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THE ONTARIO TEACHER:

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TEACHING AS A STEPPING-STONE TO OTHER PROFESSIONS.

We have heard the idea advanced by some, that to engage for any length of time as Public Teacher, unfitted a man ever afterwards for any other profession, or walk in life. In sustaining this position, certain individuals were referred to, whose habits had become so fixed, or who had contracted such peculiarities, or eccentricities, as to disqualify them for any thing else. These were held up as the samples by which the whole body of the profession was to be judged, and the peculiarities which they displayed were charged to some tendencies inseparably associated with the profession.

Now, if it could be proved that *peculiarities*, as they are called, were associated with this profession and no other, there would be some force in this argument. But is it not true that any position in life a man occupies for any great time, unfits him, to a certain extent, for occupying any other? Is it not the natural tendency of mankind to run in grooves, either physically or mentally—an arrangement which instead of militating *against*, contributes, to a very large extent, *towards* our happiness? How often do we find that the performance of certain duties, which were at one time irksome, have become quite agreeable by repetition, and that the breach and not the observance, is in reality distasteful? That the Teacher is more liable than any other to get into grooves of this kind, we fail to see. True, there is a great deal of repetition about his labours. He goes through a good deal of the same routine every day. But where, we ask, is there any profession without its routine? Indeed, does not a man's professional success, in many cases, depend upon the thorough performance of routine? The only danger is that the repetition and the routine will lose all its earnestness, and become a mere formality, without soul or power.

It is alleged again that constant contact with children has a debilitating effect upon the mind. That the habit of bringing one's self *down* to the capacity of childhood, has a tendency to create an incapacity for rising *higher* than childhood. Why this should be we know not. The power of the bow is not weakened by being occasionally relaxed. The man with a mind capable of understanding great truths, does not injure his mental powers, by endeavoring to explain those truths in such a way as to make them comprehensible to the feeblest intellect. On the contrary, is it not true that in order to simplify, the mind must first grasp the whole subject, seize the most salient points, and by directing attention to them, endeavor to find access to inferior minds. The philosopher who would have no difficulty in explaining some nice problem to a class of philosophers, might find considerable difficulty in making the same point intelligible to a class of students. But in which of those cases was his mind most exercised? Certainly in the case where the greatest exertion was put forth. Similarly the Teacher, in his efforts to reach the judgment and reason of his pupils, must endeavour to make everything doubly plain, and by illustration, as well as by exposition, resolve into their primary elements many things which he was capable of comprehending himself as a whole. The only danger to the Teacher is, that knowing that a certain amount of knowledge will, in all probability, serve him during a lifetime in the profession, he satisfies himself with acquiring that and no more.

But why should teaching unfit any man for other professions or walks in life? What are the qualities essential to the Teacher, and which make him successful? Are they peculiar and unnecessary in any other profession? We say not.

Let us see,

1. The Teacher requires *punctuality*. If he wishes to succeed and accomplish anything, he must not allow a moment of time to be wasted.

2. He wants *regularity*. Everything must be done at a proper time. No duty must be shirked because something else might be more agreeable.

3. He wants *industry*. Constant application. Himself at work; his scholars at work; in fact every faculty and power of the mind constantly in operation,

4. He wants *perseverance*. It would never do to take up a subject and lay it down in a few days. His labors can only be of any service when they are continuous. It may require many years before the harvest is reaped, but yet he must persevere. The soil may be stubborn and unyielding; the means of cultivation meagre, but yet he must work on.

5. He requires *conscientiousness*. His duties are performed away from his employers. He has nobody to chide him if he is dilatory—nobody to rebuke him if he does not put forth all his power—nobody to tell him he has slighted his work. If he fails, it is not known for some time at least. He may expect to escape detection by glancing over with superficial cleverness that which requires real solid effort. He may deceive parents and friends by a dexterous management of his classes, on examination day; and who knows the difference? A teacher certainly requires to be a man of honor.

6. He wants *agreeableness*. He must win the affections of his pupils if he wishes to succeed. He must be courteous, kind and affable. He must act the gentleman, and by the sunshine of his countenance, warm into being the better natures of his pupils.

7. He wants *firmness*. He must punish when necessary, and he must have the courage to do it. He must restrain the scholar when restraint is required, and with a firm hand prune off excrescences which if allowed to mature, would deform the full grown man.

9. He wants *decision of character*. He

must act quickly and decisively at many times. Having certain principles to guide him, he must readily apply those principles to the case immediately under consideration and act at once.

Other qualities required by the Teacher might be mentioned, but it is unnecessary. Is it not evident that any individual possessing those already mentioned, has even got a great deal that many had not, who have succeeded pretty well? And if these qualities are necessary, is it not also evident that the individual who is laboring to be a good teacher is laboring to develop that which will afterwards aid him in any profession he might prefer? Business qualities are limited to a certain number of the virtues; success in life does not necessarily involve an amount of talent, or a combination of excellencies, beyond the reach of any ordinary mind. And we doubt very much if there is any profession that so largely develops all those qualities as the very profession that is by many said to be of injurious and retrogressive tendencies.

To the individual anxious for self improvement, the profession affords facilities denied many in other walks of life. Although its labors are exhausting, yet, with ordinary physical vigor, there is much time for general reading, and even hard study. And many who were compelled by circumstances to enter the profession for a livelihood, were able to advance themselves intellectually, and at the same time earn for themselves a reputation as teachers. We trust that no teacher in Ontario will feel that he is under any disabilities because of the duties which he may be called upon to perform, but that the opportunities which the profession affords will be embraced to fit him, not only for a more faithful discharge of present duty, but for any other occupation which he might feel inclined to undertake.

We would not wish to be understood as giving any encouragement to that desire which sometimes exists among teachers to change their vocation. On the contrary we earnestly hope teaching may become more and more a permanent profession. All recent school legislation has a tendency in this direction, and the higher standard of qualification, the better salaries, and the more elevated professional *status* now enjoyed, in addition to the noble and useful character of the work of teaching itself, should vastly diminish the number of those who forsake it for other professions. We have only aimed to show that teaching, so far from having an incapacitating or debilitating influence, is the best possible course of training both for its own peculiar duties, and the highest success in any other walk in life.

MR. MOWAT'S SCHOOL BILL.

As the Bill brought down by Mr. Mowat a few days before the close of the Session, entitled "An Act to amend the Public and High School Laws of Ontario," has not been generally noticed through the Press, we purpose to lay before our readers a brief outline of its provisions, with such remarks as we deem appropriate.

The first seven Sections of the Bill refer to the reorganization of the Council of Public Instruction.

By the first Section it is proposed to add to the number now comprising the Board, three members, of whom one shall be elected by the Public and Separate School Teachers, Public School Inspectors, and the Head Masters of High Schools and Collegiate Institutes respectively. The elected as well as the appointed members are to hold office for two years—four of the latter to retire by lot at the end of one year from the passing of the Act—the remaining four to retire the following year. The Chief Superintendent and the Heads of the University, and all affiliated Colleges to remain as before, *ex officio* members of the Council.

We are exceedingly pleased with this feature of the new act. We endeavored to point out, in the first number of the TEACHER, the benefits that would accrue from the introduction of *new* blood into the Council of Public Instruction, and although the plan proposed in Mr. Mowat's Bill does not provide so largely for the elective element, as we proposed, still we accept it gratefully. We are also gratified with the charge proposed regarding *appointed* members. We need not reiterate our former statements on this point, but simply say that it is still our confirmed opinion that we should endeavor to secure in every public body entrusted with *practical* work, as much of the practical and experienced element of the country as possible.

The mode of election proposed is quite simple, and will, no doubt, fully serve the purpose designed.

Our proposal for confining the franchise to first class Teachers, was very generally objected to as too stringent. Mr. Mowat makes no limitations whatever, only the one, that is the exclusion of Assistant Teachers. It is to be the duty of each Inspector to forward to the Education Department a list of all the Head Teachers of the Public Schools in his Division. The voting papers are then sent to them by mail. On these they write the name of the party for whom they vote, and return them to the Department. Scrutineers are appointed, the votes counted, and a return made to the Chief Superintendent.

We would have preferred to see six instead of three members elective. Owing to the extent of the Province, it would be more convenient to divide it into two Sections or Electoral Divisions—the Eastern and the Western, allowing each Division to elect one representative. However, with the change made in *appointed* members, we feel convinced the new Council of Public Instruction will be a very useful and efficient body.

We notice that no nomination of Candidates for election as members of the Council of Public Instruction is provided for. The consequence would be that each Teacher, or Inspector might have a candidate of his own, and there would thus be thousands of candidates voted for. We hope the

omission will be supplied when the Bill is next presented to the Legislature.

The provisions of the eighth clause of Mr. Mowat's Bill, by which our High Schools are to be handed over to the control of County Councils, is particularly objectionable. It cannot be said that County Councils have, in any way, shewn any great desire to foster High School education. True, they have made an annual appropriation for High School purposes, but it was not a voluntary one. The Law required them to do it, otherwise we believe there are many cases in which it would not have been done.

Besides we object to giving County Councils the power to levy taxes in towns and villages for purposes with which the High School Trustees are far more likely to be familiar. Again, while abolishing a body directly responsible to the people, it is proposed to give a Committee of three or five, who are to all intents and purposes irresponsible, virtually, all the powers of Trustees. Now why effect this change? Why take such a retrogressive step? Is it not under all circumstances a sound principle to allow the *people* to manage their own affairs? And if for the sake of the representative element the Board of Public Instruction should be reorganized, why violate that principle by substituting *appointed* Trustees for elective Trustees? An irresponsible Committee for a responsible Board? We trust Mr. Mowat will see fit to amend this very objectionable feature before it is brought down next session, as we believe it would have a very injurious effect on our High Schools.

The provisions made for the admission of pupils into the High Schools are what, we believe, should have been enforced long ago. As it is proposed to adopt the system of "payment by results" it is indispensably necessary that a uniform standard of admission should be at once adopted. It is well known, that under the old system where the Public and High Schools were united, many pupils were forced into the High School, entirely regardless of their fitness—the only object being to raise the *average* in order to draw government money. The effect of this system was most mischievous, inasmuch as it laid upon the High School Teacher's shoulders, work which he should never have been required to perform. By adopting the system proposed under the new act, and by having questions prepared by a Central Committee, the same questions being the test of scholarship in every school, a uniform standard will be attained, and even High Schools will be spared much of that annoyance which arises from being obliged to do work not properly belonging to their department. We fully believe that the same benefits will arise from this system in the High Schools as have already occurred from a uniform standard among Public School Teachers.

By Sections eleven and twelve provisions are made for the alteration of the boundaries of School Sections, so that in the case of Union Schools, no part of the Union Section can be withdrawn except at a meeting of the Reeves and County Inspector interested.

In section 17 it is provided that where the convenience of a school section may require two school houses, that it shall be lawful for the Trustees, with the consent of the Inspector, to provide the necessary accommodation.

In Section 19 additional provision is made with regard to Superannuation. A distinct provision is made for the payment of six dollars to superannuated Teachers for every year in which they engage in the profession, and a further provision made whereby a Teacher may, at his own discretion, superannuate at the age of sixty whether incapacitated or not.

The time for which a teacher can claim his salary for sickness is, by section twenty-one, limited to one month

Section twenty-nine provides that the Council of Public Instruction may grant Second as well as First Class Certificates.

