certainly be made, and ought to be made, for teaching to the general student a definite group of the physical sciences, at least in outline. It must be left to scientific men to say what particular studies should be included in such a group. Doubtless they would differ in different places, and at different times, as to the studies which they would agree in selecting. But they would all agree probably in naming certain studies of scientific value as more disciplinary to the mind, and certain others as less disciplinary, when viewed comparatively to the whole body of scientific studies.

Modern languages would be studied with infinitely greater zest, and to much better purpose, if studied, as I have suggested, in the case of the ancient languages, with a view to acquiring some knowledge of their literature. They might well be studied in connection with the classic tongues, Greek paired off with

German, and Latin with one or more of the tongues of Southern Europe.

A great deal has been said of late in favor of greater attention being given to the study of English; and in England several of our earlier writers have been published in editions especially prepared for the use of schools. The study of Saxon has also been greatly encouraged of late. I warmly sympathize with all this, and believe that immense benefit will accrue from a study of general culture of English literature, in connection with the special critical study of some of its masterpieces. But I believe that the largest measure of benefit will result from a judicious attempt to combine, in the instruction of every class passing through a university course, a knowledge of each of the valuable literatures of Europe—if even in mere outline—the Greek, the Roman, the Italian, the Spanish, the French, the English, and the German, with some fair knowledge of history. Given this, the student will be able to assort and methodize in his mind all other forms of knowledge he may acquire.

But more still is wanting to a good university than training in mathematics, physical sciences, languages, literature, and history. The learning of a great school must be wider than this. The spirit of instruction must be higher. It must aim to penetrate inform, and exalt the emotional and spiritual nature as well as the intellectual. No teacher should ever forget to impress in every way he can on the minds of those given to his training the view so beautifully expressed by John Wilson, in one of the most earnest of the *Noctes Ambrosianæ* colloquies, when he says:

"I lay down upon the threshold of the scholar's studies this first condition of his high and worthy success, that he will not pluck the loftiest palm by means of acute, quick, clear, penetrating, sagacious, intellectual faculties alone—let him not hope it; that he requires to the highest renown also a capacious, profound, and tender soul."

I am not one of those who believe that morals can be taught by any set system of schooling. I think rather that the principles of honor and of right conduct are best instilled in the home, though they may be largely strengthened by high-toned example and hearty approval; and hence, every teacher should above all things be a gentleman. Nor do I hold it safe to introduce theology into the schools, since to teach religious duty is the province of the church, and the differences between the many branches of the church would bring a terrible element of dissension into any community in which an educational institution, intended for the benefit of the whole, attempted to teach any form of dogmatic theology.

But there are the evidences of Christianity and certain universal Christian truths, the teachings of which could offend no branch of the Christian Church, because all are at accord on these points. These elements of religious knowledge ought, it seems to me, to be taught in every institution in a Christian land professing to give thorough culture.

C. WOODWARD HUTTON.

THE MOON AND THE WEATHER.

Editor of *University Magazine*:

Living in a section of country where agriculture is the leading industrial pursuit, I not unfrequently hear predictions of the weather with reference to the changes of the moon. Some there are who maintain that there is a direct influence exerted by the moon upon the atmosphere, but offer no explanation, though recognizing it as an unquestionable fact. Others there are, however, who assign a cause, without showing the relation between the cause and the results. *E. g.*: One says it is attributable to the solar light reflected by the moon upon the earth. Another says it is due to the influence of gravity; corresponding to the present recognized theory of the tides. I might mention others, but 't would be unnecessary. I desire that you or some one of your scientific contributors—I would name Commodore Maury—give, through the columns of the *University Monthly*, some information on this much discussed subject. I am at a loss

to know what effect light, when separated from its heat, can have on a volatile medium like our atmosphere; or, if taken in connection with its heat, would the amount of solar heat reflected from the moon be sufficient to generate motion or moisture in the atmosphere? Again: Why should gravitation increase at or about the *quadratures* of the moon? This is my query: Are the changes of the weather attributable to an influence of the moon? If so, *why*? If not, *why not*?

BELTESHAZZAR.

(The above, from Asheville, N. C., was referred to the scientific gentleman named by the writer, from whom was received the following.—*Ed.*)

In Belteshazzar's letter about the moon, the main point is, Have the changes of the moon any influence upon the weather?

Some of the transatlantic *savans* have gone very fully into this question, and, after having patiently discussed a vast number of observations in both hemispheres, and for a series of years, the conclusion was that the influence of the moon on changes of the weather is practically *nil*. In summing up for averages, there were found a few more changes on the side of the full moon; the difference, however, was small, and was considered to be merely accidental.

The sun is always shining upon one half of the moon, and how her powers of gravitation are to be affected by our seeing more or less of the half shone upon, it is difficult to conceive.

Many fancy, that as the moon governs the tides at sea, so there are lunar tides in the atmosphere; and that as these are supposed to be greatest about full and change, the moon when near those stages should tell with most effect upon the weather. But the most patient observers have never been able, even with the nicest instruments, to detect the existence of any such tide in the atmosphere. Theoretically, perhaps, it does exist; but so feebly, that no human device has as yet been cunning enough to detect it. And this will not appear surprising when we remember that if the whole atmosphere were reduced to the density of sea-water, it would be enough to cover the earth with a layer only two feet and a half thick. Now, suppose the general swell of the ocean to be raised by the addition of this two feet and a half: does any one who has ever watched the tides, maintain that this addition of two and a half feet to the depth of seas, that is measured by miles, would have any appreciable effect upon the rise and fall of the tides?

