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THE ONTARIO TEACHER:

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THE CULTIVATION OF A LITERARY TASTE IN OUR PUBLIC SCHOOLS.

It is very much to be regretted that so little attention is paid to the cultivation of anything like a taste for literary pursuits in this country. While our Dominion is making rapid strides in commercial development and the acquisition of a national status, while our public men are beginning to take a very good position as legislators and debaters, and our professional men establishing a reputation which is alike creditable to themselves and their country, literature seems to languish, and Canada is so far without a single name, if we except Judge Haliburton, that has secured anything beyond a merely local reputation. The necessities of self-preservation—the restless, endless struggle for social position—the pursuit of wealth—the strain upon the energies in fighting the battles of life, seem to absorb all the national life-blood, and there is nothing left with which to garnish the prosaic current of events, or to gild the wide horizon with a silver lining of brightness or glory. We are fully conscious that in a new country like ours, in the very infancy of its existence, where so many have settled to secure that social independence denied them elsewhere, that there is but little leisure for that research necessary to the development of a literary taste. And yet it is true, that many of those who contributed most to the literary glory of the mother country, were men whose struggles with life were long and hard. Luxury never pampered their appetites, nor did they ever slumber in the lap of ease. Burns and Shakspeare, Walter Scott and Dickens, felt the pangs of “pinching poverty,” and yet by the princely power of their genius, they have made the world cast tribute at their feet. By the force of talent, and not by the force of circumstances, (rather in spite of circumstances), they have given to the world of letters stores of literary wealth, which none that appreciate the beautiful and the true will ever let die. Little Dorritt, and David Copperfield, by Dickens, Old Mortality and the Heart of Mid Lothian, by Scott; Hamlet and King Lear, by Shakspeare, or Auld Lang Syne, and the Cotter’s Saturday Night, by Burns, are contributions to the literature of the language which have

established beyond cavil the supremacy of the Anglo-Saxon in the world of letters, as well as in arms, in art, and song. And when it is considered that these men as well as many others whom we might mention, have wrung from the world the homage, now voluntarily paid, in the face of all but insuperable difficulties, we wonder why, here, where fewer difficulties exist, literature still languishes, and none can be found with the courage and the talent to wreath around the virgin brow of our young Dominion the laurels of literary fame.

Besides the causes already hinted at, might we not find another cause. While admitting the higher character of our system of Public Schools, both as centres of instruction and media of information to the young mind, is there not after all an almost entire absence of everything like literary culture? Our Reading Books, till we come to the 5th Reader, are almost as destitute of literary beauty, as the Sahara desert is of verdure. What more prosaic—more detestably tame could be easily imagined than the first two hundred pages of the 4th Reader. To the young mind it has but little interest, and as a means of developing taste it is entirely useless. On the contrary, where something like the budding of taste naturally existed, the effect of such composition would be to blight and destroy.

But while these deficiencies in our school books are to be deplored and should very soon be corrected, there is also a want of literary taste in many of our teachers. Their mind is as barren as the text book, and in no instance can they supplement in thought or word, the ideas on the page before their class. From one year's end to the other, the school-room is as prosaic as routine can make it, and with no thought that rises higher than the merest common place the teacher's daily labors are begun and ended. With such a spring time how can we expect a harvest? Without any effort to cultivate the imagination or excite the emotions—

without an effort to refine the taste or excite into activity the dormant powers of the scholar, how can we expect the aspirations to rise above the daily humdrum of this busy life? Is it natural that the mind should develop in a course directly the reverse of what its educating influences may be? If not, then the dearth of literary taste and culture which prevails, must have a cause, and there is no doubt but the guilt, if guilt we should call it, is chargeable in many cases to our system of education.

To remedy this what should teachers do? First, we would say, let them cultivate a literary taste in themselves. Let them read daily the best writers of the age. We do not wish that they should busy themselves in dreamy sentimentality—that they should quote poetry as their scholars repeat the multiplication table, or read novels till their imagination becomes excited and they forget they are mere creatures of clay. This is not what we mean, but we do mean that they should refine their own tastes by contact with the thoughts of the great high-priests of literature, and so form the lessons of the day, or in addition to the lessons, they should be able to kindle the emotions of their pupils with coals burnt off the altar of refinement and culture. This is no mere theory. The writer of this article can well remember the pleasure experienced when a boy of thirteen, from the analysis of some of the finer quotations in the old text books, made by a teacher, whose own soul was warmed by contact with the writings of the poets and *literateurs* of the day. And now, after a lapse of many years, the thoughts then implanted are fresh and beautiful as ever. What has been done can be done. The teacher who loves the beautiful himself can surely find time to call the attention of his pupils to what gives pleasure to every cultivated mind, and thus beget that love for literature, which affords rest as well recreation, and which can be made a source of moral elevation as well as a spur to liter-

ary pursuit. Nor should it be forgotten that the mere useful does not constitute the whole of an education. Neither in nature nor art, do we find dry utilitarianism and nothing more. Nature has done much, while erecting the machinery for carrying on the purposes of life, to surround that machinery with ornamentation and beauty. The blue vaulted heavens, ever beautiful in their serenity and vastness, are garnished with stars. The rose, admirable in the arrangement of its petals, is nevertheless tinted with crimson and most delicately shaded. The murmuring brook has its mossy banks studded with flowers. And so in art. The magnificence of Westminster Abbey, consists, no doubt, in its lofty arches, its towers and columns. But why these wondrous carvings? Why the rich frescoes? To the utilitarian they are so much useless ornament—a waste of effort, a perversion of skill. And yet the world has acknowledged that without these, much of the interest and

effect of the whole scene would be lost. So in our education. Its skeleton so to speak; its framework may be plain and should be substantial, but the form in which it is clothed—the manner in which the outline is filled—the finishing touches by which it is made beautiful and attractive, should combine all those elements of taste, which the world of letters acknowledge to be the perfection of human attainments. And as the sculptor, who designed to transfer to “dull, cold marble,” those lineaments of beauty, which had made Venus de Medici so renowned, caught from every wayward glance some new form of beauty, and from every face some lineaments of gracefulness, so the teacher, the sculptor of the human mind, should find in every writer those forms of literary excellence, which transferred to the minds of his pupils, would impart that intellectual finish, so much required at the present day, to the educational institutions of the country.

THE REQUIREMENTS OF OUR RURAL SCHOOLS.

BY GEO. B. ELLIOTT, OTTAWA.

(In the March No. of the “TEACHER,” we published the “Prize Essay,” on “The Requirements of our Rural Schools.” The Essay written by Mr. Elliott, of Ottawa, though not successful in winning the Prize, was so highly spoken of by the Examining Committee, that we have decided to publish it in full for the benefit of our readers. EDITOR.)

PREFATORY—EDUCATION—GOVERNMENT.

“The world is governed too much,” says a political writer. If this was intended to express the notion so flattering to the ignorance and self-will which mistakes license for freedom, that mankind are too much restrained by government from wrong doing, the saying is false, for in spite of all human laws and their penalties, disorder and crime still abound. But relatively the world is governed too much and educated too little.

Not to speak of the old world, where in many quarters government is still despotic and education but little fostered, it is true in our own land. Much is said of the importance of education, but a thousand things show that practically an overshadowing pre-eminence is given to government.

That this is wrong is sometimes admitted by politicians themselves. Professor Goldwin Smith, whose authority is unquestionable, has more than once urged this point very forcibly before different educational gatherings. Whether he speaks for “educational” effect, or as an educator or patriot, and from sincere convictions of a long experience as a publicist, we will not enquire. But we hold him to his admissions.

THE REQUIREMENTS OF OUR RURAL SCHOOLS.

It is now less than forty years since a general and wide spread apathy prevailed over all the land in relation to common or public schools. School houses were unseemly in appearance, inconvenient and uncomfortable in their arrangements, uninviting in their location and surroundings; teachers were poorly paid and more poorly qualified; apparatus was almost unknown; blackboards and charts and maps, were unthought of, and had any one proposed the purchase of a clock, he would have been regarded as a fit subject for a mad house.

Schools were seldom if ever visited by parents or citizens; the teacher kept school because hired to do so, and the children were sent to keep them out of the way. The public school was well enough for the poor, but not to be thought of for the sons and daughters of affluence.

It was under such a state of affairs that a few true friends of education set themselves about the work of reform. To accomplish the ends desired, it was deemed indispensable that there should be associated action and effort.

In the month of August 1830, several hundred persons mostly teachers assembled from several States of the Union and the different Provinces, and organized the American Institute of Instruction, the oldest educational association in America. Shortly after this the different Provinces commenced the agitation of Normal Schools, the first to take the lead among the latter being the present Province of Ontario. History informs us that the first Normal School in America, was opened at Lexington, Mass., in 1839. The attendance at first is represented as having been very limited, considerable opposition was manifested, but in spite of prejudice it grew in numbers and favor, until the Normal fever raged from ocean to ocean. Our present Province was not long in following the enlightened exam-

ple of Massachusetts. A decade later saw the Toronto Normal School in full operation. Nova Scotia, New Brunswick, and even Prince Edward Island followed very rapidly. It will thus be perceived that the first great step towards educational reform emanated from a few energetic wide awake teachers. They established "Institutes" for their mutual advancement and improvement. Out of these sprang Normal Schools, and as an awakening in the cause of popular education came educational periodicals.

In the space to which our essay is necessarily limited, it will be impossible for us to do justice to a subject upon which a volume might be appropriately written. We shall, therefore, confine ourselves to the three principal wants from which the country Schools of Ontario now suffer.

FIRST—CLAIMS OF THE PUBLIC SCHOOL.

Experience has demonstrated the truth of the assertion that liberal appropriations, and legislative enactments cannot of themselves, impart to any system that vitality essential to success. An enlightened public opinion is absolutely prerequisite to ultimate and permanent success. Law is but a dead letter, a lifeless skeleton. Well directed popular will, is not a creature of impulse. It is controlled by motives that are first approved, then felt. The heart must be trained to feel after the intellect has been trained to perceive the claims of any cause upon us for sympathy and support.

Especially is this true of the great cause of popular education which touches us at more points, and affects more interests than any other. The social, the political, the physical, the intellectual, the moral interests of our children, are all ultimately connected with it. It appeals to us as parents, as citizens, as patriots and as philanthropists. A few of the claims I will briefly adduce.

1. It is a *supply* exactly adapted to the *want*.

The mind of the child ever seeks for

something wherewith to satisfy its longings. The public school comes to the restless and absorbent mind with the invitation, "take freely of the good things I bring you, and be filled with the blessings I have in store for you."

2. It is the only supply that will meet the necessities of the larger part of our people. *Family instruction* will not meet the demands. Some parents are morally unfit to become the teachers of their children, some have not sufficient training themselves; many have not the time that can be spared from other pressing duties pertaining to the physical comforts of their families.

Take from the whole number of parents those who cannot and those who will not, properly instruct their children, and comparatively few remain.

How great then the demand upon the State! and how shall we meet it in the best and enlightened way, is the question constantly before us.

THE TOWNSHIP SYSTEM.

That the County Superintendency is a step in advance, a great improvement upon the Local Superintendent System is generally acknowledged by those best acquainted with the operation of both agencies; but many sincere friends of popular education regret the loss of the local officer, who when capable and faithful, effected so much in a direction in which the County Superintendent is able to do but little, the visitation and supervision of schools; and so much loss is felt that in certain localities some are advocating a return to the former order of things, even at the sacrifice of the County Superintendent. We need not only efficient supervision, but a complete and harmonious system to supervise.

As our schools are organized at present, no system of supervision can be really effective in securing unity of plan in our educational work. Each school section is a separate, independent republic, accountable to no further authority, and dependent upon

none except in the matter of the examination of teachers, and the annual receipt and expenditure of a very small amount of government money. We call the aggregation of agencies through which we educate our children a school system, when, in point of fact there is no vital legal connection between these separate agencies, and there is not a school established by law within the Province. Not only is the kind of school, and the time it shall continue, dependent upon the vote of a majority of the residents of the section, but one more than the half of the legal voters, a bare majority can prevent the establishment of a school at all. Again while in one section, in consequence of the intelligence and wealth of the people, a good graded school may be maintained ten months in each year in an adjoining section, on account of the absence of intelligence, and the poverty of the people a miserable apology for a school, in which only the simplest rudiments of an English education are taught, is maintained for five or six months only.

