Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- ☐ Coloured covers/ Couverture de couleur
- ☐ Covers damaged/ Couverture endommagée
- ☐ Covers restored and/or laminated/ Couverture restaurée et/ou pelliculée
- ☐ Cover title missing/ Le titre de couverture manque
- ☐ Coloured maps/ Cartes géographiques en couleur
- ☐ Coloured ink (i.e. other than blue or black)/ Encre de couleur (i.e. autre que bleue ou noire)
- ☐ Coloured plates and/or illustrations/ Planches et/ou illustrations en couleur
- ☑ Bound with other material/ Relié avec d'autres documents
- ☑ Tight binding may cause shadows or distortion along interior margin/ La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure
- ☐ Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/ Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

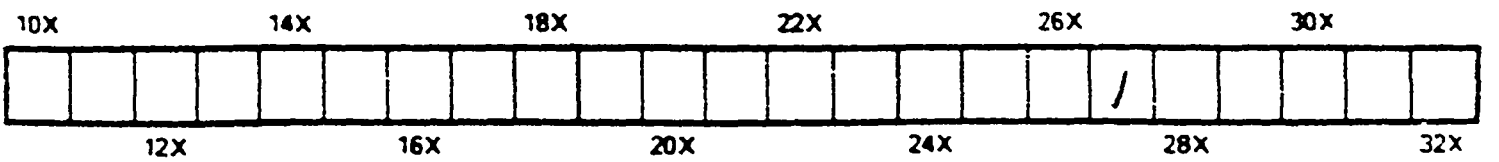
- ☐ Coloured pages/ Pages de couleur
- ☐ Pages damaged/ Pages endommagées
- ☐ Pages restored and/or laminated/ Pages restaurées et/ou pelliculées
- ☑ Pages discoloured, stained or foxed/ Pages décolorées, tachetées ou piquées
- ☐ Pages detached/ Pages détachées
- ☑ Showthrough/ Transparence
- ☑ Quality of print varies/ Qualité inégale de l'impression
- ☑ Continuous pagination/ Pagination continue
- ☐ Includes index(es)/ Comprend un (des) index

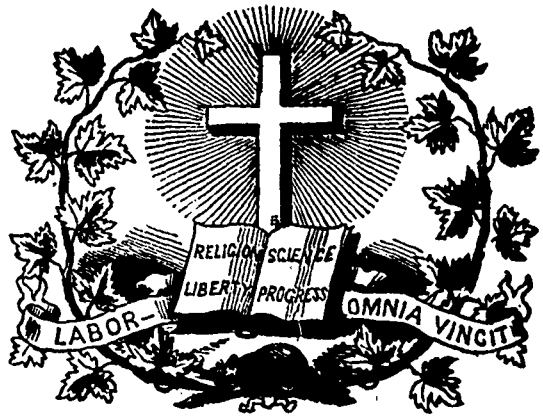
Title on header taken from:/ Le titre de l'en-tête provient:

- ☐ Title page of issue/ Page de titre de la livraison
- ☐ Caption of issue/ Titre de départ de la livraison
- ☐ Masthead/ Générique (périodiques) de la livraison

☐ Additional comments:/ Commentaires supplémentaires:

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.





JOURNAL OF EDUCATION.

Volume III. **Montreal, (Lower-Canada) May, 1859.** **No. 5.**

SUMMARY.—Education: School days of Eminent Men in Great Britain, by John Timbs, F. R. S. A. (continued).—Directions how to teach children to read, by John Bruce, Esquire, Inspector of Schools.—What shall be done wi' the boys.—The study of Natural History in Common Schools, speech by Professs. Agassiz.—Suggestive Hints towards Improved Secular Instruction, by the Reverend Richard Dawes, A. M., First Lessons.—Science: Some observations on Donati's Comet of 1858, by Charles Smallwood, M.D. LL.D.—Official Notices: Separation and annexation of School Municipalities.—Situation as teacher wanted.—Notice to Directors of institutions claiming aid on the grant for Superior Education.—Editorial: The School Law amendment Act of 1859.—Normal Schools.—Report of the Chief Superintendent of Education for Lower Canada for 1857.—Monthly Summary: Educational intelligence.—Scientific intelligence.—Literary intelligence.—Official Document: Act to amend the School Laws of Lower Canada.—Wood Cut: Diagram of Donati's Comet.

EDUCATION.

School days of Eminent Men in Great-Britain.

By John Timbs, F. S. A.

(Continued from our last.)

XLIX.

ROGER ASCHAM—HIS "SCHOOLMASTER."

One of the most remarkable men of this period was Roger Ascham, who attained such proficiency in Greek, that, when a boy, he read lectures in it to other boys who were desirous of instruction; he also learned to play on musical instruments, and was one of the few who then excelled in the mechanical art of writing. He took the degree of M. A. at St. John's College, Cambridge; he commenced tutor when 20 years of age, and was one of those who restored the pronunciation of Greek to our own modern mode of utterance. His favourite amusement was archery, upon which he wrote a treatise, entitled *Toxophilus*, in 1544, which he dedicated to King Henry VIII., who rewarded him with a pension of 10*l.* a-year. He taught the Lady Elizabeth to write a fair hand, and for two years he instructed her in the learned languages: he informs us that Elizabeth understood Greek better than the clergy of Windsor. He was next appointed Latin Secretary to King Edward: upon one occasion, he is stated to have composed and transcribed, with his usual elegance, in three days, 47 letters to princes and personages, of whom cardinals were the lowest. On the accession of Queen Elizabeth he was re-appointed her Latin secretary and tutor, and read some hours with the Queen every day. In 1563, upon the invitation of Sir Richard Sackville, he began to write *The Schoolmaster*, a treatise on Education, considered by Dr. Johnson to contain the best advice that was given ever for the study of languages. Ascham died in 1568, lamented as a scholar and a man; when Queen Elizabeth heard of his death, she exclaimed, "she would rather have thrown ten thousand pounds into the sea, than have lost her Ascham." His great benefit to literature was his introduction of an easy and natural style into English writing, instead of the pedantic taste of his day; he adopted, he tells us, the counsel of an ancient writer, "to speak as the common people do, to think as wise men do." One of Ascham's tracts, (on the Affairs of Germany,) is described by Dr. Johnson as written "in a style which to the ears of that age was undoubtedly mellifluous, and which is now a very valuable specimen of genuine English."

L.

LADY JANE GREY AND HER SCHOOLMASTER.

Foremost among the learned women of this time was the beauteous Lady Jane Grey, who was born at Bradgate, on the border of Charnwood Forest, four miles from Leicester, and educated by Aylmer, her father's chaplain. The story of her "almost infancy" would be incredible were it not well authenticated. Burton calls her "that most noble and admired Princess Lady Jane Grey; who being but young, at the age of seventeen years, as John Bale writeth, attained to such excellent learning, in the Hebrew, Greek, and Latin tongues, and also in the study of divinity, by the instruction of Mr. Aylmer, as appeareth by her many writings, letters, &c., that, as Mr. Fox saith of her, had her fortune been answerable to her bringing up, undoubtedly she might have been compared to the house of Vespasian, Sempronius, and Cornelia, mother of the Gracchi in Rome, and, in these days, the chiefest men of the universities." At Bradgate Roger Ascham paid the Lady Jane a visit, which he describes in his *Schoolmaster*.

On the morning of her execution, the Lady Jane wrote a letter in Greek to her sister on the blank leaf of a Testament in the same language, and in her note-book three sentences in Greek, Latin, and English, of which the last is as follows:—"If my faults deserved punishment, my youth, at least, and my imprudence, were worthy of excuse. God and posterity will show me favour."

Fuller says of Jane: "She had the innocence of childhood, the beautie of youth, the soliditie of middle, the gravitie of old age, and all at eighteen: the bust of a princesse, the learning of a clerk, the life of a saint, yet the death of a malefactor, for her parents' offences."

LI.

THE POETS WYATT AND SURREY.

Sir Thomas Wyatt, the poet, was born at Allington Castle, near Maidstone, in 1503. All that is known of his youth is, that at 12 years old he entered St. John's College, Cambridge, and that he took out his degrees of Batchelor and Master in 1518 and 1520. About 1524, Wyatt was introduced at court, where he was received into the King's household; in 1533, he officiated as ewerer for his father at the coronation of Anne Boleyn, upon which occasion his friend Surrey, then about 16 years of age, carried the fourth sword with the scabbard before the King. Wyatt travelled much on the Continent; he possessed great conversational powers, and is said

to have combined the wit of Sir Thomas More with the wisdom of Sir Thomas Cromwell. His political knowledge and sound judgment acquired for him a high reputation as a statesman and diplomatist; and his scholarship was in advance of most men of his time. Camden bears testimony to the extent and accuracy of his classical attainments: he spoke French, Italian, and Spanish fluently; excelled in music; and was pre-eminent for skill and dexterity in arms. Surrey has left a portrait of Wyatt, and rarely have so many noble qualities been collected into a single character —virtue, wisdom, beauty, strength, and courage. His letters to his son, written from Spain, exhibit close observation of life; and contain a whole code of maxims for the government of conduct, based on sound religious principles. He co-operated with Surrey in "correcting the ruggedness" of English poetry: it is said that they were devoted friends, and Surrey's lines on the death of Wyatt seem to indicate a close and intimate intercourse.

Henry Howard, Earl of Surrey, exercised great influence on our poetry. "He founded," says Mr. Bell, "a new era in our versification, purified and strengthened our poetical diction, and carefully shunning the vices of his predecessors, set the example of a style in which for the first time, verbal pedantry and fantastical devices were wholly ignored. He was also the first writer of English blank verse, and the sonnet, and the first poet who understood and exemplified the art of translation." The poet became Earl of Surrey on the accession of his father to the Dukedom of Norfolk in 1524; he is thought to have been born about 1517. He was placed at court, about the person of Henry VIII., at the early age of 15, but it is uncertain whether he studied at college. His boyhood was passed in the society of such men as Lord Berners, the translator of Froissart; Vere, Earl of Oxford; Lord Stafford, Lord Morley, and others equally distinguished by their literary attainments. Surrey, in his childhood, was always sent during the winter months to Hunsdon, one of the estates of his grandfather, the Duke of Norfolk, in Hertfordshire. This seat, about 1536, became the residence of the Princess Mary; with her was living the fair Geraldine, with whom Surrey fell in love, and her name is indissolubly united with his in many a legend in prose and verse, wherein he showed "the noblest qualities of chivalry blended with the graces of learning and a cultivated taste." Having travelled into Italy, he became a devoted student of the poets of that country—Dante, Petrarch, Boccaccio, and Ariosto—and formed his own poetical style on theirs.

Surrey, among his general accomplishments, appears to have cultivated the study of heraldry, which helped to bring him to the block; for the chief charge against him by his enemies was his having illegally quartered on his escutcheon the arms of Edward the Confessor, which, however, he was entitled to do. He was beheaded on Tower-hill, January 21, 1547.

LII.

LORD BURLEIGH AT CAMBRIDGE.

That truly great statesman, William Cecil, Lord Burleigh, descended from an ancient and respectable family, was born at Bourne, in Lincolnshire, in the year 1520. Both his father and his grandfather held honourable appointments under Henry VIII. During his early education, his progress either exhibited nothing remarkable, or has been overlooked by his biographers, amidst the splendour of his succeeding transactions; for we are merely informed that he received the first rudiments of learning at the grammar-school of Grantham and Stamford. But at St. John's College, Cambridge, to which he was removed in the fifteenth year of his age, he gave strong indications of the qualities calculated to raise him to future eminence. Here he was distinguished by the regularity of his conduct, and the intensity of his application. That he might daily devote several hours to study, without any hazard of interruption, he made an agreement with the bell-ringer to be called up every morning at four o'clock. Though this extreme application, without proper intervals of exercise, he, however, contracted a painful distemper, which led to his being afflicted with gout in the latter part of his life.

His indefatigable industry at college, and his consequent proficiency, was marked by occasional presents from the Master. He began, at sixteen, to put in practice the method, then usual, of acquiring literary celebrity, by delivering a public lecture. His first topic was the logic of the schools; and three years afterwards he ventured to comment on the Greek language. He was subsequently ambitious of excelling as a general scholar; and successively directed his industry to the various branches of literature then cultivated at the university.

At twenty-one he entered at Gray's Inn, where he applied himself to the study of the law with the same method and industry as he had observed at Cambridge. He found leisure also for several collateral pursuits: the antiquities of the kingdom, and more especially the pedigrees and fortunes of the most distinguished families, occupied much of his attention; and such was his progress in these pursuits, that no man of his time was accounted a more complete adept in heraldry. This species of information, had he adhered to his destination for the bar, might have been of little utility; but in his career of a statesman, it often proved of essential advantage.

LIII.

CAMDEN'S SCHOOLS.

Camden, one of the most illustrious of learned Englishmen, was born May 22, 1551, in the old Bailey, where his father was a painter-stainer. He died when his son was but a child, and left little provision for him. Dr. Smith, in his *Life of Camden*, mentions his early admission into Christ's Hospital as a fact not well authenticated, but very generally believed; and the imperfect state of the records does not admit of its verification. At all events, an attack of the plague caused his removal in 1563; and after his recovery, he was sent to St. Paul's School, and thence to Magdalen College, Oxford, in 1566.—*Trollope's History of Christ's Hospital.*

Wood, in his *Athenæ Oxonienses*, states positively that "when this most eminent person was a child, he received the first knowledge of letters in Christ church Hospital in London, then newly founded for blue-coated children, where, being fitted for grammar-learning, he was sent to the free school, founded by Dr. Colet, near to St. Paul's Cathedral." Thence he removed to Oxford, where he studied in more than one college. He left the university in 1571, and became an under-master of Westminster School, the duties of which he discharged at the time when he composed the works which have made his name so eminent. The most celebrated of these are his Britannia, a survey of the British Isles; and his Annals of the reign of Elizabeth; both written in pure and elegant Latin. Camden was now looked upon as one of the most distinguished scholars of his age: he is termed "the Pausanias of England." He was made head-master of Westminster School in 1592: he had among his scholars, Ben Jonson; he wrote a small Greek Grammar for the use of the school; and shortly before his death, he founded an historical lecture in the University of Oxford. He died in 1623, and was interred in Westminster Abbey, a great assemblage of the learned and illustrious doing him honour at his funeral.

