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OFFICIAL CALENDAR

-OF THE-

## EDUCATIONAL <br> DEPARTMENT

January:
15. Application for Legislative apportionment for inspection of Public Schools in cities and towns separated from the county, to Department, due.

Annual Report on Kindergarten atteneance to Department, due.

Annual Reports of Separate Schools to Department, due. [S. S. Act, sec. 28 (18); 32 (9).]

Minutes of R.C.S.S. Trustees' annual meeting to Department, due.

Appointment of High School
Trustees by Municipal Councils. [H. S. Act, sec. 11 (3).]
16. Provincial Normal Schools open (First Session).
17. First meeting of Public School Boards in cities, towns, and incorporated villages. [P. S. Act, sec. 106 (1).]

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Read their Opinions.
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## Editorial Notes.

Ir is announced by the Educational Department that owing to some delay in preparing the new High School Drawing Books, the present series will be accepted for 1895 as well as for the examinations of this year.

We are requested to state for the information of teachers that a modification has been made in the requirements for the High School Entrance examination, by restoring the examination for British history. The amendment makes no change in the Public School course, and where the regulations have been followed by teachers no addition is made to the work for pupils. It was feared, however, that if British history were not included in the subjects for examination, the work might be slighted. The nature of the questions at the examination will correspond with the course made obligatory for the Fourth form last August.

In the following sentence, quoted in Mr. Simpson's article on "Agriculture in Public Schools," part of which appears on another page, Prof. Huxley suggests admirably the proper method for teaching this subject, especially in lower classes. First the study of the object, then when interest is aroused, in natural order, the scientific discoveries and laws, with experiments, so far as these can be brought fairly within range of the pupil's comprehension. For these reference can be had to the text-book, Which should come second or last in order, not first:
" The history of a bean, of a grain of wheat, of a turnip, of a sheep, of a pig, or of a cow, properly treated-with the introduction of the elements of chemistry, physiology and so on, as they come inwould give all the elementary science which is necded for the comprehension of the process of Agriculture, in a form easily assimilated by the youthful mind, which loathes anything in the shape of long words and abstract notions, and small blame to it."

The world moves and even the ancient universities are carried along with it. A vote was recently passed "in congregation" at Oxford, committing that venerable seat of learning in favor of the principle of recognizing the English language and literature as entitled to a place in the regular curriculum of that venerable seat of learning. "The Council, assuming that some recognition of the English by the University was desirable, asked the House to decide whether the recognition should be by the establishment of a school, or by the founding of a University scholarship or prize." Those who wish to see a genuine and thorough educational reform will hope that the second of the alternatives may commend itself to the House. We, years ago, ventured to predict that one of the educational innovations of the future in English. speaking countries would be English Colleges, that is Colleges in which full courses in English would be the central and governing work, to which all other subjects would be but secondary and subordinate. It is possible that ancient Oxford may be the first to give this idea a "local habitation and a name."

No doubt there is too much ground in current newspaper literature for the rebuke implied in Principal MacCabe's letter to the New York School Journal, which we reproduce at his request in another column. We may say, however, that so far as our part in the matter is concerned, the fact that the boy in the incident quoted was described as Irish did not attract our attention at all until pointed out by Principal MacCabe. Nor do we see any reason to suppose that that fact had any weight or significance with Dr. Stanley Hall in making the selection. No doubt Mr. Russell, in chronicling the observations from which Dr. Hall quoted, recorded the nationality of the various pupils as an interesting and important fact in connection with them. Each race has well-marked peculiarities
which are sure to come out in the children, and the record of nationality therefore adds to the value of such a record. Whether the saloon occupies a larger place in the life of the average Irishman, as seen. in America, than in that of the average citizen of any other race, we do not know, We had not observed that the paragraph had been quoted or Dr. Hall's article referred to by our contemporary. Personally we have too much respect for many friends of Irish extraction, and too high an opinion of the genius of the race to feel at all disposed to make any of its real or fancied peculiarities a butt for disparagement or ridịcule.
The replacement of British History on the list of subjects for Entrance Examination illustrates another of the evils arising from the connection of the Educational Department with party politics. We fear that it may be too true that the plan proposed and now abandoned-that of making certain portions of British History a kind of side study, to be taught somewhat informally by the teacher and examined informally by the Inspector-would have been a failure, so far as securing any valuable amount of attention to the subject is concerned. It is almost inevitable that when the standing of the school, the reputation of the teacher, and the success of the pupil, all depend upon the results of the Entrance Examination, any extra subject put on the list simply for education, not for examination, will be slighted. But we very much doubt whether there are many teachers whose experience makes their judgment in such a matter valuable, who will not admit that British History is not one of the best subjects for Entrance Examination, and that, but for the difficulty above noted, it could much more satisfactorily be dealt with in the less formal and more natural method which is now to be abandoned without trial. The attachment of most of our people to Great Britain and British institutions is so warm that "the loyalty cry" is one of the most effective for party purposes which can be raised. Everyone must see that it is impossible to study Canadian History without being brought constantly and closely in contact with the history of the Mother Country, and that in a way which is even better adapted to stir the loyalty of Canadians to the Empire than the direct study of British History apart from that of our own land can do. All this means that even the courses in our elementary schools are being made the foot-ball of political partyism.

English.
All articles and communications intended for this epartment should be addressed to the ENGLISH EADITOR, West, Toronto.

## COMPOSITION FOR THIRD CLASS.

## MISS M. A. Watt

In the Journal, September 15 th, a course was laid down suitable for a second class and a series of topics suggested. If the second class have completed this work, they are ready to enter upon a more extended course. In the third class they will, of course, continue their abservation and expression lessons and their lessons in Geography, pictures, objects and events of interest forming the basis of their work. They will also be required to condense into a phrase the thought of the successive paragraphs of their reading lessons; to replace words by synonymous terms; to express in terse form the meaning of given extracts; to use properly in sentences given subjects, predicates or caseforms of nouns and pronouns. In this class begins the writing of letters, notes of invitation, promissory notes, receipts, and other business forms. In the junior class it will be sufficient to teach the form of a letter, the matter boing dictated or written on the board. The senior grade may deal with original matter.

A SYNOPSIS OF LESSON ON LETTER-FORM,
(to be given previous to dictation or showing of Letter-form to pupils).

1. Reason for putting name of sender's residence and the date.
(Teacher asks what pupils would put first if they were told to write a letter. Most answering correctly, she asks why put it. From answers given right one is selected by criticism of pupils).
2. Place of date. (Ruled space on blackboard. Pupils asked to put the date where it should be put. Criticize. Draw a line to represent the date 10 upper right-hand corner').
3. Address of person to receive letter. (Again by correction and criticism, the teacher draws lines for position of address, which sbould be the same as that to be put on the envelope. This is rather formal for a letter of friendship or affection, but it is better to err on the formal side in teaching, as laxity will come very naturally in after life without our teaching it).
4. Complimentary address. (Position and suggestions of suitable addresses, elicited by questioning).
5. Proper place to begin the body of the letter, which should be of at least two paragraphs. (Lines drawn to represent the body of letter).
6. Complimentary closing, (suited to complimentary address).
7. Writer's name. (Remarks on the use and abuse of Mr., Mrs. and Miss). The blackboard will present somewhat of the following appearance when the lesson is over. The class will also have it in their practice books.

Residence, Date.
Name of Receiver.
No. and Street.
Complimentary address.

Closing words and
Complimentary closing. Name of writer.

By drawing this form on a sheet of manilla paper, it is always ready for reference, and two simple letters on other sheets will serve as materials for a quiet busy-time, if one letter be written correctly, the other somewhat after the form of the appended example:
Stratford, Sept. 23, 1893. Mr. James F. Smith, 126 Queen St., Toronto, Dear Sir, Your letter was received. In "reply, my father wishos me to say he would like you to buy him the finest dog you can get for $\$ 25$. He likes a Newfoundland best. My Uncle Thomas, I am sorry to say, is very ill, and will not be able to finish the work for your house. He is a little better to-day. I remain, dear sir, yours very truly, Robert H. Jones.
The fall term of school is full of interest, and subjects for observation are to be found in the colored leaves and dropping nuts, the gathered crops of roots and fruits and grain. "The Maple Leaf" is one of our never-failing subjects of composition, and side by side is "The Beaver," which may be followed by "Canada, Our Own Land," in which the Gengraphy les. son will be reviewed, and a powerful lesson on patriotism given by the way. For other topics, the average child is very anxious to know "all about" such things as the grocery store furnishes. The fruit stand will supply "bananas," " figs," "peanuts;" the dry goods shop will open up wonders; the common things they handle so often but know so little about, such as their lead pencils, rubber, paper and pens; there are really so many subjects that the trouble is to choose where to begin. An old chart of animals, birds and fishes of comparative sizes gave one cluss fascinating materials for thought. A little cup and saucer, "a really, truly one," whose picture they drew after the teacher had talked about the way the china was made, gave variety and delight. A tin watering-can placed on the teacher's cupboard was interesting from the peculiarity of its position. An "Eonor Roll" made of paper tacked to a smooth rod having a cord to hang it up hy, on which the best essays can be gummed, would be a fine incentive to the class. It is very difficult to keep straying pieces of paper neatly unless some such device be adopted, and we all have had essays we would like to keep. When one leaf is filled, a second can be tacked on the rod and filled up, so making a very valuable scrap album of original matter. I would suggest for an appropriate heading, some such motto. printed in fancy letters, as "Worth Reading," "Our Best" or "Something Original," the cover of the album being decorated with leaves and birds or some other pleasing device. The drawing of pictures or pasting on of cut-out scraps on the compositions themselves and ruled lines of red ink on the Roll will have an educative effect on the taste of the pupils.

If we had but the time how interesting we could make the Composition lesson, and how developing it would be, but when the year is divided into two terms, with an examination at the end of each demanding so much percentage, the hardest subjects must be paramount, and as Composition is said to " come natural," it must stand aside for formal Grammar and its hard facts, which we all know do not " come natural." But we have in the present an opportunity which will aid the "good time coming" and that is in teaching our pupils the love of Composition time, by making the work interesting and suitable to their mental development.

A Janitor of a school bulding seeing the words "find the greatest common divisor" on the blackboard again and again, exclaimed in good faith, "Well, is that thing lost again?"

Ability to present a subject so that it is within the comprehension of the pupils, seldom fuils to gain the attention and excite the interest of the class, and this is a first step towards good order in a school, and self-control in the pupils.-M. Aiken.

For Friday fiternoon.

## A FUTURE IN FRONT OF HIM.

" Jim has a future front of him".-
That's what they used to say of Jim,
For when young Jim was only ten
He mingled with the wisest men. With wisest men he used to mix, And talked of law and politics;
And everybody said of him,
"He has a future front of him."
When Jim was twenty years of age, All costumed ready for life's stage, He had a perfect man's physique, And knew philosophy and Greek;
He'd delved in every misty tome And everybody said of Jim,
"He has a future front of him."
When Jim was thirty years of age,
He'd made a world-wide pilgrimage
He'd walked and studied 'neath the trees Of German universities,
And visited and pondered on
The sights of Thebes and Babylon
And everybody said of Jim,
" He has a future front of him."
The heir of all earth's heritage
Was Jim at forty years of age.
The lore of all the years was shut
And focused in his occiput
And people thought, so much he knew,
" What wondrous things our Jim will do!"
They more than ever said of Jim,"
"He has a future front of him."
At fifty years, though Jim was changed,
He had his knowledge well arranged,
All tabulated, systemized,
And adequately synthesized
His head was so well filled within
He thought, "I'm ready to begin,"
And everybody said of Jim,
" He has a future front of him."
At sixty-no more need be saidAt sixty years poor Jim was dead, The preacher said that such as he Would shine in all eternity
In other worlds, beyond the blue,
There was great work for Jim to do ; And o'er his bier he said of Jım,
"He has a future front of him."
The great deeds we are going to do
Shine 'gainst the vastness of the blue,
Like sunset clouds of lurid light
Against the background of the night ;
And so we climb the endless slope,
Far up the crownless heights of hope.
And each one makes himself a Jim,
And rears a future front of him.

