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# THE CANADA

# EDUCATIONAL MONTHLY

# AND SCHOOL MAGAZINE.

FEBRUARY, 1891.

THE EQUALITY OF GREEK WITH FRENCH AND GERMAN.

BY PROF. HUTTON, TORONTO.

University of Toronto which expired last summer Greek was equivalent in the pass course, both at matriculation and subsequently, to pass French with German; or, rather, it was equivalent to a little more, viz., to the pass French with the pass German at matriculation, and the examinations of the first third and fourth years, and also to the honour work in either French or German at the examination of the second year; though in this honour work only a pass standing was required.

The two last named regulations were apparently framed for the sake of gratuitously straining the registrar's vigilance and averting the danger of his position proving too comfortable. As this danger is not at present pressing I am not concerned to defend the old curriculum in this particular.

When the informal conference of representatives of the universities and schools met in April last it was proposed that in the pass matriculation examination Greek should be an equivalent to pass French or pass Ger-

man, instead of to pass French with pass German. This proposition was negatived and the old scheme restained. But at a later meeting of the faculty of the University and University College the change was adopted for the four years of the University course, though not without protest.

Against this change the Classical Association in its recent meeting three weeks ago passed a unanimous resolution, in which I heartily concur, though it involves some indirect censure upon myself for not having perceived more fully last summer, I will not say the abstract injustice of the change (this I did point out), but its practical mischief, and for not having given it then a more uncompromising resistance.

I desire now to show wherein this abstract injustice and this practical mischief consist. The whole controversy, like most controversies, is largely verbal, and occasioned by the different meanings attaching to the same word; in this case the word "equality." "Equality" is one of the shibboleths of our age, and has

overflowed from the region of politics into education; whatever subject claims more than equality is assumed to be in some way connected with aristocratic privilege, caste tyranny, mediævalism, and Oxford, and to be ipso facto condemned; or perhaps it would be more correct to say that this is the assumption made when the claim to more than equality is advanced in favour of a long established department of education; when, on the contrary, the claim is made by a new department, it is readily conceded: "is not one subject as good as another? faith, and a deal better, too!" seems to be the line of argu-Surely it should not be necessary to point out that "equality" of subjects, as used in reference to the education of schoolboys or undergraduates, has, generally speaking, no bearing whatever upon the intrinsic interest and intrinsic importance of the subject per se, still less upon the dignity and honourable standing of its teacher. Mathematics, e.g., is an obligatory department of study which no student can escape, and about the importance of which there can be no Yet to a very large controversy. number of minds its intrinsic interest and importance is infinitesimal. When it is said therefore that Greek is equal to French with German, and should not be treated as though it were only equal to French or German, nothing whatever is said or assumed regarding the intrinsic superiority of Greek literature to either French or German literature, still less regarding the intrinsic superiority in university standing of the teacher of Greek to the teacher of French or of German. far as persons are concerned "the republic of letters" is a phrase capable of rigid application to the members of the faculty in any reasonablyconstituted university. Caeteris paribus, the professor of Chinese, is on a level with the professor of Latin, and

this, though in this case neither the educational nor the intrinsic value of the two subjects are equal. But I need not enlarge on this point since I had occasion some years ago to prove the sincerity of my convictions. It is obvious that the meaning of "equality" in an undergraduate course is yet further narrowed; when it is said that Greek is equal to French with German, nothing is said or necessarily assumed regarding the inferiority, even from the mere educational point of view of either French or German to Greek. Many persons, it is true, conceive that the languages of Greece and Rome ar: better educational instruments for English-speaking undergraduates than French or German, and this not merely for an intrinsic quality of Greek and Latin, their synthetic and inflectional character (the large number of different moods and tenses, e.g., in their verbs and the employment of these various moods and tenses according to more or less logical and exact rules, to master which alone is in itself a liberal education or thought-training, such as cannot be found to the same degree in our own or any kindred slipshod modern language), but also for the mere accident, so to speak, that our undergraduates are not ancient Greeks or Romans; had they been born so, the "cruces" of the Latin subjunctive, e.g., or the Greek optative would have been imbibed by them with their mother's milk, and the educational training thereof would have been lost to them; they would have spoken correct or incorrect Latin, as we now speak correct or incorrect English, by the power of habit chiefly and without reflection. And so just because modern French, and, in a less degree, modern German, are so much nearer our own tongue, just because the habits and usages of speech which we have derived from our own tongue carry us

so long a distance towards the mastery of French, and, in a less degree, of German, and so short a distance towards the mastery of the classical languages; just because, in modern French, and, in a less degree, German require so very much less reflection and thought and mental gymnastics for their mastery, and are so very much easier than Latin and a fortiori than Greek; for this reason, as well as for the other, the training given by the classical languages is often preferred by experienced teachers to the training given by the modern. If anyone finds this paradoxical let him look at the case of English itself. the student's point of view English-at least pass English-is one of the easiest subjects of the curriculum; from the lecturer's point of view English is one of the most difficult of all subjects to handle fruitfully, and its difficulty—to put it briefly—is its ease. In other words, it is one of the most difficult instruments of education, for him who is demonstrating the use of the instrument, because nature herself has supplied his pupils with the means of making a fair showing in examination, even though they do not exert themselves beforehand and passively refuse to extract from the subject the educational values which it contains.

Why is it (as we hear so often and so truly) that English is best written and spoken where it is least taught, that is, in England? (I am not of course referring to the mere trivialities of pronunciation and the like, and to those cases where "bad" English only means "unfashionable" English, but to the weightier matters of logical grammar and literary taste, to "style" in short in all its branches.) Obviously this is the case just because no English lecturer or lecturess—however experienced and indefatigable—can produce unassisted any but the

most meagre results. The good results in England are produced by influences more potent than the teaching of English: (1) By the atmosphere of literature in which whole classes move, an atmosphere which is hereditary often, and by all the other cognate advantages incident to leisure and wealth and an old established civilization; (2) By the influence of the classical languages, which, so far as any teaching can develope a sense of literary style, are unrivalled. just because they involve mental exertion. It is almost superfluous to remark that almost every literary artist of the English language of our generation has been trained in classics, from the poets Tennyson, Browning, Arnold and Swinburne to the leaders of science, such as Professor Huxley. There is just one memorable exception, John Bright, who derived his splendid style from the English Bible and was tempted in consequence to draw the long bow of his rhetoric at a venture against those dim-seen classical rivals, whose features he had never learned to recognize and appreciate at close quarters. But to return to the more general question of the modern languages as a whole, and their ability or inability to serve as equivalents for classics, Dr. Hoffman, Professor of Chemistry in Berlin, in his well-known inaugural address,\* when in 1880 he assumed the rectorship of the University, expressed the opinion "that all efforts to find a substitute for the classical languages, whether in mathematics, in the modern languages, or in the natural sciences, have been hitherto unsuccessful: that after long and vain search we must always come back finally to the result of centuries

<sup>\*</sup> Translated by Professor White, and published by Ginn, Heath & Co., Boston, in pamphlet form. Second edition, with appendix, 1883. The pamphlet is most complete and deserves most careful consideration.

of experience, that the surest instrument that can be used in training the mind of youth is given us in the study of the languages, the literature and the works of art of classical antiquity." He proceeded to show by the evidence of the different professors that in every department the students whose mental training had drawn from classics had in the long run an advantage over others in grasp of their subject whatever that might be; for his own department he remarked that this was no discovery of his own but the conclusion reached independently by Liebig before him; as concurrent testimony to the same conclusion he quoted the opinions of both of the senior professors of higher mathematics, with which the opinions of Professor Rammelsberg representing chemistry, Assistant Professor von Martens, representing Zoology, Professor Zupitza of the department of English language and literature, Professors Müllenhoff and Scherer of the department of German, Professor Zeller of Philosophical fame, and Professor Meitzen, instructor in economics and statistics closely coincided. I am aware that Professor Hofmann's conclusions (not his facts) are disputed; on the ground that the general superiority of the students trained in classics is due not to their classics but to other causes, to the higher class in society to which many of these students belong, to their larger share of inherited intellectual interest, their greater leisure for education and all the other incidental advantages which are enjoyed by the children of the comparatively well to do. is noteworthy that the assertion itself of such a general superiority in the classical students is not disputed in Germany, and when we find the same contention which Dr. Hofmann advanced, advanced also by the headmasters of the great English public schools, whose pupils all come from

the same class of society but are divided into a "classical" and a "modern" side, when again we find the same contention advanced even by those who strongly dissent from these same head masters on the special question of exacting Greek from all undergraduates (vide article in the London Spectator for December 27th), there is, to say the least, a strong prima facie case made out in favour of classics, and the onus probandi lies with those who evade the natural explanation, which appears to coincide with the evidence of English as well as German experience, and select another explanation, which however plausible for Germany leaves the English evidence out of sight. I will only add in conclusion of this branch of the subject, (1) that I have avoided referring to those German professors of the natural sciences who insist on the value of the classics from a utilitarian point of view-from the point of view that some knowledge of Latin and still more in some cases of Greek is necessary to master the terminology of modern science with its Greek and Latin compounds—because I am discussing at present solely the educational not the utilitarian value, and because the utilitarian argument obviously applies just as strongly, to say the least, in favour of the modern languages as of classics. If the medical student, e.g., is perplexed at everystep of his course in biology by Greek words, yet when he has reached the higher branches of the subject he is not less handicapped by an inability to read the medical works of French or German or English authorities. (2) My reference to Professor Hofmann's address is particularly relevant to the subject I am discussing, because the protest which he uttered as Rector, and the accompanying written protest signed by the whole of the "philosophical faculty" (our "arts faculty") of the University

of Berlin, were called forth by the special question of Greek, not by the general question of classical education. To this written protest are appended among other names those of Mommsen, Droysen, Zeller, Helmholtz, Lepsius, Hübner, Curtius, Vahlen, Tobler and twenty-seven other names, many of which are more familiar to experts in the natural sciences, mathematics, and moderns, than to myself.

But, to return, I repeat that when it is said that Greek is equal to French with German nothing is said or necessarily assumed regarding the inferiority, even from the mere educational point of view of either French or German to Greek. Such inferiority may be, or may not be, a fact. have shown, I hope, that the belief that it is a fact is not confined to "the home of dead languages and undying prejudices"-Oxford. But, even though this belief be merely a delusion of the metaphysical German intellect, or a blot upon the brain superinduced by the miasmatic mists of Isis (or the fens round Ely), the proposition that Greek is equal to French with German remains unaffected. That proposition asserts nothing in respect of any intrinsic inferiority of French or German literature; nothing (of necessity) respecting any educational inferiority in the French or German language; it asserts simply (1) that if Greek, French and German are for educational purposes equal, then the same amount of intellectual exertion should be exacted from each student whichever language or languages he chooses; (2) and that therefore if to Englishspeaking students modern French and German together are not more difficult than ancient Greek, then it is reasonable to accept Greek as an equivalent to the two modern languages combined; and, therefore, (3) most unreasonable to place the

three languages on an equality in the university curriculum when they are not equal in the nature of things; most unreasonable to attempt to join together what circumstances have put asunder; most unreasonable to legislate for Canadian undergraduates as if they had been born in ancient Greece; and most unreasonable, last but not least, to offer to students the seductive attractions of a "soft" course.

This demand for equality, I repeat, is partly a confusion of thought akin to that which appears in politics, when persons or races demand from the Government that " equality which only the Creator can give, and which only He ultimately can take away. Where equality exists it asserts itself with or without the Government's sanction, and where it does not exist it cannot be manufactured The demand, then, is by statute. partly a confusion of thought introduced from the sphere of politics, and arising from a twofold confusion, partly between the intrinsic and the educational value of the languages concerned, and partly between the importance of the subject taught and the dignity of the teacher teaching it. But I am aware that it is sometimes based on something more substantial than this: on the real conviction that Greek, French and German are all equivalent each to the other to the student in regard to the labour demanded by them of him. If this be so cadit quæstio, I have no case. I appeal to every man's experience; is it so? I have myself little French and less German, measured by the hours I have given to these languages; yet I still find even now that I can translate French at sight with considerable more ease than Greek, with somewhat more ease than Latin. I believe my experience is normal; it is endorsed by Mr. Dale, professordesignate of Latin in University Col-

lege; it is endorsed by Professor Campbell, of McMaster University, who, as a first class man in moderns as well as a well-known classical scholar, ought to be able to estimate the relative exertion required by the modern and classical languages. conversation with me during the past fortnight he remarked that in his university course he could satisfy myself in his modern work in half the time necessary for classics, and that even now—after he has been a singularly successful classical teacher for yearshe would find it not more difficult to do justice to a French than he does to a Greek professorship. So, again, I am informed by the Chancellor of Victoria that in his experience one year is sufficient at a pinch to prepare the French with German for matriculation; from two years to three years for Greek. To turn to the testimony of one of the best known recent graduates, one who took first-class honours in moderns as well as classics for half his course, and who has derived an additional right to be heard on the question from his experience as a master at Bishop Ridley College, Mr. H. J. Cody says: "It seems to me almost the ultima Thule of absurdity to make Greek an equivalent for . . I found that the amount of time required for preparing my pass French stood to the time required for the pass Greek as about one to four. . I always had to spend much more time at German` than at French. . . Roughly speaking, my time spent at Greek, German and French might be represented as 4:23; 1, or even 4:3:1. The preparation of French merely demanded time--there was hardly

any difficulty. The German demanded time and patience in looking up words . . . but it required as much time and much more mental effort to do the Greek than to do the French and German together. French pass course simply cannot be made hard: the amount of work to be read may be increased, but it is a mere matter of time to accomplish it. The German course is considerably more difficult, though by no means comparable with the Greek. In regard to the unfairness of the new position of Greek several instances have come under my notice lately: three or four new boys this term are beginning language-study for matricu-Their time is not unlimited. They each ask the question, 'Can I get through the university with Latin and Greek?' . . . If they are told that they must take French or German in addition after matriculation they naturally ask, 'Can I get through by Latin, French and German without Greek at all?' and if they are told that they can do so, they of course will choose French and German. Boys are shrewd enough to see that this would be far the easier course; they have an unerring intuition that Greek is infinitely harder than French and German. The virtual result is to prevent all pass men from taking Greek. Greek is not merely not given a fair field and favour but it is positively discriminated against. No one in his senses would say that French was an equivalent. In a word, the new position of Greek seems to me unfair, paradoxical and absurd—a serious reflection on the common sense of the University."

