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# EDUCATIONAL RECORD

OF THE

PROVINCE OF QUEBEC.

THE MEDIUM THROUGH WHICH THE PROTESTANT COMMITTEE OF THE  
COUNCIL OF PUBLIC INSTRUCTION COMMUNICATES ITS PROCEED-  
INGS AND OFFICIAL ANNOUNCEMENTS.

VOL. XX.

JANUARY TO DECEMBER,  
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THE  
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No. 1.

JANUARY, 1900.

VOL. XX.

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**Articles : Original and Selected.**

**CONDITIONS OF GENIUS. \***

BY MISS H. D. OAKELEY, WARDEN OF THE ROYAL VICTORIA COLLEGE FOR  
WOMEN, MONTREAL.

When I came to think over what I had to say to you, I saw how extremely inadequate it was to the title of the lecture. I am not about to take up any of the interesting questions of hereditary genius, nor to follow the brilliant psychological speculations of Professor James, as to the presence in the human mind of accidental variations which produce expectations, æsthetic, moral, metaphysical, with which the real world offers no correspondence. I have no thought of tracing the degrees of genius, from its germs in the lowest stage of human consciousness marked off from that of the animal by the dim perception of an ideal, an ought to be, in life and art, upwards to the point at which appears the mind for which the ideal is much more real than the actual, and which is urged on by a resistless force to bring the material of existence more into conformity with it. It is rather as to the relation between genius and certain social conditions, that I would like to offer some considerations which force themselves upon our thoughts with a disturbing power, at this present time.

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\* A lecture delivered before the Delta Sigma Society, McGill University.

The subject is barren of certain conclusions, and one on which it is impossible to dogmatise. It has been found very difficult to arrive at any laws as to the connection between the national characteristics of a people, and the natural conditions of their country. Much harder is the problem to discover why, at a particular time, an extraordinary number of persons is cast up, on the wave of existence, whose mental activity, as shown in life practical, and contemplative, seems different in kind from that of the rest of men. I have mentioned together the active and the contemplative types of genius, though there are periods in which practical creativeness appears, divorced from creativeness of any other kind, because I am assuming that essentially the same principle is at the basis of each.

#### THE GENIUS IS AN IDEALIST,

just because the world has for him a more vivid reality, than it has for others. Without entering into the metaphysical question whether we can see things as they are, it will be admitted, that one person sees a great deal more than the rest of men, and at a certain point this "more" becomes a vision; the difference between the realist and the idealist is only one of degree. Vision is all in all. "We needs must love the highest when we see it," says the poet. "Action takes place in response to the stimulus of the thing seen," says the psychologist. The lion pursuing its prey, the philanthropist advancing through disappointments and increasing difficulties towards a reformed world, are both obedient to their vision. To the genius because of the intensity of his vision nothing is common, or because common ceases to arrest his attention, to pierce, to sting, to make him revise his former conjectures as to the meaning and inner life of things. The genius is not blinded by habit to the truth that all experience is new to him who newly experiences. He is originally capable of greatness both in the field of thought, and of action, though the course of life may lead him to develop only in one direction.

So much may be said about the genius of which I am thinking, but it cannot accurately be defined; however, unmistakable it is wherever found, its origin escapes our observation, its nature defies our logic, its conditions are

infinitely diverse. Perhaps there is no sphere in which prophecy is more at fault, than in that of attempts to forecast the circumstances which will give rise to this great desideratum. As in a hall, acoustically imperfect, where all sound seems jarring and uncouth, the entrance of one more person, the introduction of a single curtain may produce a different vibratory atmosphere, and concord and harmony result, so it seems to be in the case of genius. Many elements may exist in a nation, or an individual, and yet the life be stagnant, the activities unaroused. Suddenly there enters in some new circumstance, some fresh insignificant modification, in no vital part, as it seems, of the organization, and all is changed. This new cause, combining with the factors already present, brings about a wholly unlooked for result. The race awakes and goes forth to sweep over the globe, and create the law of its own life, no longer to be merely passive before the forces of nature. The individual, as Watson says, "starts in the mid whirl of time, at the cold touch of eternity." Henceforth he is lonely amongst men, because passions and motives other than theirs dominate him, and yet he is less alone, because the barrier is broken down which separated him from the heart of things, and his mind has become a mirror of the whole. But it was the most trivial and accidental seeming of instruments that brought about the change.

The only excuse I can give for choosing a subject which I am bound to describe as so full of uncertainty, is that it is interesting. It is interesting always, whether we believe that the great man is all in all, that without his new seeing, his new hearing, men would go on seeing the same sights, hearing the same sounds, and make forward no creative steps, or whether we think that the age makes the man, and what the genius utters, it was in the power, and on the tongue of a hundred others to utter, had he been silent. Judging from experience we should perhaps be right in saying that a distinction must here be made between different spheres of greatness. There are periods of history when the demand for the great man of action is so imperative that the popular consciousness or sub-consciousness of the need, is like a powerful magnet, acting on all the members of the society and drawing out, rendering effectual whatever elements of genius are in them, so that the only

question is, who will be the first. In a less degree this is true of the need for scientific originality. The consciousness of this need is less concentrated in a given society, at a particular crisis, than in the case of the man of action. The society is hardly aware, until the scientific genius appears, what was the lack, nevertheless it may be truly said that the age called for him, and he heard. It is otherwise with the man of high speculative genius, or creative in the realm of art. The philosopher, "spectator," as Plato says, "of all time and all eternity," is equally needed in every time, though a particular people, released by favorable circumstances, or by an exceptional system from the more pressing exigencies of life, is more actively conscious of this need than the world in general. So also in the case of the artistic genius, the poet, and above all that type, which is most incalculable and elusive to the investigator, that of the musician. They appear not to make life possible but to make it good, not to oil the wheels of life, but to lead on the car to a better country. This distinction seems required, though, as has been noticed, no sharp line can be drawn between different kinds of genius. Not only is every man of genius marked out by the keenness of his vision, the strength of his realism, not only does the scientific appreciation of law, and order in the universe lie very near to the artistic sense of form, but also the very same scientific discovery, both appeals to the imagination of men and provides them with facts necessary for existence. Instances of this in astronomy, chemistry, biology will occur to all. Such discoveries are as the Greeks would have said things good, both in themselves, and in their results.