There are a few other provisions to which we do not deem it necessary to refer, as they are of minor importance. On the whole, the Bill proposes many changes that may be advantageous. We trust, however, to see the clauses referring to High Schools amended, so as not to hand over to our County Councils, the discharge of duties, which we believe are already under the control of parties far more anxious to secure their success. We regret that some of the changes proposed are delayed till another year. In the meantime, we wait patiently the opportunity of putting into operation measures, which, we feel convinced, will add materially to the success of our educational system.

THROUGH THE FIRE.

A PROFESSIONAL REMINISCENCE, BY WILL. HARRY GANE.

It was a very stormy morning. The air sharp, bracing and cutting, with ever and anon clouds of snow and sleet blinding the very sight. Dark, leaden clouds scudded along the sky, once now and then breaking sufficiently for the sun to peep through for a moment, and only that! It was a Canadian winter morning, with the landscape robed in white, with the trees fairly ablaze when the sun shone, with dancing jewels.

I was in a measure unconscious of the storm as I walked quietly along the well beaten road—the music of my footsteps on the frozen track keeping time to my thoughts. It was the first teaching day of 1871, and I was on my way to my first School. The thoughts that occupied my mind were pleasant ones, for I had chosen my profession from love for it, rather than any secondary consideration.

The house, externally and internally, was a model of perfection and beauty—built of nice white brick, and surrounded by a commodious play-ground. A handsome timepiece on the wall pointed to a quarter to nine o'clock as I entered the room—leaving me just fifteen minutes to reconnoitre.

A splendid fire crackled merrily in the gigantic stove, around which probably fifty children were gathered.

My appearance was apparently expected, and was greeted with universal silence. I will picture myself to you, as I stood before the children that morning. Tall and rather slim, auburn hair and dark blue eyes, pleasant countenance, though not a bit handsome, with firm and rather proud lips. Physically young, but mentally fully prepared for my work.

"Good morning scholars!" I said pleasantly, as I entered.

A hearty "Good morning, Sir!" was the chorus swelled by fifty or sixty voices. I have heard grand music in my time, but none ever so thrilled my heart as did those words from the pupils of my first school. I felt it to be an omen of good!

I laid aside my wrappings, took off my heavy boots, and substituted a comfortable pair of slippers. Coming back to the group at the fire, I chatted pleasantly, relating more than one amusing anecdote, until I had the whole assembly in capital humor.

The shadowy hand on the dial plate pointed to nine, and touching the bell on the cherry stand, I summoned my family to their seats.

I remember as well as yesterday the pas-

sage I read for my opening lesson. It was that song, so full of power and sympathy—the twenty-third Psalm. After prayer, when they were quieted a little, I said; "Children, I am your teacher and your best friend. I want you to love me, and always remember that there can be but one Master in the house, and that will be myself. I will give you but three rules, each so simple and reasonable that every one in the room can understand them. The first is No WHISPERING. The second No IDLING. The third TREAT ME AS YOU WISH ME TO TREAT YOU!"

The first, second and third days passed by very pleasantly; as sweetly as the rippling of some little brook among ferns and daisies. The fourth day we had a newcomer, a clever handsome boy, apparently about fifteen or sixteen years of age. That he was to be the "black sheep" of the flock, I divined in a moment.

I examined him and placed him in the Third form—evidently to his sore displeasure, assigned him his work, and moved away.

I have been blessed with wonderfully sensitive auditory organs, and just as I was moving away I heard my young gentleman whisper:

"You'll see who's boss to-day."

The work of the morning progressed rapidly, as usual. During the whole time I was closely observing my new pupil, though he was totally ignorant of it. My observation showed me that he had not once referred to his lesson.

"Third Class, attention! Stand! Forward!" Every one came forward quietly and quickly.

"James Howard, this is your class."

I spoke very pleasantly. He did not appear to have heard me.

"James Howard!" A little sharper.

"What!"

"This is your class!"

"I'm in the fourth form!"

"I think fit to differ with you. Come here this moment!"

He came forward unwillingly and defiantly.

"Do you know *I* am Master here, James?"

"They *say* you are!" and he looked around and smiled at the fourth form boys. To reason with him was useless, and I knew that my moment of trial had come, so I stepped to my private drawer, and took out the instrument of punishment. It was a common riding whip.

"Please lay off your coat." The smile never left my face, and my voice never lost its usual tone. Had I lost either I had lost my victory.

"I won't do it!"

I struck him beside the head with the palm of my hand, not at all severely, but just hard enough to tumble him over. When he got up, I asked him to step into the ante room, which he did without any hesitation or bravo. What passed between us there none but ourselves and God ever knew, but when we came out, a new and brighter era was before him, and I was master of my school.

* * * * * *

Winter, stern old winter has passed away. Spring, too, with violets and robins, has followed in his wake. Summer is just disappearing from the western hills; and the beautiful golden and mellow Indian Summer is with us. The seared and yellow leaves are raining down on the highways and the meadows.

No storms have ever since interrupted our joyous school life. Every day I feel that a new link is being added to the golden chain of love which binds us so closely together.

James Howard has proved himself very dear to me—so dear indeed that I miss him greatly since he has been away. I was just beginning to wonder what could possibly cause his absence, when a note was placed

in my hand, informing me of his serious illness, and expressing his great desire to see me.

Of course I accepted the invitation, and after the day's work, took myself to his home.

He held out his thin wasted hand as I came to his bedside. As I held it in mine, I said to him:

"You are very sick, my dear boy."

"Yes, Sir. I am wasting away."

"You are getting along nicely, I hope? I do so much miss being with you!"

I answered his question tenderly as a mother could.

"Teacher, will you forgive me for my cruel treatment of you the first day I came to you?"

"Most freely and fully, James!"

There were tears on his long eyelashes and mine.

I think it was four days after, if my memory serves me, that I stood by his dying couch. The autumn sun was just peeping over the eastern hills. The birds were just warbling their fragments of songs sweet and holy.

"Open the door, please!"

We did so, and the rays of the morning sun stole sweetly into the death chamber. I thought of the chariot of fire, and I believe that a shadowy host of angels came with the sunrays.

"Oh, how lovely. I shall soon be where this glory is lost in oblivion, where the Son of righteousness is, and where God and the angels are!"

He threw his head back on my breast, and with his thin wasted hand clasped in mine, died.

As I looked at him in his coffin, with his fair hair clustering over the white brow, and his eyes closed to all on earth, I thought of our first meeting and thanked God that it resulted as it did.

INGERSOL, Ont.

ILLUSTRATIVE TEACHING.

BY REV. E. SHEPPARD, MAPLETON, ELGIN CO., ONTARIO.

The Teacher that is able to make everything he teaches plain and practical by copious and lucid illustrations, is sure of success. The Teacher that insists upon his pupils learning "by heart" all the definitions and rules of the Text Book, and upon working through all its examples without any illustration or practical application of what is learned, is sure of failure. In fact, the aptitude to illustrate and apply in the work of teaching the young, or the want of it, is the chief difference between a good and a bad Teacher, and a difference too which, unfortunately, is not set forth in the Certificate of Qualification of different classes and grades, granted according to different degrees of scholastic attainments.

He that illustrates the branches he teaches by diagrams, by experiments, by comparisons, by *familiar* and *every-day* practical examples, not only makes the subject clear to the mind, but amuses and interests the scholar, secures his attention, and thus animates him to a willing and ardent study of the things taught, until they are so thoroughly understood that they can be retentively remembered, and easily applied, in after life, to practical uses. How different with the scholar who is left to plod his "weary way," through abstract studies, which he does not understand, in which he takes no interest, and only persevered in for a time through constraint, or from a sense of duty, and, at last, relinquished in disgust.

Among the first things done by an efficient Teacher is to make plain the *object* or *end* of the study which a pupil may be entering upon, and to show, by *illustration*, the evils arising from ignorance of that particular part of learning. By questioning it will often be found that those who have, perhaps, been studying for years, have not the remotest idea of what is the *use* of that which they are acquiring, having the same inutile estimate of it that the old gentleman had of a new silk umbrella which he had purchased and carried with him, putting it under his great coat during a shower of rain to keep it dry!!

The next thing is to make plain to him the different terms and definitions; that they have a use and a meaning; that they are indispensable, and not arbitrary elements of learning, and then, all the way through the study, to elicit his progress by giving him questions that require a *practical use* of what has been learned; for the following injunction has an *educational* as well as a *religious* application:—"But be ye *doers* of the Word and not hearers only, deceiving your own selves. For if any man be a hearer of the Word, and not a *doer*, he is like unto a man beholding his natural face in a glass: for he beholdeth himself and goeth his way and straightway *forgeteth* what manner of man he was. But whoso looketh into the perfect law of liberty and continueth therein, he being *not* a *forgetful* hearer but a *doer of the Word*, this man shall be blessed in his deed."—(James 1–22.)

A few ugly grammatical errors can be made to show even a young child the use of this department of instruction. And before anything from the book is committed to memory, he can be made to understand what a noun is by naming objects then in sight;—what is the meaning of the term adjective, by stating the evident qualities of those objects, and by calling attention to the motion of things and persons moving at that time, that he saw moving yesterday, and that may move to-morrow, &c. &c., illustrate what a verb is, with its moods and tenses. And so on with the other parts of speech; and, in due time, also with the rules. With this beginning, the pupil will enter upon the regular book study with zest and relish, and have light and meaning all the way through.

Many years ago the writer heard a young man, who had been confined to Lindly Murray, express, in sarcastic humor, his astonishment upon hearing the conjugation of a regular verb, not conjugated in the book, declaring that it was a most presumptuous innovation and that "Love," and only love, was conjugated by the grammatically orthodox! This sarcasm has its point still in some systems of teaching.

Upon visiting a school taught by a shrewd Teacher, who had recently entered upon his duties in that section, a large grammar class was called up for examination. In answer to a question about their standing, the Teacher observed, "They say they have been through the book, but *I fear the book has not been through them.*" The dull, unintelligent responses proved not only that the book had not been "*through* them," but that no illustration had enlightened them, and that they were in profound ignorance of the whole subject; and this is probably true of fifty per cent of all that study this branch, in our schools. In teaching Arithmetic, illustration is of the utmost importance. Notwithstanding the great improvement in our Text Books, especially in the addition of many *miscellaneous* questions which require, for solution, a knowledge and application of the preceding rules; yet the intelligent Teacher can add very much to make the rules plain and practical. The simple rules are *interestingly* illustrated by a dozen or so of *apples* or *oranges*. "Carrying" in compound addition, or multiplication, can be explained by a question in L. s, & d, or in dollars and cents, by showing that it is the same as getting the farthings

changed into pence, the pence into shillings and the shillings into pounds. "Borrowing" in compound subtraction, by proving that it is equivalent to *getting change*, for one of the higher denomination to have a sufficient number of that denomination to take away the number indicated in the subtrahend &c. &., *ad infinitum*.

By daily giving questions *not in the Text Book*, of an every-day and *practical* kind, no scholar will ever be placed in the ridiculous position of the poor boy who, upon boasting of his arithmetic attainments in that he had gone *through the book*, was staggered by a question put to him by a person standing by:—"How much will ten pounds and a half of butter come to at sixpence halfpenny a pound?" He stood confused for a moment, and then said, "I cannot do it, sir, *it is not in the Arithmetic*!

An island, peninsula, cape, strait, or lake, made in a water puddle, will fix the ideas upon the mind of the young geographer better than the abstract definitions alone represent, a thousand times.