(To be continued.)

#### WASHINGTON IRVING AS A REPRESENTATIVE OF AMERICAN LITERATURE. (1.)

DAVID R. KEYS, M.A., UNIVERSITY COLLEGE.

IN the early years of this century Dr. Wm. Channing asked of the American public the question: "Do we possess what may be called a national literature?" and sadly regretted in his next breath that the reply was so obvious. In an essay of some forty pages on national literature he names only Franklin and Edwards as original and profound thinkers, but even these, and the few living authors who, he says, do honour to their country, are prized chiefly as giving "a promise of higher and more extensive effort. Before enquiring how far this promise has been fulfilled in the course of the century now almost closed we must ascertain what Channing meant by national literature. He defines it "We mean by national himself. literature the expression of a nation's mind in writing. We mean the production among a people of important works in philosophy, and in the departments of imagination and taste. We mean the contributions of new truths to the stock of human know-We mean the thoughts of profound and original minds, elaborated by the toil of composition, and fixed and made immortal in books. We mean the manifestation of a nation's intellect in the only forms by which it can multiply itself at home and send itself abroad." In this last sentence Channing shows a lack of confidence in the inventive genius of the American race that has been proved unwarranted by two of the greatest triumphs of modern civilization. The electric telegraph of Morse, the electric light of Edison have surely been manifestations of intellect in

forms which could be multiplied at home and sent abroad. Apart from these peculiar productions of Man's creative power, which Channing would probably rule out of his definition. has America contributed anything to science, to philosophy, to the literature of imagination and taste?

With her achievements in science, we have little here to do. The magnificent contributions of the Smithsonian Institute which fill several cases in our new university library are alone a proof of what has been done in the United States for the advancement of scientific research. But the names of Chas. Dana, the Nestor of American geologists; of Lieut. Maury, the first to explore the Atlantic Ocean, whose patriotism to a lost cause sheds a halo upon his beautiful character; of Whitney, whose Sanskrit grammar is a text book in the universities of Germany; these are enough to give in evidence on the question of America's place in science.

Philosophy is not so foreign to my theme as pure science, but just here is the weak side in the development of the national literature. For though the American may point to Emerson and to Channing himself, and to Draper, the misguided historian of European intellect, and to Elisha Mulford, the American Aristotle, there is a certain lack of power about all these men which has prevented them from winning the ear of Europe, however great their reputations at home. Emerson's friendship with Carlyle, which may be paralleled with the intercourse between Irving and Scott, did, indeed, give the American philosopher a certain vogue in England,

but at the same time it suggested to the Saturday Reviewer his famous sneer: Emerson is a Yankee pocket edition of Carlyle.

In the literature of imagination poetry ranks highest, and here we think at once of the gentle muse of Longfellow, and the more distinctively American songs of Bryant and More distinctive still in his native note is the singer of Sir Launfal's Vision, the author of the Biglow papers. But most American of all is the old white headed poet of Camden Town, who is hailed by some of his admirers as the Socrates of our age, whose name "shall be storied in records sublime" when that of Tennyson is forgotten—whose poetry most people cannot scan, but some people think the poetry of the future—Walt Whitman. These names are certainly enough to illustrate their nation's achievements in poetry. Yes, the muse of America no longer stands a spectator in the race course--she, too, is now a runner, and though handicapped by having to follow in Britannia's path, she may yet pass her sister and gather the wreath of Apollo. But the work of imagination is not in these days confined to poetry. the writing of imaginative prose we have the most striking characteristic of our age. Here the peculiarity of the American type is best seen. More highly imaginative prose productions than Poe's "Tales of Horror" have never been written in English, not even by De Ouincey himself. No English novel, it is said, has been printed oftener or translated into more languages than "Uncle Tom's Cabin." For at least one class of readers the Indian Tales of Cooper will never lose their interest. The living writers are so numerous and so good that we might separate them up into half a dozen schools and set a master or a mistress over each. We should have the psychological school of Crassford

and James, the modern realistic school of Howells, the politico-scientific school of Bellamy and Charles Dudley Warner, the antique Elizabethan school of Amélie Rivés, the southern school of Cable, or place aux dames, as he himself would say, of Miss Murfree, and the western school of Mark Twain and Bret Harte.

Still another wide department of literature lies outside all these-a department which Channing probably meant to include under the works of taste. It is in what used to be called the belles lettres that some of the most fascinating of American books have been written. Here belongs Irving's own Knickerbocker and Sketchbook and Alhambra. Here, too, comes the delightful series by which O. W. Holmes has handed his name down to the latest ages as the "Autocrat of the Breakfast Table"; here is the place for Thoreau's "Walden," one of the most distinctively American books ever written, with his refined imitators, Dudley Warner and John Bur-The charming essays roughs. Lowell with their wonderfully picturesque power over language are the finest work of this kind that has been done on our continent. Indeed, I doubt if anything in English, except, perhaps, some of Pater's sketches, surpasses them in the rhetorical art with which they are written.

Outside the various literary fields we have traversed, on the borderland between literature and science, we have the department of history. This has been the scene of many American victories. Whether like Irving and Prescott and Ticknor, treating the romantic history of Spain, or, like Bancroft, tracing their own colonial career and struggle for freedom, or, like Motley, immortalizing the bravest fight for liberty Europe ever saw, or, like Parkman, depicting with a master's sense of historical perspective the long strife between

England and France in the New! World—a theme this, which has more interest for Americans north of the 42nd parallel than for those south of it—in every case the literary is not inferior to the scientific side of the work-indeed, we are so lost in admiration of the artist that we are apt to over-look the enormous labour of the workman.

To the question whether America has produced a national literature we answer then, yes. And now comes another question. How has this literature been developed and what are its special characteristics? any peculiar marks by which we may know it from English literature written in England or Scotland or Ireland? Now this, you will perceive, is really attacking the same position from another side. For if American literature have no such ear marks as tnese then where is it? A mere geographical distinction, if it be nothing more, is valueless.

The most marked characteristic of American literature is a certain quality of the picturesque, a strong infusion of rhetoric that is seen in the careful attention paid to style, no less by essayists and travel writers than by historians and philosophers. often seen in combination with the other predominant characteristic of American literature, humour. easiest way to make this intelligible is to take a few examples from the best authors. Read Hawthorne, "House of Seven Gables," p. 123; Holmes, "Autocrat," p. 76; Thoreau, "Walden," p. 224.

Such are the salient features of the American style—can we in any way account for their appearance? seeking an answer to such a question the first appeal must be to history. History tells us in this case of the character of the early settlers - a mixed people drawn from all parts of the mother country—the best stock decidedly being that of New England —the Puritan brand. On this stock there was an Hibernian grafting, so that we have the Celtic element which Matthew Arnold thought so necessary to give the sense for hu-What more does history tell us? She shows this band of colonists forced to struggle long and hard against the powers of nature, the ambush of the savages, the assaults of the French and finally against the tyrannical oppression of the mother country.

We have growing up here in course of time a double source and power of tradition—that of the old home, ever dear to the far colonist, and that of the early fights with the Indians, an element which adds so much of the picturesque to American literature. I confess that, like Andrew Lang, "I love books about red Indians.' the case of New York, we have actually a third source of tradition—the old Dutch times-and what has been made of this, one must have lived on the Hudson to know. There is a glamour of romance about early Spanish conquest in America that casts a halo over the histories of Helps and Bancroft and Prescott and Parkman. To these historical reasons equally historical must be The natural tendency of a added. colony is to lag behind the mother country in literary taste as in other This was much more the case a century ago than now. indeed almost impossible for us to understand the altered state of things since the Atlantic cable was laid. One result of this was a sort of survival of the grandiose in the time of Oueen Anne down to the time of Geo. III. Thackeray's "Henry Esmond" illustrates this style, and his "Virginians" shows how it came to affect American society and literature. The Revolution, which for the time cut off intercourse with England, led

to warm relations with France. The American republicans took as models the young courtiers of Louis XVI., who, in their turn, sighed for the sylvan freedom of the Wild West and brought the seeds of revolution to France, along with a literary impulse that reached its highest development in Chateaubriand. Thos. Jefferson, who, if nct the wisest, was the most influential of early American statesmen, was a warm admirer of the French, and his personal influence gave a rhetorical tone to university instruction in the United States that it has to-day. It was to be expected. therefore, that when a literature began to spring up in the young republic it should have the French feeling for form, with something of the Celtic humour, and a keen desire for the picturesque in language.

All these characteristics may be found in Washington Irving. He represents, therefore, the national char-His most permanent quality, that of humour, comes to him perhaps more directly as the descendant of an Orkney fisherman.

What has been said of the influence of the Queen Anne style upon the young republic is also true in a special sense of Irving. He was a devotee of Addison and Steele, of Bolingbroke and Swift. His style was probably modelled more nearly on that of Goldsmith, which the fat of Dr. Johnson - nihil tetigit quod non ornavit-had done much to exalt in all men's esteem.

If we look to Irving's works and consider the influence they had upon American literature we shall be amazed at how far-reaching it has His "Knickerbocker" has not only created a new province in the orbis literatis notus, it has given a shibboleth to the four hundred of the American Babylon. His single genius has added a romantic interest to the Hudson valley, quite equal to

that which centuries of folk lore have gathered round the Rhine. "Grenada" was the forerunner of that brilliant series of Spanish histories which has immortalized the names of Prescott, Motley and Ticknor. Irving's books of travel set a fashion of another kind, and we have here a long list of followers: N. P. Willis' "Pencillings by the Way"; Bayard Taylor's "Views Afoot"; J. Ross Browne's "Californian in Iceland"; Curtis' "The Howadi in Egypt"; John Hay's "Castilian Days"; Story's "Roba di Roma," all these might, in one sense, considered descendants from "Sketchbook,

But, after all, it is Irving's humour which has been most fruitful in its effects on later writers. Very different indeed is the humour of "Knickerbocker" from that of the "Jump g Frog " or of "Roughing It." The delicate aroma of Irving's humorous sketches has been said to defy analysis, but everyone can feel how it pervades the following passage. Warner's "Irving," p. 219-20. following quotation shows us that he deliberately set out to attain such a style: "I wish in everything I do to write in such a manner that my productions may have something more than mere interest of narrative to recommend them which is very evanescent; something, it I dare use the phrase, of classic merit depending upon style which gives a production some chance for duration beyond the mere whim and fashion of a day."

Thus we see that Irving's style resulted from deliberative effort and was not, like that of Bunyan or Goldsmith, wholly the natural outcome of the man's personality. Yet, on the other hand, it was not the result of college training, as Milton's and Johnson's may be said to be. Irving went into business when still a youth, and never even matriculated.

the nearest parallel to his case is that of Charles Dickens, some of whose sketches have been called lineal descendants of those of Irving. eray, too, has passages that recall Irving, whose sad love story he heard with deep sympathy. But while it has a marked individuality the style of Irving was, after all, modelled in the main on the older English essayists, and great as was his influence on his contemporaries, it has almost died out in our day. At times I think I feel it in the columns of Harper's Easy Chair, the greatest collection of short essays of our century, but G. W. Curtis owes far more to Thackeray than he does to Irving. However,

the very fact that Irving's school is a thing of the past enables us to judge him more dispassionately and adds to the freshness and interest of his style.

Seldom has it been given to any writer to win such success in so many varieties of literature. In the short essay he ranks with Addison and Goldsmith; in the biographies of Washington and Columbus, with Prescott and Parkman; in his "Alhambra" he is superior to Thackeray in the "Paris Sketchbook"; in his "Knickerbocker" he rises almost to the level of Rabelais. To cultivate our appreciation of good literary style no American writer has more claims to be read than Washington Irving.

## HOW THE CHILD BECOMES A LEARNER.

DR. JAMES SULLY, M.A.

(Continued from page 22.)

(2) THIS brings us to the second and practical division of our subject. What is the teacher's part in the development of the learner?

And, here, I would pray you, note that I am conceiving of the teacher's function in a somewhat unconventional way. People are apt to think of the instructor as finding the learner ready made to his hand, and as having nothing to do but the agreeable task—if task it be—of ministering to the learner's needs. I venture to think that this optimistic view of the relation of teacher and learner is false, and fatal in its consequences. It seems to me to lead to an inadequate and unworthy view of the real function and scope of teaching.

Let us pause for a moment to see what are the logical implications of this "learner-before-teacher" theory. If that theory is true, one cannot help asking why the teacher is required at

all. A Cambridge Professor not long since suggested that a good portion of University lectures are a mistake, it being much better for the student to get his knowledge out of books. And if the theory of ready-formed learners is correct, we might extend Professor Sidgwick's plea, and urge that the eager little searcher for truth of six or thereabouts had better be taught to read as soon as possible, and then sent to satisfy his intellectual hunger on the spacious pasturage of Such an amiable view of the childish mind leads, as Rousseau's Emile clearly shows us, to the practical conclusion that the teacher has nothing to do but to stand by like some good-natured custodian in a museum, ready to answer, as well as he can, any question the curious student may wish to put to him.