I have great respect for popular beliefs or superstitions. As a rule, they generally have more or less of true philosophical principle at the bottom of them. And of all sources for popular beliefs and superstitions, the moon is the most prolific. Nor is this surprising: she rules the night, and alters her aspects daily. And though she is changing every hour, day and night, yet, for convenience, she is said to change only as she arrives at the four stages of new and full, first and last quarter, through all of which she passes once in every 29 days and a half; therefore she changes once in every 7.2 days; consequently every change in the weather must take place within the period of 3.6 days, either before or after a moon-change. Hence the popular fallacy about her changes and the weather, for every weather change must be within 3.6 days before or after a moon-change, and her worshippers give her all the credit of it. Now let us suppose that some one, disputing the influence of the moon, should hold that the weather-changes, so far from occurring about the periods of moon-changes, are most apt to occur about the time when the moon is just midway between two changes. That is, the conditions of the bet are these: Of all the weather-changes which occur between new moon and first quarter, for instance, more occur about the time when she is half-way between these two stages, than about the time when she is at them. Let us, for convenience, call this half-way stage the *wager* stage, and ask Belteshazzar to be umpire. He will then have to divide a lunation into eight stages, four for change, and four for "*wager*," with an interval of 3.6 days between them; half of this interval belongs to "*wager*," and half to the moon; and for the moon to win, it must appear that more than half the weather-changes during the lunations took place within the period of 1.8 days, either before or after moon-change.

Now, then, let Belteshazzar's neighbors who believe in the moon, take their almanacs and note for every lunation the time of the four changes, and then observe the weather-changes year by year, giving to his fickle goddess the credit of all those that take place within 1.8 days (*i. e.* 43 hours near enough) of a moon-change, before or after. Then, if these changes for every lunation count more than the others, he may say she *docs* influence the weather. But I doubt if, till that is done, it can be said with a

Q. E. D.

THE STUDY OF NATURE AS A MEANS OF INTELLECTUAL DEVELOPMENT.

"FOR many years," says Carlyle, "it has been one of my constant regrets that no schoolmaster of mine had a knowledge of natural history, so far at least as to have taught me the grasses that grow by the wayside, and the little winged and wingless neighbors that are continually meeting me with a salutation which I cannot answer! Why didn't somebody teach me the constellations, too, and make me at home in the starry heavens? I love to prophecy that there will come a time when every schoolmaster will be strictly required to possess these two capabilities, (neither Greek nor Latin more strict,) and that no ingenious little denizen of this universe be thenceforward debarred from his right of liberty in these two departments, and doomed to look on them as if across grated fences, all his life."

This sentiment of Carlyle's finds an echo in the minds of many scholars of the present day. Having spent years in study, they are yet ignorant of the most important facts concerning the external world, unable to explain the simplest phenomena of nature, blind to the wondrous beauty of God's creation, and deaf to the divine melody which is uttered in the harmonies of the material universe.

Some affirm that the study of natural science is fatal to the development of our higher emotions, and tends towards gross utilitarianism. But who can study the harmony existing in the works of nature, the manifest order and design displayed in endless changes and variety, and the immutable laws which govern the physical world, without having his thoughts and aspirations lifted to Him who inhabiteth eternity, the Alpha and Omega. "The heavens declare the glory of God! Day unto day uttereth speech, night unto night showeth knowledge!"

Astronomy writes, in the motions of the stars, poetry more glowing than human pen ever produced. Botany leads us among the flowers, the most unpretending of which is arrayed in a glory greater than that of Solomon, and teaches Divine goodness and love to every thoughtful observer. Chemistry, unfolding to us wonderful and mysterious changes, excites not only emotions of beauty but of sublimity. And what shall we say of that marvellous agent, vital force, which still eludes the analysis of the latest science. In autumn it withdraws its power, and all nature is clad in the habiliments of decay and death. In the spring time with magic hand it robes the earth in living beauty.

Who will say that lofty sentiment and poetical genius were extinguished in the soul of Hugh Miller by his devotion to the study of Geology? Are not the original occasions of poetry found in nature alone? Goethe, the poet and philosopher, Walter Scott, a close student of nature, and the author of some of the most thrilling poems that the world has ever read, and Bryant, of whose poetry so clearly reflects nature, of which he is a strict observer, have proved that science and poetry may mutually aid each other. And the language of nature is not obscure, her book being written as Lord Bacon aptly remarks, "in the only language that hath gone forth to the ends of the world, unaffected by the confusion of Babel." The utterances of nature form a poem written by the finger of God, so simple and beautiful that a child may read with delight, so deep and sublime that the great philosopher as he reads shall feel his soul stirred to its inmost depths and shall reverently approach the veil which separates the known from the unknown.

