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THE CANADA
EDUCATIONAL MONTHLY
AND SCHOOL MAGAZINE.

NOVEMBER, 1885.

UNIVERSITY COLLEGE.

PRESIDENT WILSON'S ADDRESS.

Specially revised for THE MONTHLY.

IN renewing the busy life of the college after the rest of a welcome long-vacation holiday, there is generally some new phase of our work which invites attention. At times we are called upon to define the bearing of modifications suggested by experience; oftener it becomes necessary to scrutinize the worth of novel theories, advocated too frequently from a mere hankering for change. But, happily, now, the anniversary of this college once more brings with it elements of encouragement for its friends. The matriculations of the University are every year assuming greater importance, alike as tests and as a standard of efficiency for the Collegiate Institutes and High Schools of the Province; and to one who, like myself, can look back to a time when it was found difficult to procure a satisfactory matriculation scheme which would bring the college within reach of the High Schools as then constituted, the contrast which recent examinations demonstrate is a gratifying evidence of the progress achieved

in the interval. Two hundred and thirty-four candidates, not only from the Collegiate Institutes and High Schools of the Province, but from schools and colleges beyond its limits, entered as competitors in the recent university examinations, of whom one hundred and eighty-three, representing sixty-four educational institutions, were successful. With some this is the closing act of their school career; but the larger number are to-day admitted, as undergraduates, to pursue their studies in this college and proceed to a degree. We welcome them as an assured evidence of the training now available in so many well-equipped schools; and as they replace those who now go forth from this college to enter on the business of life, we look to them to fill the ranks of our honor men; to reflect credit on their Alma Mater, and in due time to bear a part in the development of Canada. The history of this college has, from the first, been one of progress; progress not merely as indicated by ever-growing numbers,

but by more important advances, as experience has guided us, in enlarging the requirements demanded alike from professors and students. The Canadian Legislature aiming, in the University Act of 1853, at restoring to the people the full enjoyment of the State endowment, and removing as far as possible all hindrance to united action in the promotion of one system of higher education throughout Upper Canada, separated the university functions assigned by royal charter to King's College from those pertaining to its teaching faculties, and constituted the two corporations which have ever since carried on their joint work. The diverse functions of the degree-conferring Senate and of the College to which alone all teaching was assigned, though manifest enough to those engaged in the work, has been a puzzle to outsiders ever since. Even Attorney-Generals and Ministers of Education have not always mastered the distinction; and so have made confused work of it, alike in Orders-in-Council and in commissions to professors. And, unhappily, while this divorce of university and college has thus perplexed high functionaries, it has failed to accomplish the purpose aimed at in uniting Provincial and denominational colleges under one university. To ourselves it has proved an impediment in various respects; but especially from its ever increasing tendency to beget a process of examination based on mere text books, and not on actual teaching and college work. The mischievous results of such a system, when carried out to its extreme, are now fully recognized in the working of London University. The organization of Owens College, along with other provincial colleges, into a new northern university for England, is one grand protest against the system; and now the cry gains strength in London itself for replacing

its mere senatus and examining boards by a teaching university.

A system of paper examinations, wholly independent of the instruction given to the students, affects some departments much more than others; but every experienced teacher knows the mischievous tendency to substitute cram for genuine study, when the student has to look forward to the chance questions of a stranger, instead of an examination by experienced teachers on the work of the year. This evil will now, I trust, be removed by arrangements which come into immediate force, whereby the examinations of the second and third years are transferred from the university to the colleges. But in bringing about this desirable change, the necessity for which has been long felt, it has been necessary to withdraw the scholarships for those years, in so far as they are provided out of university funds; and the college must now look to the liberality of its friends to replace them. In an appeal that I made during the past year for aid to enable us adequately to equip the department of physics with apparatus indispensable for efficiently teaching electricity, which has now come to occupy so important a place in practical science, I have met with a hearty and gratifying response. I confidently rely on the same liberality to replace the scholarships now withdrawn from the college; and, after the example of Thomas Carlyle, in his gift of the Welsh bursaries, "for the love, favour, and affection which he bore to his own University of Edinburgh," to "furnish the timely aid from whence may spring a little trace of help to the young heroic soul struggling for what is highest." (Cheers.) Already I have the assurance of aid from more than one generous benefactor; which, with other gifts and appropriations at the disposal of the College Council, will, I hope, enable us to

make satisfactory provision during the present year for meeting this requirement.

Another step to which I have now to refer is the revisal of our courses of study. Thirty-two years have elapsed since University College entered on its work as the highest educational institution of this Province. At that period, as already indicated, we were necessarily dependent on the capacity of the High Schools to train their students for matriculation ; but a careful review of the successive revisions of our courses of study will show how promptly we have followed up each step achieved by the schools to elevate the standard of the college in every requirement for honors and degrees. A comparison of the subjects prescribed for the entrance examinations and the three years' undergraduate course, to which, in accordance with the requirements of King's College, the candidates for a degree were limited at the outset, with those of the four years' course now required for proceeding to the degree of Bachelor of Arts, will show with what systematic care the college faculty, in co-operation with the Senate of the University, have aimed at maintaining a high standard, and making the degree in Arts a guarantee of sound scholarship. Mr. Langton, of Trinity College, Cambridge—to whose services as vice-chancellor of this University during a most critical period of its history, not only the graduates, but every friend of higher education in Canada, are largely indebted—when giving his evidence before the committee of the Legislature at Quebec, in 1860, remarked :—“ The course of study in the college itself must be made to harmonize with the education which can be obtained out of doors. If the college commences at too high a standard for the schools, the great bulk of the youth must be debarred from entering it at

all ; or, on the other hand, not only the examination for matriculants, but, as a necessary consequence, the earlier years of the college course itself, will become a mere paper scheme which is not acted upon in practice. The real standard for entering the University, whatever it may be in theory, must be based upon the standard of the schools of a country.” Experience has abundantly confirmed this seeming paradox ; and hence the need for a frequent re-adjustment of our standard, not only at entrance, but throughout the requirements of all the years, so soon as the High Schools of the Province were able to send up matriculants adequately prepared for the work. This re-adjustment has accordingly been repeatedly arrived at ; as will be seen by a comparison of the college calendars of successive periods, in 1854, in 1859, in 1869, in 1877, and once more in 1885. With this year, accordingly, another cycle is completed ; and we anew mark a fresh step in advance by one of those comprehensive revisions of the scheme of collegiate study which—like some of those of earlier years—will largely affect the character of Canadian education. The influence of such revisions on the general education of the Province, alike in the Public and the High Schools, is immediate and beneficial. (Cheers.) Nor are the effects limited to them. For I may, without, I trust, any charge of invidious comparisons, recall the fact that not only in Ontario, but in the Maritime Provinces, in Quebec, and more recently in the young Province of Manitoba, the revised schemes of study for this college have supplied models for the highest educational institutions of the Dominion.

To our own earlier graduates a comparison of our present curriculum with that of their undergraduate course will reveal many evidences of progress ; and will have a special

interest for some who won academic honors in the early years of this college, and are now regarding with quickened sympathies the scene of their own youthful aspirations, under the happiest of all stimulants, as a younger generation steps into their place. It is, indeed, one of the happiest experiences of a long life, as the years hasten to its close, to welcome the sons of former pupils following their steps in these same halls, where once the father owned the stimulus of like aspirations :

An eager novice robed in fluttering gown.

But, in referring to the successive advances in the requirements from our students, I am reminded that the very censurers of the standard to which we were necessarily limited at the outset by the condition of the schools of the Province were those who advanced against us the further charge of monopolizing an endowment far beyond the requirements of this college. The disparagement of our standard of matriculation was a mere adjunct of the cry for division of the funds among denominational colleges. Happily, with a growing appreciation of the true requirements for such an institution, it is now acknowledged on all hands that what was then fancied to be a revenue ample for any number of colleges, is, in reality, inadequate for the full equipment of one, if it is to hold its place in fitting equality with the great schools of learning, either in the Old World or the New. Now, accordingly, the movement takes a more healthful direction, in the effort at formulating a scheme of united action, whereby, under some system of confederation among all colleges, Provincial and denominational, it may be found possible to utilize the national endowments still more effectually ; and, without interfering with voluntary efforts, or with the denominational restrictions which

commend themselves to the favour of some, to embrace all in hearty co-operation for the common aim of higher education.