No! Providence has not done us teachers this doubtful service of

growing a crop of eager and skilled learners all ready for our use. Even that much misunderstood class, gifted children, require a little help before they become experts in learning. That precocious boy, Alexander Pope, could hardly have dared to cast aside the tutor's leading strings at twelve and take his education into his own hands, but for the scholastic training he had already received. And as for your undistinguished average child, what would become of him if his intellectual sustenance and growth were made to depend on the keenness of his own stomachic promptings, and on the natural degree of perfection of his powers of scenting out suitable knowledge, cropping and masticating the same, and so forth?

The truth is, that though possessing some natural strength of desire, and some rudimentary powers in respect of learning, the child left to himself is far from being as ardent or as competent a learner as we should like him to be. To begin with, his interest in knowledge is limited, capricious, sporadic, not wide, sustained, and fruitful of valuable results. desire to gain information about things, to understand the world he lives in, the life and thoughts of his race, is largely a product of education itself. How little it belongs to the uneducated condition may appear in the sluggish condition of incuriosity in which the majority of the species are content to remain to the end of their life.

Hardly less important as showing the necessity of the teacher here is the fact that the same indolence of mind which chokes curiosity is apt to breed a complacent conceit as soon as a little knowledge is acquired. I said just now that knowledge generates a desire for further knowledge; I must now add the limitation, in an active vigorous mind. Unhappily there are many minds of an inactive

drowsy habit, and here a little knowledge is wont to become a dangerous thing morally as well as intellectually. We see this conceit of knowledge begetting an indifference to new ideas, and even an imperviousness of mind in relation to them, in the narrowminded uncultivated adult. And we meet with it in the young also. so-called home training sometimes tends in this direction, fostering a ludicrous self-complacency in the matter of knowingness, and disposing the boy or girl to despise the idea of learning as something beneath the dignity of cleverness.

For these reasons, then, I hold that the teacher is needed in order to foster and strengthen the desire for knowledge, so as to bring it to the rank of a constant and dominant impulse of life. But this is only one reason why his services are needed as a factor in the formation of the learner. He is wanted not only to strengthen and intensify the promptings of curiosity, but also to control their direction. A child may have strong impulses towards knowledge, but these may happen to take wrong Thus children's directions. structed questions, as we all know, have not unfrequently to be left unsatisfied, for the good reason that there is no answer available, at least none that the questioner could take in and understand. Not only so: as pointed out before, childish curiosity is apt to be light and flitting, like the movements of an impatient bee that lingers nowhere long enough for a good substantial take of honey. The curiosity that helps to make the learner is on the other hand a firm consolidated impulse; it is a strong soul-possessing desire to gain knowledge about this particular subject, leading to the concentration on this of the whole mind. The development of this absorbing interest in particular domains of knowledge is

one of the main results of what we call methodical teaching.

In the second place, the teacher helps to form the learner, not only by awakening and wisely directing the impulse of inquiry, but also by aiding the awakened impulse in attaining its object. There is a methodical skilful expeditious manner of getting at knowledge, and this comes not by the light of nature. While it is true that all assimilation of knowledge is due to the activity of the learner's own mind, it is true likewise that this activity needs the guiding and steadying touch of the teacher's hand. Such control is obviously implied in the whole work of selecting and arranging the material to be learnt, in devising the lesson as an orderly methodical exposition; further, in adjusting subjects of instruction to the capacity and previously acquired knowledge of the pupil as these alter from year to year, and generally in the planning out of a methodical curriculum of study. In this way suitable, and so effectual, stimuli are brought to bear on the learner's mind, the desire for knowledge is evoked in carefully selected directions, and a methodical progress from elementary to advanced stages is rendered possible. The same control is implied in our modern and more scientific manner of teaching by evoking to the utmost the activity of the pupil's mind in the process of learning. Children's intellects are apt to be inert, and it sometimes happens that although they have the material in their previous knowledge which is needed for the assimilation of a new fact or truth, this material is not forthcoming. skilfully directed question at such a moment, stirring the too inert mass of the young mind, will suffice to bring to the surface the needed analogy, principle, or illustration of principles. Such stirring of inert masses is one weighty part of the teacher's business.

I trust that I have now said enough to justify my contention that the teacher is needed before the learner is perfected as such. There is a sense, of course, in which it may be said that your pupil is there before you with his particular mind, his sum of capacities, tastes, impulses-and one may add errors and prejudicesand you have to adjust to it the whole course of your teaching. En revanche, your teaching works in the direction of bringing this embryo-learner more and more into adjustment to yourself as his teacher. That is to say, as the result of the mental exercises to which you subject this unformed mind, it grows more and more responsive to your touch, more alert, more companionable, more helpful. You are forming the learner, and the result is evidenced in the altered character of the progressive movement: your arm is no longer wearied by the backward drag of the laggard, the light grasp of your hand tells you that your companion keeps abreast of you, enjoying your pace.

I should like to bring to a close these rough notes on a large subject by pointing out one or two ways in which the teacher may most effectually contribute to the building up of the learner.

The first thing, I take it, in this great art of learner-forming is to bring the mind of your pupil into a favourable attitude towards the large domain of the unknown. He has an inkling of this already, but-not to speak of the blinding effects of conceit—he is little likely to suspect its vast dimensions. Never forget that the learner must pass through the dark and cheerless portal of conscious ignorance into the gladdening sunlight of knowledge. Do not be afraid for a moment to let him feel as far as he can that he knows as good as nothing. But be careful that it is only for a moment. The bleak chilly portal is not the place to detain him in. A complete sense of his utter ignorance, as measured by the vast territory of knowledge, would—were it possible for him to realize it—crush the learner-embryo within him. Be careful, therefore, not to unduly insist on the fact of his ignorance, and never suffer yourself to be drawn into the unworthiness of emphasizing your own superior knowledge.

And this suggests another and complementary counsel: to develop concurrently with the sense of ignorance the consciousness of a power (with your help) to surmount this ignorance. We want the painful stupor that is apt to whelm the young mind in face of the big unknown only as a spur to effort. The first dazing look out into the unbounded void must give place to a cheering perception of a track worn by human feet, which his own too may follow. In other words, as soon as the pupil is made to feel that his mind is a blank, he must be encouraged to put forth his powers of filling up the void. And here we see the importance of the highest tutorial tact at the very outset of the expedition, so as to secure the initial courage and firm forward tread. The beginning with the wrong subject, the sudden casting of the little traveller on some baffling steep of knowledge at the start, may cause a serious delay. On the other hand, the gentle leading of him from the actual level where he stands up some easy slope of learning will bring the needed confidence. At first. this confidence will be rather in you. his guide, than in himself; but if your method is sound, he will soon come to see that it is his own limbs that bear him onward, and, trusting to you to show a passable way, he acquires a cheerful readiness to push forward.

I cannot refrain from pausing here

to express my strong opinion that, in spite of all that Froebel and others have taught us, we are still far from realizing in our practice the supreme importance of the start in learning. Do we not even now abruptly plunge the beginner into the baffling obscurities of a new subject without any serious attempt at starting at the learner's actual standpoint? Theorists are no doubt making a beginning Thus, the Germans, with their notion of *Heimkunde*, or home-lore, have seen how to pave the way from the crude, unsystematized, and narrowly-bounded knowledge pre-scholastic mind to the methodical study of *Erdkunde*, or earth-lore. But this idea of setting out from the point of actual unaided attainment needs to be generalized and applied to all departments of study. I rejoice to see that a beginning has been made in Germany in something like a careful statistical investigation into the contents of children's minds. must know the child-mind intimately —all its contents alike, whether these be true or false ideas—before we are in a position to instruct it. And when the teacher does truly see into all the odd workings of this child-mind, when he fully realizes how scanty is its stock of accurate observation, what a queer jumble of fact and childish fancy its first attempts at knowledge-getting have resulted in, he will, I venture to predict, make a profound and radical change in his methods.

The change I here refer to I should describe as the prefixing to exact systematic study of any subject a preliminary unsystematic study. Systematic study is an excellent thing if we can only secure it. But what if we cannot? What if the attempt to take the child through such a systematic study should issue in a mere unstable heap of vaguely apprehended fact in place of a connected and orderly arrangement of clearly appre-

hended fact? Take history, for example-I mean that of our own country. What can be worse, more staggering, more stupefying than to take a child destitute of the idea that his country has had a past, and suddenly flop it down on a particular period, say the times of the ancient Britons? The idea of history is not inborn in the child. He finds it hard enough to grasp the fact that he himself has had a past unlike the present, and is far from thinking this of what he sees about him. The idea of history must be led up to by a series of stories; partly biographies of men who had much to do with the making of this history, and partly story like accounts of particular features of country and national life, e.g., a short picturesque narrative, intentionally incomplete because detached from its historical belongings, of the changes in the outward aspects of the country; in the dress, manners and the daily life of the people; of how we have come by some of our most valued possessions, such as the security and comfort of our homes, our liberties, and so forth. Such cuttings from history, if judiciously selected and brightly narrated in story form, could not fail to interest and arouse the childish mind. For they would all take their start in known facts, in the observation of things now surrounding the child; and they would exactly answer to one of the strongest outgoings of childish curiosity—the desire to know about the origins of things, the way in which they come to be. A few of these historical stories would suffice to familiarize the childish mind with the general truth that our customs, our institutions, our literature, and the rest of our modern possessions, did not always exist, but have been won for us by ages of human effort. And when the proper time arrives, the clear consciousness of this idea of a past unlike the pre-

sent, and of a gradual striving forward of the people to its present condition, will supply the needed interest in the connected and systematic narrative.

The contention here urged that an unsystematic study must precede a systematic study seems to me to be a deduction from the fundamental principle we all profess to adopt, viz., that intellectual progress is from the known to the unknown. If you want to carry on the child's thoughts with you. you must go back to where that thought is loitering; you must, therefore, be content at first to present knowledge in an incomplete and fragmentary form. To this extent I would concede to the maxim of Pestalozzi and Herbert Spencer that the individual mind acquires its knowledge as the race acquires it; gradually rising to the clear connected systematic view of the whole which the mountain-top gives, out of the detached partial views which were all that the successive climbing positions vielded.

I would add, however, by way of qualification, that, even in this rudimentary stage, instruction, just because it is instruction and has to exercise the learner in methodical work, must be definite and connected so far as it goes. You can tell, for example, the story of the English Parliament in a very incomplete fashion, in a manner that would make your historical pedant wring his hands perhaps, and yet enable the childmind to reach a perfectly clear and connected view of the more important features of the history.

For the same reason that it is necessary to bridge over the chasm that divides childish ignorance and confusion of ideas from the perfectly organized knowledge of the educated man by a comparatively unsystematic mode of instruction, it is desirable to preface each formal lesson by what

Zeller and other German writers on education call "preparation" (Vorbereitung). I do not mean the socalled preparation of learning a passage from a text-book. No, the true preparation here spoken of is done by the teacher, with the pupil's help, as a preliminary to the more formal exposition. It consists in bringing the learner's mind into the right condition for understanding the lesson. And this it does by producing the state of mental tension I spoke of above, by setting forth in vague outline the nature of the subject that is going to be studied, in clearing up some of the language to be used, and bringing out an understanding of some of the ideas, the whole to be carried on by means of the pupil's own backward searchings among facts already known. Such lesson preparation will have hone of the formality of set instruction. will make much use of questioning. Yet it will not confine itself to the formal procedure of question and answer, but drop now and again into the easier procedure of a talk.

Next to making a right start, I should say the most important maxim as bearing on the development of the learner is: "Be careful at every step of the advance that the pupil's mind This means that you move slowly—slowly, that is, as measured by our adult pace; slowly enough to give you time to keep a watchful eye on your young novitiate. And in this scrutiny you must not trust the outward look. Even the gaze of rapt attention may mislead. You must now and again pause, and, probing below the semblance of learning; put some searching question, so that you may be satisfied on this momentous Such interruptions of the exposition, and appeals to the learner to say where he is, are necessary, too, for the reason that children, even when honestly trying to follow you, are very apt to go off on a side-path.

The peculiarities of their mind, their limited experience, all that makes their thought unlike your thought, expose you to the danger of being misapprehended, unless you take constant pains to examine, to draw out the new thought-products as they form themselves, so as to see how far they understeed your words.

The last counsel I would give is this: If you want to develop the learner into the child, you must bring to bear what we call moral influence, so as to form the habit of genuine conscientious work. And here I would try to make good any omissions that may have struck you when I was speaking of starting the young tyro in the path of knowledge. While I hold that the utmost labour should be undergone by the teacher in order to make the outset easy and even pleasant, I am no less strongly convinced that the learner must, as soon as possible, be accustomed to that prolonged methodical application of mind to a subject in which all that is worthy of the name of learning con-Even the most highly gifted child will never become a learner till he has acquired this habit of steady pertinacious study. And as for your average child, what hope can there be for him till he has attained it? here let me say that giving the child something to do outside the school not only justifiable but highly needful if you want to form him as Home-work, if properly selected in quality and quantity, is of the highest intellectual and moral It throws the pupil on his own unaided exertions, makes certain demand on him as a free moral agent. It serves to develop in him a fuller consciousness of power, a self-confidence and a self-respect which are of the essence of the indefatigable learner.

Since learning is thorough methodical work involving an honest desire to gain real knowledge, you must form the learner by forming the virtuous character. I venture to say that dishonesty, a mean desire to shrink exertion and a readiness to pass off scamping for genuine work, is a greater obstacle to the teacher than the whole mass of childish stupidity, vast as are its dimensions. And you do most to secure the learner in every child when you develop and strengthen the good will with its loyalty to the sovereign behests of duty.

I am quite prepared to see the incredulous smile come over the face of the practical teacher at this plea for the thorough painstaking development of the learner. I have some little means of knowing how appallingly far our actual school-system is from even an approximation to the end here urged as of paramount value. Life is short, you will remind me, while art is long. The examination looms in the distance, and the examiner is inexorable. We have to pile up classes, and pile up subjects, till we lose touch with the individual child, and cannot trouble ourselves with the question whether he keeps up or not-we have to trust to the examiner to tell us this.