The question of the circumstances arousing to genius concerns us, whether or not the man is independent of his age. Though he be only a little ahead of many others, we still must ask why was he the first. If all he did was to "return in flood what was given to him in vapour," if he had but one ounce more of the elemental fire in him, still in virtue of this infinitesimal difference he was empowered to create, and has gained immortality on earth. It has made a difference to men that he lived, and he himself is a part of history, a friend to all future men and women, never to be exiled from this familiar earth. The question always of interest, speculatively, if not practically, is per-

haps unusually so at the present moment. We are not far from the brink of a new century, and we can hardly rid ourselves of the illusion that with 1901 time will make a new beginning, that something then dies for us all, and something is born with youth before it. This illusion is confirmed by the fact which itself produces, that fresh sentiments do arise with the fresh naming of the time, new hopes and schemes of life, in individuals and nations, and this myth of death and birth in periods of chronology does something to change our hearts and thoughts. We are driven thus by an ineradicable sentiment to the expectation of something new,

Novissima hora est,

and at the same time, as we look on from the present to the coming generation, and cannot avoid making forecasts, we seem to see elements hostile, or at least unfavorable to the production of genius.

The conviction is almost irresistible that democracy is on the verge of final victory. There are prophets whose convictions carry them much further than this. Charles Pearson in his book, *National Characteristics*, looked forward with a clearness sharpened by bitter melancholy to the triumph of the black and yellow races, and the universal adoption of a socialism, stripped of all the poetical and ideal elements seen in it by modern dreamers. But apart from this nightmare of a conservative imagination, it may be assumed that the belief in the destined universal success of the democratic spirit, has reasonable justification, though the irony and the paradoxes of history must not be forgotten, and how forces impossible for us to conjecture may enter into the stream, and hurry it in a direction yet unthought of. Pure democracy seems inevitable. We are fully started on an inclined plan of which that is the goal. We are hardly able to doubt that Russia herself must be moving, however imperceptibly, in that direction, just as the organization of industry is moving, in spite of the irregular features of American capitalism, and the autocratic sway of gigantic trusts. The ground for this faith lies even more in our own minds than in external circumstances. The principle of democracy has gained an axiomatic character. We can no longer weigh seriously the advantages and disadvantages. Tales of despotism are fabulous to Anglo-

Saxon ears, accounts of past tyranny are legends. A few men, formed for mediæval conditions, born out of due time, loving the picturesqueness of inequality, and the romance of an insane loyalty to persons, may express themselves in scattered verses, and bear about the burden of an extinguishable regret, but if they have any ambition they are swept forward on the democratic tide, preach and act on democratic principles, and find themselves at the head of popular movements. It may be said:—Since democracy is all conquering, have we not everything to hope, remembering the character of past democracies, and especially of Athens, and the inspiring effect on genius, at least in England, of the democratic triumph of the French revolution? It is unnecessary to dwell on all the differences between ancient and modern ideas and applications of the meaning of freedom and equality, but we should perhaps consider whether certain of these differences, essential as they are from the social point of view, are not also so from that of the conditions of genius. The liberty, of which Herodotus says, reflecting on the advance made by the Athenians after the expulsion of the tyrants, "Behold it is a goodly thing," was, even in his day, a very positive possession, involving active exercise of political functions, and the constant labour of all the free in civil or military life. Still more were the citizens to whom Pericles addressed the funeral oration, personally actively concerned in bringing about the position of Athens, and making her the school, as he says, and example of Greece. The fact that this freedom was based on slavery, this democracy, an aristocracy of a class—leisured—from the modern standpoint,—is well known to you. The conception of freedom has lost something, and gained much since the 5th century, B.C. For us the will is all important, we are not satisfied unless we can believe that a man is free to avoid the theft, though he is starving and has inherited an organization physically and morally weak. For the Greeks freedom was rather a condition of the spirit, unfretted by material cares, able to range unweighted through the rare atmosphere of pure thought, than an opportunity of the will. There is an untranslatable Greek word, which signified the condition of a soul enslaved, because deformed by base, *i.e.*, mechanical or rigidly professional occupations, just as the workman's hand is cramped by the use of his tool. The fact that we have

no exact equivalent for this word is a sign of one of the greatest revolutions in social ideas, since the Attic age. Aristotle, could he behold the modern American States, would marvel to see so vast a population, almost wholly given up to what he would have deemed illiberal occupations, he would perhaps have to revise his conception of the requisites of a free polity, and allow that a people could govern itself without the liberty or care to spend much of its time in the exercise of political functions. He would have to admit, contrary to all Greek conclusions, that the condition of politics need not correspond to the general ethical standard of a people that there may be excellent citizens in a good State, of which the politicians cannot be praised. In so far as political conditions affect the development of genius, the conjecture may be hazarded that in Athens the inspiring force was, the possibility that the whole city should feel as one, that its members could be unanimously stirred by the same danger, and work for one end. This condition—that a nation is fired by one thought, one aim, seems always powerful to rouse all the members severally to their greatest height, and so produce genius in many forms. The age of Elizabeth is an illustration of this. But in the complex texture of modern life, the decentralization of interests, whilst the energies of the individual are diffused through many societies, civic, commercial, scientific—some of them international and cosmopolitan, this unity is rare of attainment. And some of our cherished *a priori* doctrines as to the progress of civilization must yield, as we find with shame that the old primitive machinery, wars and rumours of wars—is alone powerful to awaken such a sentiment, and the victor in the modern fight strives to meet with a mediæval dignity the obsolete enthusiasm of which he is the object.