To Camden, Ben Jonson dedicated his first play, *Every Man in his Humour*; hoping, to use his own words in addressing his Master, "that the confession of my studies might not repent you to have been my instructor; for the profession of my thankfulness, I am sure it will, with good men, find either praise or excuse. Your true lover, Ben Jonson."

The career of Camden strikingly illustrates the benefits of English school foundations. Left a poor orphan, he was one of the first boys admitted into Christ's Hospital where he sowed the seed of that learning which was matured in the University of Oxford, and employed for the advantage of the next generation in his mastership at Westminster. He left to the Painter-Stainer's Company, of which his father was a member, a silver loving-cup, which is produced on every St. Luke's Day feast.

(To be continued.)

Directions how to Teach Children to Read.

[We insert with great pleasure this communication from the pen of John Bruce, Esquire, Inspector of Schools.]

SIR,

It pleased me much to see that you gave a place, in your valuable *Journal of Education*, to Mr. Arnold's method of teaching children the art of reading. No part of the art of teaching is less understood by our educators than that which respects teaching the rudimental art of education. Were such lectures as that of Mr. Arnold more encouraged, and publicity given to them, I am certain improvements in methods of teaching would be furthered and diffused more rapidly, and the standard of education raised on a basis more solid and extended. To help on the cause of education we need more of the aid of the pen and the press. Without their assistance progress in any art must be slow and precarious.

Wishing to add my mite of suggestions to Mr. Arnold's directions for teaching the initiative part of the art of reading, I would also crave a corner in your widely circulated journal. Perhaps

frequently directing the attention of teachers to this subject, may tend to show them the great importance of this part of their work, and that it claims for more consideration and deeper study than is generally supposed.

One of the duties of inspectors—and a most important one—is to bring more prominently under the notice of teachers generally, and also of the public all real improvements in methods of teaching. Indeed one of the prospective benefits of inspection, is, *that peculiar advantages of improved teaching shall not be confined to isolated and individual discoverers,* who arrive at them slowly,—*but shall at once become part and parcel of the art and science of education, and patent to all educators and students in the profession.*

Before proceeding to give the directions I intend to offer, let me direct the attention of teachers to the following introductory observations.

1o. The art of reading, which is easily attained by the use of books, forms an essential part of education. But reading is useful only when we understand that which we read; and as reading without the exercise of the understanding frequently settles down into an injurious and inveterate habit, it follows, that children should never be taught to read before they can understand that which they do read; nor should they, when taught, ever be allowed to read a sentence, without at least an endeavour on their part to comprehend its meaning.

2o. As the understanding and the memory are the principal mental agents in learning, their cultivation should always be a *preliminary* object of education. For this reason, every thing that is taught to a child should, in the first place, be reduced to the questioning and analyzing form; by which the understanding and the memory are disciplined in conjunction, and enabled to assist each other.

3o. Whatever is taught, should, at the same time, be taught well. Uncertainty or doubt as to one letter, one word, or one truth, is most easily removed when it alone occupies the attention; but to proceed while the uncertainty remains, tends only to increase and to perpetuate it. This is, perhaps, the most perilous rock in the sea of education; and in the present day it has covered its waters with fragments, and its shores with wrecks.

Thoroughness in every thing taught has clothed our most improved systems of teaching with a power which as yet is only beginning to show what in able hands it can accomplish. By its means individuals who only knew their letters, have frequently been taught to read in less than an hour.

4o. To read with ease can only be acquired by practice; and as this will certainly be attained by the pupil in delivering and preparing his exercises, it should not be pursued merely for its own sake. Every sentence that is read should convey some useful information; and the section should never be left till its meaning be understood, and till the use of the information which it contains be preserved, and can be applied by the pupil in his own case when practical. Hence the ease and pleasure taken by scholars thus trained, and their rapid progress in intelligence and useful knowledge.

1. *On teaching the alphabet.*

The first object of teachers in commencing an alphabet class, should be to draw out and to discipline the powers of their children's minds as a *preparation* for teaching them the alphabet and the art of reading. In doing this the most suitable subjects should be used, and on these their powers of observation, expression and reasoning, should be well exercised. These exercises may be variously conducted. The following hints will suggest other ways:

Let the teacher bring the children around him, and engage them in a familiar conversation with himself. To his questions they may give answers simultaneously, or individually, as he may find most suitable. Let him first direct their attention to those objects which are most familiar to them, speak of their position, form, size, colour, uses, &c., then require of them, in return, precise and correct descriptions, and repeating these till both the *memory and the understanding have got hold on them.* Begin with things in the schoolroom; then with objects in the fields, in the animal and vegetable kingdoms, &c. The external heavens will furnish with many interesting subjects for excuse. The sky—its appearance and colour at different times; the clouds—their varying forms, character and movements; the sun—its rising and setting, its concealment by clouds, its great heat, how it gives life and fertility, danger of being exposed to it too long, &c.; the moon—its appearance by night, full, gibbous, horned, its bright and dark parts, and its occasional absence from the heavens; the stars—their difference in size, colour, brightness, their number, distances from each other, &c.

A very interesting, profitable lesson to them would be the family and family duties, love to parents, to brothers and sisters, &c.

But I would warn the teacher against passing from this exercise before the intended effects are produced—before the children are able readily and correctly to answer questions and put their ideas together with tolerable correctness. Those who may be found imperfect in this exercise, should be taught singly on as simple ideas as possible till their minds collect strength sufficient to comprehend with their companions, the things on which they may have been exercised.

Having gone through this preparatory training, they may then, at intervals, be taught the alphabet, exhibited on a sheet, classified as follows, each class of letters to make a lesson, not to be passed till *mastered.*

1.	class.....	i, j, l, f, t, r.
2.	"	b, k, n, u, m.
3.	"	o, c, e.
4.	"	v, x, z, w, y.
5.	"	s, a, g.
6.	"	b, d, p, q.

Double letters: th, sh, ch, ph.—Terminations: ing, tion, ble, ple.

One of the most important exercises at this stage is training the organs of sound till they have perfect command of their own vocal powers. The character representing these sounds should then be shown and described to them, till the form and power of each are distinctly impressed upon their memories. This may be done as follows:

With the classified alphabet before him, let him direct their attention to the first class of letters, under the title of "single upright letters," and without *naming any of them,* ask what kind of letters these are,—taking care that they understand the meaning of *upright.* How many strokes has each? How do the lines of these letters stand? Are they all of the same length? What letters are dotted? Continue such questioning till they can describe them readily.

When the characters of the first class of letters are known, the teacher takes up those of the second class, as the "double upright letters," and questions them similarly on them,—still without telling the names of any of them. He does this to every line in its order, taking care to go back to the former lines frequently, and to exercise the pupils upon the "practice boards," by asking to what class the letters which he forms on the board belong, and making themselves make them too. This exercise will impress them more and more upon their minds.

Another excellent method for exercising the descriptive faculty, and familiarizing the children with the different forms of letters, is to take two or more letters having certain parts in common, as c, e, o, for a lesson.

c, e, o.—These may be compared with each other, and c e may be separately compared with o, and then with each other. The teacher points out as little as possible the differences to the children, but asks them to point out these to him. The children will often reply by saying, that is *o,* that is *c.* But is *c* exactly like *o,* or is it different?—Different, may be the reply. Then, where is *c* different from *o*? Show me with the finger, or pointer, &c.—Still the difference may not be brought out. But, the catechising must be continued till they are able to trace the difference correctly. And this will the better prepare them for the next step in advance.

Similar comparisons may be made of all the letters in the alphabet. Take as another example v, w, y.

v, w, y.—"How many straight lines has *v*? Where do they meet? Which is the thinner stroke? Where is the space between them widest, and where does it end? &c. Compare *w* with *v.* Wherein do they correspond? Is the *w* not just two *v*'s joined; if so, how are they joined? Compare the *v* with the *y,* and show how they agree, and in what they differ, &c."

Continue the questioning till the whole differences are completely and clearly brought out. Thoroughness at each step of advance must never be lost sight of.

b, d, p, q.—The most difficult distinction to retain are those between *b* and *d, p* and *q*; and I have often found children confounding these letters, even after they have made considerable progress in reading. The most effectual method, perhaps, for removing this difficulty is to draw on the black-board the perpendicular line or bar which these letters have in common, and then with the pointer, or finger, trace the various positions of the round or looped part at either side, at the top and bottom alternately. The same thing is done sometimes with a solid model, of which the round part is moveable.

On this let the children be made to explain the forming and differences of these letters as follows:

Long line, round part or loop on the right at the bottom, *b*; long bar, round part on the left at the bottom, *d*; long upright line, round part on the right at the top, *p*; long line up and down, round part on the left at the top, *q*: *b* and *d* face each other and below; *p* and *q* face each other above, *b* on the right, *d* on the left at the bottom; *p* on the right and *q* on the left at the top. Follow these explanations by questions, till their forms and positions be made familiar to the children.

In all these exercises the children may be taught how to trace with their finger in the air the outline of the figure before them. This tends to secure attention, and to promote clearness of conception.

When they can distinguish and describe letters singly and by comparison, the teacher can then proceed, and very advantageously, to teach the names of letters, associated with descriptions, putting the description generally first, beginning with the first class, viz: i, j, l, f, t, r. The questions to be put as follow: The first letter is *i*, repeat the name; what is over it? a small dot. What is dotted? the *i*. To this add the description top dotted *i*; and ask again,—top dotted, what? where is the dot of the *i*? what has a dot over it? what kind of a letter is *i*? Let the scholar then add the whole. Short top dotted *i*; and be immediately asked—what kind of letter is top dotted *i*? what short upright letter has a dot over it? Such questions should be repeated, till the children know, and can readily give the description of the letter with its name. The children are to be questioned similarly on all the letters and made to point each out as exercised upon it, in words presented to them, in which it is. Such questions serve to interest the pupils by exercising their minds, and they greatly assist their memories by associating the name of the letter with its description.

While the children are put through the preceding exercises, the practice-board should be much used, printing on the board at first only *one letter*, to be named and described; but as they become more familiar with letters two or more may be given at once, but in such a way as to exercise the understanding and faculty of accurate observation, as much as possible. The capitals are to be taught as the pupils come to them in reading, but never till all the small letters are perfectly familiar to them.

When all the letters are known, they should next be taught the sounds of the double letters and the terminations, one by one; illustrating their uses by teaching some short words, in which they occur.

During this, and indeed every stage of progress, the utmost care should be taken that the children, while they are in school, should never be idle. They should have a few minutes of recess, now and then; but industry and attention should be strictly enjoined while they are in the school. The following hints will assist the teacher in finding employment for this class both at home and in the school, when not under the teacher's training, or the teaching of some person at home:

1o. They may be made to count the number of any of the letters which the teacher wishes them particularly to learn, in a paragraph or page.

2o. They may be made simply to name these letters to themselves, or to each other.

3o. They may be shown how to exercise themselves in forming letters by finger positions, tracing their forms in the air, or in ascertaining by leaving out parts of letters, or adding something to them, what other letters may be formed.

4o. Making letters on slates—suitably ruled—both in printed and written form, will be found an excellent exercise. But the slates require to be so ruled as to guide them in shaping the letters.

5o. These exercises may be varied by giving a few figures, at any one time, to make, having their slates suitably ruled; keeping them interestingly engaged will train them to habits of diligence while in the school.

The teacher is required to consider the principle upon which these methods of teaching the alphabet, and training the mind are founded, that he may be able to carry it out intelligently, and also vary its application, without lessening its power. It consists in subjecting the alphabet to the principle of analysis,—by creating an artificial association of ideas between the forms and the names of letters; and principally, by so arranging these as to subject them to the powerful operation of catechetical exercise.

N. B.—Following up this method in teaching the alphabet, which is, perhaps, one of the most abstract, difficult, heartless exercise in the whole range of education, renders the task to children interesting and easy.

2. *First step in teaching to read.*

When the childrens' minds have become, by the preceding exercises, active and vigorous, and when all the letters and terminations have become familiar, they may then be taught to read simple sentences, each containing some plain easily understood idea. But must not be allowed to pass a single sentence till mastered as that respects both the *meaning* of every word, and its *distinct reading*.

Let me explain the method to be pursued by the following sentence:

"Robert reads well."

First, question the children on the different letters of the words in this sentence, and continue the questioning till you are satisfied that they really know them, and can both name and describe them. This prepares them for naming them without hesitation, as they are arranged in the words of the sentence. Point out to them then how the letters form the first words: *Robert*, by repeating the letters, giving them their *power sounds*, as pronounced in the word, and then pronouncing them together — R, o, b, e, r, t, Robert — first simultaneously, then individually, repeating the letters and the word, till they become familiar with the word and know its meaning. The next word is then to be gone over in the same way, and when they know it, connect it with the first—*Robert reads*. Then question them on the two, united,—*Robert reads*. Who reads? what does he do? what is the name of the boy who reads? on getting them to answer these correctly and readily, proceed to the last word—*well*. Make them familiar with it in the same way; and when the three words—*Robert reads well*, are readily recognised, each in its place, read them off in connection, they following simultaneously, and then individually. But take care in reading them off, that the voice is fully brought out, and that the reading is free and easy, without the least hesitancy.

The same thing is to be done with each word and sentence in its order, first pronouncing words and reading the sentences before them, thus setting them a *correct example for imitation*. This is training them to read and how to use their voices properly. Much of the teacher's success depends upon attention to this recommendation.

When words of two syllables are to be taught, the syllables are to be taken separately, as in monosyllables, and then they are to be put together; the teacher explaining to them how they form but *one word*, though made up of two parts. This exercise is to be continued till they understand how words of two or more syllables are divided, as we pronounce them, into portions, yet making but one word.

When they can read simple sentences easily and understand their meaning by questioning, they should then go back to the beginning again, for the purpose of reading and becoming more familiar with the explanation of words. Going over the ground again is not keeping them back; it is preparing them to advance rapidly. Indeed, this is the grand starting point upon which the teachers success greatly depends. Going over the same lessons again may be done as follows: make the child at the head of the class read the whole sentence; then question him on the meaning of the first word, substituting his meaning for the word, and showing him how, in doing this, the sense is not changed. If he cannot satisfactorily do it, the next should be asked, and whoever gives a correct meaning should go up. The next child is then made to read the whole sentence, *omitting the word that has been explained*, explaining the first word of what he reads, and substituting for the word as before. Go on in the same way with every one in the class, taking care that *one word only* occupies the attention of the class at *one time*.