## STORY FOR REPRODUCTION.

## A BOY AGAIN

The director of an immense company was in the habit of prowling around the office. One morning he happened to come across the din-ner-pail of the office boy. His curiosity led him to take off the cover. A slice of homemade bread, two doughnuts and a piece of apple pie tempted the millionaire's appetite. He became a boy again and the dinner-pail seemed to be the one he had carried sixty years ago.

Just then the office boy came in and surprised the old man eating the pie-he had tin ished the bread and doughnuts.
"That's my dinner you're eating !" exclaimed the boy, indignantly.
"Yes, sonny, I suspect it may be ; but it's a first-rate one for all that. I've not eaten so good a one for sixty years. 'There," he added, as he finished the pie, "take that and go out and buy yourself a dinner ; but you won't get as good a one," and he handed the boy a fivedollar bill.

For days after the old man kept referring to the first-class dinner he had eaten from the boy's pail. And yet when he was a boy be quite likely grumbled about his food, just as some boys do to-day, who by-and-by may think, " how good mother's victuals used to taste.

It is best to enjoy good things while you have them. They will be gope by-and-by.-Practical Teacher.

Seience.
Edited by W. H. Jenkins, R.A., Sclence Master Owen Edited by W. H. Jenkin
ound Collegiate Institute.

## SOLUTION OF PROBLEMS.

(For Problems see Answers to Correspondents.)

1. Let one side of the triangle be $x$. Then perpendicular from apex on base is $\frac{x \sqrt{ } 3}{2}$
Since Sp. G. of lamina is one-third that of water, the area of the part submerged is onethird whole area.
Let $p$ be the distance from apex to height of water along the perpendicular, then the dis tance from the side of the lamina along the level of the water to the perpendicular is $\frac{p}{\sqrt{3}}$
Area of part submerged is $p \times \frac{p}{\sqrt{3}} \cong \frac{p^{2}}{\sqrt{3}}$
Area of whole lamina $=\frac{x^{2} \sqrt{ } 3}{4}$
But $\frac{x^{2} \sqrt{3}}{4}=\frac{3 p^{2}}{\sqrt{ } 3}$

perpendicular $=\frac{\text { perpendicular }}{\sqrt{ } 3}$
2. (a) Apex down. Let sides equal $a$.

Then sides of triangle immersed are $\frac{a}{2}$
Area of triangle immersed $=\frac{a^{2} \sqrt{3} 3}{16}$
Area of whole triangle $=\frac{a^{2} \sqrt{ } 3}{4}$
Area, of part immersed
Area of whole

$$
=\frac{\frac{a^{2} \sqrt{ } 3}{16}}{\frac{a^{2} \sqrt{3}}{4}}=\frac{1}{4}
$$

$\therefore$ Sp. G. is one-fourth that of water.
(b) Similarly with base downward.
3. Let $A=1 \mathrm{lb}$. wt.
$B=2 \mathrm{lb} . \mathrm{wt}$.
Since Sp. G. of $A$ is 2, its weight in water will be $\frac{1}{2} \mathrm{lb}$.
Then weight of $B$ in water must be $\frac{1}{2} \mathrm{lb}$. , to balance.
$\therefore$ Loss of $B$ in water $=1 \frac{1}{2} \mathrm{lb}$.
$\therefore$ Sp. G. $=\frac{2}{1 \frac{1}{2}}=\frac{4}{3}$

## 4. $8.85=\frac{\text { Weight in air. }}{\text { Weight }} \frac{\text { in }}{\text { air }-887}$

$\therefore$ Weight of copper in air is 999.9 grains; say 1,000 grains.
Let $v=$ Volume of copper.
$1,000-887=113=\mathrm{wt}$. of $v$ of water.
$1,000-910=90=$ wt. of $v$ of alcohol.
$\therefore$ Sp. G. of alcohol is $\frac{90}{118}$ nearly.
5. Pressure on sides of lower half of cone is the weight of the water in the part below the horizontal plane plus the weight of a cylinder of water baving for its base the horizontal plane and for height half the vertical height of the cone. The pressure on the rest of the cone is the weight of the balance of the water.
Let $h=$ vertical height of cone. $r=$ radius.
Wt. of whole cone $=\frac{1}{3} \pi r^{2} h$
Wt. of lower half $=\frac{1}{3} \pi \frac{r^{2}}{4} \cdot \frac{h}{2}$
Wt. of cylinder above mentioned $=\pi \underset{4}{r^{*}} \cdot \frac{h}{2}$
$\therefore \frac{1}{3} \pi r^{2} h$ should by the question be equal to $2\left(\frac{1}{3} \pi \frac{r^{2}}{4} \frac{h}{2}+\frac{\pi}{4} \cdot \frac{r^{2}}{2}\right)$
which is true.

## THE OYSTER.

The common clam which has been selected as the type of the mollusca to be studied by the Senior Leaving students, has so many points of resemblance to the oyster that the following facts in regard to the latter may be found of interest to students. The main difference between the two forms are the sedentary habits of the oyster, while the clam is locomotory, and also the inequality in development of the right and left valves, which in the clam are equally developed.

One of the best bottoms for oyster culture is the Chesapeake Bay. It is covered with soft, black mud, swarming with microscopic organisms, which the oyster turns into food-the most nutritious and palatable. Its sedentary habits lead it to fasten itself to rocks, bowlders, and other firm objects, thus preventing it from being engulfed in the slimy ooze sent down by the rivers of the Chesapeake. The gill is perhaps the most important organ of the animal. It is at once a breathing organ purifying the blood; a pump for bathing itself with water, thus drawing in streams laden with microscopic food; and a brood-chamber where the young are nursed until they are large enough to take care of themselves.
The method of securing the food is interesting. The surface of the gills is covered by an adhesive secretion, and also by cilia. These drive the water over the gills, when the microscopic organisms stick fast, like flies on flypaper. The mouth is always open, and the anterior ends of the gills fit into the groove formed by the lips so that the slimy food, as it is pressed forward, naturally slides into the mouth.
Both the egg cells and the male cells in the American oyster are voided into the ocean. Contact occurs there, if at all, but enormous numbers of egg cells must annually perish. It is estimated that an adult average Maryland oyster lays $16,000,000$ eggs. This is on the authority of Professor Brooks. If half of these developed into female oysters and half into male, in the fifth generation there would be $66,000,000,000,000,000,000,000,000,000,000,000$ oysters. These would make eight earths. The oyster lays eggs each year.

Artificial fertilization consists in mixing the egg cells and male cells in small vessels where contact is sure to occur. Sea water suon destroys impregnated eggs. In early life they are motile. The embryos swarm to the surface. Their enemies are fish, cold winds and rains lce, heary wind-storms also carry off great numbers. Planting of dead shells will build up a new bed, since it forms a solid base upon which the young oyster may fasten itself and so escape being engulfed in the soft mud.

## ANSWERS TO CORRESPONDENTS.

G.R.-Question.-What are good supplementary texts on Zoology ?
Answer.—"Guides for Scientific Teaching," published by Heath \& Co., Boston, edited by Alpheus Hyatt.

Subscriber.-Question.-Will you give the solution to the sixth question on the Senior Leaving Physics paper for 1893.

Answer.-For solution see another column.
S.A.R., Tienton.-Question.-Will you please give solutions to problems 32,33 , page 45 ; and 47, 52, page 47, of Hamblin Smith's Hydrostatics, and the sixth on the last Senior Physics paper.

Answer.-'The solutions are given numbered $1,2,3,4,5$, in another column.

## SIMPLE EXPERIMENTS IN PHYSICS.

## (selected.)

1. Diffusion of Gases.-Fill bottles with hydrogen and oxygen gases; connect by a straight glass tube passing through the corks so that the hydrogen bottle shall be uppermost. In half an hour apply a lighted taper to each. In halt an hour apply a lighted taper to each. 2. Capillary Action.-Take a wire bent into
fork form, having arms of equal length, and turn up the free ends of the wire. Place a needle in the bent ends of the wire and lower gently into water. What happens when you remove the wire? Examine the edges of the needle. Treat another needle similarly so as to be parallel to the first. Then drop a drop of alcohol between the fir
2. Porosity.-Fill a colloidion balloon with hydrogen, and tie the open end securely, let go ; it $w 1 l$ rise to the ceiling. In ten or fifteen minutes it falls and is collapsed, why?
Dip a crayon in water; break. What is the condition of the centre?
Take a graduated test tube and half-fill with water, mark height, add some salt, mark height quickly, allow to stand for half an hour; account
for the diminution of the combined volumes.
Tie a piece of chamois over the end of a glass tube two feet long and half inch diameter; a test-tube with a small hole in the bottom will do. Fill with mercury.
3. Pressure in Fluids Proportional to Depth. -Obtain a tin tube, two inches diameter, three feet long, closed at one end. Have openings along the side, and fit into these perforated rubber corks, seal up small pieces of glass tubing at one end and insert into the cork perforations. These will act as plugs which can be quickly removed. Fill the tin with water, remove the plugs all at once.
4. No Lateral Pressure in Fluids Falbing Freely.-Use preceding apparatus, but have the whole bottom formed of a solid rubber cork. Remove this when the other plugs are removed.
5. To Find the Relative Densities of Two Liquids.-Fit a florence flask with a two-hole rubbar cork. Into the perforations fit tightly two glass tubes, bent just as they leave the flask so as to be separated. Place the ends of the tubes in the liquids placed in tumblers. Heat the flask, allow to cool. Compare heights of the liquids in the stems.

## OF GENERAL INTEREST.

The Breathing Pores of Plants.-The number of stomata or breathing pores on leaves varies from six thousand to three thousand per square inch. In most cases the great majority of these are on the under surface of the leaf. In the leaves of the waier lilies, which usually lie flat upon the surface of the water, they are more abundant on the upper surface.

Ants.-Ants have many strangers in their homes; some they use as cows, others are welcome because they emit a pleasant odor, some are kept as pets, still others are useful as scavengers, while many are simply tolerated. But the ant is not indiscriminate in his friendships : his friends must be either harmless, agreeable, or of use to him. Ants are, as a rule, aristoor of use to him. Ants are, as a rule, aristo-
cratic. Society relations are fixed. Each species is a "caste apart;" and it is easier for a camel to go through the needle's eye than for an individual ant of one species to recognize a cousin of another species.
Yawning.-Yawning, which is regarded by most persons as merely a sign of weariness or sleepiness, is considered by M. Naegeli as a therapeutic agency. He believes that a series of yawns, with the stretching that accompanies them, would make an excellent morning and evening exercise. The lungs can not fail to be benefited by the inflation they get.

Application of Cold.-Among some recently abserved interesting results of application of cold, M. Raoul Pictet has found that at- $150^{\circ}$ all chemical reaction is suppressed. Thus, if sulphuric acid and potash are brought together at this temperature, they do not combine. Litat this temperature, they do not combine. Litmus paper, introduced, keeps its color. It is by passing the electric current, and the current passes readily, whatever the substances; at $-150^{\circ}$ all bodies are good conductors. The disappearance of affinity at a low temperature can be utilized to get absolutely pure substances and M. Pictet has thus obtained alcohol, chloroform, ether, and glycerine.

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J. E. Wells, M.A., Editor and Proprietor.