(*To be continued.*)

### Editorial Notes and Comments.

A NOTEWORTHY feature of the close of the nineteenth century in connection with educational matters is the elaborate system of illustrated lectures for the people. The natural outcome of the public school system, which is creating an ever widening field of mental activity, is the demand that those who have created the intellectual hunger

shall appease it. In many instances the claim is anticipated by private or public beneficence as is the case with the "Bickmore" lectures, which are now becoming an important factor in the intellectual life of the Dominion of Canada. These admirable lectures are being delivered at the various large centres as Montreal, Quebec, etc., and, as circumstances warrant, it is the intention of their originators to introduce them into all the towns and cities of the Dominion from Atlantic to Pacific. The titles of these lectures suggest their immediate object, the opening up of Canada to the Canadian people, creating an interest in her natural beauties, mineral wealth, industries, commerce, etc.,—in a word, making Canadians intelligently appreciative of the grand country they call their native land.

Possibly New York has the most elaborate system of free public lectures of any city on this continent. These form a department of the public school system and are now being held at forty-six centres. The lectures announced for the month of January are of a most interesting and instructive character. A very practical course of lectures is on "First Aid to the Injured." In the musical programme we find such topics as "How to Listen to Music," "The Development of Song," and "Wagner's Music Dramas." Astronomy, political history, geography, art, and subjects of great interest at the moment as "The Peace Conference at the Hague," "Holland," and "The Expansion of England," are to be dealt with."

It is the aim of the director of this department of education, Dr. Henry Leipsiger, to have educational continuity in the lectures, as well as interesting subject matter. His design is to give connected information on some one subject rather than disjointed knowledge of many things.

Books of reference are placed at the disposal of those who care to use them, while examinations, with certificates for the successful, are arranged for.

—THE long desired and long expected event has happened—the opening of the Royal Victoria College for women. Passing through its magnificent halls, as visitors, we are impressed with the great advantages that must accrue to the students in residence over those scattered throughout the city in boarding houses, often in boarding houses not by any means too comfortable, and frequently lacking in all educational life save that which is brought

there by the students themselves. The advantages, from contact with cultured minds, in the social life, as well as in the purely scholastic work of the class-room, could not be adequately stated save by those who have had actual experience of life in residence. Freedom from care is a factor of mental growth that cannot be despised. The Scotch laddie in search of an education, who spent his life out of the class-room, in a garret, and who lived on oatmeal and molasses, had some advantages over his more favored classmates who lived with cultured people amid elevating surroundings, in the sturdiness of character which he developed; but he lost very heavily in regard to the social side of his nature. The sons and daughters of Canada, whose fathers, aye and mothers too, felled its primeval forests and ploughed its furrows, must not, while surrounded by the elegances of life such as their ancestors never dreamed of, prove recreant to that spirit of sturdy independence and love of hard work which their early struggle with nature produced.

A lady writing after a six months' residence in Newnham College, one of the English residential colleges of Cambridge, said: "My experience has taught me that many advantages accrue from life in residence. The first thing noticed was a greater 'esprit de corps' than is found here—that spirit which binds graduates to their alma mater and to one another. If I were asked why we have not more of this 'esprit de corps,' I should reply, "Because we haven't residences;" and if asked why we haven't residences, I should answer, "Because we haven't more 'esprit de corps.'"

—We would call the attention of teachers to some valuable rules for the care of the eyes laid down by Dr. Byers, assistant ophthalmist of the Royal Victoria College, at a recent lecture before the Women's Club, Montreal.

1. Do not read for more than an hour at a time without taking short periods of rest.

2. Never read in a bad light.

3. Always have the illumination in the proper position.

4. Buy and read as far as possible only well-printed books. This especially applies to children.

5. Never read in a strained position.

6. Keep the reading room pure and well-ventilated.

7. Maintain the general health at a high standard by careful living.

Dr. Byers found that the press work of the text-books used in Montreal was for the most part satisfactory.

### Current Events.

THE Province of Quebec has lost two of its most valued college principals in the retirement, on account of ill-health, of Dr. Adams, Principal of the University of Bishop's College, Lennoxville, and Dr. Shaw, Principal of the Wesleyan Theological College, Montreal.

—THE school board for Manhattan and Bronx, New York, is providing a "farm school" for habitual truants. These boys are to be given manual training, physical training, recreation and amusement under the most favorable conditions possible, that they may be turned from the error of their ways, and, having a useful trade or business at command, may become in course of time valuable citizens of the state.

—THERE is to be a colored women's training school in Washington, D.C., in connection with the Phœbe Hearst Kindergarten Training School. The expense is to be borne by Mrs. Hearst.

—THE noted inventor Ottmar Mergenthaler is dead. He became rich through his invention of the linotype type-casting machine.

—PREPARATIONS for the celebration in 1901 of the millennial anniversary of the death of Alfred the Great are now being made by Anglo-Saxons the world over.