When the children can read the sentence with each of the explanations, substituted for the words they explain, they may then try to read it with two, then three, and lastly with all the explanations together; each reading from his book the intermediate words, inserting the explanations one after another from memory, and upon making a mistake losing a place, if his neighbour who next tries it, makes none; he trying again, and if unsuccessful again losing a place as before. This is to be done with every sentence in its order, by which the pupils will become familiar with reading and the meaning of what they read, as well as with the powers of their own minds.

The teacher should study the philosophy of these initiatory exercises, that he may be able to vary their form to suit circumstances, without neutralizing their effects.

It consists principally in these three things:

1o. In enlisting the natural sagacity of the child in his own behalf; and training him, by considering the powers of the letters

in every word, to make a successful *conjecture* as to its sound and identity.

2o. It consists also in that exercise of the mind—extensive though upon a narrow basis—which gives all the pleasure and the benefit of mental labour, without its fatigue. There should, therefore, be no hurry in getting over these exercises; for by cultivating this small spot well, the teacher will find that he has almost finished his task where others only begin it.

3o. And principally, it consists in teaching the pupil to read every word well, and once for all; and in training him to understand all that he reads—*as he reads it*. By this means, it is only the *new* words which he requires to be taught; and as these are lessening at every line, as well as those which he has never learned, his difficulties are decreasing at every step of advance. A habit is formed by them. He early becomes impressed with the idea that as he reads he should take the *sense* of the passage as he goes on. In this manner an adult, who can understand what is told him, may be taught to read from the very commencement in a few hours: and even children, thus properly trained by questioning and analysing, might be made to read in a remarkably short time.

By this method of instruction children are really taught to read; whereas in ordinary cases they are only left to learn.

3. *Second step in teaching reading.*

Children from this period acquire the art of reading rapidly, and almost imperceptibly. The teachers' great concern should now be to train them, when they read, to perceive at once and to combine the ideas which the book communicates, as if it spoke to *themselves*. These objects will be most readily gained by the following means.

All the children having their eyes on their books, the highest in the class is made to read the first clause of the section, on which he and all the children to the foot, are catechised in a plain and lively manner. The second child reads the next clause, on which he is first catechised, and then all the class, on the two clauses, all looking on their books, reading mentally the words read by the others, and while doing so selecting the answers to the questions asked. This is to be done with each clause in a sentence, when it consists of more than one. When a clause is well understood, and is read off with ease, the preceding clauses should be joined with it in reading,—the children reading them in order again and again, till they come up to the teacher's own reading, who is understood to lead the reading by his own example; for his reading is to be by them closely imitated. But great care must here be taken that the words should be really *read* and are not merely repeated by *rote*. For this purpose, they ought to pronounce the words going backward, or read them in another part of their book. It is of the greatest importance that they be so exercised as to know every word taught them, at *sight*, wherever they see it.

When they can read the lesson well, they ought then, before passing to a new lesson, to explain any difficult word or words, and insert the meanings, as has been explained.

On giving a new lesson, show the scholars how to read it, they simultaneously following. Give them an outline, meaning and definition of difficult words, of such words at least, as are new to them. Then direct them how to study on their seats, so as to prepare themselves well, for being tried when again called up. To secure diligence the teacher, at next lesson, and before allowing them to read, should question them pretty minutely upon the lesson, and recommend or reprove according to circumstances. But the task at first should be easy, and its preparation strictly enforced.

When they are able to read with some fluency and explain with considerable readiness, reviewing should become frequent, and exercises in defining and applying words in sentences, should be given much oftener. At this stage, paraphrasing, verbal and general, should be a daily exercise. By pursuing such exercise the most obtuse in intellect, under the guidance of an intelligent and painstaking teacher, may attain a complete command of language for expression, and be able to perceive, analyse and familiarly deal with any subject which he understands.

The teacher is requested to consider the nature and the design of these latter exercises in the education of children. They are in the first place, intended, in continuation of the former, to lay a deep and broad foundation, upon which to rear all the succeeding branches of a child's education, by a systematic and efficient cultivation of the powers of the mind by means of proper and varied discipline.

EXAMPLES OF VERBAL AND GENERAL PARAPHRASING.

1. *Simple verbal paraphrase.*

"And Jesus, *moved* with *compassion*, put *forth* his hand and touched *him*, and *saith* unto *him*, I *will*; be thou *clean*."

Words to be removed are *italics*. In their place definitions are to be substituted. We explain them thus:

Moved, affected.
Compassion, a sense of pity.
Forth, forward.
Him, leper.
Saith, said.
Will, am willing.
Clean, healed.

Substituting the definitions for these words, the paragraph would read thus:

"And Jesus, *affected* with a *sense of pity*, put *forward* his hand, and touched the *leper*, and *said*, I *am willing*, be thou *healed*.

2. *Enlarged verbal paraphrasing on the same passage.*

Words to be removed.

Jesus, the Son of God.
Put, stretched.
Him, the man who had the leprosy.
Will, I am quite willing to cure you of your disease.
Clean, free from thy leprosy.

3. *Example of general paraphrase.*

"The Newfoundland dog swims with ease, and is fearless of water; he is useful for his services in preserving life from drowning!"

Paraphrased.

The Newfoundland dog is *web-footed*, swims with *great* ease, and is *perfectly* fearless of water; he is *most* useful *in this country* for his *good* services in *the* preservation *of human* life from drowning.

In teaching children to paraphrase, it is necessary to study first simplicity, and then elegance. At first only a few words should, therefore, be changed, and those of a kind which may easily be supplied.

My concluding remark is, that whatever is taught should be taught well, taught thoroughly, often adverted to, and frequently repeated. The mind of a child should never be drawn from a subject hurriedly, before the mind has had time to contemplate it. The effect of this is to weaken the powers of the mind instead of strengthening them; and to foster, instead of restraining and regulating that wish for variety which is so common among children.

J. B. I. S.

What shall be done with the Boys?

PROFESSIONAL LIFE.

"Professional life is a proper mark of ambition for those who have a taste and talent for it, and can reach it. But it involves severe labor for success; it is no idler's play; the social consideration it secures is in itself a poor object of toil; the remunerations of its services are, in general, neither rapid nor large. A considerable number of our young men will be wanted to fill the ranks of these classes in the community; but the tendency is to an over supply of at least two of them; and the *third* is not strengthened by every recruit who can thump a pulpit cushion. As a common rule, it is not best to urge boys into college, even if in easy pecuniary circumstances, unless they discover a decided aptitude for study. A graduate, who slides off from commencement day, into life without going into a profession because of too small an amount of personal force to grapple with its studies and practice, is apt to be spoiled for every other pursuit. He has been at college, and of course, cannot descend to ordinary work. The four years there consumed have taken up the time when he might have been taught some useful art. As the boy of seventeen, yet untaught his alphabet, is ashamed to go to the public school, so the collegian who learned nothing at the university, and knew nothing before he entered, is too old or proud to begin to acquire practical information. It is a pity to ruin thus, at the price of a diploma which means nothing, what might have made a respectable mechanic or tradesman. Nor is the ruin prevented by merely thrusting a quack or a drone into a sulky court room, or preacher's stand."

SCHOOL TEACHING.

"School teaching is an important, but hard occupation. No one

should embark in it to be lifted into a more genteel and intellectual circle. Its successful prosecution preeminently demands a constitutional fondness for instruction, a natural or acquired tact at governing and stimulating mind. It affords fine opportunity of usefulness to such. But to undertake its tasks just to be 'a master,' and to be thought literary, is a very unworthy mark of attainment."

ART AND ARCHITECTURE.

"A few branches of artistic culture, as music, painting, designing, require a gradually increasing supply of pupils; but these are rather the side dishes than the substantial fare of life. Nor are they, in their best estates, very promising ways of sustenance, that too many of our boys should be devoted to their pursuits. It will do for some of them to drive around a photograph saloon, or to profess sweet sounds for a living whether vocal or instrumental. If one has a turn that way, a fine, a manly thing is an artist-architect's life, for which, it is to be hoped, an improving taste in building private and public edifices will make a much increased demand. But it will not do for parents to think that boys are all to carry portfolios, to be artists, professional men, or merchants. There is not room for this; not recompense enough; not natural talent enough of the requisite kind."

AGRICULTURE AND MECHANICS.

"The main dependence must be found, to meet this demand—in agriculture, mechanical and manufacturing occupations. These are the indispensable employments of society, and must also be its chief labor in a healthful condition of the community. I think it is the duty of parents to select, with as much judgment as possible, a son's respective business, his aptitudes being consulted more than his transient wishes, and kindly to endeavor to shape his preferences towards that pursuit."

THE SEA.

"'But my boy wants to be a sailor,' says some anxious mother, with the tear of apprehension trembling in her eye; 'and I cannot persuade him out of it, nor consent to grant his strange propensity.' *Strange!* I do not know about that. God made that glorious sea; it is full of beauty, power, life; some body must dwell on it; noble spirits have, and all its voyagers are nearer, it always seemed to me to the eye and care of the Viewless, Eternal Spirit, than any others. One would scarcely wish to encourage a child to become a sea faring man: but where that passion for salt water exists, and years show that it does not lessen, it is far wiser for the parent not to oppose it, but to assist, with a hopeful spirit, to gratify it in a way to make it as safe to morals as possible. A boy of this roving, adventurous disposition, who stays on dry land with about the same pleasure that an eagle would feel in your poultry yard, should not be too strongly tempted, by parental objections, to run away from home that he may indulge his proclivity. That desperate step must be most painful to both parties. It often makes a hard boy irreclaimably harder. Many mothers and fathers have been sorry when too late, that they did not provide a good captain and ship for their son to make his trial trip, instead of allowing him to slip off from their reach with some wild set of rovers to contaminate his morals and to utterly wreck his soul.

"A word concerning the moral perils of the sea. With all its reckless wickedness, I am quite convinced, that, in fair circumstances, as on board our regular marine, and under masters of average character, the risks are by no means so great, as to send a lad of seventeen or twenty to New-York or Boston, to be tempted to theft and all manner of dissipation by theaters, gambling hells, and houses of assignation. The sea itself is a grand temple of elevating suggestion and devotion. Its silent waters lead to thought. Its boundless reaches remind of eternity and God. To be in port at the intervals of months cannot be so dangerous as to be within ten minutes walk of theater alley every evening. There is many a worse place where a bold, spirited youth might be than the deck of a round-the-world cruiser, 'rocked in the cradle of the deep.'

"A single further advice; whatever you do with your boy, do something substantial with him. Put him into contact with his fellow men, through some power of aiding the real progress of society by helping to supply its wants, physical, or spiritual. Do not make a mere *fancy* man of him, good for nothing but to soil kid gloves and pick up ladies' handkerchiefs. If there be a righteous ground of offense to man and man's maker, it is found in such a perversion of humanity."

TUCKER.

(*The Happy Home.*)

The Study of Natural History in Common Schools.

A series of educational meetings was held in Boston, at which distinguished persons were called upon to discuss the requirements of common schools, and the best method of meeting them. The following extracts, from the address of Prof. Louis Agassiz, on the study of Natural History, will, we think, be found interesting to our readers.

Address of Prof. Agassiz.

I wish to awaken a conviction that the knowledge of nature, in our days, lies at the very foundation of the prosperity of States; that the study of the phenomena of nature is one of the most efficient means for the development of the human faculties, and that, on these accounts, it is highly important that that branch of education should be introduced into our schools as soon as possible.

To satisfy you how important the study of nature is to the community at large, I need only allude to the manner in which, in modern times, man has learned to control the forces of nature, and to work out the material which our earth produces. The importance of that knowledge to the welfare of man is everywhere manifested to us; and I can refer to no better evidence to prove that there is hardly any other training better fitted to develop the highest faculties of man, than by alluding to that venerable old man, Humboldt, who is the embodiment of the most extensive human knowledge in our day, who has acquired that position, and who has become the object of reverence throughout the world merely by his devotion to the study of nature.

If it be true that a knowledge of nature is so important for the welfare of States, and for the training of men to such high positions among their fellows, by the development of their best faculties, how desirable that such study should form a part of all education! and I trust that the time when it will be introduced into our schools will only be so far removed as is necessary for the preparation of teachers capable of imparting that instruction in the most elementary form.

The only difficulty was to find teachers equal to the task; for, in his estimation the elementary instruction was the most difficult.

It was still a mistaken view with many, that a teacher is always sufficiently prepared to impart the first elementary instruction to those entrusted to his care. Nothing could be farther from the truth; and he believed that in entrusting the education of the young to incompetent teachers, the opportunity was frequently lost of unfolding the highest capacities of the pupils, by not attending at once to their wants. A teacher should always be far in advance of those he instructs; and there was nothing more painful than for a teacher to feel that he must repress, if possible, those embarrassing question which the pupils may wish to ask, but which may be beyond his reach.

He conceived that nothing but the inexhaustible thirst for knowledge which is imparted in human nature, enables children to sustain their interest in study, when the elements are imparted to them in the manner they are. Could anything be conceived less attractive than the learning of those twenty-four signs which are called letters, and to combine them into syllables, and then into words; and all taught in the most mechanical and hum-drum way, as if there was no sense in it! And yet, there is a deep sense in it, and there is, in those very letters, material for the most attractive and instructive information, if it were only in the head of the teacher when he has to impart it. Let him show his young pupils how men have learned to write their thoughts in words; how the art of writing was invented; in what way it was done in the beginning; how it has been shortened in its operations, which are now so rapid that the writer follows the words of the speaker with as great certainty as if he saw them already written, and had only to copy them; and then the child will be eager to emulate that, and will be ready to avail himself of the advantages which a possession of the art will give him over those who have it not.

But then, I say in order to create this interest in the child, it is not sufficient that he be taught mechanically, that such a figure is A, and that B, and C, and so on, but he is to be shown how men came to write the letters in that way, and that the earliest and simplest ways of representing these thoughts was by showing objects as they are. This point the Professor very happily illustrated and enlarged upon, and in connection with his general principle of imparting knowledge by the agency of things, he referred to an incident in his personal experience: I have been a teacher since I was fifteen years of age, and I am a teacher now, and I hope I shall be a teacher all my life. I do love to teach, and there is nothing so pleasant to me as to develop the faculties of my fellow-beings who, in their early age, are intrusted to my care, and I am satisfied that there are branches of knowledge which are better taught without

books than with them; and there are some cases already so obvious that I wonder why it is that teachers always resort to books when they would teach some new branch in their schools.