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## TORONTO, JANUARY 15, 1894

## TOO MUCH EDUCATION?

REFERRING to the alleged fact that the ranks of the applicants for charitable relief in New York include lawyers, doctors, engineers, merchants, and clerks, whom the hard times have brought to penury, in a larger proportion than ever before, and that this class of dependents upon public bounty is said to show a large increase in numbers yearly, one of our leading dailies draws the very broad inference that "education is an injury instead of a benefit to these men." That education, in itself, can be an injury, or can fail to be a benefit, to any man, even in respect to his ability to earn his daily bread, cannot for a moment be admitted. The proposition borders on the absurd. There is no industrial or mechanical occupation in which, other things being equal, a cultivated brain may not be a distinct advantage to its possessor. That which gives a semblance of truth to this too prevalent notion is the fact that so many, both of the uneducated and of those who are supposed to be educated, have imbibed the notion that the man or woman who has received a little more culture than the average must, necessarily, turn the back on all manual occupations, and take up some professional or clerkly calling. This notion has arisen, naturally enough, from the fact that in the earlier stages of educational progress, the demand in these non-manual pursuits exceeded the supply. Of course the professional and other work
referred to can be efficiently done only by educated persons, but it by no means follows that the work which can be done more or less efficiently by the uneducated, cannot be done as well or better by those whose minds have been thoroughly cultivated. The practical lesson is that teachers, parents, and all others having to do with the formation of the characters and opinions of the young, should set themselves to counteract this mischievous tendency. What is wanted in order to remove it effectually is more education, not less. When the stock of educated men and women shall be much more largely in excess of the number for whom there are places in non-manual occupations than it ever yet been, what ought to be done? Shall we cease for a time to educate, as the mills shut down when the market becomes overstocked? God forbid. That would be to act on the very low and unworthy idea that education is valuable only as a means to an end, and that the utterly utilitarian end (we use the word "utilitarian" in its narrowest sense), of bread-winning. But the philosopher as well as the Christian knows that man cannot live by bread alone. The highest uses of education are quite independent of any relation it may have to money-earning power, or to easier methods of earning a livelihood. Who ever saw a truly educated man or woman who would exchange the mental culture and the capacity for closer thinking and for higher sources of enjoyment which it brings, for the wealth of a Rothschild or a Vanderbilt, if the one had to be parted with in order to enjoy the other?

But all this in no sense contradicts the view we have already expressed, and which we believe to be an incontrovertible truth, that all education worthy of the name really increases, or should increase rather than diminish, the ability of its possessor to earn a livelihood in any manual pursuit. We return, then, to the question, what is to be done when the stock of educated young men and women shall have reached a number far in excess of the number of available non-manual positions which the business of the community can create? Our answer is, go on educating faster than ever, until the time is reached when parents shall educate their children, and young men and women shall seek education for themselves, with a direct view to agricultural, mechanical and other industrial pursuits. Soon the point would be reached where all idea of social inferiority, or inferiority of any other kind, would be done away with in connection with such pursuits. Why should a farmer be less intelligent, less cultured, than a lawyer? Why should not a mechanic be
the intellectual equal of a physician? Take away the mental inferiority and the idea of social inequality will soon disappear. The status of the so-called "learned professions" would not be lowered but that of the so-called "manual" or "industrial" occupations would be raised, until, as is meet, every honorable employment engaged in by intelligent and educated men and women would rank as an intellectual pursuit, because it would, under the application of trained mental power, become so improved and elevated that all idea of unintelligent drudgery would be eliminated.

Is this too high an educational ideal? Surely not. Surely no man's or woman's right to all the dignity and influence, and elevated pleasure, which are the legitimate outcome of cultured intellectual and moral faculties, should depend upon the accident of the employment in which he or she earns the daily bread. "A man's a man, for a' that." Let every teacher cherish these higher views of the nature and uses of education, and strive to drive out from the minds of parents and pupils those low and narrow ideas which make it a means to an end, instead of in itself the highest end. Especially let every one endeavor earnestly to eradicate from the minds of the children the false and mischievous notion that there is any degradation or necessary inferiority in industrial occupations.

## IS THIS TRUE? IF SO, WHAT?

IN a recent lecture Dr. William Erb, the distinguished Heidelberg psychologist, discusses the problem of the growth of nervousness. The tendency of the time is, he thinks, to over-burden the mind. Children are over-worked at school, and allowed too little time for the outdoor recreation indispensable to healthful physical development. For grown people, too, life is a perpetual whirl of excitement. The struggle for existence is growing constantly fiercer. That these statements are facts rather than fancies few thoughtful persons can doubt. The causes which co-operate to produce the high pressure in the case of adults are more easily discovered than remedied. Into these we have not space to enter, nor would the discussion be exactly in our line. Not so with regard to the children. We believe that one of the chief agents in destroying the bloom and freshness of childhood, and depriving the child-life of much of its natural joy, not only in Germany and the United States, but in Canada, to-day, is our much-lauded school system. To some this may sound like educational heterodoxy of the most glaring kind. We tremble at our own temerity in saying it. We shall venture, nevertheless, to give some of our reasons, though the columns of an educational journal are much too short for an adequate discussion of so large a, question. In so doing we must not forget that there are schools and schools, teachers and
teachers. Some of the evils which have come under our notice are reduced to the minimum, happily, by the good sense and sound judgment of individual teachers. Others are inseparable from the system.

Let us premise that our remarks are not in any sense comparative. They relate to the common school system of the day, in all the more progressive countries, and so in no wise affect the claim of the Canadian or the Ontario system to stand in the very front rank. We may further observe that our attention has been much directed to the subject, of late, by actual observation of the working and effect of the system in the case of a few children attending one of the best of the Toronto schools.

Let us draw a picture of the life of a city child anywhere between the ages, say, of seven and twelve. Though we shall try to sketch it from the life, we do so subject to correction. Let us take a boy as our typical illustration, though for obvious reasons the unnatural mode of life must press even harder, in some respects, upon girls than upon boys. The little fellow rises, or more probably is roused, at halfpast seven. His bathing and dressing occupy half-an-hour. Breakfast from eight to half-past eight, though if, as is usually the case, he has some chores to do, this must be crowded into fifteen or twenty minutes, with serious danger to digestion, to say nothing of the bad habits sure to be formed. If he is at a little distance from the school he has a hard scramble to reach the school at nine. If, through mischance or inadvertence, he arrives half-a-minute late, he receives a demerit mark, which involves not only reproof and disgrace, but detention after hours or some other form of punishment. This, of itself, implies considerable nervous strain upon a sensative, or conscientious, or ambitious child. But the real discipline of the day has but commenced. He takes his assigned seat under the pressure of a bundle of rules and prohibitions. He must not wriggle in his chair. He must not whisper to his neighbor. He must not do this, he must not do that, but a dozen other things he must do, and do them on the very instant they are demanded. Take an illustration from the actual: "Well," said we the other evening, to a bright but restless boy of ten, " did you get any misdemeanor marks this afternoon?" "Yes, sir, I had one." "What was your wrong-doing?" He could not recollect at first, but after a moment's thought replied: "I turned around in my seat ${ }^{\prime \prime}$ The note of wonder is ours. There was nothing in the tone of the boy to indicate that he did not think that the crime merited punishment. To another boy of eight, who is very often kept in for a half-hour or more after the close of the school for the afternoon, we said: "Were you kept in to-day?" "Yes, sir, for a while." "Why were you kept in
this time?" The boy, whom we know to be thoroughly truthful, put on his thinking cap for a minute or two, and was at last obliged to admit that he really did not know !

To return to our narrative of the day's doings. The boy is kept hard at work at arithmetic, and spelling, and writing, and the other branches, too numerous to mention, which make up the morning's programme, with no break but that afforded by a few minutes of intermission. At noon the school is dismissed. He hastens home, swallows a hasty luncheon or dinner, attends to whatever home duties falls to his lot, and hurries back to school, in terror lest he may be again a few seconds late. The afternoon's routine is very similar to that of the morning. If he has been fortunate enough to escape censure or failure in some appointed task, throughout the day, he is dismissed at four, when in winter it is almost dark, not, however, without bearing with him a satchel full of text-books, and the prescription of an amount of "home-work," often of the dryest and most bookish kind, sufficient to keep him hard at work for one, two, possibly in the case of older boys, three hours. The boy who is fortunate enough to have no chores to do, or errands to run, may possibly snatch an hour or two for out-door or in-door recreation. But after the evening meal there is nothing for him to do but to settle down to his evening task. This performed, he is tired and sleepy, and is glad to go, with weary brain and inelastic step, to his night's rest. Is this a natural and healthful life for a young boy?

But this is not the worst case. Falling back again upon the results of our own observation, we have before us another picture, that of a lad of eight or nine, whose inborn restlessness makes it almost literally impossible for him to observe the thousand and one petty rules of the schoolroom, or to keep his attention fixed long enough upon the task set before him to do. The result is, bad marks; the punishment, being kept in. Thus the rule, we may say without exaggeration, is, that he does not reach home more than from one to two hours before the evening meal. His mother, knowing that he will be too tired and sleepy to do all his home-work in the evening, requires him to do a part before the evening meal. The whole effect is, in brief, that for five days of the week the boy, half of whose waking hours should be spent in work or recreation in the open air, scarcely gets an hour per day for such purposes. Though naturally by no means a dull boy, the tendency is for him to become habitually tired, spiritless. He dislikes school, has no pleasure or enthusiasm in study, though formed by nature to have as much joy in mental as in physical activity. Is this the best, the right training for an active Northern boy?

Is the picture over-drawn, too highly colored ? We hope so. We hope, that is, that the school-life of the average young boy in our city and country schools is less exhausting and more joyous than that life as it has happened to come under our notice in a single school of high standing in the city of Toronto.

In another article we may attempt to point out the direction in which, as it seems to us, the remedy lies.

## TWO KINDS OF DISCIPLINARIANS.

THE following extracts from a book by Arnold Tomkins, recently published, on "The Philosophy of Teaching," are admirably sound and suggestive. We commend them to the study of every teacher who is not yet conscious of having attained the power of governing through, not over or in spite of, the will and inclination of the pupil:
"There are two kinds of disciplinarians: one who, by force of authority, maintains the appearance of good order; the other causes good order to arise within the pupil. What often passes for good order is quite the opposite, and the so-called good disciplinarian secures only the temporary form of discipline. This is the heavy-handed drill master who by force may quell a mob, but who can never prevent the occurrence of one. And, too, the appearance of order is good only while pupils are in the immediate presence of the master. No teacher is worthy the name of disciplinarian who does not strengthen the pupil to govern himself after he turns the corner of the schoolhouse. An able-bodied man may crush a school into fearful silence, which is the worst of disorder; but the teacher-and such may be a timid ladywho can cause order to originate in the understanding and consent of the pupil, whether securing the same beautiful and formal external appearance or not, is the true disciplinarian. A majority of teachers, from the common school to the college president, who have been noted for disciplinary power, have gained their notoriety on the score of external crushing power over the student. And by this I do not mean the application of physical force; there are a thousand and one ways of intimidating and bribing a student into the semblance of good conduct. The pupil may be enticed with rewards, roll of honor, good will of teacher, and divers kinds of favors; or threatened with loss of priviledges, with demerits, with lowering of grades, with whatever rack and torture desperate ingenuity can devise. I know what proud success teachers report to have achieved by this, that, and the other disciplinary device of fear or favor; but, beneath the surface, it surely can be but a questionable success. It may be that a teacher must hold the fort temporarily by such external forces; but he should be ashamed to report success till the pupils see the reason of proper conduct as grounded in the school itself, and voluntarily make the law of the school the law of their behavior. * * * Every time the pupil is led to resolve that he will take charge of himself, the teacher has accomplished a victory for righteousness. This is a daily and almost hourly opportunity. The whole spirit of management, and prominently that of punishment, requires constantly just such a resolution. Thus the true means of securing unity as a condition to instruction is the true means of ethical discipline."

## Speeial Paper.

*AGRICULTURE IN PUBLIC SChOOLS.
BY JOHN SIMPSON, ELDER'S MILLS, ONT.
ln the first place I maintain that Agriculture should be taught in our Public Schools because of its inestimable value to the country boy when he attains to a position in which he can put into practice his school training. Few who aspire to become farmers ever get beyond the Public Schools. To learn the elementary principles of Agriculture in these would be, to such, a boon whose value neither his teacher no himself could estimate.