Nature is also the hand-maid of art. The sculptor or painter who attempts the realization of his beautiful ideals must first

study nature. Whatever he wishes to represent he must study minutely its form, structure, and relations. Art is but the imitation or embodiment of nature. The sunset of to-day unless transferred to canvass can never be seen again, for like the ever varying picture in the kaleidoscope, are the beauties of nature, and to preserve and perpetuate these beauties is the noblest achievement of art.

We have seen that the study of nature is a source of poetry. Since poetry is but the language of imagination, it follows that the study of nature must develop the imagination. It is also unequalled as a means of cultivating the memory. Zoology tells us of the forms of animal life exceeding in number two millions, while Botany presents to our views three hundred and twenty thousand species of plants. All that Astronomy includes one could scarcely master in a life-time of study. Adding to a thorough knowledge of any one science which might be chosen as a particular field for research and study, a knowledge of the most important principles of the others, we have sufficient matter for the development of the most susceptible and retentive memory.

The relations, too, in the natural sciences are not accidental but philosophical. The memory, therefore, cultivated by this study, is not simply the power of holding together isolated facts, but is one dependent upon an unbroken chain of facts and principles closely linked in the relations of cause and effect. By observation we are led to make particular propositions, by comparison and generalization we come to general propositions. In this way, through the activity of the perceptive and reasoning powers, we come to a knowledge of general laws. In the application of the general laws thus reached by induction, we proceed by the process of deductive reasoning from the general propositions or statements of laws to particular propositions. By constantly observing facts, drawing conclusions from them, and verifying these conclusions by observation or experiment, we form the habit of correct reasoning and thus gain the same kind of discipline which Geometry or any other abstract science affords. Nor is discipline alone the result of the study of nature as is often the case in absolute sciences. Nature rewards her students not only with discipline, but with knowledge the most practical, pleasurable, and profitable. Much depends upon the mode of study. One may study books of natural science and yet fail to study nature and also fail of discipline. A system of mere rote learning will never suffice. If the student's mind has not been brought into direct contact with nature, if he has not studied the great volume of which text-books of natural science are only meagre transcripts, his knowledge will be scarcely preferable to ignorance. He can have no better idea of the real thing than one could obtain of the ocean by looking at a dull map of the sea. By learning from books alone the pupil is taught to fix his thoughts not upon the things of which he is studying, but upon the mere forms of expression.

We believe that this system injures many intellects. The pupil begins to study books of natural science with his perceptive faculties all alive and fresh for observing the real objects of nature, but in trying to understand words, to him unmeaning signs of ideas he never possessed, his mind is overtaxed and confused; he receives passively what is told him and endeavors to remember words which are the mere husks of knowledge. His natural cravings for real knowledge are suppressed, an artificial appetite for mere verbiage is created, while dullness and stupidity are fostered. Give a class a Botany lesson of three or four pages and notice how lifelessly they define in the words of the book, the root, stem, leaves, and parts of the flower. The flower and plant are no realities to them, the lesson they say is dry and uninteresting. But lay aside the book, present the plant to them, ask them to tell you about it, calling their attention to the things which you wish them to notice particularly. Then notice how their countenances will at once brighten. Every one will have something to say about the plant, they will notice all the parts, and, under the guidance of a skillful teacher, will accurately describe them. By such teaching every flower will at length become an object of more interest to them; an hour of such study will be of more benefit than a week's study of the book.

If the child by proper teaching is brought into close communion with nature in after life, every singing bird will awaken in his

soul an echo of praise, the very rocks will have tongues to tell the life and death of countless ages, the starry heavens will open to his view infinite space filled with worlds to which his own little universe is but a grain of sand. He will be reminded of the Divine being, who though the creator of the vast universe, yet noteth the sparrow when it falls. His soul will be stirred with emotion unknown to the mere student of books. He will perceive the happiness and the harmony which pervades the creation, and more than all he will learn those fixed morals and physical laws, perfect obedience to which is the ultimate end of every human being.

S. C. ALLEN.

SOME POINTS FOR YOUNG TEACHERS.

DO not assign a lesson for young pupils to prepare in half an hour which, to prepare yourself upon so as to hear it without a book, would require two hours.

Have common sense enough not to expect your pupils to be more thorough in the lesson without a book than you are with the book.

Be just enough not to use a book at a recitation when you do not permit the pupils to do so.

Have a definite, fixed length of time for your recitations, and never overreach it.

If you are forgetful, make a pupil in your class monitor, to tell you when to stop the lesson in time to hear the review, or give the preparatory drill.

Introduce every recitation by reviewing briefly the preceding lesson.

Conduct the recitation with a view to having the pupils realize the few points involved.

Take time, before excusing the class, to recapitulate points made.

Just before assigning the next lesson, give preparatory drills on the coming hard points.

Be sure that the whole lesson has tested the reasoning power, not the memory of your pupils.

Drawing has been adopted as a branch of instruction in all the departments of the Public Schools of Philadelphia, except the Primary, and in this department it will be taught as a matter of course. This is considered by the friends of education in that city a very gratifying step in advance.

OF SCHOOLMASTERS NOW BISHOPS.—Of the famous men of England now living, who were formerly schoolmasters, are the Archbishop of Canterbury, who was master of Rugby the Bishop of London, who was master of Islington School, and the Bishop of Lincoln, who was master of Harrow.