—TIME and the Turks destroy all things beautiful. It is the hand of Father Time that is making serious inroads on the most beautiful building made by man, the temple of Karnak, standing on the eastern bank of the Nile, where Thebes once stood. This temple was commenced 2700 B.C. and finished about 970 B.C. The most remarkable part of the pile of buildings is the great hall, 170 feet by 329 feet, built by Sethos I. and Rameses II. The sculpturing on the walls is of great interest, not only because of the wonderful preservation of the coloring matter, pointing to a lost art, but because of the subjects treated with such marvelous skill by those wonderful sculptors and artists, the Egyptians. They "wield the chisel and the stricken mar-

ble grows to beauty." Nine of the great columns of the hall have fallen.

—MORITZ Busch, biographer of Prince Bismarck, is dead.

—THE new commercial treaty between Mexico and China is written in English.

—THE children who are engaged in studying the map of Africa will be interested in hearing about the project of France to build a railway through the great Sahara desert from Tunis to the group of oases called Air, with branch lines to Lake Tchad and the Niger. The object of this railway is to unite the French colonies in Central and Northwestern Africa. The line at present running from Biskra, along the border of Tunis, to the end of the Atlas mountains, is to be used. The line of railway when completed will be over a thousand miles through the desert. The great difficulty in the undertaking will be in provisioning the workmen, in providing them with good water to drink, and in protecting them from attacks by hostile tribes. The cost will be lessened, because there will be no charge for right of way through the desert. No houses will have to be pulled down or farms cut through. Let the children trace the line on the map.

### **Practical Hints and Examination Papers.**

REMINDERS TO TEACHERS.—“A lie is a wronged child's only defence, and this shield of falsehood is adjusted to meet all the emergencies of life.”

The habit, indulged in by both boys and girls, of cigarette smoking should be the subject of serious consideration on the part of the teacher. It is a habit injurious to the nervous system and immoral in its tendency.

While children are in the school-room they should be kept busy. When work is done they ought to be sent out to play. For young children the lessons should be short and the hours of recreation long. Encourage children to do their work in the school hours.

Shortsightedness is a disease of the school-room. Children wearing spectacles should be taught to keep the glasses clean. It is a serious tax on the eyes to be constantly striving to see through dim glasses. It is a matter of considerable doubt as to whether a child is more helped or injured by wearing twisted, clouded glasses.

A good answer from a child is determined by the amount of thought it shows, not by the facility with which it is produced.

See that in their answers to questions children give the whole answer and nothing but the answer.

Never accept either guesses or dishonest answers from children.

—TEXT-BOOKS WITH COLORED PICTURES.—Here and there are to be seen text-books with the pictures colored. When the coloring is true to nature this adds very much to the usefulness as well as to the attractiveness of the book. The majority of children prefer colored story books to those with steel engravings, the bright to the dull.

—A STORY FOR REPRODUCTION BY THE CHILDREN.—This story by Ivan Tourguéneff is about two heroes, a bird and a boy, and is suitable for children who can write such words as *suddenly*, *sparrow*, *sprawling*, *sacrifice*, etc. The half dozen words that are beyond the powers of the children might be written on the board by the teacher and copied by the children at the right moment. Tourguéneff says:—"I walked up my garden path as I was coming home from shooting. My dog ran on before me; suddenly he went slower, and crept carefully forward as if he scented game. I looked along the path and perceived a young sparrow, with its downy head and yellow bill. It had fallen from a nest (the wind was blowing hard through the young birch trees beside the path) and was sprawling motionless, helpless, on the ground, with its little wings outspread. My dog crept softly up to it, when suddenly an old black-breasted sparrow threw himself down from a neighboring tree, and let himself fall like a stone directly under the dog's nose, and, with ruffled feathers, sprang with a terrified twitter several times against his open threatening mouth. He had flown down to protect his young at the sacrifice of himself. His little body trembled all over, his cry was hoarse, he was frightened almost to death; but he sacrificed himself. My dog must have seemed to him a gigantic monster, but for all that he could not stay on his high, safe branch; a power stronger than himself drove him down. My dog stopped and drew back; it seemed as if he, too, respected this power. I hastened to call back the amazed dog, and reverently withdrew. Yes, don't laugh; I felt a reverence for this little hero of a bird with its paternal love.

Love thought I, is mightier than death and the fear of death; love alone inspires and is the life of all.

Allow one portion of the class to tell or write the story in the first person and another part to give it in the third person.

--BELIEVE me when I tell you that thrift of time will repay you in after life with a usury of profit beyond your most sanguine dreams, and that the waste of it will make you dwindle, alike in intellectual and in moral stature, beyond your darkest reckonings.--*Gladstone*.

--IN science, read by preference the newest works; in literature, the oldest. The classic literature is always modern--*Bulwer Lytton*.

### HINTS ON TEACHING GEOMETRY.

Of all subjects in the ordinary school curriculum possibly geometry affords the best opportunity for developing in pupils the "scientific imagination." For this purpose, however, the usual method of instruction should be modified. Each new proposition should be attempted by pupils before the demonstration of a theorem or the construction and demonstration of a problem, as given by the geometers, are studied. Not only should the needed preliminary construction and the demonstration be sought by the pupils under the suggestive guidance of the teacher, but the truth to be demonstrated should be discovered, and its enunciation be determined in the same way.

