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The Canada School Journal.

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CANADA SCHOOL JOURNAL HAS RECEIVED

*An Honorable Mention at Paris Exhibition, 1878.
Recommended by the Minister of Education for Ontario.
Recommended by the Council of Public Instruction, Quebec.
Recommended by Chief Superintendent of Education, New Brunswick.
Recommended by Chief Superintendent of Education, Nova Scotia.
Recommended by Chief Superintendent of Education, British Columbia.
Recommended by Chief Superintendent of Education, Manitoba.*

The Publishers frequently receive letters from their friends complaining of the non-receipt of the JOURNAL. In explanation they would state, as subscriptions are necessarily payable in advance, the mailing clerks have instructions to discontinue the paper when a subscription expires. The clerks are, of course, unable to make any distinction in a list containing names from all parts of the United States and Canada.

CONDUCTORS OF INSTITUTES.

The county model school and the county convention, the two most recent additions to our educational machinery, may fairly be pronounced successful. They are each performing a work which could scarcely be accomplished in any other way, and they seem destined to produce great and lasting results. No one imagines, however, that they have sprung forth, complete and perfect, like the goddess of classical myth. The convention, especially, seems capable of much improvement, and this is a suitable moment for a few timely suggestions when the majority of our associations are just making arrangements for their next meeting.

First of all, a successful, live, profitable, convention will not be produced by "the fortuitous concourse" of a miscellaneous collection of items on the programme. Some great purpose, some commanding thought, must weld the items into a distinct whole, and combine variety into unity. The experience of the last decade has plainly shown that a programme without a leading idea cannot attract members from a distance, nor fire them with enthusiasm in their profession. We need not tell those who have labored to make our conventions successful, that it requires almost as much generalship as would suffice to win a battle. What troops to order to the front, what reserve forces to hold in readiness for emergencies, what cavalry, what infantry, what light skirmishers, what cannon to employ, what general plan of action to adopt—these are some of the difficult questions to be settled in the council of war, the decisions of which demand first-rate executive ability to carry them out to successful issue. Self-sacrifice, for the general good, and much labor, without the least hope of personal reward, have always distinguished our conventions. But we have lacked somewhat in the incisiveness, the attack, the unity of purpose, that naturally spring from the individuality of dictatorship.

In many of the United States the problem has been solved by appointing conductors of institutes from the ranks of leading educationists. A specialist, even if he be an extreme hobbyist, will be likely to excite interest and to precipitate that conflict of thought wherein lies the power of the convention. And he can scarcely fail to advance something new and stimulating to those who are by the nature of their work very liable to fall into the ruts of orthodox routine. His peculiar views and his special standpoint will tend to wake up thought and suggest new ideas pregnant with the germs of future progress, while his individuality will save the convention from aimlessness, and give it a pleasing spice of novelty. The experiment is by no means new in our own country, and the uniform success that has attended it warrants us in urging its general adoption. The funds of the association have never been more satisfactorily expended than in procuring the services of qualified conductors. But instead of arranging for single lectures, we should advance a step farther, and put the main action of the convention under the control of a single mind. The natural supplement to this would be local town and township institutes, held quarterly, in which all members would find ample scope for their energies, and help materially to forward the Canadian illumination.

MACHINE EDUCATION.

In the *Popular Science Monthly* for February, there appeared an editorial article entitled "Machine Education." The writer favors his readers with the following definition: "By machine education, we mean the rigid mechanical, law-established routine applied to great multitudes of children of all conceivable sorts who are got together in large establishments and submitted to operations that go under the name of mental cultivation." The definition is emphasized by the remark that "machine education is of the very lowest sort, and the best that can be said of it is, that it is barely better than nothing at all." To make matters still worse, we are informed that "it is not capable of improvement. The method itself is radically false, so that the improvements of it but make it worse." We wish to enter a respectful, but firm, protest against the general drift and necessary implications of the articles in question. We will take the writer on his own ground. He draws a striking distinction between true and false theories of education, between education as a development of mental activity and power and as a mere storing of the brain, between the genuine office of the teacher in encouraging, inciting, and arousing the pupil to put forth his own efforts, and the mechanical work of stuffing him with barren acquisitions. These distinctions are true and solid. Wherever they are disregarded in practical educational work, in public schools just as elsewhere, energy is misdirected and serious loss must ensue. If, however, the grave arraignment be made that "the whole mechanism of the public

school system is now impelled by law" in favor of "external appliances and mechanical arrangements," it is somewhat anomalous that modern society should be indebted for the distinctions which the writer so eloquently and truly describes to the very men who have founded, developed, and established beyond all possibility of overthrow the system of popular education which he condemns. We have no quarrel with the writer when he calls attention to inconsistencies between the theory and practice of public school officials, and we are not set to defend the particular methods of grading and marking adopted in the schools of New York city. *Red-tapism, ultra-officialism*, can exert their stifling influence in educational as well as in other matters. But our contention is that the implication that our modern public school systems unfavorably compare with the state of things which preceded them in respect to vicious and irrational methods of education is misleading and essentially false. Those systems, as a rule, are worked according to the precise theory which is laid down in the article under consideration. The very studies which the *Monthly* regards as of prime importance had no place in the school curriculum of thirty years ago, any more than had the theory that in schools pupils shall be taught to *think* rather than *learn* proper recognition in the educational methods of that period. While thus protesting against what we conceive to be the unfair logic of the article in its general bearing, we are glad to endorse some of its incidental positions, as for instance that "teachers should have some liberty to adapt themselves to the fundamental, though ever-varying, requirements of individual pupils."

ENGLISH LITERATURE AND GRAMMAR IN ELEMENTARY SCHOOLS.

Last month, we presented some thoughts on "Grammar and Composition in Elementary Schools," and insisted on increased attention being given to the *making* of sentences as distinguished from the dissection of sentences. Our columns contained numerous selections supporting our position, and indicating very clearly the method of accomplishing the desired end. Technical grammar cannot be profitably introduced in the earlier stages of a public school course. We must rely on imitation of good models and the force of habit much more than upon the power of logical analysis, which presupposes a grasp of thought that only one child in a thousand possesses. Even when a text-book on grammar is put into the pupils' hands it should be merely a ground-plan of the subject, "exact to perfection, short to the shortest, and clear to the clearest." It requires a combination of talents to write such a book as shall everywhere leave out everything that can be left out, and still furnish at every point articulations into which the whole of the suppressed matter will exactly fit as the student proceeds further and further with his studies. Dr. Morris and Prof. Whitney have each done this with surprising success. The latter, especially, has a happy clearness and simplicity of statement combined with the rare faculty of knowing how much to leave out. There is no doubt that his "Essentials of English

Grammar" is directly in the line of progress, and a distinct advance on all predecessors, particularly in the facts that it is a grammar of English as spoken in the present century, and is untrammelled by foreign models, and stripped of the formidable free-masonry of technical terms which make the subject so dry and wearisome to boys and girls.

We pass on in the present number to observe that grammar is the *means*, not the *end*. It is to be kept strictly in the subordinate position of key to the palace of literature. We fear that a vast amount of so-called teaching of English literature in our public and high schools is, after all, very little more than a useless jingling of bunches of grammatical keys. Thought, meaning, sense, feeling, beauty, imagination, creative power—these are all within, while we are wasting our precious time on the threshold toying with the intricate wards of the keys, but using none of them to unlock the treasures which might be ours.

Instead of proffering further remarks of our own on the *RELATION OF GRAMMAR AND LITERATURE*, we present, by permission of the publishers, a short extract from the preface to *Hamlet* in "*The School Shakespeare*," by Dr. Henry Hudson, one of the most distinguished scholars on this side of the Atlantic. It will be found among the *Special Articles*.

PSYCHOLOGY IN NORMAL SCHOOLS.

An ignorant man is one who does not know the principles underlying his daily work, and does not understand the nature of the material on which he operates. An ignorant politician does not understand jurisprudence and political economy. A shoemaker may be a very good linguist, but he is an ignorant shoemaker if he does not know all about leather. A druggist may be an excellent astronomer, but he is not fit to dispense drugs unless he knows far more about their formation and properties than he can learn in a drug store alone. An ignorant teacher is one who, though perhaps a good general scholar, knows very little of the mind on which he operates, who has not carefully examined into the process of knowing. A physician is expected to qualify himself for dealing with the body by a thorough study of physiology, and he is considered a charlatan unless he knows the function of every organ and tissue. The teacher is daily occupied in developing mind. Shall he proceed by guess, ignorant of the laws of mind, and escape the charge of quackery?

Psychology is as purely an experimental science as chemistry, its deductions follow as clearly as those of mathematics, and if education is ever to rise above mere empiricism and become a true science it must be by laying the foundation securely in a sound psychology. If the profession of teaching is to reach the commanding position it deserves, our training schools must place their students above the authority of mere authority by founding their methods upon the nature of the mind itself. A step in this direction has already been taken by the provision that first-class teachers shall hereafter attend a course of lectures on psychology, to be given each year at the Education Department. Out of all teachers, those who have charge of the

youngest classes require the aid of mental science to guide them. It is in the very first stages of learning that the science of knowing can render the most efficient help by determining their order and limits. Our normal schools must give to second-class teachers an outline of the science and enable them to make a good beginning in this *scientia scientiarum*.

It has been found by experiment in other countries that a very elementary course of instruction in psychology produces marked effects on the intelligence and power of the teaching in public schools. This way lies progress; let us fearlessly take another step, and at the very outset put every young teacher in possession of the laws of mind. "The realm of thought cannot be explored without thought," and incidentally we shall be giving them a piece of mental training, far superior to that produced by the mixture which is now by courtesy called the science of education.

INSPECTION OF SEPARATE SCHOOLS.

As the Legislature has adopted the plan of appointing an inspector of separate schools, it is not necessary now to discuss the principle. But having accepted the doctrine that thorough inspection of schools is essential, the government cannot leave the separate schools in their present condition. There are in these schools over 450 teachers and about 30,000 pupils, involving a yearly expenditure of about \$130,000. The maximum number of schools allowed to an inspector in a county is 120. But the separate schools are scattered over the whole province, so that it must be nearly impossible for the present efficient inspector, Mr. White, to visit them all even once a year. If the province were divided into two districts it might be possible to overtake the work, and the statistics plainly show that the step must be taken. We cannot go back on the record of half a century and practise parsimony at the dictation of those weight-and-measure educationists whose ideal of education would carry us back to the midnight of the dark ages.

The *Educational Monthly* for February comes sadly to hand towards the First of April with a notice of one of its sub-editors, Mr. Robinson, in which it asks with tearful indignation "When will school trustees and the people generally see that right and justice demand that the profession shall receive honorable and generous treatment—the encouragement and sympathy, rather than the indifference and contumely, of their fellow men?" This lachrymose interrogation demands a short commentary, so that our readers may fully sympathise with the *Monthly's* deep affliction, and understand what it is to receive "the indifference and contumely of fellow-men." At a meeting of the Whitby Board of Education, assembled to appoint a principal for the Collegiate Institute, Mr. L. E. Embree, B.A., was selected out of a large number of applicants. Among the testimonials submitted by him were some from certain individuals whom the Board thought were connected with a party they called the "Adam clique," and it is rumored so averse were they to any one, or anything, savoring of that party, they adjourned to institute further enquiry. At the adjourned meeting the Board were fully convinced that Mr. Embree had no connection whatever with the party, and obtained these

testimonials only in the course of professional acquaintance. Hence the *Monthly* sobs out its vexation, appeals to "right and justice," bewails the "indifference and contumely of fellow-men," and solemnly announces that Mr. R. has been led to "renounce the profession." We see! for the orphaned profession; but good may come out of apparent evil if the gentleman, in "renouncing his profession," will also take the important step of renouncing the items set down in the catechism for the admonition of all good men.

MR. L. E. EMBREE'S APPOINTMENT.

The Board of Education, Whitby, has appointed Luther E. Embree, B.A., late head master of Strathroy High School, to the principalship of the Whitby Collegiate Institute, vacated by the resignation of G. H. Robinson, B.A.

Mr. Embree entered Toronto University in 1871, after a successful course of public school teaching in St. Thomas. At matriculation he obtained a double scholarship, and graduated, with a silver medal in moderns, in 1875. For some years he was assistant master in Toronto Collegiate Institute, and subsequently principal of Yarmouth Seminary, Nova Scotia, where Dr. J. A. McLellan had previously presided. His career as principal of Strathroy High School is one of distinguished success, as the school records abundantly testify.

In his new position he will, we are sure, bring all his well-known energy to bear in endeavoring to maintain the establishment in Whitby up to the standard of a collegiate institute, a standard which from some cause or other has been jeopardized. We have every confidence in the efforts he is capable of exerting, and will exert, for the welfare and benefit of the collegiate institute. We congratulate the Board of Education on their wise selection, and we wish the new principal success and prosperity in his new and important sphere.

PANICS IN SCHOOLS.

The recent fatal accident in one of the Roman Catholic schools of Brooklyn, by which fifteen or twenty pupils lost their lives, and many more were seriously injured by falling over a staircase upon one another while rushing out at a sudden alarm of fire, has induced the school authorities in Kingston and Toronto to take precautions for the prevention of such a disaster on this side of the lines. In small schools the danger is not great, but where the attendance exceeds one hundred occasional fire drills would be highly commendable. In most of the city schools of the United States such drills are frequent. The alarm is given, and the whole school quickly and quietly turns out in perfect marching order. When a real alarm occurs there is no confusion and very little danger of a panic. Such drills also serve an excellent purpose for ordinary discipline. All doors of exit are required by statute to open outward, and the penalty for neglect is a fine of about fifty dollars. We earnestly recommend all teachers to see that no death-traps are left about their schools. Trustees should be notified and fully warned of the danger and of their responsibility. Narrow or crooked stairways should be changed immediately.

MORAL TRAINING IN SCHOOLS.

There is a great lack of moral training of young people, not only in the homes but in our public schools. The reading of the Bible in the public schools has always been met with vigorous protests, and the ordinary text-books are usually innocent of any moral instruction, except what is taught by inference, and that fails to meet the demand. What is imperatively demanded in our public schools is a regular course of moral teaching, which shall be adapted to the comprehension of all classes of pupils. Because our common school-teaching does not provide for this kind of moral instruction the Catholic denomination seizes upon it as an excuse for opposing it, and for establishing parochial schools of their own, in which they see to it that the special tenets of their church are also inculcated. All the statistics of all the penal institutions and alms-houses in this country, and in all civilized countries, go to prove that the most prolific cause of crime is connected with the sale of alcoholic liquors; and in looking about for ways and means to prevent crime, we stumble upon the demoralizing traffic. And so it may be laid down as a general proposition that to prohibit the manufacture and sale of intoxicating drinks in any community, or to reduce the use to the minimum, would be to dry up at its fountain-head one of the chief sources of crime, pauperism, and wickedness. No intelligent person will deny this broad but truthful assertion, and, with all the astonishing facts before us in this respect to the criminality springing from strong drink, the Christian and the philanthropist feel justified in adopting the most heroic treatment in dealing with this giant evil.—*Chicago Journal*.

The *Chicago Journal* strenuously insisted, we are told, on the exclusion of the Bible from public schools, and now, finding, like the French statesmen who abolished the Sabbath, that some substitute is needed, it comes out as strenuously in favor of teaching morality. But where is morality to be found apart from the Bible? The Ten Commandments and the teaching of Christ and His inspired Apostles contain an authoritative and reliable code of morals, before which the morality of the Grecians, Romans, Hindoos, Mohammedans, Chinese, Voltaire, Paine, and Ingersoll are mere dross as compared with fine gold. The best book next to the New Testament was one prepared by Protestant and Roman Catholic bishops, consisting of selections from the Scripture, for the Irish national schools; and it would be well, if we cannot get the whole Bible into schools, at least to get that volume of extracts from it, specially suitable for the young.—*N. Y. Witness*.

SPELLERS IN SCHOOLS.

We have much pleasure in announcing that the Education Department some time since determined to discontinue authorizing spelling-books, copy-books, and such like material. These books may be selected by the Teacher with the approval of the Inspector and Trustees. Gage's Practical Speller is now being used extensively and successfully in the Provincial Model School, Toronto, and in many of the leading schools in Ontario, Quebec, Nova Scotia, and Manitoba.

The continuous benefactions of Mr. Munro are rapidly making Dalhousie one of the most liberally endowed colleges of the Dominion. Following close upon the announcement of Mr. McLeod's generous bequest of funds, sufficient to endow three professorships, came the proposal of the large-minded New Yorker to establish a second chair in classics, with two adjunct tutorships. Our Nova Scotia Notes for this month

convey intelligence of a "new departure" in the liberality of a gentleman whose gifts to learning are fast making his name famous. The aim of establishing an efficient Law School in Halifax seems, under the indicated plan, entirely feasible. The new movement has indeed a guarantee of success in the character and ability of Dr. Weldon, and the legal gentlemen who are to be associated with him as the Law Faculty of Dalhousie.

J. A. Clarke, B.A., B.Sc., has been appointed to the head-mastership of the Strathroy high school to fill the vacancy caused by Mr. Embree's removal to Whitby. Mr. Clarke is a gold medallist of Victoria University, and has since graduation taken special courses in science and modern languages. He has been very successful in his mastership of Smith Falls high school and goes to his new field with the highest recommendations from inspectors and others, who describe Mr. Clarke as one of the most successful teachers in Ontario.

Mr. C. A. Barnes, B.A., Inspector of Schools, East Lambton, was the recipient of a handsome gold watch, chain, and charm, the gift of the teachers of his inspectorate. The presentation was made at the late meeting of the County Teachers' Association, of which Mr. Barnes is president, and an address was read expressive of the high regard in which he is held by his teachers, and their appreciation of his friendship during the past six years. Mr. Thomas White read the address and Miss Davidson made the presentation. Mr. Barnes thanked the teachers in eloquent terms. We regret that we cannot spare space to print the address and reply in full.

Mathematical Department.

DALHOUSIE COLLEGE EXAMINATIONS.

MUNRO JUNIOR EXHIBITIONS AND BURSARIES. MATRICULATION

ARITHMETIC AND ALGEBRA.

Examiner—C. McDONALD, A.M. Time—THREE HOURS.

1. Express in words the value of each of the figures in the number, 00706005.

2. Reduce to its simplest equivalent—

$$\{(a-b)x-(b-c)y\} - \{(a+b)x+(b+c-d)y\} + ax - bx - cy.$$

3. For what values of n is $x^n + y^n$ divisible by $x + y$? Illustrate by an example when n is not less than 4.

4. Find the value of $(x+y-z)(z+x-y)(y+z-x)(x+y+z)$, when $x^2 = y^2$.

5. Express in simplest form $\sqrt{-\frac{3}{4}a^2p^3q^{20}r^{10}st^8 - a(u-c)}$,
and $(2a-x)x^2 + \sqrt{a^2x + 2ax^2 + x^3}$.

6. $x^3 + mx + a^2$ is a factor of $x^4 + ax^3 + a^2x^2 + a^3x + a^4$:
Prove $m^2 = m + 1$.