DON.—In the middle ages the professors of the University of Oxford were called "Dominus," or "Don." In the case of the learned professor whose name is known to scholars as "Duns Scotus," the title was of course conferred, and the opprobrious name, "dunce," came into use somewhat on the *lucus a non lucendo* principle. Hence the common term "dunce."

OXFORD.—The nobleman's gown, and the gold "tuft" on the velvet cap which was formerly worn by peers' sons at Oxford, is now a thing of the past; the "gentleman commoner's" silk gown, too, is all but extinct in the University, and quite extinct at Christ Church, where it formerly prevailed most extensively. Is this a sign of the increasing "liberty, equality, and fraternity" which mark the present age?

SONG OF THE RILL.

BY GEO. S. BURLEIGH.

A Naiad afloat in a pearly boat
Sang clearly, in many a liquid note,
This song of her twittering rill,
And her voice went out till an echoed shout
Came back from the maples that girt her about,
Like a blackbird's earliest trill.

"I am Queen of a sphere that is sweet, that is dear,
O, cool as the shadow, as sunshine clear,—
The haunt of the bird and the bee;
The lilies delight to adorn it with white,
The thrushes to sing me their gayest 'good night'
Till the whippoorwill stuns me with glee.

"Young violets shed from the fringe of my bed
Faint odors as pure as the censor's flame fed
With gums in the temple of God;
And grasses that drink, leaning over my brink,
Grow greener and richer, while shrivel and shrink
The herbs of the midsummer sod.

"The lads and the lasses let loose from their clasps
Leave books to the benches and dive through the grasses
That border my beautiful pool,
And out of my reign, to the nerve and the brain
Sun-parched, come vigor and freshness again,
And a bloom through the dust of the school

"The farmer forsakes his tedders and rakes
And knelt at my basin, his fever he slakes,
Deep plunging his lips for a draught;
While maidens and boys, with a jubilant noise,
Chase under my maples their holiday joys,
And drink where the fairies have quaffed.

"Man, maiden, or lad, are you weary or sad?
Where my cup overflows, rest, drink and be glad,
In the gurgle and gush of my song;
Though ye capture no glance with my music and dance,
Ye shall know by the freshness ye catch in my haunts
It is June with me all summer long!"

COMMON THINGS.

BY SAMUEL W. DUFFIELD.

The bee from the clover bloom
Is ready to lift his wings;
I found him gathering honey
Out of the common things.

The bird to the maple bough
The twigs and the stubble brings;
He is building his love a cottage
Out of the common things.

The poet sits by himself—
What do you think he sings?
Nothing! He gets no music
Out of the common things.

—*Scribner's for April.*

Ruskin has endowed a professorship of drawing in an English school, feeling the want of such instruction himself.



OFFICIAL NOTICES.

The number of school days in the term is 111.

MINUTE OF COUNCIL.

Passed June 6th, 1872.

NORMAL SCHOOL.—PROVINCIAL EXAMINATION.—HOLIDAYS AND VACATIONS.

At a meeting held on the 6th day of June, the Council of Public Instruction passed the following minute:

Ordered, That after the present School Year, the semi-annual examination for License to teach in the Public Schools, shall be discontinued; and there shall be an Annual examination instead, commencing on the first Tuesday after the 15th of July in each year.

There shall also be but one session of the Normal School in each year, instead of two sessions as heretofore; the annual session shall open on the first Wednesday in November, and close the Friday preceding the annual Provincial Examination in July.

The Council also order, that there shall be a summer vacation of four weeks—that is of twenty week days other than Saturdays—in all the Public Schools; instead of three weeks as heretofore. After the present year, this vacation shall commence on the Monday preceding the annual examination of teachers

There shall be a Christmas vacation of two weeks—that is of ten days other than Saturdays—in all the Public Schools, instead of eight as heretofore.

NOTICE

By the Minute of Council now published Trustees and Teachers will see, that the vacation for the present summer is extended to four weeks, but as in former years, the time is optional; after the present year the time is fixed, and must commence the Monday preceding the annual examination.

I. Address of Inspectors.

- J. F. L. Parsons B.A. Halifax.
- Rev. B. R. Philp, B.A. Maitland.
- Rev. Robert Sommerville, B.A. Wolfville.
- L. S. Morse, Esq. Bridgetown.
- A. P. Landry, M.D. Clare.
- Rev. John Ambrose, M.A. Digby.
- G. J. Farish, M.D. Yarmouth.
- Rev. W. H. Richan. Barrington.
- Rev. Charles Duff. Liverpool.
- W. M. B. Lawson. Lunenburg.
- R. B. Smith, M. D. Upper Stewiacke.
- Rev. W. S. Darragh, Shinimicus, Camberl'd Co
- Daniel McDonald. New Glasgow,
- Angus McIsaac. Antigonish.
- William Hartshorne, Esq. Guysboro'.
- John Y. Gunn. Broad Cove
- Alexander Munro. Baddeck.
- Edmund Outram, M.A. Sydney.
- Rémi Benoit. D'Escousse.