Now, no system of supervision, be it ever so good can remedy the above mentioned evils, and others inherent in our system. What we need is the abolishment of the Separate Section System, and the establishment of the *Township System* of school organization and government.

In this system each town constitutes a section, and all matters pertaining to the schools are under the direction of a board elected by the various sub-sections. The Secretary of this board takes the place of the old Town Superintendent, visits and supervises the schools, grades them, assists the teachers in classifying the pupils, etc., in a word is the efficient agent of the town board, and the necessary connecting link between the County Superintendent and the Schools. Taxes for the support of schools would under this system, be levied upon the town as a whole, and every individual would pay an equal share of such taxes in propor-

tion to the amount of property owned by him.

The advantages of this system are many and evident. We shall proceed to give them in their order as follows:—

1. As each town forms a school section, and each parent would be permitted to send his children to the school which best accommodated them, all the expense, trouble and ill-feeling, consequent upon the frequent changes in the boundaries of sections would be entirely avoided.

2. School-houses would be built when and where they were needed. Many sections are now compelled to suffer year after year all the inconvenience and loss occasioned by the use of a small, badly constructed, ill-managed house, because of difficulties concerning the site, or the indisposition of the voter to furnish the means to erect a new building. Under the township system these difficulties would be avoided, as the board composed of delegates from all parts of the town would not be likely to be influenced by local disputes in reference to the site for a house, but would locate it at such a point as would best accommodate those for whom it was selected; and as the funds for building the house would be drawn from the whole town, the tax upon each individual would be so small as not to be in the least burden some, and there would be no necessity for delay.

3. Schools can be classified more easily under the township than under the separate section system. The sections as now organized, as a general rule, are too feeble in numbers and wealth to maintain more than one department, and the law permitting sections to unite for Grammar School purposes has practically been inoperative, very few sections having taken action in accordance with its provisions. The summer schools in the country especially are Primary Schools in most respects, while the winter schools embrace all grades of pupils from the Primary to the Grammar and even

the High School. This condition of things necessitates the employment of better educated, more experienced teachers during the winter term, at a cost for their services of about double the amount paid for the same length of time in the summer, while there is not, on an average, more than a dozen children in each section whose capacity, advancement or range of studies, demands a better or more costly teacher than the one employed during the summer; and thus the education of the few costs the section the difference between the wages paid in summer and winter amounting, for a four months school, to from thirty to fifty dollars. Now, if there were, within reach of the class of larger pupils in three or four sections, a school of a higher grade to which they could all have access, the winter school in their respective sections could be continued as a Primary or Intermediate School under the charge of the same teacher employed in the summer, and one higher grade teacher would suffice for several sections. By this arrangement all the pupils in a town would be divided into two grades, at a cost of tuition not greater than that now incurred; and the total additional expense would be measured by the cost of erecting a sufficient number of buildings to accommodate the higher grade of pupils. In many instances, by a proper arrangement of the term of school, the houses already erected would serve for both grades of pupils. In some sections, in which the house is so situated as to be easy of access to the larger pupils in several surrounding sections, let there be a term of school commencing as soon as the ground is settled and the weather is pleasant in the spring and continuing to the 1st of July; and a fall term commencing about the middle of November, thus affording the primary pupils six months or more of uninterrupted school during the most pleasant season of the year, which would be far more beneficial to them intellectually and physically

than the usual summer and winter terms, with the extremes of warm and cold weather, producing sickness, tardiness and irregularity of attendance, and thus wasting a good share of the money expended. The winter term could then be devoted entirely to the grammar or higher grade scholars, who, under a competent instructor whose sole time was given to them and their studies would make as much progress in one term as they now do in the mixed schools in two or more. Again, whenever a new school-house is to be built, its location, size and internal arrangement can all be adapted to the new order of things, so that in process of time without any violent changes or any appreciable increase of expense, the facilities for maintaining *graded* schools throughout the Province, can be established.

4. Better supervision of the schools. The County Superintendent though exercising a general supervision over all the schools in his county, is entirely unable to give, to each school, that personal attention necessary to obtain a complete knowledge of its condition and wants; and some of the most active and efficient Superintendents have felt the need of a local officer to co-operate with and aid them in effecting improvements in the arrangement and management of the schools. As before stated the Secretary of the town board will be the proper person to have the immediate supervision of the schools, and will have power, under the direction of the board to grade and arrange them, suggest and enforce rules for their management and government, and advise with and assist the teacher in all cases in which advice and assistance are needed. He should be appointed by the board, and he may be one of their number, or not, so that the best person to fill the place is elected.

We should thus secure all the advantages of the Town Superintendent system without losing any of the benefits resulting from the

establishment of the County Superintendent.

5. Economy of Administration. All the expenses now incurred in organizing new districts and in changing the boundaries would be saved. Each child being permitted to attend that school which best accommodated him, no matter in what subsection he resided, there would be no reason for altering sections, consequently very few changes would be made, and those few would be easily effected and attended with little or no expense. Again, the liability to a loss of moneys is in proportion to the number of hands through which they pass, and it is no wonder that with upwards of four thousand disbursing officers, there is a good deal of waste of school funds every year.

Under the township system the financial affairs of all the schools in a town being managed by the same board, one treasurer would be sufficient, and in order not to multiply officers, the town treasurer, who now collects and receives all the school moneys belonging to his town, might be the treasurer of the board and upon the order of its Secretary, countersigned by its president, would pay out such moneys; whenever needed. Thus the number of disbursing officers, the expense incurred in executing nearly an equal number of bonds, each year would be saved.

6. Better accommodation of the people. Under the present system it is necessary to organize sections in such form as to secure a certain amount of taxable property in order to support a school, and thus it often happens that a person resides in one section while the greater part of his property is situated in another; and many live in close proximity to houses to which they would be glad to send their children, but because they live in a different section, they are obliged to send them to schools kept in houses remote from them and difficult of access.

Again, it happens that a populous section

possesses a small, badly arranged house, while an adjoining section with few scholars, has a large and convenient one; yet the children of the populous district cannot attend the school in the other one without the payment of a tuition fee, or a change in the boundaries of their section, involving time, expense, and often an appeal to the Chief Superintendent. Under the Township System this would all be changed as it would be for the interest of every person to have the number of pupils in each school proportioned to the size of the house, and its power to accommodate them.

There would also be an equality of privileges in the different sections as, the schools being supported by a general tax, justice would require that they be maintained an equal length of time throughout the town, and we should not see as we now do, so great a disparity in school privileges in adjoining sections.

Free schools are founded upon the principle that it is the duty of the State to see that the children within its limits are educated. To this end a generous public fund is provided, and the people are yearly taxed to support the system; yet the kind and amount of instruction given to the children of different sections depend entirely upon influences which the law does not seek to guide or control. Now common sense and justice demand that wherever children enough to organize a school are found, one should be established with all the means and appliances necessary to secure the result desired, the proper education of the children attending it.

7. Employment of Teachers. It being the special duty of the Secretary of the town board to visit the schools, become acquainted with their condition and wants, the capacity, tact, and success of the different teachers, he would be better qualified to select the person suited to each school than nine-tenths of the present Trustees under the system now prevailing possibly can be;

thus better teachers would be employed—that is, teachers better adapted to their positions, and they would not be changed each term, as they now frequently are, but would remain in one school so long as they were successful in their work.

Incompetent and unsuccessful teachers would be sifted out, the standard of attainments of all those employed would be gradually and surely raised, and the consequent progress of the schools would be certain and uninterrupted.

The new system of examination has done much to elevate the standard of attainment, and weed out unsuccessful teachers, but inasmuch as an examination in regard to scholarship, is not always a true test of the qualifications of an applicant, and as it is not possible for the County Superintendent to give that personal attention to each school necessary to enable him to judge correctly in regard to the skill and faithfulness of the teacher, many persons are still employed who have no real fitness for their position and who are retained through favoritism or indifference on the part of those by whom they are engaged. Such persons would be quietly dropped from the list of teachers, and would engage in other pursuits, or by the use of proper means become fitted for the responsible positions of instructors of youth.

I have thus presented some of the main points in which it is believed that the Township System is superior to the present District System, and it only remains to notice some of the objections urged to it by those who object to change, or who are satisfied with the system as it is.

The first objection is to the raising of taxes for the support of schools by the town at large. Looking at the matter from a personal stand point, many think a general tax would be unjust to different localities for the reason that the children of school age are not proportioned to the valuation of property, and thus a wealthy section, with few

children sustain other districts. This object is the same one as often urged against free schools by the childless capitalist, or the wealthy tax payer whose children were already educated, "I ought not to pay for educating my neighbor's children." As property of the State shall educate the children of the State, consistency requires that the details of the system shall be arranged so as to carry out this fundamental principle. What justice is there in requiring that a specified portion of territory shall furnish the means to educate the children residing therein, so long as you withhold from its tax paying portion the power to decide who shall inhabit that territory?

The fact is, that the present method of maintaining the schools would be by a tax upon the whole Province, and the larger the sections embraced in one organization the more just and equal will be the taxation.

The moneys apportioned by the Government, and those levied upon the towns by the Trustees, are distributed to each section in proportion to the number of children between the ages of four and twenty and their attendance, and the latter moneys are raised by a tax upon each town as a whole and not separate sections. The plan advocated is in fact, in operation already, and only needs to be extended to the levy and collection of all the funds needed to support the schools.

In the second place many will object to the raising of funds by the whole town, to build a school-house in a particular section, who would be willing that the schools should be supported by a general tax after the houses are built. This objection is removed by considering the town as a single section, which needs several houses to accommodate its pupils. It is true that for convenience's sake, the town is divided into sub-sections, yet for general purposes it is a unit, and should be managed accordingly. Each town is divided into road sections, yet

when a new highway is to be laid out, the whole town is called upon to pay the expense incurred for right of way, etc., though but few of its tax payers are personally benefited; and when a bridge is to be built no one thinks of asking the citizens residing in the district in which the bridge is needed to furnish the funds to pay for erecting it; and it cannot be that the education of the children of Ontario, is a matter of less interest to the people than the laying out of highways and the erection of bridges.

In order to avoid all seeming injustice, it might be provided that these districts which had within a certain time erected good and substantial houses, should be exempt from the payment of the taxes raised for building houses for a number of years after the adoption of the township system.

All other inequalities and seeming irregularities can be as well provided for, and it is confidently believed that a law can be framed preserving for our school system all prominent vital and valuable features, and engrafting thereon such additional ones as will give it harmony and completeness, make it a better exponent of our educational standing, more worthy of affection and generous support, and insure the successful accomplishment of its great design, the education and elevation of the whole people. We could here add many valuable testimonials in favor of the township system, but space will not permit.

SCHOOL HOUSES.

A good deal has been said upon this branch of our subject. And yet, after all the importance, thrown around it by educators, men capable of knowing its importance, there exists in many parts of the Province a most lamentable indifference in regard to it. Even in many of our villages *external appearance* is scrupulously consulted, *internal arrangement* is much disregarded.

There are but very few who seem to realize that the structure of the school-room has anything to do with the formation of the

mental habits of the children confined day after day within it. Indeed, many seem to forget that the mind is not a principle of habit at all, and hence have but little concern about the influences brought to bear upon it. There is a vague idea that the mind of the child must necessarily conform to certain principles of its own accord, and by the force of its own action, no matter what its surroundings are. But surely this is a great mistake. Surrounding influences have as much to do in forming the mental habits of the child, as in shaping the course of manhood. Who has not felt, more or less the force of circumstances, in shaping the course of life? And where is the man whose habits, physical, mental or religious have not been very materially affected by his surroundings in life?

The most common fault I think in the structure of school-houses is what is termed the "long seat system." At one time this was very common in our rural sections. Happily the age is condemning the system as it will have to condemn many other systems in turn. Children are huddled together six or eight on a seat and then required to study! It is impossible. We do not believe that one in ten of those who call themselves men and women could study under the same circumstances. How can children study, when they are necessarily interrupted, every few minutes? Every class that is called to recite creates a perfect confusion throughout the school. One or two leaving a seat disturb all the others on that seat.