7. Solve the equations $(x - \frac{2}{3})(x + \frac{2}{3}) - (x-5)(x+3) = 9\frac{2}{3}$,

and

$$\sqrt{\frac{a^2}{x} + b} - \sqrt{a^2x - 1 - b} = c^2.$$

8. If $ay + bx = bh$, $ky + hx = b^2$, and $x^2 + y^2 = b^2$, prove $a^2 + b^2 = h^2 + k^2$.

9. Show generally, and not by working a particular example, that if the last figure of a whole number is 5, the last two figures of its square are 25. Show also that the sum of the cubes of two consecutive odd numbers is divisible by twice the intermediate whole number.

SOLUTIONS.

1. Book work.
2. Ans. $ax - 3bx - 2by - cy + dy$.
3. Ans. 1, 3, 5, 7, &c—any odd number. $x^2 + y^2$.
4. Exprs = $\{(x+y)^2 - x^2\} \{z^2 - (x-y)^2\}$
 $= (x^2 + y^2 - x^2 + 2xy)(z^2 - x^2 - y^2 + 2xy) = 2xy \times 2xy = 4x^2y^2$.

$$5. \frac{2pq^4m^2s^5t^5}{7t^6-c} \{(2a-x) \pm (a+x)\} x^4 = 3ax^4 \text{ or } (a-2x)x^4$$

6. On division the remainder must=0,

$1 \mid 1 + a + a^2$	$+ a^3 + a^4$
$-mc \mid -ma$	$+ a^2(1-m)m^2$
$-a^2 \mid -a^2$	$-a^2(1-m) + a^4(1-m)m$

Hence the last two columns must separately=0,
 From last column $m^2=m+1$, from last but one m^2 also $=m+1$.

7. (1) $(x^2 - x - 15) - (x^2 - 2x - 15) = 2x$ ∴ $x = -\frac{3}{2}$.
- (2) $(a^2x^{-1} + b)^2 - (a^2x^{-1} - b)^2 = c^2$.

Square, divide through by 2, and transpose—
 $(a^2x^{-1} + b)^2 - (a^2x^{-1} - b)^2 = c^2$
 Square, cancel, transpose, and divide through by a^2c
 and $x = 4a^2c \div (4b^2 + c^2)$.

N.B.—We can only tell by trial whether this root will satisfy the given eqn, because when we square we introduce a quantity which might have come from another equation with opposite signs.

8. We have to eliminate x and y . From 1 and 2

$$x = \frac{b(kh-ab)}{bk-ah}; \quad y = \frac{b(b^2-h^2)}{bk-ah}$$

$$\therefore 8. x^2 + y^2 = \frac{b^2}{(bk-ah)^2} \{(kh-ab)^2 + (b^2-h^2)^2\} = b^2$$

whence $(kh-ab)^2 + (b^2-h^2)^2 - (bk-ah)^2 = 0$,
 or $(k^2h^2 + a^2b^2) + (b^2-h^2)^2 - (b^2k^2 + a^2h^2) = 0$;
 i.e. $(b^2-h^2)^2 + a^2(b^2-h^2) - k^2(b^2-h^2) = 0$;
 ∴ $(b^2-h^2) + a^2 - k^2 = 0$, or $a^2 + b^2 = h^2 + k^2$.

9. Let x be the tens, then No. $=x+5$; hence its square is $x^2 + 10x + 25$, and x^2 can give only hundreds, $10x$ will also give hundreds. ∴ 25 are the only figures of the tens and units. Every odd number is of the form $2n+1$. Let $2x+1, 2x+2$, and $2x+3$ be the three consecutive numbers. Then $(2x+1)^2 + (2x+3)^2$ is divisible by $2(2x+2)$.

GEOMETRY.

1. If two triangles have two sides of the one equal to two sides of the other, but the base of the one greater than the base of the other, then the triangle having the greater base shall have also the greater vertical angle.

2. In any obtuse-angled triangle, the square of the side opposite the obtuse angle exceeds the sum of the squares of the sides, &c. Give the full enunciation, and prove the proposition.

3. The opposite angles of a quadrilateral inscribed in a circle are together equal to two right angles.

4. Divide a line into two parts so that the square of the one may be double the square of the other.

5. CD and FG are two diameters of a circle, and from P in the circumference perpendiculars are drawn to them, meeting the circle again in Q and L . Prove arc QL double of arc DG .

6. Construct a right-angled triangle equal in area to a given triangle and having its altitude, i.e., one of the sides containing the right angle, equal to a given line.

NOTES.

1. I. 25.
2. II. 12.
3. III. 22.
4. Construct an isosceles right-angled triangle. Then the onsq. the hyp. is double the sq. on the base. Produce the base and cut off a part=hyp. Divide the given str. line similarly to the line thus produced. (VI. 10.)
5. $CP = \frac{1}{2}$ arc PCQ (III. 3, &c.), $PQ = \frac{1}{2}$ arc PGL , and arc $DG =$ arc $CF =$ diff. between the $\frac{1}{2}$ arcs $= \frac{1}{2}$ diff. between whole arcs $= \frac{1}{2}$ arc QL , i.e., arc $DG = \frac{1}{2}$ arc QL . ∴ (VI. 33) str. line DG is double of str. line QL .
6. Let ABC be the given triangle, P the given line. Complete the parallelogram of which ABC is half. To P apply a parallelogram =twice ABC , having one of its angles a rt. angle. Draw the diagonal of this parallelogram so applied and we have the req. trian.

GILCHRIST SCHOLARSHIP—LONDON UNIV.

MATRICULATION—JUNE, 1882.

ARITHMETIC AND ALGEBRA.

Examiners—DR. JOHN HOPKINSON, M.A., F.R.S., and BENJAMIN WILLIAMSON, Esq., M.A., F.R.S. Time—THREE HOURS.

1. Add together and simplify $\frac{1}{4}\{\frac{3}{2} + \frac{3}{4}(\frac{1}{2} - \frac{3}{4})\}$ of a pound, and $\frac{1}{4}$ of $14\frac{3}{4}$ of 14 $\frac{1}{1}$ of a penny.
2. Express $\sqrt{29801 \times 753}$ correctly to the nearest integer.
3. Express $1.5470 \times 10^{-6} 18$ in its simplest form.

4. A reduction of 20 per cent. in the price of apples would enable a purchaser to obtain 120 more for a sovereign. What may the price be before reduction?

5. A merchant lays out £1000 in buying cloth in England at 3 shillings a yard. He takes the cloth to France at an expense of 3 pence a yard for carriage, packing, &c., and paying a duty of 42 centimes a metre. He sells half the cloth at 8 francs a metre, the rest at 6 francs a metre. What profit does he make. [Express the result in pounds, shillings, and pence, and assume 25 francs to be equal to £1, and a metre to be 39 $\frac{3}{8}$ inches.]

6. Simplify $(\frac{x}{x-1} - \frac{1}{x+1}) \cdot \frac{x-1}{x^2+1} \cdot \frac{(x-1)^2(x+1)^2+x^2}{x^2+x+1}$.

7. (a) Find the sum of five numbers in arithmetical progression, the second being 4 and the fifth 8 $\frac{1}{2}$.

(b) Also find the sum of five numbers in geometrical progression, the third being 3 and the fifth 27.

8. Divide £5 among a man, a woman, two boys, and a girl, so that the man has as much as the two boys and the girl together, the woman and girl together as much as the two boys together, and the man and girl together half the whole amount.

9. Find the greatest common measure of—
 $x^4 + 14x^2 + 67x + 126x + 72$,
 $x^4 + 8x^3 - 31x^2 - 123x - 90$,
 $x^4 + 13x^3 + 47x^2 + 27x - 90$.

10. A man pays £150 a year for rent, water-rate, and poor-rate, the rates being charged on the rent he actually pays. If the rent were reduced 10 per cent., the rate per £ of the poor rate 25 per cent., and of the water-rate 5 per cent., he would pay in all £130, 1s., 0d.; whereas if poor-rates were doubled and water-rate reduced 5 per cent., the rent being as at first, he would pay £169, 10s., 0d. What did he pay for rent, poor-rate, and water-rate respectively?

SOLUTIONS.

1. Result in pounds = $\frac{1}{4}\{\frac{3}{2} + \frac{3}{4}(\frac{1}{2} - \frac{3}{4})\} + \frac{1}{4} \times \frac{3}{4} \times 14 \times \frac{1}{1} \times \frac{1}{1}$
 $= \frac{1}{4}(\frac{3}{2} + \frac{3}{4} \times \frac{1}{4} - \frac{9}{16}) + \frac{105}{4}$
 $= \frac{1}{4}(\frac{3}{2} - \frac{3}{16}) + \frac{105}{4} = \frac{1}{4} \times \frac{9}{16} + \frac{105}{4}$
 $= \frac{9}{64} + \frac{105}{4} = \frac{1}{64} + \frac{105}{4}$
2. Exprs = $\sqrt{29801 \times 753} = \sqrt{22439178} = 12 \times 2 \times 3 \sqrt{1391}$
 $= 12 \times 2 \times 3 \times \sqrt{3 \cdot 2098} = \&c.$
3. Exprs = $\frac{1.5470 \times 10^{-6} 18}{29555} = \frac{15470 \times 10^{-6} 18}{26545} = \frac{3055 \times 10^{-6} 18}{5109} = \&c.$

4. He gets a certain No. for 240d., each costs a certain price,
 ∴ No. \times price = (No. + 120) \times $\frac{1}{2}$ price;
 or No. \times price = $\frac{1}{2}$ (No. \times price) + 96 price;
 ∴ $\frac{1}{2}$ (No. \times price) = 96 price,
 i.e. $\frac{1}{2}$ No. = 96, and No. = 480. ∴ price of each = $\frac{1}{2}d$.
 Reduced price = $\frac{1}{2}$ of $\frac{1}{2}d = \frac{1}{4}d$. ∴ No. at reduced price = $\frac{1}{2} \times 240 =$
 600, and $600 - 480 = 120$, as it should be by the problem.

Otherwise: $\frac{1}{2}$ off the price will require $\frac{1}{2}$ more apples, (see McLELLAN'S MENTAL ARITH. Pt. II.) ∴ 120 apples = $\frac{1}{2}$ No. for 240d.
 i.e. Cost of 1 apple = $\frac{1}{2}d$. as before.

5. 1 metre = $3\frac{3}{8}$ yds = $3\frac{3}{8}$ yds; 1 franc = $\frac{1}{20}$; 42 centimes = $\frac{21}{100}$ £.
 No. yards bought = $\frac{£1000}{\frac{1}{20}} \div \frac{21}{100} = 20000 \times \frac{100}{21} = 95238 \frac{2}{7}$ yds.
 No. metres sold = $20000 \times \frac{3}{8} = 7500$ metres. $3d. = \frac{1}{40} = \frac{1}{40}$ £.
 One-half @ 8 francs, and one-half @ 6 francs = whole at 7 francs.
 Gn = $£\{20000 \times \frac{3}{8} \times \frac{1}{40}\} - \{1000 + \frac{20000}{20} \times \frac{21}{100}\} + \{20000 \times \frac{1}{20} \times \frac{21}{100}\}$
 $= \{20000 \times \frac{3}{8} \times \frac{1}{40}\} - \{1000 + \frac{20000}{20} \times \frac{21}{100}\} + \{20000 \times \frac{1}{20} \times \frac{21}{100}\}$
 $= \{20000 \times \frac{3}{8} \times \frac{1}{40}\} - \{1000(1 + \frac{21}{20})\} + \{20000 \times \frac{1}{20} \times \frac{21}{100}\}$
 $= \frac{300000}{320} - \frac{130000}{20} = \frac{300000}{320} - \frac{130000}{20} = \frac{300000 - 130000 \times 16}{320}$
 $= \frac{100000}{320} = \text{£}312 \text{ } 16s. \text{ } 8d.$

6. Exprs = $\frac{x^2+1}{x^2-1} \cdot \frac{x^3-1}{x^0+1} \cdot \frac{(x^2-1)^2+x^2}{x^4+x^2+1}$
 $= \frac{x^2+1}{x^2-1} \cdot \frac{x^3-1}{x^0+1} \cdot \frac{x^4+x^2+1}{x^4+x^2+1}$

Now, $x^4-x^2+1 = \frac{x^0+1}{x^2+1}$ and $x^4+x^2+1 = (x^2+x+1)(x^2-x+1)$.

∴ Exprs = $\frac{(x^2+1)(x^2+x+1)(x-1)(x^0+1)}{(x+1)(x-1)(x^0+1)(x^2+1)(x^2+x+1)(x^2-x+1)} = \frac{1}{x^3+1}$

7. (a) $s = (a+l) \cdot \frac{n}{2}$, $a+d=4$, $a+4d=8\frac{1}{2}$, ∴ $d=\frac{3}{4}$, ∴ $a=\frac{5}{4}$,

∴ $s = (\frac{5}{4} + \frac{3}{4}) \cdot \frac{1}{2} = 27\frac{1}{2}$.

(b) $ar^2=3$, and $ar^4=27$, ∴ $r=\pm 3$, ∴ $a=\frac{1}{3}$, and the series is $\frac{1}{3} + 1 + 3 + 9 + 27 = 40\frac{1}{3}$; or, taking the negative sign, $\frac{1}{3} - 1 + 3 - 9 + 27 = 20\frac{1}{3}$.

8. 1 man + 1 woman + 2 boys + 1 girl get 100s.
 i.e. (2 boys + 1 girl) + (2 boys - 1 girl) + 2 boys + 1 girl get 100s.
 or, 6 boys and 1 girl would get 100s. (A)

Again, 1 man + 1 girl get 50s.
 i.e. (2 boys + 1 girl) + 1 girl get 50s.
 or, 1 boy and 1 girl get 25s. (B)

Subtracting B from A, 5 boys get 75s.; and the shares are—each boy 15, the girl 10, the woman 20, and the man 40 shillings.

9. Observe that in A and B the sum of the coeff. in the odd places, signs included = sum of coeff. in even places = 140, hence each is divisible by $x+1$. In C the sum of all the coeff. vanishes, hence $x-1$ is a factor. See McLELLAN'S 'TEACHERS' HANDBOOK—the "K METHOD," p. 92. Thus for A we have

$$\begin{array}{r} |1+14+67+126+72 \\ -1| \quad -1-13-54-72 \end{array}$$

$$\begin{array}{r} |1+13+54+72 \\ -3| \quad -3-8-30-72 \end{array}$$

$$1+10+24 = (x+3)(x+8)$$

∴ $A = (x+1)(x+3)(x+8)$, and similarly,

$$B = (x+1)(x+3)(x+5)(x-6)$$

$$C = (x-1)(x+3)(x+5)(x+6)$$

∴ G.C.M. = $x+3$. See also McLELLAN'S HANDBOOK, p. 105, for another method.

10. Let r = rent in pounds, w = water-rate per £, p = poor-rate do.
 Then $r+rw+rp=3000s$.

$$\frac{1}{10}r + \frac{1}{10}r(\frac{1}{10}w) + \frac{1}{10}r(\frac{1}{10}p) = 3001s.$$

$$r + r(\frac{1}{10}w) + r(\frac{1}{10}p) = 3390s.$$

Simplifying we have

$$r(1+w+p) = £ 150.$$

$$r(20+19w+15p) = 2890.$$

$$r(20+19w+40p) = 3390.$$

From 2nd & 3rd, $rp = £20$. Then from 1st and 2nd, $rw = £10$, and $r = £120$.

GEOMETRY.

1. If the square described on one side of a triangle be equal to the sum of the squares described on the other two sides, prove that the angle contained by these sides is a right angle.

2. Prove that the quadrilateral formed by joining the middle points of the sides of any quadrilateral is a parallelogram; and that its area is half that of the given quadrilateral.

3. If a right line be divided into two equal and into two unequal parts, prove that the sum of the squares described on the unequal parts is double the square on half the line and double the square on the intermediate part.

4. Divide a given right line into two parts so that the sum of their squares shall be equal to a given area. Show how the requisite construction is made, and state when it is impossible.

5. If a quadrilateral be inscribed in a circle prove that the sum of one pair of its opposite angles is equal to the sum of the other pair.

6. If a quadrilateral be circumscribed to a circle prove that the sum of one pair of its opposite sides is equal to the sum of the other pair.

7. Find the locus of the centre of a circle whose circumference passes through two given points.

8. Describe a circle through two given points and touching a given circle. Determine the number of solutions of the problem, and when it is impossible.

9. Prove that the lines drawn bisecting the three internal angles of a triangle pass through a common point; and show that the same theorem holds for the lines bisecting one internal and two external angles of the triangle.

10. Divide the circumference of a circle into thirty equal parts, giving the requisite construction.

HINTS AND SOLUTIONS.

1. I. 48.

2. Let ABCD be the quadrilateral, E the mid. pt. of AB, F of BC, G of CD, H of DA. Draw the diagonal DB. Then in the ΔADB the sides are cut proportionally, ∴ HE is par. to DB. (VI.2)

So also GF is parallel to DB, ∴ HE is parallel to GF, (I. 30) So " HG " " EF, ∴ HGF E is a \square m.

Also AD is double AE, ∴ ΔADB is quadruple ΔAHE . (VI.19) i.e. $AHE = \frac{1}{4} ADB$; so also $FCG = \frac{1}{4} DBC$, and thus AHE and $FCG = \frac{1}{4}$ whole quad. In the same way EBF and $DHG = \frac{1}{4}$ quad., i.e. these 8 Δ 's = $\frac{1}{2}$ whole quad. ∴ the remainder, viz., the \square m HF = $\frac{1}{2}$ quad.

3. Let A C D B be the given line,

Then (II. 7) $BC^2 + CD^2 = 2BC \cdot CD + DB^2$.

or $AC^2 + CD^2 = 2AC \cdot CD + DB^2$. ∴ $AC = BC$.

Also (II. 4) $AC^2 + CD^2 + 2AC \cdot CD = AD^2$.

Add these equals and take $2AC \cdot CD$ from each side,

and $2AC^2 + 2CD^2 = AD^2 + DB^2$.

4. Let AB be the given line, S the side of a square = given area, (by II. 14). At B draw BK making $\frac{1}{2}$ rt. \angle with AB. From centre A with radius = S describe a circle cutting BK in P. From P drop perp. PQ on AB. Q is the req. pt. The proof is obvious. S can never be > AB (I. 20), and even when $S = AB$, Q coincides with one end of the line.

5. III. 22. See H. Smith's Geom., p. 177, for neat proof.

6. The sides are tangents to the circle. The tangents drawn from the same pt. are equal. Hence by addition the result req.

7. Let AB be the str. line joining the given pts. Bisect AB at rt. \angle 's by the str. line CD. The centre must lie in CD. (III. 3.)