II. Teachers' Agreements.

The attention of Teachers and Trustees is again called to the necessity of complying with the provisions of the Law in relation to the disposal of the county Fund. It appears from the School Returns of the past Term that some teachers have in their agreements with Trustees in respect to salary, assumed all risk as to the amount to be received from the County Fund. Such proceeding is contrary to the provisions of the law and directly subversive of a most important principle of the School system, since the pecuniary penalty imposed upon the inhabitants of the section by the absence and irregular attendance of pupils is thereby inflicted upon the teacher, while the pecuniary rewards consequent upon a large and regular attendance of pupils at school is diverted from the people to the teacher. These results clearly tend to prevent the growth and development of a sentiment of responsibility and interest among all the inhabitants

of each section, and thus measurably defeat the object of the whole system—the education of every child in the Province.

The Superintendent of Education, therefore, calls the attention of Teachers and Trustees to the following

NOTICE

1. The County Fund is paid to the Trustees of the section. The amount depends upon the number of pupils, the regularity of their attendance, and the number of prescribed teaching days on which school is open in any section during the term.
2. Teachers must engage with Trustees at a definite sum or rate. The Provincial grant is paid to teachers in addition to such specified sum.
3. The following form of agreement is in accordance with the law:

[FORM OF AGREEMENT.]

Memorandum of Agreement made and entered into the ____ day of ____ A.D. 187____ between [name of teacher] a duly licensed teacher of the ____ class of the one part, and [names of Trustees] Trustees of School Section No. ____ in the district of ____ of the second part.

The said [name of teacher] on his (or her) part, in consideration of the below mentioned agreements by the parties of the second part, hereby covenants and agrees with the said [name of Trustees] Trustees as aforesaid and their successors in office, diligently and faithfully to teach a public school in the said section under the authority of the said Trustees and their successors in office during the School Year (or Term) ending on the thirty-first day of October next, (or the thirtieth day of April, as the case may be.)

And the said Trustees and their successors in office on their part covenant and agree with the said [name of teacher] Teacher as aforesaid, to pay the said [name of teacher] out of the School Funds under their control, at the rate of ____ dollars for the School Year (or Term.)

And it is hereby further mutually agreed that both parties to this agreement shall be in all respects subject to the provisions of the School Law and the Regulations made under its authority by the Council of Public Instruction.

In Witness whereof the parties to these presents have hereto subscribed their names on the day and year first above written.

Witness, [Name of Teacher] [Names of Trustees]

4. Each Inspector is instructed to report every case of illegal stipulation on the part of teachers, in reference to the County Fund.

III. To Trustees of Public Schools.

1. "A relation being established between the trustees and the teacher, it becomes the duty of the former, on behalf of the people, to see that the scholars are making sure progress, that there is life in the school both intellectual and moral.—In short, that the great ends sought by the education of the young are being realized in the section over which they preside. All may not be able to form a nice judgment upon its intellectual aspect, but none can fail to estimate correctly its social and moral tone. While the law does not sanction the teaching in our public schools of the peculiar views which characterize the different denominations of Christians, it does instruct the teacher "to inculcate by precept and example a respect for religion and the principles of Christian Morality." To the Trustees the people must look to see their desires in this respect, so far as is consonant with the spirit of the law, carried into effect by the teacher."—*Comments and Regulations of Council of Public Instruction, p. 51, reg. 5.*

2. Whereas it has been represented to the Council of Public Instruction that Trustees of Public Schools have, in certain cases, required pupils, on pain of forfeiting school privileges, to be present during devotional exercises not approved of by their parents; and whereas such proceeding is contrary to the principles of the School Law, the following additional Regulation is made for the direction of Trustees, the better to ensure the carrying out of the spirit of the Law in this behalf:—

ORDERED, That in cases where the parents or guardians of children in actual attendance on any public school (or department) signify in writing to the Trustees their conscientious objection to any portion of such devotional exercises as may be conducted therein under the sanction of the Trustees, such devotional exercises shall either be so modified as not to offend the religious feelings of those so objecting, or shall be held immediately before the time fixed for the opening or after the time fixed for the close of the daily work of the school; and no children, whose parents or guardians signify conscientious objections thereto, shall be required to be present during such devotional exercises.

March, 1867.

3. "The hours of teaching shall not exceed six each day, exclusive of the hour allowed at noon for recreation, Trustees, however may determine upon a less number of hours. A short recess should be allowed about the middle of both the morning and afternoon session. In elementary departments, especially, Trustees should exercise special care that the children are not confined in the school room too long."—*See Manual of Laws and Regulations for Public Schools, page 32, sec. 10*

IV. The Provincial Normal School.

FACULTY OF INSTRUCTORS.

NORMAL COLLEGE.

- Method, and the Natural Sciences.—J. B. CALKIN, M.A., Esq. Principal of the Normal College and Model School.
- English Language, Geography &c.—J. A. MACCABE, Esq.
- Mathematics.—W. H. MCMULLAND, Esq.
- Music.—MISS ANNIE HYDE.

MODEL SCHOOL.

- High School Department, Mr. HUGH MCKENZIE.
- Preparatory " Mr. JAMES LITTLE.
- Senior Elementary " Miss M. A. HAMILTON.
- Junior do. " Miss B. ARCHIBALD.
- Primary " Miss A. LEAF.

