THE EDUCATIONAL JOURNAL

Consolidating "THE EDUCATIONAL WEEKLY" and "THE CANADA SCHOOL JOURNAL."

Subscription, $1.50 a year. In advance.

TORONTO, NOVEMBER 15, 1892.

Vol. VI. No. 13.

OFFICIAL CALENDAR

— OF THE —

EDUCATION DEPARTMENT

November:
Applications for final examination of School of Pedagogy, to Department, due.

High School Entrance Examinations.

SELECTIONS FOR LITERATURE.

1893.

Lesson V. Pictures of Memory.
Lesson X. The Barefoot Boy.
Lesson XIX. The Death of the Flowers.
Lesson XXIV. The Face Against the Pane.
Lesson XXVI. From the Deserted Village.
Lesson XXXV. Resignation.
Lesson XL. Ring Out, Wild Bells.
Lesson XLII. Lady Clare.
Lesson LII. Jacques Cartier.
Lesson XCI. Robert Burns.
Lesson XCII. Edinburgh after Flodden.
Lesson XCVIII. National Morality.
Lesson C. Shakespeare.
Lesson CII. The Merchant of Venice—First Reading.
Lesson CIV. The Merchant of Venice—Second Reading.

SELECTIONS FOR MEMORIZATION.

Fourth Reader

1. The Bells of Shandon, pp. 51-52.
2. To Mary in Heaven, pp. 97-98.
3. Ring Out, Wild Bells, pp. 121-122,
4. Lady Clare, pp. 128-130.
5. Lead, Kindly Light, p. 145.
6. Before Sedan, p. 199.
7. The Three Fishers, p. 220.
8. The Forsaken Merman, pp. 298-302.
9. To a Skylark, pp. 317-320.
10. Elegy, written in a country churchyard, pp. 331-335.

ADDENDA TO TEXT BOOK LIST.

The following additional Text Books were authorized by the Department of Education on August 24, 1892, subject to the provisions of Section 175 of the Public Schools Act, 1891.

COLLEGIATE INSTITUTES AND HIGH SCHOOLS.

Classics:
First Latin Book, by J. Henderson, B.A., and J. Fletcher, B.A., price . . $1 00
(The Copp-Clark Co.)
Primary Latin Book, by A. Carruthers, B.A., and J. C. Robertson, B.A. . . 1 00
(Methodist Book and Pub. House.)

PUBLIC SCHOOLS.

English:
Public School History of England and Canada (new) by W. J. Robertson, B.A. 0 30
(The Copp-Clark Co.)

OTE—CHANGE IN PRICE:
Public School Writing Course, each number (to July, 1894) 0 06
(*After July, 1894, Five Cents.*)

The Department of Education has also ordered that the Public School History of England and Canada, by G. Mercer Adam and W. J. Robertson, B.A., authorized in 1886 and in use at present date in the Public Schools of Ontario, shall cease to be authorized on and after July 1, 1894.

Candidates not in attendance at the School of Pedagogy, but who are eligible to present themselves at the written examination in December, are hereby notified that Reading, Drill, Gymnastics and Calisthenics are compulsory for all male teachers; and Reading, Drill, and Calisthenics for female teachers.

There will be no examination in the Commercial Course this year.

The Educational Journal.

CONSOLIDATING

"The Educational Weekly" and "The Canada School Journal."

Subscription, $1.50 a year. In advance.

TORONTO, NOVEMBER 15, 1892.

Vol. VI. No. 13.

Table of Contents.

Editorial Notes.

"QUESTION DRAWER" is unavoidably held over for next number. In answer to an inquirer, we may say that the word "sixteenth" in line two, Chapter II., page 197 of the new History of England and Canada, should undoubtedly be "seventeenth."

THE Provincial Association of Public and High School Trustees of Ontario has decided to affiliate with the Educational Association. This is a wise and hopeful decision. We anticipate much good from the commingling of teachers and trustees in one deliberative body.

IN reply to a question in last number we said that we did not know a book containing notes on all the lessons in the Fifth Reader. Mr. Joseph Morgan, of Sebringville, informs us that Mr. R. Dawson issued such a book in 1887. We are not told who are the publishers, but any of the booksellers who advertise in the JOURNAL could no doubt furnish it.

WE have received a copy of "Course of Study for the Public Schools of the County of Wentworth, Town of Dundas, and Village of Waterdown," prepared by J. H. Smith, P. S. Inspector. We have not yet found time to examine it with any thoroughness, but we have no doubt that it has cost the Inspector much labor, and will be of great service to teachers. We may, in a future number, give all the teachers who read the JOURNAL—which means, of course, all live progressive teachers—the benefit of some portions, in which the author has departed somewhat from the beaten track.

WE congratulate our friend and valued occasional contributor, Mr. William Houston, M.A., on the one hand, and the teachers of Ontario on the other, on the appointment of Mr. Houston to the position of Director of Teachers' Institutes. Mr. Houston is so well known to our readers that he needs no introduction from us. We feel sure that the profession will be the gainer by his able and suggestive talks. He is a bit of an iconoclast, and an adept in the use of the Socratic method, which is *par excellence* the educational method.

THE Manitoba Teachers' Convention has been discussing the text-book question, but has laid the matter over for future decision. The text-book question is undoubtedly a difficult and perplexing one, but if the Manitobans are wise they will maintain more freedom of choice than we have in Ontario. Above all they will do well to shun a system under which text-books are made to order like coats or boots, the effect being to do away with all inducement to competition by either educators or publishers, save such as are fortunate enough to secure the jobs of writing and printing by favor of the Department.

THE report of the committee appointed at the last meeting of the Trustees' Association to inquire into the working of the County Model Schools, recommended that the number of Model Schools in the Province be reduced to twenty-five; that such schools have a separate building or room set apart for their use, fully equipped; that pupils be drafted from the Public Schools every day for these schools, the schools being located where there is sufficient school population to furnish such pupils; that the qualification for master be raised to that of a university graduate of five years' experience in teaching, part of which must be in the Public Schools, or a first-class teachers' certificate grade "A"; that a grant of $9,000 be divided among the Model Schools, and that the balance required for the maintenance of the schools be levied on the county or united counties forming the district; also that there be two terms in each year, of four months each. The report was adopted.

ONE of the most interesting discussions at the Provincial Trustees' Association, last week, was touching the advisability of giving school boards the power to admit to special High School classes occasional students who may never have passed the entrance examination. The following resolution was passed: "That the boards have the power to admit to special High School classes occasional students who may never have passed the entrance examination; provided that candidates who have passed the entrance examination have precedence in the matter of admission, and that the attendance of occasional pupils be not received as part of the regular High School attendance." This is, it seems to us, decidely a move in the right direction. The aim of the High Schools should be to encourage the largest possible number to take advantage of the opportunities they afford. Why should a boy or girl, who could with profit take the course of a given term or year, say, in English Literature, be debarred because he or she may not be quite up to an arbitrary mark in arithmetic or some other subject? Why should the High Schools be more exclusive than the Universities?

SIR EDWIN ARNOLD is said to have stated in St. Louis, that in Japan every child is taught to write with either or both hands, and "he hinted," says an exchange, "that it was not the only evidence of sound common sense he met with while in the kingdom of the Mikado." An English teacher says: "I learned to write with my left hand some years ago, in consequence of the impression created in my mind by reading the arguments of Charles Reade on the subject, and now I change my pen from hand to hand on the first impression of weariness." The suggestion is a good one. The facility with which those who are so unfortunate as to lose the use of the right hand, from accidents or other causes, learn to write with the left, shows that the art is easily acquired, and it would be a great relief to those whose business requires constant use of the pen, to be able to shift it from hand to hand. Many might be thereby saved from "writer's cramp," and kindred troubles. Should the practice become common it would, however, double the difficulty of identifying signatures and other specimens of hand-writing, for the characters made by the left hand would be in most cases quite unlike those made by the right.

English.

Edited by Fred H. Sykes, M.A., EDUCATIONAL JOURNAL, Toronto, to whom communications respecting this department should be addressed.

THE GENESIS OF THE RIP VAN WINKLE LEGEND.

IT must have been in the mellow haze of an Indian-summer afternoon that the Dutch forefathers dropped anchor in the pleasant harbor, now mostly meadow, at the mouth of the Pocantico, at Tarrytown, and named it *Die Slaperig Hafen*—The Sleepy Haven. Nor was this name merely the expression of their subjectivity; for when the English followed up the swift-running stream between two hills,

> "In the afternoon they came to a land
> In which it seemeth always afternoon,"

and named it Sleepy Hollow—a name which now designates the whole valley of the Pocantico. And there is many another such nook amid the hills whose watersheds feed and fill the most beautiful of rivers.

A century later than the Dutch explorers came the Palatine refugees, who, passing by the already occupied territory, landed nearest the "mountains which lie from the river's side," known even then as the mountains of the Kaaterskill. Their slopes were gorgeous with such hues as Europeans never saw. On the hills and in the glens ten thousand bushes burned as with fire, yet were not consumed. The maple and the sumac and the Virginia creeper, and the expanses of golden-rod and purple asters, seemed remnants of paradise untouched by sin.

> "A land of pleasing drowsy-head it was,"

where one fain might sleep and dream and dream and sleep forever.

With both these localities Washington Irving was familiar. They furnished their part of the material for the construction of the legend of Sleepy Hollow and the legend of Rip Van Winkle.

It is not strange that cursory readers combine the two, and insist that the same locality is the scene of both. Those who have seen the Catskill ravine outnumber those who have seen the valley of the Pocantico a thousandfold; and few of these thousands will ever doubt but that the only true and original Sleepy Hollow is that in which Rip Van Winkle slept his wondrous sleep so long ago. Not improbably, in the ages to come, when the famed traveller from New Zealand shall take his stand upon the broken tower of the East River Bridge to sketch the ruins of the City Hall, the Mountain Glen will be the only Sleepy Hollow of which he shall hear. Indeed, it is just as easy to fall asleep in the wooded gorge of the mountain as amid the hills and dales of the valley. Both legends show how the writer turned all that he touched to gold, and stimulate desire to discover the secret and watch the working of his more than Midas power; and this desire is partly gratified in the endeavor to trace the genesis of the Rip Van Winkle legend. * * *

In a note appended to the legend Mr. Knickerbocker informs us that he himself has talked with Rip Van Winkle, and that "the story, therefore, is beyond the possibility of doubt." The editor, as if to forestall cruel criticism, introduces this note by saying that without it one would suspect that the tale had been "suggested by a little German superstition about the Emperor Frederick der Rothbart and the Kypphauser Mountain." The clew thus given seems to have led explorers into a Serbonian bog.

The Kypphauser Mountain is in the Harzwald, in Thuringia, on the head-waters of the Weser. The first account of an Emperor Frederick dwelling in this mountain we find in a chronicle of the year 1426. Nearly a century later he is identified with the successful warrior and popular ruler who lost his life in the third Crusade. A little book printed in 1519 tells the story expressly of "Kaiser Friedrich den Erst seines Namens, mit ainen langen rotten Bart, den die Walhen nenten Barbarossa," that is, "the Emperor Frederick, the first of his name, with a long red beard, whom the Italians called Barbarossa."

The story lived on in men's mouths and grew during that and the succeeding centuries, until it took its present form in Otmar's *Volkssagen*, published at Bremen in the year 1800.

The Emperor sits on an ivory throne in his subterranean castle at a table consisting of a huge block of marble, through which, as he bows his slumbering head, his long red beard has already grown down to the floor, and begun to wrap itself about the stone. At the end of each succeeding century he rouses himself sufficiently to ask, "Do the ravens still fly on the mountain?" and receiving an affirmative answer, instantly relapses into profound sleep. But the time will come when he will awake, to renew on a grander scale than ever before his battles for his country. When his red beard shall have wrapped itself three times round the stone, when the ravens fly no longer on the mountain-top, when his people need him most to deliver them from pagan or from Paynim foes, then will he come forth, and having accomplished his mission, will hang his shield on a withered bough that shall at once begin to grow green again with life. * * *

He (Irving) himself has described his visit to Walter Scott in 1817. From him he heard the story of The Tower of Ercildoune, the ruins of whose tower at Earlstoun the antiquarian who visits Abbotsford still turns aside to see.

"We are now," said Scott, "treading classic, or rather fairy ground. This is the haunted glen of Thomas the Rhymer, where he met with the Queen of Fairyland, and this is the bogle burn, or goblin brook, along which she rode on her dapple-gray palfrey, with silver bells ringing at the bridle. Here," said he, pausing, "is Huntley Bank, on which Thomas the Rhymer lay musing and sleeping when he saw, or dreamed he saw, the Queen of Elf-land:

> "'True Thomas lay on Huntlie Bank;
> A ferlie he spied wi' his e'e;
> And there he saw a ladye bright,
> Come riding down by the Eildon Tree.
> Her skirt was o' the grass-green silk,
> Her mantle o' the velvet fyne;
> At ilka tett of her horse's mane
> Hung fifty silver bells and nine.'"

Here Scott repeated several more of the stanzas, and recounted the circumstances of Thomas the Rhymer's interview with the fairy, and his being transported by her to fairy-land:

> "And till seven years were gone and past
> True Thomas on earth was never seen."

Leaving Abbotsford, Irving extended his excursion into the Highlands. At Inverness, the radiating point of Highland tourists, he must have noticed, what no traveller can pass unnoticed, the most conspicuous object of the landscape there, the immense knoll of rock just out of the city, so strangely like the hull of a ship, keel uppermost. Every one who sees it asks its name, and every one who hears its name asks its story. Irving, who had spent his life in such investigation, could not have failed to learn both the name and the story. Its name is Tom-na-Hurich—the Hill of the Fairies. Its story is the story of two fiddlers of Strathspey.