In the protracted conferences of the representatives of various colleges, carried on for the past two years under the authority of the Minister of Education, I have borne a part ; and if any charge can be brought against me in reference to the course I have pursued, I think it must be that—as the representative of this college—I have been ready to make only too large concessions in the effort to accomplish so desirable a result. A basis of agreement was finally arrived at, and is now familiar to all. It was confessedly a compromise, as was inevitable where no statesman was prepared to undertake the framing of a wise and comprehensive scheme ; and, like all compromises, it has not entirely satisfied any one. It certainly does not commend itself to my unqualified approval. Some of the questionable results of the division into two distinct corporations of the University organized under the Royal Charter of 1827 have already been referred to ; but a further bisection is now demanded, the full significance of which is, I fear, even less definitely comprehended than that of 1853. The proposal to break up the small staff of this college into two bodies, as a college faculty and a university professoriate—classified on no logical system, but confessedly arranged on a basis suggested by the still more inadequate equipment of certain confederating colleges—seems to me a scheme which, whether expedient or not, can commend itself to no impartial mind as comprehensive or statesmanlike. Nevertheless, if it is left open to revision under the dictates of experience ; and the compromise, as agreed to, is carried out as a whole in good faith, I am prepared to give it a fair trial and to co-operate in the

effort to make it successful. I can scarcely doubt that, if the heads of the various colleges once met together, ignoring all denominational issues, with which, as a common board, they could have no reason for interfering—and looking solely to the maintenance of an adequate system of instruction—most, if not all, of their apprehended difficulties would vanish. But I must be allowed to say, meanwhile, that the large concessions offered on our part were only justifiable on the assumption that all the colleges represented at the conference united in the compromise. So long as this was understood, the only action on my part has been unreservedly to commend it for acceptance, alike to the College Council and to the Senate of the University. But when one after another of the contracting parties ignores the conditions agreed to after repeated conferences; and, without concerted action, asks for diverse and even conflicting modifications, I fail to see why the representatives of University College are alone to be bound by conditions which others modify at their will. Some of the new demands are of such a nature that I should be recreant to the trust confided in me as representative of this college if I did not give timely warning of the danger to which not only the Provincial College, but our whole system of national education is exposed by a proposal to trammel the free action of the University, and to organize within its Senate a sectional minority, necessarily denominational in character, with a power of veto upon the action of a large majority.

Throughout my long connection with this college, I have consistently advocated its claims as an unsectarian national institution, in harmony with our whole Provincial system of education. I have seen a generation grow up to maturity; and not a few

of my old pupils advanced to places of honourable trust and distinction in the legislature, in the churches, on the bench and at the bar, in the colleges and schools of this and other lands, as well as in other influential positions. A new generation is stepping into their place; and fathers who know from personal experience the character of the training, the culture and the moral discipline which this college offered to themselves, give the strongest practical evidence of their approval by enrolling their sons to follow in their steps. Nothing in all the experience of a lifetime has tended to shake my faith in the superiority of a national, as compared with any denominational system; and above all, in a country where divisions have so multiplied among professing Christians that denominationalism applied to education means, not a system, but a multiplication of organizations alike costly, conflicting and inadequate for the objects aimed at. For such is the ever-widening range of the sciences; and the growing comprehension of philology in its many-sided relations to ancient and modern, to cultured and to barbarous languages, that all the appliances of the best equipped universities fall short of the demands of the age. The system of national education which this college represents has proved no failure in Canada. We have gone on in healthful progress, in growing numbers, in increasing requirements, in thoroughness and efficiency, through all the years since the Canadian Legislature emancipated this college from the mischievous constraints of a narrow denominational control; and, so long as I am privileged to bear any part in it, I shall watch with jealousy every modification which threatens to rob it in any degree of its national, unsectarian character.

Its influence on the denomi-

national colleges of the Province has been confessedly beneficial, even when they were offering to it most persistent opposition. The distinguished scholar, Sir Edmund Head, to whose intelligent sympathy and aid, while Governor-General of Canada, we were largely indebted during some of the most critical years in the history of this institution, not inaptly designated it "the College Militant!" It has successfully withstood assaults in which rivals who agreed in little else conjoined to disparage and despoil it. I observe that the learned Chancellor of Victoria University in his address at its last Convocation, when commenting on religious teaching and influences as requisites assumed to be incompatible with a purely national system, remarked in all friendly apology for us:—"I do not think the senate or the executive officers of the Provincial University can be justly blamed for the secular character of that institution. They have done what they could consistently with the constitution imposed on them by the Legislature." I give my friend Dr. Nelles all credit for the good feeling which animated him; but I must disclaim, on behalf of this institution, any such apologetic tone. On the contrary, we claim to have achieved what in older countries they are still only striving for; and so to be no less in harmony with the spirit of the age than with the aspirations of our Canadian people. While this college is, in the thoroughest sense of the term, a secular college, and is free to every Canadian, alike as a student or a professor, without distinction of race or creed, we do not stand aloof from the churches; but, on the contrary, are organized on a system in which some of the largest and most influential bodies of Christians find they can heartily co-operate. Experience,

indeed, so far from tending in any degree to alienate them, has enabled us to invite them to a closer union and more active co-operation, without trenching on the essentially secular basis of a national university. Whatever some Canadians may think of it, the system commands the admiration of strangers, well qualified to form an impartial judgment. We were visited last year by the British Association, including among its members some of the foremost representatives of modern science. Among these was Professor Boyd Dawkins, a distinguished graduate of Oxford, and now professor of geology in Owens College. To him our whole system of education was a subject of interest. Referring to it in an address which he delivered after his return to England, he speaks of Toronto as the centre of Canadian energy and enterprise, and then adds: "The result of all this is now shown in the magnificent university which exists there; a university which is open to all, and free from all religious or sectarian prejudice. It is a distinctly secular institution; and, so far as I know, it is the very first secular teaching university which has been established in this world; being in this respect the predecessor of Owens College and the Victoria University of England. And in that of Toronto is another thing which is well worthy of our attention in England, namely, that the various religious sects have each their own place: There is a college called by the name of John Knox; another bearing that of Wycliffe; a college for members of the Baptist persuasion; and St. Michael's College, which represents the Roman Catholic element;" and he adds, in unqualified commendation: "I mention all these things to show you that Toronto is a very advanced place."

With our system thus commanding

the unqualified commendation of distinguished educationists, I may well repudiate any line of apologetic defence for the secular character of this college, as though it were a mere effort to make the most of a defective scheme forced on us by political and party influence. Nor should we forget that we are not legislating for ourselves alone. Our public schools have already furnished a model for those of Manitoba and British Columbia, and on the course now pursued by Ontario largely depends whether the resources of the great North-West, out of which the Prairie States of the future are to be fashioned, shall be devoted to the organization of national universities on an adequate scale, or frittered away on a multitude of petty sectarian colleges such as, in the neighbouring States, have brought academic degrees into contempt. I believe the system on which this college is established to be in harmony with some of the most promising aspects of modern times, and there are few things that we, as Canadians, have had more reason to deplore than the diversion of endowments set apart by the wise foresight of the fathers of Upper Canada for a national university to establish a mere denominational college under ecclesiastical control. While that lasted it not only justified but compelled the organization of rival denominational colleges; divided the energies of our young Province in a department where united action was essential to success; and established precedents which have thus far misled the founders of new Provinces in the North-West, and prevented them benefiting by the wise prescience of those loyal pioneers who, in the infancy of Western Canada, amid all their privations, dedicated a portion of its land as an endowment for the education of future generations. By such sagacious foresight they laid

the surest foundations on which their successors could build up a free, self-governed State; and as they designed it as a heritage for all, I am prepared to welcome with heartiest cordiality any modification of our present scheme which, while it preserves intact the thoroughly national and unsectarian basis of this University, removes any hindrance to the enjoyment of its highest advantages by every member of the State.