For example, if the nineteenth proposition of the first book of Euclid has been mastered, and pupils are about to pass to the next proposition, the teacher may well proceed in some such way as is indicated below, before his pupils study the text at all. The teacher speaks:

If you were trying to escape from another boy by running through a square, would you run around the sides or cut across the corner? Why would you cut across the corner? How do you know that it is the shortest way out to cut across the corner? You probably know it intuitively, as a finding of your experience. Let us look into the matter more closely. You are persuaded that two sides of a square are together greater than the diagonal; do you think that a similar statement can be made about a rectangle? What is the figure enclosed by two sides of a square and the diagonal joining their extremities called?

In what respect does the triangle, formed by joining the free extremities of two conterminous sides of a square by a straight line, differ from the triangle similarly formed by two conterminous sides of a rectangle and the diagonal joining their free extremities? In the triangles that we have been discussing, what has been the magnitude of the angle contained by the two sides that we have been comparing with the third side? Would the two sides have been together longer than the third side if the contained angle had been an acute angle? An obtuse angle?

James may draw any triangle on the black-board and we will call it the triangle  $A B C$ , these letters being put at the three angles. Now, are  $A B$  and  $B C$  greater than  $A C$ ?  $A C$  and  $C B$  than  $A B$ ?  $A C$  and  $B C$  than  $A B$ ? Yes, it is true that  $A B$  and  $B C$  are greater than  $A C$ , that  $B C$  and  $C A$  are greater than  $B A$ , and that  $C A$  and  $A B$  are greater than  $C B$ , but it is clumsily said: Can any boy make the same statements about this triangle in a more summary way? Yes, any two sides of the triangle  $A B C$  are together greater than the third. Now, might a similar statement be made about any triangle? About all triangles? Very well, state the truth generally.

But to see the truth in a general way and to state it correctly are not sufficient for our purpose. We must prove the truth; we must compare the two sides with the one side and show that together they are greater. Here the suggestions of the teacher must proceed more slowly; longer time must be given to the pupils to profit by each suggestion. Thus, how can you construct a line equal to the sum of the two sides? Can you do this by adding to one of the two sides? Can you so do this that the part added on shall be conterminous with the side to which it is equal? About what kind of figure do you know most from your previous studies? Perhaps then, it would be well to make the nondescript figure you now have into a triangle. This being done the figure of course is complete.

Two suggestions should be sufficient to enable pupils to discover the proof for themselves. First, compare the magnitudes of the angles in your figure, so far as they are necessarily determined by the construction. Secondly, see if the relative magnitudes of the angles determine the relative magnitudes of any sides.

Now, says the teacher to his class, deeply interested in

the work, because their own powers have been evoked, study the twentieth proposition. See if the text-book brings up the truths that we have discovered. See if it states these truths more exactly and more concisely than we have done, and arranges them more satisfactorily. To-morrow, in proving this proposition, follow the best mode of statement and of arrangement.

The proposition so learned should be succeeded by many corollaries and deductions based upon it and upon those that precede it, of which the demonstrations should be furnished by pupils, as in the examples which follow.

Prove the twentieth proposition by letting fall a perpendicular from the vertex upon the base.

Prove it by bisecting the vertical angle.

The length of a broken line joining two points is greater than that of the straight line joining them.

Let two points be joined by a path which is as short as any which can join them, then every point in that path is in the straight line joining the two points. Hence a straight line is the shortest distance between two points.

The difference of two sides of a triangle is less than the third side.

The sum of two sides of a triangle is greater than twice the line drawn from the vertex to the middle of the base.

The sum of the distances of any point within a triangle from its angles is greater than half the perimeter of the triangle.

The perimeter of a triangle is greater than twice the line joining one angle of the triangle with a point in the opposite side.

If lines be drawn from the angles of a triangle through a point within it to meet the opposite sides, the perimeter of the triangle is greater than two-thirds of the sum of the three lines.

The distances of the intersection of the diagonals of a quadrilateral from its angles are together less than those of any other point.

The sides of any quadrilateral are greater than its diagonals, but less than twice its diagonals.

If two convex rectilinear figures stand on the same base, one being enclosed by the other, the interior figure has the less perimeter. Hence part of the twenty-first proposition.

--WE must make practice in thinking, or, in other words, the strengthening of the reasoning power, the constant object of all teaching from infancy to adult age, no matter what may be the subject of instruction.....Effective training of the reasoning powers cannot be secured simply by choosing this subject or that for study. The method of study and the aim in studying are the all important things.—*Charles W. Eliot.*

--THE CURE FOR BAD BOYS.--“The cure for hoodlumism is manual training, and an industrial condition that will give a boy or girl work—congenial work—a fair wage, and a share in the honors of making things. Salvation lies in the Froebel methods carried into manhood. You encourage the man in well-doing by taking the things he makes, the product of hand and brain, and paying him for them; supply a practical worthy ideal and your hoodlum spirit is gone, and gone forever. You have awakened the man to a higher life, the life of art and usefulness; you have bound him to his race and made him brother to his kind. The world is larger for him, he is doing something, doing something useful; making things that people want. All success consists in this, doing something for somebody, benefiting humanity, and the feeling of success comes from the consciousness of this. Interest a person in useful employment and you are transforming chaos into cosmos.  
—*The Philistine.*

--ALL work, even cotton-spinning, is noble; work is alone noble.