Having a knowledge of the elementary principles of Agriculture the boy would be possessed of information that would enable him to turn to account anything in the course of his experience bearing on this subject
It is but natural that any branch of study which it was not our good fortune to take up during our school training cannot be of the same interest to us as it would have been had we received such training to some extent. Io educate the country school pupil on a subject which would be of sn great value to him in after life, is to put within his reach a power that enables him to pursue his chosen occupation not only practically, but scieutifically The teaching, to be worthy of the name, must be scientific. The following paragraphs from Professor Huxley's address to an Agricultural club are well worth quotation and careful study
"There are some general principles that apply to all technical training. The first of these, I think, is, that practice is to be learned only by practice. The farmer must be made by thorough farm work. I think I might be able to give you a fair account of a bean plant, and the manner and condition of its growth, but if I were to try to raise a crop of beans your club would probably laugh consumedly at the result. Nevertheless, I believe that practical people would be all the better for the scientific knowledge which does not enable me to grow beans. It would keep you from attempting hopeless experiments, and would enable you to take advantage of the innumerable hints Dame Nature gives to people who live in direct contact with things."
"And this leads me to the principle which I think applies to all technical training of school boys and school girls, and that is, that they should be led from the observation of the commonest facts to general scientific truths. If I were called upon to frame a course of elementary instruction preparatory to Agriculture, I am not sure that I would attempt chemistry, or botany, or physiology, or geology, as such. It is a matter fraught with danger of spending too much time and attention on abstraction and theories, on words and notions, instead of things. The history of a bean, of a grain of wheat, of a turnip, of a sheep, of a pig, or of a cow, properly treated --with the introduction of the elements of chenistry, physiology and so on, as they come in-would give all the elementary science which is needed for the comprebension of the process of Agriculture, in a form easily assimilated by the youthful mind, which loathes anything in the shape of long words and abstract notions, and sniall blame to it."

The school boy who had received at school a knowledge of the elementary principles of Agriculture, would not fail to see daily the application of those principles on his father's farm. In the farm-yard, in the fields at springtime while preparation is being made for the summer harvest ; in some way or other, he will constantly see those principles put into practice. He might not only enjoy and profit by the study on the few acres of land that may surround his home, but also along the road-side by which he journeys to and from school, by the woods and meadows through which he may
*A paper read at North York Teachers' Convention.
roam while at play. He will indeed be a lifelong student of nature, for all his occupations and smusements will, in fact, be so many practical illustrations of what he learns of the seience of Agriculture while at school, if he is properly taught there, and the most interesting of laboratories, as well as the most complete, will always be before him, namely, that of nature as seen in the surroundings of his own home.

From a study of Agriculture the pupil of our rural schools will not only learn what is profitable in a practical sense, but its study will aid in cultivating in him a sense of the beautiful and pure. To teach a child for a few years, to love nature, is to plant in his bosom a love of uature which will continue forever. To accomplish this we do not have to educate the childour part is only to set the wheels going, and the older the head the more rapidly will they revolve. Nature is our great mother. She it is that begets all our impressions of the beautiful and sublime. That nature, when studied searchingly, becomes less beautiful or less wonderful, as is often asserted, is inadmissable. The study of Agriculture, by making us understand more clearly the wonderful resources of nature, cannot but make us more devoted, more reverent, more thankful, more humble, and in turn more beneficent to others. Again, by training us to be more observant, this study cannot but lead us to a better appreciation of the beauties of form and color, and of the everchanging variety of light and shade. which now for lack of proper early training are in a large measure lost to us.

Another strong argument for Agriculture in the schools is the fact that the great majority of our population reside in the country, or are closely connected with the rural districts. Sixty-nide per cent. of Ontario's school population belong to the rural schools. The great movement of the rural population towards the city is a matter demanding careful attention. The very life-blood of the country is being drawn cityward. The bulk of those who are thus migrating to the towns are from twenty to forty years of age-that is, in the most robust and energetic stage of life.
The census report shows that Canada, like other countries, has not been gaining in her rural population as she has in her urban. Canada is without doubt an agricultural country, being young and possessing lands whose fertility is unsurpassed; hence this cityward movement is all the more deserving of attention.
We might urge that instruction in Agriculture should be given in our schools not only because of the many engaged in it, but also because of the vast amount of capital invested in it, the wealth annually produced by it, and the large share it contributes to our trade and commerce. By a careful study of the figures and statisties given in the Census Bulletin we are firmly convinced that success in Agriculture underlies success in manufactures, in trade, and in commerce. How then shall we account for its bad position? We are led to think it arises from two causes: 1. Owing to improved facilities for transportation the farmer is brought into competition with the grain-producers of the world, millions of whom are able to live on sustenance upon which he would starve. And there is no prospect of this condition of things being improved. 2. The fertility of his own soil has been very greatly impaired by continual cropping, and he is too ignorant of agricultural science to know how to restore it. Even prominent agriculturalists acknowledge that the best of fertilizers lie at our very doors, and we do not know how to use them. Undoubtedly there are hundreds of farms in the country which would be benefited by such common fertilizers as lime, wood ashes, bone, muck, and others which might be named. But the average farmer is absolutely at a loss to know when to use one kind of fertilizer and when another and because of this he neglects them all. True, he has learned the use of some by experience,
namely, that which is a product of his own farm, but beyond this he is ignorant. Before leaving this part of my subject it might be well to notice the progress of European countries along this line. Among those whose progress is most marked by means of an agricultural education, is France. Her farms are the best cultivated in Europe. Each landowner-and the farms owned by many are very small as compared with many in Ontario-exhibits wonderful skill in arranging the crops, in using chemical fertilizers, and in the matter of rotation. This is a result of the Government Agricultural College, which has taught the French landowner, both large and small, the benefit of scientific farming. The peasantry of France are contented, decent, well-to-do, independent, and hopeful. This, unfortunately, cannot be said of the peasantry of Ontario. In comparing the crop production of France with that of Ontario, we see a possibility of enormous development along the various lines. Were the farms in Ontario made to yield per acre onehalf as much as some of the farms of France. the result would well repay any amount of time and labor.
(Concluded in next number.)

## *LIFE MANIFESTED AND DEVELOPED

 BY EXERCISE.You have asked me to speak of "The Vital Principle of the Kindergarten." There is no one word which more perfectly comprehends the central principle, method; and purpose of the Kindergarten than the word exercise, and none which without qualification would be more misleading, because of its ordinarily narrow application to physical action as walking, rowing, calesthenic exercises, etc., to promote development of the muscular system. By its use, however, I am applying the principle which governs all educational presentation of any subject, that is, Begin with the known.
The whole purpose of the Kindergarten in its material outfit and its applied method is to induce exercise, to provide material, to organize experiences, and to stimulate in the child the desire to ex reise his senses, his mind, his feeling or emotional nature, as well as his physical being, with growing consciousness and definiteness of action.
Exercise and growth are in direct ratio. To exercise logically and completely the entire possibilities of the individual being, is to keep him growing in perfect balance.
Undue prominence or neglect of any side of his being at once mars the perfect symmetry of the godlike proportion of possibilities in which he was created. No faculty or power, however material or sensuous, was meant to perish, else creation were faulty and weak, but each sense and power to be the foundation for a more ideal consciousness of which it is the symbol; or each is a concrete expression of the spiritual being, $a$ finite picture of an infinite reality. The mortal is not made to perish but to be swallowed up in immortality. Something cannot become nothing. Its destiny is to be transfigured and live in the higher life, or failing this, to be transformed and regenerated. To guide the activity of little children in these precious first years, when impressions and sensations are shaping character, and ceaseless exercise, stimulated from external conditions, is developing potential power into living force, is a sacred privilege of which we cannot measure the value either to ourselves or to them.
To know the material and methods of application in its logical sequence and process is necessary, but infinitely more necessary than this is it to see and understand this life which is expressed in the natural child.
It is a genuine, organic, individual, interesting life; not a sterile, imitative, mechanical, perfunctory activity, to which external motive power must be applied to bring about any educalive results.
Genuine life, having its motive power within itself : growing, changing, developing into continually higher forms of expression, ever rising through its own creation to higher aspirations and grander results.

Individual life, not a copy of any other life, but one original in power and purpose, having a work to do distinct from every other life, for which it requires the exercise and control of all its own powers up to their full capacity at each period of life.

Organic life, in itself a trinity of manifestation, a three-fold nature having a central spring tion, a three-fold nature having a central spring tiating activity, and with absolute interdepend ence of adl phases of expression, the activity of physical affecting the ratio and proportion of both moral and intellectual action and power, and vica versa. Externally, threefold in its relationships, part of a more inclusive organism, it is a life dependent on nature for physical growth and dependent on nature for physical growth and
symbolic expression of ideals and spiritual symbolic expression of ideals and spiritual pendent on society as the environment which demands and forces the recognition of social virtues, and offers reward for the practice of the same. Through this contact with others, life rises into the realm of enjoyment which the senses only materalize for us; organically related to God as the source and ever-flowing fountain of being and final truth-the centre and unity of all process, action and life.
Interesting life, spontaneous life, joyful, everattractive and inviting to itself.
Harmonious life in anything is beautiful, joyful. In the flower that blooms, the bird that sings, the man who works, harmonious life is always joyful. Can you imagine a flower blossoming, doing its work as duty or necessity without gladness, or a bird singing because it was made to sing, and therefore must get through its lifework. What would the flower or the bird's song be without its expression of spontaneous life? What is man's work when his heart is not in it, when part of his force is his heart is not in it, when part of his force is wasted in overcoming the will within him which Humanity should be as joyful in its exercise of power and purpose as either bird or flower, for it has a divine soul within it and power to see wherefore it lives and moves and has its being. We surely have not yet used our power of being up to the limit of our insight, if life and work is not as joyous, as attractive, and as interesting as the life of a bird or flower seems to be.
It is only in contemplation of life as genuine, individual, organic, such possibly joyous, and in the conscious understanding of the needless barriers that oppose the progress of natural development, that we can intelligently look for the principles, which governlife and hope to help to promote the growth of the individual.

We cannot reduce it to rules, and so have an absolute order of guidance. "No man who works by rule can get nature upon his side. All spontaneity is fettered and individuality is excluded."

We must use the law only that we may discover the spirit or convition of mind which we must try to develop and foster. Training does not consist. therefore, in teaching or formulating the law, but in making the feeling which underlies it a conscious one, and then leading to discovery of the law as a test of conditions and results.
The Kindergarten is so completely in touch here and there, without external or material continuity, that it requires greater intensity, greater inspiration, than any other teaching. and to be successful should be more full of spirit. Many undertake the work because they fancy the work is like a machine: If you set it going and keep it in the sequence you have been taught, is the right one, it will always produce the desired result. But is that in accordance with our vision of life.
The varied instructive manifestations of life are of vital interest and invite closest study. Material is ever interpreted by the spiritual truth which it figures to us. Fostering the material growth and action may promote the material growth and action and activitual because it is in organic relation to it, but, like physical exercise, it must be guided by insight and careful watchfulness, or the emphasis of growth may be directly opposite to that for which we are striving.
The senses exercised as organs of the mind, not as organs of sensuous pleasure, fulfil their true meaning. The sense pleasure is the open door by which the sleeping soul receives the light and wakens into joyous and immortal living of thought and emotion. The sense is the created link which joins the material to the spiritual. Physical life manifests itself through the body as muscular movement. Intellectual
life expresses itself as perception and insight in many phases, as purpose, plan, conservation, progression, order, regularity, balance, selection, rejection, symmetry, decision, definiteness, achievement, sustained pleasure.
Moral, spiritual, or emotional life reveals itself as pleasure, pain, recognition of physical comfort, like, dislike, etc. Selfishness, love, in comfort, like, dis, jike, etc. Selfishness, love, in recognition. sympathy, care of the weak, conquest of the strong, self-love and sacrifice, devotion and worship, the expressions varying according to degree of insight.
Defining virtues, we seek for their genesis, the root, and the process and means of growth. Applied, we arrange experiences which shall Applied, we arrange experiences which shall exercise the individual of his own free choice,
viz, supply conditions to produce spontaneous action.
Seeing the inclusive process guides in the direction to be sought and controls inspirational interest.
Instruction has the foundation law, selfactivity of mind. It leaves no rocm for a trace activity of mind. It leaves no rocm for a trace others, which has been the curse of schools in the past generation, and is not out of sight yet
Growth is evolution; taking in, but only in connection with giving out. Observation and discovery even are not enough, though many teachers have stopped there in progress toward teachers have stopped there in progress toward
the new education. More activity is needed. the new education. More activity is needed. into it, before it is within him as a part of himself. He is not educated by it without assimilation. That is, it reappears as his own strength Beginning only in imitation rise up to original invention.
Practical application of the principles of selfactivity, together with doctrines of continuity and connectedness, forms the true heart of Froebel's system.