It is a Teacher's business, either to anticipate or find out the misconceptions of the pupil, and remove them by explanations and illustrations. It is not uncommon for very intelligent and well advanced scholars to be retarded in their studies, for a length of time, by one erroneous thought.

The writer, in giving instruction, many years ago, to a young man of far more than ordinary ability, who was fitting himself for the ministry, was discouraged by seeing him stuck fast in the timbers of "*Pons asinorum*." He worked hard for two or three days to extricate himself, and get over, but in vain; by his mental exertions the sweat oozed from his brow and trickled down his face, until he was exhausted. By questioning, the stumbling block was discovered. He had taken for granted that the *sides of the angle*, and not the degree of the opening was the angle. Two or three minutes of practical illustration would have saved all this waste of time, energy, and moisture, for, the difficulty removed, he travelled along finely.

It may be objected that it would take up too much time to carry out these suggestions; but, it must be borne in mind, that a large class, or the whole school, can receive the benefit of many of the illustrations at once, and the good resulting will be so apparent that the conscientious and faithful Teacher will persevere in thus making his pupils happy and wise.

PARENTAL RESPONSIBILITY AND CO-OPERATION.

BY GEORGE B. ELLIOTT.

The Teacher, by virtue of his office, stands in *loco parentis*, and he must therefore be invested with such power and authority as his station requires. In the discharge of his duties, he must be sustained in the same manner as any other lawfully constituted functionary. His power and authority must embrace all that pertains directly and indirectly to the general welfare of his school, and the moral improvement of his pupils. Like a government officer, he must be amenable to the power by which his appointment is made, rather than to individuals for whom he may practice his duties. He should be an absolute monarch of the school. A person who will not use such authority as this in accordance with principles of justice, and make it wholly subservient to the advancement of his pupils, is not fit for the office of Teacher. If parents and guardians have not implicit confidence in the honesty and integrity of the

person who offers to be an instructor of youth, and if they are not well satisfied with his qualifications, they do wrong in trusting their children to him. These things should be ascertained before he is engaged. It is an act of gross hypocrisy to send children to school, and at the same time to prate about imperfections in the school and lack of qualifications in the Teacher. This will only aggravate the evil if it exists.

Children are generally thoughtless, wayward, and prankish, especially when congregated in a school. Such being their general character, an important qualification of the teacher will be the ability to govern and exert a moral influence. This is quite as important as the ability to impart scientific studies, and to arouse in the pupil an ambition to learn and to become respectable in the world. Schools are composed of a heterogeneous variety of characters.

There will be children from different families in which there are all kinds of home discipline, and some from families in which there is no home discipline at all. This heterogeneous assemblage, the Teacher must reduce to systematic obedience to reasonable and necessary regulations. There, he must be their friend as well as "master." This is the most difficult part of his work, but it is the most glorious. The disposition of parents is as various as that of children. Some will be much interested in the welfare of schools; others will be quite indifferent; and some will be jealous of tyranny in the teacher. There will be those too who have but vague ideas of education and school policy, and they will be so self-confident of right as to condemn everything that is not in accordance with their preconceived notions. Teachers must have wit to conciliate these. And their patience and forbearance will often be tried by those whose family affections are strong and their judgment weak. Love for their children renders them blind to their faults, and they do not allow them to be corrected. Parental love, rightly exercised, will demand the correction of a child's misdemeanors, and the restraint of his evil proclivities; improperly used will be incredulous to his guilt and jealous of tyranny in his discipline, and thus it will give him a start in a career of crime.

That Teachers are sometimes unwise and unreasonable need not be denied. That parents are often more so must also be admitted. Parents should be cautious how they criticize the character and proceedings of a Teacher, for it can seldom be done without impairing his authority and influence. Any disrespect to a Teacher, heard or even suspected by his pupils, will be repeated from one to another. Neutrality in regard to their complaints and cunning peccadilloes, will be construed into encouragement. Promptness in performing his duty, especially enforcing discipline and correcting misdemeanours is often misrepresented and construed into unlawful usurpation. Wayward and freakish youth, knowing that their parents are displeased with their teacher, or even suspicious of it, are thereby made worse. They are made worse too by anything that raises their expectation of redress.

Pupils will cease to respect a Teacher when they know that complaints against him are being harbored. A complaint, or a criticism, however small, if made in the presence of a pupil, or before the school, will incite rebellion and lower the dignity of the school. A Teacher ought to command respect as well as obedience from his pupils, and he must be an example to them worthy of imitation. He should therefore be treated respectfully by all who wish to sustain him in his office. His reputation should be kept pure and unsullied; but this will depend mainly upon himself. If he have foibles and frailties they should be treated with leniency; and it should be remembered that his failings and indiscretions may

be exposed and made the subject of talk in a manner that will render the evil worse, and raise prejudices against schools and the cause of education. His standing and success will be much modified by circumstances over which he may, or may not have control. If he be honest he will depend on true merit, rather than upon craftily conciliating his patrons. How well soever he may be qualified for his business and adapted to it he needs co-operation from his patrons and defence by the school officers or failure is certain.

VISIT THE SCHOOLS.

This Province has done nobly, in the provision it has made for the education of its children. But few now within its limits, need be without the benefits of a school. If there is occasionally a community, where the children are allowed to grow up in ignorance, I think it is the fault of its inhabitants, and not chargeable to the Province. Wherever the people *will* to surround themselves with the blessings of a school, the means of doing so are within their reach.

But how little benefit is received from the great number of schools, compared with what might be realized! How few of those who pay taxes for the support of schools, *know* what kind of teaching they pay for. And how few of the parents, many of whom are ever willing to furnish their children everything needed for their use in school have any positive knowledge of the education their children are receiving, or of the character they are forming. By many, not all however, money is freely spent to furnish books &c., but they have no time to visit the school, and see for themselves what use is made of the means thus placed in the hands of the teacher. Parents, why be so free with your money, and yet so saving of your time? Is that your method of procedure in other matters? Do you furnish your hired men with tools, send them into your fields and your shops to work, six months or a year, and not go near them? Do you employ men to tend your horses and cattle during a winter, and not go to see how they are used? Permit me to answer these questions for you. No. You would certainly attend to these matters personally. There are but few persons to whom you would be willing to entrust such interests, more than a week. But how often do you visit your school? If the thorough culture of your soil, and diligence and care in tending your flocks, are necessary, what shall we say of the work of the teacher who has to cultivate the soil of your children's hearts, and to feed their growing minds with knowledge and virtue? Is it not important that you should know something of the "soul culture" of your children? But how can you know anything about it if you don't visit the school? It will not do to rest on the old plea that "you know all about the school from what the children say." This will not rid you of the responsibility in the matter. Two thirds of those children are incapable of judging of the merits or demerits of the teacher's work. They may "like" the teacher extremely well, simply because he is an easy "clever fellow." But that is no evidence that he will properly cultivate and develop those young minds entrusted to his care. You should know more of his qualifications, than the mere fact that he has the faculty of *pleasing* your children. Has he the ability to *educate* them?

You should know that. But how can you know if you never go near the school? But you are needed there. The teacher needs your earnest co-operation, and the scholars need your encouragement. Shall they have them? or will you let the school hang as a dead weight on the hands of the teacher in consequence of your indifference? Do not say that "you have not time," that "it is too much trouble to fix up." Come without "fixing up." Your children

you at home and walking the street every day just as you are. Why be afraid of them in the school room? You have or should have an interest there, a right to come and go when you please. An apparel that is good enough for one to wear in the common avocations of life, will do to wear to school. Neither the teacher nor children will criticise it. They will be too glad to see you for that. The idea that "Father and mother have been into school" will give them new energy for the great work before them. Go then. Nothing will pay you better.

THE PHILOSOPHY OF RAIN.

EXTRACT FROM A LECTURE ON THE ATMOSPHERE, DELIVERED IN STRATHROY, FEBRUARY 5TH, 1873, BY REV. E. SHEPPARD.

"Air has a capacity for aqueous vapor. Under the influence of even a very low degree of heat, water evaporates. A high temperature causes a rapid vaporization and the rarefaction of the air, loaded with vapor, which rises on account of its relative specific levity; thus by the action of the sun's rays upon the vast expanse of water comprized in oceans, and seas, and lakes, a very large amount of moisture rises to the higher part of the atmosphere. In these elevated regions it still further expands and cools; a deposit of a part of its moisture by a partial condensation of the vapor, causes the formation of a cloud; the same result arises from the meeting and commingling of two currents of saturated air of different temperatures. The clouds thus formed may be first the fleecy *Cirrus*; this soon becomes the mottled Cirro-stratus, finally accumulating into the black Cumulo-cirro-stratus or Nimbus. This is the precious rain cloud. But where shall it let fall its valuable treasures? Should it fall where it mainly received its watery element, no particular good would result unless to the thirsty mariner, whose fresh water supply is deficient. But far away from the margin of these azure reservoirs, are stretched out great plains of cultivated land, uncultivated forests, and vast prairies, scorching in the sun, and covered with withering grass, drooping flowers and fading foliage. The air moves from the sea landward. The cloud flies upon the wings of the wind. It is a richly laden vessel, moving in an ocean of elastic fluid. Its cargo is more valuable than the golden treasures of Ophir. These treasures are freely dispensed to all. No regard is paid to national boundaries. It is carried over dividing chains of mountains and the boundary lines of rivers. The cloud spreads its aqueous wings over the tiny garden of the poor man, and the wide fields and extensive plantations of the rich, and goes with its imbrial blessings for the just and for the unjust. The rain falls. The thirsty earth absorbs it with avidity. The verdure of the field is renewed. The flower raises its drooping head, glowing with fresh beauty and renovated fragrance. Man smiles. The birds sing, and the "little hills rejoice on every side."

FIRST IMPRESSIONS.

"Mother, why can't I go to school?"
Asked a little five-year-old,
When brother and sister were muffling up,
To brave the winter's cold.
"Wait till the Summer comes, my dear,"
Kindly the mother said;
"The snow is deep and the road too long
For your little feet to tread.

But when the Spring sun mounted high,
Making the flowers gay,
This little questioner would tease
To go to school each day.
On a bright May Morning, he had his wish,
And decked with motherly pride,
He toddled along to the country school,
By his gentle sister's side.

And Oh! such sights little wonder-eyes saw
On the road to school that day!
Such queer, strange sights, he nearly forgot
The weariness of the way.
But a sense of awe steals over his heart,
When he enters the school-room door,
And bashfully walks by his sister's side,
His eyes closely scanning the floor.

The Teacher's voice has a sound of dread,
As he issues his stern commands,
In a fretful, sharp, reproving tone,
From the lofty place where he stands.
Class after class is called and dismissed
In the same commanding way:
The Teacher, a king exalted high,
The children, poor slaves to obey.

Our little hero with dangling feet
Sits wearily longing for night;
The dream is vanished and broken the spell,
Which once was so pleasant and bright.
No word of sympathy welcomes him there,
No smile greets his wishful eye;
A desert drear is that school to him,
Except for a sister nigh.

Not soon will he plead to come again;
Not soon will his dread be forgot;
And sad recollections, many a day,
Will cluster about the spot.
Oh Teachers! why thus forget to be kind
To the expectant, trusting one,
Whose feet, instruction's pleasant path,
Are restlessly waiting to run?