No graver responsibility devolves on the council of this college than the maintenance of its secular character unimpaired. It is in this respect, at least, in full accordance with the aims of some of the wisest and most far-sighted educationists both of the Old and the New World. In truth, as I have already affirmed, the whole tendency of the age is towards the secularization of the universities; not in any spirit of antagonism to religion, but as an indispensable step towards true progress. It was meet that theologians should have the organization and control of education in earlier centuries; for they alone were interested in it. Secular learning had then a scarcely recognizable place in the most liberal scholastic scheme; and letters, jurisprudence, medicine and whatever of science then existed, pertained almost as exclusively to the clergy as the administration of the rites and sacraments of the Church. But all that is a thing of the past, and if the history of intellectual progress after the revival of learning proves—as I believe is indisputable—that the progress of scientific truth has been hindered by theological constraint, and some of the grandest revelations of science have not only been received with suspicion, but have been denounced as in conflict with religion; how much more needful is it that the spirit of speculative enquiry should have free play in an age when the bounds of

knowledge have so vastly extended? The theologian no longer pretends to a mastery of all secular knowledge. On the contrary, he finds ample scope for his intellectual powers within the widening range of his own legitimate province, and is learning to welcome the confirmations which science, in so many ways, renders to sacred truth. There is no need to ignore the services rendered by theologians to true scholarship, because now the widening compass of the sciences brings with it the necessity for a division of labour, in order that the ampler field of knowledge may be thoroughly cultivated, and its full harvest reaped. We need feel no surprise that a system which satisfied the requirements of the fourteenth, or of the sixteenth, century is found inadequate for the closing years of this nineteenth century :

The old order changeth, yielding place to new,
And God fulfils Himself in many ways,
Lest one good custom should corrupt the world.

Hence a revolution affecting the oldest as well as the more recently founded universities, since their re-organization at the era of the Reformation. The re-construction of the Scottish Universities was undertaken in 1560, and the famous "Book of Discipline,"—while providing that "the rich and potent may not be permitted to suffer their children to spend their youth in vain idleness ; but that they be exhorted and compelled to dedicate their sons to the profit of the Church and the commonwealth"—transformed the old colleges of St. Salvator, St. Leonard, St. Mary and King's College from religious houses to schools of letters and science. But the traditions survived. The office of principal remained a prerogative of the theological faculty ; and the Scottish Church, departing in this from the rule of Presbyterian parity, gave to the head of the university

the exceptional style of very reverend. In Edinburgh, as in the older universities, a long line of very reverend principals accordingly filled the academic chair, graced by such names as Rollock, Leighton, Carstairs, Robertson, and Lee. The last of those very reverend dignitaries, eminent among Scottish black-letter scholars, died in 1859 ; and with him the long-honoured system came to an end. Sir David Brewster, a layman, foremost among Scottish men of science, but no less noted for his earnest Christian faith, was advanced to the vacant principalship. To him in due time succeeded another eminent and scholarly layman, Sir Alexander Grant ; and now his place has been filled by Sir William Muir, distinguished as an Oriental scholar, but whose eminent Christian character, no less than his scholarly attainments, commended him to the electors. A system of secular education assuredly demands the most careful selection of fitting men to whom its conduct is to be entrusted ; but I have yet to learn that denominational colleges have devised one which makes them less dependent on the personal character and influence of their teachers. I refer now to recent changes in the Scottish Universities, because they show that while their secularization is being carried out in accordance with the spirit of the age, it in no degree implies any purposed divorce from moral or religious influence. The clergy have no longer a monopoly of learning, and lay claim to no exclusive heritage of religion. In Canada, as in Scotland, the Churches and the people are still practically one ; and so long as a Christian people are true to their trust, secular education will be maintained in harmony with the highest moral standards which command their allegiance.

Nor is the history of the English Universities, to which we are so frequently

referred, less instructive than those of Scotland. There, too, the colleges are being remodelled in accordance with modern thought; so that, if our work here is to be undone, the future antiquary may have to visit Canada to get sight of the antiquated type. Mediæval traditions did, indeed, control the English system till very recent years. Heads of colleges, fellows, tutors, were all alike in holy orders. Men took upon themselves the most solemn vows, and were admitted in terms of awful significance to "the office and work of a priest in the Church of God," in order to legally qualify themselves for holding a college fellowship, or to devote their lives to the teaching of classics or mathematics. Even the celibacy of the ancient religious houses was perpetuated in those seats of learning as an indispensable adjunct to a fellowship. But all this is, happily, passing away. The fellowships have been for the most part secularized, and some of them converted into professorships. On the succession of Dr. Bradley to the Deanery of Westminster Abbey, it was for the first time in the power of the college authorities to present a layman to the mastership of University College, Oxford; and their choice fell on a distinguished scholar, whose worth is well-known to all here. That Professor Goldwin Smith declined this high office in his own ancient University, to cast in his lot with ourselves is appreciated by many as no slight gain to our young community. (Cheers.) But the case of University College is no exceptional one. Indeed, unless I am misinformed, the only headship of an Oxford College any longer constrained by mediæval traditions is that of Christ Church, which under the peculiar conditions of the great Cardinal's foundation, pertains to the Dean of Oxford Cathedral. The tendencies of the age are unmistak-

able. The old exclusive barriers are everywhere giving way. Oxford and Cambridge, at each fresh step, are seen to emancipate themselves more and more from ecclesiastical and denominational restraints. Science is successfully asserting its claims; and the wise liberality to which progress has given birth found happy illustration in the promotion of a man of rare worth, the late James Clerk-Maxwell, a Scottish Presbyterian, to the chair of Experimental Physics in the University of Cambridge, which he adorned no less by his influence as a Christian layman, than by his eminent gifts as a scientific discoverer.

With the example thus set us in those ancient seats of learning it is surely full time that Canada free herself from the traditions of mediæval Europe, which asserted for the clergy not only their legitimate claims as doctors of theology, but a censorship over all researches in scholarship and every discovery in science. Religion suffers from the timidity of its champions. It has nothing to fear, but everything to hope from the freest scholarly research and scientific discovery; and they who provoke a needless antagonism, whether they be divines or men of science, only prove how far they fall short of the lofty standard of Newton and Butler, of Berkeley, Chalmers, Whewell, Faraday, Brewster, Clerk-Maxwell, and all the noble band of intellectual peers who have found no difficulty in harmonizing the truths of science and revelation. Such a harmony between secular and sacred learning should be the aim of every sincere lover of truth; and it will be best attained by according to every honest searcher after truth the most unconstrained freedom. Looking to this as an aim worthy of many sacrifices, whatever tends to remove any antagonism between diverse organizations of our present educational forces has my

hearty sympathy. Here, as elsewhere, union is strength. In an age of unparalleled progress, and in a country in the bright flush of youth, with so much to mould and fashion for the coming time, we need the union of all available forces in the work of education. In that great age of the revival of learning to which we give the significant name of the Renaissance, mediævalism with all its imperfect illumination, with all its docile subjectiveness, all its arid scholasticism, and no less, with all the rare beauty of its marvellous art, was consigned to neglect, as gothic and barbarous; and for some generations classic letters and art ruled supreme. The influence was in the main beneficial. It recalled men from the profitless controversies of the schoolmen, and the narrow dogmas of the cloister, to study the literature of ages when it seems as if a type of humanity was developed which in some respects has scarcely been equalled and never surpassed. The change was not unaccompanied with a transient phase of scepticism; but how speedy and how comprehensive was the reaction; while the inestimable benefits remain. Homer is still the world's epic poet; Sophocles survived as its ideal of all that was conceivable of "gorgeous tragedy in sceptred pall," till Shakespeare taught the world a nobler art; the spirit of Plato has still guidance for us when we would search into the mysteries of the human soul, and give free scope to thoughts that wander through eternity. Nor will the historian or the scholar slight the literature of that other classic nation, whose more practical aptitudes "drilled the raw world to the march of mind," schooled barbarian Europe into self-govern-

ment, trained it to urbanity, and taught it the significant constraints of Roman law. But the new birth could not be arrested in its cradle. Each fresh century has witnessed progress. Science, from mere crude empiricism, has developed on every hand till in its vast compass it defies the most gifted intellect to master all its many-sided truths. It is no longer the riddle of the visionary alchemist; its power is felt in every avenue of life. Physics and metaphysics are alike affected by it. It rules in commerce, revolutionizes war, and takes hold of intellectual and social life on every side. In this new land which we are fashioning for ourselves, rich in so many undeveloped resources, and dowered with the promises of a great future: we cannot afford to slight our opportunities, or to waste our strength in narrow sectional rivalries. Let us, if possible, combine our forces in a renaissance for our New World in which we shall unite the reverent spirit of the most earnest searchers into all truth, with a just appreciation of the worth of classical literature, and some adequate estimate of the triumphs of science. Let us learn by every experience of the past, and make of it a stepping-stone to higher things; for we ourselves "are ancients of the earth, and in the morning of the times."

The president closed his address by a humorous allusion to a branch of science cultivated with much zeal by the undergraduates, and in their name invited the audience to adjourn to the lawn, and witness a scientific display of football, in a match between the Guelph Agricultural College and the University students, played in strict accordance with Rugby rules.