## Sehool-Room Methods.

## TEACHING THE INFINITIVE.

## by s. g. brown, watford

In response to a request made some weeks ago, that teachers send in methods actually used by them in school in any subject, for the benefit of the readers of the Journal, I send the plan which I use in teaching the Infinitive. and in a later paper I may probably deal with the participle.
I may first state that I do not favor "cut and dried question and answer methods." I shall only attempt to indicate the points that should be brought out in the lesson, and the order in which I would develop these points, leaving the intelligent teacher to form his own questions as circumstances may suggest during the course of the lesson.
I do not pretend to treat the subject exhaustively, but I deal with it as I would in teaching a fourth class.
In teaching the lesson, I use a great many examples, in preference to a few, having in them the necessary points. I would not place all the sentences on the board at the beginning ; three would be sufficient to get the first point, but for the sake of brevity I shall place them at the beginning of this paper, and afterwards refer the beginning of this paper, and aterwards refer
to them by number. The teacher should place to them by number. The teacher should
on the board each point as it is developed.

## sentences.

1. Turning the corner quickly is dangerous.
2. Losing oneself in the woods is a serious matter.
3. Living in suspense is unpleasant.
4. He likes playing ball in the garden.
5. He was forbidden to walk when the dew was on the grass.
6. By attacking the difficulty he would soon overcome it.
7. The eye of the cat is formed for seeing in the dark.
8. His waiting did not help him.
9. Idling when one is young is folly
10. In any of these sentences the class will readily name the asserting word. But there are other words as "funny," "losing," "living," etc, that are derived from the verbs turn, lose, live, that are derived from the verbs of the sentence. They are called Infinitives, a word meaning "unlimited." They are so called because they are not limited as to form by the person and number of any subject.
11. The form of the Infinitive: The sentences, 1 , 2. 3, 4, may be changed, thus: To turn the corner, etc., etc. These are still Infinitives though different in form. Give the names to distinguish "these, viz., Infinitive in 'ing and Infinite with

Also show that in some sentences the sign "to" is omitted as in "I have heard you say so."

Let me speak."
3. How Infinitives may be used in the sentence. In 1, 2, 3, it is used as the subject. In 4,5 , it is used as the object of the verb. In 6 and 7 it is the object of a preposition.
4. How they are moditied? In 1 the Infinitive is modified by an adverb. In $2,3,4$, it is modified by a phrase. In 5 and 9 by an adverb fied by a phrase. In 5 and 9 by an adverb
clause. In 8 by a possessive word (noun or pronoun).
How completed. In 1, 2, 4 and 6 it is completed by an object.
The teacher having placed on the board each point as it is developed, he will have the following slatements :

1. The Infinitive is a word derived from a verb. 2. The Infinitive has two forms, viz., the Infinitive in "ing" and the Infinitive with "to."
2. An Infinitive may be used as the subject or object of a verb or object of a preposition.
3. An Infinitive may be modified by (1) An adverb. (2) An adverb phrase. (3) Adverb clause. (4) A possessive noun or pronoun.
4. It may be completed by an object.

## A PROBLEM IN PERCENTAGE.

A man bought 84 shares of stock at $98 \frac{1}{2}$ and sold it at $6 \frac{1}{2}$ per cent. advance; how much money did he make?
Pupil.-I don't understand what stock is.
Teacher.-When you and several other persons agree to go into busines together, you all put into the business a certain amount of put into the business a certain amount of be the whole amount of the stock?
P.- $\$ 000,000$ I should think.
T.-Yes. Now they divide that stock into one-hundred-dollar shares; how many shares will there be?
P.-Five hundred.
T.-Yes. And suppose you own one hundred of those shares, how much stock will you hold? P.-Ten thousand dollars.
T.-Now suppose the business does not prove to be profitable enough to pay what the money would be worth if put out at interest; could you sell a share of your stock to someone else for one hundred dollars?
P.-I should think not.
1.--How would the stock be rated then, above or below par?
T.-Below.
T.-Now suppose a man buys 84 of your shares at $98 \frac{1}{2}$. How much would he pay for each dollar of the stock?
P.-Wouldn't it be ninety-eight and a half T.-Yes. How much would you lose on each dollar?
P.-One cent and a half.

Now let us suppose that the business improves and that the profits are greater than the interest that could be got for the money invested; how would the stock be rated now?
P.-A Above par.
T.-Suppose now that this man sells his 84 shares at 6 6 per cent. advance. How much will he get for each dollar of stock?
P.-One dollar and six and a half cents.
T.-And he paid how much for it?
T.-Hinety-eight and a half cents. his stock?
P.-Eight cents.
T.-How much on one share?
P.-Eight dollars.
T.-And on 84 shares?
P.-Eighty-four times as much.

This is here carried out to the end, but in actual practice the pupil "caught on" before he got half through it, and then the teacher let go and he went alone the rest of the way.
There is nothing in percentage that cannot be made just as simple by a series of well directed questions. Our experience is that when the children do not see their way it is because they do not know the meaning of the terms used, or else they are not mature enough to follow the chain in the reasoning. They get lost. When the latter is the case the problem is too difficult and should be dropped for something not so complex.-Public School Journal.

## Primary Department.

## A NEW YEAR'S RESOLVE.

by Julia m. max.
With every New Year's morn, my heart has made New resolutions for the coming days,
And spoken them, but oftentimes my ways
Have been no better, and I felt afraid
This morn to speak; my trembling lip I stayed
Till something whispered,-
If your scholar says
"I will be better," though he disobeys
Sometimes, forgetting, do you then upbraid
Because he says again, "I'm sorry"? No,
You gladly listen and the past forget.
So God rejoices.
Yes, I cried, 'tis so.

Great Teacher! Wilt Thou pardon one more debt?
In Thy great school,-I have been bad I know
Let me begin once more Thy alphabet.

## SUGGESTIONS.

A BEST EXERCISE BOOK.
hroda lee.
This is a very good time of the year to begin a Best Exercise Book. Neatness and accuracy are two characteristics of good work that we cannot too soon begin to develop, and this plan for preserving the best specimens of work in a book prepared for the purpose is one I have found extremely helpful in forming these two very desirable habits. A book eight by fourteen inches in size, made of colored linen, edges pinked out, and covers decorated slightly with gold ink, is an attractive, inexpensive and convenient one. All kinds of work done on paper may be pasted in, the names and ages always being affixed. Most children will think it an honor worth working for to have a share in making the best exercise book.

The natural tendency of the majority of children is not towards neatness and carefulness in work, but habits in this line have such a positive and unmistakeable influence upon character that no pains should be spared in developing only good ones. We cannot be certain that habits formed in the junior classes will last through the entire school life, but let us do what we can, trusting that time will strengthen, not efface, the impressions we may have been able to make.

THE SEASONS.
Some years ago I was shown by a teacher in one of our public schools, a blank book that was to me very suggestive. It contained at the time little more than the headings which divided the book into four parts: Spring, Summer, Autumn and Winter. The volume was intended to contain a collection of both poetical and prose selections relating to the different seasons of the year. The time at which the book had its beginning was Spring and under this heading I found a number of short poems from some of our best authors containing beautiful and suggestive thoughts quite within the appreciation of little folks. These, she informed me, were not for memorization, but simply to be read to the children, to arouse in them an apprcciation for the beautiful things at their very doors, to which they might otherwise be blind, to excite an interest in the wonderful works Nature was every day spreadbefore their view. It did not seem to me
such a simple matter after all. It seemed rather to take the proportions of a grand and noble work. It is a pity we cannot find time for more of this work in our classes. Are you sceptical as to the interest in readings of this kind? Try them. Children learn very readily to appreciate the best things in literature, and with a little careful training you may be surprised to find how much thought they will gain from a single reading of one of the Season's verses.

## STORY TIME.

"Story Time" is an interesting part of the day to every class of children. Their enjoyment of the simplest sort of tale is so very apparent and genial as to make us wish to spare at least a few minutes in the course of each day for this purpose. But I must say that much of the value of the stories is lost when no further use of them is made than merely to amuse or interest at the time of telling. There is an immense amount of benefit to be derived from them in the training in language; I know of no better ground-work than that of the oral reproduction of stories. At first we must draw out the story by questioning, supplying parts, if need be, to present the unity of the narrative, but the help required will gradually become less and less until, at last, a short account of the whole can be given without any assistance. The oral reproduction of stories has an additional value in that it affords excellent exercise in expression. A story such as the "Three Bears" cannot be surpassed for training in this line. The children will readily personate Silverlock's Rough Bruin, Mammy Muff and Tiny, and give with wonderful accuracy the different qualities of tone, etc.

At first let the stories relate to things with which the children are quite familiar. "The Mouse that lost her Tail," "The three Pigs," "The old Woman and her Pig," and "Little Red Riding Hood" are good introductory ones. "Telling the story over again" is always a great delight to the children. The bright eyes and the eager hand of the boy who knows "where the little mouse went next," or "what the old wolf said to piggie this time," shows unmistakeable interest. If you wish to make a success of your language work this year call in the aid of the stories.

## STORIES FOR REPRODUCTION.

WHAT ROVER DID.
BY А. в. Y.

Ethel and Rover were playing in the yard. Ethel had a new rubber ball to play with, and she would throw the ball up and Rover would bark and run under it and try to catch it in his mouth. After a little, Ethel was growing tired. "So now, Rover, this is the last time I am going to throw it up." Rover barked, and Ethel said he meant "all right."

She threw it up, but when it came down Rover gave a jump and the ball bounced on his head and flew over the fence into the yard where the new people lived.
" You horrid dog, I shall never play with you again. That new little boy'll get my
ball and play all day, and I won't have any at all." Rover barked again, which meant, " I'm sorry."
"But that won't bring my ball back," sobbed Ethel.
"Is this your ball, little girl ?" and there stood a freckled-faced but very goodnatured looking boy holding the ball out to her.
"Thank you. Won't you play some? We can throw it over the fence to each other."
"Thank you," said the boy. "I was getting lonesome over here. You know we don't know anybody here." So after that there was a jolly game of ball over the fence-American Teacher.

## FIDO AND NELL.

## BY AMANDA KUERSTEINER.

I am Fido. The little girl at my side is Nell. Nell and I love each other very much. Some dogs say I am not pretty. Nell says I must not care what the dogs say about me, and I don't. Nell thinks I am very smart; I can do very many tricks. Would you not rather be smart than pretty?

Oh! I must tell you about the fun we had the other day. Nell and I were playing ball: The ball got lost and Nell could not find it. I knew where it was, but I would not tell.

Nell looked for it until she was tired, then she said to me, "Fido, don't you know where the ball is ?" And I just opened my mouth wide, and let the ball drop out.American Teacher.

## wellington and the schoolboy.

The Duke of Wellington, walking in the garden one day, saw a boy whom he recog. nized as the son of one of his gardeners working at something in the earth. He came up to the boy, looked closely at his operations, but could not solve the mystery. "What are you doing there?" said he in his usual point-blank way. "I am feeding a pet toad," answered the boy; "but they are going to send me to school and the toad will die." "Never mind," said the great captain, "go to school and I'll take care of the toad." The boy went to school, and afterwards received a letter from the great field-martial informing him that the toad was quite well.-Primary Educator.