PICTON, March, 1873. G. D. P

HINTS ON TEACHING READING.

BY A. F. BUTLER B. S., INSPECTOR, COUNTY OF ELGIN.

(*Continued from March Number.*)

The second difficulty which meets the teacher of reading, is the tendency on the part of the pupils to read always in one tone, and with the same degree of force, pitch, and time, whatever be the character of the composition. Of course this is not effective reading—it is not even good reading, but only an *utterance of stinted words*, with the same monotony of sound, and but little more intelligence than that which greets the ear from the beating of a Chinese gong, or a dilapidated tin pan. In seeking for a remedy for this, we cannot do better than quote an expression from the pen of one of our High School Inspectors, in the last Annual Report of the Chief Superintendent. "The way is long by precept, but short by example." Some precepts, however, must needs be given for the benefit of example, and here it is. First impress (you know how to impress, if you are a good teacher) upon the class the measureless superiority of graceful effective expression, above mere mechanical utterance—then the fact that the human voice is susceptible of a high degree of improvement—that its weak and piping, or rough and unmusical tones may be, yea, *must be* substituted for others more fitting as mediums of communication for those "thoughts that breathe, and words that burn."

Monotony has no charms. Nature shuns it always. The desert has its spots of living green, the prairie its varied undulations, and old ocean has besides its placid calmness, its stormy billows, and its "joyous rush up the sounding shore;" and the human voice, with but one measured key, will, when thrown upon its own limited resources, wait long for listeners, while listeners wait with delight upon the voice whose rich modulations charm the ear. Those variations of the voice termed undulation, must, of course. all depend upon and act in accordance with the sense and the particular shade of thought to be expressed, yet for a theoretical guide, let us classify them under the heads of Tone, Pitch, Force, Time, and Emphasis. Tones may be classified as Pure tone, the proper expression for ordinary or narrative composition, and by all means it should be pure, clear and sufficiently earnest; Oratund, or the full, round deep tone appropriate for expressions of sublimity, awe; wonder, and the like, of which Byron's "Address to the Ocean" and Mrs. Sigourney's "Ode to Niagara" are examples; the Guttural or grating tone for expressions of hatred and contempt, as when Shylock speaks of Antonio, with such loathing, that the organs seem barely to allow the escape, between the clenched teeth, of the strongly emphatic but husky words, "How like a fawning publican he looks. I hate him for he is a Christian, and curses on me and all my tribe if I forgive him"; and lastly the Aspirate or tone of whispered terror. It is safe to say that even fair reading comes not without a mastery of the first of these tones, and at least an acquaintance with the second. Pitch in reading may be High, Middle and Low. For an example of the first let us remember William Tell escaping from an Austrian prison to his own native mountains, and his exultant soul, soaring like the eagle upward on the high and joyous words, "Ye crags and peaks, I'm with you once

again! I hold to you the hands you first beheld to show they still are free. Methinks a spirit in your echoes answers me and bids your tenant *welcome* to his home again."

The Middle Pitch is the proper pitch for the expression of ordinary thought and composition, and with the pure tone and medium time, constitutes the very day dress of words. The Low Pitch fittingly becomes a composition like the "Funeral of Napoleon" but should, like the others, rarely be kept up throughout one reading or recitation. A similar division may be made of Time, viz. Quick, Moderate, and Slow. These terms explain themselves, and the ingenious teacher will have no difficulty in exhibiting to the class the incongruity and inappropriateness of reading these two extracts with the same rate of utterance :

"Quick! Man the boat. Away they sprang,
The stranger ship to aid,
And loud their hailing voices rang,
And rapid speed they made."

And, "My heart is awed within me as I think of the great miracle that is continually going on in silence round me."

Do not say that there is not time for both theory and practice with the reading classes, for this presupposes the necessity of following the beaten path, an idea which with progressive teachers, is now numbered among the by-gones. Time is certainly given for the accomplishment of the greatest good for the greatest number, and after pupils become able to read without much stumbling, the *art of expression* must be sought for, or the greatest good not found. A little reading, with instruction upon the *matter* and the *manner*, confers more real culture than much without this. But, let us not forget that rules and theories are but guides, and if used mechanically, but blind guides, and all that can be written will form at most but the skeleton; the living form must be moulded and the living soul supplied by the skilful teacher and the faithful scholar.

But to implant in the minds of a class of students, correct views concerning the management of the voice that it may readily and easily produce all the varied intonations required by the sense of the compositions, is really the instructor's chief concern. Emphasis, Accent, musical tones, correct expression, et cetera, are all magnificent fruit, but on the topmost branch, and out of the reach of the pupil, until he has obtained *control* of the *voice*. This is the ladder on which he may surely mount. Flexibility and power of voice must be sought for. The shallow mouth tones must give place to more resonant chest tones. How is this to be accomplished, do you say? On the same principle that the gymnast strengthens and disciplines the muscles of the body and limbs. Surely the ability to leap twelve feet at a time will not be attained by striving to leap precisely six at each time, nor will flexibility of tone ever be reached until the ice be broken, and the voice allowed to try its compass in many keys.

There are many useful exercises coming under the head of vocal gymnastics, a full explanation of which need not be given—hints to the ingenious teacher are quite sufficient, as he will in this as in all other subjects, adapt and modify his methods to suit the wants and needs of the class. For encouragement in seeking our object, let us remember that the tones of the voice are formed by the vibration of air within and against cartilage, controlled by the action of muscles; the constant dropping of water will make an impression even upon solid rock; air is as much a force as water; muscles and cartilages are more impressible and yielding than rock, and therefore constant practice must give these organs more elasticity, and bring them more completely under control of the will. One or two exercises may be mentioned which experience

has proved to be advantageous. Reading a paragraph or stanza first in a very high key, then a degree or octave lower, and so on downward to the lowest key or pitch at which the voice is capable of articulating clearly and distinctly. Second; for five or ten minutes continuously, some passage or poem remarkable for smoothness of style, in a very high key, and then, after an interval of rest, reading the same upon the natural or conversational key. Third; reading for some length of time, with a view to be heard at the farthest extremity of a large room, in the lowest possible tone of voice. Power in the natural pitch is, of course, a great desideratum, but experience, sternest of all monitors, has proved that this never comes by reading in that alone, and that the voice must be master of a varied range of action, that it may give a good account of itself in its every day work.

Time may not be found during school hours for a sufficient amount of class practice, but if a desire only for improvement be formed, the work is half accomplished. If, added to this, the pupils can be persuaded to spend a half hour at home each day, the teacher should smile and take courage. Even the pupils in the junior classes are greatly benefited by this home reading exercise, if not in voice culture, at least in this essential point, *ths eye becomes acquainted with printed words*, and that too with much less trouble to the teacher, than when the pupil depends alone on his turn in the class, to grope through his allotted portion. Granted that he miscalls a few words as he reads alone, he will certainly make greater progress, than under the straight-laced method of keeping him in such perpetual fear lest he should mispronounce, that he cannot do justice to himself. Hopefulness and zeal, judgment and patience, should in all this work sustain the teacher, because it is as certain as that effect follows cause, that the voice, by vocal gymnastics, may be so improved as to possess strength, flexibility, musical softness and thrilling earnestness; indeed all those qualities, which enable it, under the guidance of the intellect to speak with a "power that awakens, and a grace that charms." Next and lastly, we will speak of Emphasis.

COUNTY AND TOWNSHIP COMPETITIVE EXAMINATIONS.

The history of many eminent men in the educational world seems to prove that the eminence attained was largely due to some one circumstance by which *desire*, coupled with deep *resolve*, was stirred into *active* existence, never to die or slumber while thought and power of action remained. How much the world owes to a few individuals whose life-labours have fairly revolutionized social life by leading to an almost infinite multiplication of the comforts and conveniences known even by those who prided themselves perhaps on the superior advantages they enjoyed as compared with those their fathers knew! And may there not be, even in our midst, some young Stevenson, Watt, or Newton, could the latent power of his mind be stimulated to a full development? That there *may* be, it is at least not unreasonable to hope. Now, if there were established throughout the country a system of periodical competitive examinations of a number of the best pupils from the different schools of each county, or even of each township, and if really valuable prizes were offered to those, and to those only, who eminently distinguished themselves either in general proficiency, or in one or more specified subjects, would not the winning of such a

prize be very *likely* to act in some case as the one first impulse, seemingly necessary sometimes, to give motion to a giant mind, that otherwise might have remained, it may be, *sluggishly* inactive for ever? However this may be, it is almost certain that many a mind of *native* power would be developed into an active force, sooner than without this *palpable* encouragement; while a greater number still would be led to make efforts far from being unproductive of lasting benefit, both to the individual himself, and to those amongst whom his life is passed.

That what is here written is *reasonable* many, no doubt, will readily admit; though its *feasibility* they do not so readily admit. Granted that there are *difficulties* in the way, yet difficulties are not necessarily *impossibilities*; and if the object to be attained is an important one, there is strong reason to seek persistently for a solution to the question, how shall we establish such a system as the one here proposed? The following outline of a plan is suggested as a basis for discussion:

Let the Government of Ontario set apart annually a certain sum for each county, according to its population, this sum to be supplemented by the county, in the same manner as is now done in the matter of High School grants, or of the salaries of County Inspectors; the examinations to be *uniform* throughout the Province, and the examiners appointed in the same manner as those composing our present County Boards of Examiners. Such a plan seems both *reasonable* and *feasible*. At all events, let us thoroughly discuss the subject, and whatever be the result, we shall at least elicit food for thought, even if that should be the beginning and end of the whole matter.

EXCELSIOR.

SELECTIONS.

THE NECESSITY OF A KNOWLEDGE OF MIND TO THE TEACHER.

Instruction implies three things—a mind to be instructed, knowledge to be used in instruction, and the method in which instruction is to be given. The first and second are respectively the subjective and objective elements of the problem; they are united in the educational process by the third element. Method is thus the link which unites knowledge and mind in the process of education. It follows, therefore, that, in order to instruct with skill and success, a teacher needs to understand three things: first, the nature of the mind to be instructed; second, the nature of the knowledge used in instruction; and, third, the nature of the process by which knowledge may be imparted to the mind. Methods of Instruction, regarded as a science, must consequently embrace three grand divisions, as follows: 1. Nature of Mind. 2. Nature of Knowledge. 3. Nature of Instruction.

If this analysis is correct—and I do not see that it can be questioned—a course of professional instruction in a normal school, or a text-book for the aid of young teachers, ought to discuss and explain these three subjects. In this paper I present a few thoughts to the teacher on the importance of a knowledge of the first part of the subject; namely, a knowledge of the nature of the mind. The importance of such knowledge is so evident, that it would seem unnecessary to urge it; but the fact is, that teachers are generally deficient in this respect, and that educational journals seldom direct attention to it. A teacher in our common schools, who has anything like an adequate idea of the nature of the human mind, is a rare exception; and an article in

one of our public journals, urging young teachers to prepare themselves in this respect, is quite as rare. The duty of cultivating the mind is frequently and forcibly enjoined; but how can a teacher be expected to give culture to that of which he is ignorant? I will state several reasons for the necessity of this preparation on the part of the teacher.