EDUCATION OF TEACHERS.

BY PROFESSOR M. MACVICAR, PH.D., LL.D.

IN the former article it was stated that the acquisition of power, habits, tastes and knowledge constitutes the fundamental elements of a true education. It was also stated that these four acquisitions stand connected with each other, in relative importance, as educational factors, in the order named. Hence, that the development of power in the pupil is the teacher's first work, and that second in order is the development of habits. It was pointed out also that habits constitute the only medium through which power can be properly utilized in practical work. It remains now to notice the acquisition of tastes and knowledge, their relation to power and habits as educational factors, and hence to the work of the teacher.

Our tastes largely make and unmake us. Tell me a man's tastes and you tell me the secret spring which, to a great extent, if not entirely, shapes both his private and public life. We say the secret spring, because we believe few, if any, are fully conscious of the peculiar and subtle influence of their tastes in determining their sphere of work, the manner in which they perform their work, their recreations and amusements, their social and religious associations, their companionships, their reading and study, their interest in the well-being of others, in short, their real character, their place in the world. Say what we will, our likes and dislikes have an untold influence in shaping our lives. And what are these likes and dislikes but the direct products of our tastes either natural or acquired. But this is only one phase of the necessary products of our tastes, and perhaps the least important.

To say that our tastes have a very powerful influence in shaping our life-currents and in moulding our character, and that the teacher is responsible in an important sense for the formation and development of these tastes, is not to say too much. But before asking the teacher to assent to the truth of a statement which, if true, carries with it consequences of the highest importance to his work, let us note some of the facts on which the statement rests. And first, it need only be mentioned to be admitted at once, that each human being commences life in the possession of certain natural or inherited tastes. These natural tastes assert themselves from the dawn of life onwards. Their influence even in infancy is very marked. The child of only a few years frequently manifests an extraordinary taste for a certain line of physical or mental activity. Some, for example, show such a taste for music, others for drawing, others for natural history, others for investigating the why and wherefore of everything, others for certain amusements, others for certain courses of conduct both good and bad, others, in short, for the exercise of some one or more of the possible natural activities or receptivities of the body and mind. So much for some of the facts in regard to natural tastes; let us now note acquired tastes.

Here we find a much wider range of possibilities. There is no active or receptive power of body or mind in connection with which a taste cannot be acquired. The truth of this statement is easily verified by experiment. Few, if any, have failed to observe how readily tastes of every sort are

formed. States of body and of mind which at first are very trying and offensive, may, by persistent effort, become enjoyable and finally result in an over-mastering taste. The use of tobacco is a familiar example of this sort. In most cases the first use of it produces very unpleasant experiences, yet by persistent use these unpleasant experiences are entirely overcome, and a taste is formed so strong that it is almost unconquerable. The taste for tobacco is not exceptional either in the manner of its formation or in its strength. If we turn to the use of alcoholic liquors we find examples of the power of taste equally marked. And not only so but, if we pass from tastes that are dependent upon induced states of our physical organism to tastes that pertain almost exclusively to the mind, we find examples equally if not more marked. Instances are not wanting, for example, where a taste for a certain class of pernicious reading has been developed to such an extent as to be quite as unconquerable as the taste for tobacco or alcohol. And more, when tastes of this sort are formed they are not only as unconquerable, but their indulgence is almost, if not altogether, as destructive of the healthy action of both body and mind, as the indulgence of the taste for narcotics and alcohol.

The formation of tastes such as the use of narcotics and alcohol illustrates will be readily conceded by all. But observed facts compel us to concede much more than this. The law of formation illustrated by these examples holds true of every active and receptive power of the body and mind. The continuous exercise of such powers, under proper conditions, results invariably in forming a relish or taste for such exercise. So true is this and so powerful is the influence of this law that men and women are, through acquired

tastes of the most unnatural kind, degraded below the level of the beast of the field. And more, this powerful influence is felt not only among those who give themselves up to degrading practices, but also among the most refined and educated classes. It is the principal channel through which extravagances and vices of all sorts are introduced into social life and even into literary circles. Vitiates the tastes, social, literary or otherwise, of any community, and you have thrown wide open the flood gates of destructive influences. It is said that "knowledge is power." This may be so; but knowledge is verily weakness in the presence of natural and acquired tastes. The power of knowledge, and even of reason and sound judgment, vanishes before the power of our tastes like the morning dew before the rising sun. Physicians, for example, may tell us of the destructive consequences of the diet so commonly served upon our tables, and we may sincerely believe them. But what of that, our tastes will have the mastery. They are stronger than our knowledge, reason and judgment. We will indulge even although the fatal consequences of a wrecked physical constitution stare us in the face, or have already been partially experienced.

Thus far we have considered taste in the sense in which the word is most commonly used. We have represented it as an attractive force, which affects our conduct and character for good or evil. As such, the power of taste cannot be over-estimated. The teacher's work stands intimately related to taste in this sense. But, perhaps, a more intimate relation exists between his work and taste in the sense of judgment, nice perception, the power of discriminating and appreciating beauty, order, symmetry or whatever constitutes excellency in nature, in human conduct, in the fine arts, *belles-lettres*, etc. Taste in

this sense is both natural and acquired and is inclusive of taste in the former sense. The constant exercise of fine discriminations, in whatever direction, soon develops a relish, a fascination or attraction for such exercise, not less powerful in its influence for good or evil than taste in the sense we have already illustrated. Indeed, taste in this higher sense is the key to success in every line of productive effort. The mechanic, the artist and the literary man are equally dependent upon the use of this key. It is, in the first place, a powerful incentive to all true effort. But it does not stop here. It is the only force which shapes and directs the exercise of physical and mental power in performing work. It is the inspiration which gives perfection of finish alike to the products of the artisan, the artist, the rhetorician and the poet. Without the existence and exercise of a well-trained taste, there can be no master mechanics, artists or rhetoricians. It is taste that decorates the palace and transforms the humble home into a place of comfort, neatness and beauty. Taste constitutes the principal factor in determining our course of life, and moulding our character. In short, a man never is, and cannot be, an effective worker in any sphere of life for which he is not fitted by natural or acquired taste.

What we have said in this and the former article is, perhaps, sufficient to indicate the place and importance of power, habits and tastes, as educational factors, and to indicate also that the teacher's work, if rightly performed, must have constant and pointed reference to these three factors. It may be best, however, before leaving the subject, for the sake of clearness and future reference, even although involving somewhat of repetition, to state propositionally the sense in which the words *power*, *habit* and *taste* are used in this discussion, and the relation

which these three acquisitions sustain to each other :

1. Power is used in the sense of capacity to receive impressions, to bear, to endure, to suffer, to be influenced. In this sense, power is a receptivity ; but it is much more than this. Power is used also in the sense of energy, of ability to produce effects, to bring things to pass, to act, to perform work. Here it should be noted, that, in both of these senses, power in the child is only germinal. Hence the work of the teacher with reference to this part of the child's nature is to supply the conditions necessary to develop fully all the possibilities of this germ.

2. Habit is used in the sense of an acquired or induced state of the body or mind by which the power residing in either is placed in such relation to a given end that such end is accomplished, whenever desired, without the continuous conscious exercise of the intelligence and will. In restricting the word habit in this way to induced states, it is not intended to reject the fact, now so well established, that certain aptitudes are inherited. We wish simply to confine what we say to acquired habits, because with these the teacher's work is most intimately connected.

3. Taste is used, first, in the sense simply of relish, enjoyment and consequent attraction ; and secondly, in the sense of the faculty or power of perceiving and relishing, and hence being attracted by beauty, order, proportion, symmetry, adaptation, or excellency of whatever sort. In the former sense our tastes are largely, if not altogether, simply incentives to blind action. When controlled or led by tastes of this sort, little, if any, account is taken of effects or consequences, or of the recitude of our course. On the other hand, our tastes in the latter sense are not only incentives to action, but they also deter-

mine the line and nature of our action. They inspire and construct our ideals, and they direct all successful effort to realize these ideals.

4. In connection with what has just been said, the relation of power, habits and tastes, educationally considered, may be briefly stated as follows: *Power* is the effective factor, the working force, the conserved energy

of our nature; *Habit* is the medium through which power, whether of body or mind, is utilized, or through which it is efficiently connected with and made to accomplish given ends; *Taste* gives their real character to our ideals or ends, and it attracts and guides the exercise of power in executing these ideals or ends.

(*To be continued.*)

DISCOURSE PREACHED BY ARCHDEACON FARRAR, SEPT. 23,
IN ST. JAMES' CATHEDRAL, TORONTO.