One Christmas season about three hundred years ago they resolved to try their fortunes at Inverness. On arriving in town they took lodgings, and, as was the custom, hired the bellman to go around announcing their arrival, their qualifications, their fame, and their terms. Soon after, they were visited by a venerable-looking gray-haired old man, who not only found no fault with their terms, but actually offered more than they asked if they would go with him a little way out of the town. To this they agreed, and he led them to a strange-looking building, which seemed more like a shed than a house, and they began to demur. However, he offered them double their price, and they went in through a long hall, not noticing that it led into the hill. Their musical talents were instantly put into requisition, and the dancing was such as in their lives they had never witnessed, though it is common enough in these days even above-ground. However, they fixed their eyes on their instruments, and in the morning received not only twice but even three times their usual fee, and took their leave, highly gratified with the liberal treatment they had received. It surprised them to find that it was out of a hill, and not a house that they issued; and when they came to the town they could not recognize any place or person. While they and the townspeople were in equal amazement there came up a very old man, who, on hearing their story, said: "You are the two men who lodged with my grandfather, and whom Thomas the Rhymer, it was supposed, decoyed into Tom-na-Hurich. Your friends were greatly grieved on your account; but it is a hundred years ago, and your names are now no longer known." It was the Sabbath-day, and the bells were ringing. The fiddlers entered the church, and sat still while the bells sounded. But when the service began, and the first words of the Holy Scripture fell upon their ears, they dwindled to dust.

Soon after the visit to Scotland the legend of Rip Van Winkle was written. In this year the New York firm failed, and Irving devoted himself to the study of German, both to divert his thoughts and to prepare for his future. Hitherto he had written chiefly for amusement; henceforth literature was his profession.

The introduction of the English-speaking peoples to the German language and literature usually begins with the folk-lore of the language. The most popular collection now is that of Grimm. Then it was that of Otmar, before mentioned. In this Irving would find "the little German superstition of Frederick der Rothbart and the Kypphauser Mountain." According to the story, the Emperor's chosen knights dwell with him still, and there have been at least two visits paid to the imperial court under-ground. The first was that of a pair of lovers who went to borrow crockery for the wedding feast. They were received by the knights with courtesy, feasted with the richest viands, and dismissed with a whole basketful of crockery-ware. Joyfully they returned home, to find they had been absent two hundred years. They were strangers in a strange world.

The other visitor was Peter Klaus, a goat-herd of the adjacent village of Sittendorf. Tending his goats on the mountain-side, he was accosted by a young man who silently beckoned him to follow. Obeying the direction, he was led into a deep dell inclosed by craggy precipices, where he found twelve knightly personages playing at skittles, no one of whom uttered a word. Gazing around him, he observed a can of wine which exhaled a delicious fragrance. Driking from it, he felt inspired with new life, but at length was overpowered with sleep. When he awoke he found himself again on the plain where his goats were accustomed to rest; but, rubbing his eyes, he could see neither dog nor goats. He was astonished at the sight of trees which he had never before observed. Descending the mountain, and entering the village, he finds to his consternation that everything in the place wears an altered look. Most of the people are strangers to him; the few acquaintances he meets seem to have grown suddenly old; and only at last by mutual inquiries the truth is elicited that he had been asleep for twenty years.

It is this subordinate incident which Irving developed into the legend of Rip Van Winkle, directing attention to its source by his characteristic note. Doubtless Irving was familiar with many narratives of supernatural sleep. In childhood he must have heard the story of the "Sleeping Beauty." In early manhood he read *The Canterbury Tales*, and charged a friend going to London to be sure to visit Tabard Inn. Recently he had been travelling for the express purpose of collecting material for such desultory literary work as he might choose. He had heard the story of "Thomas the Rhymer" from Scott, and received from him the suggestion that "it might be wrought up into a capital tale." Soon after, the legend of Tom-na-Hurich must have captivated his fancy. His intimate knowledge of the Catskill Mountains and of the habits of the early settlers constituted an excellent background, the situation stimulated to action, Peter Klaus furnished the immediate *motif*, and the legend of Rip Van Winkle was written. There is nothing in it, save the fact of long absence, to remind one of the legend of Ercildoune. But it is connected with that of Inverness not only by the incidents which followed the sleep, but also by the statement that the entrance to the amphitheatre was found to be closed with solid rock, leaving it to be inferred that it had been opened and shut again by enchantment.

In all essential parts, however, the story of Rip Van Winkle is the story of Peter Klaus. The hero is wandering on the mountain. He hears his name called, apparently by a man who proves to be speechless, and can only make signs for him to accompany him. He is led into a broad ravine surrounded by precipices. He sees a company of men in antique garb playing nine-pins in silence. He drinks of their intoxicating liquor until sleep overpowers him. He wakes in his accustomed haunts; he rubs his eyes; he calls his dog—in vain. He seees trees that have grown there while he slept. He descends the mountain. He finds the village changed, the people mostly strangers, the few he knows grown old, and learns by inquiry that he has been asleep just twenty years.

When Rip Van Winkle first heard his name called by the stranger "he looked around, but could see nothing but a crow winging its solitary flight across the mountain"; and when he awoke and whistled for his dog, "he was only answered by the cawing of a flock of idle crows." The crows of Rip Van Winkle are the ravens of Friedrich der Rothbart, as these are simply Huginn and Muninn, the attendant ravens of Odin, the Norse god. But by the touch of Irving's feathery wand they have been changed into veritable Catskill "crows sporting high in air about a dry tree that overhung a sunny precipice."

The characteristically accurate local coloring gives the legend its inimitable veri-similitude, and causes it to be regarded by a well-known British writer as an autochthonous myth.—*From Harper's Monthly, Sept., 1883.*

Primary Department.

HINTS FOR DULL DAYS.

RHODA LEE.

NOVEMBER brings us very often some bright, delightful days Nevertheless, we are certain to have a considerable number of dull and extremely cheerless ones. There are school-rooms in which a gray sky without will do more to upset the peace and comfort of the class than anything known. We must admit that these uncomfortably cold, rainy days have tried our patience and lowered our spirits sadly at times. Nothing seemed to go right and at the end of the day we betook ourselves homeward with a feeling of weariness and disgusted with everybody and everything that was not easily got rid of.

Now, I do not approve of imagined troubles, nor of the practice of meeting them half-way, but I do recommend a little preparation and forethought for days of this description. You will be amply repaid for your trouble. Let us consider what can in reason be done.

Suppose a dark, dreary morning late in the fall. Without, everything is suggestive of discomfort, but what do we see within? A room comfortably heated, well ventilated and brightened, according to the season, with branches of maple leaves, barberries, mountain-ash berries, etc.; a teacher determined to have a good day. The elements are not going to bring that determination to nought if she can help it. At present she is trying to recall something interesting for the opening exercises. Nine o'clock comes, and although one or two children are late for line, the teacher decides to reserve the talk on punctuality for another day. Tommy Bird plays the mouth-organ, and as a little innovation he is requested to play such hymns and songs as he knows for an accompaniment to the singing. Time is also found for a short story, and then follow the cheeriest maxims and brightest gems of poetry that the class knows. As the work of the morning progresses, we notice an occasional new plan coming up, an extra mark for certain work and busy work that keeps every mind more than ordinarily intent. No melancholy songs regarding "falling rain" and "pattering drops" are sung. No verses about "sighing woods" and "moaning winds." Songs and verses are brisk, bright and energetic. At ten o'clock a march, the certain awakener of listless little people, is introduced. Tommy's mouth-organ again comes into use to supplement the marching song.

It is not necessary to give any further description of the day. Begun in this way we have not a doubt as to the end. This is what I understand by preparation. Determination, strengthened by a host of helps such as the above, will transform some days, changing a disappointing morning into one full of good and pleasurable work. Work that is not done with all the heart and in a cheerful, willing spirit is not good work.

Unhappy childhood, unhappy school-days. What inexpressibly sad thoughts these words contain. Schools are happier places than they once were. Is there not still ample room for improvement? Can we not bring a little more sympathy, a little more love, a little more of the true home spirit into our school-rooms? It would not be amiss.

TRAINING THE SENSES.

ASK your children to shut their eyes; then go to some part of your room and speak softly, letting them describe where you are without turning their heads.

Give an object to a child with closed eyes, and let him draw the form upon the board as he has recognized it by touch.

Give children a sample of color to look at, and let them try to match it among a variety of shades, carrying the color only "in the eye."

Let two or three children walk upon the floor together, and let the others (with closed eyes) detect the number walking, by the sound of the steps.

Let children smell a flower and name it, without seeing it.

Give children several pieces of dress goods letting them distinguish between silk, cotton, and woolen, by touch alone.—*E.D.K., in School Journal.*

DIRECTION.

RHODA LEE.

THE following plans have been found useful in fixing definitely the points of the compass. Before introducing them, however, the class must be able to locate roads, streets, public buildings, parks, or whatever may be the points of interest in the vicinity of the school-house.

Ask the children to tell you the various directions taken in reaching their homes. As an answer, a child says, "I go west along Russel street, south down Elm avenue and west along Madison avenue." Next, ask for directions taken in coming to school. Richard says, "I live at 23 St. Paul street. I go west to Lennox avenue, then turn north until I reach Russel street and walk west to the school."

Questions regarding routes to the station, city hall, churches, parks and other schools will be interesting. Ask the children occasionally to indicate the routes on their slates. Assign work of the kind to be done at home and brought in on paper.

Another exercise in which the children find great delight. Sketch a map of the roads, streets, etc., surrounding the school. Make it extensive enough to take in all the homes. Then let each pupil make a mark of some sort where he supposes his house to be; or, with the pointer, show the class the route by which he finds his way home, to school, to Sunday-school or any other familiar point.

LANGUAGE LESSONS.

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

thick,	late,	deep,
soft,	wide,	sharp,
cool,	fast	even,
right,	smooth,	large,
high,	old,	broad.

4. Change these sentences to express *past* time:
   (1) I lay the book on the desk.
   (2) We lie down to sleep.
   (3) The mason lays the bricks.
   (4) The cows lie in the shade.
   (5) The old man lies on the floor.

—*Journal of Education.*

VARIETY WORK.

BY LAURA F. ARMITAGE.

1. WRITE three words that end in *y*.
2. Write names of two yellow flowers.
3. Write names of two red flowers.
4. Write names of two animals having fur.
5. Write names of two animals having hair.
6. Put letters before *old*, and make other words of it,—g-old, t-old, s-old, etc.
7. Name three kinds of trees that grow near your home.
8. Write what stands for Doctor, Mister, Street.
9. Write names of four birds you have seen.
10. What color is your house?
11. What animals dig holes in the ground to live in?
12. Write five girls' names.
13. Write five boys' names.
14. Write three names for dogs.
15. Of what color are lemons?
16. Of what color are ripe grapes?
17. Write three words of four letters each.
18. Name five things that can jump.
19. Name something that likes to live in water.
20. Name three things you like to do.
21. Tell what cows are good for.
22. Name some animals that have hoofs.
23. Write the first name of a light-haired girl in your schoolroom.
24. Of a dark-haired boy.

—*American Teacher.*

The Educational Journal.

Published Semi-monthly.

A JOURNAL DEVOTED TO LITERATURE, SCIENCE, ART AND THE ADVANCEMENT OF THE TEACHING PROFESSION IN CANADA.

J. E. WELLS, M.A. - - - - - - - *Editor.*

Terms:—One dollar and fifty cents per annum, payable strictly in advance. Clubs of three, $4.25; clubs of five, $6.75. Larger clubs, in associations, sent through association officials, $1.25.

Individual members, subscribing at a different time from that of the formation of the Club, may send their subscriptions to this office. Their orders will be taken at club rates.

New subscriptions may begin at any time. Payment, when by mail, should be made by post-office order or registered letter. Money sent in unregistered letters will be at the risk of the senders.

In case it may be necessary to make change, please send it in two-cent stamps.

The date at the right of the name on the address-label shows to what date the subscription is paid. The change of this date to a later one is a receipt for remittance.

Renewals of all subscriptions should be made promptly.

☞ Subscribers addressing the office on any business will, in all cases, please give the names of the post-offices to which their papers are being sent at the time of writing.

Rates of advertising will be sent on application.

Business communications should be addressed to the publishers; those relating to matter for insertion in the paper to the editor. These distinct matters should always be treated on separate sheets of paper.

NOTICE.

As many people, either thoughtlessly or carelessly take papers from the Post Office regularly for some time, and then notify the publishers that they do not wish to take them, thus subjecting the publishers to considerable loss, inasmuch as the papers are sent regularly to the addresses in good faith on the supposition that those removing them from the Post Office wish to receive them regularly, it is right that we should state what is the LAW in the matter.

1. Any person who regularly removes from the Post Office a periodical publication addressed to him, by so doing makes himself in law a subscriber to the paper, and is responsible to the publisher for its price until such time as all arrears are paid.

2. Refusing to take the paper from the Post Office, or requesting the Postmaster to return it, or notifying the publishers to discontinue sending it, does not stop the liability of the person who has been regularly receiving it, but this liability continues until all arrears are paid.

PUBLISHED BY

The Grip Printing and Publishing Co.

TORONTO, CANADA.

T. G. WILSON, - - - - - *Manager.*

Editorials.

TORONTO, NOVEMBER 15, 1892.

THE SCIENTIFIC METHOD.

"THE sooner we get rid of the idea that education is imparting instruction, and that teachers exist to hear lessons, the sooner will we be prepared to enter on the right path." So says Professor Wesley Mills, of McGill University, in an article in the *Popular Science Monthly* for November. The article contains the main portions of the address which the author delivered under the auspices of the Royal Society of Canada, at its last annual meeting. It is, throughout, a thoughtful and well-written plea for what he deems the natural or scientific method in education. It would be difficult to do justice to the contents of the article in any outline which would be possible within our limits. Suffice it for our present purpose to say that its argument, based on physiological principles, and illustrated by diagrams showing the structure, functions, and law of development of the different parts of the brain, according to the rough subdivisions which are all that the present state of scientific knowledge of the subject warrants a careful writer in assuming as demonstrated, is the now familiar one that all education, in order to be natural or scientific, must follow along the lines which nature so plainly indicates in the development of the "organization" of the child during the period of infancy and early youth. From the fact that during the stage of infancy the human being is "on a par with other young animals;" that its brain grows rapidly during the first few months; that "movements which were at first spontaneous and not voluntary" become "gradually more and more voluntary, more under control, and more definite;" and that sensory impressions become more and more clearly sensory judgments, he draws the conclusion that "this process will continue throughout life, if not checked." The conclusion is a pretty large one if it is meant to imply, as it seems to be, that the sense-perceptions are naturally and normally intended to play the same prominent, we might almost say exclusive, part throughout life. But of that presently, though justice requires, just here, the admission that Professor Mills immediately adds the modifying statement that "Both common observation and the closest scientific study have made it plain that youth is the period of sense ascendancy." Whether this significant fact is given its full weight in the course of the article may be questioned.