Will not school officers look more closely into the matter? Many sections are losing much yearly for the want of a few dollars in bettering the internal structure of their school-house. I heard a teacher remark, last week, "If those seats had been fixed last fall, I could have earned the section from fifty to a hundred dollars more than I have, and have done it easier than what I have done." Ten dollars would have "fixed the seats," we presume; and

there would have been a gain to the section of at least forty dollars, (\$40.00.) This is not an isolated case. A man can always do more good with a good tool than he can with a poor one.

TEXT BOOKS.

One of the expressed objects of the many which the ONTARIO TEACHER has in view is the *Revision* of our School Readers and the addition to each of a copious glossary containing the meaning and pronunciation of all difficult words. Why this should be particularly selected we do not pretend to say, but what follows is quite sufficient to convince every *educator* that wherever the pruning knife can be applied it will be used to lop off superfluities, and carve out suggestions and improvements for which in the field before it, every opportunity is offered. It is a pity we are so restricted to space as we are. We might, for instance, write another half quire of suggestions respecting the arithmetics and the geographies, the spelling books, and the grammars. It might add nothing new to what has already been truthfully sacrificed in this direction. There is, however, an opinion very wide-spread and one which is fast gaining in force, that the text books in use in our Public Schools are not at all adapted to the conditions of such schools. It could be shown that they are not *practical*, and that among other things they are badly compiled, having been made *to sell*, rather than for any other purpose. Thus for instance the wisdom of requiring pupils to perform operations involving fractional numbers before they are asked to understand "Fractions," is not the least of the many absurdities which the wise and progressive *Teacher* has to encounter when he undertakes to follow the text books sanctioned by law in this Province. As we fear that we have already exceeded our limits we shall reserve the domain of text books for a future essay.

HINTS ON TEACHING.

BY JAMES LAWSON, ODESSA.

I have frequently seen and heard "hints on teaching," but propose to offer a few which I have never seen or heard except in my own school. It is possible, however, that my system is more common than I am aware of, but, knowing as I do that it is not common enough, I venture the following suggestions:—

I believe the greatest impediment in the way of a child learning his lesson is his inability to get a perfect understanding of it. The difficulty does not lie so much in his memory, as in his understanding. If he can be made to thoroughly understand a lesson he will very soon commit it to memory. And I am thoroughly convinced that a great amount of time is wasted by most of our school children in trying to commit to memory what they don't understand. I have been led to this conclusion by my own observation, having had the benefit of several years' experience in school teaching. And now it seems strange that for so long a time I should have failed to realize the fact. I have seen children whom I knew were anxious to have their lessons well prepared, but who utterly failed in reciting though they had spent plenty of time in preparation. From this fact, as well as the strange answers given, and the questions asked before reciting, it was very plain to be seen where the difficulty lay.

The remedy of course suggested itself. Instead of merely assigning the lesson for next day and allowing them to prepare it as best they could, I not only assigned them their amount of work, but, as far as time would permit, went over the lesson with them, asking them questions, and allowing them with the aid of their books to give the answers, and when they were unable, I

gave them the answers myself, at the same time offering whatever suggestions or explanations I deemed necessary.

First, I saw that something was wanted in order to have the lessons in oral spelling learnt. Time after time I was annoyed by the failure of those who were evidently attentive and studious. I found that very frequently when a word was given out for spelling they did not recognize it at all; no more than any word not in the lesson. Consequently I introduced the plan of going over the lesson at the time of giving it, plainly and distinctly pronouncing every word, the pupils at the same time looking at each word and pronouncing it themselves after me. In this way the *sound* and *appearance* of the word are associated together in such a way that when the class come up to spell, as soon as the word is pronounced it is immediately recognized, and is consequently correctly spelled. It is a well-known fact that far more depends on the eye than the ear in spelling. The eye is far more accurate in this than the ear. Spelling in English, especially, must be learnt by the eye, on account of the numerous silent letters, as well as their strange and irregular sounds.

Grammar, so highly important and intensely interesting, is generally looked upon by the beginners as the most dry and irksome of all their studies. Simply because they don't understand it, children acquire a distaste for it which seriously impedes their progress, and which it is no easy matter to remove. A little assistance from the teacher might have prevented this. When I assigned a lesson in grammar (to the junior class,) I asked the same questions as I intended asking next day, and assisted the class

in finding the answers. When we get through, the work is probably half done. The labor of the pupil is thus greatly lightened by devoting a very few minutes of the teacher's time to the preparation of their lessons. Instead, then, of the task appearing as a bugbear to the child, it becomes quite easy and interesting; and all that is required is a little application and use of the memory, and the work of preparing the lesson is done.

The junior geography class should be treated in the same way. All the hard names should be pronounced by the teacher and each member of the class. Whatever

explanations are necessary should be given. Let this be done in such a familiar and conversational style that all will feel free to ask whatever they require information on.

This plan is infinitely better than allowing the children to puzzle their brains or waste their time over that which they don't understand. Many of them get but little if any help at home, and the teacher cannot afford to have them constantly running up to him asking him all sorts of questions, and requiring all sorts of explanations and instructions. The above is, therefore, a great saving of time and labor on the part of both teacher and scholar.

READING AS AN ART.

Paper II.

BY RICHARD LEWIS, TORONTO.

The department of reading treated of in the first paper is purely mechanical; and as a mechanical effort due regard must be paid to the action of the vocal organs. An improper use of any of the organs used in speech is not only ungraceful, a positive deformity which will grow with life and become fixed;—but its continuance is destructive of all the higher functions of vocal expression, and in many instances of serious and lasting injury to health. A scientific reading exercise, that is one in harmony with the principles of the art, is a healthful exercise. The pupils when practising the elementary sounds, which ought to be a very frequent exercise, or reading, should stand, with head gracefully but not stiffly erect, and with shoulders thrown back. In every utterance the mouth should be well opened and its action firm, decisive and energetic, whilst every tendency to excess, to grimace or facial deformity should be checked. In the complete de-

livery of every sound constituting a word, two efforts ought to occur. The first is that of fixing the organs in the position of utterance, and the second is that of the finished action to which the attention of the pupil should be directed; as it is unfinished action that causes indistinct delivery. If the pupil, for example, reads the words *drum* or *stop*, in uttering the final sound *m* and *p*, the lips close for the position; but for the complete action, they should reopen. Attention to this simple law would make reading distinct, without shouting, and cultivate clear and energetic habits of delivery. The energy of utterance is in fact one of the best means of strengthening and preserving the vocal functions. In a languid and feeble utterance there is a waste of breath;—that is, it is not during delivery all resolved into final sound. It is this mingling of sound and breath which produces diseases of the throat, so fatal in after life to public usefulness. The prin-

ciple of vocal delivery is simple: as the breath is expelled for the creation of sound the vocal organs should act instantly and with proportionate force on the expulsive action of the lungs. If the breath be driven out with great force and the action of the vocal organs be languid, then the trachea is impelled upwards and ultimate disease follows. Thus the two efforts of breathing for sound and vocal action should be simultaneous and equal in force. Finally, with reference to the material functions of good reading, the pupils should be instructed to breathe regularly and systematically. To read until we are "out of breath," is the common habit. But the practical elocutionist, who never suffers from throat disease nor in voice power, breathes gently and regularly at every pause. He never gasps or appears exhausted, because he is never out of breath. Let the rule then be enforced to breathe at every pause; and when I have explained the laws of pausing, it will be seen how often the opportunities for breathing occur.

Let us next consider the higher qualities of vocal delivery,—of reading as an art, founded upon the principles of a true science. Reading is not as some have asserted an imitative art, in the sense of copying the specialties and peculiarities of a popular representative of the art. It is not in fact imitation in any sense; for he who reads well does not assume a passion or imitate a manner, but becomes that which he utters; makes it for the time being his own thought and feeling, and delivers it with all the force and truthfulness of nature. There must be genuine feeling pervading the expression, and that feeling can only be realized by a clear understanding and thorough conception of the passage to be read. The great neglect of reading as an art no doubt makes this power of conception, the faculty of instantly realizing to our own minds, whatever genius and zeal has produced in other minds, a rare faculty.

But he who aims at the highest excellencies of the art, who studies to understand and to realize what he reads, and to interpret its sense and sentiment in bodily forms is cultivating and developing the conceptive faculty; and may in time attain such command over his imagination as is necessary for the highest excellencies of expressive reading. Hence the method of the teacher. He must make his pupils understand the exact matter of the lesson, the drift of the argument, the plot or character of the poem or dramatic extract. An accomplished reader will often make his own reading of a passage an admirable interpretation of it. In selections of a high order, however, such as Horatius, or the Charge of the Light Brigade or Parhassius, or the trial scene, the story of the poem and a description of the characters ought in all cases to precede the reading. But the same principle should guide the teacher who has charge of the second or third books. Whenever a fine poem—and its simplicity or appropriateness for childhood will not affect its beauty—has to be read, the true nature of the sentiment and all the points of beauty in it, ought to be explained, both that the pupil may have imagination exercised and interest aroused.

The rules of elocution are very numerous; but the principles which suggest them are few and simple. These rules are good for reference and authority; but the accomplished reader never thinks of his "rules." He studies the sentiment or thought which he has to read, the tenor and resolution of one thought to another, or the nature of the sentiment, and the forms of expression and their logical relation or bearing; and then he reads in harmony with the unvarying principles which I now proceed to explain.

Time. When once children can read with facility they read too fast. They pay little regard to the grammatical punctuation, and none to the rhetorical pauses dependent on the logical relations of the sentence. Relief from the struggles with a hard word

is secured by a sudden dash at the next easy word without regard to sense or punctuation, while all the elements of each word are hurried over with a rapidity and imperfection which makes the whole passage a mass of unmeaning sound, unless the hearer carefully follow the reader with his eye on his book. Now good reading ought to be so clear and distinct that the hearer should understand every spoken word without the book. This is an excellent test of intelligible delivery. Slow reading then is the first quality of good reading; and slow reading is secured, first, by the complete utterance of all the elements, all the sounded letters of each word; and second, by a strict observance of the principles of rhetorical pause. The suggestions already given in the first paper must be faithfully carried out to secure the full utterance of the elements. But besides this the reader should be practiced in prolonging all the sounds in words of importance. For it is not by stopping after every word that slow reading is secured, but by prolonging and completing the sound of the letters. In music we dwell upon the vowel sounds; but in reading while the vowels must always have their true sound given, the consonants and especially the liquids, *l*, *m*, *n*, *r*, and *ng* are the true agents of time or quantity; and whether we read or speak if we wish to be heard, that is understood by the greatest number of persons without unnecessary shouting or fatigue, we must give the power and the time of the voice to the consonants, we must utter them distinctly. Drawling delivery arises from a prolonging of the vowels; but energy and clearness and time are secured by a distinct utterance of the consonants. Thus in delivering the following passage slowly, the voice must dwell on the italicised letters and complete the sound of each final letter in the way already indicated.

*Ye nymphs of Solyma begin the song,
to heavenly themes sublimer strains belong.*

The next method of securing due time in reading, is carefully to observe the laws of pause. And here I must urge the commanding importance of sentential analysis. It is impossible to read with logical correctness without such analysis. The application of the laws of inflection depends altogether on the position and relation of the phrases and clauses of sentences; and the rules of rhetorical pauses are all derived from the structure of the sentence. No grammatical punctuation should be neglected. But grammatical punctuation is utterly insufficient for the higher purposes of delivery. The principle of rhetorical power is however, very simple. We must pause before every phrase and every subordinate clause of a sentence. We must pause wherever there is an inversion of the parts, or where there is an ellipsis, or where there is a repetition of the same thought, in other words before and after words and clauses in opposition. Rules of elocution, direct us to pause before prepositions and relative pronouns, and after the compound subject of a sentence; but the teacher, who would refer all difficulties to his own judgment must be independent of rules, and to him, principles are the all-sufficient guides. The principle cannot it is true, be made clear in the lower classes of the school; but even there it is possible and well to accustom the pupil to learn how groups of words represent separate forms of thought; as thus:—

“Who fed me—from her gentle breast,
And hush'd me—in her arms—to rest,
And—on my cheeks—sweet kisses prest?”