Yes, I know all this, and so deeply am I impressed with the failure of this system to turn out learners, that I am sometimes disposed to prophesy disaster. I very much doubt whether, if the result of our newest and undoubtedly our best schools were tested—I mean our girls' high schools—it would be found that one-half of those who had been put through their mental drill carried away from it any impulse towards learning. And if this is true of the best, what shall be said of the worst? Ask yourselves what all these school-girls and all these school-boys that you are turning out into the world year after year read after they leave you, and you can easily answer the question whether your system is forming learners.

But I will not end with a pessimistic note. I believe that we are slowly following Germany and some other countries which had the start of us in recognizing the paramount dignity and value of clear knowledge, and its correlative, the trained power of acquiring knowledge. We must recognize it much more fully yet. The parent must recognize it, and be willing to extend the period of study and to expend more on the accomplishment of it. The state must recognize it, and treat education, not as one of its smaller side-interests, but as its largest and most vital interest. community that first comes to the full and distinct perception of what Education at its best is and can effect. is the community that will persist and expand in the future contentions of the race.—The Educational Times.

# "A BLISS TO DIE WITH."

Our lives, O fellow-men, pass even so. We watch and toil and with no seeming gain; The future which no mortal may foreknow, May prove our labour was not all in vain.

But what we sow we may not hope to reap, Perfect fruition may not hope to win, Not till, work weary we have fallen asleep, Shall blossom blow, and fruit be gathered in. Let it be so. Upon our darkened eyes
A light more pure than noontide rays shall shine,

If pain of ours have helped our race to rise, By just one hair's-breadth nearer the divine.

Because so great it must be incomplete,
Have endless possibilities of growth,
Strength to grow stronger, sweetness still
more sweet,

Yearning towards God, who is the source of both.

# WHAT CAN TEACHERS DO TO DRAW MEN AND WOMEN OF LEARNING AND TEACHING POWER INTO THE SERVICE OF OUR SECONDARY SCHOOLS?

BY HORACE M. WILLARD, HOWARD SEMINARY, WEST BRIDGEWATER, MASS.

(Continued from page 16.)

GAIN, there is a strange lack of ! esprit de corps among teachers. Those courtesies which the clergy extend to each other; that delightful social intercourse which they enjoy, even those of widely divergent belief, is greatly lacking among those who The very fact that one is a teach. teacher ought to give him a certain claim to the courtesy and consider-The men of the ation of his fellows. schools are not bound together as There is often a they should be. critical or jealous spirit and an ungenerous rivalry. A fellow teacher is not sought out, his acquaintance cultivated and his interest and pleasure as a brother worker regarded. can account for this only on the principle in Physics that like electricities repel. The Homœopathic motto, "Similia similibus curantur" might be adopted in such cases to advantage.

Tenure of office too, or rather uncertainty of such tenure, affects unfavourably the teacher's calling. is, in the first place, a salaried man. If in a public school, his salary is determined by men who themselves hold office and have ambitions for political preferment. A rigid economy is their wisest policy, and they are often very politic. The teacher's position may depend on favouritism; political cabals may unseat him; the quarrels of committee-men may oust him; the political influence of a rich parent may overthrow one who dares to be independent in politics or religion, who forgets that upon these subjects his mouth must be sealed. If he

teach in an Academy, even greater trials may await him. For

"Man, proud man, Drest in a little brief authority, Most ignorant of what he's most assured, Plays such fantastic tricks before high Heav'n As makes the angels weep."

"With devotion's visage And pious action He can 'sugar o'er The Devil himself'" And thus in truth

"Enterprises of great pith and moment . . . . . . their currents turn awry And lose the name of action."

Well might Hamlet say,-

"Who would bear the whips and scorns of time,

Th' oppressor's wrong, the proud man's contumely,

The insolence of office and the spurns That patient merit of th' unworthy takes When he himself might his quietus make"

by quietly resigning his position?

The influence of a single man, if rich, wholly incompetent for the place he fills, or rather holds, may be such that no self-respecting teacher can submit to his arrogant dictation.

In short, the positions in schools, whether public or private, are too much subject to the caprice of individuals. They lack in stability and permanence, hence in dignity. "My brethren, these things ought not so to be." That they are real and not fanciful or overdrawn, any teacher of wide experience must admit. There are many 'exceptions, but these do not disprove this statement. A few who have attained to eminence may reach the Elysian fields:

" Pauci, quos aequus amavit Juppiter, aut ardens evezit ad aethera virtus, dis geniti potuere."

"Exinde per amplum mittimur Elysium et pauci laeta arva tenemus."

But these few bright and shining examples are in the minority, and teaching has suffered. Mrs. Stowe savs: "Men of tact, versatility, talent and piety, will not devote their lives to teaching. They must be ministers and missionaries and all that, and while there is such a thrilling call for action in this way, every man who is merely teaching feels as if he were a Hercules with a distaff, ready to spring to the first trumpet that calls him away." Had we numbered more men like Agassiz, Arnold, or Horace Mann, Mrs. Stowe would not say, "merely teaching."

But these hindrances which make teaching appear unattractive to men of culture are not the only obstacles to their electing it as a life work. strong objection has been that it does not demand of its followers the high degree of culture which the so-called learned professions demand. is not admitted to the bar because he is a college graduate. Neither would he for that reason be allowed to practise medicine. The preacher is trammelled who gets from the college to the pulpit; but the teacher goes at once to the school-room. There is a prevalent notion that anybody can teach school; that the teacher, like the poet, is born, not made, nascitur non fit. So far as poets are concerned the theory can do no harm, as the world, by the nascitur process, has been well supplied with poets.

dangerous and pernicious do It is a dangerous and pernicious doctrine in its application to teaching. call for able leaders to man our secondary schools has been long and loud, and a fit process for fitting them for Why need their work is in demand. this work suffer longer by comparison with that of the learned professions? Why may not teachers take their

rightful place in the world and exert that influence over society to which they are entitled? Why is not their work superior to that of any other profession? Why may not they be regarded as producers, as factors in the material and intellectual growth of the nation?

Their business is to make men and women out of the crude material which comes into their hands. Not to instruct, merely, but to educate. develop brains and character, in short, to make a man. If man was the noblest work of the Creator, His last and best creation, what higher work can any man do than further the Creator's plan in developing honest men? call a complete and generous education," says Milton, "That which fits a man to perform justly, skilfully, magnanimously, all the offices, both public and private, of peace and war." work demands a preparation second to none; a type of character such that nothing short of the noblest native endowment, supplemented by the highest possible culture, can satisfy the demand. No smattering of the sciences, languages, and mathematics, no dilettantism in the matter of training, but a varied and exacting course of study. A need has been recognized, a beginning made, which will. I believe, result in the establishment of this new ideal school.

"We may not he able to realize our ideal, But woe be to us if we have no ideal to realize."

Right along this line, I believe that we can do something so to elevate the work of teaching that it shall be regarded as one of the learned professions. A beginning, in this country, has been made at Johns Hopkins; Clark University is continuing the same. The work of Professor Payne in the University of Michigan is in the same line. All these movements, and others which might be named, especially the effort among Massachusetts' teachers during

the past year, have initiated a movement to which the State must give the weight of its approval, a "consummation devoutly to be wished."

The profession has suffered because the many bright and shining lights are not in the ascendancy; more leaders are needed. How can they be secured? Manifestly, by the removal of obstacles, by an effort to "make straight paths."

In 1863, twenty-seven years ago, I read, in this city, before the New England Association of School Superintendents, a paper on the "Culture of Teachers," in which I most earnestly advocated the establishment of a collegiate normal school in Boston for the special professional training of college graduates proposing to teach.

If the Normal School has done so well for the preparation of teachers for the schools of grammar and primary grade, why may we not have a school of education, corresponding in grade to the Andover Theological, the Harvard Divinity and Law School, the College of Physicians and Surgeons in N. Y., and others of similar character and rank, whose object should be to give to minds, trained by a college faculty, advanced special training and technical instruction? The average legislator, politician, or business man does not, perhaps, see the need of this. He wants the practical. No money expended on that which is theoretical.

Principals, drilled in the school of experience, alone know the perplexities constantly awaiting them in training the raw recruits for service. experience of successful teachers can not be purchased by the new and un-He must, by the same round of mistakes, climb the ladder which leads to success. No record of the past has he to guide him. would it not be equally sensible to allow young and inexperienced doctors to acquire their knowledge by experiment and mistake? Many lives

might be lost, but the doctor would gain experience, and, after experimenting on a sufficient number of patients or patient ones, he might become a good practitioner.

Education, as a science, is still in a rudimentary state. The vast amount of thought which has been given to the subject by thinkers and philosophers in many countries is, for the most part, inaccessible to young teachers. Though much of this is purely theoretical, and not the result of practical knowledge, much is of the greatest value, and would be of inestimable benefit to students of pedagogy.

Our army would be but poorly officered if its officers were to be appointed from the ranks, and promoted solely on account of their knowledge of military affairs derived from the West Point furnishes it with trained men, competent to take the lead. Not so in the army of teachers. Each man must begin as a private and spend years of valuable time in slowly feeling his way. But let him begin his work with a consciousness of mastery, derived from his thorough drill in the best things in the science of education, and he will waste no time in experiment.

The *Emile* of Rousseau was the beginning of a new departure in educational theories. German writers have made extensive contributions to the literature of education. writers like Spencer and Bain have likewise contributed to the same. Spencer, for example, has clearly shown the need of suitable food for the brain to work upon—adapted to each stage of its development. has shown it to be the duty of the teacher to stimulate the power of the, brain of each pupil to the fullest In the same way many an able writer has given his contribution to the science of education. science it is still almost in its infancy and offers a most inviting field for experiment and research.

Some will say that it is sufficient to endow a chair of Pedagogy; not a chair merely, I should say, but another school for a post-graduate course of study, ranking with the others as an integral part of a university. This would be better than a normal college, because it could have the benefit of the great libraries and museums of the university, in addition to its own special endowments.

I believe that quite as much time is needed for the preparation of a teacher as for a minister. Eminent scholars and experienced preachers prepare the latter for his work. critical study of the Old and New Testament in the Hebrew and Greek necessary; a familiarity original manuscripts and the voluminous writings of the fathers is required; oriental customs, modes of thought and expression; the growth of Christianity, the battles for the faith, the rise of sects, the doctrines, systems of philosophy, criticisms, ethics, history, literature-all this and much more must be carefully studied.

From Socrates, who was the first to arouse the mind to an examination of itself, down to the present time, the work of all writers, of whatever country or language, would brought into suitable shape for teaching and study. This consolidation of material and resources would lead to definiteness, to a science of education. The number of subjects for study would multiply so rapidly that the wonder would still grow that men had not long ago devoted themselves to this subject. The superiority of this kind of knowledge to that picked up at hap-hazard by varied experience of failure and success would be apparent to all. The teacher would begin conscious of his power and of his ability to impart knowledge.

We should hear less of dull pupils and more of the bright ones. "Much that is written in the minds of one's pupils in indelible ink will be brought out by the fire of thought."

Wordsworth called his brother a voiceless poet. The world of child-hood is full of dumb souls waiting for the voice of the Master and Teacher. We need those who will recognize the gem before it is polished.

Differences of opinion as to methods, order of studies, text-books, would in a measure, cease. They would be settled ex cathedra on a rational basis—founded on psychological and scientific principles; education would cease to be empirical and would become scientific, having taken its rightful place and speaking with authority.

I have not tried in this paper to lay out any plan for drawing into the service of our secondary schools men and women of learning and teaching power. The general public cannot realize the need of this. We can. Let us by discussion discover the way.

By no means would I be understood to disparage our work. I regard it as second to none on earth. "The teacher builds the sacred edifice of character which is to be a holy temple for God to dwell in. He raises the stately structure of a life work which shall be as enduring as the law of God."

He moulds the character of the future citizen. Who of us regrets his choice after the years in which so much of joy has come to him? sees the manly men and womanly women whom he has helped to train acting well their part in life, and from them receives those words of grateful appreciation which repay him for his Such words are an inspiration and lift him above the pettiness and cheapness which are the bane of ordinary lives. The influence of the teacher may be far-reaching; and "not until the day of final review will the penetrating stream of his influence be fully revealed."—The Academy.

## SHAKESPEARE'S "TEMPEST" FOR CLASS-WORK.

## BY WILLIAM HOUSTON.

THERE are many ways of dealing with such a composition as the "Tempest" in the class-room, and it would be absurd to express any opinion as to which way is the best. I have this winter a class taking it up one night each week, and an outline of our plan is subjoined, at the request of many English teachers who have become interested in the matter. This scheme is offered for consideration, not as being specially useful, but to enable others to compare their methods with mine, and I hope, some other teachers of the "Tempest" will send you their schemes for publi-Such comparisons can hardly fail to make the teaching better all round by suggesting to all of us new points of view, and new modes of treatment. My syllabus is as fol-

I. Comprehension of the text, including:—

1. The logical structure of the sentences, poetical inversions, ellipses, etc.

- 2. The meaning of words that either have passed out of use altogether, or are now used in non-Shake-spearian senses.
- 3. Allusions and references to unfamiliar things and incidents.

4. Figurative language.

- 5. Obscurities arising from corruptions of the text, with suggested emendations.
- II. Motive of the author in producing the play, and the occasion of its production.
  - III. General form of the play:-
- 1. As dramatic, noting the essentials of a drama as a work of art, and
- 2. As poetical, noting (a) the difference between poetry and prose,

and (b) the kind of poetry—epic, lyric, and dramatic.