But let us follow the writer a little further. A few brief quotations will, perhaps, suffice to make the course of his thought and argument tolerably clear.

The boy of five, let us suppose, is sent to school a perfect stranger to books and the usual educational equipment. Everything on the road to school attracts him to such an extent that likely enough he may arrive late. When at school the teacher may find him so restless that the question of keeping him in order so that he shall not disturb others is a matter of serious difficulty. So long as he can be kept in action things go well enough, but to keep this activity within conventional bounds is the problem.

Very often repressive measures that quite paralyze his nature are resorted to in order to adapt his organism to the environment, instead of the reverse being attempted. It is forgotten too often that if this young creature were not active, even restless, impulsive, inattentive—*i.e.*, ever ready to secure some new impression—he could not develop after nature's plan.

This is all true and good. The writer goes on to say that if we would "imitate nature, or rather assist, not impede her, all would be well." He draws a graphic picture of the way in which violence was done to these first educational principles under the old methods.

Think of what we have passed through. Arithmetic without any basis of concrete perception or practical application; geography confined to knowing right and left, up and down, in and out, on a flat surface or "map," with certain names attached to these forms that suggested no realities; reading that was necessarily uninteresting and lifeless, because the things described were not within the child's experience and so were not realized; grammar—that last straw to break the long-suffering learner's back—grammar that was the worst bore of all, because introduced at a period when the mind was unfitted for abstractions and so became divorced from all that was real and practical.

A fair inference from such facts is that given in the sentence we quoted at the beginning of these remarks. With that we are in hearty agreement. That is, however, but the negative definition of the true educational process. Professor Mills' positive definition, so far as we can give it in a sentence, and in his own words, is as follows: "It must now appear that in the true sense education is simply furnishing an environment which is favorable to the development or unfolding of the organization of the child." It is just at this point that we find ourselves disposed to demur. True, let the terms "environment" and "organization" have sufficiently wide meanings and there may be nothing to object to. But whether Professor Mills intends them to have such meanings, we are in doubt. If his view is that the education of the whole man can be effected along the lines of this constant reference to sense perceptions and relations, *i.e.*, that accurate observations of sensory phenomena and the work of generalizing from these phenomena, if carried on in an ascending ratio of intricacy and difficulty, would result in the development of the whole human organism, or the highest part of that organism, we cannot accept it. To our thinking, a human being educated strictly on such principles, would be but a dwarfed, one-sided specimen of the race. He would illustrate more fully, though he might feel less deeply, the incompleteness, the sense of deadness in the higher nature, to which some distinguished men of science have confessed, in view of the imperfect development of whole classes of their faculties, and those the highest in order of intellectual and moral excellence.

Let us try to make our meaning a little clearer. Does Professor Mills imply that the organs which stand related to the material world are our only sources of knowledge—that there can be nothing in the intellect which was not first in the sense? One would almost think so. And yet when he speaks of grammar as being introduced at a period when the mind was unfitted for abstractions, he implies that there comes a time when it is not so unfitted. The question then arises whether this power of abstraction is not a part of the mental organism which requires development and, if so, whether that development is not best attained by commencing at the earliest possible period to accustom the child to try its powers of abstraction—whether, in fact, the order of nature, as indicated in a deeper study of the action of the human mind, is not rather followed when we pass as rapidly as may be found expedient from performing our educational processes upon the material furnished by the senses, to deal with other classes of thought-objects suggested, or first brought into consciousness by these, but really different in kind. We can but suggest, by way of illustration, in addition to the general and abstract notions which the child really soon becomes capable of using, such subjective phenomena as the moral judgments, the mental concepts, the products of reflection, of imagination, and so forth. There is really no question about following the method of nature. The vital question is as to what that method really is. Because all mental development of the child begins with sense phenomena, and the processes performed, if we may so say upon these, does it necessarily follow that it ends there? May it not be rather the crowning distinction between man and all other animals that, in the order of nature, he quickly learns or may learn to pass from the objects of sense to others of a subtler class; that he makes of the former stepping-stones by means of which he may rise to higher things? If this view is nearer the truth, would it or would it not follow that he is the better, the true teacher, who leads the minds of his pupils gradually but steadily away from the lower to the higher functions of his complex organism? Were not man's faculties given him for higher work than the mere study of nature, noble and ennobling as that study undoubtedly is?

Literary Notes.

THE complete novel in the November number of *Lippincott's Magazine*, "More than Kin," is from the well-known pen of Marion Harland. It is a tale of love, sorrow, and misunderstanding, in which one domestic tragedy narrowly misses bringing in another; but darkness gives way to light at last. Other articles, poems, sketches, etc., as usual.

IN the November number of *The Arena* Professor Buchanan discusses the practical appplication of the new education in an article which is of peculiar interest to teachers. We hope to refer to it again. A paper of peculiar interest to young authors, and indeed to all lovers of American literature, is entitled "The West in Literature," by Hamlin Garland. There are numerous other articles of the usual excellence on topics of living interest.

AMONG the excellent things in the November *St. Nicholas*, next to Whittier's beautiful poem, girls will no doubt prefer the Kate Douglas Wiggin's serial, "Polly Oliver's Problem," and boys will select Stoddard's serial, "The White Cave"; but after the sigh of satisfaction and regret that signifies the ending of the first chapters of these long stories, both will no doubt turn to Felix Leigh's clever story, "A Giant in Fragments," or to Burrough's interesting biography of "A Young Marsh-Hawk." Thereafter (or before, maybe) will come the pick-out of little sweet bits, like the funny jingles illustrated by Birch and by Newell, or the poring over the touching story of the "Siren," by Henry Bacon, the laughing at "Jack Dilloway's Scheme," or "The Geometrical Giraffe"—but how is one to specify in a number like this? It is as bright as a button, and as good as gold.

Scribner's Magazine for November contains the second of its group of preliminary articles on "The World's Fair," this one being an account of "Chicago's Part in the World's Fair," by Franklin McVeagh, one of the prominent citizens of Chicago. His account of what Chicago has accomplished is a wonderful record of enterprise and successful achievement. He shows how that city has shouldered responsibilities which belonged to the United States Government Commission; how she has supplied eleven million dollars instead of the five that it was expected she would furnish; how she has arranged a site for the fair which in extent, situation, plan, and adornment exceeds anything ever before attempted, and that she has provided buildings equally remarkable in size, variety, and artistic value. Mr. McVeagh then points out how Chicago will adequately meet the question of transporting people.

THE November *Century* is the first number of the forty-fifth volume and of the twenty-third year of this magazine, which, while preserving the general characteristics which have given it vogue, is striking out freshly into new paths. The frontispiece is the portrait of an American of whom his countrymen have reason to be proud—the historian Francis Parkman—and the complexion of Mr. Parkham's series of historical narratives on the French power in North America is further accentuated by two short articles by Mr. Lowell (an unfinished sketch) and by Dr. Edward Eggleston, both of whom lay stress upon the importance of this work. Articles which strike into the midst of current discussion are "Plain Words to Workingmen," by one of them, Fred Woodrow; "Does the Bible Contain Scientific Errors?" by Prof. Charles W. Shields, of Princeton; and "Some Exposition Uses of Sunday," by Bishop Potter, in further discussion of the question of opening the World's Fair for the entire week. The last topic is also discuss ed editorially, and by Dr. Washington Gladden in an Open Letter. Other articles, sketches, poems, etc., too numerous to mention separately make up the number.

MANITOBA is rapidly forging to the front in educational matters. Brandon's new Central School building is 130 x 90, contains sixteen rooms, and cost $37,000.

Special Papers.

LITERATURE FOR THE ENTRANCE EXAMINATION.*

BY THOS. DOWLER, MIDHURST.

According as it is handled in the public schools, it seems to me that it is quite within the range of possibility to create (or at any rate to foster) in the minds of entrance candidates a life-long love for, or hatred of literary pursuits: and consequently to open or to close to them inexhaustible stores of pleasure and of profit. On the one hand, by making the Literature Lessons laborious tasks, to which teacher and pupils alike are constrained to gird themselves with effort and reluctance, we may cause a reaction to set in, which, when the dreaded ordeal of the Education Department has become "a picture on memory's wall," shall cause the emancipated toilers in the literary mine to throw books to the winds, and in the enjoyment of their newly-recovered freedom from bookish slavery to forswear for ever all avoidable reading.

On the other hand, if by judicious methods we can make the literature lessons so interesting that all will look forward with pleasure to that class, and the scholars are impressed more and more with an ever-deepening sense of advantages which may be derived from a *proper* use of *proper* books, we may lure them on to reap for themselves, in after years, rich harvests of recreation and of enduring gain, from wisely-selected books, and send them out into the world of higher education or of business, with minds trained, to some extent at least, to discriminate between the chaff and the wheat of literature, that they may know how to refuse the evil and choose the good.

"How to do this" is one of the most important educational questions of the day: because the *study* of English Literature is now receiving unwonted attention from the authorities, and seems likely ere long to take its rightful place on a par with, if not above, the study of the ancient classics. Why have the works of the Greek and of the Roman writers so long monopolized the attention of those engaged in higher education, to the practical exclusion of English Literature as a distinct branch of study? Is it not true that there has been, in the past, devoted to Greek and Latin, a large amount of attention in High Schools and Universities, which might more profitably have been given to English? Is there in the thoughts of those heathen poets, orators, and statesmen of antiquity, or in their methods of expressing those thoughts, anything so inherently superior to the thoughts and modes of expression of the Christian masters of English that they deserve to be held up, in preference, before the youth of our country as models for study and imitation? Seeing what susceptible creatures we are, is there not a certain amount of danger that the perusal of writings imbued with polytheism and teeming with allusions to and descriptions of the Bacchanalian orgies and incestuous loves of their mythological deities may have a demoralizing influence upon the reader? I wonder whether any of the immorality, scepticism, and rank unbelief of the present day could be traced back to some such source. Have not many of the advantages resulting (or *appearing* to result) from a thorough course of training in the so-called dead languages, been the effects of the methods of study adopted, rather than of any peculiar merit in the works studied? And would not those peculiarly beneficial methods of study, if exercised as assiduously in the fields of English Literature, be productive of infinitely better results, unmarred by many of the baneful effects of false beliefs.

Formerly a knowledge of ancient languages was necessary as a tool, as a key, to unlock the hidden literary treasures of by-gone ages—in whose mythology were locked up many secrets of nature and of art, known to the priests only. But now that the light of science is so widely diffused and we possess so many and such perfect translations of all that is worth knowing in the old writings, there is surely no longer any need to consider their study in the original languages essential to a liberal education?

If then a student does not need Greek and Latin for philological, or for professional purposes, and has not time to devote to their study, as well as to the higher study of English, let him devote his attention exclusively to the latter with the assurance that he may reap all or nearly all the advantages to be gained from the former.

Let us try to discover the peculiarly beneficial feature in the study of dead languages, and then use it in the study of English. Perhaps the first thing that the much-befogged would-be linguist has to do is laboriously to dig out of his lexicon the literal word for word translation of some knotty passage. This turning of leaves, a merely mechanical operation, cannot surely be of much benefit; so it must be in the next step of the process that the benefit comes in, viz., in the all-important problem of "making sense," as we used to call it at Rugby. There is a chance for intellectual growth, for in that process of "making sense" the student is obliged to concentrate all his faculties upon the work in hand to enable him to express in the best language at his command the crude ideas which he has with such arduous and useless labor extracted from their ancient hiding place. Is there anything useful about this which cannot be had equally well in the study of the works of English writers? Is not "doing our best" every step of the way the only sure road to success in everything?

Perhaps no hard and fast rules for the teaching of literature are possible, even if desirable; but surely some broad principles may be laid down for our guidance. One of the greatest difficulties that I have had to contend with in my efforts to teach "Entrance Literature" has been want of time. There seem to be so many and such interesting roads for research branching out in all directions from every paragraph—yes, almost every sentence—of any work that is worth studying at all that a very short excursion along a few of them will run away with all the time. The literature, the work itself should be studied, not the "History of Literature," which consists largely of dates and names. It is easy to study and talk much *about* literature. But as it is vastly more important to know the multiplication table, the Arabic system of notation, the alphabet, and their uses, than to know with the minutest accuracy when, where and by whom they were brought into use, so it is of primary importance in the study of Literature to find out what is written and the useful ends it serves, after which we may go on to consider minor details, as we have time.

I remember thinking that I was studying Chemistry, while I was learning the names of great chemists and their discoveries with dates; so I believe there is danger of thinking that we are studying literature, while in fact we are only learning about it. The first and most important object being to make sure that the author's meaning is understood by every individual in the class, we should direct all our efforts towards that end. We should strive to make sure that the pupil comprehends and appreciates the beauties of the piece under consideration (to the extent of his capacity) and [not(?)] spend the time at first in turning the lesson into a text, or mine, out of which to draw material for miscellaneous exercises in analysis, parsing, derivation, etc. When we study a picture we do not direct our first attention to the canvas on which it is painted, or to the oil with which the colors were mixed. A fine statue is admired more for its perfect proportions and beauty of outline than for the material of which it is composed, so let us remember that a literary gem is equally a work of art and to be regarded as such.