Second Book.

Here the dash indicates the rhetorical pause, and although the scholar at this stage may know nothing of prepositions or adverbial phrases, the questions where? and how? would suggest the separate forms of thought and judiciously used, become a means of thought analysis of the highest value. Then as a higher example, where

the grammatical and analytical structures are supposed to be understood, the following passage will illustrate what I have suggested :

Hé — only — with returning footsteps —
broke

The eternal calm — with which — the tomb
was bound ;

Among the sleeping dead — alone he woke,
And blessed — with outstretched hands —
the host — around.

Fifth Book.

Here adverbs and prepositions throw in new forms of thought, additional interrupting phrases, referring to the main thought, and demanding the rhetorical pause by which the full grandeur and beauty of the poetry are expressed by the voice of the reader. Let the passage be read first just as it is punctuated (page 527), and then according to the rhetorical pauses marked by the dash, and he must have a dull ear for perceiving the music of time, who cannot appreciate the advantage of these pauses. The following passage is another example of the arrangement of pause after the analysis of the sentence.

How — like a mocking devil — in the
heart —

Rules — the unrein'd ambition ! Let it —
once —

But play the monarch, and its haughty
brow —

Glow — with a beauty — that bewilders
thought —

And unthroned peace — forever.

Fourth Book.

In all these illustrations the dashes mark the rhetorical pause, while in the reading books we have the common punctuation. It is impossible to give rules for the time to be given to each word. This will depend altogether on the nature of the composition. Any one can understand that elevated, sublime, solemn or sorrowful subjects, must be delivered slower than sentiments of vivacity or animated passion. This, however, is

a safe rule that where the movement of the whole passage is slow, then the pauses are longer than where the movement is quick. The old rule of counting one for a comma, two for a semicolon, &c., is only useful as a rule of proportion. It is no guide for the expression of deep emotion. The accomplished reader or the master of oratory will often in the interval of deep emotion — pause where no punctuation could be marked, and by an awful silence, accomplish triumphs greater than those of speech. No rules can instruct us in this difficulty. Judgment, conception and deep feeling only, must be our guides.

There is another important use that may be made of the rhetorical pause. In the reading of poetry the regular recurrence of the accented and unaccented syllables is one of the causes of sing-song which disfigures general reading. This defect of delivery is heard in its worst form when, from mere habit the reader accents or gives undue force to unimportant monosyllables, as in the following passages, where by observing the law of accent the italicised words have emphasis.

Oh ! *dark, dark, dark, amid the blaze of
noon.*

Hail *holy light, offspring of heaven, first
born.*

On *the bare earth*, exposed, he lies,
With *not a friend* to close his eyes.

Show *pity Lord*, oh *Lord* forgive,
Let a repentant *rebel live.*

By *prayer* the *offended Deity appease.*

Let any one read these passages in the usual way, and the weight of the voice will fall on the italic words or syllables. But if before the accented but unimportant word a slight pause be made — the music of the metre will be preserved, and sing-song prevented.

Oh — *dark, dark, dark,* — amid the *blaze of
noon.*

Hail — *holy light* — offspring — of heaven —
first born.

On—the bare earth—exposed—he lies,
 With—not a *friend*—to close—his eyes.
 Show—pity *Lord*—oh *Lord*—forgive,
 Let—a repentant rebel—live.
 By prayer—the offended—Deity to ap-
 pease.

There are yet the subjects of inflection of modulation, and emphasis to be explained. Their importance will justify the preparation of at least another paper.

In the meantime let the teacher who has listened to or heard of the triumphs of delivery in oratory or public reading, remember that the excellencies of the art, like all other excellencies of all other arts, are the result of system and industrious applica-

tion. The grandest results are often but the combined operation of simple principles, and the greatest triumphs of every art are due to a wise and earnest application of all the elementary principles that constitute the art. It is true that genius anticipates laws and dictates them; but it is the privilege of all minds to reach by the study and application of such laws, and, although the art may only be that of expressive reading and the field of action not wider nor higher than the household or the school-room, yet this expressive reading is capable of creating enjoyments and influences as delightful and beneficial as music or painting.

THE OBJECT OF PUNISHMENT.

No teacher has a perfect school. No teacher can get along without inflicting punishment of some kind upon wrong-doers. He may be able to dispense with corporal punishment, but he must punish in *some way* so long as there are disobedience and wrong doing in his school. A gentle reproof for a poorly learned lesson, or a stern look to a mischievous boy differs in degree only, not in kind, from a severe flogging or a sound flogging. The success or failure of punishment depends very much upon the spirit and manner in which the teacher inflicts it, and these, in their turn, depend largely upon the view which he takes of the necessity and the object of punishment. It is important, then, for every teacher to understand the philosophy of punishment, and to be able to give a clear answer to the question, "Why do you punish your scholars?" It is the object of this article to answer this question.

It should be borne in mind that the object of punishment is the same in all government. There is, to be sure, a vast difference between divine, civil, military, family, society, and school punishments. They differ in form, in duration, and in the person or persons who inflict them, but they agree in having a common object, a common *reason why* the punishment is in-

flicted. The relation of punishment to wrong-doers and wrong-doing is the same in all those organizations which are marked by the governmental idea.

Let us first notice some of the false reasons for inflicting punishment.

1. Punishment should never be inflicted from revenge or envy or jealousy or pride, or any of that class of feeling. A teacher who is influenced by such feelings in inflicting punishment, must despise himself, and will surely be despised by his pupils.

2. Nor is the instinct that prompts to punishment a sufficient reason for inflicting it. We all have such an instinct, and it was implanted in our constitution for a wise purpose. When a crime is committed or a wrong done, this instinct demands the punishment of the offender, and is satisfied with that punishment. Without this instinct in man, it is doubtful whether any government could be sustained. But the mere instinct is blind, and must not be allowed to sway the judgment. It must be under the control of the judgment, otherwise we shall make many mistakes. "Be ye angry (at all wrong-doing) and sin not." The teacher who punishes under the influence of excited anger, and in a way that shows that he enjoys inflicting the punishment, will not be sustained by the common sentiment of

the school. If he can not control his feelings, the punishment should be deferred until he can.

3, Punishment should never be inflicted *simply* because the offender deserves it. Ill-desert furnishes a ground for inflicting punishment, but is not in itself a sufficient reason for it. A person under just authority has broken a law. Now we will suppose that the one in authority absolutely knows that that person will never do wrong again, and also that no one in the universe will be influenced, even in the remotest degree or manner, by his sin, or by the fact that it goes unpunished, the infliction of punishment under such circumstances would be so much unnecessary pain. It would do no good. And this shows that ill-desert in itself is not a sufficient reason for punishment.

It may be said that punishment should be inflicted in such a case to sustain the dignity of the law. But the object of sustaining the dignity of the law, is to keep men from doing wrong, and if, as was the case in the supposition, that object is already gained in another way, then no pain need be inflicted. No person, however ill-deserving he may be, should be punished, unless his punishment is going to do some good—that is, unless it is going to operate in some way to prevent wrong-doing in the future.

This brings us to the true reason for inflicting punishment. All the reasons that can be given are summed up in one simple, comprehensive reason that applies to *all* legitimate punishments in *all* governments, viz :—Punishment is inflicted to prevent wrong-doing. It may prevent wrong-doing in the offender only, or in others only, or in him and others also. There are circumstances in which punishment is inflicted solely with reference to its effect upon the offender. Such is the case in a family where there is but one child. There are other circumstances in which punishment is inflicted solely with reference to its effect upon others. Illustrations are found in capital punishment and in eternal punishment. These could not be defended for a moment, if the reformation of the offender were the only object of punishment. It is a great mistake to suppose, as some do, that the reformation of the offender is the only or the principal object of punishment. It is, indeed, true that the relative importance to be attached to the reformation of the

offender increases as the number of subjects diminishes, so that if the number be reduced to one, and that one the offender, his reformation becomes the great object of punishment. But such cases are rare, if they exist at all. The general statement that punishment is intended to prevent wrong-doing covers all cases, even those in which there is no wrong-doing to be prevented except in the offender. While the statement that the object of punishment is the reformation of the offender is only a partial truth, and sometimes is not even that. If the offender can be reformed, so much the better, but if there is absolutely no hope of his reformation, the punishment must still oftentimes be inflicted. It is so in God's government; it is so in the state; it is so in the school.

Punishment operates in two ways to prevent wrong-doing.

First, it brings the motive of fear to bear upon the minds of those who are disposed to wrong. This is a proper motive to use with such persons. They must be restrained from doing wrong, if not by a higher motive, then by a lower.

Secondly, it gives to all an impressive exhibition of the nature and guilt of wrong-doing, and of the justice and dignity of the law. The person who has a proper idea of these things is not so apt to do wrong, as is the person whose ideas of these things are faint and indistinct.

Now let us make a practical application of those principles to the school. The school is a government in itself. The teacher is the governor. He combines, in most cases, the legislative, judicial, and executive offices. In order to secure that good order and decorum, without which the great object of the school cannot be attained, the teacher lays down certain rules. They are for the public good, for the good of the whole school, and hence for the good of each individual in the school. The fact, however, that it is for their interest to keep the rules, does not induce all to keep them. One of the scholars breaks a rule. If he is not punished he will be encouraged to break it again and again, while others influenced by his example, will do likewise. But if the teacher firmly yet kindly inflicts the punishment, the *fear* of suffering similar pain or disgrace has the *tendency* to prevent the offender and others like him from breaking the rule in future. At the

same time, if a suitable punishment is properly inflicted, the whole school receives a deeper impression of the necessity of the law, the estimation in which it is held by the teacher, and the guilt of disobedience—and that impression has a tendency to keep them from doing wrong. The punishment may reform the offender. It is very desirable that it should. But if he is perfectly incorrigible, he must be expelled from school,—not simply to cut off his wrongdoing, but as an example and warning to others.

Let the teacher thoroughly understand the necessity and reason for inflicting punishment; let him also, by familiar talks and illustrations, make his scholars understand the same things; then let him, by his manner in inflicting punishment, show that he does it from a sense of duty, for the good of the school, not because it gives him pleasure,—let the teacher do these things, and he will find school government much easier than he supposes.—*R. T. Cross, in National Teacher.*

THE RELATION OF PSYCHOLOGY TO TEACHING.

ORDER OF PRESENTATION OF A SUBJECT.

There is that in the nature of every subject that determines in some degree the manner and order of its presentation. This can not be overlooked, whatever be the character of the teacher or the method determined upon. However, there are certain general principles embracing all study that may very briefly be stated.

The saying, "from the simple to the complex," etc., lies at the foundation. The difficulty lies in the errors that occur in attempting to realize the idea, which cause such indifferent results as to bring discredit on the teacher and the plan of which this is the basis. From the simple to the complex is easily said, but to determine what will seem simple and what complex to the mind of the child requires a keen thoughtful observation and careful study, both of the matter presented and the manner of presentation. To one who has learned to think and combine many statements in one general expression, simplification has a widely different meaning from that it must have when used in regard to the work of a child. That this is unknown—or, when known, disregarded—we have but to refer, with a half-score of exceptions, to the text-books prepared for the children's use.

To illustrate. The matter of an arithmetic lesson is greatly simplified for a teacher by comprehending it in a single statement, as,—“the value of a fraction varies directly with the numerator, and inversely with the denominator;” but it would be most unwise to present this at first to the consideration

of the class. When considered with reference to all the facts it embraces, it is indeed more simple, but much more complex than any one of them considered alone. To begin with the simple, we must analyze every subject, separating it into its elemental parts, postponing the generalization until the child has acquired a sufficient number of facts, together with the ability to generalize for himself. It requires but a little thought to make clear that this is the natural method, or the method by which the world has come to its present knowledge of any subject. In every discovery, knowledge and practical use of a large number of simple facts must long precede the statement of the science in which they are comprehended. For science is but the arrangement in a systematic manner of facts long known. To begin, then, with the enunciation of general principles is to reverse the normal order; and the worse feature of this is that it cuts off the child completely from anything like self-help, and makes him entirely dependent upon his book and his teacher. If the teacher use the true method of instruction, he is in a great measure thrown upon his own resources, and when he uses text-books he must treat them as if they were Chinese, and work from the last page to the first.