I. The importance to the teacher of a knowledge of the nature of mind, seems so evident as to be almost axiomatic. Mind is the object to be instructed; it is that upon which the teacher operates; that which he is to mould and fashion, and shape and develop. How can this be done without a knowledge of its nature, its capacities, and laws of activity? In every other department of labor, a man would be but a blunderer if he did not understand the nature of the object upon which he wrought. A farmer must understand his soil—that his low-lands are adapted to grass and his uplands to grain—or he would make sorry work in agriculture. Selecting his fields with a knowledge of soil, the skillful farmer sows his seed and plants his corn, and his intelligent labor is rewarded with the waving grain-fields of Summer and the golden ears of Autumn. There is a spiritual agriculture as well as a physical one; culture of the mind is not unlike the cultivation of the soil. The seed of truth in the soil of the human intellect, if adapted to its capacity and properly planted, will bring forth a ripened harvest of knowledge and spiritual power. If a knowledge of the nature of soil is necessary to the tiller of land, who shall say that it is not of equal necessity for the teacher to understand the nature of the intellectual field which it is his duty to cultivate?

The teacher has also been compared to a musician and the human soul to an instrument on which he is to play,—a curious instrument of many strings and delicate keys which require the skill of a master to touch aright. What would be thought of an orchestra leader who would employ a person to play upon an instrument, who is ignorant of its nature, even though he were entirely familiar with the music to be performed? What ought we to think of selecting a teacher to play upon the delicate instrument of the human soul, who is ignorant of its varied capacities and the laws of their activity? When Guildenstern says he can not play upon the pipe, Hamlet replies: "Why, look you now, how unworthy a thing you make of me! You would play upon me; you would seem to know my stops; you would sound me from my lowest note to the top of my compass: and there's much music, excellent music in this little organ; yet can not you make it speak. 'S blood! do you think I am easier to be played upon than a pipe?" Surely if it requires familiarity with the violin or harp to bring from them the tones of melody and harmony which lie sleeping in their strings, it must require some knowledge of the human soul to develop the beauty and power which slumber in this "harp of a thousand strings."

II. The teacher should understand the nature of mind, in order to cultivate and develop its powers. The object of education is twofold, culture and knowledge. These two objects are not identical. A man may have much knowledge and little culture; he may be full of learning and not know how to use it. I have known men top-heavy with learning, who went reeling through the world, useless to themselves and society. I have known persons with comparatively little learning who were efficient in the application of it, because back of it they had a well trained mind. Many teachers seem to think that the acquisition of knowledge is the main object of instruction and study. Than this no error can be more radical and pernicious. Knowledge is valuable to us, but culture is more valuable than knowledge. Mental power is worth more than mental acquisition. What we bring out of the mind is worth more than what we put into it. The ability to acquire and use knowledge is a thousand-fold more valuable than the knowledge itself. Willis expresses the truth in beautiful imagery when he says, "The mind forges from knowledge an archangel's spear, and, with the spirits that compel the world, conflicts for empire." Pupils forget a large part of what they learn at school and college, but the mental habits they form go with them through life. It is the teacher's duty, therefore, to cultivate the mind as well as to impart knowledge to it. This culture is given in part in the act of instruction. Knowledge properly taught gives culture to the various powers which are made active in the acquisition, and becomes an instrument by which the mind is

enabled to originate and acquire other knowledge. An acquaintance with the mind is therefore necessary, that this instruction may accomplish one of the principal objects contemplated.

III. The teacher should study the mind that he may know the order of development of its faculties, and understand the educational needs of the pupil. The mind is a unit with a variety of powers. All these powers are operative at every period of life, but some of them are more vigorous at one period than at another. In childhood the perceptive powers are especialy, active, and the memory ready and retentive. The child almost lives in its sense. Its eyes see everything; its ears catch every whisper; its busy fingers tear down and build up all day long. Its memory holds what its senses gather, with a tenacity truly wonderful. The activity of the understanding also, in the investigation of causes, is so active as to become a source of annoyance to parents and teachers in their fruitless endeavors to answer its ever recurring questions—"Why?" and "what's the reason?" Later in life these faculties lose somewhat of their energy, and other powers become more active. The child rises from its sense-life into a sphere of abstract thought; it begins to compare, to generalize, to reason. This difference of mental activity at different periods has an important educational significance. How can the young teacher who is ignorant of this fact suit his instruction to the wants of pupils? Even the old teachers, some of whom were teachers of many years' experience, did not comprehend this matter, as some of us who were tortured by being made to sit on the high slab benches with our feet dangling in the air, and nothing to do except to be still and keep our hands out of mischief, the hardest task of all, very distinctly remember.

Understanding the educational wants of a pupil, the teacher will be able to select such studies as these wants indicate. Different branches of study call into activity and give culture to different faculties. Perception demands concrete things, to see and feel and handle. Memory requires the facts of nature and history, to store them away for future use. The imagination delights in beauty of form, color, and tone; in spring flowers and singing birds; in starry nights and leaping cataracts; in flowing measures and poetical imagery. The understanding asks for the causes of facts and phenomena and the laws which govern them. The reason stretches out beyond the known and finite to grasp the unknown and infinite. These powers require different branches of study or different parts of the same branch; and a teacher who understands these facts can select the study adapted to the faculty, can give the mental food needed. Give teachers such a preparation for their work, and there will be less time and patience wasted in our common schools in trying to make children understand long reasoning processes in arithmetic, when they ought to be drilled in the mechanical processes; and in cramming them with the metaphysical abstractions of grammar, when they ought to be acquiring skill in concrete speech.

IV. The teacher should understand the nature of the mind in order to impart instruction properly. The principles and methods of instruction are drawn both from the nature of the mind and the nature of knowledge. To understand the branches to be taught, therefore, is not sufficient, in order to understand the methods of teaching. Moreover, though it is true that these principles and methods have a dual origin, as stated, their primary source is the mind to be instructed rather than the matter to be imparted. We begin the investigation in the nature of the mind rather than in the nature of knowledge. Here, then, is a still stronger reason for this qualification of the teacher. He should do his work in the light of a knowledge of mental science, if he would do his work most successfully. He must know the nature of attention and how to secure it, if he would make the deepest impression upon the mind of the young learner. He must understand the activity of the perceptive powers, and the relation of the products of the senses to the memory, if he would succeed best in teaching natural science. The absurdity of teaching botany in the winter, or of teaching physiology without bringing in from field or farm-house the bones, muscles, tendons, and eyes of animals, would never have been attempted by one who had a practical knowledge of the operation of the perceptive powers and their relation to the facts of natural science. A teacher must understand something of the laws of memory and recollection, in order to attain the

best results in teaching history, geography, etc. Some of the long, involved, unnatural, so-called "logical" forms in mental arithmetic would never have been used to confuse the mind and force it out of the simple and natural pathway of thought, if the nature of judgment and reasoning, as operations in the mind of a little child, had been fully understood The "murder of the innocents" with English grammar will never end, while instructors of youth are so profoundly and, I am almost tempted to say, wickedly ignorant of the simplest facts concerning the nature and order of development of the powers of expression and abstract thought. "That which causes us to think," says Lavater, "is dear to us." Is it any wonder that that which represses and smothers thought in the mind of the child, should be detestable to him, and often cause him to hate both his study and his teacher?— *Edward Brooks in National Teacher.*

THE FIRST YEAR OF SCHOOL.

In a previous article under this title, it was stated in substance that the work of the first year of school is a preparatory one: that of putting children in the way of observing carefully and methodically; of setting in order the knowledge they have before entering school; of leading them to tell what they know in good language, easily, naturally and gracefully; as well as to teach the rudiments of reading, spelling, and writing. They are to learn to submit to restraint; to act in harmony with others; and to be obedient to authority.

How is this to be done? The especial methods of teaching reading and spelling it is not in my present purpose to discuss. I propose in this paper to speak particularly of the general school work which has a special bearing upon the development of the character of the child.

One of the most profitable exercises for the first year of school is the reading of stories by the teacher. They may be short stories, finished at a single reading, or longer ones divided into several parts. But let it be distinctly understood that the exercise is not to be merely for amusement. The teacher is to make the story real by question and comment; the children are to repeat it in parts until familiar with it, and finally to tell the whole of it without help. This will lead many of them to relate incidents of their own experience. If any one doubt it, let her read a story about a remarkable dog to a room-full of children, and then have it so repeated until they apprehend it fully, and see if fifty per cent. of the class have not anecdotes as remarkable to tell of their dogs.

Let us see what such an exercise might be made to accomplish. One thing that it may be made to do is to fix the attention. A man who has not learned to put his whole mind upon the thing in hand is not in the way to make the most of his time or his abilities. Children upon entering school have almost no power of concentration. This, like every other ability, is to be developed by exercise only. So the teacher who allows a school exercise to go forward without the attention of the class is making the faithful performance of school work more and more impossible. What was at first only inability to command the attention comes to be a habit of inattention; and habits strengthen with every indulgence. So every school exercise should be planned in matter and length so as to hold the class to its end. This one does this as almost nothing else can. It awakens, and leads to the desire to express, the ideas the child already has, and helps him to language to express these ideas. It gives him confidence in the presence of his classmates and teacher. It encourages him to learn to read that he may find the contents of books for himself. All this, besides any direct lesson the teacher may draw from the story and impress upon the school.

It may be urged that not all primary teachers know what stories are perfectly

adapted to primary classes, and not all know how to read them well that can find them. If this were true, it does not invalidate the practice. It would not do so if every teacher should fail. But every earnest teacher, who is studying to do the best thing she can, will succeed in this if she undertakes it.

Drawing is also a profitable exercise for this year: not on account of what the children learn of the art, for that is very little, but for the discipline it gives. It requires careful attention. It demands exactness in observation and execution. Carelessness and indolence are discoverable at once, and can be shown to be carelessness and indolence. Again, if children are taught inventive or constructive drawing, judgment and taste are developed in making new combinations of lines and angles, and in their suitable arrangement.

Writing puts pupils in possession of a valuable aid, in getting lessons, or, rather, in keeping things learned. It is of great value in teaching spelling, which assists in learning to read. It also serves an excellent purpose in the Object Lessons.

Gymnastics are invaluable. They are not only a rest, but they are a wonderful means of culture. They cultivate a love of order, and inspire with self-respect. Is it Lord Macaulay who says, "If you can do but one thing for a boy, let that be to make him graceful in movement"? Put a boy in full possession of physical powers, and you have done much toward making a man of him.

And last, though not least, the work of the first year is to be accomplished by Object Lessons. I am disposed to make a broad way for Objective Teaching; it should be first, last, and intermediate. There are very few students who get beyond its necessity. This is forcibly illustrated by Mr. Tyndall's lectures in this country. If he, a man who knows his subject from centre to circumference, talking to the savants who have been listening to him, needs lamps and screens and blackboards, iron-filings, magnets and plates, what does not the teacher of little children require to keep them interested and attentive? One would think that he, if any body, could afford to talk in learned abstractions to such learned and thoughtful listeners. But he does not do it, because he is the scientist Tyndall, and knows better.

But in the early stages of school-life, there is even more than this demanded. The range of the ordinary lessons is narrow, and almost nowhere touches the child's out-of-school life. But the two lives —in and out of school—should come in contact and influence each other. Both will be the better for it. Reading in its elements must be largely mechanical—an exercise of memory. This drudgery must be done before arriving at its delights. There is little pleasure connected with any of this work during the first year. It is not till the mechanical part of reading costs no effort that it becomes positive pleasure to read. Writing and drawing afford no scope for using the past experience of a child. One of the secrets of a good Object Lesson is to make it as suggestive as possible of all the child already knows that stands related to it, and to work through it to broader generalizations and new terms. The comparative process is the thought process, and is all of it. In these lessons such a direct appeal is made to the faculty of comparison that the intellect is aroused to its best work. The Object Lesson does for the child what the syllogism does for the logician. It is true that all is stated in the conclusion is predicated in the major premise. Nevertheless, the conclusion is a new truth, because the major term was not known in all its comprehension. So the child knows that this is cotton and that is bread; but he does not know, until you assist him in a process of analysis, how much the terms cotton and bread mean, neither has he thought to compare cotton and wool, or bread and sponge, to note their resemblances and differences.