When the student knows what is written, let him go on to find out by whom, how, why, when and where it was written, etc. With the first object in view, let teacher and class go over the work together, line by line, removing, not by telling everything, but by judicious questioning, each difficulty as it is met with; explaining allusions to persons, places, events, etc., finding places on maps, giving the meanings of difficult passages of poetry in prose, etc., till every word and every phrase is fairly understood. Let the pronounciation of every strange word be correct the first time that it is heard, because first impressions are lasting, and it is easier to learn five new things than to unlearn one old one. Take nothing for granted as being understood. Pupils often think they understand, when really they know nothing about the meaning of a passage. Children very often attach totally wrong meanings to the simplest words, because they have met the same, or somewhat similar combinations of letters in different situations. Consequently, the best form of literature lesson is a continued conversation between the teacher and the class; the teacher drawing as much as possible from the pupils' own experience, striving to lead them from and through the known to the unknown, so that they may feel afterwards as though they had known it all before. Native plants flourish best, so we shall succeed best when we can develop the pupils' own ideas, or when those fail, graft our own ideas as branches upon their own stocks.

The class will then be in a position to read intelligently, not like Milton's daughter reading Greek to her blind father without understanding what she read. Can you imagine any intelligent person taking up, of his own free will, a book made up chiefly of words which he does not understand and reading it for pleasure? How then is it likely that pupils if they leave school without the ability to read intelligently, will read much at home to educate themselves? But one who can read with ordinary intelligence, having plenty of good books at his side, need never be long lonely; need never feel as deeply as others not so blessed, the lack of congenial society; for through his books he can hold sweet converse with the brightest and best spirits of this and of past ages. If, therefore, we can implant or arouse in our pupils a love of good books, for the sake of information, inspiration, or even recreation they afford, we have done much towards placing within their reach a remedy for many of "the ills that flesh is heir to." Reading aloud is an important part of the study of literature. A classical composition appeals to the ears as well as to the understanding (or to speak more correctly it appeals to the intellect through the ear more strongly than through the eye). Therefore, we can get a more thorough grasp of the author's meaning by hearing his work well read or recited. It is then by the medium of the ear there is achieved that

"Delight
"And triumph of the poet, who would say,
A man's mere 'Yes,' a woman's common 'No,'
A little human hope of that, or this:
And says the word so that it burns you through
With a special revelation, shakes the heart
Of all the men and women in the world
As if one came back from the dead
And spoke with eyes too happy, a familiar thing
Become divine i' the utterance."

Of course not all can thus interpret the gems of literature. But all can improve, more or less, and some fairly good readers may be produced in almost every school.

Having progressed so far towards the mastery of the piece (whether poetry or prose), the finest passages should be committed to memory and recited, thus storing the mind with food for thought. If you have ever taken part in dialogues, or in amateur theatricals, you will probably remember how strangely and unexpectedly parts of your speeches would recur to your mind, and fit in with the every-day events of your lives. Thus a good work thoroughly mastered and incorporated with the mental furniture as "a thing of beauty" becomes to the happy possessor "a joy forever." The understanding is enriched and nourished with exquisite thoughts instead of starving on inanities.

Although the select works of our great writers were not intended by their authors to serve as texts for school exercises, yet they do furnish the best materials for all kinds of language lessons: and perhaps such lessons can be both more pleasantly and more profitably taught from them than in any other way. Then why not use the best?

When the plot or train of thought, or purpose of the work has been matured, require the scholars to reproduce the outline or substance of it in their own words, first orally, then in writing, as an exercise in composition. If a long work is under consideration, let them first take a convenient portion at a time, and afterwards combine the parts into one whole.

Having thus found out *what* our author has said we may, if "old Father Time" is propitious, go on to consider with the class, "How" the writer has expressed himself: what striking features and devices have been used to arouse and sustain our attention, to bring about the exchange of thought which has taken place: how his thoughts have become ours. That is, we may study the nature and form of the vehicle or artistic medium of thought. As words are the material, we can study

*A Paper read before the North Simcoe Teachers' Association, at Barrie, October 8th, 1892. Published by request of Association.

their origin, form and uses: as we might examine the canvas, oil, and colors of which a picture is composed, or the chiselled marble of a statue. If the words used are old-fashioned and uncommon, enquire why they were so. If you are studying poetry examine whether the words are purely poetic, or could be used with equal propriety in prose. Notice whether the writer shows that he has at his command a rich vocabulary (i.e., a plentiful flow of words), or otherwise Observe how he arranges the parts of speech. If they are transposed, find out whether it is (a) for the sake of rhyme or of rhythm ; (b) for emphasis ; (c) or for the sake of originality. Consider whether he is verbose or concise in his statements.

If the writer is diffuse is it (1) to prevent ambiguity ; (2) to express strong feeling ; (3) or for emphasis, that he uses so much circumlocution ? If he has tried to convince us of anything, are his premises and conclusions logically arranged ? And are his arguments sound and convincing ? What kind of sentences has he used ? Are they periodic ? loose ? compromised ? balanced ? long or short ? How are the paragraphs constructed and arranged ? Does he observe the rules relating to : (1) Writing ; (2) Explicit Reference ; (3) Parallel Construction ; (4) Continuity and Method ; (5) Proportion ; (6) Variety and Transition.

We may point out the force or nature of the chief figures of speech, without troubling much about their Greek and Latin names. If the author has used similes and metaphors, etc., ask "Do they help us to understand him, or do they obscure his meaning ?" Do they arouse our feelings ? If the subject-matter has been treated of by other writers, compare their modes of treatment. Advanced classes can consider the author's style. Enquire as to "simplicity." Is the comparison easy to understand because it is expressed in simple, easily understood words, or, like our Public School History, does it need translating into the vernacular before any ordinary mortal can gather the sense of it ?

As to "Clearness." If the writer does use high-flown language and loves a Greek or a Latin polysyllable, where a good, old, honest Anglo-Saxon monosyllable would serve every purpose, does he express himself clearly, (that is, without confusion of ideas) ? As to "Impressiveness" of style, we may ask does the perusal of this work excite in us contempt for what the writer condemns, and admiration for what he praises ? Does he introduce striking incidents, vivid contrasts, sarcasm, wit, satire, etc. ? Is the style marked by active strength. (1) Originality of Thought ; (2) Harmony of Language and Subject ; (3) Harmony of Scenery and Incident ; (4) Harmony of Person and his Words and Deeds ; (5) Harmony of Incidents and the Plot of the Story ? And in variety is it characterized by animation, vivacity, liveliness, rapidity, brilliancy, nerve, vigor, force, energy, fervor, dignity, stateliness, splendor, grandeur, magnificence, loftiness or sublimity, according to the requirements of the piece ? Is it marked by passive strength in pathos, love, pity, benevolence, humanity, etc. ?

The main object of poetry being to give pleasure, we should, in the consideration of a poetical composition into which painful incidents have been introduced, notice how pain is redeemed, that is, we should observe what ameliorating conditions or facts have been woven into the story, to neutralize the painful and produce a pleasing effect upon the mind.

In the skilful "Redemption of Pain" is included much of the poet's art, because to exclude pain from poetry would be to write of an unnatural state of things since it is such an important element of life : and, on the other hand, to leave it unmitigated in the poem would be unpoetical.

Draw attention to the "Music" of Poetry : (1) in melodious syllables ; (2) in alliteration ; (3) in rhymes ; (4) in the harmony of the sounds of letters and syllables with sounds, movements, etc., in Nature, which they are intended to represent. Soft, liquid, smoothly-flowing syllables being used to represent easy motion, etc., and hard, harsh, rasping, guttural sounds to denote difficulty of movement, etc.

Notice, too, the picturesqueness of descriptions (1) of still life in nature, in animals, and in men, produced by the use of words denoting size, position, light, color, etc., etc., and (2) similarity of action in the elements, in dumb animals, or men in activity, expressed by means of words denoting direction, motion, resistance, sound, odor, etc., etc.

As to "Taste," is the whole piece in good taste, or does it exhibit mannerisms, disagreeable peculiarities, etc. Does it show care in preparation and a finished polish, or can you detect haste and negligence of execution ? Does it seem to have been written for the sake of imparting pleasure or information, or merely as a pedantic display of erudition ?

In addition to all the lines of study which I have already indicated, we may enter upon formal grammatical analysis, parsing, derivation, scansion, and a hundred and one other minor matters ; to say nothing of studying the life and times of the author in order to discover "Why," "When" and "Where" he wrote : all of which information is necessary to enable us to appreciate any great literary work ; so that we may know the immediate (remote and near) causes that developed or influenced the author's genius, and so colored his message : for it is generally conceded that writers, (particularly poets) reflect the age in which they live. That is to say, the modes of thought, prevailing sentiments, and tastes of their day are reproduced in their writings.

Finally, our teaching of "Literature" will have become in the highest sense successful when we shall have brought our pupils to love reading, and eagerly to cultivate an ever-extending acquaintance with the Great and the Good of the Past and of the Present by studying their literary works for the sake of the *Truth* they contain ; the ennobling sentiments they inculcate ; and the higher ideals they present.

Science.

Edited by W. H. Jenkins, B.A., Science Master, Owen Sound Collegiate Institute.

A LESSON IN ELEMENTARY BOTANY.

The following outline lesson by F. Lilian Taylor, is taken from the *Public School Journal*. It will be found suggestive in many ways, not only to High School masters, but to many Public School teachers who are introducing natural science studies into their schools :

THE HAND-SHAPED LEAF.

The pupils have previously become familiar with the terms blade, stem, veins, point, and midrib.

All the children are provided with maple leaves. Their teacher directs and questions. The children raise hands and after sufficient time has been given for observation, individual pupils are called on for answers. The following questions suggest the method of arousing the children's observation and thought :

Lay the maple leaf on your hand. Count the points of the leaf. How many fingers have you ? In what is the maple leaf like your hand ?

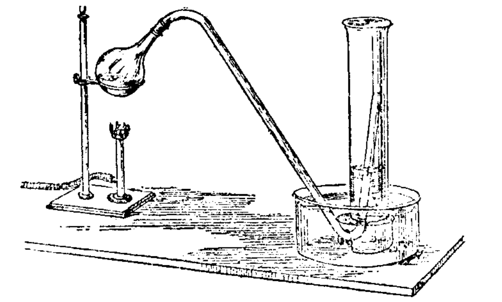
Which is your longest finger ? Which is the longest point of the maple leaf ? Notice the fingers each side of the middle finger. Now touch the points of the leaf on each side of the middle point. Tell what you observe. Hold up your hand and spread out your fingers. Draw your fingers along all the large ribs which spread out and make the framework of the leaf.

Tell all the ways in which the maple leaf is like your hand. What shape shall we call it ? Who will come to the desk and find another hand-shaped leaf ? The lesson concludes by drawing the leaf.

THE QUALITATIVE ANALYSIS OF AIR.

The usual methods given for the qualitative analysis of air are unsatisfactory for junior students. It is a common experience to find pupils who conclude that the gas remaining after the phosphorus has burned has come from the phosphorus, or is a product of phosphorus with something in the air. To upset the former conclusion it is necessary to prove that P is an element, a step which is quite unadvisable in our High Schools. The latter conclusion is also not capable of easy disproof. As a substitute for the above the following is offered :

Expt. 1.—Arrange apparatus as in Fig 1. In the flask place a quantity of clean mercury. In the collecting bottle put water to about one-third its height and invert as in fig. Now boil the mercury gently for a couple of days. Note the height of the water in the collecting bottle at the beginning and at the end of the experiment. Test the gas remaining in the collecting bottle with a lighted taper. The pupils will note that on beginning we have



mercury and air, on concluding we have mercury, a red powder, and a gas which will extinguish the taper. They will also note that about one-fifth of the original air has disappeared.

Expt. 2.—Take some of the red powder from experiment 1 and heat as mentioned in H.S. Chemistry under head of Oxygen. The notes of the pupils will show that on commencing we had a red powder, at the end mercury and a gas which will re-light a glowing splint.

Expt. 3.—Mix the gas obtained in Expt. 1 with that obtained in Expt. 2 and test for air.

SENIOR LEAVING ZOOLOGY.

OUTLINE NOTES OF A LESSON ON A FISH.

Before taking up the fish, the class has worked over the gross anatomy of the frog as a type of vertebrate structure, following generally the plan laid down in Huxley & Martin's Practical Biology. Drawings have been made of various skeletal structures, and of the whole skeleton to show the correlation of parts. The fish taken for study was the one most accessible, viz., the common lake whitefish—Coregonus.

(*a*) Place the fish on its side and draw. The main points to be noted in this drawing are the position and number of the fins, their general shape and character ; position and relative size of the eyes and head ; the lateral line, and other superficial characters.

(*b*) Detach, magnify, and draw a scale, indicating the free and attached edges.

(*c*) Pass guarded bristles into all external openings.

(*d*) Note the variations in coloration.

(*e*) Lay the specimen on its side. With scissors carefully cut an opening in front of the pectoral fins and carry the incision to near the posterior opening, then cut upwards, and around the dorsal edge of the body cavity and the gill-cover, being careful not to injure any underlying organ. Remove the side wall and, without disturbing, draw the exposed parts.

(To be continued.)

SIMPLE APPARATUS FOR EXPERIMENTAL SCIENCE.

To show the diffusion of gases.—Apparatus—A test tube, and a tumbler, plaster of paris. The test tube to have a hole in the bottom. Mix the plaster of paris ; dip the mouth of the test tube into the plaster and remove to dry. Fill the test-tube with gas (coal gas will do), and set the tube with the broken end in water and allow to stand for some time.

To show the absorption of carbon dioxide by charcoal.—Apparatus—Two test tubes, one with a hole in the bottom. Fit both with corks and connect by rubber tubing. Place the broken tube in water. Remove the cork from the other tube ; fill it with CO_2, and put in a couple of pieces of glowing charcoal ; quickly insert the cork. Why does the water rise in the broken tube ?

"An author does good work if he does nothing more than simplify apparatus used in teaching science."—*Scientific American.*

THE PLACE OF NATURAL SCIENCE IN A SCHOOL COURSE.