I am inclined to think that pupils in the more advanced grades suffer most from this abnormal arrangement of their work, every possible device being utilized to make them wholly dependent on others. Their works

on natural history tell them that all animate objects are either animal or vegetable, and proceed directly to divide the animals into five branches, which are in turn subdivided into classes, orders, genera, and species. After some weeks or months of such weary plodding as may possibly give them a lifelong dislike for the subject, they learn of mammals, birds, and insects, with which they are or may become acquainted. Possibility of an awakening interest can hardly be until this long-deferred normal beginning is reached, but it would be strange if the darkness in which the first steps were taken had not so dulled the vision as to render imperceptible the many beauties which this study holds for every student.

Likewise, in botany, instead of beginning with flowers, which they may examine, analyze, and arrange in groups according to their resemblances, they spend many weeks delving among endogens and exogens, gymnosperms and cotyledons, until, with brains inextricably tangled with words they cannot think of applying to the flowers about them, they come to regard the study as dreary and tiresome, and when the text-book is laid aside with the term, neither it nor the science is ever thought of, except with emotions of aversion.

The order of studies being determined, it is important that the continuity should not be broken. Links missing in the chain will correspond to blank spaces in the mind, which will tend to render indistinct succeeding knowledge that hinges on that which is lost. By the study of psychology we become acquainted with those mental processes by which the knowledge we possess was gained, and thus learn how this may be presented to be grasped most readily by the child. The subjects presented are not independent, but, they rest on what has preceded, except something yet to come. To omit any part is to destroy the natural basis on which the expected knowledge should rest, and must greatly enhance the difficulty of comprehension on the part of the learner.

Independent facts—*i.e.*, facts having no bearing on what has preceded, and unrelated to that which is to come—have no place in the course of study. The normal order of presentation is that in which each step prepares the child for the next, and each new lesson is but the outgrowth of the old.

This, wisely followed, promises success with mathematical assurance.

I wish now to state most clearly a principle I have already indirectly referred to—the necessity of independence in study. The mind may possess itself of a thought, having received it clearly stated from another mind which has thoroughly digested it, and arranged the manner of presentation so as to clear the way of all difficulties and render the grasp of the thought an easy mental act. But in the beginning, some mind must have reached the same end slowly and loiteringly, itself removing obstacles and laboring with difficulties, obstinately laboring until the clouds are lifted. The difference between the methods is the difference of passivity and earnest activity. In the one the mind accepts the thought ready for assimilation, itself passive and inclined to action in the slightest possible degree; in the other all the powers of the mind go forth to healthful labor and find in activity that sturdy growth which is the characteristic of thoughtful men.

There is nothing so desirable as self-helpfulness, and there is no teacher like that one who, while presenting as little as possible of ready-made thought, stimulates that desire of acquisition which leads to independent thought. The ground is, even broader than this. Not only should the pupil not be dependent upon the teacher, but he should also be in the greatest possible degree independent of other sources. Knowledge is extremely desirable, and second-hand knowledge is infinitely preferable to ignorance; but we shall all agree that that knowledge which the mind has obtained through its own efforts, unaided, is of greater value and has contributed more to mental growth.

There are better methods of instruction than those which make of the pupils mere passive recipients—so many pages of a text-book assigned, so many statements on these pages committed, a time for repeating what memory has gathered, and a teacher to clothe in clear language and fresher illustration that which is dimly understood. And the mind waits, sluggish, powerless, inane, like the encrinite accepting food, if food come to it, but powerless to seek for itself. Accustoming itself to knowledge fully digested, it courts a mental dyspepsia, which renders the assimilation of solid food an impossibility. A sad feature is this,

that from the nature of the case, as we are conscious of mental growth through the action of the mind, these mental Casper Hausers must in a great degree remain in ignorance of their deficiencies. The power by which they might recognize and possibly reform their ill-advised treatment is the power that has become a weakness. Thus, just in the degree that they are made dependent on other minds, do they come to regard their dependency as natural.

Self-education alone answers the true idea of education. In just the degree that the teacher prepares the way by removing the difficulties and bridging the hard places, in just that degree does he interfere with the growth that can come only through active and habitual use of the faculties. Knowledge acquired without the mental labor necessary for assimilation is a burden which the mind throws off at the earliest opportunity, and from this arise the disgust and hatred with which youth often regard school. It comes from the necessity of continually doing things which give rise to no pleasurable emotions. There is no delight surpassing that of the discovery of a truth unaided. What if the truth has been known for centuries? To the pupil it is new, and he feels all the discoverer's enthusiasm. Strengthen the impulse now given for self-help, and you aid the most important educational force. New worlds are continually opening about him, richer than those discovered by the Spaniard, and gathering in their treasures he is the ideal student.

This longing for truth is a part of our being, stifled, dwarfed, ignored often, till it turns itself to base and petty things, and forgets the noble purpose for which it was created.

This habit of self-help must be formed in infancy, and opportunity for its exercise should never thereafter be removed. A talking teacher may do to a self-helping youth an irreparable injury, by smoothing the way before him till, like the Carthaginians at Capua, he is enervated by easy living and unfitted for real labor. This is the only preparation that can be made for original investigation in mature life. Thoughtful boys and girls must precede thinking men and women. The ability to depend on one's self cannot be easily gained—if, indeed, it can be gained at all—in mature life. Dickens' tale of Skitzland is

no fable. Many of our pupils will waken men and women in stature, but wanting the powers they have never learned to use; able to perceive and remember, to do tasks assigned, and to go for help to a superior when a difficulty is met, but robbed of the powers God meant them to possess, which would have made them helpers instead of helped, leaders rather than followers, able to drink from the fountain-head, instead of taking the cup as it passes from hand to hand.

To sum up briefly. The order of presentation of subjects should conform to the order in which the mental faculties grow strong for use, giving first lessons that direct the attention of the child to external objects and natural impressions, and lead him to observe with accuracy and quickness; second, lessons that give opportunity for the exercise of that combining or imaginative faculty which shortly evinces itself; and lastly, lessons that shall strengthen the faculty of reason and the power of judgment; and underneath all this, or rather interpenetrating it, such discipline as shall make the child subservient to himself, entirely self-controlling.

There is another phase of this subject that has been to a great extent overlooked. Tracing the causes of failure in the feeble minds about us, vacillation and fickleness are continually suggested. An indispensable element of success is a determined purpose. Even mediocre men, should they apply themselves willfully to one thing, with a purpose to make of themselves all that can be made in one direction, would soon cease to be mediocre. Indeed, I believe there is no one who has received so poor an outfit from nature as to be unable to live a successful life, if he be modest in his ambitions and unyielding in his will. But nothing worthy can be achieved except by patient and continued application. Application is possible only with the power to hold the attention fixed, through consecutive hours, days, years; and this can be obtained only through a will disciplined and habituated to control every impulse and desire.

It is customary to disregard this phase of training, both in the school and family. The expression "breaking the will" indicates almost the only effort put forth in this direction,—an endeavor better left unattempted, since, whether successful or otherwise,

it ruins the subject of the attempt. If successful, the result is a cringing, hesitating, spiritless man; if unsuccessful, an imperious, overbearing, egotistical despot. Yet it is possible to discipline the will of the child, making it in its natural and healthful workings the glory of the life. This terrible master, if once made an obedient servant, like the genius of the Arabian Nights, holds the power to unlock all the treasures of the universe, to lead the way to mysteries concealed through all time, and to place in the hands of him he serves the sceptre of omnipotence.

The child must become conscious of its power to choose, since every expression of choice is an exhibition of will-power. As soon as the child is able to comprehend this, the training of the will should begin. Obstinacy must not be mistaken for will. In reality, in the majority of cases, weakness of will and obstinacy are intimately associated.

With this recognition of his power to choose, the child must also become conscious of the moral responsibility that rests upon him in the exercise of the will-power. Consciousness of this responsibility will rise in him as he is left to consider the results of his decisions. Being called upon to exercise his power of choice, even if he makes a disastrous decision it is well that he should be required to abide by it, at least until he clearly comprehends the consequences, and thus fastens in his memory the principle that careful judgment should precede choice.

To strengthen this power, and to render its workings more in harmony with the truest interests of all, the teacher should place more responsibility of choosing upon the child. While the thoughtful care of the teacher, unknown, prevents disastrous results, the child should be required to think and decide for himself, and to abide by his decision, if it may be, until the natural results follow and are recognized as such by the child. In this way, and in this way only, can strong, trustworthy, and self-reliant men and women be developed. Though the judgment of the teacher, in all cases, should be more trustworthy, it would be worse than unjust that the child should be blindly guided by this; and when the child has been so guided through childhood, is it not preposterous to expect that in mature life it shall be able to use wisely a power whose very existence it had hardly recog-

nized? On the other hand, the self-reliant and decisive boy will become the man whose judgment is safest, and whose decisions need but rarely to be reversed.

There is great danger, however, that the child will form habits of hasty and absurd conclusions, and abide by these, obstinately arrogating to himself honor for his decision of character. Against this danger the teacher's personal example is the natural and safest guard. As the pupil, emulating the teacher, recognizes that by his method of reaching decision, decisions properly depend on reason, he will naturally tend to search his own thought for a reasonable basis on which his choice shall rest.

And there is yet another question of great importance, the answer to which must be found in careful study of psychological principles: "What shall be the character and methods of school government? What laws shall be given to the child? What shall be their scope and design? What penalties shall be attached to their infringement?"

There has been much discussion of late years, and as its result a quite generally diffused idea that Solomon's injunction regarding the rod may be disregarded with little danger. But the question remains unanswered, "What punishment shall take its place?" and so while most teachers advocate some milder method of suasion, practically they cling to the method which has come down to us with the cordial approbation of our forefathers. I fear that in most cases teachers take the fact of transgression for granted, and direct their energies less in the direction of prevention than of cure. Though, in the present state of affairs, it may not be possible to achieve a perfect success in the prevention of school room sins, yet it seems to me that much may be done, and the question becomes twain, "What shall be done to prevent transgression?" and "How shall transgression be punished?"

In regard to the first, the natural demand of both mental and physical powers for action *must* be gratified. There is no possibility of a refusal with safety to the child. The error is, then, on the part of the teacher if, as is often the case, the pupil, hedged about with many and needless restrictions, permits this pent-up demand for activity to vent itself in some forbidden channel. The most of what is called misconduct, I believe,

is only an entirely right and commendable activity, wrongly directed. The difference between the studious and earnest pupil and the mischievous and turbulent one is only the difference of two streams, the one, of which flows in its proper channel musically, helpfully; the other thrown from its course, bursting its banks, boils through the meadows recklessly, wastefully. It is a part of the teacher's work, failure in which is failure in duty, to provide opportunity, through the work of the school-room, for full and free exercise of the child's faculties.

We do not accept the doctrine of total depravity, nor do we believe, if two equally attractive methods of gratifying the demand for exercise be open to the child, he will deliberately choose the wrong one. The fact is that fly-traps, and slate notes, and tit-tat-to are vastly more interesting than geography and grammar, and the child turns to them as a matter of course. Where, then shall rest the blame of this misconduct—on the child, immature, ignorant, and plastic, or on the teacher, who should possess the power to direct and shape this easily-bent morsel of humanity to the shape of true manhood? But if, when all has been done that lies within the power of the teacher, offences must needs be, how shall the woe be brought to the child by whom the offence cometh?

1. The child, at different stages of mental development, requires different treatment; and

2. Penalties may be natural or artificial.

First, an infant, when all the power of the mind is exerted in the perception of external objects, can only become conscious of external impressions. If punishment is needed for a child at this period, corporal punishment may rationally be used.