An Object Lesson, to do the work that should be done by it, is not to be an isolated performance. It must be a link in a chain—*it must fasten to something at both ends.* It may be one of a series of oral lessons, or may be given to introduce or illustrate something taught in the books. It may always be profitably made the basis of a composition exercise. Teachers have been wont to attempt to gather figs of thistles in this exercise, and have failed as signally of a harvest as would one in the literal quest of fruit from such unpromising source. Comparatively little can be done in written work the first year, and yet a

good beginning can be made. Children can at first write only the name of the object upon which the lesson is based; then several leading words, names of qualities or uses, may be written; and after, short sentences. Before the end of the year several sentences will be written,—first copied from the board, then written independently. I would have these lessons, from the beginning, followed by a written exercise, and as soon as possible let it be a synopsis of the entire lesson.

If these lessons are given methodically, we sometimes undervalue the power of habit in education. The *how* is as important as the *what*; nay, often much more so. A boy with his powers all at loose ends and his knowledge a hap-hazard acccumulation of facts is as helpless to produce effects by either as the driver of a team untrained to pull together at command. When the Object Lesson is made the centre around which all the knowledge of a given kind is grouped and properly arranged, the pupils are put in a fair way to add to it, and that to purpose.

I am aware that Object Lessons are said to do just the thing I deprecate. They are said to weaken the mind by bringing to it what it should go out and get for itself. They are said to stultify by launching into the minds of pupils masses of facts that, having cost no effort, are never moored, and so are easily swept out again by the successive lessons. Nothing worked for, nothing digested, nothing assimilated, and so, weakness the conclusion of the unprofitable process. Better keep to the multiplication-table. True. If bread by unskillful making is rendered indigestible and innutritious, it is harmful, and better be let alone. Keep to vegetables. But who denies the possibilities of bread because sometimes made badly? The character of mind being known, the science of education is not an inductive science. The basis truths of education are established deductively. And because some teachers do not know the possibilities of their work, or have not skill to compass them, shall psychology and logic be held to be failures to shield them from the imputation of incompetency?

The first year's school work is a great one in the child's life. Beginnings are always great,—not in themselves, possibly, but in their causual relations. It is often undervalued and the worker disesteemed, because, in the very nature of things she can not show on paper, in an examination, its results. The work of these teachers is to stake out lots, to clear away obstructions, to dig cellars and to build foundation-walls. They get scarcely to the surface with their work, so that the world sees them, before others take it up and build grandly in the sight of men, upon that on which they have bestowed no labor. But, if the buildings stand firmly, it is because the first workers wrought well. But let them take this word of warning. If they begin not having studied the plan, and so work ignorantly and unprofitably, because their work is so nearly out of sight, they must claim no honor in the doing of it.—*D. A. Lathrop in Illinois Teacher.*

EDUCATIONAL INTELLIGENCE.

CANADA.

—The next meeting of the Teacher's Association No. 1 Middlesex will be held in Strathroy, on the first Saturday in June.

—The quarterly meeting of the County of Perth Teachers' Association was held at Stratford, May 3rd. We hope to give a synopsis of proceedings in our June No.

—Mr. Harrington, Teacher No. 4, Fullarton, was recently presented by his pupils with an album containing their photographs, accompanied with an address, as a mark of their esteem and affection.

—We have just received the Second Report of W. Carlyle Esq., Inspector of Public Schools, County of Oxford. It is beyond comparison the most lengthy and elaborate document of the kind that has yet reached us, and must have cost Mr. Carlyle a great deal of labor. Besides the General report, he gives a detailed statement of every school and section in the County, including assessable property, No. of children, amount raised for school purposes, condition of school house, apparatus, state, management, scholarship, and efficiency of each school &c., &c. While the information thus given reflects much credit on Mr. Carlyle's painstaking industry, the propriety of publishishing the *status* of each individual school and teacher, will be considered by many as questionable. Many of the schools are in a state of very high efficiency, and many others would be much better, were it not for deficient accommodation, irregular attendance &c. The schools are classified as follows: excellent 1 ; good 22 ; fair 40 ; poor 28 ; very poor 17 ; uncertain 1 ; total 109.

LANARK TEACHERS' ASSOCIATION.—The third Quarterly Meeting of the Teachers' Association of the County of Lanark was held in Carleton Place, on Monday, 14th April. The attendance was unusually large, about 60 teachers being present, which fact shows that the interest in the undertaking continues to increase. John McCarter read a paper on "The Status of Teachers." Messrs. Thomson, McNab, and Slack conducted the discussion that ensued. Rev. F. F. McNab then spoke on "Object Lessons." Messrs. Slack, McCarter and Moag also made some remarks on the same subject. A paper of high literary merit was then read by H. L. Slack, Esq., on "The Language We Speak," showing the profit to be derived from, and interest connected with tracing words through their migratory processes to their different original sources. A motion was then passed authorizing the President to correspond with the various Reeves, with a view of asking the Township Councils for grants to furnish prizes for Competitive Examinations for the rural schools. In the evening the Association gave its promised Entertainment, the success of which more than realized the most sanguine expectations. The attendance was exceedingly large. The Rev. John May, County Inspector, Carleton, and Rev. Mr. Borthwick, Inspector of Schools, Ottawa, both lent their presence and gave addresses of a very interesting and instructive character. There is scarcely room to particularize where all were so good ; but the dialogue rendered by Misses May, Hogg, Lafferty and Campbell, the different parts of which were sustained in a manner that could not be excelled, deserves special mention, inasmuch that it was pronounced by all as the piece of the evening. At the conclusion of the proceedings, R. Bell, Esq., and Rev. Mr. Grout moved a vote of thanks to the Teachers' Association for the excellent entertainment given to the public, accompanying the same with warm congratulations on the successful result of their enterprise, also assuring them that if a contribution list in aid of the funds of the Professional Library were presented to the public it would meet with a liberal response.

SCHOOL EXAMINATIONS.—No. 10, McGillivray, April 4th, Mr. A. Hutson Teacher. There was a large attendance, and a very successful examination, followed by appropriate speeches.——No. 8, Blanshard, April 4th, Mr. Moir Teacher. The school is in a highly prosperous condition being one of the best in the County, and many of the pupils well advanced. The examination was every way satisfactory.—No. 6, Clinton, April 9th, Mr. S. S. Nash Teacher. Notwithstanding unfavorable weather the attendance was large, and the pupils acquitted themselves very creditably.——Union No. 13, Mornington, April 9th, Mr. A. Large Teacher. The pupils showed a thorough knowledge of the subjects taught, and in speeches afterwards the teacher was highly eulogised.——West Nissouri, April 8th, Mr. Wm. Cassidy, Teacher. The examination showed that Mr. Cassidy has been working the school up to a state of high efficiency.—No. 5, London, March 28th, Mr. James Harrison Teacher. There was no special preparation, a feature highly to be commended, nevertheless the examination was very satisfactory.—Union, No. 6, Dunwich, and 22, Southwold, April 4th, P. Mills Teacher. A rigid examination turned out highly to the credit of the Teacher.——No. 6, Metcalfe, April 8th, Miss Lizzie Stuart, Teacher. The examination reflected the greatest credit on the teacher. Prizes were given for the first time in the section. A grand musical and literary entertainment in the evening passed off very successfully.——No 1, London, April 4th, Miss Janet Smith Teacher. There was a large attendance, and the Inspector Mr. Groat was present. Prizes were distributed, and with a good school house, a good bell in its cupola, and a good teacher the school is doing finely.——Mount Pleasant School, April 2nd, Miss Walker, Teacher. Attendance large; examination very successfull ——No. 6, Blanchard, Mr. M. Long Teacher. The examination was a splendid success.——No. 3, Fullarton, April 8th, Mr. Hamilton and Miss Oliver, Teachers. The examination was every way successful and creditable.

WENTWORTH TEACHERS' ASSOCIATION.—This Association met as per notice in the Central School buildings, Hamilton, on Monday, 14th April, at 2 o'clock p. m. After the reading and adoption of the minutes of previous meeting, the following officers were appointed for the current year: President, J. H. Smith, Esq., Inspector; 1st Vice., A. Macallum, Esq., Hamilton; 2nd Vice., J. A. Leitch, Esq., Ancaster; Secretary, G. W. Johnson, Esq., Stoney Creek; Treasurer, Miss S. Bennetto; Executive Council, Messrs. R. McQueen, J. Bremner, J. F. Taylor, R. Bell and William Couts; Then followed a discussion on "School Registers" and "Weekly Reports." A conversazione was held in the evening, at which there was a large gathering. Next day after a long discussion it was decided that perfect and imperfect recitations, late, absent, good and bad conduct marks be taken into account in fixing the position in the class. The discussion of the subject of a scheme for weekly reports was deferred till the next meeting of the Association. At this time, Mr. Macallum gave an instructive lecture on the properties of the atmosphere, illustrating as he proceeded, by means of apparatus. Some of the experiments, carrying TRUTH on the VERY face of them, will furnish food for after reflection to all present. He illustrated a number of methods of proving the weight of volume of different ingredients, compressibility &c. of the air; collecting oxygen was also gone into; combustibility and life-sustaining powers of oxygen were also established beyond a doubt. Some of the experiments were quite simple, and within the compass of most teachers, and as he stated, the most simple experiments are generally the most important.

OXFORD TEACHERS' ASSOCIATION.—The Annual meeting was held in the School House, Ingersoll, April 9th and 10th. About 50 teachers were present, of whom nearly the half were ladies, and a large proportion of both sexes, members of the Association. J. C. Glashan, Esq., Inspector, Middlesex; Dr. Clark, and Rev. W. H. Landon, Princeton; Dr. Campbell, London; T. M. McIntyre, Esq., M. A., and other friends of education were present during the greater part of the session and took a lively interest in the discussions. The Roll having been called by the Secretary, J. S. Deacon, Esq., the work of the Convention was opened by the reading of an excellent, practical, earnest and reflective Essay by the Rev. W. H. Landon on "The Relation of the Teacher to his Pupils." Mr.