8. Let A, B, be the given. pts. Take any pt. C in the given circum. Describe a circle thro. A, B, C, (IV. 5). If this circle does not touch the given circle, let D be the other pt. of intersection. Produce AB and CD to meet at E. Draw EF touching given circle at F. Describe a circle thro. A, B, F, this will be the circle req. (III. 35) and (III. 37). Two str. lines can be drawn from E touching given circle, ∴ two solutions possible. The construction fails when AB is parallel to CD. In that case draw str. line parallel to AB touching the circle in K. Describe a circle round ABK. AB may also lie within the given circle. If it be equal to its diameter the solution fails.

9. Let ABC be the triangle. Bisect the angles at B and C. Let the lines meet at G. Join AG and produce it to meet BC in H. Then (VI. 3), $AB \cdot BH = AG \cdot GH$, and $AC \cdot CH = AG \cdot GH$ ∴ (V. 11), $AB \cdot BH = AC \cdot CH$, and ∴ (V. 16), $AB \cdot AC = BH \cdot CH$, and ∴ (VI. 3) AH bisects the angle at A. In the case of external angles we shall merely require to use (VI. A.).

10. Inscribe a regular hexagon (IV. 15), and let AB be one side. Also inscribe a regular pentagon (IV. 14), one of whose sides is AC. Then of 30 equal parts of the circum. AB cuts off 5, and AC cuts off 6, ∴ BC, their diff., contains one. Join BC and place 20 other lines round the circle each = BC.

PROBLEMS FOR SOLUTION.

By J. H. THOMSON, Monkton, Ont.—

1. The current in the centre of a stream is twice as great as it is at the edge. A man rows up the edge in 30m., and down the centre in 20m.; find how long it would take him to row up the centre of the stream.

2. I have two silver coins one of which is $\frac{1}{10}$ fine, and its diameter is 1 inch; the other one is $\frac{1}{15}$ fine, and its diameter is $1\frac{1}{2}$ in.; the first one is worth $\frac{1}{2}$ as much again as the second; find of ratio their thicknesses.

ALGEBRA.

3. Solve the equations—

(1) $\frac{1}{21x^2-13x+2} + \frac{1}{28x^2-15x+2} = 12x^2-7x+1$.

(2) $(\frac{x-a}{x+a})^x + (\frac{x+a}{x-a})^x = \sqrt{5}$.

(3) $x+y+z=5, \frac{x+ay}{y+bx} = \frac{y+az}{z+bx} = \frac{z+ax}{x+by}$.

4. Sum the series $x+2x^2+7x^3+20x^4+61x^5+\dots ad. inf.$, x being less than unity.

By J. K. H., Bradford—

5. A merchant bought 100 bushels of seed for \$100.00, consisting of clover seed at \$10.00 a bush., wheat at \$1.00, and oats at 12 $\frac{1}{2}$ ¢. How many bushels of each did he buy?

Solution by the proposer—

The price of the wheat does not affect the average price. Then sum of bush. of clover seed and oats equals the sum of their value.

Let x =numbers of bush. of oats, and y =clover seed,

$$\begin{aligned} \text{Then } x+y &= \frac{1}{2} + 10y & x &= 72 \text{ bush. oats,} \\ 7x &= 72y & y &= 7 \text{ " clover seed,} \\ & & \text{rem} &= 21 \text{ " wheat.} \end{aligned}$$

We add the following—

5. A ship with a crew of 175 men set sail with a supply of water sufficient to last to the end of the voyage; but in 30 days the scurvy made its appearance, and carried off three men every day, and at the same time a storm arose which protracted the voyage three weeks. They were, however, just enabled to arrive in port without any diminution in each man's daily allowance of water. Required the time of the passage, and the number of men alive when the vessel reached the harbor.

Solution—

Let x =time in days. The water saved by deaths = the water used by the protraction, from which we have

$$175x - (21 \times 175) = 175x - \frac{1}{2}(3x^2 - 177x + 2610),$$

whence $x=79$ da. 7s, and the number of men left at the end of the voyage = $175 - [(90 - 30) \times 3] = 28$.

NOTES AND ANSWERS TO CORRESPONDENTS.

A correspondent asks for rules for computing the amount of hay or straw in a mow. We do not know of any. Perhaps some of our readers will be good enough to send us rules founded on careful experiment.

T. M. H., Port Hope—This has appeared in the JOURNAL before. See vol. iii., page 101, "A Mathematical Puzzle."

In the July number for 1882 we took occasion to propose the question, "Why should the multiplication table be taught to 12 times 12 and there stop 'forever and forever'?" We are glad to find our view of the matter confirmed by the authority of Leonard Waldo, S. D. (Harvard), Astronomer in the Observatory of Yale College, who has published in a very convenient form the extended table up to 100 x 100. Teachers in primary schools will find this table very useful in abbreviating the labor of revising their pupils' work, and also for memorising more than the usual multiplication table. It will to a certain extent take the place of that very convenient but more expensive little instrument, the Arithmometer or multiplying machine, as both multiplication and division of large numbers can be accomplished by its aid with very little labor and with great rapidity and accuracy. We have found it very convenient indeed. To over-worked teachers it will be a boon, in the way of saving much strain and drudgery. Boston, 1882.

At a recent meeting of the Canadian Institute, Prof. G. P. Young made an important communication on the solution of higher equations. We are glad to find the veteran metaphysician returned to his first love, Mathematics.

Correspondence.

To the Editor of the Canada School Journal:

DEAR SIR, - Will you kindly inform me through the columns of your invaluable JOURNAL whether mental arithmetic and drawing are required at the next examination for entrance to high schools? Are they optional or obligatory subjects? A number of teachers are not quite sure, and your reply will give much satisfaction.

Yours truly,

March 27th, 1883.

TEACHER.

[In our Official Department in this number, we publish the subjects of examination for entrance. By this it will be seen that Mental Arithmetic and Drawing are both obligatory subjects. The Drawing is as given in Walter Smith's "Primary Manual" and Drawing Cards; and the paper thereon will be valued at 60 marks.]

Special Articles.

RELATION OF GRAMMAR AND LITERATURE.

The occasion moves me to protest, with all possible earnestness, against the course now too commonly pursued in our studying and teaching of English literature. We seem indeed to have got stuck fast in the strange notion, that children are never learning anything unless they are conscious of it; and so we are sparing no pains to force in them a premature and most unhealthy consciousness of learning. Nothing is left to the free and spontaneous vitalities of Nature. Things have come to such a pass with us, that a pupil must live,

Knowing that he grows wiser every day,
Or else not live at all, and seeing too
Each little drop of wisdom as it falls
Into the dimpling cistern of his heart.

Hence our education is kept at a restless fever-heat of ambition and emulation; and this naturally involves an incessant urging of high-pressure methods. We have no faith in any sowing, save where the seeds "forthwith spring up, because they have no deepness of earth." So eager and impatient are we for immediate results, that the conditions and processes of inward growth are, as far as possible, worked off and got rid of. But the results attained by this straining and forcing are necessarily false and delusive; and presently wither away, because they have no root.

Thus, in our hot haste to make the young precociously intellectual, we are just burning real health and vigor of intelligence out of them; or, at all events, the best that can be gained by such a course is but what Wordsworth justly deprecates as "knowledge purchased with the loss of power." For, in truth, when people, of whatever age, see themselves growing from day to day, they are not growing at all, but merely bloating; a puffing-up, not a building-up. And we shall assuredly find, in due time, nay, we are already finding, that those who get ripe before they are out of their teens begin to rot before passing their twenties. For such a forced and premature action of the mind can only proceed by overtaxing and exhausting other parts of the system; and must needs be followed by a collapse of the mind itself equally premature. In other words, where the brain is built up at the expense of the stomach, the brain itself must soon break down. And, as "the child is father of the man," so of course the smart boys of our educational hot-beds can only blossom out into grown-up intellectual manikins.

Now, in opposition to all this, be it said, again and again, that the work of education is necessarily secret and unconscious just in proportion as it is deep and generative. For the mind is naturally conscious only of what touches its surface, rustles in its fringes, or roars in its outskirts; while that which works at its vital springs, and feeds its native vigor, is as silent as the growing of the grass, as unconscious as the assimilation of the food and the vitalizing of the blood. When its springs of life are touched to their finest issues, then it is that we are least sensible of the process. So it is rightly said, "The gods approve the depth and not the tumult of the soul." Only the dyspeptic are conscious of their gastric operations; the eupeptic never think of their stomachs, are not even aware that they have any.

One would suppose that a little reflection on the workings of the infant mind might teach us all this. For children, during their first five years, before they can tell anything about it, or make any show of it in set recitations, and while they are utterly unconscious of it, do a vast amount of studying and learning; probably storing up more of real intelligence than from any subsequent ten years of formal schooling. And such schooling is no doubt best and wisest when it continues and copies, as far as may be, those instinctive

methods of Nature. But the pity of it is, that our education, as if "sick of self-love," appears to spurn the old wisdom of Nature, preferring to take its rules and measures from a proud and arrogant intellectualism.

In the mental and moral world, as in the physical, the best planting is always slow of fruitage: generally speaking, the longer the fruit is in coming, the sounder and sweeter when it comes; an interval of several years, perhaps of ten, or even twenty, being little time enough for its full and perfect advent. For growth is a thing that cannot be extemporized; and, if you go about to extemporize it, you will be sure to cheat or be cheated with a worthless surface imitation: that is to say, in place of a growth, which is slow and silent, but full of juice and taste within, will be substituted a swift, loud, rapid manufacture.

What a teacher, therefore, most especially needs (and parents need it too) is the faith that knows how to work and wait,—to work diligently, carefully, earnestly; to wait calmly, patiently, hopefully;—that faith which, having its eye on the far-off future, does not thirst for present rewards,

Nor with impatience from the season ask
More than its timely produce

For Nature, the honest old Mother, is far better, stronger, richer than our busy and meddling intellectualists, who are straining so hard to get ahead of her, have the heart to conceive. Human wisdom may indeed aid and further her processes, but it is stark folly to think of superseding them. And the forcing system now so much in vogue is essentially a levelling system; though, to be sure, it is an only level downwards: perhaps, indeed, the circumstance of its looking to a compelled equality is what makes it so popular—a thing sure to issue in a manifold apuriousness. For its estimate of things is, for the most part, literally preposterous. Minds of a light and superficial cast it over-stimulates into a morbid quickness and volubility, wherein a certain liveliness and fluency of memory, going by rote, parrot-like, enables them to win flashy and vainglorious triumphs by a sort of cheap and ineffectual phosphorescence; thus making them, as Professor Huxley says, "conceited all the forenoon of their life, and stupid all its afternoon"; while, upon minds of a more robust and solid make, which are growing too much inwardly to do any shining outwardly, it has a disheartening and depressing effect. Thus the system operates to quench the deeper natures, while kindling false fires in the shallower.

Hence, no doubt, the feeling, which can hardly be new to any thoughtful teacher or parent, that "strongest minds are often those of whom the noisy school hears least." For, under the system in question, modest vigor is naturally eclipsed by pert and forward imbecility—the proper characteristic of minds that have not strength enough to keep still. But minds thus heated into untimely efflorescence can hardly ripen into anything but sterility and barrenness, before the season of fruitage, the sap is all dried out of them. To quote Professor Huxley again: "The vigor and freshness, which should have been stored up for the hard struggle for existence in practical life, have been washed out of them by precocious mental debauchery—by book-gluttony and lesson-bibbing; their faculties are worn out by the strain upon their callow brains, and they are demoralized by worthless, childish triumphs before the real work of life begins." Of those who are so incessantly driving on this bad system, we may well ask, with Wordsworth—

When will their presumption learn,
That in th' unreasoning progress of the world
A wiser spirit is at work for us,
A better eye than theirs, most prodigal
Of blessings, and most studious of our good,
Even in what seem our most unfruitful hours?

Now, Shakespeare, above all other authors, should be allowed to teach as Nature teaches, else he ought not to be used as a text-book

at all. And here, I suspect, the great danger is, that teachers, having too little faith in the spontaneous powers of nature, will undertake to do too much, will keep thrusting themselves, their specialties and artificial preparations, between the pupil and the author. With average pupils, if of sufficient age, Shakespeare will make his way, slowly and silently indeed, but effectively, provided his proper efficacy be not strangled and defeated by an excess of learned verbalism. For his great superiority lies very much in this, that he writes close to facts as they are: no cloud of words, nothing, stands between his vision and the object. Hence with him, pre-eminently language is used as a transparent, invisible vehicle of thought and matter; so that the mind, if rightly put in communication with him, thinks not of his expression at all, but loses sight of it, in the force and vividness of what is expressed. Beautiful his speech is indeed, but its beauty lies in this very thing, that it is the crystal shrine, itself unseem, of the speaking soul within. The less, therefore, the attention of students is diverted from his matter to his language by external calls, the quicker and stronger will be their interest in him—an interest free, natural, and unconscious indeed, but all the better for that; so that the teacher will best further it by letting it alone; will most effectively help it by leaving it unhelped. For the learning of words is a noisy process: whereas the virtue of things steals into the mind with noiseless step, and is ever working in us most when we perceive it least. And so, when Shakespeare is fairly studied in the manner here proposed, the pupil will naturally be drawn to forget himself: all thought of the show he is to make will be cheated into healthful sleep; unless, ay, unless—

Some intermeddler still is on the watch
To drive him back, and pound him, like a stray,
Within the pinfold of his own conceit.

(To be continued.)

NECESSITY OF RIGHT EARLY TRAINING.

BY HON. JOHN W. DICKINSON.

When the child begins to live his spiritual life, his mind has no facility in the exertion of his active power, nor has it any tendency to act in any particular manner.

As soon as the mind exercises itself in thinking, feeling, and choosing, it begins to acquire a facility in performing these acts, and there will accompany the facility an inclination to continue to do what is easily done. This facility and inclination constitute habit.

We say of very young children that their mental faculties are undeveloped, meaning that they have not yet formed habits of acting. The capacity of the mind for forming habits renders mental development possible.

The one cause of development of the faculties is exercise. From this may be derived one of the fundamental principles of a true method of teaching. From the same truth may also be derived an idea of the importance of right early training.

If the powers are developed by use, it follows that a method of teaching must be devised which will present right occasions for their proper exercise.

As the kind and degree of activity the mind exerts during the early developing period of its existence determine its character, it must be placed in care of a skilful director from the first.

He will study to find, if possible, what ideas the mind in its early existence is adapted to form, what emotions its natural activity will produce, and what choices its natural acts of thinking and feeling will prompt it to make.

No unnatural interference by a controlling power must be allowed to defeat the ends which nature has planned for the child to secure for himself.

There is a period in every child's early life that the educator should improve in promoting the physical growth of the young being placed under his care.

At first the child is to live a physical life, and be controlled in his movements largely by the animal principle of action. At this time ideas will spring up in his mind as the material world is brought in contact with his senses. His emotions will be sympathetic rather than rational, and his acts will owe their origin to the impulses of his nature rather than to his reason. But notwithstanding all this, it should not be forgotten that the infant mind will begin to take on its character as soon as it begins to move itself in producing its mental states.

For this reason the spontaneous activity of childhood should be directed—not forced, but simply directed—into those forms which will produce some useful elementary knowledge, or at least a thirst for knowledge, and lay the sure foundation of a harmonious development of all the faculties.

We need, then, a system of training which shall precede the formal processes to which the child is usually subjected on entering the primary school. The true kindergarten seems to offer this training.

I say a true kindergarten, for, unless kindergarten training is philosophical in its nature and methods, it will be adapted to do more harm than can be done by the application of unnatural training in any one of our present systems of schools.

This is due to the fact that the infant mind yields readily to external influences, and that early impressions are everlasting.

For these reasons, care should be taken that the youthful powers are not checked in their spontaneous growth by arbitrary control, nor stimulated to premature activity by unnatural incentives, nor suffered to become warped in their character by neglect to direct them to a proper and healthful exercise.

The young yield readily to authority, and are directed easily by example. It follows that those who are to direct youthful development toward intellectual and moral character, must themselves be what they would have their pupils become.

They should be so acquainted with the laws in accordance with which the infant powers unfold themselves, that they may be able to co-operate with nature by removing all artificial obstructions, and supplying the conditions to a natural and easy development.

We are yet hardly aware, in this country, of how much consequence it is to the future progress of the child that he be permitted from the first to grow up in the presence of wise and good instructors.

If the children from their earliest years are the objects of right influences, and are led to the natural exercise of their faculties, we have a right to expect that they will become fitted for a happy and successful life.

When the child enters the primary school, he will be put to reading, spelling, constructing words into simple sentences and his sentences into simple discourse. He will combine numbers, practise singing and drawing, and have presented to him a systematic course of lessons on the qualities of objects. He will be made subject to such rules of conduct as have for their object the right activity of the intellect, sensibility, and will—such activity as should ultimately lead to the power of complete self-control.

For this work, the child, if possible, should have a previous preparation.

Without violence to his youthful nature, he may be so directed in those exercises that have amusement for their end as to enter,

at about seven years of age, the primary school free from bad habits, and with his powers trained to self-activity, and his mind stored with a rich collection of facts. He will then be ready for rapid progress in those studies which the primary schools are designed to teach.

If all our children could pass from a well-conducted kindergarten into their courses of study, I am sure it would at once appear that a foundation had been laid for rapid and successful teaching.

It is known by those who have made the kindergarten system of instruction an intelligent study, and have had experience in the results produced, that children trained under its influences are more readily controlled, that they are superior in intelligence to children who enter the elementary schools without previous training that they have a more eager thirst for knowledge, and that they have a much better command of language.

If this is true, then the period of elementary instruction, as now established, might be shortened, without subtracting from the good results now secured.

It would be well if the spirit of the kindergarten could be carried into the public schools.

All objects of study, or adequate representatives of the objects, should be brought into the presence of the children for their observation, and they should be permitted to obtain a knowledge of them by an exertion of their own active power. Here, too, as in the kindergarten, the teacher should do nothing but direct.

He should establish the conditions of study, and then leave the pupil to work out for himself his own knowledge and his own discipline.

In some modern schools, the ancient custom of assigning lessons from books to be studied, and committed to memory by the children, has been partially abandoned, but in the place of it a new custom has been introduced, which in too many cases consists simply of lectures and explanations by the teacher.

The new method is no better than the old; for both alike make language the original source of our ideas, and they alike appeal exclusively to the passive powers.

Our elementary schools may learn also from the kindergarten exercises that there is an order of development of the powers to be observed, and a logical relation of ideas to be provided for, in all grades of instruction.

This order and this relation are not much regarded by elementary instructors, and there results from the neglect a unsystematized plan of work that has no definite meaning, nor certain results.

A thorough knowledge of the philosophy of education is needed, to reduce our plans of instruction to unity.—*The Public School*.

SOME PEDAGOGIC ERRORS.*

During a recent ramble among schools I jotted down in my notebook a few errors, as they seemed to me, which I detected in the work of certain teachers. Believing these faults—I am almost inclined to call them radical defects—to be more common among inexperienced instructors than we are willing to admit in these days, I venture to reproduce my criticisms, with a few comments thereon, for more general comparison.