IV. The plot or story:-

1. As chronologically developed (cf. Lamb's "Tales" based on other plays).

- 2. As artistically evolved (cf. Wilson's simile of "two clocks" keeping different times, to illustrate Shakespeare's method of keeping the stage action within a reasonable stage limit, while he suggests the longer lime required for the evolution of the plot). In this connection note the device of
- (a) Prospero's narrative to Miranda (Act I., sc. 2).
- (b) Prospero's dialogue with Ariel (Act I., sc. 2).
- (c) Prospero's dialogue with Caliban (Act I., sc. 2).
- (d) Conversation among members of Alonzo's suite (Act II., sc. 1)
  - V. Structure of the play, as such:-
- 1. The unities, and how far they are observed; classic and English dramatic ideals; comparison of the "Tempest" with other plays of Shakespeare in this respect.

2. The mechanical division into Acts and Scenes, and the relation of these divisions to the progress of

action and narrative.

3. The admixture of prose and verse, and the appropriateness of each form to the persons using it, and to the occasion on which it is used.

- 4. The admixture of comedy with serious action, the latter amounting to tragedy so far as the feelings of certain persons in certain situations are concerned.
- VI. Comparative suitability of the play:—
  - 1. For representation on the stage,
  - 2. For private reading,

For close study,
 as compared or contrasted with other
 plays by Shakespeare and by other
 dramatists.

VII. Dramatis personæ:--

1. Considered as individuals, each with a thoroughly developed personality and character, and

2. Considered in relation to each

other in various situations.

.3. Giving in both cases passages to justify the opinions held.

VIII. Imagery of all kinds, used

as artistic devices by the poet.

IX. Versification on its technical side, including especially rhythm, and the various elements of tone colour, such as rime, alliteration, and onomatopœia.

X. Shakespeare's use of nature (1) by way of description; (2) by way of analogy or suggestion, and (3) as part of the machinery of the play.

XI. Shakespeare's treatment of human nature, in dealing with the passions, the sentiments, humour, wit, pathos, religion, conscience, etc.

XII. Shakespeare's use supernatural, endeavouring answer to such questions as: How far he himself believed in magic or sorcery; whether he intends Prospero to be regarded as really a magician, or simply as a man of great natural powers who labours under the delusion that he is bringing about what is actually happening in a natural way; what idea Miranda has of the difference between the natural and the supernatural, etc. Compare the use of the supernatural here with its use in such plays as "Julius Cæsar," "Richard III.," "Hamlet," "The Midsummer's Night's Dream."

XIII. The ethical element in the play — retribution for wrong-doing, aggravation and development of the criminal disposition, the danger of growing ambition, the evil caused by non-discharge of public duty even when no bad purpose prompts the

neglect, the two murder plots and their frustration, different treatment of two sets of plotters, self-control and magnanimity of Prospero, their good effect on Alonzo, and the omission of information as to their effect on Antonio and Sebastian, etc.

XIV. Exceptional passages — distinguished by a high degree of artistic excellence or in other ways, as e. g. Act I., sc. 2, "Where should this music be?" etc.; ibid, "The fringed curtains of thine eye advance," etc.; Act II., sc. 1, description of Gonzalo's imaginary commonwealth; Act II., sc. 2, Caliban's soliloguy; ibid, "I do not know one of my sex," etc.; Act III., sc. 2, "Be not afeard; the isle is full of noises;" Act IV., sc. r, "Our revels now are ended," etc.; Act V., sc. r, "Dost thou think so, spirit?" to "I'll drown my book; the masque in Act IV., sc. 1, and the lyrics occurring there and elsewhere.

To prevent misconception, I make the following remarks:—

1. The above scheme was prepared for actual use in my own class, subject to whatever modifications experience might suggest, and it is published now as a suggestion for others, not as a sketch of an ideally perfect treatment of the play.

2. Any scheme of the kind, if followed implicitly and unintelligently, is as likely to do harm in the hands of an incompetent teacher, as to do good in the hands of one who is competent.

3. What is called "side reading" is practically ignored, because the analysis here indicated is almost purely esthetic or artistic. So, I think, should the teaching of the "Tempest" be. This is so much more important than anything about the play, even the facts bibliographical and biographical, and the time for class work is at the longest so brief, that to direct attention at any length to other matters would be comparatively a waste of time. I hope the examiners

for 1891 will take the same view in framing their questions.

4. The scheme is based on the "Tempest," and is not intended to be regarded as in all respects suited to other plays, and a *fortiori* to other poems that are not dramatic.

5. The topics enumerated in the syllabus may be taken up in different orders, and may also be—must be, in some cases—taken up simultaneously.

6. The discussion of these themes should take up practically all the time of the class in the class-room, and as acquaintance with the play is presumed, it follows that the reading of the play must for the most part be done privately. The best way to read for esthetic purposes is to read the play from beginning to end, and as much as possible of it continuously at a sitting. The more frequently it is read the better, but it should be read by every pupil and by the teacher at least once a week, not laboriously, but as a recreation. I can testify from experience that this is the best way to enjoy it, and enjoyment is an indispensable condition of good teaching of a work of art.

7. The Socratic method should be used. The aim should be not so much to get the pupils to entertain correct views on the points raised, as to get them to make an independent effort to solve the esthetic problems for themselves. It is the effort that educates them, and fortunately effort making in class is a safer preparation for a proper examination than is the memorization of other people's opinions.

8. Lastly, it is to be hoped that the examiner will be some one who has taught the "Tempest." Before I took it up in class I thought I knew

it fairly well. An examination paper prepared by me last September would have been very different from a paper I would prepare now, after nine or ten weekly discussions of the text. I have no doubt that a dozen more evenings, devoted to the discussion of the points enumerated in the above scheme, will further and greatly modify my views as to the kind of questions most likely on the one hand to test fairly a candidate's real and valuable knowledge of the play, and on the other to furnish teachers with some useful hints as to the manner in which they should deal next year with Shakespeare's "Merchant of Venice."

[Since the above syllabus was put in type there has come into my hands a very brief scheme of study of the "Tempest," prepared by the Rev. J. G. Bailey, M.A., LL.D., of Oxford, for University "Extension" work. I herewith append it as containing useful additional suggestions:—

I. Widely different views as to date:

I. Evidence: (a) external, (b) internal.

II. Outline and source of the plot.

III. Characters:

1. Human: (a) Prospero, (b) Miranda.

2. Non-human: (a) Ariel, (b) Caliban. IV. The comic elements of the play.

V. General ethical ideas:

1. Gain may be loss, and loss gain.

 Service may be freedom, and freedom service.

VI. Some political and social questions:

 The right to discover: annex, colonize.

(Bacon's essay: "Of Plantations.")

2. The education of the savage.

3. Inter-marriage of different races.
VII. Does the "Tempest" veil a hidden meaning?

VIII. Is Prospero Shakespeare? IX. The Epilogue. Farewell.

I leave this with the remark that more importance is attached by Dr. Bailey to information about Shakespeare and the "Tempest" than I am willing to assign to it in High School work.]

# KNOWLEDGE OF THE HISTORY OF EDUCATION NOT A GIVER OF POWER.

A PERSON would justly be considered demented who should advise a shoemaker to study the history of shoes in order that thereby he might make better shoes. The want of connection between the proposed means and result is apparent at once. But is it any more sensible to urge teachers to study the history of education in order that thereby

they may teach better?

This is not a new topic in these columns. In the past we have questioned the advisability of putting so much stress on the history of education or on the philosophy of education in the Teachers' Reading Circle courses of the country. But the idea still prevails largely that a course of reading for teachers would not be quite orthodox if it should omit altogether a compend of the history of education or a text-book on the application of mental philosophy to the science of teaching.

The subject is revived by a discussion briefly reported in another column, which prompts the question: For the ordinary teacher whose supreme needs are wholly of a practical nature wherein lies the value of the history of education? So far as we can see it lies just where the value of the history of shoes lies for the man whose need is to make good, salable shoes, that is, its value lies nowhere, it does not exist.

Now this is not saying that there is no value whatever in the history of education; but simply that it is worthless as a means of supplying to teachers dynamic information or practical skill. A knowledge of the history of education is valuable as a small ingredient of general culture and as a somewhat larger ingredient

of professional culture. But such knowledge acquired as patchwork, from a mere compend, does not produce culture, is no real index of culture. You may read all the mere text-books you can find on a subject, but you will not thereby acquire culture. Culture requires wider articulation, a deeper insight, than comes from merely stringing facts together in the memory. But it the facts of educational history such as the great mass of teachers get, do not contribute to their culture then these facts give them nothing. In the history of education as a science and aside from the biographies of a few of the personalties that figure in it, there is nothing heroic, nor even inspiring until one's horizon takes in a larger view of human progress than comes from reading a few books.

A knowledge of the history of education has value mainly as a sign of wide reading and study, as affording an honest presumption of large mental acquisitions and of professional or literary tastes. But where these acquisitions and tastes do not precede or underline the index then the latter is a lie. A knowledge of such history has value as a sign in the same way that a knowledge of spelling has value as a sign. In the nature of things the power to spell correctly should mean that one has read so much literature that as a result he has mastered the forms that he has seen so often in his reading. In this sense the ability to spell is a true sign of a lettered But when the process is violated and we go to work and learn to spell from the spelling-book, without any reading, then the power to spell signifies nothing, is in fact a lying index, for it seems to indicate

possessions and achievements that do not exist. Many a good speller is an absolutely unlettered person in any honest sense of the time. For him the value of his ability to spell lies in its enabling him to pass for that which he is not, a lettered person. Since he possesses the sign he is wrongly credited with that which it signifies.

So when teachers are set to work to acquire the history of education from the spelling-book as it were, instead of getting it as one of the threads or components of a large fabric of knowledge and professional taste, they are encouraged to acquire and parade a sign of something within them which is not there in any real sense. It seems to us that for teachers still dwelling in the rudiments of knowledge and culture their time might be much better spent than in this premature study of the history of education.—Intelligence.

#### PUBLIC OPINION.

CONCENTRATING ITS SOUL ON PENCE.—S.M.D., of Philadelphia, sends *The Critic* this note:—

"In the matter of International Copyright are we, as a nation, asking 'What is just?' or 'Will our books be as cheap?' Shame on us, if our first consideration be a few pence in our pockets, and integrity in commercial dealing our second! Let me send a warning from Ruskin: "A nation cannot last as a money-making mob: it cannot with impunity—it cannot with existence—go on despising literature, despising science, despising art, despising nature, despising compassion, and concentrating its soul on pence."

THE ADVANTAGES OF A COLLEGE Course.—We find in the college paper issued by the students of Cornell (Iowa) college a description of some proceedings of the University of Michigan at Ann Arbor on the occasion of the election of Prof. Knowlton as Dean of the law depart-The students in this department felt that "there ought to be a demonstration." They held a meeting and decided to be present at 7.30 p. m., armed with Roman candles, a hardwood cane, and one or two brickbats in their coat tails. At the appointed hour they assembled, six

hundred strong, and, headed by two German bands, proceeded to the new dean's home. After the artillery of fire-crackers and sky-rockets, class and university yells, and the dean's speech, the cry went up, "Do the town!" The "doing the town" consists of running everybody and everything off the streets. As this cry spread, every store was "Take the street cars!" closed. was the next cry. But not a car was On hearing that the students were in the streets, every one had been run into the station, and was under lock, key, and loaded guns. Not an officer was to be seen. they went to a public meeting, and here they were warned that arrest would follow, and they retired. Some of the brickbats were thrown at other students who interfered.

The only suggestion to be made on the above is to the people of Ann Arbor: (1) Make a big jail and (2) keep a police armed with revolvers if necessary; (3) treat a disorderly student just as other disorderly persons are treated. And to the faculty of the university we say that, more important than anything those students will get out of the text-books is the training they will get in good behaviour.

THE BLUE COAT SCHOOL -- And Christ's Hospital, as the "Blue Coat School," is the next old institution threatened by the hand of the I do not mean that the destrover. grim old pile itself is threatened,—but all that goes to make up its individual charm, and recall its antiquity will vanish if once the baleful competitive examination enters those hallowed walls, and the quaint, picturesque little figures one now sees romping bareheaded in the quadrangle just off the busy city thoroughfare are to be deprived of their blue coats and vellow stockings, and clad as other urchins. The "Blue Coat School" is doing good work: it provides a splendid education for many and many an honest lad who would never have either wits. nerve, or physcial endurance to pass through the ordeal which precedes the "survival of the fittest." Surely there might be one or two places left on the face of the earth for those who are not clever, but who have to live and to earn their living all the same. The old system of nomination provided for such boys,—they had, they have still a right to be provided for; and if the gentle, tender-hearted boyking, Edward VI., who founded this noble Christ's Hospital, could make his voice now heard. I fancy it would plead for the weak who are thus to be thrust to the wall. It is perhaps just and right-or, at all events, it seems the only thing to be done—that coveted posts and situations should be the reward of competition,-those presumably best suited for the places obtaining them; but is it fair, is it just. to prevent the slower, duller boy from getting the education which might develop such powers as he possesses? How may we take from him the privilege which has been his by free gift from the foundation of such institutions as Christ's Hospital? Many a poor pensioner who has rendered the state good service will sigh when there are to be no more nominations to the "Blue Coat School.' -L. B. Walford, in The Critic.

## NOTES FOR TEACHERS.

Individualism in Education.—Perhaps the worst feature of any routine discipline is that it fails to take account of the vast differences which exist between individual pupils, and treats a whole class of students as if they all were east in one mould. The very first task of the educator is to place himself in close and sympathetic contact with the pupil, and thus to discover what his nature offers to culture; the next task is to adopt measures to develop these offerings.—

Atlantic Monthly.