## CHILLY LITTLE SPARROWS.

Key $A$
$\{1 \mathrm{~d}: \mathrm{d}|\mathrm{r}: \mathrm{r}| \mathrm{m}:-\mathrm{l} \mathrm{d}: \mid \mathrm{l},: \mathrm{l}$, Chil - ly lit - tle spar - rows Sit - ting


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\text { spar - rows } B u \text {-ried in the snow. }
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lit - tle feet? Don't you find it
$\{\mathrm{m}: \mathrm{m}|\mathrm{d}:|\mathrm{l},: \mathrm{l}, \mathbf{| t}: \mathbf{t}| \mathbf{| d}:-\mathbf{|}-\|$ hard to get An - $y_{\text {, -thing to eat? }}$

Hungry little sparrows
Would you like some bread?
I will give you all you want
Or some seed instead ;
Anything you like to eat,

You shall have it free, Every morning, every night If you come to me.

## olly little sparrows

Have you had enough?
Don't forget to come again
When the weather's rough.
Bye, bye, happy little birds !
Off the wee things swarm
Flying thro' the driving snow,
Singing in the storm.

## CLASS RECITATION.

## LITTLE JACK FROST.

AUTHOR UNKNOWN.
Little Jack Frost ran up the hill,
Watching the stars so cold and chill,
Watching the stars and moon so bright,
And laughing aloud with all his might.
Little Jack Frost ran down the hill,
Late in the night when the winds were still, Late in the fall when the leaves came down, Red and yellow and faded brown.

Little Jack Frost tripped through the hills; Ah!" said the flowers, "we freeze, we freeze;" Ah!" said the grasses, "we die, we die ;" Said Little Jack Frost " good-bye, good-bye!"
Little Jack Frost tripped 'round and 'round, Spreading white snow on the frozen ground, Nipping the breezes, icing the streams, And chilling the warmth of the sun's bright beams.
But when Dame Nature brought back the Spring,
Brought back the birds to chifp and sing, Melted the snow and warmed the sky,
Little Jack Frost ran pouting by.
Flowers opened their eyes of blue,
Green buds peeped out and the grasses grew ;
It grew so warm and scorched him so,
That little Jack Frost was glad to go.

## THE SELF-REPORTING SYSTEM.

To the Editor of the Educational Journal:
SIR,-In response to your request for opinions of the "self-reporting system" I would say that I think it most excellent when the teacher can thoroughly trust his pupils. Hence, I should not advise a teacher to use it until he has become somewhat acquainted with his scholars.

I use it myself, now, in my Fourth Class, and find it to work admirably. I have three such good, sweet children, two boys and a girl, in this class, and believe they are honest for I have never known anything to the contrary ; occasionally, also, one of them will come to me and say, "Miss Clark, would it be counted talking because I said so and so at such a time?" And perhaps I will answer, "Well, we won't count it this time, but we will'next time." We arestrict about the matter and do not allow a child even to ask for a knife.
To-day I had a little talk with my Senior Third Class about this system. I had been requested once or twice by some members of the class to give them marks for conduct. I said to-day that 1 should like to do it, and had wished to for some time, but did not know that it was right. Could they be perfectly honest? They must not think there would be no temptation to be otherwise, etc. I trust the method will succeed in this class. I cannot try it in my Junior Third and lower classes, for I have known some of them (I am sorry to say), to conceal the truth ; and might the temptation not be too much for them?
As to our system of marking, I give monthly reports and the Conduct marks are put on these along with the others. A child who has not talked all day, gets five marks. From morning to recess counts one, from recess until noon two (the children tell me the Arithmetic time is the hardest to keep from talking), from noon to recess one, and one from recess until "four." Of course, if a scholar speaks-once from morning to recess, he loses his mark, and so on through the day.

Yours truly,
Minnte Clark.
Simcoe, Ont.
[The above letter was accidentally overlooked at the proper time.-Ed. Journai.J

## Literapy Notes.

"Intercollegiate Football" forms the subject of an article that appears in the January number of the North American Review. It is written by Drs. White and Wood, of the University of Pennsylvania, who maintain that no known game compares with football in the development in the player of those "military virtues" which are of enormous value to their possessor in all the struggles of life. In an article on "The Sunday-School and Modern Biblical Criticism," in the same number, the Rev. Dr. Briggs urges upon the Sunday-School teacher the necessity of studying and teaching the Bible in the light of the results of recent research.
Among the illustrated articles in The Popular Science Monthly for February will be one entitled " Notes from a Marine Biological Laboratory," by Prof. William S. Windle. It describes the laboratory of Johns Hopkins University, now located in Jamaica, with characteristic views of its surroundings. In another illustrated paper Dr. Sidney J. Hickson describes the "Physical Conditions of the Deep Sea;" and in still another, James E. Humphrey tells "'Where Bananas Grow," showing by the pictures how the fruit is gathered and shipped. "Hereditry in Relation to Education" is the subject of a paper by Prof. Wesley Mills, M.D., to be published in the same number. The idea made most prominent in it is that teachers could learn much as to the proper treatment of each of their pupils from observing the characteristics of the parents.
Messrs. Houghton, Mifflin \& Co., of Boston, New York, and Chicago, have recently added to their Riverside Literature Series, as Extra Double Number M (30 cents, postpaid), James Russell Lowell's famous poem a fable for critics. The book is illustrated with Outline Portraits of the Authors mentioned in the poem, and there is also a facsimile of the rhyming title-page of the first edition. The intrinsic merit of this work; as has been well said, lies in its candor and the general excellence of its criticisms, in the course of which the "whole tuneful herd" of American authors are reviewed with keen appreciation and good-natured banter. This book should be a very valuable one for the higher grade of school work on account of the literary value of the poem, the criticism of the famous contemporary American writers mentioned in it, and their portraits which are fully in accord with the spirit of the poem.

Mr. W.T. Stead, the distinguished London editor, has been in Amirica for some weeks, a part of which time has been spent in Canada. Mr. Stead has long been a warm friend of Lord and Lady Aberdeen, and his recent sojourn at Ottawa as the guest of the Governor-General has resulte.d in a very readable and complete has resulted in a very readable and complete complished wife, which appears in the January number of the Review of Reviews. The article is one which will be interesting in North America on both sides of the boundry line and interesting also in Great Britain. The article is profusely and attractively illustrated. It is followed by a summarized report of the address followed by a summarized report of the address
given by Mr . Stead in Toronto upon the mission given by Mr. Stead in Toronto upon the mission
and destiny of Canada, in which Mr. Stead dwells especially upon the position of Canada as a connecting link between the British and American halves of the English-speaking race.

The number of The Living Age for the week ending January 6th begins a new volume, a new year, and a new series. After its successful career of fifty years this standard periodical seems as vigorous and prosperous as ever. Always the chief, it is now the only eclectic weekly of the country. Its distinguishing characteristics are that its presents in convenient form a compilation of the world's choicest literature, encyclopædic in its scope, character, comprehensiveness and completeness, and with a freshness, owing to its frequent issue, attempted by no other publication whatever; the ablest essays and reviews, the latest results of
scientific research; biographical sketches, stories of travel and exploration, literary criticism and of travel and exploration, literary criticism and every phase of culture and progress in the
European world, making an amount of reading of the highest value, unapproached by any other magazine. This number begins the 200 th volume.

The January St. Nicholas contains a story by Rudyard Kipling called "Mowgli's Brothers,"the tale of a child-a "man's cub"-who was rescued from a tiger by a wolf, and adopted into the wolf's family. It contains a number of clever ideas about animal life in the jungle, one of which is this: The Law of the Jungle, which never orders anything without a reason, forbids every beast to eat Man except when he is killing to show his children how to kill, and then he must hunt outside the hunting-grounds of his pack or tribe. The real reason for this is that man-killing means, sooner or later, the arrival of white men on elephants, with guns, and hundreds of brown men with gongs and rockets and torches. Then everybody in the jungle suffers. The reason the beasts give among themselves is that Man is the weakest and most defenseless of all living things, and it is unsportsmanlike to touch him. They say too-and it is true-that man-eaters become mangy, and lose their teeth.

The Atlantic Monthly in the January number begins its 73rd volume, and rarely in the thirtysix years of its existence has it contained in a single issue so many interesting and valuable articles. The opening of a new novel by Mrs. Margaret Deland, "Philip and his Wife," especially marks the beginning of the year. To teachers and to those interested in the great question of education, the articles on "Samuel Chapsion of education, the artstrong" and "The Transmission of Learning through the University" will most appeal. Other articles of interest are Capt. Mahan's sketch of the life of "Admiral Earl Howe;" a new and most excellent story by Sarah 'Orne Jewett entitled "The Only Rose," and a very able criticism of her writings ; "Ten Letters from Coleridge to Southey;" "From Winter Solstice to Vernal Equinox,"' by Edith M. Thomas; "Wolfe's Cove," a very dramatic story of the capture of Quebec by General Wolfe in 1759, by Mary H. Catherwood; two graceful poems by Helen Gray Cone and Edward A Uffington Valentine ; and a further instalment of Charles Egbert Craddock's "His Vanished Star." There is also a critical review of the letters of Lowell, Brooks, and Gray, and the usual Comment on New Books, and the Contri butor's Club.

The complete novel in the January number of Lippincott's is "The Colonel," by Harry Wil lard French. Based on a romantic adventure, the tale goes on to study the characters of these two highly-gifted idealists, and to trace the for tunes of a mutual passion which neither is willing to own. The sentiment throughout is pure and lofty, and the chapters appeal to the reader's heart no less than to his brain. Gilbert Parker supplies the opening chapters of a serial story "the Trespasser," which will run through six numbers of the magazine. It deals with a Canadian of high family, who comes from a wild and wandering life to take his rightful place in England, and is of uncommon force and interest. "Frenchy" is a domestic tale by Molly Elliot "Frenchy" is a domestic tale by Moll." Mother and Her Boy," by George Morley, is a pathetic sketch from every-day life "The Peninsula of Lower California," by James Knapp Reeve, Mrs. Sherwood's "Recol lections" of Rachel, Fanny Kemble, and Charlotte Cushman, "A Juvenile Revival," in which Thomas Chalmers celebrates the "Christian Endeavor" era. Frank Shelley's account of "Early Marriage Customs," and Charles Morris's an ticipations of "The Twentieth Century," are among the other articles. In "Talks with the Trade," F. M. B. answers some questions of young writers. The poetry of the number is of considerable merit.

Dow't do right unwillingly, And stop to plan and measure, 'Tis working with the heart That makes our duty pleasure.

## Hints and Helps.

## SUPPLEMENTARY READING FOR PUBLIC SCHOOLS.

To the Editor of the Educational Journal
Sir,-You published recently a list of books given by a correspondent that $I$ considered to be valuable to all earnest teachers who are striving to develop in their pupils a taste for good books; and I would like to express my thanks to your clever correspondent for the list and the essay that accompanied it; I am sorry I cannot mention her name. All' such lists have a peculiar value of their own, a value which those who have never introduced supplementary read ing for half-an-hour a day can no more appreciate than a deaf man can appreciate exquisite music. I would like to say that I have found the series of Classics for Children published by Ginn \& Co., Boston, well printed, well bound and of excellent quality. I have not used every book on the list but I can vouch for nearly all. Dickens' Oliver Twist is a capital book to read aloud the last half-hour of each day, and has a powerful interest for boys and girls. I send you herewith the best list of such books that I have chanced to meet for fifteen years past. It was prepared by a lady for the use of the public schools in Oakland, California, and came to me through the courtsey of Miss Sara Thoms French, a Canadian teacher who has spent fifteen years in Berkeley, Cal. I hope you may be able to find room for it in the columns of the Journal, because I happen to know that a large number of our most promising young teachers are fully alive to the moral and intellectual value of good books when read by an intelligent teacher. Somewhere in the future when the spelling-book has become obsolete as the mastodon, and the craze of the last twenty years for written examinations has become as archaic as the Elizabethan ruff, our posterity will marvel that we did not let our children drink freely at the stream of good literature that flowed through this century.