2. "*The teacher talks too much.*" This is an especial temptation to an instructor who is well versed in the subject under consideration. Saturated with knowledge, he is like a wet sponge, needing only a touch to cause his information to drip out upon the class. In the recitation criticised as above, the teacher was intelligent, almost learned. His remarks were excellent, and the pupils were interested, and perhaps instructed; but the time was so occupied

* By J. Dornan Steele, in *Central School Journal*.

that there was no opportunity for regular recitation work. No test was made of the pupils' preparation of the lesson, no searching questions were asked, no analysis of the subject was given. It was merely a delightful talk to a number of girls by a scholarly gentleman. It was not teaching. In a neighbouring school I witnessed a similar recitation, and while conversing with one of the pupils after class, he slyly remarked "We always get Miss — to talk about something when we haven't got our lesson." Now, the lecture system is beneficial only to advanced pupils, young men and women thirsting for knowledge, who have absorbed all their text-books contain, are eager to know what their professor can impart, and whose minds are trained to receive and retain information.

With young pupils, mere beginners in study, ignorant of the methods of mental acquirement and assimilation, with no especial taste for work and no power of concentration, there must be class-drafts and proofs of previous labor demanded. The recitation is for the benefit of the pupil, not the teacher. In general, it is mentally more profitable to tell a thought than to receive it. Under the talking-system pursued in some schools, the teacher grows much faster than his pupils. He is actively employed all the time, while they are mere recipients, delighted sometimes, indeed, but not held to labor for what they wish to know. He acquires a choice of words, and learns to talk fluently and tell what he knows, while they get neither experience in expression nor criticism on their use of language and their grammatical mistakes.

A little information may often be imparted to great advantage, it is true, but only to enliven the monotony of hard work, and to act as a stimulant to fresh exertion. The maximum of talking on the part of the pupil and the minimum of talking on the part of the teacher is the perfection of a recitation. In my own classes, when topical recitations are fully established, I have always required the class to conduct the entire recitation from the blackboard diagrams, with only an occasional suggestion or remark during the progress of the work, and a general commentary at the close.

2. "The teacher makes no point." In the recitation I witnessed, there seemed no special goal to be reached, but the pupils were wandering aimlessly about, toiling to get over a certain number of pages of the book. When they finished, it was with an air of relief that another task was performed. On no check was there the glow of victory. No one seemed to feel that he had taken a step, a definite, measured step, in the path of knowledge, and had gone up a little higher to a better outlook. Neither teacher nor pupil appeared to grasp the relations of that lesson to the one of the day before, and the one assigned for the succeeding day, whereby it became a link in the chain of the term's work, which if dropped out by inattention or absence would break the whole asunder.

Now, every lesson should have an object, else the children had better be out on the play-ground breathing fresh air, and developing their muscles. The class should assemble for a specified purpose; to master some difficulty clearly perceived beforehand, upon which they have worked during the time of preparation and are to report their success; to give clearer intelligence about what they have done; to get fresh facts; and to prepare for a new struggle and advance. They should know where they stand when they come to class, and whether they have conquered the point of the lesson and when they have, it should be with a distinct idea of something they have gained or failed to gain. At the close of each lesson, the teacher should tell the class the object of the next day's work, give directions about doing it, and remove any insurmountable obstacles, thus preparing the way for intelligent, profitable, and economical labor on the part of the class, and preventing the necessity of individual help, which is so annoying to the teacher and often so injurious to the pupil. If the teacher unfortunately uses a text-book

which does not give an analysis of the lesson in bold paragraph headings, he should prepare such an outline and let the students classify the lesson. Many studies admit of a uniform analysis. Thus, in Chemistry I have used the following topical outline—Source, Preparation, Properties, Uses, Compounds; and in the periods of Geology—Location, Kinds of Rocks, Fossils, Remarks. These titles answer as labelled pigeon-holes, in which the pupil can sort off all the facts of the lesson, and, to stretch the figure, are like elastic bands, which will expand to receive all knowledge one may gather in future life. They aid alike in learning, reciting, and retaining a lesson, and are invaluable in all teaching and studying worth the name.

When a scholar thus looks over the advance lesson, finds the thick underbrush parted by a strong hand, so as to give him an unobstructed view to the end, detects its point, has its analysis clearly in his mind, and he is warned of the dangerous places—he feels as if he half knew the lesson already, and sets about it with a light heart and an assurance of success. Such a course begets in him confidence, both in himself and his teacher. With each lesson there is a consciousness of something done under the direction of a skillful guide. School work is reduced to a system; the pupil knows where he is, and how fast he is advancing; he is constantly reaching a result; and in the satisfaction of progress, the delight of acquisition, and the pleasure in employing his powers usefully, he finds a daily interest in his work.

3. "Pupils are kept in at recess and after school to study." This is literally a crying evil. It is a custom handed down to us from the past, and sanctioned by age; but teachers are perceiving its enormity, and are fast discarding the practice. It is both unnecessary and injurious. Scholars may be profitably directed to remain after school for the purpose of receiving suggestions, counsel, etc., from the teacher, but not to study, and at recess NEVER! The object of an intermission is to preserve the health of the pupil. Nature demands this, and it is her right. No teacher should rob a child of legitimate exercise. It is a physical wrong. Moreover, in play the superabundant flow of the animal spirits is worked off, and that force is employed in throwing a ball, or running a race, which would otherwise find vent in mischief or restlessness. The whole fifteen minutes usually given is demanded, and the thoughtful teacher, instead of depriving a pupil of any of those precious moments, should urge every one to use them in the best manner possible. It is well to explain this object, especially to the few studious girls who are inclined to keep their desks at that time, and to convince them of their duty to preserve their health, and that play-hours should be as sacredly devoted to recuperation as study hours, to work. Even when the weather is unfavorable for out-door sports, the necessary relaxation can be secured by throwing open the windows far enough to obtain fresh air (taking pains that no one shall receive the direct draught) and then putting the school through the light gymnastics.

Keeping a pupil after school to learn a lesson is wrong in principle. It begets a dislike for the teacher, the school-room, the study, and all connected with it. What should be a delight, is made a punishment. Moreover, it punishes the teacher as much as it does the pupil. It wears him unnecessarily, and deprives him of time for rest and study, unfits him for work, and so robs the school of its right—his best services. The difficulty with the pupil is generally an inability to concentrate the mind upon the lesson. If that cannot be secured during the fresh, vigorous hours of the day, under the inspiration of the class, and example of companions, the teacher may well despair of success under less favorable conditions.

I cannot sum up the matter better than in the words of Superintendent Harris: "The cure prescribed (i.e., retention after school) only aggravates the disease. Prepare the lesson so that the pupil can carry it by storm, and never allow him to make a dissipated, scattered attack upon it."

WHAT DO CHILDREN READ?

From our early youth we have read that "a little learning is a dangerous thing." The truthfulness of this old saw is forcibly and sadly illustrated at the present day in observing the result of simply teaching a child to read. The ability to obtain ideas from a printed page is in itself a delightful occupation. It is all the more delightful when we consider that this ability is usually acquired at a time when the child has little or no fund of thought upon which to draw for the purpose of whiling away his leisure hours, and also that it is at a time when the mind of the child is exceedingly active, and ready for anything which promises excitement. As soon as a child learns to read, he has a new world opened to him, and the question at once occurs: From all this material scattered so profusely on every side, what shall I read? This question, we repeat, is suggested at once, and it must be answered. Leave the child to himself, and his natural instincts, his love of adventure and excitement, and his unformed taste, readily lead him to choose that reading which satisfies his nature. As the mind grows like that upon which it feeds, but little time elapses before his imagination is so excited by the unreal, his judgment so warped by the false, and his taste so depraved by the unnatural, that he becomes unfitted for the dull, prosy affairs of actual life, and longs for those scenes where freedom runs riot and all law and restraint are unknown.

As we walk the streets of our cities and villages, and observe how profusely a vile and debasing literature is scattered broadcast over the land, how cheap it is, what pains are taken to advertise it and bring it to the attention of our boys and girls, how attractive it is made, and how well calculated to inflame the youthful imagination—we shudder as we contemplate the future, unless some powerful counteracting influence can be brought to bear against it. The influence of a certain class of publications is so pernicious, so destructive of youthful morality, and ultimately fraught with so great danger to the State, that we are firmly of the opinion that a law should be passed by our present Legislature licensing and regulating the sale of books, newspapers, and magazines. Any publication intended for children to read which makes a criminal a hero, which exalts lying and theft and murder, and ridicules all the nobler sentiments of humanity, should be, in the eye of the law, a disturber of the peace and prosperity of society, and be treated accordingly.

We say the strong arm of the law should intervene, and rescue the youth of the land from the debasing influence of this vile literature; but we have small hope that any effort will be made for this purpose. Publishers of this class of newspapers and books will continue to scatter their poison broadcast, and grow rich in doing it; many of the boys and girls of our land will eagerly devour it, and as a consequence be induced to live lawless and irresponsible lives and in process of time become inmates of our jails and penitentiaries. All this we fear will continue to go on for years to come, as it has for years in the past, before the general public will become fully alive to the magnitude of the evil.

We introduce this subject at the present time, not for the purpose of advocating a stringent law which should regulate the publication and sale of the literature in question, but for the purpose of directing public attention to its gravity and seriousness, and offering a word of suggestion to our teachers.

The danger would be largely averted if children could be kept longer under the influence of the school. They would then not only learn to read, but would acquire a taste for good reading. As their minds were cultivated, and they became possessed of broader views of life and the social relations, and so were better able to distinguish the real from the sham, they would turn away in disgust from that which so charms the ignorant and those possessing an un-

cultivated taste. More schools and more schooling should be the war-cry of those who wish to wage battle against this demon who is casting such a blight over so many innocent lives.

To teachers we would say: You can do something toward averting the evil by making use of every opportunity for creating a taste for pure and healthful literature. If the opportunity does not offer itself, make it. As far as possible, know what every one of your pupils reads. Frequently you will find it necessary to convince the parents that their children are receiving injury from the papers they permit them to read. Unlettered fathers and mothers cannot realize the danger which threatens their offspring from reading papers which they say were purchased at a reputable bookstore. Point out the danger, and substitute something better if possible. Be sure that you fully appreciate the importance of the question, and your sense of right and duty will readily suggest ways and means to do all that lies within your power.—*Pacific School Journal*.

CRITICAL READING.

JOHN M. GREGORY, LL.D.

Let me repeat that reading is a two-fold art: 1, the translation of written language into oral language; 2, the interpretation of the thought read. By the first we express in sounds what the author wrote in signs. In the second we re-think what the author thought. I advance to the second.

The mastery of the thought is the final aim of all reading. Even to read well for others demands to some extent the understanding of the thought. We must get the meaning in order to give it, though to many readers it may be fairly said, as it was to the eunuch, "Understandest thou what thou readest?" In the use of reading, as the means of gaining knowledge, the second art is the all-important one. To read for others is one thing; to read intelligently for ourselves is much more difficult, as well as more useful.

Reading for the thought, or the critical reading of authors, which I have said should alternate in the reading classes with the reading for language, embraces several somewhat distinct steps or parts.

1. The critical reading of an author requires us to know who and what the author was; when and where he lived; the aim and circumstances of his writing the book or piece in question, and something of his times or contemporaries. The better we know an author's history, the better we shall understand his thought. This is the preliminary step.

2. The first step in the interpretation of a reading lesson is the careful study of the meaning of the words used. Next to this, and not to be separated from it, is the gaining of the exact meaning of the sentences. To get the full meaning of what the author says must precede any fair criticism of his style, his spirit or his views. To accomplish this fully the reader must translate the meaning into other words. This is one of the most useful processes in all teaching, since it compels the pupil both to think and speak.

3. The study of the author's allusions, illustrations, and figures of speech, his tropes, metaphors, similes, personifications, etc., must come next. They are a part both of the language and of the thought, and the reader must enter fully into these, must picture them forth in all their breadth and beauty, or he fails to think as the author thought, and to see all the author saw. Here too the pupil may try translation, seeking to change the figures both into plain statement, and into other figures. Since nearly all language is more or less figurative, this exercise is extremely useful as a discipline, and as a training for all intelligent reading. It gives to

the imagination that quick and ready power of picture-making so useful in thinking and so charming in speech.

4. The argument of the author will next come under review. His proposition, affirmed or implied, his premises, whether facts or assumptions; his inferences and conclusions; all these must be understood and put to question. All profitable reading, said Sir Wm. Hamilton, is a silent debate between the book and the reader, and this is true whether the article read is poetry or prose, story, sermon or epic song. Young readers can do but little of this. To rise, as it were, above the author, and sit in judgment on his work, to call into question the truth of his statements, the soundness of his arguments, and the validity of his views and opinions, implies a talent and intelligence akin to his own. The author and reader hold conferences over each fact or truth stated. Sentence by sentence, thought by thought, the reader must ponder the author's words; and assent to or reject with intelligent reasoning of his own. If it is history, he must scan its assertions, weigh well its probabilities, compare its several parts, and interpret for himself its facts and events. If it is poetry, he must reanimate its imagery, see again its visions, hear its rhythm and melody, and under all this find and judge the theory and spirit of the author. So in each department, the true reader must analyze, "read, mark, learn, and inwardly digest," the book or chapter he peruses. Only the strongest mind can do this thoroughly, but all who read with pleasure or profit must do it to some extent. To learn to do this is the last, best, and highest aim of the reading class. It begins in the simplest reading. It rises with steady steps to the highest.

5. The study of the style is also a part of the critical study of an author. Simplicity, purity, clearness, precision, force, elegance, beauty of expression, these great qualities of style are matters of thought as well as of speech, and are constantly under the eye of the reader. He can be taught by one who knows, to detect and understand all these in his daily reading lesson, and few attainments in the art of reading will be found more useful. An obscure style is often mistaken by the young or careless for profound. He stands in a sort of awe of the printed page, and thinks what is not clear must be beyond his depth. So on the other hand clearness is often mistaken for truth. What seems so plain and easy to understand is counted as obvious truth. The reader must learn to question both false darkness and false light.

A WARNING.

I must not close this talk without a warning against that bad and pernicious notion adopted by some teachers who would make the reading lesson the vehicle for all sorts of information, a scrap bag for all the "odds and ends" of knowledge. Every fact in the universe is related in some way to every other fact, and an ingenious teacher can hitch on to any reading lesson all he happens to know. Reading of a stone, he can lead his class to stars and seas; to ages past and kingdom come; to paleontology, poetry, and politics; to travel, history, science, literature, and common life. It may all be vastly interesting, but as far as real education or instruction is concerned, it is as useless as a sky-rocket would be to guide a benighted traveller through a wilderness. It is mere Chinese crackers and fire-works, which amuse but cannot enlighten. A pertinent fact brought forward to illustrate a point under discussion is often enlivening and instructive, but a budget of irrelevant facts is an obstacle to a true understanding.

My time is up, and I leave to another the questions of *means* and *methods* of training in this critical reading of authors.

An *oath* is a vain formality, which binds no scoundrel and strengthens not the statement of an honest man.

MORNING WORK.

Perhaps, on the whole, moderately early rising is now a commoner practice in cities than it was forty years ago. It seems strange that the habit of lying in bed hours after the sun is up should ever have obtained a hold on the multitude of brain-workers, as undoubtedly it had in times past. Hour for hour, the intellectual work done in the early morning, when the atmosphere was yet unpoisoned by the breath of myriads of actively moving creatures, must be, and, as a matter of experience, is, incomparably better than that done at night. The habit of writing and reading late in the day and far into the night, "for the sake of quiet," is one of the most mischievous to which a man of mind can addict himself. When the body is jaded the spirit may seem to be at rest, and not so easily distracted by the surroundings which we think less obtrusive than in the day; but this seeming is a snare. When the body is weary, the brain, which is an integral part of the body, and the mind, which is simply brain function, are weary too. If we persist in working one part of the system because some other part is too tired to trouble us, that cannot be wise management of self. The feeling of tranquillity which comes over the busy and active man about 10:30 or 11 o'clock ought not to be regarded as an incentive to work. It is, in fact, the effect of a lowering of vitality consequent on the exhaustion of the physical sense. Nature wants and calls for physiological rest.

Instead of complying with her reasonable demand, the night-worker hails the "feeling" of mental acquiescence, mistakes it for clearness and acuteness, and whips the jaded organism with the will until it goes on working. What is the result? Immediately, the accomplishment of a task fairly well, but not half so well as if it had been performed with the vigour of a refreshed brain working in health from proper sleep. Remotely, or later on, comes the penalty to be paid for unnatural exertion—that is, energy wrung from exhausted or weary nerve centres under pressure. This penalty takes the form of "nervousness," perhaps sleeplessness, almost certainly some loss or depreciation of function in one or more of the great organs concerned in nutrition. To relieve these maladies—springing from this unsuspected cause—the brain-worker very likely has recourse to the use of stimulants, possibly alcoholic, or it may be simple tea or coffee. The sequel need not be followed. Night work during student life and in after years is the fruitful cause of much unexplained, though by no means inexplicable, suffering for which it is difficult, if not impossible, to find a remedy. Surely morning is the time for work, when the whole body is rested, the brain relieved from its tension, and mind-power at its best.—*Lancet*.

FIRE PANIC IN A SCHOOL.

A fire broke out a short time ago in the German Catholic School of the Holy Redeemer, in New York, in which were assembled some five hundred girls and two hundred boys. The building was five stories high, the upper floors being approached by a narrow staircase. When the alarm was given, the scholars began to leave the building in an orderly manner, under the care of their teachers, who had previously drilled them with the special object of averting a panic in case of an outbreak of fire. Disorder was first produced by the inrush of parents and other friends with the object of rescuing the children. At the angle of the stairs a child fell, and others falling upon it, a blockade was at once produced. A panic then set in, and a fierce struggle for life ensued, which baffled all efforts to restrain it. The confusion was climaxed by the breaking of the balustrade. Many children fell into the space beneath, which was soon half filled with writhing bodies. Fifteen young girls who were at the bottom of this terrible heap were suffocated, whilst many others sustained fractured limbs and internal injuries. The school was situated among a dense population. After the panic was over, the scene witnessed outside the building was of the most distressing character. The parents of the dead and injured children were nearly frantic; and even the police, as well as the ordinary spectators, were moved by the grief displayed on the recognition of the little corpses as they were brought out of the building.

Promotion Examinations.

We are pleased to acknowledge the receipt of Promotion questions from several Inspectors. It is apparent that in many counties a fair effort is being put forth to secure a symmetrical classification of the pupils in the public schools. In this, the teachers should be most interested, as much of their comfort and progress in a new situation depends on the proper classification of their pupils. The general register should show the place of every pupil, if this is not kept as it should be, a new teacher may easily be imposed on, by children anxious to get into a higher class than their merit warrants. Strange to say, most teachers are averse to keeping their registers properly. They think it too much work, and consequently neglect an important and imperative part of their duty. Especially is the general register left without the necessary entries, thus entailing on teachers who change their situations needless trouble and anxiety. With registers well kept, there is a constant exhibit of the progress of every pupil in the school; besides, the information they should contain is of great value to the section for future reference. It is the Inspector's duty to initial those in whose promotion he concurs, but how can he do so when the names are not entered? Evidently, improvement in this matter should be brought about as speedily as possible. Perhaps discussion of registers at an association would help some to a fuller discharge of their duty. Severe measures are hardly necessary, when it is obvious a portion of the teacher's legal duty is to keep the registers in the form prescribed by the Education Department. The form now in use is consistent with a well-managed school, and there is no reason why all the blanks should not be accurately and promptly filled.