VANQUISHING LIONS.

HE took for his text the words: "Thou shalt tread upon the lion and adder; the young lion and the dragon shalt thou trample under feet."—Psalm xci. 13.

There are lions in the path of life which the slothful man will not encounter; but which the brave man fights and, in the end, slays. There are perils which come to us from the world, the flesh and the devil: perils from lives of outward and public wickedness which we have to face as citizens and as men. In his struggles against the varied forms of sin and vice which are without and around him the brave man may often be, or seem to be, defeated, for in such a cause his every defeat carries with it the germs of future and of certain victory. When the good man seems to be conquered the powers of evil have still to rue their short-lived triumph, and to say, as Pyrrhus said when he defeated the Romans: "Three such victories would utterly ruin me." To-day, however, we have to speak of a different slaying of lions and of a contest within us, not without us; of a contest in which, if we would not be lost, we must, God helping us, win the victory—a personal, an assured,

and, if not in this life, an absolute and final victory. It is a subject which we may make intensely practical, a subject which directly affects every one of us, whatever our age or our circumstances. For upon the issue of this contest the strength and majesty and blessedness in every other contest must depend. May the Holy Spirit above, who sendeth forth His seraph with a live coal from the altar, touch the lips of whom He will, and so teach me to speak and so open your ears and touch your hearts to hear, that by His mercy every one of us may leave this church awakened and solemnized, more resolute, more hopeful, more determined to make his stand against the power of evil and work out his own salvation with fear, indeed, and trembling, yet with indomitable energy and the strongest concentration of every power of his will. We learn from Scripture and from experience that a picture, an allegory, especially if it be unhackneyed, may sometimes bring a great truth or a pressing duty home to the heart and conscience when a mere unimaginative inculcation of it may fail to furrow the trodden ground of our familiarity. Such an allegory is

found in the words of my text and in many other passages of Scripture. The definite promise, "Thou shalt tread upon the lion and the dragon," was a reference not only to reptiles and wild beasts of outward evil, but to evils in which the deadliness of vice is concentrated in our individual hearts—evil thoughts and deeds and habits which assail and hurt the soul. When the Author of the Epistle to the Hebrews says of some of the Old Testament characters that they stopped the mouths of lions he doubtless meant his words to be understood metaphorically as well as literally. So, too, does St. Paul, when he says that he fought the beasts at Ephesus, and that God delivered him out of the mouths of lions. So, too, St. Ignatius, when he says that on his way to martyrdom he was fighting with wild beasts all the way, and describes the Roman soldiers as ten leopards with whom he was travelling. So when David speaks of the jawbones of the lion he is not thinking of actual lions but of human and spiritual enemies. If, therefore, we can adopt the metaphor, we are no more guilty than these of using language which is fantastical or sensational language, and the fitness of the metaphor is shown by the fact that we find it also in the heathen mythology. Let us not follow the ignorant prejudice which would regard the thoughts of the heathen as if they were not worthy of our Christian interest. We have learned more and more in our own day that there is an Ethnic as well as a Hebrew inspiration. The noble study of comparative religions is widening the horizon of our thoughts, and revealing to us that God spoke in old times to the Greek and the Roman and Persian and the Hindoo, as well as to the Jew. All wisdom is not hid in Moses' law. Now in the old and uncorrupted springs of Greek mythology we

find the purest moral intuitions of that wonderfully gifted race. If there was one virtue which the ancient Greeks admired above all others, it was sober-mindedness, which is also earnestly impressed upon all, especially upon young men, by St. Paul and St. Peter. Now, if Paul, even on the Scripture page, quotes the Greek poets, why should we not also refer to the pure lessons of Greek mythology, and the Greek type of this noble virtue of sober-mindedness, the ideal type which they set before themselves, of a life strong in self-control and almost divine in its self-sacrifice? The type of a deliverer of the world is their hero Hercules. Grossly as that idea was dwarfed and stunted by the polluted imaginations of the later poets, the hero stands in the old mythology as the grand representative of toiling, suffering, persecuted, victorious manhood—the embodied conception of a life raised to immortality by mighty toil for the good of others. And they saw, as we see, that he who would indeed conquer evil in the world must first conquer it in his own heart. To him it must never be said, as to the Pharisee of old, "Thou therefore that teachest others, teachest thou not thyself?" This is the meaning of that fine apologue of the Choice of Hercules. The young hero, in his opening manhood, makes his choice of self-denying virtue, and not of unlawful pleasure. But the moral is yet more finely conveyed in the legend of his conquest of the Nemean lion, which is the first of his great labours. The great hero in his adolescence is always represented as arrayed in the pelt of this conquered wild beast. Doubtless the slaying of an actual lion is something. The Scriptures deem it worthy of record that lions were slain by the youth Samson and the youth David. But neither Samson nor David wore the lion's skin in memory of their victory all

the rest of their lives. The skin of the lion which the Greek hero slew was held to make him invulnerable and well-nigh invincible. It was difficult to get this hide. The lion must be fought in the darkness and dealt upon without weapons, but by the grip of the throat. What is the meaning of that? It means that the Nemean lion is the first great adversary. Whatever that may be to Hercules or any one of us, then or now, the first monster we have to struggle with and strangle, or be destroyed, is to be fought in the dark with no man helping us, for every man's Nemean lion lies in the way for him somewhere. All future victories depend upon that. Kill it, and through all the rest of your lives what was once terrible becomes your armour; you are clothed with the virtue of that conquest. In the first place, this lion is to be fought in the darkness and in the cavern, and with no earthly weapons. It is not the stout club, it is not the keen arrows which can slay it. You must block up the entrance to its cave, you must plunge through the murky gloom, and there by sheer force of arm and by resolute might, by that will which God has given to every one of you, and which makes it your chief human privilege to say I ought, I can, I will, strengthened as you will be by the grace of Christ, you must fearlessly and pitilessly meet and strangle this lion. The lion is that inward sin, that special impulse and temptation to evil which is most directed against your individual heart. Are you at this time willing, or are you not, to conquer the sin, whatever it may be, which doth most easily beset you? Remember that God will have no reservations. Remember that His law is that you must keep all His commandments. Not all but one. Do not deceive yourself with the fancy that there is one sin which you may cherish for

yourself; one law to be violated with impunity. On the tree of death, as on the tree of life, there are twelve manner of fruits; but God will not suffer you so much as one of them, because in each one of these fatal fruits is infused the deathfulness of all. Millions of men would be saved almost without an effort but for one sin—the drunkard, but for his drink; the envious man, but for his inworking malice; the unclean, but for his guilty love or desecrating vice. And the man who does not struggle and overcome is losing himself more and more hopelessly in the pathless morass; he is sinking deeper and deeper in the unfathomable sea; he is fettering himself with heavier and heavier chains. Therefore, my brethren, as you love your lives, enter with resolution the dark caverns of your hearts and face the lion who is lurking there. Lay aside the fancy that he can lie there undisturbed without destroying, that you can fence yourself round against him by reason or philosophy, or by prudential reserve, or by any procrastination of the struggle. Nothing will save you but a resolute effort, putting forth the gathered force of your life intensified with grace and prayer. Give that lion but one fatal wound, and though its flaming eye may glare upon you, and its relaxing claw may have power to rend you, each tightening grip on its throat will find it weaker, and you growing from strength to strength, until at last you will fling out of his lair the huge and hideous carcass, and turn the cavern into a holy temple and Christ shall enter there. Further, observe the infinite superiority which Christ has granted to us in these days. The Greeks had noble ideals; but their conduct fell as far short of those ideals as ours does. But often their ideals are as grievously corrupt. Human strength and knowledge is at the best but perfect weakness. But it is the mercy

of God that He has given us in the life of our Lord Jesus Christ an ideal not human, but divine. But notice that the more early this battle is undertaken the more surely it is won. Hercules, while yet an infant, strangles the serpents sent to slay him. He who strangles serpents in his youth will slay monsters in his manhood. He who has early had strength to conquer temptations will not be so likely later to lose his self-reverence and his self-control. If in the flush of youth he has sat at the feet of law, he is little likely to rebel afterwards. And these were the truths which the Greeks succinctly expressed by representing their hero in the skin of the lion he has slain. Thus in early life men can best win this victory while yet they are not dominated by a corrupt present, and are still unhampered by a faithless past. Victory is won more easily at fifteen than at twenty, more easily at twenty than at twenty-five; and ten thousand times more easily at thirty than at sixty. Samson, while he is young, while yet the sunny locks of his obedience to the moral law lay in waves upon his illustrious shoulders, could meet the young lion that rose against him as easily as if it were a kid. He could do so no longer after his locks were shorn, after his life was sullied, after he had yielded to sensual temptations. When his heart had been corrupted, his will more effeminate, his hopes depraved, you will see him rending lions no longer, but toiling as the drudge of his enemies, the companion of slaves in turning the mill at Gaza. And David, while he was a pure and ruddy shepherd, while his heart was white as the lilies he twined round his harp-strings, and his thoughts as pure as the dew upon their leaves, when a young man uncontaminated by the life of cities, he could fight for his lambs, and with unaided arm overcome the lion and the bear; he could