Yours truly,
Seaforth Coll. Inst. Jan. 1, 1894.
18t, 2nd and 3rd grades.
1 Danish Fairy Legends....... H. C. Anderson
2 What the Moon Saw ............... C. Anderson

4 Alice in Wonderland. Dodgeson
Dodeson
6 Letters from a Cat .Jackson
7 Frisk and his Flock......................... Sanderson
8 Pussy Tiptoe's Family...............Sanderson
9 Bodley Books (vii volumes)........... Scudder
10 Little Pussy Willow.
Stowe

14 King of the Golden River.............. Ruskin
14 Each and All. Andrews
15 Seven Little Sisters ........................Andrews 16 What D - saw in his Voyage...... Darwin 17 Boys of other Countries...... Bayard Taylor 18 Little People of Asia. Miller
19 Popular German Tales
19 Popular German Lales.................. Grimm
22 Adventures of Ulysses Lamb
23 St.ories of Greek History........................ Yonge 24 Stories of English and Roman History Yonge 25 Stories told to a Child................... Ingelow 25 Child's Book of Nature .Hooker Underfoot. Nichols
30 First Lesson in Natural History.Mrs....Nichols
31 Four Feet, Wings and Fins......... 82 Insect Life........ Agassiz
Maskel

34 Little Folks in Feathers Conant
86 Queen Brothers of the Air. $\qquad$ Miller
30 Mr W Pets at Marcy's Miller 38 Madame How Madame Rain........... Musset 39 Adventures of a Browney ................. Mulock 40 The Story of Patsey......................... Wiggin

4Th, 5th and 6Th years.
Stories from the Greek Tragedians...... Church
Stories from Virgil.
Church
Stories from Homer
Church
Two Years before the Mast Dana
Hall
Ten Times One is Ten

Plant Hunters Reid

Cast up by the Sea The Country of the Dwaris... Lost in the of Dwaris....... .......Chaillu Lost in the Jungle
Wild Life under the Equator....
In the Wilderness.
Canoe and Saddle.
Life in the Open Air
Afloat in the Forest
Forest Exiles.
Stories
$\qquad$ inthrop
.....Reid
Christmas Stories
…Reid
Haus Brinker . Dodge
1000 Miles in Rob Roy Canoe.................................................... Arabian Nights.
Popular Tales from the Norse ............. Dasent
Tangleword Tales
Wonder Book
Hawthorne
Asgard and the Guards
McDowell
Boy's King Arthur.................................
Echoes From Mistland
Woodward
Norse Stories

Book of Golden Deeds
Yonge

Peasant and Prince.................................................
Days of Bru Prince
. Aguilar
Alfred the Great
Hughes
Scouring the White Horse
Easy Star Lessons
Hughes
Fairyland of Sciences
Proctor
Cruise of the Betsy
History of a Mountain
Buckley
Life and her Children.
Miller

Common Objects of the Country H E Scudde
Story of a Short Life........................... Ewing
Jackanapes
Child Life in London
Penell
Children of the Cold.
Schwatka
Rab and His Friends Brown
Child's History of England..................... Dickens
Earth and the Man.. . . Guyot
Home Book in Nature Treat
Rollo Books
Abbott
Plutarch's Lives

## 7TH, 8TH AND 9th Grades.

Sketch Book
......... Goldsmith
David Copperfield
Black
David Copperfield....... ....... . . . . . . . . . Dickens
Old Curiosity Shop
Dickens
Ivanhoe.
Scott
Leather Stocking Tales
scott
The Spy
Cooper
Days of Bruce
Aguilar
Scottish Chiefs
Porter
Gulliver's Travels
Swift
An Egyptian Princess. ....................................................
My Winter on the Nile.
Ben Hur
Warner
Zenobia.
Wallace
Pilgrim's Progress.... . . . . . . . . . . . . . . . . . . . Bunyan
In His Name..
.Hale
Man without a Country.
Hale
Old World
. Church
Story of Siegfried.
Baldwin
Tables of Ancient Greece Cox
Old Times in the Colonies
Coffin
Boys of '76.
Coffin
Boys of '61
Politics of Young Americans ..................................................
Wakerobin
Nordhoff
Winter Sunshine
Barrows
A Little Girl among the Oid Masters.... Howell
One Year Ahead..............................................
Tales from Shakespeare.........................................................


Feats on the Fiord.
Martineau
Age of Chivalry
The Heroes of the Crusades
Translation of the Odyssey
Bulfinch
Douglas
The Making of the West..
Heroes of the Olden Times
. .Long

Modern Vikings.
Against Heavs Odds.
Maine Woods.
Odds.
Baldwin
Boylsen
Boylsen
Walden.
Thoreau

## Riversidi-

10 Biographical Stories.
29 Little Daffydowndilly $\qquad$
Thoreau

## 28 Birds and Bees

Hawthorne
Other Pape. Burroughs
47 and 48 Fables and Folk Stories. Burroughs
49 and 50 Stories.... ......... H. C. Anderso
Bulfinch's Age of Chivalry ................. Hale
Bulfinch's Age of Fable
Hale

| Musical Memoi | .Haweis |
| :---: | :---: |
| Music and Mora | Haweis |
| Uncle Tom's Cab |  |
| Roof Tree | ur |
| Table for C | Lowell |
| Snow Bound | ittier |
| e Song of Hiaw | fellow |
| Evangeline |  |
| mong the H | Whitt |

## THREE TEACHERS.

## by lucy agnes hayes.

I KNEW three teachers once called "highly successful." One was a young woman with majestic air and figure, and a beautiful face, a trifle heavy. She was conscientiousness itself. She ruled by her physical strength and she just "kept at her pupils" till they came up to the required standard in the course of study. Perrequired standard in the course of study. Per-
sonally, she disliked children and deemed it dignified to "keep them in their places," which places were far away from her. The pupils hated and feared her, but they passed the required examinations and that was all their parents and the School Board cared for ; all that the teach er's own sense of conscientiousness demanded.

The next was a young teacher, too; slight small, nervous, with the sweetest eyes and face imaginable, refined, (" magnetic," some people called her, but I think it was only her love for everyone she came in contact with naturally returned by them.) The pupils passed the examinations, too, and two boys who had been called "foolish" in New England parlance suddenly became bright boys by getting this quick seeing woman for a teacher. She discovered that Joe couldn't read because he didn't know the words before him. She gave him little les sons such as five-year-old boys have, and soon he could read as well as any of his class. He used to go to her house at night to study. She found that Tom didn't know anything-becaus he was near-sighted and could not see. Glasses transformed him. Well, this teacher ruled by love and patience and common sense. The pupils worshipped her, and $r$ spected her. She was the only teacher in town who had no " nickname," and that speaks volumes, dear teachers if you only knew it.
The last was an old man, principal of a high school. How can I write of him? His stature was far above the ordinary, with broad shoulders and massive chest, and handsome head and face-a face in which benevolence, high thought, and noble life were indelibly written-the im pression of sixty winters. To be in his presence and hear him speak was a liberal education To read Latin with him was to become a Roman fired with enthusiasm for strong and true and righteous living. He had faults. He was quick tempered, and I've seen him throw his copy of Virgil on the floor with a bang and cry out"The dickens ! this class is not half prepared !! Go to your seats-you block-heads!!!" We went and studied. No one complained, nor thought of complaining. Not one respected him less. It was genuine pain to the man to hear Latin read villainously, and we knew it. A lesser man would $h$ have lost our respect forever This burst of temper only made us love him more, if that were posssible. "I want you to go out of this school able to read and learn," he used to say, "with a love for reading and learning, that is all-no, not all ; with the will and ambition to be of use in the world, and to be masters and mistresses of whatever occupa tions you have in life."-Progressive Teacher.

## WHO WAS STUPID?

Happening, one day, in a classroom where the teacher was trying to teach her pupils how to find a common denominator of fractions, I saw that the pupils were not enlightened by her explanation; and the failure was so evident to her that she informed me, in an undertone, that the class was particularly stupid.
I told her I had not noticed any stupidity on their part.
"Why then," said she, "don't they understand it?"
I told her I thought there were two good reasons: They don't know the meaning of the word "denominator," and they have never used the word "common" in the sense in which it is here used. They know the difference between their common and their best clothes, but their use of the word has been to express a difference rather than a sameness.
"Let us, said I, "drop those terms for the
present, and teach them to change fractions to the same name."
"By the way,"- to the teacher,-" have you taught them to reduce whole numbers to a common denominator?"
"Why, I don't know what you mean," said she.

Ah," said I, "the pupils don't know what you mean, and you don't know what I mean ; but I'm not going to call you stupid. Perhaps the fault is with me."

Well, do," said she, " teach my class to find a common denominator in whole numbers, and perhaps I shall understand it."
I then said to the class "Take three cats from five dogs, how many will remain?
"Five," they answered
"Five what? five dogs? But that isn't subtraction ; there are as many left as we had at first. Well," said I, "let us try addition. How many are three cats and five dogs?"
"Eight.
"Eight what?"
That was a puzzler. Finally, a little fellow, who had been regarded as the dullest boy in his class, stammered out, "Eight animals."
It was all over then. Four boys and three it was all over chere seven children, etc. The teacher girls were seven children, etc. me afterwards that she had little difficulty in teaching her class to find the same name for several fractions, and they now understand what was meant by a common denominator.-Prof. B. F. Troud in American Teacher.

## TARDINESS.

Is tardiness the worst thing in the world? Has a pupil committed an unpardonable sin when he comes in tardy? What is it to be tardy? Is it to fail to be over the "dead-line" when the tardy-bell strikes? Here come When the tardy-bell strikes. Here come started to school on time. They came together a short distance from the school house with their pockets full of marbles. The gorgeous October weather influenced them to remain out as long as possible. A game was proposed. They had plenty of time for a game or two. They play. Time flies. It always does in a case like this. Suddenly they are reminded that it is almost time for the tardy-bell to strike. Johnnie's legs are longer than Jimmie's. Johnnie just got over the "line" and Jimmie just didn't. Jimmie was marked tardy! Poor Jimmie! Johnnie got in by the "skin of his teeth," but his record is clear. He is always teeth," but his record is clear. He is always runner.
Are not both boys tardy? Of course we are not saying they should be so marked. We are not teaching school for the sake of the report. We are working for these boys. Are not both forming the habit of neglecting their duty by allowing themselves to be influenced by their surroundings? Should we not try to make them both see that this is true? Should we not lead them to see and to feel that it was their duty to be in school earlier? Should we not try to get both to resolve to take charge of themselves hereafter? Should we not warn them that it may be hard for them to do this? We do not mean to excuse the tardiness at all. We mean mean to excuse the tardiness at anes.-Indiana Šchool Journal.

## TACT.

ву м. с. r.
Is there anything which plays a more important part in all the relations of life than tact? There is nothing which helps the teacher so much in her relations with parents, pupils, and fellow-workers. Many an unpleasant scene in the schoolroom may be avoided by the use of a little tact. Do you see a boy on the verge of some mischievous act? Do not say, "John, behave, or I shall have to punish you." Can you not say, "John, will you bring me that book from the table p" or, "John will you arrange these cards for me?" Ask some little service that will require his immediate attention. In this way his mind is diverted from his scheme for mischief, for even a naughty child likes to help his teacher.

It is not only with the pupils that the teacher should use tact, but with the parents as well, No matter how naughty and disagreeable. a
child may be to outsiders, he is lovable to his parents. When the mother comes to the teacher to ascertain what her boy is doing in school, comes with a desire to have him do his best, and asks, "How is my son doing?" is it pleasant for her to have the teacher say: "John is a very naughty, troublesome boy ?" Very likely he is, but cannot the teacher tell it in a less disagreeable manner? She will not secure the co-operation of the parent by such remarks. As a rule, parents desire that their children should do right, and are willing to work with the teacher for that result. Why then should the teacher, who really means well by the child, antagonize the parents.

If John is bright, and able to do good work, but is idle or naughty, why not say to his mother, " John has the ability to do good work, but I am sorry to tell you that he is idle and disobedient?" The mother, pleased that you recognize John's good qualities, is anxious to have him behave in such a way that you will discover more good in him, and readily lends her aid in making him what he ought to be. The child who finds that there is hearty sympathy between his mother and his teacher, must be hardened indeed if he can resist the combined influence.