When we teach music, we do not learn it by rote, we do not commit it to memory, but we take an instrument and learn to play upon it. When we would study natural history, instead of books let us take specimens—stones, minerals, crystals. When we would study plants, let us go to the plants themselves, and not to the books describing them. When we would study animals, let us observe animals; and when we would study geography, let us not resort to maps and text-books, but take a class of children and go into the fields, and look over the hills and valleys, the lakes and rivers, and learn that a knowledge of the earth consists in knowing what mountains and hills there are, what rivers flow, what are the accumulations of water and the expanse of land. And then, having shown them that land, let us show them a representation of what they know, that they may compare it with what they have before them, and tell them that is the way in which the things they have seen may be represented, and then the maps will have a meaning for them. Then you can go to maps and books, but not before you have given them some hints as to what these things mean, and what east, west, north and south are; not merely by representing them by the letters E., W., N. and S. upon a square piece of paper, with all sorts of dots upon it, one representing Spain, the other the United States, which in their estimation have about the size of the piece of paper on which they have learned it.

I well remember that when I was a teacher at Neufchatel, I objected to the mode of teaching geography in our schools. I was satisfied it could be done otherwise, and I asked that I might have a class of the youngest children, who were admitted to the school, and teach them in another way. The Board of Education would not grant me leave, and I resorted to another means. I took my own children, my oldest, a boy of six, my girls, children of four and a half and two and a half years, one hardly capable of walking, and invited the children of my neighbors. Some came upon the arms of their mothers, others were able to walk by themselves. I took these young children upon a hill above the city, and there showed them the magnificent crescent of the Alps standing before them, their peaks piercing the clouds, and told them how far away they were, then pointed to the hills between these, and the lake at our feet; and when they had become very familiar with all these, and enjoyed the beautiful scenery, I took from my portfolio a raised map, in which the natural features of the country are attempted to be imitated in pasteboard, and turning them away from the scene, I showed them everything represented on a small scale, and they recognized the very peaks they saw before them; they saw the lake which was spreading before them as a blue spot upon that map; and so they learned the meaning of maps, and afterwards could appreciate the map which was not even raised, but only with black and white marks representing the same features. From that day geography became no longer a dry study, but a desirable part of their education.

I have undertaken to address you upon the desirableness of introducing the study of natural history into our schools, and of using that instruction as a means of developing the faculties of children and leading them to a knowledge of the Creator. Natural History, I have already said, should be taught from objects and not from books, and you see at once that this requires teachers who can read and say whether a lesson has been committed faithfully to memory, but they must know these objects before they can teach them, and they should bring these objects into the school, and not only exhibit them to the scholars, but place them in the hands of each scholar.

Some years ago I was requested by the Secretary of the Board of Education to give somes lectures on Natural History to the teachers in different parts of the State, in those interesting meetings which are known as Teachers' Institutes. I had been asked to give some instructions upon insects, that the teachers might be prepared to show what insects are injurious to vegetation and what are not, and be the means of imparting that information to all.

I thought the best way of answering the call was, to place at once an object of this kind into their own hands, for I knew that no verbal instruction could be transformed into actual knowledge; that whatever I might say would be carried away as words, and not as the impression of things—and what was needed was the impression of things. Therefore I went out shortly before the exercises commenced, and collected several hundred grasshoppers and brought them into the room, and having first etherized them, so that they should not jump about, I put one of them into the hands of each teacher. It appeared ridiculous to all. But, I have the satisfaction of saying that the examination of these objets had not been carried on long before every one became interested, and instead of looking at *me*, they looked at the *thing*.

At first, I pointed to things which could not be easily seen. They said, 'These things are too small to be seen.' I replied, 'Look again, and learn to look, for I can see things ten times smaller than those to which I have called your attention; it is only want of practice which sets such narrow limits to its powers.

Having examined one object, take another which has some similarity to it, and analyze its parts, and point out the differences between that and the object examined before, and you are at once upon that track, so important in all education, which consists in comparison. It is by comparison that we ascertain the general features of things; and it is by comparison that we reach general propositions. In fact, comparisons are at the bottom of all philosophy, and without comparisons, we never get beyond the knowledge of isolated, disconnected facts.

Now, do you not see what importance there must be in such training—how it will awaken the faculties and develop them—how it will be suggestive of further inquiries and further comparisons? And as soon as one has begun that sort of study, there is no longer a limit to it. In this way, we can become better acquainted with ourselves, we can more fully understand our own nature and our own relations to the world at large. We can learn how we are related to the whole animal kingdom, if we once begin that comparison. At first it might seem difficult to find any resemblance between man and a quadruped, or between the quadruped and birds, or between birds and reptiles, or between reptiles and fishes; and if we were to attempt to compare a fish with man, the very idea would seem preposterous; and yet, the two are constructed upon the same plan; the same elements of structure which we may trace in the fish are presented again in man, only in a more elevated combination; and it may be shown, in the simplest way, that there is a plain gradation leading up from the fish to the noble stature of man. And these comparisons are the best means of developing all our faculties, because they call out not only the powers of observation, but also the ability of the mind to generalize and at the same time discriminate. They call out, in fact, all those abilities which distinguish one man from another, which give men power over other men—the ability of discriminating judiciously and of combining properly—the ability of ascertaining the differences as well as the resemblances. The one constitutes the art of observing; the other constitutes the art of philosophy, the art of thinking.

The difficult art of thinking can be better fostered by this method, than in any other way. When we study logic, or mental philosophy, in the text books, which we commit to memory, it is not mind which we cultivate, it is memory alone. The mind may come in, but if it does, it is only in an accessory way. But if we learn to think by unfolding thoughts ourselves, from an examination of objects brought before us, then we actually learn to think, and to apply this ability to think to the realities of life.

It is only by the ability of observing for ourselves that we can free ourselves from the burthen of authority. As long as we have not learned to settle questions for ourselves, we go by authority, or we take the opinion of our neighbor;—that is, we remain tools in his hands, if he chooses to use us up in that way, or we declare our inability to have an opinion of our own. And how shall we form opinions of our own otherwise than by examining the facts in the case? And where can we learn to examine facts more readily than by taking at first those facts which are forever unchangeable, those facts over which man, with all his pride, can have no control? Man cannot cause the sun to move in space, or change the relations of the members of the solar system to each other, or make the seed to sprout out of its season, or make the oak produce apples. Man must take the phenomena of nature as they are; and in learning this, he learns, truth and humility. He learns that what exists in nature is true, and to value truth, and that he must bow to what is,—to what he cannot change in the nature of things. But, at the same time, he learns how to ascertain what things are; and how they came to be; and while he learns that, he acquires a power which can never be lessened, but which is ever increasing in proportion as his opportunity for further observation is increased.

It is only by the development of all his faculties that we can make man what he may be; it is only in giving to his mind the food which will nourish all his faculties, that we accomplish this end. If we only cultivate the imagination, the taste, the memory, the culture of the senses is neglected, the ability of observing is neglected, and all those abilities which man may acquire by the culture of his senses, by the art of observing, are left untrained.

The reason why we so frequently see scholars who do not do well in school is because their abilities lie in another direction from

that which suits others; it is because one great element is left out of the system of education—that which appeals to the senses, to the power of observation—that which requires activity and manipulation; and while only the imaginative faculties and the memory are cultivated, which will suit some minds perfectly, and be the very food they want, others are left starving for want of the food which their nature requires.

I say, therefore, that in our age, when the importance of the study of Natural History is so manifest, by its many applications to the wants of man, I would add that one means of culture to our system of education, and add it as soon as it is possible to educate the teachers who may be capable of imparting the information; and that can be done easily by following the same wise method which has been followed in the introduction of every other branch. How was it when Physical Geography was introduced into our schools? One man went about from school to school to give instruction in that branch.

He had his pupils, and those pupils are now teachers. Do the same thing now. Select a few men who have the aptitude and the practical skill to teach, and let them go forth, to the Teachers' Institutes at first, and then into the schools. Let them show what can be taught, and very soon the information will be spread abroad, the ability to teach will be acquired, and in a few years we may have a system of education embracing that important branch that is wanting now, and which I believe to be really one of the most important additions which can be made to any system of education.

Suggestive Hints towards Improved Secular Instruction (1).

BY THE REV. RICHARD DAWES, A.M.

I.

First Lessons.

Having taken a considerable interest for some years in the daily teaching of my own village school, I am, from the success which has attended it, induced to offer the following outline of what is taught, and the manner of teaching it, to the attention of teachers in our elementary schools,—as being likely to be of some assistance, at all events to the less experienced among them, and perhaps not altogether useless to those whose qualifications and training in our Normal Schools may have better fitted them for their work.

And first, it is of great importance that the teacher should be able to interest the children in what they are doing; and this, if he take a lively interest in it himself, he will find no difficulty in doing, even when teaching what is looked upon as the mechanical part of reading; particularly if he know how to mix with it oral instruction of a conversational kind, and has any judgment in selecting subjects to talk to them about,—such as the domestic animals, birds, etc., and other things, with which they are brought in contact in their habits, manner of living, and how useful to man,—the one attaching itself to places, the other to persons; then perhaps relating some short and amusing anecdote of the dog or other animal, for which a good teacher would be at no loss, and would always see, from the countenances of the children, whether he was interesting them or not, and would go on, or leave off, accordingly.

And again, if a cow or horse is mentioned—drawing them into a description, leading them to contrast them,—a child will perhaps say: A cow is a four-footed animal. Teacher: Yes, but so is a horse; and then will point out something in which they differ. The child will then try again—a cow has got horns, but a horse has not; then the teacher will point out that some cows have no horns, and will lead them on into things, in which the cow and horse really do differ—such as the hoof; the cow having a cloven foot with two hoofs on one foot: what other animals have the same?—difference in the way of feeding; a cow chews the cud—ruminating: does the horse?—what animals do?—sheep, deer, etc.—What difference in their teeth; has a cow front teeth in the upper jaw? a sheep? a horse? etc. What do you call a number of cows together? what of sheep?—of deer?—of swine?—of bees? What are the habits of animals going many together? mention those you know which do so. The flesh of the sheep called what?—of the ox? The particular noise of the sheep, cow, horse, swine, etc.? bleats, bellows, neighs, grunts. The young of a cow? a calf;—and its flesh? veal. The young of the horse, what? a foal. Spell calf, calves: write them down on your slates. And in this way children may be led into a tolerably correct idea of the thing in question, and will be partly able to describe it themselves; all this they tell again at home, which has its use.

There is something extremely pleasing and interesting to children in having their attention called to the habits—difference in structure—in covering—in manner or feeding—in fact, all possible outward differences, a knowledge of which can be acquired by the eyes and by the hands (seeing and feeling) of the beasts and birds about them; and of this a very strong proof is given, in what I have related in connection with my giving to a class of boys a lesson of the following kind, which was suggested by some observations in a book on Natural History, by the Rev. L. Jenyns, on the difference of the way in which animals with which they are acquainted rise. How does the cow get up?—hind-feet or fore-feet first? how the sheep? how the deer, etc.? Some will answer rightly, some wrongly; but all think and are alive to the question. Then pointing out to them; that all these animals rise with the hind-legs first, and that they belong to the class of ruminating or cudchewing animals—and that if it is true that in one, two, three, four, etc., particular cases of animals which chew the cud, that they rise in this way, whether it would not be likely to be true in all cases—showing them the way of getting at a general rule, from its being true in a number of individual instances.

Then again: How do the horse, the pig, the dog, etc., rise? hind-feet or fore-feet first? do they ruminate? have they front teeth in the upper jaw? The teacher would point out how they differ from the ox, the sheep, etc.

Children living in the country are very much alive to this kind of instruction; and I found that several of them in going home from school had observed the animals when rising, and gone out of their way to make them get up; thus bringing to the test of experience what they had been taught, and commencing at this early period, habits of observation on things around them; which, in after life, may add much to their happiness, and open out sources of enjoyment to them, to which they have hitherto been strangers.

Happening to mention that some observers of the habits of animals thought that sheep more frequently lie down on the left side than on the right, I find that many of them count a flock of sheep, as to the side they are lying on, when they see them lying down in the fold or in the field, and I have no doubt will, in time, have counted such numbers as may balance their opinions one way or the other.

Mr. Jenyns says, that he mentioned to a farmer, who had passed all his life among animals belonging to the farm, this difference in the mode of rising in the horse and in the ox—the sheep and the pig—and generally in the cud-chewing and non cud-chewing animals, but that he (the farmer) was not aware of it; and I recollect myself many years ago in college combination-room, a conversation arising as to whether a sheep or a cow, had a double row of teeth in front, similar to the horse, when, strange to say, although every one seemed to know that it was the case with the *horse*, yet not more than one or two were aware that the sheep had not; and so many doubts were started about it, that two young men of the party walked a considerable distance to a field where there were some sheep, and caught one of them in order to examine it.

When able to read with tolerable ease, and when they have acquired some idea of reckoning up small numbers, which they very soon do, it will be found extremely useful occasionally to call their attention to the number of letters in a word—pointing out which are vowels, and which are consonants; for instance in the word *number*—how many letters? six. How many are vowels? two. Then how many consonants: some will reckon by looking at the book; others, and these are the sharp ones, will reason, and say; as there are six letters, and two of them vowels, the remaining four must be consonants; making it a question in arithmetic.

In this way, very great interest may be excited; and when such words as *bounty, city, yearly*, occur, the teacher should point out, that at the end of words *y* is a vowel; at the beginning, a consonant; and then ask them to quote all the words they know beginning *y* or ending with *y*: this gives them great facility in acquiring words; such questions, as, What is the first letter in such and such a word—what is the last—how many syllables in the word—what is the middle syllable—what is a syllable made up of? Of letters—what is a word made up of? Of a syllable or syllables. This interests much more than the ordinary way of reading without observation, and keeps up the attention.

Again, call their attention to the page of their book—say it is page ten, eleven, twelve, or thirteen—how many leaves? five, five and a half, six, six and a half: and from this they very soon will gather that when the page is denoted by an even number there is

(1) This is the first of a series of extracts from the valuable book under that title.—London 1857, Groombridge and sons.—Paternoster Row.

an exact number of leaves, and no odd page remaining; hence the teacher will point out to them, that all even numbers are divisible by two without remainder, and that an odd number, when divided by two, always leaves a remainder of one. Occasionally making them reckon the leaves, in order to show that it agrees with their arithmetic, is good; in fact, there are innumerable ways in which the common sense of a teacher might be called forth.