Blessed is he who has found his work; let him ask no other blessedness. He has a work, a life purpose; he has found it and will follow it.—*Carlyle's Past and Present.*

--SCHOOL HYGIENE.--Dr. Cyrus Edson, writing in the *Youth's Companion*, refers to the pernicious habit of allowing children to use one another's writing and drawing instruments. “Possibly one of the most dangerous tricks or habits,” he says, “which a child can acquire, is that of putting or holding a pen or pencil in the mouth. And here let me enter my protest against the custom in some public schools of supplying the children with the slate pencils and penholders. Wherever this is done, these things are gathered up at the end of the day, and redistributed the next morning. As children, unless they be

trained otherwise, will put such things into their mouths, there is the greatest danger of disease germs reaching them. I cannot conceive of a custom more certain to spread communicable disease than is this, and I think it should be abandoned everywhere. Each child should have its own pencil, penholder and slate pencil, and should be forbidden to exchange. Each child should be warned not to put either into the mouth, and the teacher should be careful to stop anything of the kind at once. Moreover, the parents should carefully explain to the children the danger of the practice, and should not weary in the well-doing of explanation."

—FOOD AND BRAIN POWER.—Ribot in his "Diseases of Memory," quite unintentionally, probably, makes a strong plea for the proper feeding of school children. He quotes the words of Sir H. Holland in relation to his partial amnesia (loss of memory). "I descended on the same day two very deep mines in the Hartz Mountains, remaining some hours underground in each. While in the second mine, and exhausted both by fatigue and inanition, I felt the utter impossibility of talking longer with the German inspector who accompanied me. Every German word and phrase deserted my recollection; and it was not until I had taken food and wine, and been some time at rest, that I regained them again." It is a well known fact that severe illnesses have had similar effects upon the memory. In the case of Sir H. Holland, the lapse of memory was due to a low physical condition brought on by lack of fresh air and food. Are not the very same causes at work among school children producing a depressed physical condition which reacts in turn upon the mind, resulting in forgetfulness and inability to stand prolonged mental work? It is a fact worth noting that, in the case cited, memory was restored after the taking of a stimulant, nourishment and rest. The stimulant without the accompaniments of rest and food has but little value so far as the brain is concerned. Teachers should proclaim unceasingly the truth that the best heritage that parents can leave their children is a strong, healthy, well developed body, a good education, and an inspiring example.

—GIVE a wise man health and he will give himself every other thing.—*Colton.*

—A FEEBLE body weakens the mind.—*Rousseau.*

—THE IDEAL TEACHER.—Mr. Sidgwick in his "Practice of Education" gives us a glimpse of an ideal teacher in the person of Mr. Frederick Temple, of Rugby. "What it was," he says, "to come for months or years, into daily contact, at the most impressionable time of life, with a man whose every look and tone and word spoke to us of high aims and resolute endeavour, whose life in the sight of the dullest and weakest of us was plainly based on duty and self-devotion, whom all could absolutely trust, to whom the most timid would naturally turn in trouble and perplexity, whom all could love and venerate without reserve,—such an experience it is not likely that one who had ever known it could forget or ignore." Shall such an aroma as this linger after we have departed from the active work of teaching?

Mr. Sidgwick also shows us another of Rugby's great teachers—Dr. Arnold. "When he was composing sermons, histories, notes on Thucydides, and teaching Rugby better than any school was ever taught before, he was writing letters, as his life shows, on every mortal subject of interest—the Newmanites, Niebuhr, Rome, the Jews, the Chartists, London University, the French Revolution. This width of interest took hold of the boys, as it always does and must. And he himself knew it and felt it. 'The more active my own mind is,' he said, 'the more it works upon great moral and political points, the better for the school.'"

—CICERO has said, "What greater or better gift can we offer the republic than to teach and instruct our youth." The noble men and women of all ages have had a lofty ideal with regard to the work of the teacher, and he who speaks slightingly of his work is not worthy of being called a teacher.

—STUDY to acquire such a philosophy as is not barren and babbling, but solid and true, not such an one as floats upon the surface of endless verbal controversies, but one that enters into the nature of things.—*Archbishop Leighton.*

—THE TEACHING OF AGRICULTURE IN ELEMENTARY SCHOOLS.—The text-book on Agriculture assigned for elementary schools is that of Mr. Charles C. James, M.A., Deputy Minister of Agriculture, for Ontario. Many of the elementary teachers of this province are taking up the sub-

ject of Agriculture for the first time. To these a few suggestions with respect to the use of this admirable little work of Mr. James will not be out of place.

The first essential is that the subject be taken up practically. The second is that the children take their part in making it practical. Start some oat or wheat seeds in a box under the conditions mentioned in the text-book, *i.e.*, in warm, moist, well-drained soil, under a light covering of earth. Examine the seeds as they begin to sprout. It is this beginning of things with which children are least familiar, for the farmer, having sown his seed, is not in the habit of pulling it up to see how it is getting on; but it is the beginning of things that is of most importance in relation to growth. The farmer keeps a watchful eye upon his grain from the time he buys the seed until he receives it back again from the ground, increased many-fold, but the interest of the child is in proportion to the height of the grain in the field. Where the school fire is allowed to go out at night the box of sprouting oats or wheat should be taken home either by the teacher or the child living nearest to the school and brought back in the morning.

In considering the question of annuals and biennials the children might be asked to bring examples of these—an easy task when the farmer's cellar is full of his root-crop and his barns filled with grain. When different kinds of seeds are under consideration allow the children to bring specimens from home and take their part in sorting and labelling the various kinds, making a fresh collection and new labelling with each class. Put all the wheat seeds together, having the children first observe the different qualities of the grains that are brought. All wheat will not be equally good. Do not be satisfied merely with having drawings of the large seeds as the almond, acorn, horse-chestnut, apple, pumpkin, etc. The seeds themselves can easily be procured by the children. Then it adds very much to the interest and intellectual value of a lesson for each child to open and examine the seeds, and state in his own language what he finds. The value of comparing his observations and mode of expression of what he observes with yours and those of the book, must be properly estimated.