A TEACHER'S MESSAGE TO HIS BOYS.—Dr. Potts, Head Master of Fettes College, Edinburgh, a man of high attainments as a classical scholar, and a very distinguished educationist and

administrator in the management of a large school — was very sudden!y called away last year. that the end of life was fast drawing nigh, he said he wished paper to write this last message to his boys: "I wish, particularly, to offer to all the boys at Fettes College (particularly to those who have been here any time) my grateful acknowledgment of their loyalty, affection, and generous appreciation of me. I wish, as a dying man, to record that loving kindness and mercy have followed me all the days of my life; that for me faith in Goo is the sole firm stay in mortal life; that all other ideas but Christ are illusory; and that duty is the one and sole thing worth living for."—U. P. Magazine.

A MASTODON FOUND.—Forty miles west of St. Thomas, Canada, the bones of a mastodon were found in a grave thirty-five by twenty-one feet. were in a bed of marl and were about six feet below the surface. The length of the animal is, from the point of the nostril to the root of the tail, about twenty-two feet. This is greater than that of the celebrated mastodon giganteus, discovered near Newburg, N. Y., in the summer of 1845, and the skeleton, as a whole, is larger and more complete than any that have been found in Kentucky, Ohio, Missouri, California, or Oregon.—The School Fournal (N.Y).

WHAT IS RATTAN?—Every one knows that chairs and many other pretty articles of furniture are made of rattan. It is a climbing vine found in the Celebes and other Malayan countries. Starting with a trunk as thick as a man's leg, it winds through the forest, now wrapping a tall tree in its folds, like some gigantic snake, and then descending again earth and trailing along in snake like curves until it can find some other stately tree to fasten and climb upon in its pursuit of light and air. The

rattan is a water carrier. The thirsty traveller has at all times a tumblerful of cool, refreshing water at his command by cutting off six or eight feet of it, and putting one of the severed ends to his mouth, or holding it over a dish to catch the water.—The School Fournal (N.Y).

WHY THUNDER STORMS AFFECT MILK.-The effect of an electrical discharge is to decompose a portion of the atmospere, by which ozone is produced. This substance is an oxide of oxygen, and its action is often believed to be, and may be, the cause of the souring of milk, beer, and fresh wine during thunder storms. doubt if the milk is submerged in water, and access of air is prevented, no result of the kind will occur; and as the more milk is exposed to the air the more it will be affected by the ozone, the milk in open shallow pans will be acidified more readily than that in deep pails, although these may be open. It is believed, however, that the heat of the air preceding thunder storms is more directly the agent in the souring of the milk than the ozone that may exist in the air after the storm is passed. - Our Times.

#### GEOGRAPHY.

THE submarine telegraph system of the world now consists of 120,070 nautical miles of cable. Since the West African system of cables was completed to Cape Town, Africa is completely encircled by submarine telegraph. Eleven cables span the North Atlantic and five companies, owning over 30,000 nautical miles of cable, send telegrams between North America and Europe.

THE Sea Route to Siberia, which Captain Wiggins has spent a life and a fortune in opening up, has at last become a successful commercial highway between Great Britain and Northern Russia. Two ships left London at the beginning of August with cargoes destined for Karraoul, a Siberia port one hundred and sixty miles up the Yenisei, where they discharged their cargoes into river boats,

and, after remaining for nineteen days, returned to London which was reached after an absence of eighty-four days. Had the vessels not been detained in Siberia, the round trip would have been accomplished in less than sixty days. As the Yenisei River is navigable for over two thousand miles of its course, and light draught vessels can almost reach the border of China, the trade possibilities opened up by this route are simply incalculable. The Obi River, which drains an immense country, is also open to navigation. Recent travellers state that Siberia possesses as healthful a climate as the Northern States of the American Union and a greater extent of fertile grain lands than is contained in the whole continent of North America. This vast country is separated from Russia Proper by a chain of mountains and by a vast wilderness, which renders land transport from the West far more expensive than by the sea route. To the east, another vast wilderness cuts off this country from the Pacific It is not improbable that the trade between Great Britain and Siberia will, if not restricted or prohibited, become very great within a few years. All, however, depends upon the Czar, who, though he has shown some encouragement in the opening up of the route, may be moved by his councillors to close it by edict, if it is found to interfere seriously with Russian trade or with the maintenance of the exile system. -The Montreal Witness.

GEOGRAPHY AND HISTORY.—The relations existing between geography and history would seem to demand that one should not be taught to the exclusion of the other. Is it not possible that by teaching less of detail in geography, time may be found for training children to read and appre-

ciate history? The two studies are properly complements of each other. The one is a description of the earth and the other a story of the people who have lived on the earth. either is presented with no reference to the other it often becomes a dry, and uninteresting subject. The teaching of geography for this reason has lacked life and colour. Something is gained when interesting books of travel and adventure are permitted to enliven the lesson, but a still richer benefit is conferred when the teacher, after discussing the physical structure and topography of a country, directs his pupils to some striking events, or epochs, which have marked the history of that country, or to the achievements of its patriots and warriors, its social and industrial progress, and the causes therefor. As a matter of fact, the relief and topography of a country are of no value except as they reveal reasons for what nations have been able to accomplish. logic in events. There is still closer logic in the soil and what it produces, or in a given section of country and what the human race has wrought within its borders.—S. T. Dutton. New Haven (Intelligence).

THE JOHNS HOPKINS TRAVELLERS' CLUB.—The Travellers' Club of the University held its first meeting Oct. 10, 1890. Addresses were made by Professor H. F. Reid of the Case School of Science, Cleveland, Ohio, and by Dr. Emil Hausknecht, for several years Professor of Pedagogics in the Imperial University of Tokyo. The following are abstracts of their remarks:—

"The Muir Glacier in Alaska." By Professor H. F. Reid, Ph.D. A party consisting of Messrs. H. P. Cushing, H. M. McBride, R. L. Casement, C. A. Adams, J. F. Morse, and Harry F. Reid, passed last summer

encamped at the mouth of Muir Glacier, Alaska, for the purpose of studying and exploring the glacier.

The mouth of Muir Glacier is situated in latitude 58° 50' N., and longitude about 136° W. of Green-It lies among the mountains near the southern end of the great St. Elias range, and drains an area of about a thousand square miles. snow which falls on this area is compressed into ice, and moves down like a river into an inlet of Glacier Here the glacier ends in a great ice wall a mile and a half broad, and in places rising up more than two hundred feet vertically from the water's edge. From this ice-front great masses of ice continually break off with a loud report and float away as icebergs. We saw some, three or four hundred feet long, standing seventy or eighty feet out of the water, though usually, in the act of falling, the larger masses break up into smaller pieces.

Captain Carroll, of the steamship Queen, has sounded a depth of seven hundred and twenty feet just in front of this ice-wall; the ice, which undoubtedly reaches to the bottom, must therefore be nearly a thousand feet thick in the middle.

Our first work was to make a survey of the glacier in order to determine its size, the breadth and height of the ice front, the distance and I height of the surrounding mountains, etc. Our instruments were supplied by the U.S. Coast and Geodetic Sur-We measured off a base line nearly two thirds of a mile long on the west side of the inlet, and by triangulation established the positions of a number of prominent points. these points we carried our plane table and mapped in the neighbouring mountains; fixing, at the same time, the positions of more distant points, to which the plane-table was then taken and the work continued.

mountains in the immediate neighbourhood of Muir Glacier are not very high (only from six to seven thousand feet), but on account of their high latitude, and the large annual snowfall, they have all the appearance and characteristics of mountains of twice their altitude in the Swiss Alps. About fifty miles to the west tower the Fairweather group with at least two peaks over fifteen thousand feet high.

The motion of the ice interested us particularly. An expedition, which visited this glacier four years ago, reported that the motion was from sixty to seventy feet a day. The glacier, near its front, is broken up by deep crevasses into innumerable ridges and pinnacles of ice. It was by observing the positions of certain pinnacles, at intervals of several days, that the above result was obtained. All observations on other glaciers have shown motions much slower than this. The Mer de Glace, in Switzerland, moves but three feet a Fearing that an error might have arisen by mistaking one pinnacle for another, we determined to make strenuous efforts to force a across the glacier and plant in the ice a set of black and red flags, whose positions could be accurately determined by our two transits, one placed on each side of the glacier. were provided with ice-axes, such as are used by climbers in the Alps; and wherever there was any danger of an accident we were fastened together by a rope, so that if one slipped the others could hold him. made trial after trial, now from the east side, now from the west side, of the glacier; and finally succeeded in setting out a satisfactory row of flags, though a short distance in the middle of the glacier defied all our efforts to The observations on the flags showed a motion of from eight to ten feet a day in the most rapidly

moving portion of the ice. The great care we took to avoid all sources of error leaves no doubt that this result is substantially correct.

Muir Glacier shows many evidences that it is undergoing great changes. It is the objective point of excursions which take place every summer from Puget Sound. The captains of the steamers, who have visited it for several years, claim that they notice a recession of the ice front of a mile or more. Though probably true, this is somewhat indefinite, for they took no means to determine its position from time time. We mapped in the ice front and fixed its position with respect to two cairns of stones which we made. If, in a few years from now, som one again fix its position with respect to these same cairns, the rate of recession can be accurately calculated.

The moraines of Muir Glacier exhibit peculiarities which have not

been observed elsewhere. About twelve miles back from the front of the ice is a broad valley, which forms a second outlet to the glacier. The glacier runs four or five miles down this valley and ends in a second icewall in a lake. A large moraine can be traced from the top of this ice-wall and down to the main ice front, without anywhere approaching the mountain side. A moraine with two ends and no apparent beginning is rather a puzzling phenomenon.

We made magnetic determinations, and also regular meteorological observations for about two months. The weather last summer was unusually fine for Alaska. However, one can hardly, with reason, complain of the bad weather when it does come, for it is to the large amount of precipitation that we owe the existence of the glaciers and the grand scenery of this region.—The Johns' Hopkins' University Circular.

EDITORIAL NOTES

THE CHANCELLOR'S SCHOLAR-SHIPS—The Hon. Edward Blake, Chancellor of the University of Toronto, has doubled his generous donation of \$10,000 made last February, and with this sum of \$20,000 founded matriculation scholarships in the University. Mr. Blake's proposal was cordially and gratefully accepted by the Senate and the news of his gift will be hailed with interest and pleasure.

## FREE SCHOOL BOOKS.

IT is stated that there are 43,000 underfed children attending the London, Eng., schools. For a few years past generous and public-spirited citizens of the city have been giving

these children one meal a day in order that they may profit by the instruction given in the elementary schools of the city. Mrs. Fawcett, who holds the opinion that before kind-hearted people feed children, either at their own or any other person's expense, the parents should first be dealt with, relates the following significant case: A man in receipt of good wages devoted the odd shillings to his wife and family, keeping for himself the solid weekly sovereign; and one of his children who went to the Board school attracted the attention of a visitor as being evidently underfed. The father was sent for and was plainly told by the doctor that the boy was being starved. was necessary that he should have

every day one meal of meat, a pint of milk and an egg for breakfast. The father was properly ashamed of himself, and at once promised to do what was required; and he has since acted up to his word. Every one who is familiar with even such a city as Toronto knows how troublesome it is to get parents to send their children to either the public or Sunday school. How often he is met with the statement that the children have no shoes or proper clothes to go to school. And not unfrequently it is added that the children must work to have something to eat. It may be the right of a Christian state to see that parents attend to their duty of educating their children—it may, perhaps, be the duty of a Christian state to educate the children, whether the parents be willing or no. But if any one thinks that supplying free school books is going to end the trouble about school attendance, all that need be said at present is that such an one has only begun to wrestle with the question. As giving some informa-

tion on this question we add an extract showing what the experience of the schools in Prussia is, taking the city schools of Berlin as the type: "Formerly the schools furnished books free of charge to children who declared they could not afford to buy But it was found that they did not care much about books which they got so easily. They handled them roughly and frequently lost When, on the other hand, the books were kept in the class-room, it took much extra time and trouble to collect and distribute them. thorough test both methods have been rejected. At present the children own their books, and it has been found that comparatively few parents are actually too poor to buy them, and to meet such extreme cases a few free books are now kept in each The children carry their books in knapsacks by means of shoulder-straps. In these they also carry a lunch, which generally consists of bread and butter, and which they eat at ten o'clock."

## SCHOOL WORK.

## MATHEMATICS.

Archibald MacMurchy, M.A., Toronto. Editor.

UNIVERSITY OF TORONTO.

JUNIOR MATRICULATION, 1890.

ARTS-ALGEBRA-PASS.

Examiner-A. R. BAIN, LL.D.

(Solutions by I. J. Birchard, Ph. D.)

4. Show that

(1) 
$$z+y=0$$
, if  $\frac{x}{b-a} = \frac{y}{c-b} = \frac{z}{b-c}$ 

(2) 
$$\frac{A^2}{a^2} + \frac{B^2}{b^2} + \frac{C^2}{c^2} = \frac{A^2 + B^2 + C^2}{x^2 + y^2 + z^2}$$
 if  $\frac{A}{x} = \frac{B}{y} = \frac{C}{z}$  and  $\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = \mathbf{1}$ .

4. (1) Since 
$$\frac{y}{c-b} = \frac{z}{b-c}$$
, and  $\therefore \frac{y+z}{c-b+b-c} = \frac{y+z}{0} = \frac{x}{b-a}$   $\therefore x \times 0 = (y+z)$   $(b-a) = 0$ ,  $\therefore y+z=0$ , since  $b-a$  is supposed not to be zero.

(2) We have 
$$\frac{A^2}{x^2} = \frac{B^2}{y^2} = \frac{C^2}{z^2}$$
$$= \frac{A^2 + B^2 + C^2}{x^2 + y^2 + z^2}$$

Now in the equality  $\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = I$ ,

multiply the terms in succession by the four equal fractions given, and we get the required result.