ADDITION AND SUBTRACTION.

CLASS I. TO III.

1. Which is the greater, the addends or the sum?
2. What is meant by carrying? How many would you carry from 109; 200; 712; 895; 7040?
3. Name the terms of subtraction. How would you prove a question in subtraction, by subtraction? How would you prove it by addition? Must the minuend be always greater than either the subtrahend or the difference? Tell which is the greater, the subtrahend or the difference.
4. Show as well as you can that carrying, or borrowing in subtraction, is the same as adding the same number to both minuend and subtrahend.
5. Find the sum of 10; 1040, 69, 8275, 491, 78, 309, 41, and the difference between 1000 and 101.
6. By subtraction, find how many times 789 can be taken from 4734.
7. The sum of five addends is 2973; four of them are 78, 489, 67, and 910; find the fifth. Tell in words how you would do this question.
8. How much must be added to 4090 to make the remainder after 70,980 is taken from 1,000,000?
9. From the sum of all the numbers ending in 2, between 3 and 100, take the sum of all the numbers ending in 1, between 7 and 98.
10. A boy has \$2.00. He buys at 19 cents each as many pencils as he can; how many did he get? How many cents has he left?

ARITHMETIC.

CLASS II. TO III.

1. When can questions in addition be done by multiplication? Tell how 7896 times 439376 could be found by addition. What is meant by partial products?
2. Multiply 89768 by 7896. Do this question by multiplying first by 7, then 9, then 8, then 6. How would you prove your work is correct by division? How by subtraction?
3. The factors of a number are 7, 13, and 5; find the product of

that number and 9047. Having the factors of a number, how would you find it?

4. If you forgot the product of 8 and 9, show how you could find it.
5. By what must one million be diminished that the remainder may exactly contain 19? By how much must it be increased that the sum may exactly contain 19?
6. Show by subtraction that 4823 contains 689 seven times. In this question, tell the divisor, the dividend, the quotient, and the remainder.
7. Divide 7131986390 by a number, the factors of which are 13, 11 and 17. Find the correct remainder and tell how you found it. What was the unit in the first quotient? In the third?
8. State how multiplication can be proved by casting out the nines. Show by an example that this is not a safe test.
9. In a township there are 600 voters; if 151 do not vote at an election, find the greatest possible number of votes which each of two candidates may receive.
10. Simplify $146 \times 79 \times 3\frac{1}{2} \div 16 \div 73 \times 39\frac{1}{2} \times 17 \times 8$

GRAMMAR.

CLASS IV. TO V.

1. Name the sexes. Name the genders. State how sex differs from gender. What is meant by common gender? Parse the word, "they," in the following: A boy, a girl, and a lamb were in the field, but they went out of it.
2. Give as many rules as you can for the use of the comma, period, question mark, quotation marks, and point of exclamation. Write sentences to illustrate the use of the rules you give.
3. What is meant by analysis? Analyze the following: "Well Jasper, you'll spend the night with us; won't you?" said the guide.
4. Which is the above, a direct or an indirect quotation? Give rules for changing from one to the other. Apply them to the sentence given.
5. Discuss the use of "his" in the sentence,—Neither the boy nor the girl had his supper.
6. "Away went Gilpin—*who but he.*
His fame soon spread around:
He carries weight! he rides a race!
'Tis for a thousand pounds!"
(a) Parse italicized words.
(b) Change into prose.
(c) Name the marks used in the extract.
(d) Why an apostrophe in 'Tis? Why in John's slate.
7. Correct the following:
I did'nt use to do it.
He married a negro.
It was bought at Amos the grocer's.
Will I get my lesson.

GEOGRAPHY.

CLASS IV. TO V.

1. What boundaries of Ontario are indefinite? Why are they indefinite? Give the proposed methods of settlement.
2. By means of a table give the names of the cities of Ontario; the counties in which they are situated; the railroads passing through or into each.
3. Trace the course of the Pacific-Railway through the provinces of Canada.
4. How does a county town differ from any other town? Name ten towns or villages that are not county towns. Tell the county in which each is to be found.
5. Why are north winds cold and south winds warm? Give the cause of wind. Explain the use of the trade winds.
6. Outline a map of Europe. On it show the coast-waters. The boundaries of the countries. The mountain ranges. The rivers. Print names of countries, mountains, and rivers.
7. When does the sun cross the equator? When is it farthest north? When farthest south? What is meant by the declination of the sun?
8. Where are the following in greatest abundance: Tea, Oranges, Gold, Lead, Lions, Negroes, Timber, Grain, Machinery, Intoxicating drinks?
9. From what do the rivers get their supply of water? Name the common forms of water and explain how each is produced.

HISTORY.

CLASS IV. TO V.

1. Name the different invasions of Britain. How does an invasion differ from a rebellion? Sketch the rise and progress of any rebellion with which you are well acquainted.

2. What Queens have reigned on the British Throne? Give the date of their accession, and one important event in the reign of each.

3. Define the word "treason," as fully as you can. Name some persons put to death for this crime. Be careful to give the exact form of treason for which each suffered.

4. Give the composition of the British Parliament. When did a sovereign exercise the veto power? When in Canada was it last exercised? What is meant by this power?

5. Tell all you know of the origin of the two great political parties of England. Give some of the views held by each on the public questions of the time in which they lived.

6. Who is the present Premier of the British Parliament? With what difficult question is he grappling? What does he mean by saying "Centralization is the curse of Ireland."

7. Under the following heads, sketch the steps by which the American colonies became independent:

- Cause of dissatisfaction.
- Declaration and progress of war.
- Interference of other powers.
- Close of war.

NORTH YORK UNIFORM PROMOTION EXAMS.

READING.

CLASS II. TO JUNIOR III.

II. Book, page 115, to "queer stocking, said Mary."
Value 30 marks.

JUNIOR III. TO SENIOR III.

III. Book, p. 35, to "Stand by to lower away the boats," p. 36.
Value 30 marks.

SENIOR III. TO IV.

III. Book, page 119, to "Told in his own words."
Value 30 marks.

NOTE.—This paper is not to be seen by candidates. The selections have been made to test *intelligence, fluency, pronunciation, time, &c.*

Should it be impossible to hear the reading except in the presence of the candidates of the same class, it is designed that one candidate shall begin where the one reading before left off, and the selection is chosen so that the closing limit of the first shall be the starting point of the second, and so on.

SPELLING AND LITERATURE.

CLASS II. TO JUNIOR III.

1. Write carefully, correcting mistakes in the following:

- The window pane on the cupboard shelf.
- Remembering that our Father's at the helm.
- A journey from the meadow across the mountains.
- That silly fellow liked mischief, and taught silverlocks.
- They knited some stockings for some poor neighbor's children.

2. Some words in the following list are incorrectly spelled; write them all correctly:

Acceded, demured, pleasantly, sissors, plaged, suddently, seperating, courteseyed, parliment, loosened.

3. Write the following words with their meanings:

Substance, sheltered, nestlings, tresses, hearth-rug, a gentleman, sentenced, pondered, meddlesome, perceived.

4. Change as far as you can the words, but not the meaning, of the following sentences:

And then some pretty hymn Ann sings.
A little boy hung down his head.
The remains of their dear parents were laid in the grave.
He met a face that was deadly pale.
Virtue alone stands fast.

5. What is a fable? What good lesson should you learn from the lessons:

"The Boy and the Nuts."

"Dirty Tim."

"The Beggars Man."

Write from memory the verso beginning "Little deeds of kindness."

Values:—Full marks 10 for each question.

JUNIOR III. TO SENIOR III.

1. Write in full, correcting where necessary, the following lines:

Her rattling shrouds all sheathed in ice.
A look of compassion and affability that familiarised.
This ingenuous boy trained some partridges.
Its gallant defense by a handful of pioneers against the allied Indians of Ohio.

A lofty precipice in front. In simphone austere.

2. Write all the following, correcting where necessary:
Slackning, herbage, engineering, hideous, amature, mischievous, discreter, luscious, appalling, perigrenations, untameable, vengeance, asylum, vicious, veterinary, superciliously, schemes, plaintiff, cyprus, innocent.

3. Correct where necessary, and define:
Maintenance, adjunct, Saskatchewan, civilized, rustick, woodland, punctuality, conscience, bedewed, opiate.

4. Change the italicized words but not the meaning of the following:

The maintenance of the dam is a matter of vital importance.
The opportunity of pursuing a liberal course of study.
So fumed for his talent in nicely discerning.
Look aloft, boy, aloft.
Too highly civilized for a nomadic life.

5. (2) Who wrote "The Discontented Pendulum," and what moral should we learn from it?

(2) What traits of character in "John Maynard" make him appear so noble? Who wrote that lesson?

(6) Write from memory the last two verses of the "Tyrolese Evening Hymn," commencing, "Yes! tuneful is the sound."

Values:—Full marks 10 for each question.

SENIOR III. TO IV. CLASS.

1. Write, with necessary corrections:

(4) Napoleons magnificent size and proportions, his intelligent head, white-tipped tail, made him as remarkable as his peerless namesake.

(8) The merciless broom frequently knocked them down from the cornices and curtain rods, amid derisive shouts and incessant chaterings.

(3) When the colony of Ponsylvania was pressed with scarcity of provisions the indians cheerfully rendered assistance.

2. Spell correctly and define:
Treachorous, perilously, baize, catastrophe, sacrificed, commemorate, saucepan, auctionere, Febuary, bucanereers.

3. Introduce new words or phrases having the same meaning as those in italics in the following:

*But lightly he'll reck if they let him sleep on
In the grave where a Briton has laid him.*

*Even this did not diminish his generous anxiety.
Some heartless wretch had peeled the bark.*

The time had now arrived for the termination of this strange contest.

4. (4) Who was the "peerless namesake" spoken of in the first question on this paper? and tell what you know of him.

(4) What propensity of Jacko, the pet monkey, made him very useful about a house? and in what way? Explain how he got away and was driven back to his home one day.

(2) From what work is the lesson, "My Pet Monkey," an extract?

5. (4) Tell in a few words by what means John Adams, when a boy, was made willing to study as his father desired.

(6) Write from memory what you can of one of the following: "The Soldier's Dream," "Somebody's Darling," or "The Old Arm Chair."

Values:—Each question worth ten marks.

GRAMMAR AND COMPOSITION.

CLASS II. TO JUNIOR III.

1. Write three sentences of not less than six words each about the dog.

2. Point out the nouns in the following sentences :

John is a good boy.
The horse leaped over the fence.
Father said crying was no use.

3. Correct the following sentences :

These apples is sweet. That is John's coat. He was drowned in the pond. He went to Toronto. I done a problem in arithmetic.

4. Make complete sense of the following :

The horse is told me how he
Henry is angry at is a very useful
exercise. to come to-morrow.

5. Describe the school-room in which you are writing.

Values :—Each question worth ten marks.

JUNIOR III. TO SENIOR III.

1. Give the part of speech of each word in the following : I once had many friends, but some of them are now dead.

2. Correct the following : I have two brother-in-laws living in England. You was very quiet this morning. Who did you see at the Gardens to-day? Did you ever see the Queen's of England crown? These molasses are too thick.

3. Write five simple sentences of not less than six words, and draw a line under the predicate of each.

4. Add subordinate clauses to the following, making complete complex sentences : James told me that The question is how This is the house where He still lay where He brought back the book which

5. Give a brief account of your last pleasure trip.

Values :—Each question worth ten marks.

SENIOR III. TO IV.

1. In the following sentences, show the subject, the predicate, and the modifiers of each :—Never had there been so great an excitement in the town. Forth from the ranks rushed the gallant Henry.

2. Parse : He made his father angry. Tell me where he is.

3. Give the plural of chimney, soliloquy, staff, cherub, volcano ; and the feminine of friar, lord, stag, bachelor, negro.

4. Improve the literary form of the following : A fox was passing through a vineyard, and he saw some fine bunches of grapes on one of the trees, and so he tried to reach one of them, but it was hanging very high, and he could not get it.

5. Combine the following groups of statements into a simple sentence : A fine lawn sloped away from the mansion. This lawn was studded with clumps of trees. These clumps were so dispersed as to break a soft fertile country into a variety of landscapes.

Values :—Each question worth ten marks.

GEOGRAPHY.

CLASS II. TO JUNIOR III.

1. Give the meaning of the following :—Geography, lake, river, island, sea, ocean, mountain, equator, pole, and zone.

2. Name the continents and oceans.

3. Name the principal villages and streams in your own township.

4. What is the shape of the earth? Why do we have day and night? Why is it warmer at the Equator than in the north or south Temperate Zones? What is meant by the Eastern Hemisphere? What by the Western Hemisphere?

5. What are the chief agricultural products of the County of York?

Values :—Full marks 10 for each question.

JUNIOR III. TO SENIOR III.

1. Define the following : Cape, lake, isthmus, peninsula, meridian, sound, river, valley, prairie, mountain.

2. Name the townships in the County of York, grouping them in their respective Ridings.

3. Name in order, beginning at the west, the provinces of the Dominion of Canada.

4. Name two large rivers in each of the continents of North America, South America, Europe, Asia, and Africa.

5. What are the chief products and industries of our own Province?

Values :—Full marks 10 for each question.

SENIOR III. TO IV. CLASS.

1. Define meridian, estuary, planet, promontory, watershed, ecliptic, empire, zone, strait, delta.

2. What and where are Montreal, Azov, Ceylon, Rhone, Himalaya.

3. Name the counties bordering on Lakes Huron and Erie.

4. Mention the various circumstances by which the climate of a country may be influenced.

5. Name the chief products and industries of the Dominion of Canada.

Values :—Full marks 10 for each question.

ARITHMETIC.

CLASS II. TO JUNIOR III.

1. (a) Write in words 1883, 51013, 2102054, XLIV, XXXIX, CXCIX.

(b) Write in Roman numerals 46, 77, 111.

(c) Write in figures one million, two hundred and forty-two thousand, four hundred and six.

2. (a) Add together, 7256, one thousand five hundred and sixty, MMCXLIV, 42549, and MDCLXXVII.

(b) Find the difference between 21764932 and 14825984, and from your result subtract 545265.

3. (a) Multiply 473219865 by 4793.

(b) " 2732145 by 28, employing factors.

4. Divide 271325466 by 9, and divide your quotient by 257.

5. A farmer sold 45 bushels of wheat @ 90c. per bush., and 60 bush. oats @ 42c. per bush., and with the money received bought cloth at 73c. per yd. How many yds. did he buy?

Values :—Full marks 10 for each question.

JUNIOR III. TO SENIOR III.

1. (a) Define : a number, addends, minuend, multiplier, quotient.

(b) By dividing a certain number by 38 I get for quotient 2960 and remainder 16. Find the number.

2. (a) A has \$120 ; B has \$53 more than A ; C has \$8 less than A and B together, and D as much as the other three. How much have they in all?

(b) A man divided \$18775 equally among his five sons, and \$6415 less than that amount equally among his six daughters. How much did each son receive more than each daughter?

3. Find the amount of the following bill :—379 yds. silk @ \$1.75 per yd. ; 728 yds. muslin @ 39c. per yd. ; 625 yds. cotton @ 11c. per yd. ; and 195 lbs. tea @ 74c. per lb.

4. (a) Give tables used in measuring length, time, liquids, and for weighing drugs, and precious metals.

5. (a) How many drams in 1 ton, 2 cwt., 3 qrs., 4 lbs., 5 oz. ?

(b) Reduce 4729384 sq. feet to acres, rods, &c.

Values :—Each question worth ten marks.

SENIOR III. TO IV. CLASS.

1. Define *measure*, *multiple*, *G. C. M.*, *fraction*, *terms of a fraction*.

2. A owned a farm of 240 acres, 3 roods, 4 per., 10 sq. yds. He sold to B 59 ac., 3 ro., 6 per., 18 yds., and divided the remainder equally among his three sons. How much did he give each?

3. Find the G. C. M. of 2151, 67545, and 437292.

4. Arrange in order of magnitude (greatest first) the following fractions : $\frac{2}{3}$, $\frac{1}{4}$, $\frac{3}{8}$, & $\frac{5}{12}$

5. In a cricket match one side of 11 men made a certain number of runs ; one obtained $\frac{1}{5}$ of the whole number ; each of two others $\frac{1}{4}$ of the whole, each of three others one-twelfth of the whole, and the remaining five 150 runs among them. Of these last, four scored altogether 14 times as many as the other. Find the whole number of runs, and the number scored by each man.

Values :—Each question worth ten marks.

Mr. W. E. Sheldon, Secretary National Educational Association, announces that the next Annual Meeting of the Association will be held at Saratoga Springs. The National Council will hold sessions at Congress Hall, July 5, 6, and 7. The General Meetings, and other Departments, will hold sessions July 9, 10, and 11. The American Institute will follow at Fabian's, White Mountains, on the 11th, 12th, and 13th. Programmes in due time.

Practical Department.

SUGGESTIONS TO YOUNG TEACHERS.

1. Make weekly or bi-weekly inspection of all books held by the pupils, holding each responsible for the right use of the same. This will prevent much mutilation and destruction of books.
2. In the class-room, teachers should not confine the attention of the pupils exclusively to what is found in the books. "Books are but helps," or instruments; and while that which is contained in them should be judiciously used and thoroughly understood, yet, so far as time will permit, the teacher can, to advantage, introduce such matters as are not only valuable in themselves, but such as will tend to impress the subject of the lesson more firmly upon the mind.
3. Be judicious and sparing in awarding credit or discredit marks; to be lavish, would render them cheap, and comparatively valueless.
4. Before reproofing delinquents in recitation, first inquire whether or not they have studied, and if so, what effort has been made. Some pupils may devote much time and labor to the acquirement of their lessons, and yet in the class-room be weak in recitation; and to denounce such would tend to discourage rather than stimulate.
5. During a recitation, the attention of all should be engaged upon the lesson or subject under consideration.
6. When a pupil applies for assistance in any question, do not accomplish the whole yourself, neither send him away entirely unaided; but after he has studied the subject faithfully, present to him one or two of the leading principles involved, and then leave him to develop the matter himself. Too much aid is sometimes worse than too little.
7. Teachers should, before entering on their duties for the day, be thoroughly conversant with the subject of each lesson. A teacher, while conducting a recitation, should never be obliged to refer to the book or map for the purpose of ascertaining whether or not the pupil is correct in his answer. Besides displaying a weakness on the part of the teacher, there arises in the mind of the pupil the query—Why should I study what my teacher does not know?
The teacher should be first well acquainted with the true answer to every question, and the correct pronunciation of every word in the several lessons. It will be seen that many advantages attend this plan; the chief of which are—much time is saved, the teacher instructs with more facility and success, and the pupil, observing the familiarity of the teacher with the several subjects, feels for him a greater respect.
8. In hearing a lesson, give the pupil time to answer when it appears he has a correct idea, and merely hesitates to find words to express himself; but when it is evident that he is ignorant of the answer, waiting is but loss of time.
9. Be sure the pupils have gained ideas. Words, without ideas, clog the mind.
10. A teacher taking charge of a new class, should at first advance it beyond the farthest point it had previously attained in each study. In case the teacher finds the new class deficient in what has been passed over, he should not turn back until about two weeks have elapsed, when all necessary reviews may be made; because when a class passes under the control of another teacher, a sudden retrograde movement would produce discontent in the class. At the same time, the teacher should avoid allusions tending to disparage the course of his predecessor in the estimation of the class.