Try the test for *good* seed and encourage the child to do so also. The child should count the number of seeds

put in and the number of shoots that come up. The *description* of seeds as those of buckwheat, corn, turnip, dandelion, strawberry, etc., should be given by the child, in the first instance with the seeds before him.

For illustration of the second chapter, bean and pea seeds may be sown, a few new ones each day, so that there may be plants at various stages of growth.

All this means some little trouble on the part of both teacher and pupil, but it is the willingness to take an infinitude of pains that brings a rich harvest in the end.

To the successful teaching of the subject, it is necessary that the teacher read through the whole book and prepare in advance for his illustrations.

There is an article in the November number of the "Nineteenth Century," entitled "Manuring with Brains," or the "Dalmeny Experiments." It is suggestive of the plan to be followed in all instruction in Agriculture. Teach the child to use his brains in relation to the whole question. Do not allow him to accept your facts and statements or those of the text-book without investigation. If he uses his child brain, a habit will be formed that will not leave him when he becomes a man. Quite as important, possibly more important than facts he will learn about farming, will be the correct habits of investigation that he will acquire.

All children are not destined to be farmers or farmers' wives (though a large proportion of those found in district schools are), but they all need to take an intelligent interest in the "oldest of the arts and the most recent of the sciences" "in *perfect agriculture*—the true basis of trade and industry, and therefore the foundation of the riches of the state."

—It is not *what* we learn that is of supreme importance to us, but *how* we learn and *with whom* we learn.

## ENGLISH (GRADE I. MODEL SCHOOL.)

[Two questions to be answered from each section.]

### SECTION I.

1. Weave these four simple sentences into one.

Champlain was a French explorer.

He was born in Brouages.

He founded Quebec.

He died in Quebec.

2. Compose a sentence of fifteen words on Niagara Falls, and analyze it by showing what words are respectively attached to the subject, predicate and object if there is one.

3. Repeat the last three stanzas of the "Psalm of Life," and then write out in your own words what they mean.

### SECTION II.

4. In what poems do these lines occur :

(a) My little one kissed me a thousand times o'er.

(b) Beneath this mouldering canopy...

(c) He is the freeman whom the truth makes free...

(d) Ah! then and there was hurrying to and fro...

Name the authors as well as the poems.

5. Write sentences on these words, showing that you know their meanings: *turbulent, incarnate, absorbed, superstructure, refugee.*

6. Lord Lorne, when Governor-General of Canada, delivered an address at Winnipeg in 1881. What were some of the graceful things he said in that address?

### ENGLISH (GRADE II. MODEL SCHOOL.)

[Two questions to be answered from each section.]

#### SECTION I.

1. Write a business letter asking for the payment of an account and draw up neatly the account which you propose to enclose in the letter.

2. "The making of sentences is an art." Weave these four simple sentences into a large compound sentence.

1. The springtide is very pleasant.

2. The birds return to our woods in springtide.

3. The springtide comes between winter and summer.

4. The flowers begin to show their sweet faces in springtide.

3. Write four simple sentences of your own about your native place and then weave them together in one large compound sentence.

#### SECTION II.

4. Show that you know the meaning of the following words by writing a sentence of not less than fifteen words

on each : temptation, fulfilment, calculate, understanding, tribulation.

5. What portion of grammar is especially included under etymology.

6. Write out any three stanzas of eight lines each and composed by three different authors. Give the titles of any ten poems you have ever learned and name their authors. (Place titles and authors' names in parallel columns.)

### SECTION III.

8. Complete the stanzas of which the following are respectively the first lines :

- (a) It glared on Roslin's castled rock.....
- (b) Few, few, shall part where many meet.....
- (c) Italy thy beauties shroud.....
- (d) One by one the sands are flowing.....

8. Give in your own words a description of the Battle of Hohenlindn.

6. Who was Sir John A. Macdonald? Give the substance of his great speech on the Canadian Confederation.

### SECTION III (ALTERNATIVE.)

7. Complete the couplets of which the following are respectively the first lines :

- (a) Thus to relieve the wretched was his pride.....
- (b) Near yonder thorn that lifts its head on high .....
- (c) Even now the devastation is begun.....
- (d) At church with meek and unaffected grace.....

8. Give in your own words a description of the country parson as he is represented in the "Deserted Village."

9. Tell what you know of "Sweet Auburn" as an actual place in Ireland, or write a paragraph on Oliver Goldsmith.

### ENGLISH GRAMMAR (GRADE I. MODEL SCHOOL.)

[Two questions to be answered from each section.]

#### SECTION I.

1. Parse all the words in the following sentence :

Champlain, having arranged all his affairs in France, again set sail for his western home on the banks of the St. Lawrence, near the Island of Orleans.

2. Compose another sentence of the same kind as the above with all the words changed and having *Jacques-Cartier* for the subject, and *explored* for the predicate.

3. Analyse the sentences :

(a) I had been a wanderer among the rocks.

(b) There was, among their ranks, a champion in black armour, mounted on a black horse, large of size, tall, and to all appearance powerful and strong.

(c) Let us then be up and doing  
With a heart for any fate.

## SECTION II.

4. Name the various kinds of nouns and define them with examples.

5. Write out a table of the personal pronouns, and compose a sentence which has all the relative pronouns in it.

6. What are the feminine forms of *nephew*, *wizard*, *bridegroom*, *index*, *stag*, *executor*? What are the plural forms of *staff*, *hoof*, *deer*, *fish*, *focus*? What are the superlative forms of *near*, *old*, *late*, *fore*, *little*?