V. Bond of Secretary to Trustees.

"The Secretary of the Trustees shall give a bond to her Majesty, with two sureties, in a sum at least equal to that to be raised by the section during the year, for the faithful performance of the duties of his office; and the same shall be lodged by the Trustees with the Clerk of the Peace or the county or district."—*Manual of School Law, page 6, sec. 25.*

This bond is to be given annually, or whenever a Secretary is appointed, and Trustees should not fail to forward it by mail or otherwise, to the Clerk of the Peace, immediately after they have appointed their Secretary. The following is a proper form of bond:—

PROVINCE OF NOVA SCOTIA.

KNOW ALL MEN BY THESE PRESENTS, THAT WE, (name of Secretary) as principal, and (names of sureties) as sureties, are held and firmly bound unto our Sovereign Lady VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen, &c., in the sum of _____ of lawful money of Nova Scotia, to be paid to our said Lady the Queen, her heirs and successors, for the true payment whereof, we bind ourselves, and each of us by himself, for the whole and every part thereof, and the heirs, executors and administrators of us and each of us, firmly by these presents, sealed with our Seals and dated this _____ day of _____ in the year of Our Lord one thousand eight hundred and _____ and in the _____ year of Her Majesty's reign.

WHEREAS the said _____ has been duly appointed to be Secretary to the Board of Trustees of _____ School Section, No. _____ in the District of _____

NOW THE CONDITION OF THIS OBLIGATION IS SUCH, That if the said (name of Secretary) do and shall from time to time, and at all times hereafter, during his continuance in the said Office, well and faithfully perform all such acts and duties as do or may hereafter appertain to the said Office, by virtue of any law of this Province, in relation to the said Office of Secretary to Trustees, and shall in all respects conform to and observe all such rules, orders, and regulations as now are or may be from time to time established for or in respect of the said office, and shall well and faithfully keep all such accounts, books and papers, as are or may be required to be kept by him in his said office, and shall in all respects well and faithfully perform and execute the duties of the said office; and if on ceasing to hold the said Office, he shall forthwith, on demand, hand over to the Trustees of the said School Section, or to his successor in office, all books, papers, moneys, accounts, and other property in his possession by virtue of his said office of Secretary—then the said obligation to be void—otherwise to be and continue in full force and virtue.

Signed, sealed, and delivered } [Name of Secretary] (Seals)
in the presence of } [Names of Sureties] (Seals)
[Name of Witness.]

WE, THE SUBSCRIBERS, two of her Majesty's Justices of the Peace for the County of _____ do certify our approbation of _____ (name of Sureties,) within named, as Sureties for the within named _____ (name of Secretary,) and that they are to the best of our knowledge and belief persons of estate and property within the said County of _____ and of good character and credit, and sufficiently able to pay if required, the penalty of the within bond. Given under our hands this _____ day of _____ A. D. 186_____ [Names of Magistrates].

VI. An Act to Alter and Amend Chapter 58 of the Revised Statutes "of Public Instruction," and the Acts in amendment thereof.

(Passed 13th day of April, 1872.)

Be it enacted by the Governor, Council, and Assembly, as follows:

1. The existing provision for the sectional assessment of property held by corporations and companies, mean, and shall be understood to mean, that all such property is liable to assessment in and for the benefit of the section wherein it lies, and after the thirty-first day of October, A. D. 1872, these provisions shall extend and apply to all rateable property held by any association, company or firm, whether incorporated or otherwise; that is to say, the assessment payable directly by the association, company, or firm, in respect of any property, shall be paid in and for the benefit of the section where the property lies; and if any portion of the rateable property of any association, company, or firm lies in a place not embraced in any school section, such portion shall be treated in all respects as if situate in the section where the chief works and business of the association, company, or firm are established.

2. In any case where, owing to neglect on the part of the assessors, the County Roll does not afford the information necessary for the purposes of this Act, the Trustees shall request the Clerk of the Peace to refer the Roll back to the assessors for correction or amendment.

3. The following words are added at the end of the fourth subsection of Section 35 of Chapter 29 of the Acts of 1865, entitled "An

Act for the better encouragement of Education," that is to say, and in case the three nearest Commissioners do not agree to the site of a school house the matter shall be referred to the Board of Commissioners for the District or County in which the school is situate, and their decision shall be final. In cases of border sections where the nearest Commissioners do not agree, it shall be referred to the County Inspector, subject to an appeal to the Superintendent of Education, whose decision shall be final.

4. The seventh section of chapter 3 of the Acts of 1866, entitled "An Act to amend the existing laws relating to Education," is amended by substituting the words "Five hundred dollars" for the words "One thousand dollars" in such section.

5. Section 7 of Chapter 30 of the Acts of 1866 entitled "An Act to amend the Act for the better encouragement of Education" is repealed and the following Section substituted therefor:

"The Council of Public Instruction shall have power to draw annually from the Provincial Treasury such sum as shall be necessary for the publication of an educational journal, a copy of which shall be supplied gratuitously to each Board of Trustees for their own and the teachers' use, and also to each inspector and each chairman of examiners and of commissioners.