E. M. Sipprell, Blenheim, illustrated his method of teaching the simple rules of arithmetic, which he did in a very concise, plain and intellectual way. Mrs. Grinton read a very well composed and suggestive Essay on the "Benefits of Reading," which received the thanks of the association. Mr. Bucknell next gave his ideas on "Keeping Order," in an able essay. Dr. Clark next gave an off-hand, but exceedingly clever and philosophical address on the subject of "Relation of Conscience to Education." Mr. Gane read his Essay on "Composition in School," which it is needless to say was in itself a fine specimen to be illustrated, read in a modest and unassuming manner, and with no attempt at oratory. Dr. Campbell, London, next illustrated in a very clear and instructive style his method of teaching "Object Lessons." Mr. Morrison, Zora, volunteered a very creditable illustration of his method of teaching "Fractions." Mr. Huntsman next explained his system of "Phonetic Reading and Phonography." Mr. Deacon gave an outline of his method of teaching "History." On the motion of Mr. Huntsman, seconded by Mr. Bucknell, Mr. Carlyle was unanimously re-elected President, and the others chosen were Mr. A. Fisher, 1st Vice-Pres.; Mr. Huntsman, 2nd Vice-Pres.; Mr. Deacon, Sec'y. and Treas.; Executive Committee, Messrs. Frazer, Macintyre, Powell, Cowan and Rev. W. H. Landon, with power to add to their list. Mr. Fisher then illustrated his method of teaching "Drawing," by examples on the blackboard. Mr. Paton gave some very sensible observations on the study of "Derivations." Mr. Macintyre followed with a very able exposition of "Analysis." Among the miscellaneous subjects spoken upon during the short time now left before adjournment, a motion submitted by Mr. Gane was unanimously agreed to, that the "Ontario Teacher" deserved the hearty support of the members of this association; all the speakers recommending the journal in warm terms of praise.

UNITED STATES.

The Massachusetts Association of Classical and High School teachers recently discussed the question of single or double sessions in high schools, and voted that the single session was preferable.

—Col. E. B. Morgan, of Aurora, N. Y., proposes to give the Auburn Presbyterian Theological Seminary, grounds, buildings and money, to the amount of $300,000, on condition that the institution be removed to Aurora.

—Newark, N. J., has a Natural History Society, organized by teachers and pupils of the High School. It has been in existence about two years.

—The State Commissioner of Rhode Island asks the Legislature to pass a truant law. There are 4,000 children of school age in the little State of Rhode Island who don't attend school, and it is proposed to gather them in.

—The friends of Cornell University are models of liberality. Mr. Henry W. Sage, of Brooklyn, has just given $30,000 for the erection of a chapel, to be under the management of the University, but not under control of any single denomination. This makes the gifts of Mr. Sage to the institution amount to three hundred thousand dollars. A gift of $30,000 has also been received from a gentleman who does not wish his name made public—a graduate of Yale College—for the endowment of a lectureship or preachership on moral and religious subjects, not to be under the control of any single sect, but to be filled by a succession of able and distinguished men in various religious bodies.

CHOICE MISCELLANY.

DRAWING IN SCHOOLS.—The study of drawing is now a branch of the regular course in the intermediate and grammar schools of the city of Providence. It occupies an allotted space of time, and is taught by the regular teachers. A writer in the Providence *Journal* says: "If drawing is of practical and general value, it may well claim to have place in our general system of education, and in the free schools, although it is evident that only the rudiments can be taught in the ordinary grades. And, if drawing is to be taught in the public schools, it will hardly be questioned that the work must be done by the regular teachers. The experience of other communities where the matter has been tested is that this is the true method of procedure. The regular teacher must therefore be qualified to give the needed instruction." The point here brought out is a strong one, and it may properly be supplemented by a general observation which appears in the last report of Mr. Philbrick, Superintendent of Public Schools in Boston:

"When drawing is properly understood and properly taught, it will be acknowledged by every enlightened mind to be an indispensable element in the education of every human being, whatever may be his destination in life. Here general education and technical education meet. The child needs drawing equally whether he is destined for a course of liberal culture, or for any industrial pursuits."

The Massachusetts Board of Education has also given much attention to this subject, and its last annual report contains some valuable suggestions. The chief difficulty in the teaching of drawing in the schools of that State is the want of competent teachers. The plan pursued in Providence shows the way out of the difficulty. —*New York School Journal.*

KEEPING ORDER.—At the recent meeting of the Oxford Teachers' Association, Mr. Bucknell read an Essay on "Keeping Order," of which the following is a synopsis: Order is "heaven's first law," and is nowhere more essential than in the school room. To secure it the teacher must be orderly himself. Like produces like. He must not reprove with angry tones and looks, but with soft and gentle modulations of the human clear voice, coupled with a self-possessed countenance. It is absolutely necessary that the hearty co-operation and support of trustees and parents be secured. These may be obtained by a firm, steady, straight-forward course in the path of known duty; by frequent visits among the parents, and friendly discussions on school matters, soliciting their kind aid, manifesting a real and deep interest in their welfare. A well-defined system must be adopted. There must be a time and a place for everything, and everything in its proper time and place. Therefore, a clock and time-table are necessary. Keep the pupils busy. Answer their requests with a cheerful yes, or a decided no; enforce everything by kindness combined with firmness. Avoid tediousness and monotony Make the exercises interesting. Allow the pupils to use their vocal organs, and give them other physical exercises. Allow them full recess but require sharp attention to the bell. Be faithful in all engagements with them. A well-devised system of merit marking tends greatly to promote order. Allow no whispering or leaving seats without permission. If these rules are violated, give impositions and misdemeanor marks. Give the impositions in the evening, if parents do not object, otherwise at recesses and noons. Monthly or quarterly reports of perfect lessons, deportment, &c., should be sent to their parents, and framed and hung up in the school room for the encouragement of pupils and the inspection of visitors. All children need correction, varying according to the peculiar temperaments and dispositions. When all other means fail to bring into subjection the bold and defiant, do not shrink

from using the strap or rod Use these seldom and only as a last resort. The wise man says, "Foolishness is bound in the heart of a child, but the rod of correction shall drive it far from him." "The rod and reproof give wisdom," &c. No teacher is likely to succeed in the thorough discipline of his school without a deep sense of the infinite importance of the work. The training of the young is no doubt one of the most important and responsible positions, even superior, in some respects to that of the sacred ministry. If our youth be trained in habits of regularity, punctuality, perseverance, unwavering truthfulness, respect and obedience to proper authority, they will become loyal, useful and happy subjects, a blessing to their parents, and the world.

EDUCATION VERSUS CRIME.—Let me repeat once more that school houses are cheaper than jails—teachers than officers of justice; moreover they stand towards each other in an inverse ratio. By employing more good teachers and keeping them by sufficient remuneration in the profession, by bringing our educational facilities as near perfection as possible, the fewer of the other class will be required, until at last they, we doubt not, will disappear altogether. From Dr. Ryerson's report we learn that the cost of each pupil for the year 1870 was $3.87; the cost of each prisoner in our common jails we find from Mr. Langmuir's report was $16.03 without including some expenses such as the salaries of our judges, &c., that might justly be added. Of these prisoners 1,722 or 27 per centum could neither read nor write, and 417 of them were under sixteen years of age. The Commissioner of Education for the State of New York avers that 85 per cent. of the crimes in that State is committed by the uneducated. Eighty per cent. of the crime in New England, in 1870, was committed by parties whose education had been wholly neglected or nearly so. The statistics of our own Penitentiary but too surely corroborate these lamentable facts. Of 11,420 juvenile offenders committed to jail in England in one year, only 196, or less than 2 per cent., could read and write well! Moreover, General Eaton, the United States Commissioner of Education, after making very diligent and extensive inquiries on the subject, concludes that "the mere power to read and write increases the productive faculty of the laborer fully 25 per cent." apart altogether from the happiness it confers. The education of the masses, in connection with the moral and religious training of youth, constitutes the only efficient means for drying up the sources of crime; our public schools constitute the only lever long enough and strong enough to raise the whole fabric of society to a higher level; and compulsory attendance at school is absolutely necessary, if we would secure, in the highest degree within our reach, the greatest good to the greatest number, the elevation of all classes, the progress of society in virtue and happiness, and the welfare and safety of the state.—*From Report of A. Macallum Esq., M. A., Inspector, Hamilton.*

VENTILATION OF SCHOOLS.—The normal quantity of carbonic acid gas in healthy air is four parts in 10,000. The highest sanitary authorities declare that when the proportion exceeds that of six in 10,000 the air is positively poisonous. Keeping these facts in mind we shall be prepared to appreciate the force of certain experiments recently made in New York by the chemists of the Health Department, for the purpose of determining the sanitary condition of the air in our schools and other public buildings.

Seventeen public school-rooms were visited, and as many samples of air obtained. A careful analysis of these samples showed that all were poisonous, the presence of carbonic acid varying from 9.7 to 35.7 parts in 10,000. That is, the least offensive sample contained more than twice the normal or healthy quantity, while the highest extreme contained nearly nine times the proper quantity. The average proportion was 20.3, or five times the proper amount.

Dr. Endemann, the chemist who made the analysis, reports that the ventilation in nearly all these guildings is faulty, and that the proper amount of fresh air can only be obtained by opening the windows, a practice often very detrimental to persons sitting near the openings and in the current thereby produced. In one of the schools where there were ventilating flues in the walls, experiments were made to test their efficiency as follows: First the air was taken, while one of the windows were open, and found to contain 17.2 parts in 10,000. The window was then closed, and

after the lapse of ten minutes another examination gave 32.2 parts of carbonic acid, or an increase of 15.6 parts. The air now became to the teacher and children so oppressive that the experiment was not continued. Dr. Endemann says: "If the accumulation of carbonic acid had been allowed to continue, we might have reached within one hour the abominable figure of 110."

We presume the sanitary condition of the air in these rooms to be no worse than that of most of the public and many of the private crowded school-rooms throughout the whole country. The same is true of many lecture and committee-rooms, court-rooms, crowded family apartments, close sleeping-rooms, and ill-ventilated offices and counting-rooms.

The ventilation of a large part of the church edifices, throughout the country is little, if any, better. Sunday-school halls and class-room are particularly obnoxious to these criticisms. In nineteen cases out of twenty the air in them near the close of a crowded service is surcharged with the poisonous carbonic acid. We could easily specify instances. They abound on every hand. Not long since a quantity of air taken from a packed infant class-room just before the dismissal of the pupils was submitted to the proper analysis and found to contain as high as 37.3 parts of the poisonous acid in 10,000 of air, a proportion nine times too great for the safety of those who breathed it! And this condition was described by the teachers as not unusual.

We need not expatiate at length upon the importance of these facts. They should engage the immediate and earnest attention of all who have anything to do with the erection of any public edifices, especially of school buildings and churches. Let these edifices be thoroughly ventilated. Let it be done at once.—*Christian Advocate.*

—Teach what will be used in after life. Teach as we use in after life. Teach from the known to the unknown. Teach pupils to do things. Teach the how before the why. Do not tell, but draw out. Teach as much as possible by application. Teach by topics. Teach at every recitation something not found in the books. Give class instruction as much as possible. Remember that change is rest.

THE BEAUTY OF LIFE.

"Truly the light is sweet, and a pleasant thing it is for the eyes to behold the sun."

Solomon.

Life is beautiful; its duties
Cluster round each passing day,
While their sweet and solemn voices
Warn to work, to watch, to pray.
They alone such blessings forfeit,
Who through sloth, their spirits cheat;
Or, in selfish stupor sitting,
See the rust their armour eat.

Life is beautiful; affections
Thrill with Joy its golden string,
In its opening blossoms nestle,
Bird-like 'mid its branches sing;
Smiling rock its cradle slumbers,
Guard with pride its youthful bloom,
Fondly kiss its snow-white temples,
Dew the turf that decks its tomb.

Life is beautiful with promise
Of a crown that cannot fade;
Life is fearful with the threatening
Of an everlasting shade.
May no thoughtless worldling scorn it,
Wandering wide in folly's maze;
Duty, love, and hope, adorn it,
Let its latest breath be praise.

GLEANINGS.