## SECTION III.

7. Into how many classes may adjectives be added? Name and define them with examples.

8. What is inflexion? Give five words that are inflected to show case, number, gender, tense, person.

9. Correct these sentences :

There ain't much needcessity of my going.

Between you and I, there is nothing to it.

Thunder and lightning isn't very nice when there aint no shelter near one.

When one is done out he is no good for nothing.

He done his work last night, I seen him do it myself.

State what rule is broken in every case of bad English in the above sentences.

## ENGLISH GRAMMAR (GRADE II. MODEL SCHOOL.)

[Two questions to be answered from each section.]

## SECTION I.

1. Write out separately the clauses in the following stanzas and number them :

*Art is long and time is fleeting,  
And our hearts, though stout and brave,  
Still, like muffled drums are beating  
Funeral marches to the grave.*

*No more thy glassy brook reflects the day,  
But, choked with sedges, works its weedy way  
Along thy glades, a solitary guest,  
The hollow-sounding bittern guards its nest.*

2. What is meant by parsing? Parse in full the words in italics in either of the above stanzas.

3. What is meant by (1) general analysis and (2) particular analysis. Give the particular analysis of the last sentence in either of the above stanzas.

## SECTION II.

4. Define the terms *subject*, *predicate*, and *object*. Show how these parts can be enlarged or extended in the sentence.

“The pupils parsed the words.”

5. What is meant by “a part of speech?” Name, define and give the derivation of the eight parts of speech. Make a sentence in which they are all to be found.

6. Give six adjectives that are compared irregularly. and six verbs that are conjugated irregularly. Give the three forms in each case.

## SECTION III.

7. Name the various kinds of pronouns and define them. Compose sentences to illustrate the use of each kind, and then make a sentence containing them all.

8. How many parts of speech are inflected? What is each inflected to show? Define the grammatical terms used in connection with the inflexion of the verb.

9. Correct the spelling and grammar and fill in the ellipses of the following letter :

I am not very shure whither I can't be with you on Wedensday or not. but I will do my——best to be down at the exhibition the —— it oppens. If the oportunity should come your——, you——communicate with the other—— of your family and if they hapen to be late they can come in by the seperate entrance.

### ENGLISH GRAMMAR (GRADE I. ACADEMY OR GRADE III. MODEL SCHOOL.)

[Two questions are to be answered from each section.]

#### SECTION I.

1. There are sixteen clauses in the subjoined extracts Write them out in their order, numbering them and distinguishing them as noun, adjective, adverbial or principal clauses :

*A time* there was, ere England's griefs began,  
When every rood of ground maintained *its* man,  
For him light labour *spread* her wholesome store,  
*Just* gave what life required, but gave *no more*.  
*Deserted Village.*

But *Thou* hast said the *blood* of goat,  
The flesh of rams, I *will* not *prize* ;  
A *contrite* heart, an humble thought,  
Are mine accepted *sacrifice*. *Ivanhoe.*

*What* followed why recall? The *brave* who died,  
Died without *flinching* in the bloody surf,  
They sleep as well beneath that purple *tide*  
As *others* under turf. *Fifth Reader.*

2. Parse in full the words in italics in any one of the above passages, and give the rule in syntax connected with each of them.

3. Give the particular analysis of the first and the last clause in each of the above passages.

#### SECTION II.

4. Define the following terms used in the analysis of sentences : *subject, predicate, object, indirect object, enlargement, extension, connective, adjunct, attribute.*

5. Name the seven kinds of subjects, the five kinds of predicates, and seven kinds of objects, giving examples.

6 Give in your own words the meaning of *analysis* and *synthesis*. Are these terms only applicable in grammar? What is composition?

### SECTION III.

7. What is meant by an irregular verb? Give six examples of strong verbs in their present, past, and participial forms. Give also an example of a compound verb.

8. "Each part of speech has a function to perform in a sentence." Write out a list of the eight parts of speech and define each of them in turn in words denoting its special function.

9. Prepositions are not all small words." Give five prepositions which are not monosyllabic. What is a conjunctive adverb, an adjective pronoun, and a verbal noun? Define each and give examples in a sentence illustrating the function of each.

### A. A. EXAMINATIONS, 1899.

#### ENGLISH GRAMMAR.

(N. B.—Not more than two questions in each section to be answered.)

#### A.

1. Give in tabular form the feminines of:—

Lad, fox, hero, marquis, bachelor.

And the plurals of:—

Roof, index, cow, crisis, vicar-general.

2. Give the rules with examples for forming the degrees of comparison of adjectives.

3. Correct, if necessary, the following sentences:—

A great and a good man looks beyond time.

It cannot be me you mean.

Thomson's "Seasons" is now comparatively speaking little read.

Lying by the fire, the heat is felt.

Neither of the workmen had their tools with them.

## B.

4. Distinguish weak and strong verbs.

Give the first person singular, past indicative and the passive participle of : --

Begin, cling, seethe, hew, work, bereave.

5. Define and illustrate with short sentences :—

Complementary Nominative, Cognate Objective, Apposition, Indirect Object, Representative Subject.

6. Parse the words in italics in the following sentences :—

*Considering* philosophers of *past* times enquired into the *why* of most things, *why* did they not *consider* whence sprang the *virtues* of *humility* and *gentleness* ?

*Wide* waves the *eagle* plume.

## C.

7. State the various kinds of pronouns and give examples.

Show the pronominal use of *that* and *as* by short sentences.

8. Analyse :

He has not read as much as I.

The great man down, you mark his favorite flies ;

The poor advanced makes friends of enemies.