But the development of the child soon gives him a claim to the title of a *thinking* being, and though, mayhap, he reasons vaguely, yet there is a dim appreciation of the relation of causes to results. Punishment of such a person is *defensible only* when it is regarded as the natural consequence of some conscious act of that person. Nature suggests the law, which we must be wise

indeed to improve. If I violate a natural law by placing my hand upon a heated iron, the penalty follows instantly in the pain of the burn, proportioned exactly to the degree of the offence. If I repeat the transgression, I experience the penalty a second time; and should I repeat the act a hundred times, I am conscious that a hundred times the penalty would follow. Recognizing this connection between transgression and its consequences, the least child exercises great care in conforming to nature's laws in so far as they are apparent to him. For every wrong action our pupils are liable to commit, there is a natural reaction, and if the teacher were but careful to make manifest the necessary connection, and to see that the penalty followed the transgression inexorably, the child would soon acquire, for the laws of the school-room, that respect which he now feels for the laws of nature.

For the pain that attends an infringement of nature's laws, one may become angry and embittered, but his resentment can be directed only against himself, the transgressor. Likewise, if the teacher act only as the agent in causing the natural reaction to follow the offence, in this case also anger, if felt, can be directed only against the transgressor, and a mutual dislike, which is so often engendered by an artificial punishment and which is the prolific cause of further trouble, may be avoided.

It rests with teachers alone to make this matter practical, by searching out the natural penalties for school-room offences. If this be earnestly and thoughtfully studied, punishment in every case avoided, unless there be a manifest connection between it and the fault that preceded it, and care taken that no offence escape its natural consequence, the time will soon be known among us when this question will have ceased to trouble, and the rod that now hangs, a badge of disgrace, from so many school-room walls, will occupy its only legitimate place, in the hands of those beings to whom the Creator has not given souls.—*Prof. E. W. Thompson, in Michigan Teacher.*

JOHNNY CONTINUES HIS STUDY OF EYES.

BY ADAM STWIN.

The day fixed for the visit to Central Park proved charmingly pleasant: not too warm, yet sunshiny enough to make the contrasts of light and shade all that were needed for Johnny's purpose. He is always delighted to visit the animals; but this day he was doubly eager, having a special object in view. It's wonderful how much more one can see and enjoy at such a place when he knows beforehand what he is going to look for!

It was just supper time when the boys returned, and Johnny was so excited by what he had seen that he could scarcely stop to eat.

"What is the matter with the boy?" his mother asked, in amazement at the torrent of observations and questions he poured out as soon as I entered the room.

"He's crazy about eyes," said Fred. "His head's full of them."

"Full of nonsense!", exclaimed Mary, who is just old enough to think that what she doesn't know isn't worth knowing.

Fred laughed; and seeing that Johnny was making himself altogether too prominent for a little fellow, I begged him to desist, which he did, with something like a heroic effort.

When the supper was over and we had retired to the sitting-room, I said to Johnny who was hovering round, fairly aching to have his talk out, "Now Johnny, let us hear what discoveries you have made to-day."

"Discoveries!" cried Mary. "What could he do making discoveries?"

"Listen awhile, and perhaps you'll learn," I said. "You know that anything he finds out for himself is a discovery to him; whatever it may be to any one else."

All this time Johnny's story was running on, his thoughts tumbling over each other like a flock of runaway sheep. He was too excited to talk straight. "Not so fast! not so fast," said I. "We'll never get anything if you go on at that rate. Tell us, to begin with, what you noticed first."

"Of the animals?"

"Yes; what animal's eyes did you notice first?"

"A goat," said Johnny, "but he wasn't in the Park."

"Never mind; tell us about him."

"He was eating a sheet of paper in the gutter, just outside of the Park."

"Eating paper?" This from Mary; then turning to me she said, "Goats don't eat paper; do they?"

"Yes," said Johnny stoutly, "brown paper."

"Johnny is right," said I. "Brown paper is made of straw, which goats like; and when the poor things are hungry they are not very particular whether their straw is in its natural state or whether some one has turned it into wrapping paper. But our talk was to be about eyes, I believe. What kind had the goat?"

"Ugly eyes," said Johnny; "they're just like cat's eyes turned over."

"Inside?"

"Yes inside," he said. "Goats wink like anybody; but the——the——"

"Pupil," I said, as he hesitated.

"Pupil," he repeated, "the pupil shuts up level, so," and he held his hand flat before his eyes. "Pussy's eyes are just the other way, you know."

"So there are at least three different styles of eyes that you have seen,—like pussy's, like the goat's, and like——?"

"Humpty's," said Johnny.

"We'll call that kind *dog eyes*," said I, "and the others *cat eyes* and *goat eyes*. The inner curtain of the dog's eyes closes the pupil, (that is the window of the eye) like this: O, o, o, the pupil remaining always round. In the cat's eye it closes so O, O, O. And in the goat's this way O, O, O." I said, marking the forms with a pencil.

"I never knew that before," said Mary, beginning to have a wholesome respect for Johnny's superior knowledge.

"You see, then, how needful it is to be careful not to accuse others of talking non-

sense just because we happen not to understand all they saw."

Mary said nothing; but I guess she will not forget the lesson very soon.

"What are those holes for?" Johnny inquired, seeing me cut a number of oval slits and round holes in a card.

"I want to show you the different styles of pupils. Here is a series of round holes beginning quite large and ending small. Now if you hold them close to your eye, and look at them one after another, you will see the circle of sight grow smaller and smaller till it is only a small round spot. That is the way with our eyes and the dog's when the pupil contracts. Now, hold the card so that the narrow holes stand upright—so—and you'll see how pussy's eyes change as the light grows brighter."

"Let me see," said Fred.

"That sort of pupil, you see, cuts off the light from the sides. The range of sights is narrowed, but up and down you can see as well as ever. Have you ever noticed pussy when she was eating anything in a light place?"

"She growls," said Johnny.

"She keeps turning her head from side to side, to see if any one is coming," said Fred.

"She turns her head because she can't see far on either side without doing it. Her sight is straight ahead."

"That sort of eye wouldn't do for us," said Fred trying the holes.

"Not very well," I replied. "We do not skulk in coverts like cats, and need to see all around and up and down equally well. Now turn the card the other way, so as to make your field of vision like that of a goat."

"The field is wide enough," Fred remarked, "but I can't see up and down at all without moving my head."

"That sort of light would suit us no better than the cat's," said I, as the younger children were trying the card. "Though it might do for the Esquimaux. It would save them the trouble of making bone spectacles as they do, that is, eye-covers with narrow slits in them, to shield their eyes from the glare of the sun on the snow and ice. You get the same effect nearly by looking between half-closed lids. But all this is a great way from Johnny and the Central Park. You know what different kinds of eyes there are, Johnny; now let us

hear what kinds of animals they belong to."

"Wild-cats have eyes like pussy's" he said; "and tigers, and leopards, and lions, too, I guess, but they were so high up I couldn't see them very well."

"Lions have *cat*-eyes too; and panthers."

"Panther kittens," said Johnny; "funny little rascals! I'd like to have them tame. The old panther was asleep and wouldn't look up."

"Her eyes are the same; and so are the eyes of a good many other animals which have claws like pussy, and the same sort of tongues and teeth. They hunt like pussy too, and purr, and eat flesh. They are all cats. Were there any with eyes like Humpty's?"

"A good many; the bears—but I couldn't see the big Grizzly's eyes, he was asleep in his den; the foxes; the 'coons were asleep; the kangaroo has pretty eyes, but he's shy. The foxes eyes looked like a dog's but they were lazy. They'd just lie with their noses on their paws and blink at you, as Humpty does by the fire. The wolves wouldn't stand still; they're almost as bad as the—the—what did you call em' Fred? those ugly spotted things over the panther kittens."

"Oh! the hyenas," said Fred.

"I couldn't see their eyes more than a second at a time," Johnny went on; they looked like dogs' eyes, *some*, only awfully sneaky."

"You'll have to try them again another day. Were there any with eyes like the goat's?"

"A few," said Johnny; "the grunting cow was one."

"He means the Yak," Fred explained.

"Did you see any common cows?"

"They were tied on the grass where I couldn't get to them."

"Any sheep?"

"The sheep were on the other side of the park," Fred answered.

"The Zebra had em'," Johnny said.

"Did you notice any horses' eyes?"

"I didn't see any close enough; but I will, the first chance I get. I couldn't see the deer's eyes either, nor the buffalo's, they were too far off. I saw the—the—Those animals with long necks, Fred, and funny little heads, there in the corner."

"Giraffes?"

"Yes, the 'raffes; one put his head down

to me and wrinkled his nose. His eyes were a little like a goat's—only big and black and handsome. I couldn't get near enough to the elephant—he has such little pig eyes—and there was such a crowd around him. You ought to have heard him scream when he couldn't steal any more hay from the canal. It made him terribly angry, and he had more than he could eat in his own stall all the time.

"How were the camel's eyes?"

"They were big enough, but I couldn't get a chance to see them right. Besides, it

was getting too dark in there to see much, and we had to come home. But Fred has promised to take me there again some fine day."

"Take me too Fred!" cried Mary eagerly. She always turned up her nose at the animals before.

"Be sure you remember the sheep," I said "and the cows and horses, if you see any. And take a look at the birds too—the owls and the eagles and the rest. You'll find their eyes worth looking at closely."—*Christian Union.*

PHYSICAL SCIENCE FOR THE YOUNG.

Outside of the large cities of our State too little has been done with physical science in the public schools. Custom and public opinion demand so much knowledge of books in all the branches which overcrowd the primary course that the teacher shrinks from any attempt to introduce new studies. Moreover there is the prevailing sentiment that physical science can be taught only by means of costly apparatus and by those only who have been educated in science courses. Looking at these difficulties theoretically they do appear to be great enough to deter all but the most ambitious; but the experience of many young and unpracticed teachers who have had the courage to make the attempt to overcome them has proved that, after all, the courage to grapple with them is the only strength needed to overcome them.

It may not be possible to organize a Science class to rank with those in geography and arithmetic among the daily exercises of the school-room, but it is not impossible, surely, to secure time for a short general exercise each day or at least as often as once or twice a week. It may be an exercise for the entire school if necessary, but, where circumstances will allow the arrangement, success will be more certain if it be an exercise for a class, the members of which are of similar age and attainments.

It may not be possible to command what is called an "apparatus," but abundant experimental illustration may be given by the help of objects and utensils to be easily gathered in any district. And let it be re-

membered "That the *simplest experiments*, or those most easily imitated by the pupils, *are the best.*"

It may not be possible for every teacher to accomplish as much by this means as he might, had he himself been trained in courses of science and in methods of manipulation, but he can not fail to arouse a lively interest and a greater mental activity among his scholars, to impart much useful information and at the same time to leave the minds of his pupils after each exercise in better condition to pursue their regular studies.

But how shall such oral exercises in elementary science be conducted? No two intelligent teachers will ever accomplish a result by exactly the same process. They may work in the same direction and in obedience to certain fundamental principles but, beyond this, every successful teacher will be found to have a "way of his own." Hence only a general answer to the question just asked is desirable. Experience will be found a quick and faithful instructor in matter of detail, by every teacher who will heed her precepts. But, in a general way, the following suggestions will indicate the method.

The object. To enable the pupil to see clearly the facts presented and to infer correctly from what is seen. Let the teacher lay every plan and work out every detail with reference to these two results.

The preparation. Never attempt an experiment before your class until you have tried it, studied it, and laid your plans for

using it. Always work according to a well considered plan, marked out beforehand.

The process. Place the apparatus clearly in view of the class and then ask one and another to describe it. Go through the work of the experiment deliberately and let the members of the class describe it step by step. By appropriate questions, or by statements, brief and simple, direct their minds to essential points which you will find them constantly overlooking. In this way carry their thoughts along toward the final inference, which must be seen to be the natural consequence of the facts observed in the experiment.

And following these suggestions in each successive exercise, do not forget in addition to so select the subjects as to make the exercises follow in natural and logical order.

A few lessons about some of the simple qualities or properties of matter will be likely to claim attention first. And let us suppose that to develop the definition of divisibility is the object of

THE FIRST EXERCISE.