11. The hearing of lessons should not occupy more than one hour and a half daily; the remainder of the day being devoted to actual teaching, when the lessons for the following day may be explained by the teacher. In Grammar Schools, answering in concert should be abolished.

12. When practicable, teach by means of objects, or through the medium of the eye: in Geography, use globes, maps; in Astronomy, use orrery, globes, and diagrams; in Spelling, frequently require the pupils to write the words or sentences given.

13. If you have no drones in your school, talk at each recitation to the dullest in your class, and use all your ingenuity in endeavouring to make him comprehend. The others, then, will be sure to understand.

14. Make each exercise as attractive as possible. Think out your methods beforehand, and illustrate freely.

15. Cultivate self-control; never be led into confusion, and above all, be in earnest.

16. Be cheerful, and smile often. A teacher with a long face casts a gloom over everything, and eventually chills young minds and closes young hearts.

17. Use simple language when you explain lessons. Long words are thrown away in the school-room.

18. Thoroughly test each pupil on the lesson, and do not be afraid of repetition. Review every day, or much will be lost.

19. Do not try to teach too much; better teach a little and teach it well.

20. Endeavour to make your pupils understand the meaning of what they study. Probe the matter to the bottom, and get at the real knowledge of your scholars.

21. Cultivate the understanding, and do not appeal directly to the memory.

22. Lay the foundation of knowledge firmly and well.

23. Impart right principles, and lead your pupils to a higher level, to a nobler range of thought. Endeavour to accomplish all that skill, intelligence, and love can suggest.

What now you do, you know not,
But shall hereafter know,
When the seed which you are sowing,
To a whitened field shall grow.

'Tis a rich young soil you're tilling,
Then scatter the good seeds well;
Of the wealth of the golden harvest
Eternity will tell.

24. Teach your pupils to fight manfully in the warfare of good against evil, truth against error; and above all, let the eternal principles of right and wrong govern your own life, and form a part of your own character. If you do this, you will "sow beside all waters, and eventually bring home your sheaves rejoicing."—E. V. DeGraff, in *Virginia Educational Journal*.

THINGS STUDENTS SHOULD KNOW.

The following is the shortest and most accurate method of computing interest known, and is worth preserving. Multiply the principal by number of days, and divide—

If at 5 per cent., by 7,200.	If at 11 per cent., by 3,273.
If at 6 per cent., by 6,000.	If at 12 per cent., by 3,000.
If at 7 per cent., by 5,143.	If at 13 per cent., by 2,760.
If at 8 per cent., by 4,500.	If at 14 per cent., by 2,571.
If at 9 per cent., by 4,000.	If at 15 per cent., by 2,400.
If at 10 per cent., by 3,600.	If at 16 per cent., by 2,250.

THE RECITATION.*

In the olden time, the skill of the school-master was measured by his ability to keep order, even if he kept it by striking terror into the minds of his pupils; and even now many school-officers suppose that if a teacher has good order, he is a good teacher. This is not necessarily the case. Many teachers, without either learning or ability have good order. The test of the modern teacher, or rather the modern test of the teacher, is his skill in arousing and developing thought and imparting knowledge. This is chiefly done by the recitation. The recitation is the one test of the teacher. If he does not understand its purposes and cannot guide it to the accomplishment of these purposes, he fails professionally no matter whatever else he succeeds in.

The objects of the recitation are :

1. To test the preparation of the pupil.
2. To train the pupil to correct expression of thought.
3. To fix the useful information contained in the lesson.
4. To elaborate and add to the text of the lesson.

Let us glance at each of these topics, for we do not intend to enlarge on any one of them.

1. *To test the pupil's preparation.*

This is named first, because it naturally comes first in the recitation. The lesson is assigned as a task to be learned, to be mastered. The pupil should understand that he will be held responsible for the lesson, and he will be severely tested upon it *before* any help is offered by the teacher. This test will determine largely the kind of preparation the pupil will make. If the test is easy, general and scattering, so will be the preparation. But if the questions are penetrating and the test searching, the pupil will acquire the habit of accurate and thorough preparation.

2. *To cultivate in pupils correct expression.*

One would suppose, by the way some teachers talk during recitation, that the object of it is to train teachers in the art of correct expression. Whoever recites has the benefit of the recitation. If the teacher recites he has the benefit of it; if the pupil recites he has the benefit of it. If the teacher is intelligent and well prepared, this method is entertaining to the class, but of comparatively small profit to them. The pupils like it, for it does away with the necessity of their preparation. During the recitation the teacher's words should be few and right to the point. But in case pupils can't say anything worth mentioning about the lesson, who is to break the silence? If the class fail for want of ability, the teacher must, of course, proceed to help them to get the lesson ready for another recitation, when they will be expected to recite.

3. *To fix the information contained in the lesson.*

To do this it is necessary to repeat and reiterate. There is no easy path to it. The laws of association are to be remembered and applied, the understanding is to be reached, but we can't do without the drudgery of repetition. Some educators say, "Reach the understanding, and the memory will take care of itself." I don't believe it. How do we learn the multiplication table? I would advise teachers to revise every lesson before beginning the advance, and review the advance lesson too. By reviewing the advance lesson I mean to have the same topic discussed, or the same question answered by different pupils, or more than once by the same pupil during a recitation.

4. *To elaborate and add to the lesson.*

This is the entertaining part to the pupil, and to the teacher too if he have a point to make, or an apt illustration, or a little *new* information to impart. But this can seldom be done without pre-

vious preparation by the teacher. It can't be done at every recitation by the very best of teachers, but it might be more frequently done. A good deal of time is wasted by desultory explanations, class-room platitudes, worn-out illustrations, etc. Here is where the teacher's industry, skill, and ingenuity can be turned to good account for himself and his school.

A very common kind of recitation is that styled by Baldwin "The Drifting Method of Recitation." This is the method that takes its own course. Anybody can conduct it. It conducts itself. It begins anywhere, drifts everywhere, and ends nowhere. The teacher, like a rudderless vessel, is driven this way and that way by every passing whim or fancy suggested. It is an easy way, so easy that the teacher, though asleep, need not err therein. May their tribe decrease.

No one method is to be adhered to for young pupils. The best method for grammar schools and high schools is the topical method, interspersed with questions and answers. But there should be some written recitations too. A good method for recitation is the following :

1. Review of preceding lesson.
2. Recitation of advance lesson.
3. Addition of new matter by the teacher.
4. Recapitulation of advance lesson.

Thus far and no farther can we go in advice. As to *how* to review the preceding lesson, to recite the advance lesson, etc., that must be left to the judgment and resources of the teacher. He can do it well without some special preparation, but he must be allowed to put himself into this part of the work, and if he fails to do it successfully he must fail. The conclusion of the whole matter is, therefore, that successful teaching depends more on the man or woman than the method.

WHAT SHOULD PUPILS KNOW?

A committee of the Board of Education of the city of Philadelphia has been visiting the schools of different western cities and determining the quality of the instruction given in them by applying a test to the fourth-year grade. The test required of each pupil is that he should write in proper form upon a page of letter paper a letter in which he should relate his experiences on the way to school, or something of a like familiar character. The relative efficiency of the instruction given in the schools of the different cities is to be determined, in the minds of this committee, by the ratio of correct papers prepared. They selected the fourth-year grade for the reason that nearly one-half of those children who enter the public schools withdraw from them at this stage or before. By the test applied they assume that it can be approximately determined how much of real preparation for actual life the schools have led these children to make.

What could be discovered by this test?

1. The pupil's ability to spell, to construct sentences, to write, and to punctuate. This is the formal side of composition.
2. The character of the pupil's vocabulary; which would indicate the degree of culture in the use of language which the home and the school had furnished.
3. The pupil's habits of observation. The paper will show whether he has formed the habit of sharp and discriminating observation, or has not yet learned to see what his eye rests upon.
4. The order or method of the pupil's thinking will be shown. Do his ideas follow each other in obedience to law, or do they come without order or method?
5. The ability of the pupil to select out of the flood of things that are present to the senses those that are important to be known.

* By W. L. Ballantine, Mahanoy City, Pa., in *New York School Journal*.

6. The power of self-control will be manifest by the readiness with which the pupil can concentrate his energies upon the task assigned, and the persistence with which he holds his mind to its accomplishment.

7. Indirectly, the paper will show how well the pupil can read. His vocabulary, orthography, the construction of his sentences, the capitalization and punctuation, will be indicative of the intelligence with which he can read and has read the printed page. It will not show much as to his knowledge of arithmetical processes or of geography, but from the paper, and a glance at the programme school work, a good guess can be made of his attainments in these studies.

We believe that a discriminating observer can make the discoveries suggested in the foregoing statements from these papers, provided the pupil has had sufficient practice in this kind of exercise to make it a familiar and easy method by which to express his thoughts. Pupils who have had no practice in composition and letter-writing would be so embarrassed by the novelty of the mode of expression and ignorance of what we have called the formal side of composition that they could do nothing.

WHAT shall be said of the propriety of applying the above test to pupils ranging from nine to ten years of age? There are two phases of the question which deserve consideration:—

(1.) Is this test a fitting test of knowledge? In other words, is that knowledge which this test implies the knowledge which the child most needs if he is to withdraw from school at this age?

(2.) Is this test a proper one to determine whether the mental training that the child has received is what he should receive during the first four years of his school life?

The questions ask for different things, and yet it may be true that the answer of one will determine the answer of the other. Let us try to answer the second question.

During the first eight or ten years the child must be employed in obtaining a knowledge of facts. It is the age of the acquisition of new ideas and forms. It is the time for storing the mind with material for future elaboration. These things acquired must be named; hence the importance of language. These things with their names must be repeated many times and in varied relations in order that they may be familiarly known. The child is only able to see the outside of things—the skin of them. He is unable to have a knowledge of the full contents of anything that he may learn. Words are, to him, only a small part of what they come to mean later in life, but they stand for something, and this something is a part of what they are subsequently found to contain. The entire energy of the mind is expended in acquisition of new ideas, in memory, and in imagination. There are comparatively few of these acquisitions made that result from the higher processes of thought. The child is constantly taking in and storing up in the mind the germs of ideas, as it were, which future thought is to develop. He can know nothing completely, but he should have a ready knowledge of many things, so far as he is able to know them. These things should be of those things which he will probably spend his future life in elaborating. Ready knowledge of these implies familiarity with the words which express them. This involves not only the power to talk, but to read and to write; that is, the spoken form of the word and also the printed and written form, and the proper arrangement of these in sentences. It would be an excellent test of the pupil's familiarity with ideas and their names to call upon him to write down in connected form his ideas in any one of the familiar fields in which his mind had been wont to work. This would be a specially good test provided the pupil had not been accustomed to write down his ideas in that field.

It is our conviction that few pupils in our public schools, of the grade named, can acquit themselves well by this test, but if their training had been what the preceding analysis suggests, it is quite evident that the test would make that training manifest.

SCHOOL RECESSES.

There is a growing disposition to question the wisdom of general recesses in schools.

The reasons advanced for abolishing this time-honored custom are the following:

1. The recess in the winter season is prolific of colds caught from exposure on the play-grounds, or from sitting in the school-room in a perspiration resulting from excessive exercise at recess.

2. Many of the cases of discipline—some say one-half of them—arise from trouble on the play-ground.

3. There is great danger of bodily injury from the reckless play of a large number of children.

4. The opportunities for acts of petty tyranny of the strong against the weak would be diminished by abolishing the recess.

5. The opportunities for moral contamination would, thereby, be reduced to a minimum.

These are undoubtedly objections that hold against the general recess.

What can be said for it?

1. It is an old custom, practised by the school for generations. What the wisdom of generations has sanctioned, especially in the sphere of conduct, may be supposed to have some good reason for its continued existence.

2. The school needs rest from study. The most perfect rest, except sleep, results from the transition from study to play. The last hour of both the morning and evening sessions will be much more fruitful of intellectual acquisitions if there is an intermission from labor for ten or fifteen minutes during the session, in which the pupils engage in free and active play. The more earnest, industrious, and orderly the school, the more necessity for this period of complete rest. Gymnastics is suggested. But this exercise is too much akin to the orderly procedure which is the characteristic of work to make it the best rest for the mind.

3. The public school is the training ground for active and independent life. There the children of all classes meet upon a plane of absolute equality, as to rights and privileges. In the school-room equality is maintained by the teacher. On the play-ground it is enforced by the public sentiment of the school. It is here that the strong learn to respect the weak, and the weak and timid to maintain his rights against the strong. It is here that children learn to estimate each other by the personal qualities each possesses, rather than by the poverty or riches of the family.

The common school is the nursery of republicanism, and the play-ground is only inferior to the class-room for implanting its principles.

4. Discipline, the training of the will, is the main purpose of the school. It is no valid objection to the general recess that it affords occasions for the exercise of this discipline.

5. If it were true that the opportunities for moral contamination were increased by the public recess, it would be good reason for abolishing it. But it seems to us that this is not the truth. Immorality does not seek to display itself in the sunlight and to the public gaze. We mean those grosser forms of immorality into which children may be early led. It is only the secret and hidden places that are favorable to this. The abolishment of the public recess will remove one of the strongest safeguards to morality.

The language of the play-ground is far from being all that is desired. Slang, obscenity, and profanity are not uncommon. But these are much less frequent on the play-ground of a well-governed school than on the street. Children can only be kept from danger of contamination of this sort by isolating them. Whether it is not better for the child to early meet these influences and be taught by teacher and parent to resist them is the question. Those who would keep their children from them must keep their children from the public school, even if the general recess shall be abolished.—*Indiana School Journal.*

DIRECTIONS IN USING LANGUAGE LESSONS.

Facility of language, and the ability to think "on one's feet," are acquired by practice.

Daily exercises should be given in speaking and writing. The reading-lessons, pictures, stories, current events, etc., will furnish the themes for conversation, and constitute the basis for composition.

Encourage the pupils to think independently, and to speak and write with freedom and accuracy.

When compositions are finished, select one of the most faulty and write it on the board, and have the pupils correct it in every particular.

Principles learned should be carefully applied in kindly criticism and correction.

The terms *noun*, *adjective*, and *adverb* have been used for convenience, and not for the purpose of definition and minute grammatical classification. The children will soon become familiar with them, and use them just as they use hundreds of other class-words properly without being able to give their definition.

Use Readers to cultivate *language* and *written expression*. The oral statement of information obtained from the pictured reading-lessons makes a valuable language-lesson.

The value of pictures as a means of cultivating *thought* and *expression* in children is not fully appreciated. They awaken interest, and convey ideas which the minds of young people cannot grasp from simple print.

Suitable ones may be found in *St. Nicholas*, *Wide Awake*, *Little Ones at Home*, Harpers' illustrated journals, and others.

Place the picture selected before the class, that they may look at it closely; by easy questions lead them to express their simple ideas; then ask them to make written statements, or a short story, about it.

Have pupils write at least five connected statements upon subjects furnished by the teacher; as, short interesting stories and events of the day *with which they are familiar*.

Have them copy and write from dictation portions of reading-lessons and stanzas of poetry for formal correctness.

Allow them to exchange work for mutual criticism and correction. "As much as possible should be done *by the pupils*, and little or nothing *for them*."

LESSONS IN PHYSICS.

An experiment is a trial; we note the result. This is the only way we learn about matter.

1. I have a stone in my hand; it does not fall. Why? Note the experiment—the holdings, the result, its not falling.

2. I loose my fingers and it falls. Why? Note the experiment—the unclasping, the result, the descent.

3. The same trial is made with ten things, pen, pencil, book, etc. The pupils are now to state the experiment in a *general* way and the result in a *general* way.

4. Over the surface of the water in a tumbler a piece of lead is suspended; letting go it sinks. Why? What is the "experiment"? The trial whether the water will hold up the lead. What is the "result"? The lead sinks.

5. The same trial is made with ten things, a nail, a pin, a shell, a stone, etc. Then the pupils are to state the experiment in a *general* way and the result in a *general* way.

6. A piece of wood is held over the surface of a tumbler; letting go, it floats. Why? What is the experiment? What is the result?

7. The same trial with ten things, and the pupils state the experiment and the result in *general* terms.—*New York School Journal*

SOME POINTS FOR YOUNG TEACHERS.

WINTER MANAGEMENT.

1. In winter, more than at any other time, is the health of the children dependent upon the thoughtful, even tender, discretion of the teacher.

2. If by any means a child's clothing becomes wet, it is your duty to have it dried, no matter what rules of order or discipline require. Sitting in wet stockings or wet skirts, or wet garments of any kind, is dangerous to the children.

3. Special care should be given to the outer wraps of the pupils that they are thoroughly warm and dry before putting them on.

4. To this end, during the last period of a cold, damp day, some time before dismissing, let two or three of the pupils bring in all the outer clothing from the cloak-rooms and dispose them near the stove, so that at the dismissal they may be warm and dry.

5. Female teachers will remember, but male teachers are likely to forget, that the younger pupils need personal attention both when they come in and when they go out of doors, if the weather is at all severe. This is especially true if they have come from or are going to a home which is quite distant, and over bad roads.

6. In spite of the hue and cry about ventilation, teachers must remember that it is vastly more important that the pupils are *warm* than that they have chemically pure air to breathe. If fresh air that is warm can be secured, good; but if fresh air that chills is admitted, it is not only dangerous, but oftentimes, as every observing person knows, certainly fatal. Better, a thousand times, warm and impure air than cold pure air to persons who are sitting.

7. This is not a protest against *pure* air, but against *cold* air.

8. Cold pure air may be admitted if the pupils are in motion.

9. Oftentimes, when the air is thought to be bad, it is good enough but too warm, and this is just the time when thoughtless teachers let down or raise windows, so that a flood of cold air pours upon the children, with more dangerous effects than if a drenching flood of cold water were emptied upon them.

10. The mistake was in permitting the room to get too warm.

11. To cool off the room, open the windows and engage the pupils in marching or gymnastics, or send them out into the air.

TEACHING ENGLISH COMPOSITION.