History in the liberal sense surveys the field of human life in its typical forms, and furnishes the best illustrative moral materials. Nature study opens the door to the real world in all its beauty, variety, and law. The formal studies constitute an indispensable part of useful and disciplinary knowledge, but they should occupy a secondary place in courses of study because they deal with the form rather than with the content of the sciences. It is a fundamental error to place formal studies in the centre of the school course, and to subordinate everything to their mastery. History and natural science, on the contrary, having the richest knowledge content, constitute a natural centre for all educative efforts. They make possible a strong development of will-energy because their interesting materials furnish strong and legitimate incentives to mental activity, and an enlarged field and opportunity to voluntary effort in pursuit of clear and attractive aims.—*Dr. Chas. McMurry, in General Method.*

ANSWERS TO CORRESPONDENTS.

1. Where can I get a microscope suitable for examining plants, their structure, etc. ? 2. Would same microscope be useful in examining the various smaller organs of human body ? 3. What will such microscope cost ? 4. How many times greater will it magnify ? P.G.M.

[I. Lyman Bros. & Co., Montreal, are agents for a very good student's microscope (E. Leitz). 2. Yes. 3. Twenty-two dollars and a half. 4. From 84 to 600 times, according to the combinations of the objectives and eye-pieces used.]

❋ Mathematics. ❋

All communications intended for this department should be sent before the 20th of each month to Chas. Clarkson, B.A., Seaforth, Ont.

THE HIGH SCHOOL JUNIOR LEAVING AND UNIVERSITY PASS MATRICULATION.

ARITHMETIC AND MENSURATION.

NOTE.—Candidates for Matriculation will take sections A and B. Candidates for Junior Leaving will take sections B and C.

A.

1. A gallon contains 277.274 cubic inches ; a cubic foot of water weighs 62.5 pounds. If mercury weigh 13.5 times as much as water, how many gallons of mercury will weigh a ton ?

2. A marksman shooting at a target at a distance of 500 yds. hears the bullet strike the target $3\frac{1}{33}$ seconds after he fired. A spectator, equally distant from the target and the marksman, hears the shot strike $1\frac{2}{3}$ seconds after he heard the report. Find the velocity of the bullet and of sound.

3. A dealer has 1,000 hats for sale ; at first he sells so as to gain 50% on the cost price ; after a time he lets the remainder go for what he can get, and finds he loses on these latter sales 10%. If his total gain be 29% how many hats did he sell at a gain of 50% ?

B.

4. (*a*) Every prime number when divided by 6 will leave a remainder of either 1 or 5.

(*b*) Add 4567, 1572, 7354, 6251, 3216, which are in the scale of 8, and express the result in the scale of ten.

(*c*) Explain how to determine by inspection whether any given fraction will produce a terminated or repeating decimal.

5. A watch was 4 minutes slow on July 1st at noon, and on July 6th at midnight it was 2 minutes and 20 seconds fast. What is the true time on July 12th, when the watch indicates a quarter to ten in the morning ?

6. A mortgage for $1,800 dated April 1st, 1889, and bearing interest at 6%, has endorsed upon it the following payments :—Oct. 12th, 1889, $300 ; Sept. 15th, 1890, $450 ; Nov. 1st, 1891, $250. How much would pay off the mortgage on Nov. 1st, 1892, each payment to cover interest to date ?

7. A merchant bought 200 yards of cloth at $1.50 per yard, payable in three months, and sold it one month after at $1.75 per yard, payable in four months. To pay the purchase money he borrowed for the necessary time at the rate of 6% per annum. Find his gain or loss on the transaction.

8. A man secures a net income of $2,312.20 from a fixed salary, and the rent of a house. On the house, which rents for $50 a month, there is a mortgage of $2,000 at 6% per annum, $4,000 insurance at $1\frac{1}{4}$% premium, taxes, at the rate of 19 mills on the dollar, on an assessment of $5,000, and on his salary a tax of 10 mills on the dollar, with $400 exempt. What is his salary ?

9. The capital of a trading company consists of 4,000 shares of $80 each in *A* stock and 2,000 shares of $25 each in *B* stock. In dividing the profits, 5% of the amount of each share is first paid, and the remainder is then divided equally amongst the shareholders. The profits of the business in one year being $34,853.50, how much would be paid to the holder of a share in *A* stock and *B* stock respectively ?

10. Twenty years ago a man insured his life for $10,000, paying an annual premium of 2%. During the first ten years money could have been invested at 6%, and at 4% during the next ten years. If he should die now, which would have been the more profitable investment for his family ?

C.

11. Two circles have their radii 12 feet, and $12\sqrt{3}$ feet respectively, and their centres 24 feet apart. Show that the area of the portion common to both circles is $24(5\pi-6\sqrt{3})$ square feet, and that the perimeter of this portion is $4\pi(\sqrt{3}+2)$ feet.

12. A triangular room having its sides 20, 21 and 29 feet, is to be covered as completely as possible with a carpet 2 feet wide. The strips of carpet are to run parallel to the longest side, and are not to be split or cut diagonally. How many square feet of the room will be left bare ?

13. A line passing through the centre of a sphere is moved so as to describe a circle upon the sphere. If the radius of this circle as a plane circle is 2, and the radius of the sphere is 4, show that the total surface of the conical sector so determined is $8\pi(5-2\sqrt{3})$.

SOLUTIONS.

By W. PRENDERGAST, B.A., Seaforth Collegiate Institute.

1. $\frac{625}{10}\times\frac{277274}{1000}\times\frac{1}{1728}\times\frac{135}{10}$ = No. of lbs. in 1 gal. of mercury.

$$\frac{2000\times10\times1000\times1728\times10}{625\times277274\quad\quad 135}=\frac{2048000}{138637}$$

= 14.772 gals. in a ton mercury.

2. Time required by bullet to travel from marksman to target + time required by sound to travel from target to marksman $=3\frac{1}{33}$ sec.

Time required by bullet to travel from marksman to target $=1\frac{2}{3}''$

$\therefore$ vel. of sound = 500 yds. per $1\frac{12}{33}$ sec.
= 1100 ft. per sec.

and vel. of bullet = 900 ft. per sec.

3. Let x = No. sold at gain of 50%

$\frac{1}{2}x-\frac{1}{10}(1000-x)=290$

$x=650$. ANS.

4. (*a*) 1st. All prime numbers are odd.

2nd. Since the product of 6 and any whole number (odd or even) is even, and the difference between an odd and even number is odd, therefore any odd number divided by 6 will give for remainder either 1 or 5.

3rd. 3 could not be the remainder, since in that case the number itself would be divisible by 3, but the number is prime, and therefore the remainder, when number is divided by 6, is either 1 or 5.

(*b*)	27424
	8
	23
4567	8
1572	188
7354	8
6251	1506
3216	8
27424 in scale of 8.	12052 in scale of 10.

(*c*) If the denominator of fraction has no prime factors except 2 or 5, the decimal will terminate, and if denominator has any prime factor other than 2 or 5 the decimal will repeat.

5. From noon July 1st to midnight July 6th = 132 hrs.

From $2\frac{1}{3}'$ past midnight July 6th to 9.45′ a.m. July 12th = 129 hrs., $43\frac{2}{3}'$

Watch travels 132 hrs., $6\frac{1}{3}'$ in 131 *true* hrs.

It is required to find the number of *true* hrs. in 129.43⅔ *watch* hrs.

$$\frac{132\times129\frac{42\frac{2}{3}}{60}}{132\frac{6\frac{1}{3}}{60}}=\frac{132\times23348}{23779}=129\text{ hrs., }36\tfrac{10656}{23779}{}'$$

$\therefore$ correct time is $36\frac{10656}{23779}$ minutes past 9.

6. From April 1st to Oct. 12th, '89 = 194 days
" Oct. 12, '89, to Sept 15, '90 = 338 days

From Sept. 15, '90, to Nov. 1, '91 = 1 year and 47 days.

Int. on $1800 for 194 days at 6% = $57.402

$300 − 57.402 = $242.597 the part of principal paid Oct. 12th.

1557.402 = part of prin. unpaid after Oct. 12th.

Int. on this amt. for 338 days = $86.531

1557.402 + 86.531 − 450 = 1193.933, principal due after Sept. 15, '90.

Int. on $1193.933 for 1 yr. 47 days = 81.1342

$1193.933 + 81.1342 − 250 = $1025.267 = prin. due after Nov. 1, 1890.

Amt. of $1025.267 for 1 yr. = $1086.781, amt. due Nov. 1, 1892.

7. $300 = cost. $3 = int. for 2 mos.

$303 = cost payable at same time as selling price is received

350 = selling price

$47 = gain at time s. p. is received.

8. $120 = int. on mortgage
50 = premium on insurance
95 = taxes
265

$335 = net income from house
400 = part of salary exempt.

2312.50 − 400 − 335 = $1577.20 = $\frac{99}{100}$ taxable part of salary

$\therefore$ total salary $=400+(\frac{100}{99}\times1577\frac{1}{5})=\$1993\frac{13}{99}$.

9. First, on one share of *A* stock a dividend of $4 is paid.

On one share of *B* stock a dividend of $$1\frac{1}{4}$ is paid.

In this way total amount paid = 5% o (320,000 + 50,000) = $18,500

34853.50 − 18500 = 16353.50 to be divided among 6000 shareholders, which gives 2.7255+ to each.

$\therefore$ 2.7255 + 4 = $6.725+ is paid to holder of the share of *A* stock.

and $3.975+ is paid to holder of one share of *B* stock.

10. Annual premium = $200 (paid at beginning of year). If that premium were invested it would in 20 years amount to

$$200[1.04^{10}+1.04^{9}+\ldots.1.04]+200[1.06^{10}+1.06^{9}+\ldots.1.06]\,(1.04)^{10}$$

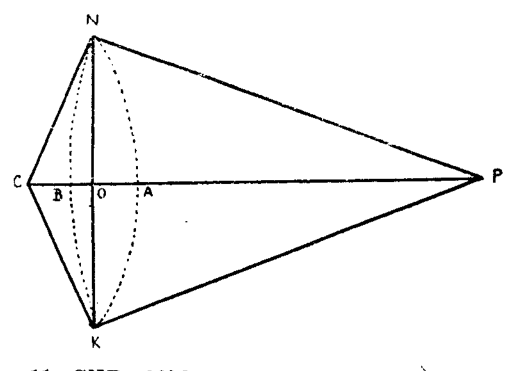
$$=200(1.04)\frac{104^{10}-1}{.04}+200\,(1.06)\,(1.04)^{10}\,\frac{1.06^{10}-1}{.06}$$

$$=200\left[\frac{1.04}{.04}(1.04^{10}-1)+\frac{(1.06)(1.04)^{10}}{.06}(1.06^{10}-1)\right]$$

$$=200[(26\times.48024)+\tfrac{1}{6}(106\times1.48024\times.79805)]$$

$$=\$6633.536+$$

i.e., the insurance policy would be more profitable.



11. CNP = 90° because $NC^2+NP^2=CP^2$

$\triangle$ CNP = ½ equilateral $\triangle$ because CP = 2CN and $\angle N=90$

$\therefore\ \angle NCP=\angle KCP=60°,\ \angle NPC=\angle KPC=30°$

$CO=6,\ PO=18,\ NO=6\sqrt{3}$

Area of sector of left hand circle $=12^2\times\pi\times\frac{120}{360}=48\pi$

Area of $\triangle$ NCK $=36\sqrt{3}$

$\therefore$ area of segment NAK $=48\pi-36\sqrt{3}$

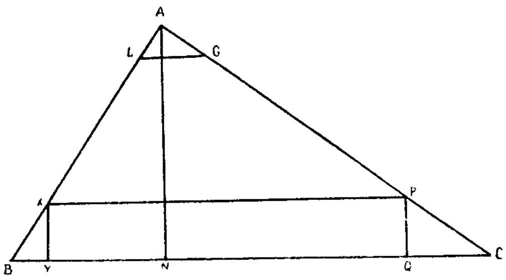
Similarly area of segment $NBK = 72\pi - 108\sqrt{3}$

Area of common part $= 24(5\pi - 6\sqrt{3}.)$ Ans.

Arc $NAK = \frac{1}{3} \times 2\pi \times 12 = 8\pi$

Arc $NBK = \frac{1}{3} \times 2\pi \times 12\sqrt{3} = 4\pi\sqrt{3}$

Perimeter of common part $= 4\pi(\sqrt{3} + 2)$



12. $\frac{20 \times 21}{29} = 14\frac{14}{29} = AN$, ∴ there will be 7 pieces of carpet.

$\frac{xy}{AN} = \frac{Bx}{BA}$, $Bx = \frac{2 \times 20}{14\frac{14}{29}} = \frac{58}{21}$ (Euc. VI., Prop. 4.)

$By = \sqrt{[(\frac{58}{21})^2 - 4]} = \frac{40}{21}$

Area $\triangle Bxy = \frac{40}{21}$

Similarly $\triangle PQC = \frac{21}{10}$, $PC = \frac{29}{10}$, $PQ = \frac{21}{10}$

$\underline{|A} = 90°$ since $29^2 = 20^2 + 21^2$

$AL = 20 - (7 \times \frac{58}{21}) = \frac{2}{3}$, $PC = \frac{29}{10}$

$AG = 21 - (7 \times \frac{29}{10}) = \frac{7}{10}$

Area of uncarpeted $= (\frac{1}{2} \times \frac{2}{3} \times \frac{7}{10}) + (7 \times \frac{21}{10}) + (7 \times \frac{40}{21}) = 28\frac{4}{15}$. Ans.

13. The conical surface of a segment of a sphere = the surface of a cylinder of same radius as sphere and of height = to thickness of segment.

Thickness of segment $= 4 - \sqrt{(4^2 - 2^2)} = 4 - 2\sqrt{3}$

Spherical surface of conical sector $= 4 \times 2\pi \times (4 - 2\sqrt{3}) = 8\pi(4 - 2\sqrt{3})$

Conical surface of conical sector $- 4^2 x\ \pi \times \frac{2 \times 2\pi}{4 \times 2\pi} = 8\pi$

Total surface $= 8\pi(5 - 2\sqrt{3})$

CORRESPONDENCE.