5. A and B were travelling on the same road toward Toronto, A at the rate of a miles, B at the rate of b miles per hour. At

noon A was m miles and at 6 p.m. B was nmiles from Toronto. Find how many hours from noon A passed B, a being greater than b. Interpret the result when m=40, a = 5, b = 3, and n = 26; also when n = 18.

5. Let x=number of hr., after noon,

Then distance of 
$$A$$
 from Toronto= $m-ax$ 

"

"

"

 $B$ 

"

 $=n+6b-bx$ 

...

 $m-ax=n+6b-bx$ .

from which 
$$x = \frac{m-n-6b}{a-b}$$
.

Substituting values of letters we get x = -zin the former case, and x = +z in the latter. The meaning being that A passed B at 10 a m., and 2 p.m., in the two cases respectively.

6. Solve

(1) 
$$xyz - a(yz - zx - xy)$$
  
  $= b(zx - xy - yz) - c(xy - yz - zx).$   
(2)  $(a+b)^2y + \frac{f[(c+d)^3 - (a+b)^3]}{(a+b)(c+d)}$   
  $= \frac{2(a+b)^3}{(c+d)} + (c+d)^3x.$   
 $(a+b)(c+d)x = (c+d)y - 2(a+b).$ 

6. (1) Dividing the first equation by axyz

we get 
$$\frac{1}{x} - \frac{1}{y} - \frac{1}{z} = \frac{1}{a}$$
.

Similarly 
$$\frac{\mathbf{I}}{y} - \frac{\mathbf{I}}{z} - \frac{\mathbf{I}}{x} = \frac{\mathbf{I}}{b}$$

and 
$$\frac{\mathbf{I}}{z} - \frac{\mathbf{I}}{x} - \frac{\mathbf{I}}{y} = \frac{1}{c}$$
.

Add the three equations, then

$$-\left(\frac{1}{x} + \frac{1}{y} + \frac{1}{z}\right) = \frac{1}{a} + \frac{1}{b} + \frac{1}{c}$$

From this subtract the first equation

$$-\frac{z}{x} = \frac{1}{b} + \frac{1}{c}, \quad \text{or } x = -\frac{zbc}{b+c}, \text{ e.c.}$$

7. Solve (1)  $x^2 - 4x + 3 - 7$ 

$$\sqrt{x^2 - 9x - 6} = 5x - 3.$$
(2)  $2x^2 - xy = 6$  and  $2y^2 - 3xy = 8$ .

7. (1) 
$$x^2 - 4x + 3 - 7$$

$$\sqrt{x^2 - 9x - 6} = 5x - 3$$

$$\therefore (x^2 - 9x + 6) - 7\sqrt{x^2 - 9x - 6} = 0,$$
or
$$\sqrt{x^2 - 9x + 6} (\sqrt{x^2 - 9x + 6} - 7) = 0,$$

$$\sqrt{x^2-9x+6}=0$$
, or

$$\sqrt{x^2 - 9x + 6} - 7 = 0$$

from which  $x^2 - 9x + 6 = 0$ .

or 
$$x^2 - 9x + 6 = 49$$
,

$$\therefore x = 9 \pm \frac{\sqrt{81 - 24}}{2} \text{ or } x = 9 \pm \frac{\sqrt{81 + 172}}{2}$$

$$=\frac{1}{2}(9\pm\sqrt{57}).$$
  $=\frac{1}{2}(9\pm\sqrt{253}).$ 

(2) 
$$2x^2 - xy = 6$$

$$2y^2 - 3xy = 8.$$

Add the equations, divide by 2 and take the square root; then  $x-y=\sqrt{7}$ .

S cond equation may be written: x(x+x-y)=6 for m which, by substitution.

$$x^{2} + x\sqrt{7} - 6 = x,$$
  
 $\therefore x = \frac{-\sqrt{7} \pm \sqrt{31}}{2}, y = \frac{-3\sqrt{7} \pm \sqrt{31}}{2},$ 

8. Investigate the relations of the roots of  $ax^2 + bx + c = 0$  to the coefficients.

Find what values of m will give equal r ots to  $x^2 - 3(2+m)x + 9(5+m) = 0, 0 d$ solve the equation in each case.

8. First part of question is "Book-work." Conditions that equation  $ax^2 + bx + c = 0$ may have equal roots is  $b^2 = 4ac$ . Applying this principle to given example, then

$$9(2+m)^2 - 36(5+m) = 0.$$
  
Simplifying and solving,  $m = +4$ .

9. Using the relations referred to in the first part of question S, determine what values of the fraction  $\frac{x^2+4x-16}{4}$  will make

9. Put 
$$\frac{x^2+4x-16}{x-4}=k$$
; clear of fractions

and a range in quadratic form

x imaginary.

$$x^{2}-(k-4)x+4(k-4)=0.$$

Now the conditions that x may be imaginary is  $b^2 - 4ac$  must be negative; or

 $(k-4)^2 - 16(k-4)$  is negative,

 $\therefore k-4-16$  is negative, or k < 20.

## CLASSICS.

J. FLETCHER, B.A., Toronto, M.A., Oxon., Editor

### NOTES ON CICERO, IN CAT., III.

§ 11. Toto indicio, etc.-When all the information had now been produced and laid before the Senate.

Domum suam. Brad., 316, iii, Per quem.—Through whose instrumentality. (Brad., p. 218, 16.)

Nihilne, etc.—Whether he had had no conversation with them. . . .

Ille subito, etc.—Suddenly losing his head, from a conviction of his guilt, he showed how remarkable the power of conscience is (impf. due to sequence of tenses).

Quum id, etc.—Contrary to the general expectation, instead of denying he suddenly acknowledged his guilt.

Ingenium illud, etc.—That remarkable ability and readiness in speaking which always stood him in such good stead.

§ 12. Sine nomine.—Without an address, i.e., without the usual formula with which a letter began: e.g., Cicero Attico S. D. (salutem dat.).

Quis sim, etc.—Who I am you will learn from the person I have sent to you  $(i\varphi)$ , the bearer). Be a man; remember the length you have gone already and consider what now remains to be done. Avail yourself of everyone's help, even of that of slaves.

§ 13. Quum . . . tum. Brad., § 494. Illa certissima.—The following (Brad., 341) seemed to me very convincing proofs and evidence of guilt: their letters, their seals and their hand-writing; but the following more convincing still: their pallour, their glances, their expression and their silence.

Inter se.—One another. The usual form for the reciprocal pronoun.

Indicari-To be informed upon.

Senatum. Brad., 248.

De summa re p.—Lit. with regard to the supreme common weal, i.e., the political condition of the country.

Quid fieri placeret.—What action they wished should be taken. "De hac re quid fieri placet" was the regular formula by which the presiding magistrate asked the senator for his opinion (sententia) upon any question before the House.

Principibus.-The leading men.

Varietate. - Diversity of opinion.

Primum . . . deinde.—In the first place . . . in the second place.

§ 14. Gratic aguntur.—I received a vote of thanks. Gratias agere, thank; gratiam

habere, feel gratitude; gratiam referre, prove one's gratitude.

Verbis amp.—In the most complimentary terms.

Sit. Brad., 484 (b).

Forti fid. Predicative. Tr. "Had found them brave and loyal assistants."

Collegæ.—C. Antonius, uncle of the triumvir Mark Antony. He was consul with Cicero in 63.

A suis et reip. consiliis.—From his own and the public counsels. He had been friendly to Catiline, but had been won over by Cicero with the promise of the governorship of Macedonia for the following year.

Abdicasset.—He could not be called to account while he remained in office.

In custodium trad.—Should be given into custody. This was called custodia libera. The prisoner was handed over to a magistrate or a leading senator who was held responsible for his safe-keeping.

Ad sollicitandos. — For the purpose of tampering with. From sollus, quite (obsolete), and cio, move.

Primum.—With perductos. By whom, it was well known, the Gauls had first been brought.

Reliquorum mentes, etc.—That the treacherous resolves of the rest might be changed.

§ 15. Supplicatio.—A solemn thanks-giving.

Meo nomine. —On my account.

Quod . . . contigit.—Since the foundation of this city, I am the first to whom, acting in a civil capacity, this piece of good fortune has fallen. (The toga was the regular dress of the Roman citizen in time of peace.)

Liberassem. Brad., 484 (b).

Quae supplicatio, etc.—If this thanksgiving should be compared with others, it differs in this: others were appointed for national service; this one for national preservation. (Bene gesta: sc. republica, i.e., because the commonwealth was well administered.)

Pratoris jus. - His rights as prætor.

Ut qua, etc.—Antecedent in rel. clause and rel. clause thrown forward, as usual when the antecedent is emphatic. Tr. In order that, by punishing L. as a private person, we might be freed from any scruple we might have felt, though no such scruple prevented the celebrated Marius from killing, etc.

Glaucia.—A corrupt demagogue and a supporter of Saturninus, killed (B.C. 100) by the mob who were exasperated at his brutal murder of Memmius, a rival candidate for the consulship. Marius was friendly to him, but, though consul, was powerless to prevent his death.

## MODERN LANGUAGES.

Editors { H.I. STRANG, B.A., Goderich. W. H. FRASER, B.A., Toronto.

### EXERCISES IN ENGLISH.

- 1. Expand into compound or complex sentences:
- (a) There being only four members present no business could be done.
- (b) He gave orders to have all the doors and windows securely fastened.
- (c) It will require our united efforts to accomplish it.
- (d) I see no other way of preventing such a result.
- (e) They have decided to recommend the adoption of this plan.
- 2. Change from compound to complex, or vice versa:
- (a) I did not know that or I would not have given it to him.
- (b) Although I offered him twice the value of it he would not sell it.
- (c) Our opponents were not expecting us, and were quite unprepared.
- (d) None of the witnesses that were examined had seen the blow struck.
- (c) We shall work for another hour and then take a rest.
- 3. Substitute equivalent words for the italicized phrases, and vice versa:
- (a) He has had no opportunity up to the present time of showing it.
- (b) An occasional reminder will no doubt be benefi ial.
- (c) To all appearance their number was gradually decreasing.
- (d) For these reasons I shall explain briefly how it is done.

- (c) He treated them with scorn and contempt.
- 4. Change the principal clauses to subordinate, and vice versa.
- (a) He was arrested just as he was entering the car.
- (b) I have tried every plan that I can think of.
  - (c) He gets the same answer as I do.
  - (d) I cannot go till I finish this.
- (e) He was working while you were playing.
- 5. Combine each of the following pairs, first into a compound, then into a complex sentence.
- (a) His uncle gave him a shilling. He lost it.
- (b) He read the letter. He handed it to the chairman.
- (c) He has often tried to do it. He has never succeeded.
- (d) You have done no work. You will not receive any pay.
- (e) It was growing too dark to see. They abandoned the search.
  - 6. Change the voice of all the finite verbs.
  - (a) None of us can see how he does it.
  - (b) They took advantage of his absence.
- (c) Did anyone foretell the result of the contest?
- (d) A full account of it is given in the letter he wrote to the Mail.
- (e) He might have got rid of it without much trouble.
- 7. Substitute equivalent expressions for those italicized:
- (a) With Cowper, Hastings formed a iriendship which neither the lapse of time, nor a vide dissimilarity of opinions and pursuits, could wholly dissolve.
- (b) It was necessary to postbone the execution of the design and Hastings, who was now in extreme peril, had to flee.
- (c) Nuncomar, stimulated at once by cupidity and malice, had been constantly attempting to injure the reputation of his rival.
- (d) A compact was made, by which Francis agreed to desist from further opposition to Hastings.

- 8. Express the meaning in as different form and words as possible:
- (a) He had little to attach him to England, and his pecuniary embarrassments were great.
- (b) All military affairs were withdrawn from his control, but the other departments of the administration were entirely confided to him.
- (c) For the exercise of his immense power he was responsible to none but the British masters of the country.
- (d) A situation so important and so lucrative was naturally an object of ambition to the most powerful natives.
- (e) Harmony, indeed, was never more necessary.
  - 9. Rewrite in indirect narrative.

A rich but uneducated woman who had sent her daughter to a good school called one day to ask how she was getting on. "Pretty well, madam," answered the teacher. "She is very attentive. If she lacks anything it is a capacity for study, but for that deficiency we must not blame her." "Certainly not," replied the mother, "but I blame you for not letting me know sooner. Thank fortune, her father can afford her a capacity, and I beg that you will at once get her one, be the price what it may."

- 10. Rewrite in direct narrative: A Scotch minister had in his parish a man who used to get drunk occasionally. One day the minister, reproving him for his bad habit, said it was a pity he loved whiskey so much; surely he knew it was his worst enemy. To this Donald replied by asking slyly if the minister had not told them that they ought to love their enemies. The minister replied that that was true, but that he had never told them that they ought to swallow them.
  - 11. Combine the following groups:
  - (a) Into a simple sentence: The captain saw his wretched state of health. He urged him to return to England. He offered him a free passage with them.
  - (b) Into a compound sentence: He retained his presence of mind. He was undaunted by the danger. He went up on deck. He did not attract attention. He did not cause any alarm. He told the captain.

- (c) Into a complex sentence: He rallied from the first attack in a few days. He suffered several relapses. The last of these proved fatal.
- (d) Into a compound complex sentence: Was there no way of settling the dispute but by an appeal to arms? It seemed so. Hastings was confident of his influence over his countrymen in India. He was not inclined to shrink from such an appeal.

## CLASS-ROOM.

## HAMILTON PUBLIC SCHOOLS.

PROMOTION EXAMINATIONS, DEC. 1890.

Grade 5.