Experiment.—Obtain a quart bottle or fruit jar of white glass, and let it be filled with clear water. Obtain also a small quantity of unground cochineal. This substance furnishes the carmine with which most red ink is colored and it is interesting to remember that each little seed-like piece of it is the dried body of an insect. Select a single large sized piece of cochineal: this is the body which is to show its quality of divisibility.

Crush the cochineal in a tea-spoon thoroughly. Notice that it is already broken into many parts. Put a little water with it and mix them well, and then pour the mixture upon the water in the jar. Notice its rich color and the cloud like streams descending through the water. Finally stir the fluid vigorously and afterwards notice that the whole body of the water is distinctly colored and that, even on close examination, separate particles of cochineal may not be seen. Where is the cochineal? It is scattered through the water. Why are we unable to see the particles? Because they are too small to be visible. What does this

experiment teach us about the cochineal? That the little seed-like body may be broken into a multitude of pieces.

Let us make a little calculation. It will need as many as a hundred such invisible pieces, one may think, to color all parts of a single drop of water. Now it is said by those who have estimated it that there are not less than 15,000 drops in a quart of water. Then into how many pieces has the single ball of cochineal been broken? $100 \times 15,000$. No less than a million and a half!

Observations.—Can other bodies be separated into parts? Who cannot think of an example at once? We have seen glass shattered by a single blow. We have seen wood cut and broken. Bars of iron are sometimes snapped asunder.

Then let us turn the question over; who can think of any body which can not in some way be separated into parts? No one of us? Then what may we say of all bodies of matter?

Inference.—All bodies of matter may be separated into parts. Now the quality which allows this is called divisibility. Who will define this term?

Definition.—Divisibility.—That property of matter which allows a body to be separated into parts.

No attempt is made to do more than give an outline of the exercise. The conversation between teacher and class by which the several points are brought out will not be likely to be identical in any two classes while the general plan indicated may be followed in all. Moreover this general plan may be followed in the construction of the definitions of the other properties of matter. It is this. By experiment attract attention to the quality itself in some one substance. By other experiments or familiar observations let it be seen that the same quality is possessed by each one of several other substances. By the experiments and the observations to be led to infer that many, or perhaps all bodies alike, possess the same quality. To this common quality let a name be then for the first time given, after which the formal definition follows readily.—L. E. Cooley, in *N. Y. Educational Journal*.

EDUCATIONAL INTELLIGENCE.

CANADA.

—The tri-ennial meeting of the Alumni of the Woodstock Literary Institute on the 7th of April, was very successful and largely attended. Dr. Fyfe was presented with \$160, in anticipation of his visit to Europe. A number of excellent addresses were given.

—The *Globe* says:—"The vacancy caused by the resignation of Dr. Wiggins, as Principal of the Institute for the Blind at Brantford, has been filled by the appointment of J. Howard Hunter, Esq., M. A., who has signified his acceptance of the position."

—We clip the following from the *Journal of Education*: The examination of Candidates for admission to High Schools and Collegiate Institutes will be held (*D.V.*) on the 29th and 30th days of June next. The examination of Public School Teachers will also be held (*D.V.*, on the 20th of July for 2nd and 3rd Class Certificates, and on the 27th July for 1st Class Certificates. The Chief Superintendent has been notified of the following elections to the Council of Public Instruction:—The Very Rev. Wm. Snodgrass, D.D., to represent Queen's College, Kingston. The Rev. John McCaul, L.L. D., to represent University College, Toronto.

—At a regular meeting of the Ottawa Teachers' Association, after the transaction of routine business, the following resolutions were unanimously adopted:—1st. That in the opinion of the Association, active steps should be taken to secure the selection of a fit and proper person to represent the Public and Separate School Teachers in the Council of Public Instruction. 2nd. The Association will not pledge its support to any person who has not spent some time in actual teaching, besides having the necessary legal qualifications. 3rd. That in the event of a suitable candidate residing in the Ottawa Valley seeking the position, the Association will support him in preference to any other. 4th. That to secure united action in this matter, mutual correspondence with neighboring associations is desirable, and is earnestly solicited.

—A most successful Teachers' Institute was held on May 14th and 15th by Dr. Sangster, in the village of Madoc, North Hastings. A large number of teachers from all parts of the county were in attendance during both days. The Inspectors for South and North Hasting, John Johnston, Esq., and Wm. Mackintosh, Esq., A. F. Wood, Esq., Warden of the County, and a large number of clergymen and teachers were also present. The methods of teaching reading, arithmetic, grammar, geography, object lessons, the method of questioning, and other subjects were discussed by Dr. Sangster in a manner characteristically lucid and practical. This address to teachers on the importance of their work was peculiarly impressive and instructive. On the evening of May 14th, a large audience assembled in the Masonic Hall, to hear the doctor's lecture on "Heroes and Hero Worship." The lecture was a rare intellectual treat, little expected even by those who knew Dr. Sangster to be a very able teacher. (Com.)

—From a telegram to the *Mail* we learn that Dr. Sangster delivered his lecture on "Heroes and Hero Worship" in the Town Hall, Belleville, May 16th, to the largest and most enthusiastic audience which has yet assembled in that building. His Worship the Mayor of Belleville took the chair. At the close of the lecture a vote of thanks to the learned doctor was ably moved by Prof. Dawson, and seconded by President Carman of Albert College. Next day Dr. Sangster met the South Hastings Teachers' Institute and discussed several of the most difficult subjects of education. After the morning session the teachers, to the number of one hundred and nine, met in private, and a resolution was proposed and passed unanimously pledging the support of the teachers of South Hastings to Dr. Sangster as their candidate for the Council of Public Instruction. On May 14th, Dr. Sangster received the nomination of the teachers of North Hastings also unanimously, so that the County of Hastings will give the doctor an undivided vote of some two hundred teachers.

UNITED STATES.

—The number of schools in Pennsylvania in which the Bible is read is over 10,000.

—Under the new constitution of Pennsylvania, women are eligible to any office pertaining to the administration of the school laws of that State.

—The new State Normal School of Nebraska had during the present year 357 students. There are three departments—model, preparatory and normal—and the students in the normal school practice teaching in the model school.

—Tennessee has 4,680 teachers and 417,442 children of school age (6-18). The average salary of teachers is \$32 per month. About \$30,600 has been donated to the public schools from the Peabody Fund during the past year.

—The American Geographical Society is to be represented at the millennial celebration in Iceland by Dr. Hayes, the Arctic explorer. Dr. Hayes will take his departure from this port about June 1, and leave Dundee, Scotland, in a vessel specially chartered for the voyage to Iceland.

BRITISH AND FOREIGN.

—The Czar of Russia—on the advice, no doubt, of his "Minister of enlightenment"—has ordered that thirteen new training schools for male and female teachers shall be added to the already existing ones, which are reported to be seventeen in number.

—In Chili there are 1,190 schools, of which 726 are public and 464 private. In the towns there is on the average one school for every 1,769 persons, and in the country one school for every 3,020 inhabitants. In 1872 these schools were attended by 82,152 pupils, and the amount expended by the government for educational purposes amounted to 414,127 piastres. The number of teachers in the primary schools was 896 males and 657 females.

—Fifteen against eight of the Cantons of Switzerland voted for a revision of the Swiss constitution. The effects of this resolution, from an educational point of view, will be the following: discretionary permission given to the central power of founding a polytechnical school, a university or other establishment for the higher education of the young; free access for every citizen's

child, irrespective of the parent's creed, to all the public schools, with power given to the federal authorities to take coercive measures against the refractory cantons; abolition of all compulsion in respect to religious instruction and ceremonies; the tutelage of the father or guardian in the matter of religious instruction to be limited to the sixteenth year of the child or ward, etc. The eight brakes on the chariot of Swiss progress were the Cantons of Uri, Schwytz, Unterwalden, Zug, Freiburg, Valais, Appenzell (interior) and Lucerne. The fifteen "advanced" Cantons were the following: Zurich; Berne, Glarus, Solevae, Basle, Schaffhausen, Appenzell (exterior), St. Gall, Grisons, Aargau, Thurgau, Tessin, Vaud, Neuchatel and Geneva.

—Prof. Francis W. Newman, arguing in the *London Examiner* in favor of free schools in England, says that their present system involves an immense waste of teaching power, a fact which appears also in Germany. A Professor of Natural History in University College, London, whose fame was European, for a series of years had classes which could always be counted on the fingers. Another bad result of the system which he notes is the expense of highly educating a family, which he calls a "great moral mischief to the gentry. On one side," he says, "it leads to delaying marriage too long, and on the other makes it harder to be content with comparative poverty, by which a father becomes incapable of fitly educating his children, Men's minds are hereby made less independent; on both sides the evil recoils on the public." The Professor compliments the American system, declaring that our curriculum and text-books are all the product of fresh thought, and that the routine of classical Europe has not been allowed to cripple the most enlarged modern views.

—The *Schoolmaster*, London, England, is devoted in the late number, almost to the exclusion of all other news, to the meeting of the English National Union of Elementary Teachers, held in the second week of last month. England is now in the throes of establishing the public School; but here is what the teachers there seek: "We may venture to summarize the expressed opinion of the Conference: It is highly desirable that there should be a Minister of Education, on whose shoulders shall lie

the responsibility of matters educational ; there should be some restriction as to the number of pupil teachers ; needlework should be recognized as a paying subject, and our sisters should be fairly treated, as they have not hitherto been, in regard to this matter ; Dr. Arnold's address was a comprehensive expression of much that we desired ; the standards of examination should be uniform, and (this most decidedly in the opinion of Conference) problems which might puzzle a mathematical tutor

should no longer be set to our pupils ; teachers should be appointed as inspectors, because they are thoroughly qualified for the work, are more likely than the present ones to examine fairly into the conditions of elementary schools ; indirect compulsion should be adopted, but, at all events the children should be forced to come to school by some means or other ; and, finally, that our Union has in its hands a power which, if judiciously used, must work greatly for the future of the profession."

 CHOICE MISCELLANY.

A simple method of removing ordinary scratches from a slate :—Dip a wet sponge or cloth into pulverized pumice stone and rub it over the surface of the slate. It will soon be as smooth as the surface of a new slate.

The best teacher is not one who helps his pupils, but one who helps them help themselves. The only true education is self-education. The mind can be filled from without, but it can only grow from within. That only is effective teaching which suggests, prompts, inspires.

A TEST OF PRONUNCIATION. — Some Eastern professor has devised the following, with which he is reported to have brought a number of teachers' institutes to grief. We recommend it as a good exercise for advanced reading-classes and spellers. Let a few lines of it be written upon the blackboard at a time, and the pupils put upon inquiry as to the pronunciation before attempting a doubtful word. They should never be encouraged to guess.

"A sacrilegious son of Belial, who suffered from bronchitis, having exhausted his finances, in order to make good the deficit, determined to ally himself to some wealthy, lenient and docile young lady. To accomplish successfully his vagary, and forge the fetters hymeneal, he armed himself with a calliope and a coral necklace of chameleon hue. He also secured a suit of rooms at the principal hotel and engaged the head waiter as his coadjutor ; he next dispatched a letter of the most unexceptionable calligraphy extant, inviting to the matinee to be

held on the morrow, the handsomest young lady in town. She revolted at the idea, and refused to consider herself as sacrificable to his desires, and accordingly sent a polite note of refusal ; on receiving which this misguided young man, procuring a carbine and a bowie knife, proceeded to an isolated spot and deliberately severed his jugular vein and discharged his carbine into his abdomen. It need not be said that the result was fatal ; the debris was removed by the coroner."

FOR THE GEOGRAPHERS.—In an address delivered before the American Geographical Society, Chief Justice Daly, of New York, shows that the explorer's occupation is not gone, for with all our geographical knowledge, nothing is known of 12,000,000 square miles of our globe. The largest unexplored tracts are the Arctic and Antarctic regions and the interior of Africa. These represent, respectively, seven, three, and one million square miles. A large portion of Australia and other islands in the vicinity has never been visited by intelligent men. The past year was one of great activity with explorers. The whole region of Palestine, Upper Asia Minor, and Northern Arabia has been examined, and many geographical and historical facts determined. In Australia, over 2,000 miles of telegraph have been established through a portion of country but little known before. In Africa, more has been learned of its people than of its geography, but the way has been opened for extended exploration the present year. In this country the Yellowstone expedition, the Colorado exploring party, and the coast

survey have each reported many new facts. The Russian expedition against Khiva, and the English march into the country of the Ashantees, have also opened up regions of which little was known before.