6. No County in this Province shall be permitted to draw more than six hundred dollars in any one year for assistance to poor districts except in cases where the academy grant is not drawn, in which case the counties shall be permitted to draw the amount of the academy grant in addition to such sum of six hundred dollars, but no more. No section employing a teacher holding a first-class license shall receive any assistance as a poor section.

7. The meeting required to be held by Section 25 of Chapter 20 of the Acts of 1865 "An Act for the better encouragement of Education," shall be held on the last Monday in September in each year instead of on the third Monday in October as prescribed in such section.

8. So much of Chapter 58 of the Revised Statutes and of the Acts in amendment thereof as is inconsistent with this Act is repealed.

9. Nothing in the first two sections of this Act contained shall apply to the school sections in the town of Yarmouth.

By Section 5 of the Act to alter and amend chapter 58 of the Revised Statutes, the Government appropriation to aid in the purchase of School Books has ceased. We would therefore specially direct the attention of Trustees and Booksellers to this Revised Section. The Council of Public Instruction will, as heretofore, prescribe the Books to be used in the Public Schools, but will not aid in their purchase.

Also by section 7 of the above amendment, the time for holding the annual school meetings is changed. This meeting in future will be held on the last Monday in September, instead of on the third Monday in October as heretofore. Trustees will observe that this amendment regulates the school meeting to be held this coming autumn.

The sum required by any section, for the purchase of prescribed school books maps and apparatus shall be determined by a majority of rate-payers, present at any regularly called school meeting (to be assessed upon the section in the same manner as all other sums required for the maintenance of the school or schools.)—See Section 93, page 29 of the School Manual.

REGULATIONS.

The following are the Regulations of the Council of Public Instruction with reference to all Books, Maps, and Apparatus purchased by Trustees for use in their respective sections.

Reg. 1.—They shall be the property of the School Section, and not of private individuals.

Reg. 2.—Any pupil, shall be entitled, free of charge, to the use of such school books as the teacher may deem necessary.

Reg. 3.—Any section neglecting to provide a supply of books, maps, and apparatus may be deprived of the public grants.

Reg. 4.—Trustees shall make such further regulations, agreeably to law, as may be necessary to ensure the careful use and preservation of books, maps, and apparatus belonging to the section.

LIST OF TEXT-BOOKS, MAPS, AND APPARATUS.

In accordance with the above amendment, the following books are prescribed by the Council of Public Instruction to be used in all the Public Schools.

PUPILS' WEEKLY RECORDS.

Weekly Record (for one Term).

THE NOVA SCOTIA SERIES OF READING BOOKS.

Books No. 1, 2, 3, 4, 5, 6, and 7; The art of Teaching Reading, Bailey's Brief Treatise on Education.

SINGING BOOK.

The School Song Book.

SPELLING BOOK.

The Spelling Book Superseded, (Eng. Ed.)

GRAMMAR AND COMPOSITION.

English Grammar; English Analysis; Reid's Rudiments of Composition; Bain's Rhetoric; Dalglisch Introductory to English Composition; Dalglisch Advanced English Composition.

In the meantime, Trustees are authorized by the Council to use whatever Grammar they prefer. Lennie's Grammar, if followed by Analysis, will, perhaps, give a good result in any.

MATHEMATICS.

The Editions of Greenleaf's Works now in the prescribed list, are the latest and most approved of these very excellent and generally used works. They are especially recommended to the attention of Trustees and Teachers.

- Eaton's Commercial Arithmetic.
- Greenleaf's National Arithmetic
- " New Practical or Common School "
- " New Elementary "
- " New Primary "
- " New Intellectual "

- Arithmetic.*—Nova Scotia Elementary Arithmetic. Nova Scotia (advanced) Arithmetic. Nova Scotia Arithmetical Table Book.
- Algebra.*—Chambers' Algebra, (as far as Quadratics). Do. Do. (complete). Greenleaf's New Elementary Algebra
- Plane Geometry.*—Chambers' Euclid, (including Plane Trigonometry)
- Practical Mathematics.*—Chambers'; (including Land surveying, a brief treatise on Navigation, &c.)
- Solid and Spherical Geometry.*—Chambers' (including Spherical Trigonometry, Conic Sections, &c.)
- Mathematical Tables.*—Chambers'
- Navigation.*—Norie's, (an extended treatise).
- Chisholm's Mathematical Scale
- Bull Frames*
- Slate Wipers, (to be used without water).
- Slates.—Common Slates, (beveled frames) 6½ in. by 8½ in.
- " " " 8 in. by 10 in.
- " " " 9 in. by 13 in.
- Blackboard Chalks, (1 gross); Slate Pencils, per box, (100).
- Eaton & Frazee's Book-keeping.
- " " Blank Books, set of three Books.

WRITING.

- Payson, Dunstan & Scribner's International system of Penmanship.
- Swan's Series, Victoria Head Line.