It will also be useful to give them correct ideas of the kind suggested by the following question: Where does the sun rise? point in the direction. Where is he at noon? Where does he set? When is he highest in the heavens? In what direction is your shadow cast in the morning; in what direction at noon?—in the evening? In what direction do you come to school?—go home? and as they come, of course, from very different directions, this becomes more instructive. Point to your home—towards sunset. Are the days lengthening or shortening? Will to-morrow be longer or shorter than to-day? In what direction is such and such a parish or striking object? How the parish in which they live is bounded on the different sides, etc. In this way children may be made to get correct ideas as to east, west, north, and south, and the intermediate points.

The teacher should also occasionally call one of them forward, and, putting a piece of chalk into his hand, tell him to draw a line on the floor running north and south. What is the first letter of *north*, and what of *south*? put N and S then at the proper ends; how does he know the south from the north? draw a line through the middle running east and west—another half way between the east and the north—the east and the south, etc. This they are all pleased in being able to do themselves, and there is scarcely a boy in the smaller classes that would not do it, with great accuracy; of course the teacher might vary it, by telling a boy to begin and make a ring (circle) on the floor as if he were going to play marbles; then to draw a line through the centre due east and west—another north and south—and this way has an advantage; as they will get to something like the figure of the compass.

I have observed also, that they take great interest in having their attention drawn to the particular points in which the sun rises and sets; for instance, that on a certain day in March he rises due east and sets due west; that every succeeding day up to the 21st of June he rises farther and farther to the north of east, and sets a little farther to the north of west, on each succeeding day, and up to this point the days go on increasing: he then returns in the same way, rising nearer to the east and setting nearer to the west on each succeeding day until the 21st of September, when he again rises due east and sets due west: then up to the 21st of December rises farther to the south of east and sets farther to the south of west, and on each succeeding day describing a smaller arch in the heavens and the days shortening.

This becomes a matter of daily observation, as a thing which they can see with their own eyes, and interests them accordingly.

Again, the teacher should point out how their shadow is longest when the sun is in the horizon—diminishes up to noon, when the sun is highest, and then increases again until sunset—what it would be if the sun were over their heads, etc.

The following verse, from one of the Lessons, will illustrate this:—

> Trudging as the ploughmen go
> (To the smoking hamlet bound);
> Giant-like the shadows grow,
> Lengthen'd o'er the level ground.

Questions like the following are also instructive. If the sun rise at five o'clock, half-past four, three, etc., in the morning, at what time will he set? getting them to understand what mid-day means, and that there are as many hours from sunrise to noon, as from noon to sunset—that the difference between the hour of rising and twelve o'clock will give the hour at which he sets.

As soon as children are able, the teacher should endeavour to give them correct ideas of the measures of time, of space, and of volume; ask them, for instance, What is a year? they will answer, twelve months. What is a month? four weeks. What is a week? seven days. What is a day? twenty-four hours. What is an hour? sixty minutes: and thus driving them into a corner, they find out the answer was not the one expected, and begin to think on the subject: the teacher should then point out to them, that a year is a measure of time, as a yard is a measure of length; that a month, a week, a day, etc., are also measures of time, but of less duration than the year; of course they will afterwards be made to understand what duration of time the year does measure: he should then point out the great conveniences of the subdivisions of time for the purposes of civil life.

I was pleased some time ago in going into the school, to see the contrivances of some of them in making a clock-face on paper, which had been the evening task for one of the lower classes; what struck me was, the great regularity of an inner and outer circle for the face, in many instances as if made with compasses; they had recourse to cups or saucers, or any other circular things of unequal dimensions in their cottages, but of a size which came within the compass of their paper on which they placed them, and then ran the pen round the edges; this shows that man is a contriving animal, and I have no doubt the task afforded amusement and instruction both to parent and child.

The teacher should exercise the children on the clock-face, pointing out that the minute-hand goes round twelve times for the hour-hand once; that the circle on the face is divided into twelve equal parts; that while the minute-hand goes once round the whole circle, the hour-hand would only move from twelve to one, or 1/12th of the whole; and when it had gone twice-round, the hour-hand had arrived at two o'clock, or 2/12ths; when three times, at three o'clock, or 3/12ths, and so on; and when the minute-hand had gone twelve times round, the hour-hand would have moved over twelve of these division, or 12/12ths: in this way they by degrees get some idea of fractions.

In the same way as to measures of length, giving them a correct idea as to the length of a yard, a foot, an inch, etc., and how many times the smaller measure is contained in the greater; and here the teacher would do well to have a two-foot rule, and make first one and then another of the children measure the dimensions of the room—the length and breadth of the door-way, or any distance between one fixed point and another—to show them to what particular purposes in civil life these measures are used; that the yard is the measure by which they buy calico, flannel, fustian, cloth, cordage, etc, all things for the puspose of clothing: the length only being measured, the breadth being of a standard kind.

That in speaking of the size of a room, of a garden, of a field, both length and breadth must be taken into account—of a peck, a bushel, a quart, etc., length, breadth, and depth—and the particular things measured by these should be pointed out.

(To be continued.)

SCIENCE.

[The following paper on Donati's comet, was inserted in the *Canadian Naturalist* for December, and has been extended and illustrated by the author for this journal.]

Some Observations on Donati's Comet for 1858.

BY CHARLES SMALLWOOD, M.D., LL.D.,

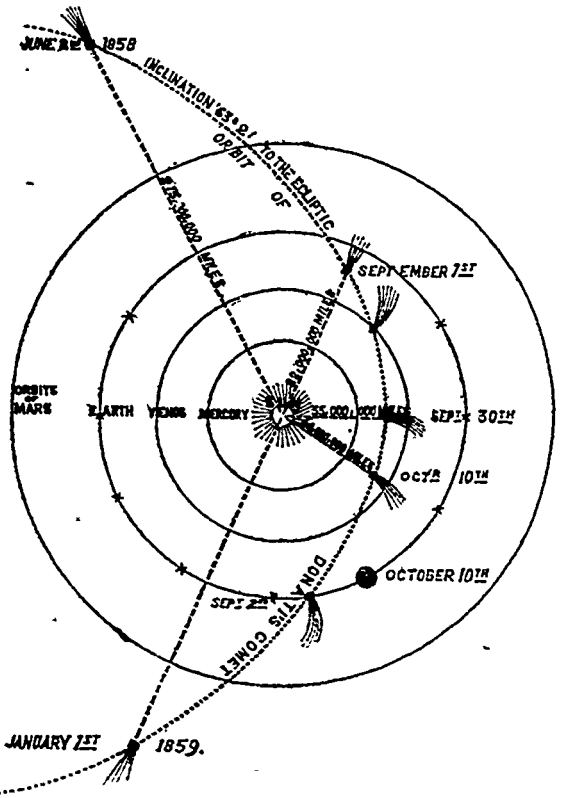
Professor of Meteorology in the University of McGill College, Montreal.

(Presented to the Natural History Society).

The measured limits that were set to the orbit of our earth, by the Creator's fiat, and which tends to develop with remarkable regularity the budding flowers of spring, and to ripen the golden fruits of autumn, and which brings the returning seasons of "summer and winter," is one of those permanent and perpetual laws which mark the wisdom, the power and the beneficence of the Almighty Architect. To contemplate the starry host night after night, seems to have been the primitive and favourite occupation of the Chaldean shepherds while in the pursuit of their pastoral duties and to admire and to study its grandeur, is still the sublime occupation of many who when the dim veil of night hushes the busy thoughtless world to slumber, search in the all but fathomless depths of space, some bright speck or point of light removed from the observer to a distance which the human mind cannot embrace, even the thoughts of its immensity, and those light has taken even thousands of years to reach us; and this distant spot of light is to us fixed in its position ever since the human eye, aided by the telescope, has gazed upon it, and the *Micrometer* has marked its position with the greatest accuracy, and hundreds of those minute and distant objects have been yearly "*catalogued.*" The earth has undergone its changes, but the glorious canopy of the heavens has remained unchanged.

Another class of heavenly bodies move—revolve in orbits like that of our earth—round the common center of our system—the sun. The limits and courses of these wandering bodies, the night-watchings of the astronomer has pencilled and measured as with a

span, and weighed them in the balance. A very few years ago the number of these bodies—the planets—did not exceed *five* but recently the catalogue has increased to *sixty-one*, and but a few years have passed away since à Leverrier, with a colossal stride placed one foot as it were on the centre of the sun and the other foot on the surface of the remotest star of our system, and pointed out the spot where a new planet—*Neptune*—was to be found, such has been the modern progress of the science.



At certain periods of the world's history another class of erratic bodies, called comets, have appeared in the celestial vault, whose perihelion passage was in comparative close proximity to the orbit of our earth, while its aphelion circuit far exceeded the immense distance of those remote planets already mentioned. Bodies of this nature in all ages of the world have attracted the attention of astronomers and filled the wondering inhabitants with awe and amazement, appearing for a few nights and even at noon day with excessive splendour, and then *apparently* vanishing into the depths of space for ever. The written history of the appearance of comets has always been associated with some disaster, hence the popular fear at their appearance. (I need only call to recollection the panic which spread over the United States and the Continent of Europe last year.)

The description and appearance of these bodies have often been distorted by the fears of the historian and the excited imagination of the ignorant. So far back as 596 years before Christ, the mother of the Chinese Emperor, Yu, considered the comet of that year as auspicious for the future Empire and the yet unborn Emperor; but modern astronomy has robbed these bodies of their terrors, and they are now considered as forming a part of our solar system, and appearing at certain intervals of time. To trace the orbits of these bodies and predict their return involves, calculations of no small labour. Their light density subjects them during their circuit to perturbations from all other bodies which can act upon them, and deflect or retard their course; hence the difficulty in predicting their return. But here again science has once more triumphed, and a Halley, a Biela, and an Encke, have traced their orbits, measured their distance, and predicted their return with the greatest accuracy. They have calculated their elements.

In July, 1264, a comet, whose tail was 100 degrees in length and of great brightness, made its appearance in July in the constellation *Cancer*, passing through *Auriga* and *Taurus*; its orbit was below the plane of the Ecliptic, and its aphelion extended twice the distance of Neptune. It disappeared on the night of the 2nd of October, the night that Pope Urban IV. died.

Helvétius, Fabricius, Lalande, Pingré and others, have collected numerous records of a remarkable comet which appeared in March 1566, which is described as blazing with uncommon splendour, like a globe of flame, about equal to half the moon, and displaying a vast train of light. It first was seen near *Spica Virginis*, and soon advanced with great rapidity and a retrogade motion (a movement contrary to the motion of the planets), towards the north, as far as *Ursa Major*. It then advanced towards the south, when it was gradually lost to view. It was seen for nearly two months. Its position seems to have been marked with the accuracy that the use of the instruments used in those days permitted, and it is said to have moved so rapidly as to pass over 75 degrees, from east to west—and 30 degrees from south to north—in four days. It has been considered to have been one of the greatest comets ever seen.

A body of such a nature and with such appearances, was, as a matter of course, associated with some great disaster; and history has associated it with the death of two great German princes, diseases in cattle, famine, pestilence and war. The emperor Charles V. took fright, abdicated his throne, imagining that its appearance predicted his death, and actually made preparations for his final departure from this world; but Kepler says he survived some years after. Its distance from the sun, at its aphelion, was 8,500,000,000 miles, while its perihelion passage was within the orbit of Venus. This famous comet has received the name of Charles V. comet, from the fact of his abdication at its advent.

The object, in referring to the history and appearance of only two of these bodies, among some hundreds that have been recorded, is for the purpose of directing attention to its probable re-appearance, and to contrast its movements with those of Donati's comet of 1858, as the impression has extended that Donati's comet was in reality the *expected* comet of 1566. As far back as 1351, Mr. Dunthorpe of Cambridge, England, in comparing the elements of the comets of 1264 and 1556, found them so similar, that the two were considered by him as identical, and that it was a comet whose period was about 292 years, making its re-appearance in 1842.

Mr. Barber of Etwell, in following up these calculations found that Dunthorpe had not taken into account the perturbations occasioned by Jupiter and Saturn, and he found that between the years 1556 and 1592 their united attraction would diminish the period of its appearance 263 days, but that between 1592 and 1806 it would be increased, by the action of Jupiter *alone*, no less than 751 days, or more than two years.

Babinet of Paris has also published his results, and found that the orbits of the comets of the years 304, 685, 1264 and 1556, have some appearance in common, and have always been marked with an extraordinary display.

Bomme of Middleburg has re-calculated their orbits, and says its re-appearance may be expected in August, 1858, with an uncertainty of two years.

Hind of Bishop's Observatory, Regent's Park, has paid especial attention to the orbits of the comets of 1264 and 1556, and after many intricate and careful calculations, taking into account the perturbations caused by Jupiter, Saturn and Neptune, has also come to the conclusion that its appearance would probably be in August, 1858, with an error of two years.

The opinion of this eminent practical astronomer has been the subject of severe criticisms, owing to the misrepresentation of what has been called "*his predictions*," which have in reality been nothing more than opinions and probabilities reduced from deductions and calculations worked out by himself upon the orbits of these comets, which are bodies of so uncertain a nature.

Hock of Leyden has recently raised some objection to the views of Hind on the identity of the comets of 1264 and of 1556; but Hind, in a letter written to me under the date of the 12th May, 1857, says: "I still maintain the opinion that I have so long held respecting the identity of the comets of 1264 and 1556."

The re-appearance of this remarkable comet will throw much light upon the perturbatory influences of those heavenly bodies, which may be in proximity to its orbit, and it can now be scarcely doubted that Donati's comet of 1858 was *not* the expected comet of 1556.