not do it after that sin with Uriah and with Bathsheba. Then the rustle of a shaking leaf was enough to terrify him, and the crown fell from his head; he became weak as water and fell before his own worthless son, sobbing, barefooted, cursed by his enemies, and followed with those dark spirits of lust and murder. Which of us has not been in one way or other defeated as Samson or David was? Which of us can encounter that poison-breathing lion in the dark caverns of his heart, and strangle it as fearlessly as he might have done? How grandly has Milton expressed this idea that sin is weakness when, in "Paradise Lost" he gives Ithuriel's rebuke to Satan, and proceeds:

So spake the cherub, and his grave rebuke,
Severe in youthful beauty, added grace
Invincible. Abashed the devil stood
And felt how awful goodness is, and saw
Virtue in her shape, how lovely; saw and pined
His loss, but chiefly to find here observed
His lustre visibly impaired.

And again, in the case of our first parents and their unrest and weakness after their first sin. An American writer of genius describes the first transgression which he can remember. "Time," he says, "has led me to look upon my offence more leniently. I do not believe it or any other childish wrong is infinite, as some think, but infinitely finite, but often think—had I but won that battle!" Oh, my brothers, we may be unable to recall the first time we do wrong; the memory of your first transgression may be clouded over by time; but is there one here who does not from his heart regret that he did not win that battle? But let us not despair. It is never too late to fight, never impossible to slay that lion, or to feel that you should tread the young lion and dragon under foot. If the grace of God shows exquisitely in some soul pure from its youth upwards, growing, like the Lord Jesus, in wisdom and

stature, and in favour with God and man, the grace of God shows yet more mightily in the case of those who have been in the fight, those who have lain prostrate in the bloody contest, who have felt the fierce lion's merciless teeth and merciless claws, yet have sprung up again and gathered their strength, have turned rout into resistance and resistance into victory. Who are the special proofs of the irresistible love of Christ and of the irresistible power of God's grace? In whose cases is the grace best shown? Not in Enoch the immaculate, not in Abraham the friend of God, not in John, the hermit of the desert, not in John, the exile of Patmos, not in Stephen with his face like the face of an angel; no, but in the son who was lost and is found, who is rescued from the rags and the far land and the husks and the swine and returned to the pure, rejoicing home; in the Magdalen out of whom He cast seven devils; in the harlot who washed His feet with her tears and wiped them with the hairs of her head; in the publican whom He transformed into an apostle; in the demoniac sitting at His feet clothed and in his right mind. These are the products of His grace, these are the lost, torn sheep over whom the Good Shepherd rejoices, those are the repentant sons for whom the angels strike their harps. You may be weak, you may be bad, you may be corrupt, you may be a defeated man, all your life may hitherto have been wasted. You may have sunk deeper and deeper into the awful abyss and mire of sin. Yet I would give you hope, I would fain kindle your courage, I would fain awaken a spark and rouse it to a glow, and then into a clear and leaping flame. Though your sins be as scarlet, they shall be white as snow. Do not allow the devil to make you listen to those words as though to you they meant nothing. They are God's words to

you, they are Christ's message to you, they are the Spirit's appeal even to you. Are you a drunkard? There is not a drunkard here who may not die a forgiven and a temperate man. Are you dishonest? Have you for years been making profits by the lies and base conventionalities of this or that profession? You can this very day smash your balance; you can melt your unjust weights, and abandon your unfair practices. Is your heart burning with bad passions? Are you a profane person, or a fornicator, or are you laying waste by any sin the inner sanctuaries of your being? There is not one but may become strong and pure in Christ. To some it may be there are sins like lava—smouldering by day, lurid by night. But if you will put away the evil thing and seek God on your knees; if you will summon the shamed and routed and scattered forces of your being to the great battle of God, He will so help you, that far as the east is from the west, so far from you will be the sin which burns your heart. My brethren, because Satan knows that despair is fatal, he will try hard to keep you cynically indifferent, or to drive you to despair. He will whisper to you that you are too far gone, that those hopes, those promises, are for others, not for you. But O, my brethren, they are for you. If you will not put them from you, then you, even you, can still strangle that full-fledged lion, whose claw is in your heart. It is a true saying, and worthy of all acceptation, that Christ Jesus came into the world to save sinners. To save sinners, and therefore to save you; to save the guilty, and therefore to save you; to save the bad, and therefore to save you; and if you will take no words but His very own, take it in these: "I am not sent but to the lost sheep of the house of Israel; I am not come to call the righteous but sinners to repentance."—*Globe.*

SCIENCE IN COMMON SCHOOLS.

BONES.*

BONES are the framework of the human body. If I had no more bones in me, I should not have so much shape as I have now. If I had no bones in me, I should not have so much motion, and grandma would be glad; but I like motion. Bones give me motion, because they are something hard for motion to cling to. If I had no bones, my brains, heart, lungs, and larger blood-vessels would be lying round in me sort of loose-like and might get hurted; but not much, lest it is hard hit. If my bones were burned, I should be all brittle, and you could crumble me up, because all the animal would be out of me. If I was soaked in a kind of acid, I should be limber. Teacher showed some bones that had been soaked. I could tie a knot in one. I had rather be soaked than burned. Some of my bones don't grow snug, and close to my other bones, like the branches to the trunk of a tree do; and I am glad they don't; for if they did, I could not play leap-frog, and other good games I know. The reason they don't grow that way is because they have joints. Joints is good things to have in bones. There are two or three kinds. The ball-and-socket joint, like my shoulder, is the best. Teacher showed it to us, only it was the thigh-joint of a cow. One end was round, smooth, and whitish: that was the ball end. The other end was saucer-like: that is the socket, and it oils itself. Another joint is the hinge-joint, like my elbow. It swings back and forth oiling itself, and never creaks like the school-room

door does. The other joint aint much of a joint. That is in the skull, and it don't have no motion. All of my bones put together in their right places makes a skeleton. If I leave out any, or put some in the wrong place, it aint no skeleton. Cripples and deformed people do not have no skeletons. Some animals have their skeletons on the outside. I'm glad I aint them animals; for my skeleton, like it is on the chart, would not look well on my outside.

This composition is an excellent illustration of "how not to do it." An illustration of so-called science *teaching*, telling facts to children instead of leading them to find out facts for themselves, of learning instead of the acquisition. In this case the fault lies partly with the topic. A child learns by sight and by touch, not by *faith*. While it is possible for an excellent teacher to illustrate an abstract or an abstruse subject, which cannot be seen or touched, so that the child may grasp the essential points, it is not probable that one in a hundred of those now engaged in teaching will do so without too great an expenditure of time. Teachers as well as housewives often fail to remember that children and uneducated persons are able to grasp but one idea at a time. The above composition shows plainly that too many words were used in the attempt to give too many ideas to the child in too short a time. Professor Hyatt ("Science Guide," No. 1, p. 6), has well expressed the creed of those who are advocating elementary science in public schools, when he says: "The idea is not to teach, but to lead the mind to work out for itself the simple physical problems herein described,

* Composition by a boy in one of the lower grades of a New England grammar school.

and thus almost unconsciously to arrive at the conclusions. The time spent in making each step is, therefore, of no consequence. The quality of the knowledge gained, and not its quantity, is alone to be considered. This sort of knowledge cannot be given by another to the scholar: it must be gained by work."

The following composition, also the work of a boy in a New England grammar school, is an example of "how it may be done," and done, we venture to say, successfully; for, in clearness and accuracy, it will compare favourably with the answers to examination questions on similar topics written by boys of seventeen or eighteen in our higher schools.

IRON ORES.