STAPLES' PROGRESSIVE SERIES OF COPY BOOKS:

For both girls and boys.	} Set of	Book No. 1,	} For girls only.	} Book No. 8,					
		" No. 2,			} " No. 10,				
		" No. 3,				} For boys only.	} " No. 9,		
		" No. 4,						} " No. 11,	
		" No. 5,							
		" No. 6,							
" No. 7,									

- Nos. 1 to 11 bound in 1 vol., with full instructions on the system (for the Teacher's desk).
- Ruled Card to accompany copy books.
- Penholders.
- Staples' Circular Pointed School Pens.
- Inkpowders.
- Rulers, 12 in. (for pupils' use,.)
- Lead Pencils.
- India Rubber Erasers.
- Pink Blotting Paper.

DRAWING.

BARTHOLOMEW'S SCHOOL SERIES OF PROGRESSIVE DRAWING LESSONS.

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NATURAL SCIENCE.

- Chambers' Chemistry, (with new notation)

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LEXICONS.

- Liddell & Scott's Greek-English Lexicon (abrgd.), Yonge's English-Greek Lexicon.

VII. Evening Schools.

The Council of Public Instruction has made the following Regulations in reference to Evening Schools:

1. Trustees of Public Schools may establish in their several Sections Evening Schools, for the instruction of persons upwards of 13 years of age, who may be debarred from attendance at the Day School.
2. Such Evening School shall be in session 2½ hours; and in relation to Public Grants, two evening sessions shall count as one day. The Prescribed Register shall be kept, and a Return of the school made in the form directed by the Superintendent.
3. Books and School materials for such Evening Schools will be furnished at the same rate, and subject to the same conditions as for day schools, provided always that no pupil of an Evening School shall have power to demand the use of books free of charge.
4. No portion of Provincial or County funds for Education, shall be appropriated in aid of Evening Schools, unless teachers are duly licensed.
5. The Council would greatly prefer that the Teachers of Evening Schools should be other than Teachers of Day Schools; but where this may not be practicable, it shall be legal for the Teacher of the day school to teach day school four days in the week, and evening schools three evenings in the week.

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Examination of Teachers.

"The half-yearly Examination for license to teach in the Public Schools, shall be held in March and September of each year. Examinations to begin on Tuesday the ninth day preceeding the last Thursday of said months."—Reg. Council Public Instruction.

NOTICE IS HEREBY GIVEN, That the next semi-annual Examination will begin on

TUESDAY, 17th SEPTEMBER next, at 9.30 o'clock, A.M.

Deputy Examiners will be strictly forbidden to admit any person to be examined who fails to be present on the day and hour named.

Candidates are required to forward to the Inspector, not later than September 1st, a written notification of their intention to be examined, and of the grade of license for which they will apply. No application can be received after this date. Candidates are to undergo Examination in the grade of which they have notified the Inspector. Seats will not be reserved for any who do not forward notification as above. Applications may be made for examination at one of the following stations:

STATION	ADDRESS.
Sydney.....	E. Outram, M. A., Sydney.
Baddeck.....	A Munro, Baddeck.
Margaree Forks)	John Y. Gann, Broad Cove.
Port Hood.....	
Arichat.....	Remi Benoit, D'Escousse.
Guysborough)	Wm. Hartshorne, Esq., Guysborough.
Sherbrooke)	
Antigonish.....	A. Melsaac, Esq., Antigonish.
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Tatamagouche)	
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Barrington.....	Rev. W. H. Richan, Barrington.
Liverpool.....	Rev. Chas. Duff, Liverpool.
Lunenburg.....	W. M. B. Lawson, Lunenburg.

Candidates are to furnish their own writing material. Candidates already holding licenses of any grade from the Council of Public Instruction, are required to give the number of the same at the Examination.

All Candidates for License will be required, on presenting themselves for examination, to furnish a written certificate of good moral character, signed by a minister of religion, or by two of Her Majesty's Justices of the Peace. These certificates are filed in the Educational Department, together with the other papers relating to the Candidate's Examination.

The use of books or manuscripts will be strictly prohibited.

Persons not intending to engage as Teachers in the Public Schools will be required, on presenting themselves for Examination, to make payment to the Deputy Examiner as follows:—Grade E, \$0.37; D, \$0.50; C, 0.75; B, \$1.00; A, \$1.00. Also, teachers wishing to be re-examined in any grade for which they already hold a license, will be required to make payment to the Deputy Examiner as above.

Candidates for license of Grade A., who have already made an average of 75 or upwards on Grade B., are to work papers on those subjects only which are peculiar to Grade A. Such Candidates are required to present themselves for examination (with their licenses or memoranda) on Thursday noon. Other candidates for Grade A., will present themselves at the opening of the Examination on Tuesday.

At the September examination in each year an exercise in spelling shall be prepared for candidates who at any previous examination made an average of 60 or upwards in the examination for 1st class, and were debarred from receiving license of the 1st class by reason of bad spelling. The exercise shall contain a number of ordinary English words to be written at dictation, and any such candidate not making more than six errors will be granted a license of the 1st class without further examination.

*Every person examined will be informed by mail of the result of his or her examination, as soon as decided.

The Journal of Education,

Published every two months, under authority of Act of Parliament in FEBRUARY, APRIL, JUNE, AUGUST, OCTOBER, DECEMBER—and furnished gratuitously to Trustee-Corporations, and to such Teachers as are specified in Sect. 6 (15) of the Law concerning Public Schools.

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