#### LITERATURE.

- I. Tell what happened after the White Ship struck upon the rock. [13]
- 2. Give the meaning of "lone post of death," "wreathing fires," "battle's wreck," "wrapped the ship in splendour wild." [14]
- 3. Tell what you know of Hubert de Bourg and his kindness to Prince Arthur. [13]
- 4. What is the meaning of "sported on the green," "yon little stream hard by,' "could not well make out," "wonder waiting eyes," "quoth he." [15]
  - 5. Of what use is the hippopotamus? [13]
- 6. Write the stanza beginning, "When Bill plays at cricket." [12] Write one of the stanzas which tell us what the little cottage girl was like. [5]

#### GRAMMAR.

- 1. Give rules for spelling names to mean more than one. [6] Write the following names to mean more than one: gas, valley, pulley, monarch, scissors, deer, staff, calf, tomato, solo. [1.7]
- 2. Use each of the following words in a statement:—
  - (1) As the name of more than one;
- (2) As an action-word that states what one does: stones, skates, rings, flies, shoes. [20]
- 3. Why do we add "s" or "es" to action-words? [4] Write statements giving the different uses of the action word. [8]

- 4. Add er and est or prefix more and most to the following: dim, dry, sly, rosy, wet, wilful, active, gentle. [16]
- 5. When do we add "'s" and when apostrophe only, to denote possession? Write the following names so as to mean more than one and denote possession: man, wife, fly, ox, bee, child, deer, cannon. [16]

#### GEOGRAPHY.

- 1. Name the islands along the coasts of North America and tell to which country each island belongs. [10]
- 2. Name the lakes in the valley of the St. Lawrence, the Nelson, the McKenzie. [10]
- 3. From the high central part of North America three large rivers flow, one east, one north, one south. Name them, and tell where each one empties, and what mountains are on each side of it. [10]
- 4. If you sailed down the St. Lawrence, then along the Atlantic coast and up the Mississippi, tell what cities you would pass and what country each city is in. Tell also what straits and sound you could go through, and what peninsulas and capes you would pass. [10]
- 5. Name the things found, grown or made in North America, and tell in what parts of North America each thing is found, grown or made. [10]

## ARITHMETIC.

- I. To build a mile of a certain railway cos s \$3,579. What would 1,009 miles of such railway cost? [14]
- 2. A pole is 3 yards 2 feet 7 inches long; the distance between :wo houses is 27 times the length of this pole. How far are the houses apart? [14]
- 3. A piece of tape 35\frac{3}{2} inches long is cut into pieces 2\frac{3}{2} inches long. How many of these pieces will there be? [14]
- 4. A yard of cloth costs nine-tenths of a dollar. How much will seven and a half yards cost? [14]
- 5. How many inches are there in sevenninths of a yard? How many seconds are there in twenty-three thirtieths of a minute? How many pints are there in three-eighths of a gallon? [14]

6. If a locomotive can go 8 miles in onefifth of an hour, how many miles can it go in one hour and a half? [14]

#### COMPOSITION.

- 1. Write a statement, a command, and an inquiry, using an action-word in each. [15]
- 2. Give three rules for the use of each of the following: comma, period, capitals. [18]
- 3. Write six sentences, using correctly these words: seen, done, lay, lain, went, set. [15]
- 4. Correct, where wrong: tom where are you going, you may come here mary; o look at the beautiful Carriage. [12]
- 5. Change the following sentences so that more than one shall be spoken of in each case: She goes to his house. I gave him a book. A good boy tries to do his work. Mary is sometimes a good girl. [20]

#### Grade 6.

#### LITERATURE.

- 1. Tell what you know of the pyramids.
- 2. Give the meaning of "lingering light of his boyhood's grace," "wandering waves of gold," "wafted his name above," "the wooden slab at his head." [16]
- 3. Why is the name "ruby-turoat" given to the humming-bird? Tell how the nest is made. What makes the nest so difficult to find? [12]
- 4. What is temperature? How is 1: measured? Tell how the thermometer is made. [12]
- 5. Explain the following: "flaming forge,"
  "flaming forge of life," "sinewy hands,"
  "brawny arms," "earned a night's repose."
  [16]
- 6. Write the last-four lines of "The Village Blacksmith," and the second stanza of "Prayer." [12]

#### GRAMMAR.

- 1. What is a proper noun? Write a sentence containing a proper noun. [6]
- 2. What is a pronoun? Write a sentence containing a pronoun. [6]
- 3. What is a sentence? Name the different kinds of sentences. Give an example of each. [8]

4. Write down the nouns and pronouns in the following:

You know, we French stormed Ratisbon;

A mile or so away,

On a little mound, Napoleon Stood on our storming day.

- 5. What is an action-word? What is a relation-word? [5]
- 6. Write down the action-words and relation-words in the following:

Under a spreading chestnut-tree the village smithy stands.

Children coming home from school look in at the open door. [14]

- 7. Name the two parts of a sentence, and separate the following accordingly:
  - (a) The drifting snow falls silently. [4]
  - (b) He spoke roughly. [4]
  - (c) Matted and damp are the curls of gold. [6]

#### GEOGRAPHY.

- 1. Name the provinces and cities along the St. Lawrence valley, and tell where each is situated. [9]
- 2. Name the chief scaport in each of the provinces that border on the sca, and tell what is exported from each scaport. [9]
- 3. From what parts of the Dominion of Canada do we get each of the following: coal, gold, oil, nickel, furs, wheat, salt? [9]
- 4. Name the lakes on the boundary line of Canada, and the principal lakes in each part of the Dominion. [9]
- 5. Tell ail you know about the mountains of Canada. [9]
- 6. Through what lakes and rivers would a vessel pass in making a trip from Sault Ste. Marie to Montreal, and what would the cargo likely consist of? [9]

#### COMPOSITION.

- 1. Write two declarative, two interrogative, and two imperative sentences. Write an exclamation that is a sentence. [16]
- 2. Find the subject and predicate of each of the following sentences: Who told you the story? On the hill stood a house covered with vines; What will you give me for it? Men, women and children were there. [16]

- 3. Write correctly: and what is there to pardon said alexander i said to myself this man gives too much for his whistle another person cries how cold it is here. [16]
- 4. Write sentences, using correctly these words sit, raise, done, lie, lay, been. [16]
- 5. Write in your own words the poem, "The Village Blacksmith." [16]

#### ARITHMETIC.

- 1. Express in words 96.79 and 87.06 and multiply these numbers together. [14]
- 2. How many yards of cloth, worth \$3.97 a yard, can be bought for \$266, and how much money will be left? [14]
- 3. A pole is 3 yards 2 feet 7 inches long; the distance between two houses is thirty-seven times the length of this pole. How far are the houses apart? [14]
- 4. What are the prime factors of any number? Find the prime factors of 72, 105, 114. [14]
- 5. Three planks measuring respectively 12 feet, 16 feet and 20 feet in length were cut into the largest possible pieces of equal length. What was the length of each piece, and how many pieces were there? [14]
- 6. A farmer sells to a grocer 19 doz. eggs at 18 cts. a doz., 47 lbs. of lard at 13 cts. a lb., and 117 lbs. of beef at 8 cts. a lb., and takes in exchange 7 lbs. of tea at 55 cts. a lb., 9 lbs. coffee at 35 cts. a lb., a set of dishes worth \$7.50, and the b lance in cash. How much cash is due him? [14]

#### Grade 7.

#### LITERATURE.

- I. Why does a linen garment feel colder to the skin than one made of cotton or wool? [8]
- 2. Why does covering ice with sawdust preserve it? [8]
- 3. Dark-coloured clothes are cold in the shade and warm in the sunshine. Why? How is it with light-coloured clothes? Why? [10]
- 4. Give the meaning of "his life-blood ebbed away," "beheld life's morn decline," "my heart leaped forth," "scanty hoard," "the spark of life." [13]

- '5. What is meant by "struggling moonbeam's misty light," "we hollowed his narrow bed," "little he'll reck," "random gun," sullenly firing," "we carved not a line." [15]
- 6. Tell how a plant begins to grow. If we reverse a germinating seed, placing it with the root upwards, what will take place? [10]
- 7. Of what use is the fruit to the plant? Describe the fruit of each of the following plants: the bean, the maple tree, the dandelion, the cotton plant. [10]
- 8. Write down the six lines beginning with, "One more gone for England's sake."
  [6]

#### GRAMMAR.

- 1. What may a preposition and its object modify? Give an example of each. [12]
- 2. "In the same way, the beautiful asters of our woods, with their flowers of yellow or purplish disks, let their little fruits fly away from their heads as soon as ripe."
- (a) Write down three phrases, each of which modifies a noun, and tell the noun it modifies.
- (b) Write two phrases, each of which modifies a verb, and tell which verb it modifies. [15]
- 3. Use each of these words as a noun and as a verb: light, charge, taste, walk. Use each of these words as a noun and as an adjective: dark, lost, Hamilton, iron. [16]

- 4. What may an adverb modify? Give examples of each. [12]
  - "It seemed so hard at first, mother, to leave the blessed sun, And now it seems as hard to stay, and yet His will be done."

Tell the part of speech of each of these words: so, hard, now, and his, will. [12]

- 6. Write each of these words so that it will denote possession: boys, fox, woman, ladies, children. [5]
- 7. (a) Write a sentence in which a conjunction connects two phrases.
- (b) Write a sentence in which a conjunction connects the same parts of speech used in the same way. [8]

#### HISTORY.

- 1. Who were the first founders of Upper Canada? What brought them here? [10]
- 2. What was the cause of the war of 1812? What part did General Brock take in it? [10]
- 3. Name the three causes which led to the rebellion of 1837? [10]
- 4. What is meant by Responsible Government? [10]
- 5. What four provinces were included in the confederation of the British American provinces in 1867? What provinces have since been added? [10]

## CONTEMPORARY LITERATURE

Overland Monthly for January, a holiday number, brings back Christmas in the way of stories.

THE Trinity Review flourishes under the editorship of Mr. Troop who is fortunate in sometimes having the help of Prof. Clarke.

JANUARY Table Talk contains receipts for festive dishes and much good advice. The enquiry department must be a great comfort to entertaining housewives.

THE February Quiver contains a short poem illustrated by Mrs. H. M. Stanley.

Three serials are running at present. These with the short stories make quite a budget of fiction. Another of the excellent chapters for the Sick and Infirm appears in this number.

THE first article in the Missionary Review of the World is "Fallen Asleep." Rev. J. M. Sherwood one of the editors of the magazine died Oct. 22nd, 1890. Well worth reading is an editorial article on Livingstone and Stanley. The missionary intelligence is extensive, timely and interesting.

THI last pages of the *Critic* are devoted to notes of what is past, what is coming and things one likes to know. The reviews, letters and extracts are as good as ever.

TALLEYRAND'S Memoirs begin in the January Century. They are certain to be read with interest and attention. The Californian Series continues admirably illustrated by Mr. Fenn. Octave Thanet contributes a powerful story of the Irish famine. The poetry and serials are worthy of a place in the Century.

"A TALK about Reading" by Charles Dudley Warner opens the January St. Nicholas. Elfie's visit to Cloudland, a promising fairy serial begins in the same number. Andrew Lang tells the "Story of the Golden Fleece" in his best style, every sentence flowing like a song. The Boyhood of Michael Angelo and a Great Industrial School are two interesting articles.

Handbook of England and Wales. (London: John Murray.) 12s. The best of handbooks for travellers, and a good book of reference for teachers.

The Practical Arithmetic. (Baltimore: The Sadler Pub. Co.) 85 cents.

Locke's Conduct of the Understanding. Edited by Thomas Fowler, D.D. (Oxford: The Clarendon Press; London: Henry Frowde.) Third Edition

Civil Government in the United States, By John Fisk. (Boston: Houghton, Mifflin & Co.)—An important book. Students and citizens will find its pages full of instruction, especially on municipal government.

From Messrs. Ginn & Co. (Boston.) Quintus Gurtius. Books III. and IV. Edited by Dr. H. N. Fowler. With an introduction by Prof. Greenough of Harvard. 30 cents.

Open Sesame. Vol II. A collection of Poetry and Prose for School Days. By Blanche W. Bellamy and Maud W. Goodwin.

Classics for Children: Scott's Old Mortality.
From Colony to Commonwealth. Nina M. Tiffany.

English Prose, from Elizabeth to Victoria. Prof. Garnett.

Philosophy of American Literature. By Greenough White.

Sir Francis Drake. By Julian Corbett. (London: Macmillan & Co., and New York.) Drake of the Armada is a good subject for one of the Men of Action Series, and those who wish to have a short history of his life and exploits, of the discipline on his ships, and the plans he laid for his country's greatness, and how he carried them out, cannot have a better book for the purpose than this.

From Messrs. D. C. Heath & Co. (Boston.) De Vigny's La Canne de Jone. Spiers. Guides for Science Teaching. No. VIII. Insecta. By Alpheus Hyatt and J. M. Arms.

Notes on School Management. By George Collins. (London: Moffatt & Paige.) 6th edition.

The High School French Reader. With vocabulary and notes. By J. Squair, B.A., and W. H. Fraser, B.A. 60 cents. (Toronto: The Rose Publishing Co.) The Department of Education has, not too soon, authorized a new French Reader in which the French is good (in most cases from standard authors). We congratulate the editors and the Modern Language teachers of Ontario upon the appearance of so good a book.

Shakespeare's King John. (L ndon: Macmillan & Co., and New York.) A spirited introduction by the editor, Mr. K. Deighton, some eighty pages of text, and one hundred of notes make up this, another good number of the English Classic Series.

Greek for Beginners. By Prof. Coy. (New York: The American Book Co.) A revised edition, with some changes, of Coy's Mayor's Greek Lessons.

Elementary Algebra. W. W. Rouse Ball. (Cambridge: The University Press.) This is an excellent text book. The arrangement, the great number of good examples, and the clear and concise style of the book-work are among its best points. Mr. Ball is Fellow and Mathematical Lecturer of Trinity College, Cambridge.