Among the improved methods which cultured teachers of our time have introduced into the schools, none is more to be commended than the various excellent devices for training the young in English composition. A few years ago, intelligent educators began to wake up to the fact that while our schools gave their pupils much useful instruction, they entirely failed to impart to them, in many instances, the most necessary and fundamental power, that of using their native tongue readily and well. Not only was needed training in English composition in many instances wholly ignored; but such instruction as was given in it was generally so poor and illogical, that it was scarcely better than no training at all.

We have dwelt in these columns on the fact that skill in language comes only by its continued use; that we learn language by using it. A theory of composition may be excellently elaborated; rules for the use of language may be formulated with the utmost accuracy; yet these cannot teach language, any more than a book of printed directions can teach one to swim or to dance.

We all know the old method of teaching composition. A list of time-worn subjects was given, all dealing more or less with abstractions or sentiment, as "Faith," "Hope," "The Reward of Virtue," etc.; or Nature was drawn upon for topics from which a touching moral lesson might be drawn, as "Spring," "The Seasons," "The

Falling Leaf," etc. It was not at all probable that one of the victims of these subjects had an idea on any one of the subjects offered, it was simply impossible that he should have an original idea concerning any of them. Such utterances of others on the subjects mentioned as came within reach were liberally cribbed from; those of the pupils who had a readiness in stringing together words without meaning were bribed to do the composition of their companions who lacked the gift; and so, at stated times, teacher and school worried through a stereotyped amount of composition writing. The pupils learned nothing from exercises of this kind, they gained a little facility in the use of stereotyped and stilted phrases,—this was all, no power whatever in the valued art of direct, intelligent, and forcible expression.

The Egyptians of old, when they levied the tale of bricks upon the toiling Israelites, but gave them not the straw so necessary in the making thereof, were accounted most cruel taskmasters. Not less cruel is the teacher who demands of his pupils compositions without ideas. Give children ideas, and if they have any vocabulary at all, they will not be slow in manufacturing compositions. They should be taught that a composition is not merely a stilted effort at an essay, but any intelligent arrangement of knowledge on any subject. When the child understands this, he will no longer regard composition-writing as a hopeless bugbear.

The first thing necessary is, by some device, to give the child some ideas. * * * A picture is placed before the children, a few questions are asked to test their understanding of it, or, if they are inexperienced in writing, the teacher tells them a story about it, and then they are set to work to write a composition concerning the picture. Very young children will be found to do this work very well, showing that when writing compositions means telling what they know, it becomes a very simple matter.—*Western Educational Journal*.

Notes and News.

ONTARIO.

The average salary paid to teachers in Prince Edward County is, males \$370, females \$265.

The Hon. Adam Crooks has left for England for four or five months with a view of securing rest.

The high school, Fergus, of which C. F. McGillivray, B.A., is head master, is doing well. The attendance averages 60 pupils.

A. D. Davidson, B.A., late head master Caledonia high school, was a short time since appointed to a similar position in Elora high school. He is ably assisted by Mrs. Kirkman.

We are glad to announce the convalescence of Mr. J. W. Narro-way, the efficient principal of the central school, Belleville. He had been suffering from a severe attack of bronchitis.

W. O'Connor, M.A., late head master of Owen Sound high school, has been appointed principal of the collegiate institute, Peterboro; C. De la Matter, B.A., succeeds him at Owen Sound.

The cost of public school inspection has, during the past few years, made a wonderful increase. In 1871 the expenses were only \$11,527, while in 1881 they amounted to \$31,022.

The teachers of the high and public schools of Pembroke met in the high school building, the other evening, and organized a Local Teachers' Association for the purpose of self-improvement.

Mr. James Learn, formerly a deserving student of St. Thomas collegiate institute, and well known as a teacher in Dorchester, has been appointed head master of one of the London public schools.

Miss Alice Higgins, a graduate of Toronto normal school, has recently been appointed first assistant in the public school, Brussels, of which Mr. J. Shaw is the efficient and highly respected head master.

The appointment of Mr. S. Roulston to the head mastership of Palmerston public schools is one that is giving much satisfaction. Mr. Roulston previously taught in Arkona, Lambton Co., where he was highly esteemed.

The Listowel high school Board have engaged a native German, Dr. Sommer, to give lessons to the pupils wishing to acquire the German language. There are 15 in the class at present, with the prospect of an increase.

In the Tronton high school, of which H. E. Kennedy, B.A., is head master, arrangements have been made to have a "Local examination for women" held next June. A committee of resident influential ladies and gentlemen, has the matter in hand.

We do not hesitate to say that the March number of the CANADA SCHOOL JOURNAL just to hand is the most interesting number yet issued. This single number is worth to any teacher the annual subscription price of the JOURNAL.—*Canadian Statesman*.

At the meeting of the school board, Whitby, recently held, Mr. Henderson's salary, as teacher in the collegiate institute, was increased to \$650.00. Mr. Henderson is a faithful and diligent teacher, and we are pleased to note this recognition of his valuable services.

Mr. D. B. Hyatt, who was second master in Fergus public school, has recently been promoted to the principalship. He is well assisted by Mr. Webster, and both these gentlemen are zealous, well qualified teachers, whose desire is to bring their school up to the highest standard.

Brampton high school is, we learn, preparing for a public entertainment to come off shortly, the proceeds to be devoted to the establishment of a library of reference for the school. We wish the head master, Alex. Murray, M.A., his staff, and the pupils, every success in their enterprise.

There are 25 teachers employed in the schools of Belleville. The highest salary paid to a teacher in that city is \$1,000, and the lowest \$250. The amount required for this year is \$15,210, of which \$3,857.85 is in government grants; the remaining \$11,352.15 will have to be provided by the city.

A. H. Watson, B.A., has succeeded Mr. Kerr as assistant in Richmaud Hill high school. It is proposed to build a new public school—the present building is a disgrace to the town. The public school is under the management of F. F. McMahon, with two assistants. Average attendance, 160.

The public school estimates of Brockville for 1883 are \$6,710—\$4,995 of which is for the salaries of 15 teachers, 14 of whom are females. The estimates of the high school board are \$2,300. It is proposed to form a special class in the high school for the study of botany, chemistry, and practical science.

There is an average attendance of 220 pupils in the public school, Aurora. For the past three years Mr. Armstrong has occupied the position of principal, and is reported as one of the most successful teachers in the county. The staff of teachers at present numbers four, and steps are being taken to secure the services of a fifth.

The public school, Lucknow, under the excellent management of Mr. H. S. McLean, head master, is in a very flourishing condition. The building is one of the best of its class that we have seen, and the system of instruction carried on cannot fail to produce the best results. Mr. Middleton, second master, is doing good work in his department.

At the literary entertainment recently given in connection with the high school, Weston, the sum of about \$100 was realized. This amount will be placed to the credit of the prize and scholarship fund. The chair on the occasion was filled by the energetic head master, G. Wallace, B.A., whom we congratulate on the live condition of his school.

We regret extremely to hear of the illness of Dr. J. Agnew, the respected and, up to the time of his sickness, indefatigable inspector of schools for Frontenac County. Although it is thought his chances of recovery are very meagre, yet we hope he may rally and be again able before long to carry on the arduous duties he has hitherto so efficiently performed.

The library in connection with the Mechanics' Institute at Elora is, without doubt, second to none in any other country town in the Province. Certain works recently added have become the subject of a newspaper war between some of the local clergy and the late public school head master. As a consequence these books are now generally sought after by the townspeople.

Notwithstanding the severe weather, the attendance at the central school, Listowel, has been well maintained. The good, solid instruction imparted therein by Mr. B. Rothwell, principal, and his able staff of assistants, together with the perfect order and discipline which are prominent features, combine to make this school second to none of its class in the country.

Mr. W. A. Hoath, Principal of the Albert St. school, Oshawa, has been visiting Toronto with the view of becoming acquainted with the working of the public schools of the city. Mr. Hoath is one of those progressive teachers whose aim is the pinnacle of the profession, and, possessed as he is of many leading qualifications, we have no doubt but he will "make his mark" in a short time.

A new school building, we are told, is about to be erected in Lower Wingham. It is almost time to make a new departure there, as the building now in use is unsightly, comfortless, and inconvenient. The attention given by the head master, Mr. W. E. Groves, to his work has been productive of an increased daily attendance, and a desire on the part of the trustees to give him a better school-room.

Mr. Alex. Patrio, head master, Elora public school, is giving much satisfaction in his work. A visit to the school will amply repay the trouble, as one of the rooms is filled with cabinets containing stuffed birds and other animals, fossils, ores, shells, vegetable productions of Canada, specimens of Canadian manufacture, and curiosities of various kinds—in fact, the School Museum is a unique and interesting feature.

The High School in Richmond Hill continues to do good work; Mr. McBride, the energetic principal, although a young man, has proved himself a very successful teacher. A successful entertainment has recently been held in the High School with the laudable object of procuring funds to make an addition to the Reference Library attached to the school. A Reading Room has recently been established in connection with the same school.

Peter Armstrong, a pupil of the Markham high school, has been for some time in the habit of carrying a loaded pistol, which lately exploded whilst in his pants pocket. The bullet struck his left leg above the knee, inflicting a severe wound. This is the second accident of the kind that has lately befallen high school pupils, who appear ignorant of a statute against carrying concealed weapons which renders the offenders liable to a fine of \$20.

Inspector Hughes, of the Toronto schools, in a recent visit to some leading American cities, collected full statistics as to teachers' salaries. We notice on comparison that the salaries paid to teachers there are considerably higher than those paid in Canadian cities. Another marked feature is the payment of the highest salaries to the teachers of the junior classes. It is also a recognized principle, in some of the places visited, that the most experienced and efficient teachers should be employed for the lowest grades in the school.—*Stratford Beacon*.

Mr. R. W. Bright has succeeded Mr. Bellamy as principal of the public schools, Drayton. Since his appointment he has had much up hill work in reorganizing the school, and has been successful in bringing it into a good state of efficiency. The new school building is a credit to the trustees and an ornament to the village. It would be an advantage if another teacher were appointed, as the classes are rather crowded at present for beneficial instruction. Miss Sampson and Miss Coulter are the assistants, both of whom are highly spoken of.

Wingham public school is prospering under the able management and assiduous care of Mr. James Ferguson and his assistants. Mr. Ferguson, by his untiring energy and diligence, has raised this school to a prominent position in a county where there are many other excellent schools, and as a teacher and a gentleman he continues to enjoy the confidence of the trustees and the respect of his fellow-citizens. In his school work he has many original, practical plans, some of which we may have an opportunity of giving in the columns of the JOURNAL, in the early future.

Mr. E. A. Stevens, the Principal of the Renfrew County Model School during four and a half years, it will be remembered, some little time since obtained a rather lengthy leave of absence from the Board of Education, in order to study for a higher certificate than he held. Recently he tendered his resignation, which was accepted by the Board. Many of our readers will regret to learn this, as Mr. Stevens was intensely earnest, in fact enthusiastic, in his profession, and very successful in his practical school work, and, after school hours, exerted himself to procure decorations for the school-house, and gymnastic appliances about the play-grounds, so as to make the premises attractive to the pupils, which naturally made him popular with them. His friends, however, while regretting his unexpected departure, will be pleased to learn that he has resigned his position here only to accept the first assistant mastership of the Wollesley Public School, Toronto, the largest public school in Canada, at a salary of \$750, with a promise of a rise shortly.—*Renfrew Mercury*.

There are twenty-four model school pupils in Port Hope. A contemporary states that the town is indirectly benefited \$1,050, and directly—through fees, Government grant and Counties' Council grant—\$470. Mr. Goggin receives a salary of \$100, as model school teacher, thus giving the town a gain of \$370 in cash, and through books and board, \$1,050.—*Times*.

From the report of the Inspector on the Kingston public schools for February, we learn that the average daily attendance was 1,351—833 boys and 837 girls, that the daily average time required for home lessons was fifty-five minutes, and that all teachers are reported as having complied with the recent resolution of the board compelling them to accompany their pupils to the play-ground.

The February number of the CANADA SCHOOL JOURNAL is, as usual, overflowing with information for the educationist. The Dominion intermediate examination papers will be found useful to teachers of high schools. Of course in this, as in all similar journals, as the contributions are from dozens of correspondents, many grotesque views and inconsistencies occur, but to the teacher who knows how to use it, we know of no better investment than subscribing for it.—*Kingston Daily News*.

The salary of Mr. Dickson, Head Master of the High School, Newmarket, has been increased every year for the past three years. Mr. Dickson is a hard-working and painstaking teacher, and well deserves this appreciation of his services. That terrible scourge—Diphtheria—has latterly been very prevalent in the town, nearly compelling the closing of the High School; fifteen pupils have been laid aside, two dying from its effects. Some families in the town have been bereft of as many as three or four children.

The High School Board in Newmarket had unwisely adopted the plan of fixing the yearly fee as high as \$13. This has, however, been recently reduced to \$10. As a result, a surplus of \$1,000 has been accumulated over working expenses, but we fear this acquisition of wealth is a disadvantage to the school, by keeping the average attendance at low water mark, while neighboring schools admit pupils free. Mr. Rannie still has charge of the Newmarket Model School, and evidently with great satisfaction to all concerned, as his salary has been increased by the Board at the last re-engagement. For the special accommodation of the teachers in training at the Model School a new room has been built.

MANTOBA.

The University examinations commence on the second Tuesday in May.

It is likely that a teachers' association will shortly be formed at Portage la Prairie.

In many parts of the Province there is unusual activity in organizing school districts and establishing schools.

At the last meeting of the Council of the University of Manitoba it was decided that for the present Bachelors of Arts, of at least three years standing be granted the degree of Master of Arts.

The Winnipeg school trustees have decided to advertise for tenders for the erection of a school-house at Fort Rouge, ward No. 1, on the plan of the Argyle and Dufferin schools, and also for an addition of two rooms to the Euclid Street school.

Mr. Robert Machray who went to the University of Cambridge after having obtained, in 1879, the Governor General's silver medal in the previous examination of the University of Manitoba, has recently graduated as B.A., taking second-class theological honors. He would in all probability have taken first-class honors, but after the first four papers he was seized with acute neuralgia, and though he struggled on through the next seven papers, he was at last confined to his room and was not able to take the last three papers. This illness has been a great disappointment, as in addition to destroying his chance of first-class honors, it prevented his going in for the University Hebrew prize, which he had hoped to get. During his studies at Cambridge he lost half a term from a very severe attack of neuralgia. Mr. Machray returned about a week ago. He will take the position of Assistant Professor of Ecclesiastical History in St. John's College. Mr. Machray is a nephew of the Bishop of Rupert's Land.

According to announcement, the regular meeting of the Manitoba Teachers' Association was on Friday afternoon held in the Central School, the president, Venerable Archdeacon Pinkham, in the chair. As the meeting was only a formal one for the transaction of routine business, no teachers were present except those of the city, about thirty in number. The minutes of the last meeting having been read and approved, Mr. Somerset, on behalf of the committee appointed at a previous meeting to draft a scheme

whereby local associations could be formed that could work in harmony with the Provincial Association, was called upon to report. He stated that he had postponed convening the committee, hoping that the members from outside would be present at the meeting; but as they had not filed an appearance, and as he had not time to call together the other members during the afternoon, he was obliged to submit a few suggestions of his own. They were as follows: "The Provincial Teachers' Association would recommend that the days hitherto set apart for the attendance of teachers at the Provincial Convention, be granted hereafter at the same periods and on the same terms to Local Associations. Any local Teachers' Associations may become affiliated with the Provincial Teachers' Association by sending annually before the first of July to the Secretary of the Provincial Association a list of its members and a fee at the rate of 10c per member. All the members of affiliated local Associations shall be members of the Provincial Association, and the President of each local Association shall be ex-officio a member of the Executive Committee of the Provincial Association. In view of the meetings of local Associations being held at the periods hitherto occupied by the Provincial Conventions it is recommended that the constitution of the Provincial Association be altered so that its meetings may hereafter be held annually in August." These suggestions were adopted by the association. It was then moved by Mr. McIntyre, seconded by Mr. Greig and carried, that a committee, consisting of Messrs. Fawcett, Somerset, Byington, Blakely, Hunt, Eaton, the Principals of the Schools in Brandon, Portage la Prairie and Emerson, the President and the mover be appointed a committee to amend the constitution of this Association, and submit the same at an adjourned meeting to be held on the 23rd of August. On motion the meeting then adjourned till Thursday, 23rd of August.

NOVA SCOTIA.

The following gentlemen constitute the Committee on Education of the Legislative Assembly now in session: Hon. Provincial Secretary Church, Mr. Langley, Mr. Harrington, Mr. Robicheau, Mr. Hockin, Mr. Haley, Mr. Patterson.

The students of Dalhousie College have resolved by a large majority to petition the Faculty and Governors for an extension of the annual session. It is urged in support of this action that the present session is too short for the work required.

D. H. Smith, Esq., the retiring Inspector, carries with him the esteem of all brought into contact with him in his official relations. He was a faithful and impartial public officer, and it is to be regretted that his health did not prove adequate to the trying duties of the inspectorial position.

It is reported that Roderick McKay, Esq., B.A., formerly English Master at the Pictou Academy, and now pursuing a post-graduate course at his *Alma Mater*, (Queen's University, Ont.) has been offered the position made vacant by Mr. McLellan's acceptance of the Inspectorship.

R. McLellan, Esq., for several years past instructor in the classical department of Pictou Academy has, on the recommendation of the Superintendent of Education, been appointed by the Council of Public Instruction, Inspector of schools for District No. 9, (Pictou and South Colchester). This is regarded as an excellent appointment. Mr. McLellan, who pursued several years of successful study at Dalhousie, holds a Provincial Grade A License, and has had a wide and eminently creditable experience as a teacher. As Classical Professor at Pictou, he contributed his full share to the success achieved by Pictou boys during the past few years in various fields of competition.

From the Report of the Superintendent of Education for 1882, we glean the following figures: Total number of schools during winter term, 1,820, summer term, 1,910; total number of teachers during winter term, 1,890, summer term, 1,975; total number of pupils during winter term, 76,888, summer term, 81,196. The number of pupils in attendance during the winter term shows a small decrease in comparison with the preceding year; the other figures indicate a marked enlargement of educational operations. The teachers employed are classified as follows: Academic Class during winter term, 28, summer term, 28; First Class during winter term, 313, summer term, 272; Second Class during winter term, 790, summer term, 797; Third Class during winter term, 719, summer term, 849. The Report states that the year whose operations are recorded was one of exceptional educational activity. The subjects most fully discussed by the Superintendent of Education in the Report are the professional training of teachers, intermediate or Academic Education, and Compulsory Education.

It is understood to have been decided by the Executive Committee of the Provincial Education Association to hold the next ensuing annual session of that body in Halifax instead of Truro, where previous sessions have been held.