No absolue rule can be laid down in such matters, but we shall find that there is nothing equal to tact in smoothing over the rough places in our school life.-The American Teacher.

## CONCERNING DISCIPLINE.

Prevention of the wrong-doing is better than punishment of the wrong done.
Exercise great care in taking a stand, that you may have no occasion to retreat.
Fauit findling is not calculated to cure a fault. Distrust in the teacher breeds deceit in the pupil.

A child properly employed is easily controlled.
Obedience won is far better than obedience compelled.

Absolute self-control on the part of the teacher is a necessary pre-requisite to proper control of the pupils.

A class that will work well by itself is well managed.
An orderly changing of places between lessons signifies much regarding a teacher's control of the class.
If children push or crowd in the file there is weakness somewhere.
If the teacher has to talk much about order there can be no good order.

Public sentiment in school can alone secure perfect discipline, and it requires a great teacher to discipline through public sentiment.
Make no threats.
Be firm.
Be kind.
Be patient.
Be pleasant.
Be self-contained.
Be as perfect as you ask your pupils to be.Exchange.

## FOR THE LANGUAGE CLASS.

Cut out short selections from the newspapers and distribute the slips. Let each pupil pass his pencil through every word that can be spared without materially changing the thought. Let then strike out also every long word for which they can substitute a shorter one, then re-write, simplifying and shortening the phrases whereever possible. The results will surprise and delight any teacher who has never tried such work. Almost invariably the composition will be made so much more forcible by the change that even the dullest pupil will appreciate the improvement.-Western Teacher.

The teaching of history must be begun by teaching facts. not inferences.-President $E$. $\bar{I}$. Warfield, Layfayette College.
$\square$ Nothing is so charming as the ruddy tints that happiness can shed around a garret room. - Victor Hugo, in Les Miserables.

## Coppespondenee.

## COMMON ERRORS IN PHYSILS

To the Editor of the Educational Journal:
Sir,-After a gratuitous remark about "increase in the temperature" which was not exhibited in my note (in your issue of December 15 ), "Celo" attempts to show that I was mistaken as to a matter of fact. If he will again look over my article, be will see that the Primary, Junior Leaving and Senior Leaving papers were taken up in succession, and that it was when considering errors made by Senior candidates that the observation about the double time-phase was occasioned. It is true that " 10 centimetres a second per second" was on the Junior Leaving paper, and "Celo" need not have quoted the whole heading to tell us so; but it is also true that its appearance there did not elicit a remark from the examining committee (in whose behalf I was acting), at least I have no recollection of any. If it "struck the candidates cold" they soon recovered, as no evil effects were observable in their answers. It is one thing to work with a phrase, another to explain it clearly.

In my former letter, out of "Celo's" series of ten questions, I answered the only one which really had anything to do with the subject, the only one, too, that would have been asked by any one signing his own name. I answered it both in the spirit and to the very letter, but my answer is not frankly accepted. We have a shuffling reference to two editions of the textbook, which, even if true, would not be worth the statiag. But now I find the fourth edition, to which my copy belongs, was published four years before the examination, its preface being dated March, 1889 , the first edition apparently having been copyrighted in 1888 . "Celo" should wait to verify his surmises before putting forward such a flimsy excuse.
As you say, Mr. Editor, a little more light on those regulations would be acceptable, but I would judge, from his quoting other works on Physies, with which of course it is presumed, he is acquainted, that "Celo" has not lived up to what you and I take to be his interpretation of the law. A teacher can make the very best use of a text-book without ever having it within the school-room. By the way, "Celo" must see that in the definition he quotes the phrase, "unit of velocity," begs the question.
But the strangest thing of all is the way "Celo" swerves round against the Education Department. After having given a long list of insinuating, sarcastic, inquiries about irrelevant and personal matters, without attaching his name, he "hastens to say that nothing personal or offensive was intended." Examiners are like other men, having their faults, but their sensibilities as well; and when, after seriously striving to co-operate with his fellow-teachers, one finds that a work undertaken at their request, purely for the purpose of summarising their observations, is made the pretext for a personal attack, any suspicions arising in the mind of the one who freely gave his time and trouble must be excused. However, 1 accept "Celo's" declaration that he does not wish "to call attention to the shortcomings of the Examiner-he is all right;" but it appears very odd that the present writer, while acting as the chairman of a committee, should, by reporting their observations on "an insignificant item on the Physics paper," bave thus "laid himself open to a counterstroze," but the stroke is now against a "cast iron rule of the Education Department!"
I am sure every examiner is always glad to receive suggestions or manly criticisms, and while I thank you, Mr. Editor, for courteous treatment at your hands, I shall not again beg the favor of your valuable jouraal to reply to an anonymous correspondent.
C. A. Chant.

Toronto, Jan. 9, 1894.

# Book Notiees, ete. 

Any book here reviewed sent post-paid on receipt of price. Address The Educational Journal. Toronto.

Virgil's Aeneid (six books) and Bucolics, by Wm. P. Harper, Ph. D., President of the University of Chicago, and Frank J. Miller, Ph. D.. Instructor in Latin in the same. New York. American Book Company.
The authors have now included the Bucolics with the original edition of the first six books of the Aeneid, which was duly noticed in our columns.

Zenophon's Anabasis, by Wm. R. Harper, Ph. D., and James Wallace, Ph. D. The same publishers.
The Cæsar, the Virgil and now the Zenophon in this series almost defy criticism. Nothing like them has ever appeared in the history of school editions of the classics. As specimens of book-making, of scholarly accuracy, and saving common sense these beautiful books are without a rival in school literature. A new feature in this book is a tendency to use the Anabasis as material for history. This is the more to be welcomed, since, on the whole, it has to be said that classical study in the United States has disregarded the subject-matter of the author's read in colleges and schools.

We earnestly press this 'Anabasis' upon the attention of all classical teachers in our schools.

## **

Arnold's F'irst and Second Latin Book, revised and corrected, from the American edition of
Rev. J. A. Spencer, by James E. Mulholland,
New York. American Book Company.
Arnold's Latin Prose Composition, corrected and revised from the first American edition, by James E. Mulholland. Same publishers.
We can see no excuse for publishing either of these books. With such introductory Latin books as Comstock's and Lindsay and Rollin's, already before the American public, the former of these books is surely carrying still another owl to Athens.
As for the other, Balbus continues to " lift up his hands" with the old wearisome monotony. Nor do the "corrections" extend so far as to "correct" the atrocious eleventh lessson. No hint is given of the proper Latin for prohibitions. If Mr. Mulholland desired to produce a book somewhat fuller than the excellent little composition book of Jones, why did he not set his hand to revising and correcting Bradley's Arnold?

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Chances of Success, by Erastus Wiman. Toronto : F. R. James, 77 Victoria Street.
This is in some respects a unique book. The name of the author is a guarantee that it is an interesting book. Its sub-title, "Episodes and Observations in the Life of a Busy Man," will serve to convey a tolerably clear idea of the nature of its contents. Anecdotes and narrative are freely intermingled with serious essay and discussion of living questions, political, financial, economical. In the words of Public Opinion, "The business man, combatting unfamiliar conditions, should be grateful to Erastus Wiman for the attempt he has made to set forth the altered environment in which men are now found. Equally should parents find in Mr. Wiman's book a clear statement of the new conditions which their children must encounter, and without a knowledge of which their education will be most imperfect." The work is well written, and entertaining as well asinstructve.

Clare's Unrivaled' History of the World.
We have inadvertently delayed too long to notice this work, which was placed on our desk by the Toronto agents (McAinsh \& Kilgour), in five large volumes, some weeks ago. For the many whose libraries are necessarily limited, and who have not time to follow the study of history in its almost innumerable special branches and authorities, this work seems admirably adapted. It is not a mere dry compend of dates and facts, but a very readable and sufficiently comprehensive work. The style is clear, easy and pleasing. So far as we can judge from a cursory inspection the author's sense of proportion in the importance of events is good. The various phases of the world's history, on the whole, are placed in
their proper perspective. In these days when there is so much temptation for the young to waste time in trashy reading, the presence of such a book in the family is a real boon. Its influence in helping to form tastes and promote intelligence may in many cases be worth a hundred times its cost. The maps and other engravings are well executed, and as a rule serve to illustrate and supplement-not merely to ornament the narrative. The history is brought down as nearly as possible to date.

## **

The Science of Education, by Johann Friedrick Herbert, Professor of Philosophy in the University of Gottingen. Translated by Henry M. and Emmie Felkin, with a preface by Oscar Browning. Boston; D.C. Heath \& Co. (Price \$1.00).
The publishers deserve the gratitude of educationists for the issue of this translation. Not that the book may be expected to affect existing methods or to inaugurate an epoch in the aims of education. The student of methods will make little practical use of the work; while the confirmed believer in the permanent childhood of teachers and taught, the critics of pedagogy as so much diluted pedantry, the teachers -even those who are not Carlyle's "hodmen,"who regard their work as the necessary drudgery of the world; in a word, pessimists in general, will consult their pleasure by leaving the book alone. Its readers must have caught the enthusiasm of that great idea of the "perfectibility of mankind, which it is the shame of this generation to deride.
On the other hand, educational radicals and iconoclasts, and the vendors of pedagogical nostrums will find no encouragement here. Herbart has prepared a cold douche for the enthusiasm born of ignorance.
The following sentence strikes a key which is sustained throughout

A young man who is susceptible to the charm of ideas, who has the conception of education in all its beauty and all its greatness before his eyes, and who is not afraid to resign himself for a time to numberless alternations of hope and doubt. despair and joy-such a man can undertake the task of training up a boy in the environment of actuality to a nobler life, provided always that he possesses mental force and science to apprehend and represent this actuality as from the point of view of humanity, only a fragment of the great whole."
The section on " moral strength of character." while the noblest portion of the work, cannot be regarded as the most inportant. The chapter on discipline abounds in such pregnant sentences as this: "Discipline does not acquire its full momentum till after it has found an opportunity of showing to the pupil his better self, br means of an approbation (not exactly praise) powerfully affecting him." And what can be finer than the short chapter on "The manner of instruction?" But the special value of the work lies in the section on "Many-sidedness of interest." Much of this is crabbed reading, but it is of real value and contains the essence of Herbart's philosophy.
Classical teachers will find a decided interest and freshness in Herbart's experience with the Odyssey and his opinion of its educational value. The book will, in any case, be of permanent value as the record of a life which from the first had but one aim and was consecrated by a holy enthusiasm.

There is nothing so kingiy as kindness, and nothing so royal as truth.

Nothing is denied to well directed effort; nothing is ever attained without it.
Is leaving my hotel, I paid my bill, and said to the landlord, "Do I owe anything else ?" He answered, "You are square." "What am I P" He said again, "You are square." "That's strange," said I; "I have lived so long, and never knew before I was square." Then as I was going away, he shook me by the hand, saying, "I hope you will be 'round again soon." "But I thought you said I was square! Now you hope I'll be round !" He laughed and said, "When I say I hope you'll be round, I mean I hope you won't be long." I did not know how many forms he wished me to assume. However, I was glad be did not call me flat.Liverpool Courier.

## Question Drawer.

R.B.-The Youth's Companion is published in Boston, Mass.
S. B.-Write to the Education Department for circulars containing lists of subjects for Entrance and Third Class examinations.

Philetcs asks what is the approximate time a child should spend in each Reader in the Public School course, provided that the child possess average ability and attend school regularly? Perhaps some teacher of experience will kindly answer.
E. T. W.-The present Lieutenant-Governors of the Canadian Provinces are: Ontario-LieutCol. the Hon. G. A. Kirkpatrick; QuebecHon. A. J. Chapleau; New Brunswick-His Honor John J. Fraser, late Judge of the Supreme Court ; Nova Scotia-His Honor M. B. Daly ; Prince Edward Island-J. S. Carvell, Esq. ; Manitoba-Hon. John C. Schultz ; British Columbia-Hon. Edgar Dewdney ; Northwest Territories-Hon. C. H. MacIntosh.
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