The comet which has so recently visited us, and which has now passed from our view was discovered by Donati, at Florence, on the 2nd June in right ascension 9h. 25m. 12s. North Polar distance 67° 15'. Its appearance was a round, bright, nebulous patch of light, with a condensed centre, and without any tail. It was seen at Berlin, by Bruhns, on the 7th August and on the 23rd of the

same month it was visible at Cambridge, in Engiand. It was seen in Canada as early as the 6th and 7th of September. On the 12th, at 8 p. m., M. T., its appearance was bright and nebulous, the tail was slightly curved upwards and it was near the star *Xi* of the constellation *Ursa Major*, being nearly in a line with the pointers *Merak* and Dubhe. Its position (1) was right ascension, 11h. 20m., and North Polar distance 54° 20'. It was seen after sunset and before sun-rise (which led to the supposition of two distinct comets.) Its appearance gradually increased both in brightness and magnitude, until the 10th October. On the 28th of September, at 8 p.m., its approximative places were R.O. 12h. 32m. N. P. D. 57° 10'. Its tail extended over nearly 13 degrees and was calculated to be upwards of eighteen millions of miles in length. It was then in the constellation *Canes Venatici*. On the 2nd October its R. A. was 12h. 30m. N. P. D. 66°. Its tail was nearly 27 degrees in length curved and reaching to *Eta in Ursa Major*. It passed over a cluster of small stars in *Coma Berenices*, which were visible through it. Its calculated distance from us was 50,000,000 of miles and its course was at the rate of 20,000 miles per minute. On the 4th October it was near the bright star *Arcturus* and nearly rivaled it in brightness. On the 11th of October it passed from North to South declination. On the 10th, at 6:30 M. T., its R. A. was 15h. 56m. and N. P. D. nearly 90°. It was now at its maximum of brightness and was a most brilliant and magnificent spectacle. Its tail was nearly 50 degrees in length curved like a Turkish sabre and passing upwards through the constellation *Ophiuchus*, a line to the star *Phi* of that constellation apparently bounding its convave edge. Its convex border was much brighter and better defined than its concave, it extended upwards nearly as far as *Teta Herculis*. It crossed the earth's path on the 18th and was nearest the planet *Venus* on the morning of the 18th.

On the evening of the 18th it was faint and near the horizon and required the aid of powerful telescopes to distinguish it, although it was seen as late as the 22nd of October in some of the United States observatories South of us. On the 21st its N. P. D. was 118° 15', having passed over upwards of 100 degrees in its path. At each observation a dark shade of light could be seen passing from the body of the central nebulous mass, triangular in shape on which the body of the comet projected a shadow on the surrounding coma, the direction of this shadow was upwards.

From some recent calculations of Bruhn's, of Berlin, he is of opinion that the period of its revolution round the sun exceeds 2,000 years. Loewy has fixed its period of revolution at 2,494 years.

The chinese records make mention of a comet which appeared 331 years before the christian era, associated as customary with the popular belief of wars and disasters, and corresponding in date with the battle of Arbela, these records also make mention of the appearance of remarkable comets both at an earlier and a later date.

Donati's comet seems to have surpassed the comet of 1811 both in size and brightness; the extreme length of its tail, according to Sir Wm. Herschell, was only 25 degrees, while that of Donati's on the 10th of October was nearly 70 degrees in length. The night of the 10th was peculiarly fitted for observation, and nothing could have exceeded the magnificent blaze of light that proceeded from both the nucleus and ta

Its appearance, course, motion and disappearance would tend to the opinion that it is a distinct body from the comets of 1264 and 1556, so that the appearance of the body that excited so much wonder at those periods of time, and which has occupied the attention of mathematicians and astronomers up to the present date, may yet be looked for.

The superior advantages that we now possess of observation have not been lost upon Donati's comet, and its place has been so accurately laid down, that its reappearance cannot be mistaken; and the calculation of its orbit may in a measure tend to throw some light on the perturbations that may influence all such like bodies.

Several other small comets were also visible during the year, but excited little attention, owing to their small size.

(The Rev. Dr. Williamson, of Queen's College, Kingston, has recorded some very accurate observations on the comets place; the last observation taken by him, was on the 18th of October, R. A. 16h. 57m. 25s., declination South 21° 51'. The Bond's of Cambridge, U. S., and the staff of observers under Dr. Gould, at the Dudley Observatory, Albany, have also made some very important observations, which are published in the "Astronomical Journal" and the "Mathematical Monthly," and to which I am indebted for these extended remarks. According to the observations made at Cambridge, U. S., the diameter of the nucleus, on the 24th of September, was 1080 miles, which increased till the 2nd of October and reached the diameter of 1560 miles, the least observed diameter of the nucleus occurred on the 5th of October, when the comet was at nearly its maximum of brightness, the external envelope varied from 5800 to 14,100 miles in breadth. The comets of 1744 and 1811 possessed also these envelopes. The shape of its orbit is nearly that of a parabola, the longest diameter about 35,100,000,000 miles, and the smallest diameter about 2,700,000,000 miles, it was seen by M. H. P. Tuttle, at Cambridge, on the 28 of June, and was detected by H. M. Parkhurst, of Perth Amoy, N. J., on the 29 of June and on the 1st of July, by Miss Mitchell, of Nantucket, shewing an amount of attention and research reflecting much honor on our American astronomers. The observations were kept up at Cambridge until the 20th of October, when the comet became too low for observations. The last measurements which I have been able to collect was that of the 17th December, R. A. 298° 51'467, declination South 53° 35'501 for Washington mean noon. The following periods of its revolution have been computed: Watson, 2415 years; Bruhns, 2102 years; Lowey, 2495 years; Graham, 1620 years; Brunnow, 2470 years; Newcomb, 1854 years, and Searle, 2338 years, the last computations are from three normal places, at intervals of 62 days: the first is from eight observatories, at Berlin, Florence, Padua and Vienna; the second from six observatories, at Washington and Ann-Arbour, and the third from nine observatories, at Bonn, Gottingen, Markee, Washington and Ann-Arbour.

On the 14 September, Chacornac succeeded in obtaining traces of Polarization, by means of the large Refractor without an eyepiece, and Professor Govi found in the light from the 27th September to 16th of October, strong marks of polarization, the plane coinciding nearly with the axis of the tail.

The only record in point of climatic difference during the past year, was the excessive rains of July and a somewhat lower temperature than the usual average. No marked difference was observed during the time that the comet was at its nearest proximity to the earth; (that is to say, on the 10th of October).

(1) The measurements are taken only approximatively from stars in its neighbourhood.

OFFICIAL NOTICES.

SEPARATION AND ANNEXATION OF SCHOOL MUNICIPALITIES.

His Excellency, the Governor General in Council was pleased, on the 3rd of May instant—

1. To erect into a Scholastic Municipality the townships of Ham and South Ham, in the county of Wolfe, with their present limits.

2. To erect into a Scholastic Municipality the township of Peterborough, in the county of Maskinongé, which township is bounded as follows, to wit: partly by the Fief Hunter, partly by the Fief Hope, and partly by the seigniory of Lanaudière, towards the west by the township of Brandon, towards the north by wild lands of Crown, and towards the east by the toweship of Hunterstown.

3. To annex that part of the thirteenth range of Arthabaska, which is situate on the south side of Rivière-du-Loup, to the Scholastic Municipality of North Halifax, in the county of Megantic, with the exception of the lands of Leon Brunelle, Joseph Leblanc and François Marcotte, forming part of section number four of the Scholastic Municipality of Stanfold; these erections and annexation to come in force only after the First of July next.

—

SITUATION AS TEACHER WANTED.

Mr. E. Talham, who has obtained a model school diploma and is qualified to teach English, French and all branches required to be taught in model schools, is desirous of obtaining a situation as teacher on or before the 1st of July next. Satisfactory recommendations can be furnished.

Address: Mr. E. Talham, St. Ours, County of Richelieu.

—

Education Office, 20 April, 1859.

NOTICE TO DIRECTORS OF INSTITUTIONS CLAIMING AID ON THE GRANT FOR SUPERIOR EDUCATION UNDER THE ACT 19 VICT., CAP. 54.

1st. That this year, no institution shall be entitled to or receive any aid unless the return, and demand therefor, be fyled within the period

prescribed, that is to say, before the first day of August next. No exception will be made under any pretence whatsoever.

2nd. Acknowledgment of the receipt of such return and demand will be made immediately to the party forwarding same.

3rd. Any party not receiving such acknowledgment within eight days after mailing the documents should make enquiries at the post office and also at this office, failing which, such demand and return will be deemed, as not having been sent in.

4th. Blank forms will be transmitted during the first fortnight in June next, to all institutions now on the list, and institutions not receiving them during that period, must apply for them at the office of this department.

5th. Institutions not on the list, who may be desirous of making the necessary return and demand, can obtain the requisite blank forms by applying for them at this office between the 1st and 15th of June next.

PIERRE J. O. CHAUVEAU,
Superintendent of Education.

JOURNAL OF EDUCATION.

MONTREAL, (LOWER CANADA) MAY, 1859.

The School Law Amendment Act of 1859.

We publish in this number at full length a short statute passed during the last session of parliament. We particularly call the attention of school commissioners and trustees to the power which is given to them to raise to any amount the tax on immoveable property for school purposes. This provision has for its object to relieve a certain number of school municipalities who having a very small share in the school grant, could not work the school law even with the assessment when twofold the amount of their share, which they were permitted to levy by the act of 1856. The school municipalities are also empowered to levy a larger sum than heretofore for the building of school houses. From the zeal which has been shewn of late in almost every municipality, we have no doubt that many will take advantage of these new provisions.

The other clauses of the act refer to the appointment of Boards of Examiners and to the powers of the Council of Public Instruction.

Normal Schools.

It is with much pleasure that we insert in our columns the following article on Normal Schools, which appeared in the *Abeille*, a publication written and published by the pupils of the Quebec Seminary. Our pleasure is the more lively because, besides the excellent effects it may produce on those who will read it, we consider the generous sympathies that the youth of our colleges express for the body of teachers. The writers of the following lines will, at no distant period be priests or influential citizens; perhaps many of them may wield our destinies as legislators or as ministers. In these positions, it will be in their power to raise the teacher to the level of his sublime calling, by obtaining for him that personal consideration, of which he has been so long deprived, and the increase of his material comfort. May they then recall to their minds the generous spirit breathed in this, their youthful effusion, and may their conduct be conformable to the sentiments therein expressed, and which are, we doubt not, held by all the youth of our colleges. Their career moreover, though it may in many points differ from that of teachers, will it not have had the same starting place and shall it not have the same end? Religion, country, science are they not, for the one as well as for the other, at the outset to protect, at the close, to crown their noble efforts?

"Lower Canada has not been backward in the encouragement of material progress; railroads run from one end of the country to the other; electricity annihilates the distance between her towns and villages; innumerable steamers plough her waters; and the industry of man victorious, over the obstacles of nature opens her immense lakes to the vessels sailing on the ocean. But in paying to industry its just tribute, she shuns the fatal consequences which it often produces, as we ameliorate our means of existence, education, that bread of the intellect makes rapid progress. You need but open your eyes to perceive it. While the Laval University gave to superior education a powerful impulsion, the Normal Schools announced a new future to popular education. We can assure without hesitating that the Normal Schools are a precious acquisition to the country. Our gratitude is due both to the promoters of this institution and to the men, who by their prudent direction have succeeded in placing these schools in the way of progress, in which we now find them.

Without an institution of the kind the education of the people would have long remained stationary. A few districts might, by the sacrifices of a few devoted men, have received a more extensive instruction, but the radius of education would not have extended. To promote and spread education in a country, there must be unity in the method of instruction, and equal profit in the progress made. Moreover is not the success of the scholars dependant on the teachers? Are we to believe that this function is equally well filled by any person? It is certainly not so, though totally unqualified many think themselves capable of teaching. The art of teaching youth is a difficult art and but a few men possess it. It is as honorable as it is difficult, hence it should be worthily filled, so that it lose not of its dignity by the ignorance of those that practise it. A man is not permitted, no matter how learned he may be in other branches, to perform the duty of lawyer or of notary, without previous study and a satisfactory examination. The state would severely punish the temerity of him, who having followed no course of lectures in medecine, would practise the art. Indeed there is not a craft how humble soever, which does not require an apprenticeship. Is the art of instructing youth, an art so full of importance to the child, to the parent, and to society, is this the only one for which we are to suppose an intuitive science?

Such are the motives that gave rise to the establishment of Normal Schools. There our teachers will be prepared for their future duties. The Superintendent in his annual report, gives us an idea of the order and of the activity which reigns in those schools. We are surprised that in the short space of a scholastic year, the students could master so many different branches and yet make such rapid progress in each branch. Persuaded that science alone is not sufficient to form good teachers, the superiors keep a strict watch on the moral conduct of their pupils. And can there be anything more necessary to the teacher, who will one day be called to fill the place next in rank to the parish priest, than an instruction which shall enable him to supply the moral and intellectual wants of the children? Example is childhood's first book, and the one that leaves the deepest impression.

The teacher formed by the Normal School has, thus, two titles to our confidence: we are certain of his capacity and of his virtue. Truly this is a powerful recommandation. Already many have appreciated its value; they have understood the importance of the duty confided to the Normal School. From all parts, pupils full of zeal and of love for study, quitting their ease and liberty, have entered the school-room, resolutely determined to overcome the difficulties lying in their path, many of mature years to whom study presented many obstacles. Such was the eagerness that the directors of the Normal School were obliged to refuse many applicants, owing to want of place to receive them.

There remains however an obstacle which may impede the onward march of education, it is, false economy. We meet with some men, happily few in number, to whom science and the best recommendations are as nothing when compared with a small salary. Let two teachers come forward, one learned, rich in personal qualities, the other ignorant, unknown, but determined not to fix a high

price on his services, they would not hesitate to choose the latter, who possesses the essential condition, in their opinion. You will allow that this is a deplorable way of judging of men and of things. They must have but a slight knowledge of the value of education, to thus sacrifice it to a vile profit. Let us hope that those calculations of a blind economy will disappear with the onward march of education, thanks to the Normal Schools.

Permit us, then, in concluding to wish the pupils of the Normal Schools the success which their zeal and self imposed sacrifices merit. Their calling is an honorable calling. They have to model the nobler part of man. The sculptor chisels the shapeless marble into an appearance of life; the teacher must draw the mind itself from the darkness of ignorance. We admire the citizen who devotes himself to the service of his country, the soldier who bleeds in her defence; but the teacher, who dedicates the better portion of his life, to a most laborious and painful vocation for the purpose of enlightening and bringing up a new generation, to be industrious and worthy citizens of their country, most certainly merits equally the esteem, the respect, and the encouragement of every religious and patriotic member of society.

Report of the Chief Superintendent of Public Instruction for Lower Canada for 1857.