Mr. W. S. Howell, Sombra, points out the omission of d in the solution of No. 47, p. 156, in the last line but one. It was intended to read:—"All giving a remainder d less than the divisor used." His solution of the pulley question is reserved for consideration.

Mr. J. McIntosh, Pinkerton, objects to the solution of No. 6 in Entrance paper of July, 1892, that "no equations are intended for Public school children," and offers a solution which is simply an equation not fully expressed. The "Arithmetical Equation" is the basis of almost every operation in arithmetic. True it is that few text-books give it due prominence, but nevertheless it furnishes the simplest and clearest expression of the reasoning involved in most problems, and Public school children ought to learn to put down their solutions in equational form at the very beginning of their studies. When thus expressed the reasoning is concise and easily followed. Kirkland and Scott's Elementary Arithmetic marked a distinct advance in this regard; can any one tell the reason why it was "dis-authorized?" Does any one presume to say that the present Public School Arithmetic can compare with the former book in clearness? We pause for an answer.

Mr. C. Johnson, Ivan, sends solution of No. 143, p. 274, H. Smith's Arithmetic. This problem has been solved in these columns every year since The Journal began publication. Mr. Johnson's work is correct; we repeat the concise solution of January, 1888:—To avoid fractions, suppose each cask holds 20 gallons;

∴ 2(20 gal. − 5 gal. × number hours) = (20 gal. − 4 gal. × number hours)

i.e., 40 gal. − 10 gal. × number hours = 20 gal. − 4 gal. × number hours

∴ 40 gal. = 20 gal. + 6 gal. × number hours

or 20 gal. ÷ 6 gal. = number hours = $3\frac{1}{3}$ hours.

Bro. McIntosh will see here a simple application of the "Arithmetical Equation."

Mr. J. H. Packham, Owen Sound, has very kindly sent the Commercial Arithmetic paper set for Commercial specialists in July last. The questions, with his solutions, will appear as soon as practicable. Many thanks.

Mrs. A. Glencross, Traverston, requests solutions to No. 27 in Trade Discount, and to Nos. 34 and 38 in Profit and Loss, High School Arithmetic. Will some kind friend oblige?

Mr. W., Port Ryerse, wishes to see arithmetical solutions to the three following problems:—

(1) A hare is 200 of her own paces in front of a greyhound. If 2 of the greyhound's paces are equal to 3 of the hare's, and she takes only 3 while the greyhound takes 4, in how many of the hare's paces will he overtake her?

(2) A man, assisted by a boy, completed a job in 15 hours. The man received $\frac{5}{6}$ of the pay, the boy $\frac{1}{6}$, but the man was paid at double the rate the boy was in proportion to the amount of work each did. How many hours would the man unassisted have taken to do the work?

(3) Question 102, page 151, Public School Arithmetic.

No. 3 was solved in the June number. See p. 62, No. 59.

Mr. C. D., Frankville, writes:—Please solve: (1) What successive discount taken twice is the same as $17\frac{43}{121}$% taken once? (2) What successive discount taken three times will reduce $30 to $21.87? (3) A trader can have a certain gain and allow a discount of 10% when using a yard measure .72 of an inch too short. What discount can he allow by using a correct measure and have the same gain as before?

No doubt some of our readers will gratify him.

Mr. W. J. Hamilton, Campellford, takes great pleasure in adding his mite towards helping The Journal by sending the solutions below, which were asked for last month. We appreciate his good-will towards this department and his fellow-workers:—

138. Since B makes 45 while A makes 50
and C " 40 " " 50
" B " 45 " C " 40
or B " 90 " C " 80

∴ B can give C 10 points in a game of 90. Ans.

140. 14 miles 6 fur. = 77,880 feet.

The amount of water to be drawn from the canal = 14 mi. 6 fur. × 48′ × 1″

= (77,880′ × 48′ × $\frac{1}{12}$) cubic ft.

= 311,520 cubic ft.

The amount of water in the lock

= (80′ × 12′ + $8\frac{1}{2}$′) cubic ft.

= 8160 cubic ft.

Since 8160′ = passage of 1 barge

1′ = " " $\frac{1}{8160}$ barge

and 311,520′ = passage of $\frac{1}{8160} \times \frac{311520}{1}$ barge

= $38\frac{3}{17}$ barges

= 38 barges. Ans.

To all our friends we return sincere thanks for the kind things in their letters and for the trouble they have taken to make The Journal a useful medium of self-help among our noble brotherhood. If any one deems the answers tardy, let him bear in mind the dimensions of our constituency and the mass of matter that must every month be omitted for want of space, and he will become patient. We trust that the hints sent by mail to numerous friends may prove timely and helpful. Let every teacher love his profession and do all in his power to educate public opinion up to a higher standard on educational questions.

You are disappointed. Do you remember, if you lose your heart about your work, that none of it is lost; that the good of every good deed remains, and breeds, and works on forever; and all that fails and is lost is the outside shell of the thing; which perhaps might have been better done, but, better or worse, has nothing to do with the real spiritual good which you have done to men's hearts, for which God will surely repay you in His own way and time.—*Charles Kingsley.*

For Friday Afternoon.

THE WATERMILL.

Hark! Listen to the watermill
All the live long day,
How the clickings of the wheel
Wear the hours away.
Languidly the summer winds
Stir the greenwood leaves;
From the fields the reapers sing
While binding up their sheaves.
And a memory o'er my mind
As a spell is cast:
"The mill can never grind
With the water that is past."

Summer winds revive no more
Leaves strewn over earth and main;
And the sickle ne'er can reap
The gathered grain again.
And the rippling stream flows on,
Tranquil, deep and still:
Never gliding back again
To the watermill.
And the proverb truly speaks,
With a meaning vast:
"The mill can never grind
With the water that is past."

O, the wasted hours of life,
That have swiftly drifted by;
O, the good we might have done—
Gone and lost, without a sigh;
Lives that we might once have saved,
By a single kindly word;
Thoughts conceived, but ne'er expressed,
Perishing unpenned, unheard.
Take the lesson to your heart,
Take and hold it fast:
"The mill can never grind
With the water that is past."

Take the lesson to yourself,
Loving heart and true;
Golden years are fleeting by,
Youth is passing too.
Try to make the most of life,
Lose no happy day;
Time will never bring you back
Chances swept away.
Keep the proverb fresh and green,
Take and keep it fast:
"The mill will never grind
With the water that is past."

Work while the daylight shines,
Man of strength and will;
Never does the streamlet glide
Useless by the mill.
Wait not till to-morrow's sun
Shines upon your way;
All that you can call your own
Lies in this to-day.
Power, intellect and health
Cannot, will not last:
"The mill can never grind
With the water that is past."

FIVE RULES FOR TO-DAY.

1. Plan the entire day's work before opening school.
2. Do not condemn hastily either recitations or conduct.
3. Personally, be yourself all that you desire in the child.
4. Endeavor to be guided by love in whatever is said or done.
5. Let no trivial annoyances disturb your own quietness and confidence.—*Faith Upton.*

Snatch time by the forelock and make yourself useful to the world. The world has no need for a person who cannot make the people better by having lived.—*John L. Ray.*

Use well the moment; what the hour
Brings for thy use is in thy power;
And what thou best canst understand,
Is just the thing lies nearest to thy hand.
—*Anon.*

School-Room Methods.

FIRST LESSONS IN GEOGRAPHY.

THE knowledge acquired in the study of geography should be a real knowledge of the earth as the home of man, providing for him food, clothing, and shelter, supplying objects for his enjoyment and study, and so being a means of social, intellectual, and spiritual progress. As a means of mental culture, also, the study of geography is of great use. Observation, imagination, memory, judgment, and language are all exercised in the study, and by it the child's interest in the world about him is awakened in such a way as to increase his sympathy and love for his fellow-men.

It is evident that these great objects cannot be attained by learning and reciting facts ordinarily found in a text-book, especially if the facts stand in the pupils' minds in a disconnected way and unrelated to any experience of theirs or to any direct use.

PREPARATORY LESSONS.—Before geography as a study is begun, children need to acquire a proper habit of observation, and to gather facts which will aid them in their subsequent study. During the first three or four years, therefore, the plan of study includes lessons in *Form, Place, Plants, Animals, and Minerals*, which are intended to give such knowledge as will make the study of geography more intelligible and therefore more profitable. The methods to be pursued in these subjects are to be treated under the head of Observation Lessons.

Local Geography.—Further preparation for the study of geography is made in the third and fourth years by lessons to teach geographical ideas and geographical language. The knowledge thus gained is sometimes called local geography because much of it is gained by observation in the locality of the school.

The simpler subjects of the following outline should be taught during the third year, the more difficult being delayed until the fourth year, when all preparatory work should be reviewed.

I.—BODIES OF LAND.

1. Hill: base, slopes, summit, hill range, hill system
2. Mountain: base, slopes, summit, peaks, mountain range or chain, mountain system, volcano { crater, lava }
3. Plain: field, woods, meadow, swamp, prairie, desert; oasis
4. Table-land.
5. Valley:— River valley, Gorge, or canon, Pass.
6. Highlands
7. Lowlands
8. Coast: beach, cliffs, bluff, projections: { cape, promontory, peninsula, isthmus }
9. Islands: continental, oceanic, volcanic, coral

II.—BODIES OF WATER.

1 Spring: pure water, mineral, hot, geysers
2. Brook: source, branches, banks, bed, current, channel, mouth, water-shed
3. River: source, branches, banks, bed, current, channel, water-falls, mouth, uses, river system, river basin, water-shed
4. Pond: system, basin
5. Lake: system, basin
6. Ocean: sea (archipelago), gulf, bay, harbor, strait, channel, sound

III.—CLIMATE (weather).

1. Temperature: hot, cold, temperate

Spring, summer, autumn, winter; day, night.

2. Air and moisture: wind, vapor, dew, frost, cloud, fog, mist, rain, hail, snow, ice

IV. SOIL:

loamy, sandy, clayey, fertile, arable, barren

V. PRODUCTIONS.

1. Plants: for food, for clothing, for building-material: { houses, ships, utensils }, for fuel, for medicine, for oils and dyes
2. Animals: for food, for clothing: { furs, skins, leather }, for labor, for utensils: { ivory, bone }
3 Minerals: for building-material: { houses, ships, utensils }, for fuel, for food

VI. PEOPLE.

1. Races: Caucasian, Mongolian, Malay, African, American
2. Occupations: agriculture, fishing, mining, manufactures, commerce: { exports, imports }
3. Government: republic, monarchy: { absolute, limited }
4. Religion: Pagan, Jewish, Christian, Mohammedan
5. States of Society: savage, barbarous, half-civilized, civilized

Some of the foregoing subjects will be found difficult to teach satisfactorily. Let it be remembered, however, that no amount of telling or reading can take the place of teaching, and that the teacher may be content to teach very little of a subject, provided the facts are discovered and expressed by the pupils themselves.

Among the most difficult of these subjects to teach is climate, a thorough study of which belongs to a later period. Some ideas of the subject may be gained by calling attention to the temperature and moisture of the atmosphere from time to time, making comparisons of the weather of different seasons and of different places. It may be noted that the temperature is more equable near the sea than at a distance from it, and that it is lower upon a high hill than it is in the valley.

Some general ideas of the formation of dew and rain may be gained by simple experiments. Call attention of children to the fact that some of the water which was left in a dish on the stove the day before has disappeared. Bring out the statement from them that the water has "gone into the air." Call attention to the rising steam, and ask them for familiar instances of the same thing. Give them the name *evaporation*. Hold a cold plate over the steam, and let them observe the drops of water formed on the plate. Call attention to the deposit of moisture on the window-pane in a cold day, and upon the outside of a pitcher of ice-water in a warm room. From these illustrations the children get the idea of *condensation*; and, by a little questioning, they may see that the same conditions exist in the formation of dew and rain as exist when drops of water are seen to form on the plate and pitcher.

Most of the topics in the above outline, under *Bodies of Land* and *Bodies of Water*, may be taught by leading the children to observe the various features of land and water in the vicinity of the schoolhouse. The observation should be made from the schoolhouse at the time of recitation and at recess, or it may be made in little tours of inspection by the school either as a whole or in groups. Frequently it will be found well to direct the attention of children to certain things, and have them bring the results of their observation into the recitation. It will be useful, also, to call attention to their past experiences, and to use the results of their experience in the recitation.

As an assistance both to observation and to memory, it will be found well to draw and to mould representations of the various objects observed, and to have the pupils express correctly, in their own language, all the facts observed.

For the purpose of teaching productions, bring before the class as many specimens of native and foreign products as can be found. From the stores, from the neighboring woods, and from the homes of pupils, there may be obtained a large number of vegetable, animal, and mineral productions, some of which may be kept permanently in the school.

To teach ideas relating to people, first lead the children to think of the condition of the people of their own town and province. Subsequently, by means of stories and pictures, lead them to compare the people of other countries with those of their own country in respect to occupations, religion, government, race, and state.—*Bince's Courses and Methods.*

A METHOD IN PHONICS.

BY MISS LONGHURST, UFFORD, MUSKOKA.

ACCORDING to the method of teaching reading proposed in Ontario Readers, Part I., the phonic system is not introduced until the pupil has been made familiar with several words. These are supposed to be taught by the "word" method, phonic sounds being entirely neglected until the learner has mastered the contents of his Reader up to Lesson VIII. In the opinion of the writer, a much better way is to begin at once with phonics.

Below is given a method which has been used successfully in teaching reading to a class of beginners.

Suppose the class in position to receive a first lesson.

The teacher writes upon the black-board the character m.

Pointing to the character, she tells the class that it stands for the sound m, (teacher gives phonic sound), and has class imitate her in making it.

This is done several times, the teacher writing the character and the class giving the phonic sound which it represents.

The teacher next writes the character "a" and gives its phonic sound as in "mat."