NOTES ON THE SCIENCE OF WEATHER.— Professor William Ferrel conducted a series of mathematical investigations on the “motions of fluids and solids on the surface of the earth” published in 1856, and a second edition in 1869, which resulted in the establishment of the following general laws; regarding the earth as a sphere and assuming that there is no friction between the atmosphere and the surface of the earth :—

1. The atmosphere cannot exist at the poles.

2. The exterior surface of the atmosphere meets the surface of the earth at the poles, attains its maximum height in about latitude 35° , and is slightly depressed at the equator.

3. In latitude 35° the atmosphere has no motion.

4. Between latitude 35° and the equator the atmosphere moves towards the west.

5. Between latitude 35° and the poles the atmosphere moves towards the east.

Under the same assumption, if we consider a small circular portion of air on any part of the earth's surface and suppose it to rotate we can establish the following similar propositions :—

1. Air cannot exist at the centre of this rotating portion.

2. The upper surface of the revolving portion is convex and meets the earth near the axis of revolution.

3. The region of maximum height has no gyratory motion.

4. The inner part will gyrate from right to left in the northern hemisphere.

5. The outer part will gyrate from left to right.

6. In the southern hemisphere the direction of gyration will be reversed.

7. The whole mass will have a tendency to move toward the north or toward the south according as it gyrates from right to left or from left to right.

8. If a body move in any direction on the surface of the earth it will be reflected to the right in the northern hemisphere and to the left in the southern hemisphere, by reason of the earth's rotation.

TEACHERS' DESK.

J. C. GLASHAN, ESQ., EDITOR.

Contributors to the 'Desk' will oblige by observing the following rules :

1. To send answers with their questions and solutions with their problems.

2. To send questions for insertion on separate sheets from those containing answers to questions already proposed.

3. To write on one side of the paper.

4. To write their names on every sheet.

CORRECT ANSWERS AND SOLUTIONS RECEIVED.

H. T. Scudamore, 60.

Iota, 64.

Wm. Jamieson, 65.

Con. O'Gorman, 63, 65, 67.

ANSWERS TO QUESTIONS.

60. "The reason is the lengthening of the semi-diurnal arc for some time after the winter solstice is less than the daily deference of noon. This causes the lengthening of the daylight to be accounted

after clock noon,—not after solar noon. The reverse occurs in a less marked degree at the summer solstice."

H. T. SCUDAMORE.

Let the reader turn to an almanac for December and January and reduce the 'clock time' to 'solar time,' by using the table of differences between 'clock noon' and 'sun on meridian,' and the cause of the apparent anomaly will be manifest.

*61. This question was proposed merely to call attention to the wretched state of the etymology in our authorized dictionary, (Worcester's), in which there is no hint that the *to* of *all to-brake* is essentially a different word in force, prosody and derivation from the preposition *to*. However, the query

* Most unfortunately a misprint crept into this question; for 'all to-break' read 'all to-brake.' Many of the Glasgow Bibles (Collins printers,) have the same mistake, so there is danger some of our readers may not have been able to correct the quotation by verification.

has opened a far wider question than was contemplated. We have received the following letter from N. M.:

"In reply to your question No. 61, about the meaning of "all-to-break," in Judges IX. 53, I beg to say, that it is one of the examples of errors creeping into a very correct text from the negligence or stupidity of printers. The words of the text convey the idea of the stone breaking Abimelech's head entirely, not that the skull was so thick that it broke it all to effect that without success. The original translation conveys the correct idea. The old form of altogether was "alto," and as such it appears in the earliest editions of our translation, reading "alto brake his skull." A pedantic improver of the text at some time or other, not understanding what *alto* could mean, added an *l* and separated the syllables; hence "all to." One old translator I have seen has, "and totally broke his brain pan."

In opposition to this may be quoted Abbott's Shakespearean Grammar, sections 436 and 28.

"All-to" is used in the sense of "completely asunder" as a prefix in

"And *all-to*-brake his skull."—Judges ix. 53.

"Asunder was an ordinary meaning of the prefix 'to' in E. L. It must be borne in mind that *all* had no necessary connection with *to*, till by constant association the two syllables were corrupted into a prefix, *all-to*, which was mistaken for altogether and so used. Hence, by corruption, in many passages, where *all-to* or *all-too* is said to have the meaning of "asunder," it had come to mean "altogether," as in

"Mercurio's ycy hand had *al-to* frozen mine."—

HALLIWELL.

It has been shown that *too* and *to* are constantly interchanged in Elizabethan authors. Hence the constant use of *all to* for "quite," "decidedly too," as in Rich. II. iv. 1. 28, "*all too* base," may have been encouraged by the similar sound of *all-to*. Shakespeare does not use the archaic *all-too* in the sense of "asunder," nor does Milton probably in

"She plumes her feathers and lets grow her wings,

That in the various bustle of resort

Were *all-too* ruffled."—MILTON, *Comus*, 376.

There are two passages in Shakespeare where *all-to* requires explanation:

"It was not she that called him *all-to* noight."
V. and A. 993.

"The very principals (principal posts of the house) did seem to rend

And *all to* topple."—P. of T. iii. 2. 17.

1. In the first passage *all-to* is probably an intensive form of "to," which in Early English (see *Too*, below) had of itself an intensive meaning.

Originally "to" belonged to the verb. Thus "to-breke" meant "break in pieces." When "all" was added, as in "all to-breke," it at first had no connection with "to," but intensified "to breke." But "to" and "too" are written indifferently for one another by Elizabethan and early writers, and hence sprung a corrupt use of "all to," caused probably by the frequent connection of *all* and *too* illustrated above. It means here "altogether."

2. In the second passage some (a) connect 'to-topple,' believing that here and in M. W. of W. iv. 4. 57, 'to-pinch,' 'to' is an intensive prefix, as in Early English. But neither of the two passages necessitates the supposition that Shakespeare used this archaism. (See M. W. of W. iv. 4. 5. To omitted and inserted, 350. We can, therefore, either (b) write 'all-to' (as in the Globe), and treat it as meaning 'altogether,' or (c) suppose that 'all' means 'quite,' and that 'to-topple,' like 'to rend,' depends upon 'seem.' This last is the most obvious and probable construction. Or, adopting this construction, we may take *all to* mean 'the whole house.'

'The principals did seem to rend, and the whole house to topple.'

From this use of 'all too' or 'all to,' closely connected in the sense of 'altogether,' it was corruptly employed as an intensive prefix, more especially before verbs beginning with *be*: '*all-to*-bequalify,' B. J.; '*all-to*-bekist,' *ib.*; and later, 'he *all-to*-be-Gullivers me,' SWIFT; '*all-to*-be-traytor'd,'—NARES."

Again, Morris' Historical Outlines of English Accidence, sec. 324, x:

"To (Goth. *dis*; O. N. *tor*; O. H. Ger. *zar*, *zer*; Lat. *dis*; Gr. *di*).

This particle is of very frequent occurrence in Old English, signifying *asunder*, *in pieces*; it is sometimes intensive, as *to-bite*, *to-cleave*, *to-rend*, *to-tear*; it is often strengthened by the word 'all' (= quite): "And a certain woman cast a piece of a millstone upon Abimelech's head, and 'all to brake' his skull." Judges ix. 53. *All-to*-brake = broke quite in pieces."

Where doctors differ who is to decide?

Suppose in this case we let English Language speak. But ere we do that one or two points in N. M.'s letter need to be noticed. *Beginning* at the *end*. "One old translation"—will N. M. give date, translator, and publisher, as there is a word in the quotation the Editor cannot find in 'Old English.' 'A pedantic improver, &c.' Before writing this did N. M. look at a copy of the 1611 edition of the Bible or of the page for page reprint of it, printed at the Clarendon Press? Regarding the insertion of an *l* the editor has not yet discovered aught but the

fancy of the writer which in Early English determined the adverbial use of *al*, *all*, or *alle*. 'The original translation.' Is N. M. sure he is not relying upon a commentator, who himself mistook the force of 'to' and consequently changed 'brake' into 'break?' This was the origin of 'break' in the Scotch Bibles. N. M. is right about the meaning of the original, so also was the commentator. 'Negligence, &c.' Most English scholars nowadays think the printers were right.

In like manner it was formerly the custom to blame the printers for a great many mistakes in Shakespeare and commentators ground their brains in discovering *what Shakespeare wrote*. Modern study of Early English has revealed that in nine cases out of ten THE PRINTERS give us just what Shakespeare wrote *and meant*, and now that this meaning is known, the commentators often afford richer reading than a volume of Punch, and make us bless the day that we have the printers', not the commentators' Shakespeare.

Let us now turn to Early English.

'& hor vantwarde was to-broke.'

(And their vanguard was broken in twain.)

ROBERT OF GLOUCESTER'S CHRONICLE ;

Reign of William the Conqueror, (Cotton M.S. Caligula A. xi. ab. 1298.)

'For whiche on roode thou were to-rent.'

(For which on the cross thou wast torn in pieces.)

D. MERCI BEFORE THY IJGEMENT : In 82.

'Me thinketh myn herte wole a. to-breke, whanne y thinke on that soote.'

(Me thinketh mine heart will break in pieces when I think on that sweet one.)

THE LOVE OF JESUS ; In 247-8.

(Both the above are from the Lambeth M.S. 583, ab. 1430 A.D.)

'Beete Brugges a-Boute that to-Broke were.'
(Build again the bridges that were broken again-der.)

Piers. Ployman, Vernon Text, Passus viii. In 30.
'Whose rusful voyce no sooner had out-braysed
Those wofull wordes wherewith she sorrowed so,
But 'out !' alas ! she shryght, and never stayed,
Fell downe, and all to dasht her-selfe for woe.

THOS. SACKVILLE, LORD BUCKHURST.

Induction to the Mirroure for Magistrates, s. 18.

We said that this query opened up a question not contemplated in proposing it; the question was 'In case of a dispute about the meaning, derivation, &c., of a word how is the matter to be settled?' Evidently by reference, not to dictionaries or grammars as authorities, but to *language*. This we have considered so important (apart from the question of settling the force of the language in a verse of our English Bible), as to warrant us in devoting a considerable space to an exhibition of the investigation of a dispute. We could easily have added to the quotations from Abbott & Morris, half-a-dozen from the writings of scholars noted for their researches into Early English, but we preferred giving two or three proof-quotations adding references to the original manuscripts so that statements need not be taken on reprints.

ETYMOLOGY. The inseparable prefix TO was derived from the ablative case of the numeral two and originally meant in *twain*, later it came to mean *asunder*, *apart*, and still later *exceedingly*. In Saxon poetry this to never counts in the alliteration, the other except sometimes in 'to-geanes' always. This to is of the same derivation as the Latin *dis* and Greek *dis*, the other of the Greek *de*, (no Latin equivalent).

EDITOR'S DRAWER.

"Hints on Teaching" is a specimen of the manner in which teachers might aid us and each other. Short articles of a similar character, would be very valuable, and are respectfully solicited.

COUNCIL OF PUBLIC INSTRUCTION.—We have no new names to add to the list of Candidates for election to the Council of Public Instruction, published last month. As the time for the election approaches, the public interest increases. The candidature of Dr. Sangster seems now to be attracting the greatest share of attention. While his fitness in many respects is universally conceded, his moral character has been severely assailed

for certain circumstances in connection with his resignation of the Head Mastership of the Normal School in 1871, and his second marriage. On the other hand Dr. Sangster has some warm defenders who strenuously maintain that his conduct is capable of full justification. We have no desire, at least for the present, to enter into this controversy, but we trust the teachers of the Province, who now for the first time are entrusted with the franchise, will make such a selection as will best advance the interests of education, and add to the efficiency and usefulness of the reorganized Council of Public Instruction.