(*Continued from our last.*)

To improve the condition of the teachers has always been a constant aim of the department. The irregular method of paying their salaries had always till now been one of the chief obstacles to the progress of education. This irregularity was produced partly by the negligence of the school-commissioners, partly by the forced tardiness of the department in distributing the half yearly aid, in consequence of the system adopted; a system which required the passing of an order in council for the payment of the share of each several municipality, when and as soon as the commissioners should have conformed to the law by transmitting their report. The legislation of 1856 obviated this inconvenience, by placing the entire amount at once, at the expiration of the half-year, in the hands of the superintendent. The following table will shew the progress made in the distribution of the grant, in consequence of this important reform.

A table shewing the dates of the payment of the annual grant to the various municipalities in recent years.

Half yearly payments		Dates of payment.	Month in which payment was made.	Number of municipalities paid.	Amount paid. £	s.	d.
Second	1854,....	1855	March,...	165	8133	12	8
Second	1854,....	1855	April,....	102	2825	8	0
Second	1854,....	1855	May,.....	59	1680	16	9
Second	1854,....	1855	June,....	14	231	3	6
Second	1854,....	1855	August, ..	18	495	16	11
Second	1854,....	1855	October,..	15	450	5	3
Second	1854,....	1855	December,	5	96	8	1
First	1855,....	1855	August, ..	338	10219	3	10
First	1855,....	1855	October,..	101	3349	1	9
First	1855,....	1855	December,	22	505	15	1
Second	1855,....	1856	February,.	383	10898	18	0
Second	1855,....	1856	May,.....	79	2330	7	3
Second	1855,....	1856	July,.....	14	399	6	6
Second	1855,....	1856	August, ..	17	577	1	11
First	1856,....	1856	August, ..	421	12255	13	1
First	1856,....	1856	September,	38	808	3	11
First	1856,....	1856	October, ..	17	441	14	11
First.	1856,....	1856	November,	7	156	16	9
First	1856,....	1856	December,	5	63	11	10
Second	1856,...	1857	January,..	207	6435	7	3
Second	1856,....	1857	February,.	167	4538	9	3
Second	1856,....	1857	March,...	61	1651	4	6
First	1857,...	1857	July,.....	307	9198	12	0
			August, ..	142	2870	0	0
Second	1857, ...	1858	January,..	211	6660	0	0
			February,.	157	4401	0	0
			March,...	96	2276	0	0
First	1858,....	1858	July,.....	366	10513	0	0

Thus, while no part of the second half-year's grant for 1854, which was payable on 1st January, 1855, had been paid on 1st March, 1855, and at the end of that month there were only 163 municipalities which had received their share thereof; in 1858, 211 municipalities had been paid for the second half of 1857, by the last day of January; and all had received their share, before the end of March. With respect to the second half of 1858, which fell due on 1st July instant, it will be seen that 366 municipalities have already received their shares of the grant, amounting to £10,513.

This not only shews the difference between the two systems of payment, but evinces likewise much greater diligence on the part of the municipalities. The one measure of reform contributed to effect the other: for as soon as the municipalities had the assurance that the department would be prompt to pay what was due to them, when all the formalities were fulfilled, the local authorities, having the whole responsibility of delay, would naturally use greater diligence in the performance of their duties. It is also important that the teachers should be made aware how promptly payments are now made, in order that the Secretary-Treasurers may no longer have a pretext for retaining the masters' salaries in their hands, of which unfortunately more than one instance has occurred. Whenever any considerable delay occurs, the teacher now knows that the local authority is to blame; either that the commissioners have not collected the assessment, or that the Secretary-Treasurer is negligent in the performance of his duties.

Another important measure of reform has been effected by the legislation of 1856. The commissioners frequently changed, and still continue to change, their schoolmasters without any reason, or usually actuated by the very unjustifiable motive of a mistaken spirit of economy. If they did not venture to dismiss the teacher, before the expiration of his engagement, they waited till the day before it was to terminate, and then, if they found another willing to take the place at a lower salary, he was informed that his services were no longer required. My predecessor had wisely required commissioners and school trustees to give three months' notice to any master whom they did not wish to re-engage after the termination of his engagement. The executive government had considered the absence of a regular notice to be equivalent to an arbitrary dismissal without cause; and in several instances of this kind, I have been authorised to pay to teachers, indemnities which were deducted from the share of the grant, belonging to the municipality. The provision of the law, under which these payments were made, was one most favorable to the teachers; and it is to be hoped that the example of the municipalities who have been thus punished will have the effect of speedily putting an end to so great an abuse.

We have seen in the recapitulation of the statistics, that on the whole, an encouraging increase has taken place in the salaries; but in order to ensure the progress of this increase, until the teacher shall have attained to his proper position in the social scale, an augmentation of the grant for common schools is absolutely necessary. The insufficient amount of this grant, which instead of increasing, in respect of each municipality, diminishes a little every year, as I have before shewn, bears chiefly on the teacher, while all other items of expenditure remain nearly unchanged, or rather grow in amount, the salary of the teacher seems to be almost the only thing considered to be sufficiently elastic to give way, in the numerous combinations required by the insufficiency of municipal resources. Every year in every municipality new school districts are formed, new schools established, new teachers engaged, at trifling salaries it is true; the effect however is, that the remuneration of the other masters cannot be raised, but must often be somewhat diminished. The whole extent of the evil resulting from such a state of things cannot be conceived. The teacher cannot understand why he is the only person in society who is doomed to see his pecuniary resources, not increase, but diminish, while he exhausts himself with toil, with zealous service, with study to attain perfect skill in his profession. He loses heart, he abandons his profession, or what is still worse, he exercises it carelessly and negligently, and loses instead of gaining ground. It

would appear that the increase of the assessment should produce a corresponding increase in the salaries of the teachers, and so it would, but for the circumstances to which I have just adverted The topographical character of Lower Canada has great influence in this matter. The villages are few; the inhabitants residing along the entire front of each concession. Thus the schools are inevitably multiplied. The heads of families being compelled to pay, not only the assessment on their real estate, but also the monthly fees for tuition, each acquires the right of having a school within such short distance of his dwelling that he may conveniently send his children to it; and, as the system is elective, he is enabled to enforce his rights.

We can hardly, however, expect any very large increase in the assessments in future years. With the best will in the world, it is evident that the municipalities can scarcely do more than they now do. The only way to induce them to do this, would be to increase the share of each, in proportion to the sacrifices it may have made; and this was the general expectation in the passing of the new law, under which they were recommended to make their assessment double the amount of their share of the grant, and enabled to do it. It may not be improper here to remark, that the restriction still existing, relative to special assessments for the erection of school houses, should be annulled, as that was annulled which limited the amount of the assessment on real estate to the amount received from the government grant.

If I insist so strenuously on the necessity of increasing the salaries of the teachers, it is certainly not because I consider that on that measure hangs the whole question of the elevation of that useful class in the social scale, but that it is the first step upwards as our social system is now constituted, and that, failing that, the others will be made with difficulty. There are however conditions of progress which are based on more noble, more elevated motives, and they have not been disregarded.

Teachers' associations have been formed in each normal school district, and these have been divided into sections, corresponding with the districts of inspection. Several sections have been already organized; and the associations themselves have already held several conferences and discussions, and useful and interesting lectures have been delivered. Talents and qualifications hitherto unknown have been discovered, a feeling of common interest begins to spring up, the *union which constitutes strength* has a tendency to be formed. I know few things better adapted than these to raise the teacher in his own estimation and in that of the public; while at the same time his acquirements are increased in quantity and degree, and his sphere of action is extended. These associations required an aid to enable them to form a library in each section, although they are allowed the use of those belonging to the normal schools. "Le Journal de l'Instruction Publique," and the "Journal of Education" are also two most effectual agents of intellectual culture; and I have made every effort to render them as interesting as possible. With respect to these publications also, it is to be regretted that the grant does not suffice to enable me to send them gratuitously to each school.

The competition kept up by inferior teachers male and female, with those who are well qualified, the engagement of teachers, hired literally at the lowest rate, according to the practice in some municipalities which have been threatened with the deprivation of their share of the government grant, if they continue it, constitute serious difficulties which would be evidently aggravated by the appointment of boards of examiners in the several counties respectively, invested with all the authority now granted to them by the laws in force. In my last year's report, I invited the attention of the legislature to this subject more particularly, and I have found no reason to change the opinion which I then expressed. It is nevertheless of urgent importance, that the point should be decided, as, should the system which I have suggested not be adopted, it will be necessary to take other steps, to provide for a better system of examination for the admission of candidates as teachers, than that which is now in use.

To recapitulate:

From the foregoing remarks we deduce that it is necessary: 1o. To provide grants for superior education independently of the income of the Jesuits' Estates, and of the common school grant, leaving the annual additional grant for the latter untouched and capable of being applied to increase the grant to each municipality; 2o. To reorganise, and make by-laws for the inspection of schools, and the examination of candidates for admission as teachers; 3o. To provide for the compilation and printing of school books; 4o. To establish a depot similar to that of Upper Canada for school and parish-libraries; 5o. To increase the grant for the normal schools.

It will perhaps be thought strange that in the present state of the finances of the country, I should insist so strongly on the necessity of measures which involve an increased expenditure. I answer, that happily Canada has advanced too far in the noble career of public education to be able to draw back. The question might be mooted whether a government ought or ought not to take the education of the people into its own hands, but having once undertaken it, there is but one way of performing the duty. Every day, even in the most difficult circumstances, we undertake the most stupendous and expensive public works, with a view to the profits which may inure to the province, as a portion of the great human society, without caring whether the treasury will ever receive any equivalent for the amount expended. We say with reason that channels must be opened for our commerce and our manufactures, will any one dare to deny that it is equally important, even in view of our material interests, to open a way to the future to the intelligence of the rising generation?

Persuaded that a government and a legislature which have already done such great things, will not flinch from the performance of a task so fair in promise, and so necessary in itself, I have unabated confidence in submitting to you the foregoing reflexions; and I can assure you, that whatever increase of labor or responsibility may result from the measures of reform which I recommend, you will always find me ready to acquit myself of my part therein, to the best of my humble abilities and of the strength with which Providence has deigned to bless me.

I have the honor to be,

Sir,

Your very obedient servant,

PIERRE J. O. CHAUVEAU.

MONTHLY SUMMARY.

EDUCATIONAL INTELLIGENCE.

A Problem in Verse.

A hare to shun a greyhound nimbly ran,
Full forty leaps before the dog began,
But for her life so nimbly did she strive,
That for his three leaps the hare gave always five,
But two of his are equal to her three!
To catch the hare how many leaps made he?

Michigan Journal of Education.

—The Quebec papers speak in high terms of a soirée given by the pupils of the Laval Normal School, on the 28th April last. The attendance was large, among others were remarked the Rev. G. V. Casault, rector, and several professors and students of the Laval University, Rev. Vicar General Cazeau, of the Archbishopric, Rev. Mr. Auclair, Curé de Notre-Dame, Rev. Mr. Langevin, Secretary to the archdiocese, Mr. Maguire, Police Magistrate, Mr. Recorder Gauthier and other distinguished members of the clergy and of the bar.

A number of the pupils' compositions inscribed in the copy book of honor, were read.

Mr. Gagnon presided over the musical department, with his usual ability and success. The chorus of Fra Diavalo: "La Dame Blanche," and "Le Chant de l'Iroquois," were the favorites of the evening.

—The Jacques Cartier Normal School has to deplore the loss of Mr. Camille Christin, a pupil of that institution, who died, of phthisis, at l'Assomption, on the 26th April last, aged 22 years and a few months.

Mr. Christin, after having been an assistant teacher during three years, entered the normal school in the autumn of 1857. Although at that time his health was delicate and his sight impaired, his love of study, and his desire to support his family enabled him to struggle on to the end of the year.

Mr. Christin hoped that the country air would restore his health and strength sufficiently to enable him to teach. But he daily became weaker and his pecuniary resources, in consequence, diminished. A generous friend, Mr. Archambault, came forward to his aid and with the assistance of the Association of Teachers, a sum was forwarded to him sufficient for his support.

Mr. Christin was a man of brilliant talents and the country has lost an efficient teacher.

— George O'Kill Stuart, Esq., of Quebec, has made a present to the Laval University of 1000 volumes of books, on medecine and surgery, from the library of the late eminent Dr. Fargues, of that city.

—Marcus Child, Esq., Inspector of Schools for the counties of Stanstead, Richmond, Compton and Wolfe, and for parts of those of Drummond and Arthabaska, died at his residence at Coaticook, at the age of 67.

Mr. Child had filled the office of Inspector since the creation of that office, in 1851. He had been for many years a member of the House of Assembly for Lower-Canada before the Union. He was universally beloved and esteemed, and the local newspapers have testified to his many virtues. As an inspector, he had great zeal and activity, considering his advanced age and bestowed great attention to the state of education in his extensive district, as may be seen by the extracts of his reports, published with those of the Superintendent. As a politician, Mr. Child was long connected with the liberal or reform party of Lower Canada, and, we believe, was held in great esteem by Mr. Papineau, Mr. Morin, and the other leaders of the party.

—A *hortus siccus*, a collection of marine plants, a collection of canadian ornithology, embracing 130 specimens well stuffed, a small collection of entomological specimens, and a beautiful collection of canadian butterflies, were recently added to the museum of the Jacques Cartier Normal School. The birds and the butterflies were collected and prepared by Césaire Germain, Esq, of St. Vincent de Paul, Inspector of Schools. Mr. Germain is well versed in canadian natural history and although he could not make a present of these collections which have cost him some money, he has laudably left them for half the price at which they were valuated by a competent person. The herbarium of marine plants was offered by Madame Faure, of Berthier; they were collected on the coasts of Brittany, near Limoilou, the residence of Jacques Cartier.

—A large number of catholic boys in one of the common schools, in Boston, having refused to read the protestant version of the Bible, or to recite the decalogue from that version, one of them, named Thomas Wall, was flogged by the sub-master of the school. The sub-master was sued and discharged by Judge Maine, as having merely *enforced the law of the land*. The case has brought about an interesting controversy in the public papers of the United States and has created no small excitement throughout the catholic community of America. The teachers and pupils of Nativity Sunday School, New-York, have presented young Wall with a gold cross bearing the inscription: "To Thomas L. Wall for his heroic conduct at the Elliot School, Boston."

In a communication to the Board of School Commissioners of Boston, on that subject, the Right Rev. J. B. Fitzpatrick, R. C., Bishop of Boston, made the following points: 1st. Catholics cannot under any circumstances acknowledge, receive and use as a complete collection and faithful version of the inspired books which compose the written Word of God, the English-Protestant version of the Bible. 2nd. The acceptance and the recital of the Decalogue under the form and words in which protestants clothe it, is offensive to the conscience and belief of catholics. 3rd. The chanting of the Lord's Prayer, or psalms or hymns, addressed to God, performed by many persons in unison, being neither a scholastic exercise nor recreation, can only be regarded as an act of public worship. Indeed it is professedly intended as such in the regulations which govern our public schools.