This is also repeated several times, the teacher pointing alternately to the characters "m" and "a" and requiring class to give the phonic sound indicated by the character pointed out.

Next the characters "ma" are written side by side and the class is asked to give the phonic sounds indicated one after the other very quickly.

The result is the syllable "ma."

Teacher then writes ma-ma and has class pronounce the two syllables forming the word "ma-ma."

There is a sudden dawning of intelligence as the little ones realize the fact that these curious marks on the black-board indicate sounds from which they can form words.

The class then take seats and write the word "ma-ma" on their slates several times.

At the next lesson, after reviewing what has been already taught, the characters "n" and "r" are placed upon the black-board and the class learn to distinguish them and give their phonic sounds as before.

Next the character "n" is placed just after the syllable "ma" and the two pronounced quickly in succession. The result is the word "man."

The teacher writes "a man" on board and the class read.

Then the word "ran" is formed by taking away the "m" from the word man and substituting "r." Teacher then writes "A man ran," and class read.

This method is continued until the class can read a great number of easy sentences in script from the black-board, after which they are taught to read ordinary print in much the same way, beginning with Lesson VIII. in Ontario Readers.

When they can distinguish all the characters by their most common phonic sounds, the names of letters are taught and children allowed to spell by naming the letters, as well as by giving phonic sounds.

Children taught by the phonic method learn much more quickly than by any other to recognize new words without the aid of the teacher. They are also much more likely to read in a natural tone and with distinct articulation than if any other method is employed.

DULL DAYS.

ONCE in a while a day will come when you go into the school-room in the morning with a dull, tired feeling that makes the very thought of work disagreeable. You wonder how you are going to drag through the day. Now, what is to be done? We answer, *go to work.* Rouse yourself up and go to work. It may require a supreme effort; but make the effort and conquer the flesh by force of will. Begin with pleasant voice and countenance the work which you had planned, and in a marvellously short time the enthusiasm you inspire in the class will react on yourself, you will forget everything in the interest of work, and the day will slip away almost before you are aware. You may not think so, but just try it. Sublime is the dominion of the mind over the body; and work is a panacea the value of which is not generally remembered.

Now, if on the other hand, when you feel out of sorts you allow the feeling to have dominion over you, you will act so that the class will soon be out of sorts too, and a dismal day will be passed by all concerned. It is an excellent thing for such days that the work be mapped out before, and you know without any *thinking* just what you are going to do, for in some states of the nervous system it is easier to work than to think. There is one kind of physical weariness which needs nothing so much as a smart two-mile walk, while another kind requires rest. Now, if your mental or physical inertia of the morning be at all of the latter sort, as soon as school is dismissed seek the lounge or easy-chair or grassy bank and rest as nature prompts.—*The Educational Review.*

BUSY WORK IN NUMBER.

THIS from the Primary School for the primary teacher:

1. How many pupils in the school room? If there were ten more, how many more would there be? If there were eight less?

2. How many panes of glass in one window? How many in all the windows?

3. Write the name of the month? How many days in a month? How many in next month?

4. How many hours in a day? In two days?

5. Draw five lines across the slate, and draw five more lines across them. How many blocks on your slate?

6. How many children in the row you sit in? How many feet have you all? How many fingers? How many noses?

7. There are seven bones in each of your fingers, and two in your thumbs. How many bones have you in one hand? In both honds?

8. Draw a clock on your slates. How many numbers on its face? In how many ways can you write the numbers? Make the hands say four o'clock. Make them say noon. Midnight. Six o'clock.

9. How many meals do you eat in one day? How many in three days? How many in a week?

10. How many Sundays in this month? How many days, not counting the Sundays? How many school days?

11. How old are you? How old will you be in 1899? In 1893?

12. How many eggs in a dozen? In three dozen? What is the difference between two dozen and a half-dozen.—*The Southern Educator.*

EXERCISES FOR THE LANGUAGE CLASS.

WHICH of the italicized forms should be used? Why?

Will (*shall*) you regret leaving Chicago?

She says that she *will* (*shall*) be sixteen soon.

We have decided that we *will* (*shall*) not return the material.

Will (*shall*) I be allowed to go?

We thought he *would* (*should*) have a new trial.

If you did so you *would* (*should*) be punished.

What *would* (*should*) we do without you?

Which is better? Why?

It tastes quite *strong* (*strongly*) of wintergreen.

He felt very *bad* (*badly*) at being beaten.

They live *happy* (*happily*) as ever.

The piano sounds *different* (*differently*) from mine.

The roses smell *sweet* (*sweetly*).

Fill out the blanks with "would" or "should."

He did better than I —— have done. I presume if you —— ask him he —— do so. Though I —— die yet —— would not accept. I —— be sorry to see him injured. —*Central School Journal.*

Hints and Helps.

IMAGINATION.

SOME children are greatly lacking in imagination and in order to secure a well balanced mind, it should be your duty to occasionally present such exercises as will increase and develop the faculty of imagination. The exercise given below has been successfully used to train the imagination, and will also be found useful in promoting quick thought, concentrated attention, descriptive powers and good language.

When the children are in readiness, have them close their eyes and guess from a description of some prominent building or person with which they are familiar. You give the first description, then they open their eyes and tell who or what it is, afterward they may describe and others guess.

As: 1. "I see an old man walking slowly down the street. He is bent, but was once tall. His cheeks are red. He carries a gold headed cane and wears a high grey hat. Eyes open. Who is it?

Or 2. "I see a large, grey house. It is made of wood and has four pillars in front, and a bay window at the south. The roof is painted red. There are four chimneys. The house stands in large grounds and there are several tall trees in front. The front windows look across the street and you can see railroad tracks and a pretty lake. Sometimes a lady and a baby in a white dress look from the windows."—*Normal Instructor.*

BUSY WORK IN PRIMARY GEOGRAPHY.

ARNOLD ALCOTT.

"I SHALL in my next lessons in Geography develop the terms scale and map," said Miss Sunbeam to her teacher friend.

Measures of inch, foot, yard, etc., were taught early to Miss Sunbeam's pupils, by actual measurements made by them on the sides of the school-room, in the school-halls and yard, and at home.

The fact is that my ideal teacher, Miss Sunbeam, was a progressive and thoughtful reader of all the new books on her pet subject, Geography. She was a thorough admirer of Col. Parker's and Chas. F. King's methods.

Let us listen to her, as she is chatting with some of her friends on her little schemes.

"You know I always train my pupils well in number and arithmetic, for I believe that these are very essential factors in the teaching of geography. My boys and girls are taught to measure by their steps. They can tell how far our school is from a certain corner. How many yards it is from Mary's house to Jennie's and so on."

"But," said one of the listeners, "I should think that their ideas would be far from correct. What do you do, then?"

Miss Sunbeam said, "As judging distance is such an important step in the teaching of geography, I have my scholars judge first, and then *test* their results by actually measuring."

"Well," said Miss Bright, "I have decided that the next money I spend for my school shall be in purchasing good hardwood rulers for everyone."

"That is a good beginning," replied Miss Sunbeam, "and now let me give you some good black-board exercises on what I have been speaking about, viz., judgment used in comparing distances as follows:—

"I draw two lines slightly differing in length.

"Which line is the longer?"

"How much longer?" The pupils verify by measuring. Then I draw some trees, telegraph poles, houses, street-car tracks, etc., and ask,

"How high?"

"How wide?"

"How long?"

"Before I proceed with the plans for teaching the map of North America (Miss Sunbeam has a senior grade of Second Book) let me give you a few sample pages of my Busy Work Chart, which refer to the Geography in hand.

BUSY-WORK CHART.

1.—Draw a picture of the travels of "Silver-locks," and "The Three Bears."

2.—Make a little sketch map of the travels of Red Riding Hood.

3.—Write a story on "Our Schoolroom," and draw a map of it.

4.—Write an autobiography of a bird which has three little ones, then draw a picture of these.

5.—Draw a plan of the garden in front of the school, and put in the geraniums and nasturtiums.

6.—Draw a maple leaf, an oak leaf.

7.—Cut out without sketching a poplar leaf.

Miss Sunbeam's hearers were delighted; and then she added that these were but a few of the pages, but that perhaps at some other time she would give them a fuller account of all her charts, for said she, "I have one for every subject."

The term "scale" was developed from the plans which were being drawn of the schoolroom. The teacher said, "I shall allow one inch for every yard in length of the room. How many inches long shall I draw, Mary?"

"Ten, Miss Sunbeam," was the answer.

And so on with the breadth.

"Now your slates are not large enough to make a plan the size of mine, so you little boys and girls may allow half an inch to the yard in your plans. How long will your line be to represent ten yards John?"

After awhile John replied, "Five inches long."

And similarly the breadth was developed.

Then, having shown that plans may differ in size, the next point which was taken up was the difference between a picture of the room, and a plan of the room. Miss Sunbeam has a friend who has a camera, and being very successful in amateur photography, he, one day, pictured her schoolroom. This picture aided her now in this lesson. By questioning she drew from the pupils that this picture showed the place as it really was, windows, doors, desks, flowers, charts, etc.

Now for the plan:—"Does this drawing show the schoolroom and everything in it?"

"No, Miss Sunbeam."

"What is the difference, then?"

"We see only the shape of the room."

"Quite right," replied the teacher, "a plan shows the form of a place, and a picture shows the place as we see it."

Then as it had already been shown that plans and pictures differed in size, but that every part of a plan must be the same relative size, the teacher gave the term "scale" instead of size. One inch must stand for the same distance in the same sized plan always.

Miss Sunbeam next taught the plan of their village, and from thence developed the plan of our country, North America. She made a five-inch square, divided it into inch squares, and led the pupils to do the same; then she showed the map of North America which she had carefully drawn with black crayon, on manilla paper. Pupils were now told that a plan of a large surface of country was called a map. Also, that in this map one inch stood for one thousand miles. Then was asked, "About how wide is the continent of North America across the widest place?"

The points of the compass were applied to the map by having the latter placed on the floor with the top toward the north end of the room, and from this the positions of North, South, East and West were referred to the map.

Now Miss Sunbeam's great success in teaching was due to the fact that she kept *curiosity* fully alert and active, and so she had intellectual growth.

"How often do you tell fairy tales?" she was asked.

"Oh, I tell the pupils a fairy tale at least once a week, and then they relate it to me in their own language, and illustrated by drawings on the blackboard, and on slate, or paper. You see, my pupils are quite accustomed to sketching everything. We have large collections of leaves for winter use which have been sketched and cut by the pupils. But, so much for our little *homey* chat. Good-bye."

SUPPLEMENTARY READING.

ARNOLD ALCOTT.

In compliance with the wishes of teachers that the stories written by our own children might be printed, I send to the JOURNAL the following which are original, the teacher merely having said, "My Dog," "My Doll," "Boys and girls write stories."

As space is limited only three are given. In another number, I shall give samples of autobiographies and dialogues from my pupils.

Each of the writers of the following was nine years old:

1.—I have a hound. Its name is Carlo and it goes with me everywhere. He can catch any rat that comes near him. He is a faithful dog, and is ten years old. He can pull a little waggon with me in it.

2.—I once had a faithful St. Bernard dog. One day as I was walking along the wharf a little boy fell in the water. Prince, as I called my dog, jumped in after him and saved him. The boy patted Prince for saving him. So I took Prince home and gave him his dinner. And then he rode me all over in my dog cart.

3.—Now, boys and girls, I am going to write you a story of my doll if you will sit nicely. I once had a doll and it was made of wax. It was almost as big as myself, too. It was Pearly. One day I was asked to go to a concert and I had to have a doll. Guess what it was dressed in. It was dressed in pink satin. And it had a crown of flowers. It was dressed as a bride and was most beautiful.

THE SCIENCE TEACHER.

FROM F. MUHLBERG'S ADDRESS TO THE TEACHERS OF CANTON VAUD

THE teacher of natural science ought to have the necessary special scientific schooling for that purpose. In no department of instruction is it less permissible to teach authoritatively than in this, and to make it a subordinate branch for a teacher not specially prepared for it is often worse than to provide no scientific instruction whatever; for the teacher must not only be master of the material he teaches, but ought also to be a model of the intellectual training he tries to impart; he should have the capacity to observe, describe, and reason accurately about the material of study. In order to give his instruction in such a way as to incite his pupils to an interested activity in their studies, it is indispensable for him constantly to try to develop his own intellectual powers further, and continually refresh them by special studies (which, however, should not be introduced into the school). Not only should every lesson be well prepared, but after every lesson the teacher should give, himself, an account of the result of his instruction, and, in case of ill success, he should ascribe its cause to himself rather than to his pupils, so as to avoid mistakes in future. One of the constant faults of teachers is that in order to get on with their pupils as fast as possible they themselves describe the objects or phenomena under consideration and derive laws from them, instead of allowing the scholars to do so. They pre-digest, in other words, to a certain extent, the intellectual food which they ought to allow the scholars to attack for themselves, subject to control and correction only. A science teacher should be able to show his pupils how to give graphic reproductions of what they have learned. Whatever drawing might be necessary for this purpose should not, however, be presented ready-made to scholars, but should be drawn by the teacher on the large scale on the slate or board before their eyes. If the teacher, besides his instruction proper, has to furnish the material for study, *e.g.*, plants, etc., prepare demonstrations, lead excursions into the field, and have charge of the natural history collections of the scholars, it is clear that a great burden is laid upon him, which is all the greater because natural science teaching is by itself more fatiguing than other branches, since it requires the guidance of each individual scholar, and because the attention of the teacher must be divided between the different scholars, the material for demonstration, and the progress of the instruction.

FORM AND DRAWING.

J. A. HILL.

How is it so little is said or written on the educational value of the study of "Form and Drawing?" The leading characteristics of manhood come from the atmosphere of the early days. Many of the finer traits of a man's nature, and his more ennobling ideas of a great Creator, are woven into the soul through the medium of the study of form and design. There can be no question as to the constant influence of the beautiful as a factor in education. It is allied to purity, and as the former is more clearly seen in the study of form, so the latter becomes permanently impressed in the nature. Its moral effects are obvious from the influence it exercises in developing the love of the beautiful, which plays a large part in moral processes. It has a wonderful effect in the awakening of curiosity. From this starting point the child can be led from one investigation to another until he acquires an excellent knowledge of form in detail, and a practical training in making researches that will be invaluable to him afterwards in studying the sciences.