This morning the teacher passed each boy three specimens. One of the boys brought his specimens to the desk, and the teacher tried them with a magnet. One of them was reddish, the other was yellowish, and the other was black. The yellowish one and the reddish one we found was not magnetic, but the black one was magnetic. These specimens were all iron ore, from which iron is obtained. From the black ore, we found that the best iron is obtained from it. We were then told to rub each specimen on a piece of paper. The red specimen made a red mark, and the yellow specimen made a yellow mark. From the other specimen, which was black, the most of us could not make it mark on account of its hardness; but our teacher told us if there were some powder on it, we could make it mark a black streak. Then the teacher took some small pieces of the yellow ore and put them in a test-tube, and held the tube over the flame of an alcohol-lamp, and each line filed around to see what it formed in the tube, which was water. There was no water in the tube when

the ore was put in, therefore it must have come from the ore. This ore is called limonite or bog-iron ore, because it has so much water in it, and is found in wet, marshy places. The name of limonite came from a word meaning meadow. The teacher then took them out of the test-tube, and tried them with a magnet, and found they were not magnetic. It was proved that they were not pure iron, because they would not stick to the magnet. We found that these pieces of iron ore contained iron and oxygen, therefore they were iron oxides. When these pieces were rubbed on paper they made a streak like the red ore. The name of this red ore is hæmatite, which means blood-red. Hæmatite is composed of iron, oxygen, and no water; and once it was supposed to be limonite, and the water driven out of it by the heat of the earth.

Teacher then took the pieces of limonite which was heated in the test-tube, and put them in a piece of charcoal, which is a form of carbon, and blew the flame of an alcohol lamp on the charcoal by a blow-pipe. After she got the most of the oxygen out of the pieces, she then took them on a piece of paper, and tested them with a magnet, and found the smallest pieces were magnetic, because they were heated the most. The black ore is magnetite, which contains the best iron.—*Ellen H. Richards.*

The composition on bones, by a boy nine or ten years old, who has been made a subject for science teaching, illustrates very strongly the dangers that lie in the way of a too early introduction to too difficult matter. It is by no means a bad specimen of the way in which a scientific lecture is reproduced in the young student's mind; it is, on the contrary, a remarkably favourable one. A great part of the information conveyed has been properly assimilated,

and made a part of the real furniture of the boy's mind; and it is reproduced with vigour and originality. It is very different from a mere committing to memory of hard names, which might have been the effect; but it has still important warnings to convey.

The wise teacher will always take the examination papers of her brighter pupils as a sure and searching test of the value of the instruction which she has endeavoured to give. There are three plain and easy lessons which she will derive from the one before us. She will shut her eyes to the unchild-like and uncanny air of "smartness,"—the *gamin*-like quality which is attractive in a French novel, but nauseating in real life in America; and she will attend only to the scientific ideas expressed. She will draw two morals for her next lesson on bones, and one for her scientific teaching in general. She will see that the connection between bones and the general idea of motion is far too difficult to be given to a young child. Hereafter she will tie strings or elastic bands to sticks, perhaps, and show how particular movements may be affected; but she will omit to give principles in regard to the production of motion in

general. She will also refrain from calling the bony outside of certain animals a skeleton. Such fanciful extensions of the meaning of popular names will do for older children; but older children can also learn to say "exoskeleton" and "endoskeleton," and the content of a name in a child's mind is a matter which is no more to be trifled with than the logical sequence of ideas. In the third place, the teacher will notice—what she has often noticed before—that it is a hazardous thing to supply a young child with reasons. Facts may be safely given in any amount, so long as they are simple, and such as he could find out for himself if put in the proper circumstances; but reasons should be given as sparingly as possible. He has not yet any means of knowing what kind of a thing a reason is; and it is of the utmost consequence that he should not be hopelessly set adrift on this subject. Probably the most characteristic of all the qualities of the untrained mind is the facility with which it is able to give a reason for every thing that happens.—*Christine Ladd Franklin in Science*. [The above is intended for the science this month.]
—EDITOR SCIENCE DEPARTMENT.]

NOTES FOR TEACHERS.

PROF. HUXLEY said in a recent lecture:—"I have said before, and I repeat it here, that if a man cannot get literary culture of the highest kind out of his Bible, and Chaucer, and Shakespeare, and Milton, and Hobbes, and Bishop Berkeley, to mention only a few of our illustrious writers, I say, if he cannot get it out of those writers, he cannot get it out of anything; and I would assuredly devote a very large portion of the time of every English child to the careful study of the

models of English writing of such varied and wonderful kind as we possess; and, what is still more important and still more neglected, the habit of using that language with precision, and with force, and with art. I fancy we are almost the only nation in the world who seem to think that composition comes by nature. The French attend to their own language; the Germans study theirs; but Englishmen do not seem to think it worth their while."

LORD ASHBURTON, in an address to schoolmasters, said:—"No knowledge, however profound, can substitute a teacher. A teacher must have knowledge, as an orator must have knowledge, as a builder must have materials; but, as in choosing the builder of my house, I do not select the man who has the most materials in his yard, but I proceed to select him by reference to his skill, ingenuity and taste—so also in testing an orator or a teacher, I satisfy myself that they fulfil the comparatively easy condition of possessing sufficient materials of knowledge with which to work; I look then to those high and noble qualities which are the characteristics of their peculiar calling. There were hundreds at Athens who knew more than Demosthenes, many at Rome that knew more than Cicero, but there was but one Demosthenes and one Cicero."

It becomes the sacred duty, not less than the high privilege, of the schoolmaster of the poor to foster and protect the boy of genius, struggling amid the pressure of indigence and persecution. When his heart is about to sink under the conflict, let him be told of the triumphs of those kindred spirits who have gone before him—Thomas Simpson, who studied mathematics at the loom; Hugh Miller, who mused on geology when he was hewing stones; Michael Faraday, who made chemical experiments when he was a journeyman bookbinder; Ferguson, who watched the stars as he tended his flocks; Gifford, who studied Latin when he was making shoes; Peter Nicholson, who wrote his work on carpentry when he was at the bench; Robert Burns, who carolled

his sweetest songs as he followed the plough; Benjamin Franklin, who drew the lightning from the clouds when he kept a printer's shop.—*Tate's Philosophy of Education.*

HISTORY OF CORPORAL PUNISHMENT.—An interesting sketch under this name is published in the July number of the *Revue Pédagogique*. Among other things it contains a summary of the leading laws of several German states on this subject (1862-84), of which the following points may be mentioned:

Causes for which corporal punishment may possibly be inflicted.—Insubordination, obstinacy, habitual lying, incorrigible laziness, cruelty toward animals or toward the weak, and other indications of low feeling; misconduct; cutting trees, in case of a second offence; theft of a certain importance, etc.

Age and Sex.—In the case of girls, corporal punishment should be resorted to in exceptional cases only, and then be managed with great care. As a general thing, children of both sexes are exempt from corporal punishment as long as they are not eight or nine years of age. In Baden the latter applies also to children of weak constitutions.

Marks left.—Decision of the Prussian Supreme Court: "Bruises or discolouration of the skin of the child are, in themselves, no evidence of a transgression of the limits of allowable punishment."

Abolishment of corporal punishment in France.—In France the Gordian knot of the use and abuse of the rod has been cut with one stroke by the Regulation of July 18, 1882: "It is absolutely prohibited to inflict corporal punishment of any kind."

GEOGRAPHICAL NOTES.

AT the present rate of decrease, the Maori race of New Zealand will have disappeared by the year 2,000 A.D., or thereabouts. The natives numbered over one hundred thousand in Captain Cook's day; now, there are not forty-five thousand of them in all.

A LAKE OF PAVING MATERIAL.—In about the centre of the Island of Trinidad, a dot in the Caribbean Sea, just off the coast of Venezuela, there is an asphalt lake. It is said to cover about one hundred acres, and is apparently inexhaustible. It is a black, sandy substance, and is believed to be crude rotten petroleum. A singular feature of the substance is that although about fifty thousand tons are taken out annually, it continually fills up, so that there is no lessening of the supply. This singular lake of paving is leased to a company in Washington.—*Tidings from Nature.*

THE Temiscamisque Country, which is now being rapidly settled, is described as an agricultural district of great wealth. A number of rich St. Jerome farmers have recently visited that country with a view to settling, and after a thorough exploration described it as the richest agricultural district they have ever seen. The country for many miles from the lake shore is level and the bush is very light hard wood, easily cleared. Settlers are pouring in every day and lots are being taken as fast as they are surveyed. The Temiscamisque Colonization Society have the matter of settlement in hand.—*Montreal Witness.*

STANLEY says the length of the Congo River is 2,100 miles, and that

the Mississippi and the Nile together would scarcely equal its tribute of water to the ocean. From the mouth of the river a steamer drawing fifteen feet can steam up 110 miles, at which point a land journey of fifty-two miles is taken on account of the rapids. Then another standing or rowing voyage of eighty-eight miles occurs, which is succeeded by a land journey of ninety-five miles. After that it is possible to steam up another 1,060 miles. Along this route thirteen stations have been constructed among peaceful tribes.