—William H. Powell, late Superintendent of Public Instruction in Illinois, in his report to the Legislature thus sums up the general results of the last two years in that department:

1. The establishment of a State Normal University.

2. The organization of a system of school district libraries, and the introduction of one thousand of the same into the school districts of the State.

3. The building of three thousand school houses in the various school districts in the State.

4. The sustaining of free schools for nearly seven months, during each of the school years, 1857 and 1858, in nearly all the school districts of the State.

5. The organization of about two thousand new school districts in the State.

6. The organization of over fifty Teachers' Institutes in the various counties of the State.

7. The conversion of over two-thirds of the private academies and seminaries, which had an existence in the State, two years since, into public Graded Schools under the law.

8. The introduction of the most approved styles of school furniture and apparatus into a considerable number of the school districts of the State.

9. The awakening and building up of an all-powerful and constantly increasing public opinion, in all portions of the State, and especially the southern, in favor of popular education, which has no parallel in the history of the country.

N. Bateman, for some time editor of the *Illinois Teacher*, has succeeded Mr. Powell, as Superintendent of Public Instruction.

SCIENTIFIC INTELLIGENCE.

—Professor Morse the inventor of the present systems of electric telegraph has been created Knight Commander of the Order of Isabella the catholic; the Swedish Royal Academy of Science has also elected him a foreign member of the academy.

DEATH OF HUMBOLDT.—Among the items of intelligence by the *Canada* is an announcement of the death, on the 6th instant, of the illustrious philosopher, Baron Alexander von Humbolt. He was born in Berlin on the 14th September, 1769 (which was also the natal year of Napoleon and Wellington), and had therefore, at the time of his death, nearly completed his ninetieth year. His long life was so usefully and indefatigably employed that he has left behind him the reputation of a comprehensive mastery over *all* the departments of natural science, greatly beyond what has been attained by any of his contemporaries. His first work, "The Basalt on the Rhine," was published in 1790, nearly three score and ten years ago, being the fruit of his observations during an excursion while pursuing his university studies. In the spring and summer of that year he made a tour through Belgium, Holland, England, and France. Having a strong *penchant* for the cultivation of physical science, he repaired, in 1791, to the School of Mines and Freiberg, where he received private lessons from the celebrated Werner. A year or two later, he published a treatise on the fossil botany of Freiberg. He was for three years about this period Superintendent of Mines in Franconia. But his thirst for foreign travel became irrepressible, and, resigning his office, he repaired to Vienna, in 1795, to prepare himself for travel. In the first place he made a journey with Hatler to North Italy, to study the volcanic theory of rocks in the mountains of that district. In 1797, he was about to proceed to Naples with a similar object in view, but was stopped by the events of war, and turned his steps to Paris, where he made the acquaintance of Bonpland, the celebrated naturalist. In 1798, he proceeded to Spain, whence, in the spring of the following year, accompanied by Bonpland, he sailed for the New World Landing at Cumana in July, 1799, he immediately began his South American explorations. Four years were spent in travelling through the tropical regions of South America, and making himself acquainted with their productions and natural history. During these explorations he accumulated a vast body of facts of much interest in the various departments of science. On June 23, 1802, Humboldt and Bonpland reached a height of 19,230 feet on Chimborazo, a greater height than had ever before been attained. At this extreme elevation, the adventurous travellers were enveloped in thick fogs, and in an atmosphere of the most piercing cold, while, on account of the rarity of the air they breathed with difficulty, and blood burst from their lips and eyes. Only once has the elevation they reached on the Chimborazo been surpassed, when Boussingault in 1831 by a different path attained a height of 19,600 feet. In 1803 Humboldt and Bonpland proceeded to Mexico, and spent several months in exploring the volcanic regions of that country. In the following year they went to Cuba, where they spent two months, and then visited the United States. Having made but a brief sojourn there, they sailed for Europe, and in August, 1804, Humboldt landed at Havre, richer than any previous traveller in collections of interesting objects, and in observations in the field of the natural sciences, in botany, zoology, geology, geography, statistics and ethnology. On his return to Europe he took up his residence in Paris, where having made the acquaintance of Gay-Lussac, he devoted himself for some months to chemical researches. Shortly afterwards he commenced a series of gigantic publications, giving the result of his observations in every department of science. Up to 1817, four-fifths of the intended work had been published in parts, each of which cost in the market more than $500. Since then the publication has gone on more slowly, and is left incomplete. After a journey to Italy, he returned to Berlin in December, 1805. In 1807 he accompanied Prince William of Prussia on a political mission to France, and with a view to the publication of his works remained for the most part in Paris till 1827. He visited Italy, however, in 1818, with Guy-Lussac, and afterwards travelled in England in 1826. In 1827 he took up his residence in Berlin, and, enjoying the intimate friendship of his sovereign, was made a Councillor of State, and entrusted with several diplomatic missions. In 1829, at the desire of the Czar Nicholas, he made an expedition, accompanied by Ehrenberg and Gustave Rose, to the Altai and Ural Mountains, for the purpose of examining those regions. Since 1842 Humboldt has been engaged in the preparation of the "Cosmos," the work by which he is most widely and popularly known, and which sums up the results of his life's studies with regard to natural phenomena of all kinds, and the laws by which the universe is regulated.

LITERARY INTELLIGENCE.

—Mr. de Tocqueville, the celebrated French publicist and litterateur, died at Cannes, on the 7th of April last. Alexis Charles Henri Clérel de Tocqueville was born at Verneuil, the 29 of July, 1805, and consequently was not yet 54 years of age, although his name has been long before the public. By his mother he was a descendant of Malesherbes. He was entrusted with judiciary functions as early as 1826. In 1831 he was named with Mr. Gustave de Beaumont commissioner to investigate the penitentiary system of the United States. He visited Canada at that time on his return with his colleague and both were, we believe, in Quebec, the guests of the late Hon. John Neilson, who had also been entrusted with Judge Mondelet, of Three Rivers, with a similar mission, and who published a very interesting report. Like all other Frenchmen who visit Canada, he was struck with the sprightliness of the French language and manners, and was delighted with his visit to the beautiful parishes about Quebec. Soon after his return he published his famous work "*De la Démocratie en Amérique*," which Royer Collard

called a continuation of "*Montesquieu's Esprit des Lois.*" In 1837, he replaced Mr. de Laromignières at the Academy of Sciences, and in 1841 he succeeded Count de Cessac at the French Academy. From 1839 to 1848 he was a member of the Chamber of Deputies for Valognes, in the department of *La Manche*. Although he lent his assistance to the government on many questions, especially on the question of slavery and on that of the adoption of the american system of penitentiaries, he was generally adverse to the ministerial policy and frequently denounced the political corruption that prevailed during the last years of Louis Philippe's government. In January 1848, he exclaimed from the tribune: "*We are on the eve of a great revolution,*" a prophecy which was realised within a month from its date. At the *Assemblée constituante*, when he was returned by a large majority by the same constituency that had elected him so often he voted with the moderate party, and distinguished himself with Mr. Thiers in opposing successfully and eloquently the socialist party. He was entrusted by general Cavaignac with the mission of representing France at the conferences held at Brussels for the settlement of the Italian Question. On the 3rd June, 1849, he was minister of foreign affairs, took an active part in the discussion that took place on the subject of the expedition against the republicans of Rome. Having left the ministry on the 31 of October he opposed the policy of the president and was one of the last friends and advocates of constitutional government. On the 2nd of December 1851, he was among the members of the Legislative Assembly who signed a protest against the *coup d'état*. He was arrested and sent to jail with many of his colleagues. Under the government of the Emperor he has remained in private life. His latest works are "*Histoire Critique du Règne de Louis XIV*," 2 vols., 1847, and "*L'Ancien Régime et la Révolution*," 2 vols., 1856. The latter as well as his "Democracy in America" has been translated into English and widely circulated in both languages. Mr. de Tocqueville had been ill for a long time and died at Cannes, on the Mediterranean after having given evidence of great piety and resignation and having performed with great devotion all the rites prescribed by the catholic church. Mr. Gustave de Beaumont, his old friend and associate, visited him frequently and states that in his last days he expressed the greatest anxiety as to the fate of Italy in the present crisis, having himself taken such a prominent part in the affairs of the peninsula.

— The sale of the books and manuscripts of Mr. Libri, part of which every one knows he was accused of having stolen from the public libraries in France, has taken place in London. Among other manuscripts that have obtained very high prices, is a copy of Petrarch's and of Dante's poems on vellum of the 16th century, which sold for £250 st.

— Lady Morgan died at London at the age of 76. She was born at Dublin, in 1783. Her first work was her book of Irish Songs, which she published when only 14 years of age. Her work on *France*, as also her travels in Belgium and Germany; O'Donnell, Florence McCarthy, the O'Briens and the O'Flahertys, and her other novels obtained great celebrity and have most of them been translated into French and German. Her last work, to which her husband contributed, was published in 1841 It is a collection of short novels under the title of *The Book without a Name*. She obtained from Lord Grey a pension of £300 st., the highest, we believe, paid by the British Government to any author.

OFFICIAL DOCUMENT.

Act to amend the School Laws of Lower Canada.

Assented to 4th May, 1859.

Whereas it is expedient to amend the School Laws of Lower Canada, as hereinafter is set forth: Therefore, Her Majesty, by and with the advice and consent of the Legislative Council and Assembly of Canada, enacts as follows:

1. It shall be lawful for the Governor in Council, whenever it may be deemed expedient so to do, upon report of the Superintendent of Schools or Council of Public Instruction for Lower Canada, by Proclamation, to constitute a Board of Examiners of Teachers in and for any County in Lower Canada, or in and for any two or more neighboring Counties in Lower Canada which may be conveniently united for such purpose; and every such Board shall meet at such place and at such times as the Governor in Council may upon like report from time to time ordain; and the members thereof shall from time to time be appointed by the Governor in Council through the Superintendent of Schools.

2. The certificates to be granted by every such Board shall only avail for the employment of the Teachers obtaining the same, within such County or Counties, and for such class or classes of Schools, as the Governor in Council upon like report may from time to time ordain, and for a term of three years from the date of such certificates; and those to be hereafter granted by the several Boards of Examiners in the Cities of Montreal and Quebec, and in the Districts of Kamouraska, Gaspé, Three-Rivers and Ottawa, and in the Counties of Sherbrooke and Stanstead, respectively, shall in like manner only avail for such territorial limit, and for such class or classes of Schools, as the Governor in Council upon like report may from time to time ordain, and for a like term of three years.

3. The meetings of the several Boards of Examiners in the Cities of Montreal and Quebec, the Districts of Kamouraska, Gaspé, Three-Rivers and Ottawa, and the Counties of Sherbrooke and Stanstead, respectively, shall hereafter be held at such places therein, and may hereafter be held at such times instead of, or besides, those now fixed by Law, as the Governor in Council may upon like report from time to time ordain.

4. Every Board of Examiners, with the exception of those in the Cities of Montreal and Quebec respectively, shall be composed of not less than five nor more than ten members, and may be organized, if the Governor in Council upon like report shall so ordain, but not otherwise, in two divisions, Roman Catholic, and Protestant, respectively; in which case each division shall separately perform the duties devolving on them.

5. It shall be lawful for the Governor in Council upon like report from time to time to modify, as occasion may require, the detail of duties imposed on Boards of Examiners and on the Secretaries of such Boards, by the fiftieth section of the Act passed in the ninth year of Her Majesty's Reign, intituled, *An Act to repeal certain enactments thereln mentioned, and to make better provision for Elementary Instruction in Lower Canada;* and every modification so made of such duties shall be binding on all parties for whom the same may have been made, as though expressly embodied in this Act.

6. The School Commissioners for any Municipality, and the Trustees of any Dissentient Schools therein, may hereafter raise by direct assessment upon the taxable property by law subject to such assessment, any amount beyond that now limited by law, which it may be deemed necessary to raise for the support of the Schools under their control.

7. The limit heretofore set to the amount of any rate for the building of a School-house is hereby extended,—so that hereafter any rate for the building of a Superior or Model School-house may amount to the sum of one thousand dollars, and for the building of a Common School-house to the sum of five hundred dollars.

8. No assessment for School purposes shall hereafter be held for null or be set aside, by reason of its having been made or published after the time limited by law.

9. The copyright of any book, map, chart, musical composition, or other publication whatsoever, (whether original, or wholly or in part compiled,) which may hereafter be published for the use of Schools under the direction of the Council of Public Instruction for Lower Canada, may be acquired and held by the said Council; and all profits to result from such copyrights shall enure to the benefit of the Lower Canada Superior Education Income Fund.

10. The ninth section of the Act passed in the Session of the Parliament of this Province held in the nineteenth and twentieth years of Her Majesty's Reign, intituled, *An Act to amend the Common School Laws, and further to promote Elementary Education in Lower Canada,* and all other provisions of any law now in force inconsistent with this Act, are hereby repealed.

The terms of subscription to the "Journal de l'Instruction Publique," edited by the Superintendent of Education and M. Jos. Lenoir, will be FIVE SHILLNGS per annum and, to the "Lower Canada Journal of Education," edited by the Superintendent of Education and Mr. John Radiger, also FIVE SHILLNGS per annum.

Teachers will receive for five shillings per annum the two Journals, or, if they choose, two copies of either the one or of the other. Subscriptions are invariably to be paid in advance.

4,000 copies of the "Journal de l'Instruction Publique" and 2,000 copies of the "Lower Canada Journal of Education" will be issued monthly. The former will appear about the middle, and the latter towards the end of each month.

No advertisements will be published in either Journal except they have direct reference to education or to the arts and sciences. Price—one shilling per line for the first insertion, and six pence per line for every subsequent insertion, payable in advance.

Subscriptions will be received at the Office of the Department Montreal, by Mr. Thomas Roy, agent, Quebec; persons residing in the country will please apply to this office per mail, enclosing at the same time the amount of their subscription. They are requested to state clearly and legibly their names and address and also the post office to which they wish their Journals to be directed.

SENECAL, DANIEL & Co., *Steam Printing Establishment*, 4, *St. Vincent St.*