—Knowledge may increase sin if the heart be not educated as well as the head.

—To clean blackboards, rub with a cloth wet slightly with kerosene. All the dust will adhere to the cloth and the board be left clean as when first slated.

—The facts which a child learns at school are of less practical value than the habits of thought and feeling which he acquires. The mental act is more important than the acquisition.

—It will always bring a rich reward of respect to be polite to your pupils. Children relish and appreciate an "if you please" and a "thank you," and it adds to their self-respect, without which there is no true worth. Give your example to your precepts. Children can detect sham as well as grown people, and will often notice inconsistencies in walk and conversation that older people might pass unobserved.—IOWA SCHOOL JOURNAL.

—The more I think of it I find this conclusion more impressed upon me,—that the greatest thing a human soul ever does in this world is to *see* something, and tell what it *saw* in a plain way. Hundreds of people can talk for one who can see. To see clearly is poetry, prophecy, and religion,—all in one.—*Ruskin.*

—The school is no place for a man without principle. I repeat, *the school is no place for a man without principle.* Let such a man seek a livelihood anywhere else; or failing to gain it by other means, let starvation seize the body, and send the soul back to its Maker as it is, rather than he should incur the guilt of poisoning youthful minds, and dragging them down to his own poisonous level. If there can be one sin greater than another, on which heaven frowns with more awful displeasure, it is that of leading the young into principles of error and debasing practice of vice.—*Page*

—It is too late in the day to think of damming up the stream of popular enlightenment; it is clear that more and more of art and science and personal education, domestic comfort and refinement are to inundate the world, until there shall be no room for ignorance, either of the laws of the human mind, or of the physical globe we live on. Where the front rank of intelligence now stands, the rear rank shall presently stand, while the great procession of humanity gradually advances higher and higher up the mountain of knowledge, and looks down upon its old ignorances and mistakes, its superstitions and delusions, with wonder ever to have lived under their influence, and with joy and gratitude in having escaped from their dominion.—*Liberal Christian.*

—How many teachers have, as yet, taught their pupils letter-writing? Reader, if you have not, begin it to-morrow. Do you say you have not time? I say you have. You have from nine o'clock in the morning till four o'clock in the afternoon. Of course there is not time for everything, and it is the teacher's duty to devote the time to those things that will be of most worth to his pupils. The teacher always *takes* time for things he thinks of importance. My appeal is, take a little time from arithmetic or grammar or geography, or history, or all of these, and teach the children to write letters. All persons, in all conditions of life and at all times of life, have to write letters, and they should be taught how to put them in proper form. Teachers, if you have not given this subject special attention, do it at once. To neglect it is to wrong the children you are paid to instruct.—INDIANA SCHOOL JOURNAL.

TEACHER'S DESK.

J. C. GLASHAN, ESQ., INSPECTOR, NO. 1, MIDDLESEX, EDITOR.

In order that those who take an interest in this Department may have full opportunity to send in replies to the questions proposed, no answers are inserted in the present No. They will be given in the June No. Will contributors to the "Desk" be kind enough always to send answers with their questions and solutions with their problems, or else state that they are difficulties they wish settled for their own satisfaction? If answer by *letter* is required, please enclose a stamp.

B. R. W.—Your formulæ require exponents, and the publishers are not yet prepared to use these. The preliminary article on Interest is too long for the "Desk," but as very confused ideas on the subject seem to be held by teachers, it has been handed to the General Editor for insertion among the "Contributions." Perhaps you may be willing to develop your remarks into an article.

J. R.—A verbal answer of practical use and theoretically correct cannot be given to your first question. The rule in the arithmetics gives the *legal* method. Thanks for your other questions.

PROBLEMS AND QUERIES.

(15.) Name the only king that was crowned in England since the Norman Conquest. ALEXANDER MCINTOSH, PINKERTON.

(Will some of our friends, versed in constitutional law, discuss the common assertion on this point? EDITOR.)

(16.) A and B, at opposite extremities of a wood

135 rods in circumference, begin to go round it, the same direction at the same time; A, at the rate of 11 rods in 2 minutes, and B, of 17 rods in 3 minutes. How many rounds will each make before the one will overtake the other? DO.

(17.) A silver globe worth 25 cents per square inch, is filled with wine worth $3 per gallon; the silver of the globe is just equal in value to the wine. What is the diameter of the globe? A. F. B.

(18.) What is the exact location of Moravian Town where the British were defeated, Oct. 5th 1813.? I. R.

(19.) A. B. bought a house, through a building society, for £300, agreeing to pay back loan and interest at the rate of £1 1s. 9½d. per £100 per month for 12½ years. The £300 was advanced in full, and the legal expenses of the lease, mortgage, &c., were £21 11s. 6d., which sum must be added (without interest) to the total paid. What would be the whole sum he had to pay: the rate per cent. upon the whole, and the rate per cent. on the balance left unpaid at the end of each year? Selected by J. R.

(20.) Find six weights that will weigh any number of lbs from 1 lb to 364 lbs. J. MCARTHUR, LOBO.

(21.) Explain the grammatical construction and origin of 'That head of yours,' 'Those eyes of hers.' J. B. SHOTWELL, ADELAIDE.

(Contributed by Mathematical Editor.)

(22.) AN OLD ACQUAINTANCE OF OUR IRISH FRIENDS.—'And now' said the strange schoolmaster, throwing off his frieze jock, and exhibiting a muscular frame, cased in a well worn black coat, 'maybe the Englishman would like a taste of the scuffle?'

"O no, no! By no means! What do they mean Johnson? I hope you have influence with them.'—*Carleton's Traits and Stories of the Irish Peasantry.*

A, in a scuffle, seized on ⅜ of a parcel of sugar-plums, B snatched ⅜ of it out of his hands, and C laid hold on 3-10 more. D ran off with all A had left except 1-7 which E afterwards secured slily for himself; then A and C jointly set upon B, who in the conflict let fall ⅓ he had, which was equally picked up by D and E—B then kicked down C's hat and to work they went anew for what it contained; of this A got ¼, B ⅓, D 2-7, and C and E equal shares of what was left of that stock; D then struck ⅔ of what A and B last acquired out of their hands, they with difficulty recovered ⅜ of it in equal shares again, but the other three carried off ⅓ apiece of the same. Upon this they called a truce, and agreed that the ⅓ of the whole left by A at first, should be equally divided among them. How much of the prize after this distribution remained with each of the competitors?

(23.) Given the price of any article in pounds, shillings and pence, English, per 112 lbs, to find the equivalent per lb. in Canadian currency—Exchange being calculated at 109. Rule—Reduce the price given to half-pence. From this number take one-tenth of itself. The remainder, when pointed off two figures from the right, will give the required value per lb. in cents. TORONTO GLOBE.

Prove the above.

(24.) What is the relation of *from* in 'He kicked the cat from under the table.' OLD DOMINIE'S PUZZLE.

(25.) Do conjunctions *now* always join sentences? If so parse *and* in 'Sugar and water is sweet,' 'The fence runs between his garden and mine?

(26.) What was the answer of the Scottish Parliament at Norham (and again at Upsettleton) to the claim of Edward I to be liege lord of Scotland? Hume says *silence*, had he any authority for this?

(27.) "He (William I) richly rewarded those to whom he owed his crown, but he took care that they should never be able to bring his crown into jeopardy. By two consummate strokes of policy he guarded against the dangers he saw rise in every other country, and made England the most united kingdom in Western Christendom." What were these strokes of policy?

(28.) Give the rule for finding the G. C. M. and the L. C. M. of two or more fractions.

CURIOSITIES.

(1.) The following Magic square of Ten was made some time ago by the editor. It is the most 'complete' he has ever seen, but as the filling in is so easy, it is not likely new. If a Mathematical Department is opened in the TEACHER, rules for making these squares may be given. Any one can fill them in who can work scales in Sangster's National Arithmetic.

90,14,89,17,100,91, 5, 4,93, 2					
83	39,69	28, 66	35,73	32,62	18
16	34,60	37, 71	30,64	41,67	85
15	78,48	57, 19	82,44	53,23	86
88	51,25	80, 46	55,21	76,50	13
9	47,77	20, 58	43,81	24,54	92
95	26,52	45, 79	22,56	49,75	6
7	70,40	65, 27	74,36	61,31	94
3	59,33	72, 38	63,29	68,42	98
99,87,12,84, 1,10,96,97, 8,11					

Take away the border and we have a square of eight; quarter and there are four squares of four; quarter again, and pick out, either symmetrically or semi-symmetrically, a sixteenth from each quarter;

and these can be formed into twelve magic squares of four ; e. g. the central block of four is a magic square ; take it out, the top and bottom brought together make another square, the sides make another, and the four corner sixteenths make yet another ; again the block whose corner figures are 28, 73, 80, 21, is a magic square ; so also is the corresponding block below it ; take these out and bring the sides together and there are two more magic squares ; take the block 78, 19, 26, 79, its corresponding block on the opposite side, bring the top and bottom together, and there are four more magic squares. In fact this magic square contains in itself twenty-five other magic squares.

(2.) Diophantine Problem. Find a triangle whose area is 56 sq. yds., whose perimeter is 56 yds. and whose sides contain each a whole number of feet.

EDITOR'S DRAWER.

EDUCATIONAL INTELLIGENCE.—We again invite teachers, inspectors. and all other friends of education to send us items of educational intelligence.

OUR CIRCULATION.—We are under obligations to many friends for their successful efforts to extend our circulation. Many others, however, from whom we might expect something, have as yet done nothing. Friends ! if the TEACHER ls to be a success, we must have a good circulation in every county in the Province. We appeal to you to sustain our undertaking if you consider it worthy of support.

TECHNICAL EDUCATION.—In England the movement in behalf of Technical Education has, of late, been rapidly progressing. During the present month, the first of the proposed Technological Examinations by the Society of Arts will be held. It will be remembered that these examinations are part of the result of a congress held last year, under the Presidency of Prince Arthur, to consider the best means of advancing technical education. The subjects for the present year, are nature and manufacture of Cotton, Paper, Silk, and Steel, and Carriage-building. The candidates will be examined on elementary abstract science, so far as it bears on their subject, and tested practically and theoretically on that subject. Three classes of certificates will be awarded, Honours, Advanced Grade, and Elementary Grade.

CREDITABLE.—In the last No. of the "Philosophical Magazine," the highest philosophical periodical published in Britain, edited by Sir Robert Kane, L. L. D., F. R. S., &c., &c. Sir William Thompson, L. L. D., F. R. S., &c., &c., and Mr. Francis, Ph. D., F. R. S., &c., &c., we notice an article on Fractional Distillation, by our fellow-townsman, Mr. J. C. Glashan, School Inspector. The problem which appears hitherto to have escaped the researches of mathematicians, was proposed in February by Mr. J. A. Wanklyn, Member of the Royal Bavarian Academy of Sciences. Physically, as involving the nature of liquid solutions, it seems to have engaged the attention of several eminent chemists and physicists, especially Mr. Wanklyn and M. Berthelot. Mr. Glashan applies his formulæ, which are in themselves general, to a series of experiments on a solution of ammonia in water, and obtains for the co-efficient of volatility of the former (2—L 52) ÷ (2—L 95) or 1 2.7488, water being 1. (L. means logarithm.) The best preceding examinations of this particular case seem to have given ammonia a co-efficient lying *between* 9.6 and 18.5, rather wide limits and practically useless.