The towns of Pictou and Kentville have each met with a serious loss in the destruction of school buildings by fire. The edifice burned at Pictou was large and well furnished, accommodating several of the higher common school grades. That at Kentville, embraced the entire school provision of the town, with the exception of a small building occupied for the primary grade. Though a neat and somewhat commodious structure, it had proved inadequate to the educational requirements of the place, and the trustees had decided upon a material enlargement. The ground is now clear for the erection of a building worthy of one of our most growing towns. Fortunately there was a reasonable sum insured on each of the properties destroyed, while the trustees in both towns have been able to make satisfactory arrangements for the temporary accommodation of the schools.

The *Acadia Athenaeum* reports an unprecedentedly large attendance at the Ladies' Seminary, Wolfville. The same Journal announced that "Mr. W. F. Kempton and Mr. H. S. Freeman, formerly students of Dalhousie College, have joined the Sophomore Class (of Acadia College,) increasing its number to 15. We are further indebted to the *Athenaeum* for the following interesting statistics regarding the graduates of Acadia College; "The total number is two hundred and eleven, of whom twenty-nine have died. Of the whole number, eighty-seven, or forty-one per cent. engaged in the ministry. Thirty-six have entered the legal profession, of whom one has become a Judge of the Supreme Court, and another a County Court Judge. Twenty have studied medicine, and the same number have engaged in mercantile pursuits. Eleven are journalists, five hold positions in the Civil Service, while four are agriculturists, and one a civil engineer."

An important initial step has been taken towards the establishment of a Faculty of Law in connection with Dalhousie College. Through the continued generosity of Mr. Munro, the well-known benefactor of Dalhousie, an adequately endowed Chair of Law has been founded in that institution. Around this central chair, other professorships, or more probably *lectureships*, are designed to be grouped making it a complete Faculty of Law. Several of the leading legal practitioners of Halifax, and at least one judge of the Supreme Court, have promised their hearty and practical co-operation. The Governors of Dalhousie have been singularly fortunate in their selection of a gentleman to inaugurate the enterprise of assuming charge of the newly-formed chair. Prof. R. C. Welden, A.M., Ph.D., has been duly nominated by Mr. Munro, and the nomination ratified by the Board of Governors. A graduate of Mt. Allison College, Sackville, N.B., of the Faculty of which institution he has for several years been one of the most distinguished members, Dr. Welden pursued a post-graduate course in philosophy and constitutional history and law at Yale, graduating there as Doctor of Philosophy with great distinction. Subsequent study of the same branches at Heideberg, under some of the most eminent jurists of Europe, has given to his attainments a wide range and a profound depth. In magnetism of manner, he is well qualified to make attractive a post which his learning and abilities cannot but adorn. The endowment provided by Mr. Munro yields an income of \$2,000 per annum.

GEMS OF THOUGHT.

Parting with friends is temporary death,
As all death is. We see no more their faces,
Nor hear their voices, save in memory;
But messages of love give us assurance
That we are not forgotten. Who shall say
That from the world of spirits, comes no greeting,
No message of remembrance? It may be
The thoughts that visit us, we know not whence,
Sudden as inspiration, are the whispers
Of disembodied spirits, speaking to us;
As friends who wait outside a prison wall,
Through the barred windows speak to those within.

(Longfellow.)

Be to my faults a little blind,
And to my virtues wondrous kind.

Readings and Recitations.

THE LITTLE GRAVE.

"It's only a little grave," they said,
 "Only just a child that's dead:"
 And so they carelessly turned away
 From the mound which the spade had made that day
 Ah! they did not know how deep a shade
 That little grave in one home had made.

True, the coffin was narrow and small,
 One yard would have served for an ample pall;
 And one man in his arms could have borne away
 The rosewood and its freight of clay.
 But what darling hopes were hid
 Beneath that little coffin lid.

A weeping mother stood that day
 With folded hands by that form of clay;
 And painful, burning tears were hid
 'Neath the drooding lash and aching lid;
 And her lip, and cheek, and brow,
 Were almost as white as her baby's now.

And then some things were but away,
 The crimson frock, and the wrappings gay;
 The little sock, and the half worn shoe,
 The cap with its plume and tassels blue;
 And an empty crib stands with covers spread,
 As white as the face of the sinless dead.

'Tis a little grave; but oh! what care!
 What world-wide hopes are buried there!
 And ye, perhaps, in coming years,
 May see, like her through blinding tears,
 How much of light, how much of joy,
 Is buried up with an only boy!

NOBODY'S CHILD.

Only a newsboy under the light
 Of the lamp-post plying his trade in the rain.
 Men are too busy to stop to-night,
 Hurrying home through the sleet and rain.
 Never since dark a paper sold;
 Where shall he sleep, or how be fed?
 He thinks as he shivers there in the cold,
 While happy children are safe in bed.

Is it strange if he turns about
 With angry words, then comes to blows,
 When his little neighbor, just sold out,
 Tossing his pennies, past him goes?
 "Stop!"—some one looks at him sweet and mild,
 And the voice that speaks is a tender one.
 "You should not strike such a little child,
 And you should not use such words, my son."

Is it his anger or his fears
 That have hushed his voice and stopped his arm?
 "Don't tremble," these are the words he hears;
 "Do you think that I would do you harm?"
 "It isn't that," and the hand drops down;
 "I wouldn't care for kicks and blows;
 But nobody ever called me son,
 Because I'm nobody's child, I s'pose."

O men! as ye careless pass along,
 Remember the love that has cared for you,
 And blush for the awful shame and wrong
 Of a world where such a thing could be true.
 Think what the child at your knee had been
 If thus on life's lonely billows tossed;
 And who shall bare the weight of the sin,
 If one of these "little ones" be lost?

Teachers' Associations.

The publishers of the JOURNAL will be obliged to Inspectors and Secretaries of Teachers' Associations if they will send for publication programmes of meetings to be held, and brief accounts of meetings held.

WATERLOO.—The annual meeting of the Waterloo County Teachers Association convened in the Berlin Model School on February 7th. The attendance was very large, and a very pleasant and profitable day was spent in discussing such subjects as appertain principally to the work of the teacher. The meeting was called to order by the President, Mr. J. Suddaby, at nine o'clock, after which Mr. Baehr opened the session with prayer. The Treasurer read his report, which showed a balance on hand of \$32.50. Upon motion of Mr. Weismiller, seconded by Mr. Herner, Messrs. Hagey and Hagedorn were appointed auditors. The Library Committee's report was then read. Moved by Mr. Pearce, seconded by Mr. Hagedorn, that the Secretary and Messrs. Martin and Moyer constitute the Library Committee for the current year. Carried. Moved by Mr. Herner, seconded by Mr. Hagey, that the same Legislation Committee be re-appointed. Carried. Mr. Baehr very practically and thoroughly dealt with the Inflection of the Adjective and Adverb, after which Messrs. Weismiller, Herner, Hagey, Brueckner, and Suddaby followed with some well-timed remarks. Mr. Carscadden, M.A., of the Galt Collegiate Institute, next addressed the Association on the subject of Practical Education. This he termed to be that sort of education that has a direct bearing upon one's profession in after life. Instead of the present school programme being too extensive, he maintained that while a few subjects might be left off, such subjects as Physiology, Bookkeeping, Chemistry, Physical Geography, and Physics should be added, and more attention paid to Composition. Mr. Knowles followed with some remarks, after which the thanks of the Association were tendered to Mr. Carscadden for his very able address. Moved by Mr. Wm. Linton, seconded by Mr. Hagey, that the Rev. Mr. Boyd take up the subject of "Religion in Schools" in the evening, Dr. McLellan being prevented from delivering his lecture on account of sickness. Messrs. Ballantyne, Baehr, Hagedorn, Pendergast, and Brueckner were appointed members of the Nominating Committee. The meeting then adjourned until 1.30. Upon re-assembling, the report of the Committee on Question Drawer was received upon motion of Mr. Ballantyne, seconded by Mr. Baehr. The Rev. Mr. Thompson, M.A., of Ayr, then explained the "Tonic Sol Fa" system of Music. Throughout his address, which extended over about two hours, his remarks were so apt and varied as to elicit repeated applause. He claims many advantages for the system over the present one, and maintains that by its adoption throughout the public schools in Canada, as in England, thousands would easily glide into the kingdom of Music who are at present prevented by the five-barred gate. After some remarks by Mr. Groh, the thanks of the Association were tendered to Mr. Thompson for his very excellent address. Mr. Laird then gave his views on Geography, and how to teach it to junior classes. His method is very practical, and as he teaches altogether from nature it must certainly be very interesting and instructive to the class. His ideas, which were well received, were followed by remarks from Messrs. Knowles and Wm. Linton. Mr. Thomas Cowan, chairman of the Galt School Board, was then called upon and highly entertained the meeting for a considerable time. Mr. Isaac L. Bowman also addressed the meeting for a short time. The thanks of the Association were then presented to the trustees for their attendance, and to Messrs. Cowan and Bowman for their speeches. Mr. Pendergast then read an excellent essay on "The Teacher out of the School." He holds that the teacher will teach much better if he continually and regularly exercises his physical and mental faculties outside of the school-room, and in order to do that successfully he must have a well-arranged time-table and strictly adhere to it. Remarks were made by Messrs. Ballantyne and Herner. Mr. P. E. W. Moyer interested the Association by giving some of his experience while a teacher thirty years ago. The meeting then adjourned until 7.30 p.m. In the evening the Rev. Mr. Boyd delivered a lecture on "Religion in Schools." He maintained that the teacher inculcates more moral principles into the minds of his pupils by his own example than can be done by the study of any text-book intended for that purpose. And further, that such text-book should only be introduced for the study of the older and more advanced pupils. At the close of the lecture he received a hearty vote of thanks for his admirable address. *Second Day.*—After the adoption of the Auditors' Report the Committee on Ventilation read their report. Messrs. Pearce, Groh, Hagey, Pendergast, and Moyer followed with various suggestions, after which the report was received. Mr. Knowles then took up Agricultural Education, and the advice he gave on the best method of raising stock, fertilizing, tilling, and planting the soil, excited the most careful attention of all present. In his opinion half an hour per week should be devoted to teaching the subject in rural schools. A discussion followed in which Messrs. Pearce, Linton, and Groh took part. Mr. Donnenworth next read a carefully prepared essay on "Reviews." He maintains that school work should be reviewed on

each Friday, and not at the beginning of each lesson. Mr. Ruby, of the Hamburg School Board, was called upon to address the meeting. The following are the names of the officers appointed for the coming year: President, J. E. Bryant, B.A., Galt Col. Inst.; Vice-President, D. K. Erb, Sec. Treas., Mr. Ballantyne, Managing Committee, Messrs Coony and Ovens, and Messrs. Petrie, Cull, and Weismiller, Delegates to Provincial Association, Messrs. Knowles and Wm. Linton. Votes of thanks having been tendered to the retiring officers and to the Berlin School Board for the use of the school-house, the meeting adjourned to meet in Galt on the first Friday and Saturday in October.

ALGOMA.—The winter session of the Algoma Teachers' Association was held in the hall, Manitowaning, on March 16th, 1883, and though the attendance was fair, considering the distance that teachers would have to come, yet it is to be regretted that some teachers exhibit so little interest in these meetings, which would amply repay the trouble and expense of attending them. The election of officers was first proceeded with, the following being the result:—President, Mr. G. F. Payne, Manitowaning; Vice-President, W. Forrest, Sheguiandah; Secretary-Treasurer, J. Hanna, Tehkuminnah; Librarian, T. Flesher, Hilly Grove; Managing Committee, G. F. Payne, E. I. I. Ferguson, J. Hanna, F. Flesher, and Miss Munro; Auditors, E. I. I. Ferguson and Miss Munro. The President gave a lengthy and very excellent address on school work and the present system of education, suggesting some very good points. On the whole the address was one well worthy of publication. The Auditors' report, showing a balance of cash in hand of \$38.97, was read and adopted. The report of the librarian shows that the library is being appreciated by most of the teachers. A vote of thanks was tendered to the late president, Mr. H. Brown, for his untiring zeal and interest in the Association. On motion of Mr. Moore, seconded by Mr. Brown, it was resolved that \$20 shall be expended in books for the library, consisting of twenty-two volumes, the works of a very choice selection of authors, and \$5 in a book-case for library, Messrs. Ferguson and Brown to negotiate for the same. On motion of Mr. Ferguson, seconded by Mr. Brown, it was unanimously resolved that the thanks of this Association be tendered to the Department and Inspector for the grant of \$50 for the year 1882. The Inspector is to be requested to fix the date of next meeting in July so that he may be able to attend. On motion of Mr. Flesher, seconded by Mr. Ferguson, Mr. Brown was requested to send a report of the meeting to the CANADA SCHOOL JOURNAL and *Manitowin Expositor* for publication. The meeting adjourned at 5 p.m., the greatest fellow-sympathy and good-feeling having prevailed throughout.

WEST HURON.—The semi-annual meeting of the West Huron Teachers' Association was held in Exeter on Friday and Saturday, Feb. 16th and 17th, 1883. After routine business, the president, Mr. George Baird, Sr., read an able and interesting address in which he touched on the following points: "Benefits of Teachers' Associations," "Improvements in School-houses and School-teachers" during the last twenty or thirty years, "Duties of Teachers to do all that they can to put down Dishonesty at Teachers' Examinations," "The Bible as a Class-book in the School," and the "Superannuation Fund." A vote of thanks was tendered to Mr. Baird for his address. Mr. A. H. Aborn then read a well prepared essay on "The Reading Lesson," in which he advocated a more conversational style of teaching reading, and the encouragement of home reading by the scholars. This essay was well received and a spirited discussion took place on the subject. Miss A. Jenkins having read a short but valuable paper on the benefits of "Calisthenics in the schools," showed her plan of teaching the subject by putting several of the members of the Association through a number of calisthenic exercises. A discussion on the benefits of calisthenics in schools ensued. Mr. Wm. Henderson, after reading a paper on "A few points in Arithmetic," gave some practical examples of his methods of explaining said points. He held that more attention should be paid, in the junior classes, to the simple rules. A number of questions put by members of the Institute were satisfactorily answered by Mr. Henderson. In the evening a large public meeting was held in the C. M. Church, when the Rev. G. Webber delivered his very interesting lecture on "William Tyndall," the great reformer and translator of the Bible into English. This eloquent lecture was listened to with rapt attention by the audience, and at the close a hearty vote of thanks was tendered the reverend lecturer. On Saturday the Association re-assembled in the Public School at 9:30 a.m., and Mr. W. M. Leigh dealt with the difficulties of the subjunctive mood, and by his lucid explanations of some points regarding it, enabled the members to have a clearer knowledge of this very troublesome part of Grammar. A few remarks were made on this paper by the Inspector, and one or two others. Mr. J. R. Miller, I.P.S., then read an essay on "The Kindergarten," and how far the Kindergarten exercises can be taken up in our common schools; after which Miss A. Dickson sang a number of the Kindergarten songs, accompanying them with the appropriate movements. Frequent applause assured Miss Dickson that her efforts to give the members a better idea of the Kindergarten were appreciated. The subject was discussed by several of the members, all of whom were agreed as to the great benefit to be

derived from the use of music in the schools. The Inspector explained some rather obscure points in the new programme, and answered several questions put to him by the teachers about it. A motion that a committee consisting of Messrs. A. H. Cresswell, Wm. Anderson, H. Huston, J. Grassick, Thos. Gregory, and S. S. Nash, be appointed to study up Herbert Spencer's "Education," and discuss the ideas contained in that work at the next meeting of the Institute, was put to the meeting and carried. The Association then adjourned to meet next in Goderich at the call of the Executive.

Official Department.

ENTRANCE EXAMINATION, JUNE 28, 1883.

THE SUBJECTS OF EXAMINATION ARE:

- Spelling.—Fourth Reading Book to p. 246, and Spelling Book.
- Dictation.
- Writing.—Neatly and legibly.
- Arithmetic.—Principles of Arabic and Roman Notation; Vulgar Fractions; Decimal Fractions; Simple Proportion, with reasons of rules; Elementary Percentage and Interest; Mental Arithmetic.
- Grammar.—Principal Grammatical Forms and Definitions; Analysis of Simple Sentences (including Parsing).
- Composition.—Simple and Complex Sentences, orally or in writing; Grammatical Changes of Construction, Short Narrative or Description; Familiar Letters.
- Geography.—Maps of America, Europe, Asia, and Africa; Maps of Canada and Ontario.
- Linear Drawing.—Outline of Maps, Common Objects on paper. A paper will be set on Drawing as given in Walter Smith's "Primary Manual."
- History.—Candidates will be examined in the leading facts of English History. The questions set will not demand a minute knowledge of details, but will be strictly limited to the outlines of the subject.
- Reading.—Candidates will be examined, as heretofore, in reading from the Fourth Reader, pp. 1-240; but they will, in addition, be expected to show that they understand the meaning of these reading lessons.

They will likewise be examined more minutely on the selections enumerated in the following list, and they will be required to reproduce the substance of one or more of them in their own language:—

- (1) The Norwegian Colonies in Greenland.—*Scoreby.*
- (2) The Founding of the North American Colonies.—*Pedley.*
- (3) The Voyage of the "Golden Hind."—*British Enterprise.*
- (4) The Discovery of America.—*Robertson.*
- (5) The Death of Montcalm.—*Hawkins.*
- (6) Jacques Cartier at Hochelaga.—*Hawkins.*
- (7) Cortez in Mexico.—*Cassell's Paper.*
- (8) The Buccaneers.—*The Sea.*
- (9) The Earthquake of Caracas.—*Humboldt.*
- (10) The Conquest of Peru.—*Annals of Romantic Adventure.*
- (11) The Conquest of Wales.—*White's Landmarks.*
- (12) Hermann, the Deliverer of Germany.—*Jerré.*
- (13) The Burning of Moscow.—*Segur's Narrative.*
- (14) The Battle of Thermopylae.—*Raleigh.*
- (15) The Destruction of Pompeii.—*Magazine of Art.*
- (16) The Taking of Gibraltar.—*Overland Route.*

N.B.—(1) In valuing the answers in Geography, Grammar, and Composition, one mark is to be deducted for every mistake in Spelling.

(2) The maximum of marks for each subject, which must on no account be altered, is given in the following table:—

Reading.....	50	Geography.....	72
Writing.....	20	Composition.....	72
Dictation.....	22	History.....	72
Fourth Book and Spelling.....	72		
Grammar.....	100	Total.....	560
Arithmetic.....	100		

Minimum for pass, 250. One-third in each subject is also required, except Drawing, and one-half of the marks for the analysis (including parsing) questions. (See paragraph 9 (2), page 2.)

The paper on Drawing will be valued at 60 marks. While one-third in this subject is not exacted, credit will be given for the marks obtained in reckoning the total marks required for pass.

He that swells in prosperity is sure to shrink in adversity.
 To see what is right and not do it is want of courage.—*Confucius.*
 Lack of preparation is the great fault in those who essay to be teachers.—*Professor Luken.*

I live for those who love me,
 Whose hearts are kind and true
 For the heaven that smiles above me.
 For the good that I can do.