Seneca says, "The object of education is not external show and splendor, but inward development," and I fear many of us in its search, like Sir Launfal, go far afield when the flower can often be found at the near door. The pupil who gets the training of the perceptive and constructive faculties, which this study gives, will go to his other studies with such a quickening of that class of mental powers as will make him a clearer, stronger and more accurate student in every department of school work. The eye is trained to the accurate perception of size and proportion, and becomes exact in judging angles, distance and elevation. The hand gains despatch and at every move readiness of expression. The memory is trained to definite recollection and the taste refined and cultivated. It requires close observation, and since observation is the study of life it brings the child into closer communion with his Creator.

IT PAYS.

BY ANNIE E. TREAT.

It pays to wear a smiling face
  And laugh our troubles down,
For all our little trials wait
  Our laughter or our frown.
Beneath the magic of a smile
  Our doubts will fade away,
As melts the frost in early spring
  Beneath the sunny ray.

It pays to make a worthy cause,
  By helping it, our own;
To give the current of our lives
  A true and noble tone.
It pays to comfort heavy hearts,
  Oppressed with dull despair,
And leave in sorrow-darkened lives
  One gleam of brightness there.

It pays to give a helping hand
  To eager, earnest youth;
To note, with all their waywardness,
  Their courage and their truth;
To strive, with sympathy and love,
  Their confidence to win;
It pays to open wide the heart
  And "let the sunshine in."

Book Notices, etc.

Any book here reviewed sent post-paid on receipt of price. Address The Grip Printing & Publishing Co., Toronto.

French Course. By G. H. Williams, M.A. Pp 216. Price, 2/6. London: Moffatt and Paige.

The author attempts a change in methods of French instruction, presenting first French words and phrases, then their English equivalents, then the rule. This method is followed through the main body of French grammar. A grammatic appendix, and passages for translation into French —clever mosaics that unite plot-interest with abundant drill on special difficulties is added. The method is on the whole a good one, though it needs modification badly. There is no excuse in a natural method for an order of treatment based only on the parts of speech. Surely the pupil should not at the outset be called upon to learn the plurals of *coq-à-l'âne, blanc-seing.* A large number of carefully-selected illustrative sentences give the volume a value even apart from the method.

F.H.S.

Matriculation Chemistry. By Temple Orme. Lawrence & Bullen, Publishers, London. Price, 2s. 6d.

In the preface the author lays special stress upon the value of the practical study of the science as the only method to derive much profit. A perusal of the text indicates that the author has subordinated this cardinal principle of science teaching to other considerations.

W.H.J.

LET him not boast who puts his armor on
As he who puts it off, the battle done.
—*Longfellow.*

I HAD rather never receive a kindness than never bestow one. Not to return a benefit is the greater sin, but not to confer it is the earlier.—*Seneca.*

IF a man empties his purse into his head, no man can take it away from him. An investment in knowledge always pays the best interest.—*Franklin.*

Do not dare to live without some clear intention toward which your living shall be bent. Mean to be something with all your might.—*Bishop Phillips Brooks.*

"As a man treats an animal, so I believe he would treat his fellow. If wrongly, roughly, brutally and badly, he would be so to you if it suited his purpose and he—dared."—*Harrison Weir.*

LIST OF BOOKS FOR ENTERTAINMENTS AND THE PARLOR

RECITATIONS, DIALOGUES, STUDENTS' AIDS, ETC.

: : FOR SALE BY : :

J. K. CRANSTON, School and Supply Depot, GALT

To Public and High School Teachers, Model and Normal School Pupils ordering by mail or express School or Standard or Miscellaneous Books, we give Ten Per Cent. Discount for cash with order, and prepay express or postage. All kinds of School Supplies and School Necessaries are supplied to Schools and Trustees at Ten Per Cent. Discount for cash with order. Send for Complete Catalogue and look up Sept. 1st and 15th advertisements in the EDUCATIONAL JOURNAL. Express paid, or Ten Per Cent. C.O.D., with privilege of examining and the party ordering pays express one way.

SPEAKERS AND DIALOGUES. (Retail Price)

1. **The Hamilton Speaker.** A collection of high-grade extracts for declamation and oratorical display. 12 mo. Cloth $1 00
2. **Dick's Recitations and Readings.** A series containing pieces in poetry and prose, especially adapted for recitations and readings. Numbers 1 to 17 of this series now ready. Each number. Paper, 30c. Cloth 0 50
3. **Dick's Dutch, French, and Yankee Dialect Recitations.** Consisting entirely of droll recitations in the dialect named. Paper, 30c. Boards 0 50
4. **Dick's Irish Recitations.** Containing humorous recitations, amusing stories, etc., in Irish dialect only. Paper, 30c. Boards 0 50
5. **Dick's Comic and Dialect Recitations.** A choice selection of amusing pieces and laughable Yankee, Dutch, Irish, Negro, Chinese, Cockney and Western dialect recitations and readings. Paper, 30c. Boards 0 50
6. **Beecher's Recitations and Readings.** Containing humorous, serious and various dialect recitations. Paper, 30c. Boards 0 50
7. **Burbank's Recitations and Readings.** The selections recited by the well-known public reader, Mr. A. P. Burbank 0 25
8. **Howard's Recitations, Comic, Serious and Pathetic.** Affording a great variety of popular and effective pieces. Paper, 30c. Boards 0 50
9. **McBride's Comic Speeches and Recitations,** containing a number of entirely original humorous speeches. Paper, 30c. Boards 0 50
10. **Wilson's Recitations and Dialogues.** An excellent selection of popular pieces, for school declamation, with instruction in elocution. Paper, 30c. Boards 0 50
11. **Spencer's Comic Speeches and Recitations.** A collection of laughable recitations and dialogues. Paper, 30c. Boards 0 50
12. **Martine's Droll Dialogues and Recitations.** An excellent and varied collection for school entertainments. Paper, 30c. Boards 0 50
13. **Barton's Comic Recitations and Dialogues.** A variety of speeches, recitations and dialogues, adapted for all occasions. Paper, 30c Boards. 0 50
14. **Kavanaugh's Juvenile Speaker.** Easy original speeches and dialogues for very little boys and girls from 5 to 10 years of age; including May-day and school celebrations, and other festival occasions. Paper, 30c. Boards 0 50
15. **Kavanaugh's Exhibition Reciter.** Short and easy original speeches and dialogues for children from 3 to 10 years of age, with May-day celebration and very effective speaking tableaux. Paper, 30c. Boards 0 50
16. **Kavanaugh's New Speeches and Dialogues.** Original speeches and dialogues for little children from 6 to 10 years old, and for Christmas and other occasions. Paper, 30c. Boards 0 50
17. **Kavanaugh's Comic Dialogues and Pieces.** Original easy dialogues and short pieces for little folks from 5 to 12 years old, with Christmas, May-day and other celebrations, requiring a number of performers. Paper, 30c. Boards 0 50
18. **Dick's Little Speeches for Little Speakers.** A selection of effective pieces for little tots from 3 to 7 years old 0 15
19. **Little Lines for Little Speakers.** Short, easy pieces, specially adapted for very small children from 4 to 10 years old, including easy pieces for Thanksgiving, Christmas, Easter, and other special occasions, including birthday and wedding anniversaries $0 15
20. **Dick's Diverting Dialogues.** A collection of original and amusing dialogues, adapted for young people from 12 to 16 years of age. Paper, 30c. Boards 0 50
21. **Dick's Comic Dialogues.** Consisting of bright and easy dialogues for young folks from 14 to 20 years old. Paper, 30c. Boards 0 50
22. **Dick's Dialogues and Monologues.** A selection of effective dialogues and original monologues for performers from 15 to 20 years old. Paper, 30c. Boards 0 50
23. **Graham's School Dialogues.** Containing original dialogues, well adapted for young people from 12 to 16 years old. Paper, 30c. Boards. 0 50
24. **McBride's Comic Dialogues.** Original dialogues, introducing amusing dialect characters, for young folks of 12 to 16 years of age. Paper, 30c. Boards 0 50
25. **McBride's All Kinds of Dialogues.** Original humorous dialogues, including dialect characters, for young people from 10 to 16 years of age. Paper, 30c. Boards 0 50
26. **Several Scottish, English and Irish Song Books.** Each .... 35c., 90c. and 1 25
27. **University Song Book.** Each 0 90
28. **Merry Melodies.** Paper, 15c. Per doz 1 35
29. **Merry Songs.** By S. G. Hansen. Boards, 35c. Per dozen 4 00
30. **Golden Thoughts and Songs.** By J. F. King. Each, 35c. Per dozen 4 00
31. **Calisthenic Songs.** By S. G. Hansen. Each, 50c. Per dozen 5 40
32. **McBride's New Dialogues.** Original entertaining dialogues, introducing Yankee, Irish and other dialect characters. For young folks from 10 to 16 years of age. Paper, 30c. Boards 0 50
33. **McBride's Humorous Dialogues.** Original droll dialogues, with eccentric and dialect characters, for young people from 10 to 16 years old. Paper, 30c. Boards 0 50
34. **McBride's Funny Dialogues.** New and original dialogues, some of which introduce dialect characters, for young people from 10 to 16 years old. Paper, 30c. Boards 0 50
35. **McBride's Temperance Dialogues.** Entertaining dialogues, illustrating the evils of intemperance, for youth of 10 to 16 years of age. Paper, 30c. Boards 0 50
36. **Steele's Exhibition Dialogues.** Bright and easy plays for school exhibitions, etc., for performers of 16 years or older. Paper, 30c. Boards 0 50
37. **Frost's Humorous and Exhibition Dialogues.** For school and other entertainments, for young folks of 10 years and older. Paper, 30c. Boards 0 50
38. **Frost's New Dialogues.** Containing humorous dialogues for exhibitions. For young people of 10 to 16 years of age. Paper, 30c. Boards 0 50
39. **Frost's Dialogues for Young Folks.** Well adapted for young children of both sexes, from 7 to 12 years old. Paper, 30c. Boards 0 50
40. **Holmes' Very Little Dialogues for Very Little Folks.** For quite young and very small children, from 4 to 10 years old. Paper, 30c. Boards 0 50
41. **Dick's Little Dialogues for Little People.** For small folks, from 3 to 7 years old 0 15
42. **Also Scottish, English, Irish, Dutch Readings.** For home and hall. Humorous. Each 0 35

TABLEAUX AND AMUSEMENTS. (Retail Price)

43. **W. B. Bellamy's New Readings and Recitations.** English, Irish, Scotch, Dutch, Yankee and Temperance. With valuable hints on elocution. Highly recommended ....
44. **Dick's Parlor Exhibitions.** Containing tableaux, living portraits and statuary, illustrated ballads. The art exhibition, punch and judy, shadow pantomimes, etc. An indispensable aid in arranging public and private exhibitions. Paper, 30c. Boards $0 50
45. **Dick's One Hundred Amusements.** Containing games, grotesque illusions, tricks, Mrs Jarley's wax works, etc, Furnishing complete and varied entertainments for ten evenings, and fully illustrated. Paper, 30c. Boards 0 50
46. **Pollard's Artistic Tableaux.** With description costumes, and each tableau artistically illustrated 0 30
47. **Frost's Book of Tableaux.** A large collection o effective and humorous tableaux and shadow pantomimes. Paper, 30c. Boards 0 50
48. **Tony Denier's Parlor Tableaux.** Illustrating about eighty popular subjects, fully explained... 0 25
49. **Weldon's Fancy Costumes.** Containing a number of favorite historical, national and fancy costumes, with full page illustrations and elaborate descriptions 0 50

TEACHERS' AND STUDENTS' AIDS.

50. **Punishment Straps** (authorized) 0 25
51. **Ogden's Model Speeches for All School Occasions.** Containing opening and closing speeches, salutatories, valedictories, dedications, presentations, etc. Paper, 50c. Boards 0 75
52. **Ogden's Skeleton Essays.** Condensed treatises on popular subjects for expansion into essays, lectures, etc., including various popular debatable subjects, treated from opposite points of view. Paper, 50c. Boards 0 75
53. **Barber's American Ready-made Speeches.** Containing speeches for presentations, welcome, congratulation, condolence, compliments, and for anniversary, birthday and other festival occasions, etc. Paper, 50c. Boards 0 75
54. **How to Write a Composition.** Contains complete compositions, skeletons of subjects, attractive topics for essays, with hints for their elaboration. Paper, 30c. Boards 0 50
55. **How to Conduct a Debate.** A series of complete debates, outlines of debate, and questions for discussion, with references to works of information. Paper, 50c. Boards 0 75
56. **The Debater, Chairman's Assistant, and Rules of Order.** A manual for instruction and ready reference in all matters pertaining to the management of public meetings according to parliamentary usages, with instructions for organizing literary and other societies, etc. Paper, 30c. Boards 0 50
57. **Alexander's Calisthenics.** Musical drill for young children, introducing ring, skipping, marching, and other exercises, illustrated, and music for each movement 0 25
58. **Cruden's Calisthenic Training.** Containing physical exercises, dumb-bell, bar-bell, hoop, marching, and free gymnastics, suitable for youth, with appropriate music 0 50

Religious Publications. Miscellaneous, Religious, Theological Books and Standard Works of Reference a specialty. Sunday School, Private or Public Libraries supplied at the **Lowest Possible Prices.** Liberal Discounts to Ministers, Teachers and Students. Cases of Library Books are sent on approval for selection when desired, or carefully selected. 500 lots 10 per cent., 1,000 lots 15 per cent., 1,500 lots 20 per cent., over that amount 25 per cent. Books mailed free on receipt of price, or C.O.D. We pay return charges.

JAMES K. CRANSTON, Wholesale and Retail Bookseller and Stationer, Galt, Ont.