THE WHALE.—The great whale, which has every season for many years past grown scarcer and scarcer, seems this summer to have reached almost vanishing point. The ships which are at present on the battling grounds on Davis Strait and Baffin's Bay are still to be heard from. But those which have tried their luck in the Spitzbergen Sea have, in several instances, returned with poor cargoes, and with tidings of the vessels afloat which do not hold out much promise of tempting profit. A few whales have been captured here and there, but the scanty freight has often been eked out with "bottle-noses" and belugas, or white whales, in the pursuit of which the lordly skipper of palmier days would have scorned to launch his boats.—*The Standard.*

ONTARIO FIFTY YEARS AGO.—In 1835, when the agricultural population of Upper Canada was only to be found along the shores of Lakes Ontario and Erie, and the entire Huron tract was practically unexplored, the two great landed proprie-

tors were the Crown and the Canada Company. It had then become necessary to abandon the free grant system, and regular sales of land by auction were held, the prices varying from one to three dollars per acre. In the few settled townships there was but one person to every thirty-two acres. About this time the real settlement of the Province began. Special inducements were offered to families, and just because the long sea voyage and the weary, expensive journey from Quebec were only possible to persons of endurance and resources the pioneer settlers of Ontario were the choice bone and sinew of the old land. If luxuries were scarce, good wholesome food was cheap; if clothing and travelling and postage were very dear, agricultural labourers and artisans could demand high wages, considerable additions to the population were made every season, and the 310,000 of fifty years ago has become the two millions of to-day—a God-fearing, sober people, in a land of plenty, with an unrivalled climate, enjoying all the amenities of civilization, and the most perfect civil and religious liberty.

THE GREAT CANALS OF THE WORLD.—The Imperial Canal of China is over 1,000 miles long. In the year 1861 was completed the greatest undertaking of the kind on the European continent—the Canal Languedoc, or Canal du Midi—to connect the Atlantic with the Mediterranean; its length is 148 miles, it has more than 100 locks and about 50 aqueducts, and its highest part is no less than 600 feet above the sea; it is navigable for vessels of upward of 600 tons. The largest ship canal in Europe is the great North Holland Canal, completed in 1825—125 feet wide at the water surface, 31 feet wide at the bottom, and has a depth of 20 feet, it extends from Amsterdam to the Helder, 51 miles. The Caledonian Canal in Scotland has a total length of 60 miles, including three lakes. The Suez Canal is 88 miles long, of which 66 miles are actual canal. The Erie Canal is 350½ miles long; the Ohio Canal, Cleveland to Portsmouth, 332; the Miami and Erie, Cincinnati to Toledo, 391; the Wabash and Erie, Evansville to the Ohio line, 374.

NOTES FROM BRITISH COLUMBIA.

THE appearance of another number of *THE EDUCATIONAL MONTHLY* suggests that I should send you a few "notes." The two leading educational events of the past few months are the examination of teachers and the organization of a Teachers' Institute for the Province. The examiners appointed by the Government for this year were the Superintendent of Education, Rev. D. Fraser, M.A., and Mr. F. G. Walker, B.A., Cantab. The examinations commenced on the 6th of July; seventy-one candidates sat, of whom fifty-seven were successful, although quite a number had to content

themselves with lower classes and grades than those for which they applied.

About thirty teachers applied for renewal of first-class certificates, which by law are renewable year by year, as long as one is actually teaching, and can furnish satisfactory proof of success in his work.

At the close of the examinations came the organization of the Teachers' Institute. The attendance was large and great interest in the proceedings was manifested throughout. The following officers were elected: President, S. D. Pope, B.A., Superinten-

dent of Education; Vice-President, J. N. Muir, B.A., Principal, High School, Victoria; Secretary-Treasurer, R. A. Anderson, Cedar Hill, who, together with Mr. D. Wilson, B.A., of New Westminster, and Miss Story, of Victoria, compose the Executive Committee.

We have two High Schools in the Province, the attendance at which has exceeded the most sanguine expectations of the friends of higher education. These are situated in Victoria and New Westminster. The people of Nanaimo are now impor-

tuning the Government for the establishment of a High School in that city, and the indications are that the important districts of Chilliwack and Cowichan will soon follow suit.

The necessity for a normal school is being more and more strongly felt, and it is believed that the question of establishing such an institution will come up before the next session of the Legislature.

With the increase of population the number of public schools is steadily increasing, and will soon reach one hundred. D.

CORRESPONDENCE.

To the Editor of THE MONTHLY:

SIR,—In common with many others, I am deeply interested in the welfare of our local High School, and anything affecting its revenue is to me a matter of concern. Our municipality supports our school liberally; on some occasions we give as much as three hundred dollars towards its maintenance. This, of course, is in addition to the Legislative and County Grant, and the possibility of us having to increase this grant is the occasion of this letter. Our grant from the Department for the last few years has been steadily on the down grade. We receive good reports of the efficiency of the school from the Inspectors, and, as far as my observation goes, they are correct, and yet our grant is being constantly docked. Will you undertake, sir, to explain this? Our reports, results of examinations, equipment are decidedly su-

perior to what they were a few years ago, and yet we receive less, decidedly less, than we did then. In our last statement of Government money a certain sum is first added and then deducted by the reigning powers, "so as to bring our grant within the approximation." What is the meaning of this, Mr. Editor? Can you explain it? There is no one on our Board who understands what it means, and we have always had the reputation of being moderately intelligent. We have consulted our High School teacher and some members of our local council, and we cannot solve the question. A friend suggested that I should ask you, and I hope you will not consider it impertinent in me taking this liberty. Hoping you will excuse any mistake in this brief communication, as I am not in the habit of writing for publication.

Yours, etc., X.

EDITORIAL.

A PROFESSION.

AN EMPLOYMENT REQUIRING A LEARNED EDUCATION.

WE often hear the phrase, "the teaching profession," though we remember hearing one of the best and most learned teachers in the Province object to the expression. There is no such profession, he stated. We have the legal, the clerical and the medical professions; no one cavils at these societies assuming the designation of profession. Do teachers require a learned education for the proper and efficient discharge of their duties? Every one conversant with the question, and competent to form a judgment, will at once admit the importance of their office and the arduous nature of their work. If all grades of teachers be considered as a unit, from the public school teacher to the college professor, all intelligent people will, without much hesitancy, grant in face of the words at the beginning of this article, the correctness of the time-honoured phrase, "a profession," as properly describing the public servants known to society as teachers. And we add that it is our belief that more college-bred men will be found in the ranks of the teaching profession than in that of either medicine, law or divinity. If teaching, then, be a profession, it is timely and pertinent to ask, Has it the rights and privileges of the other learned professions? Upon the very edge of the inquiry we are met with the special peculiarity that in the case of each of the other three professions each of them has the exclusive right to say what are to be the conditions of admittance, and in some of them sureties are required to vouch for the good standing of the applicant and

his good behaviour in the future, at least as regards his monetary engagements, to his profession. Furthermore, the members exercise unquestioned control as to preparation, attainments and character: often a large entrance fee is exacted as well as an annual payment of dues. How stands the case with the teachers? Have they any say as to admission, preparation, attainments or character? Not a word more than any member of the community. Not only is the case thus, but the Government offers inducements by giving free tuition, paying travelling expenses, giving books, and an allowance for board.

The effect is what any one might easily and clearly have foreseen. Teachers are not held in the same esteem as the other learned professions, and the emoluments are so inadequate that no man of talent or high academic standing, except in a few cases, ever thinks of making teaching his life-work. This result we hold to be the legitimate fruit of the policy pursued towards teachers in the past. If the State should bind itself to provide a fairly comfortable living for the teacher when he has spent his energies in the public service, then there might be some good ground to enter a plea in defence of the past and present plan of preparation for his professional duties; but now that the pension scheme has been withdrawn, and the teacher left to shift for himself, the Government has forfeited all the claim it may once have had to provide for his education, and the matter may now safely be left to the general law of demand and supply. The system now stands as an example of the Executive having departed from a very important com-

fact to prepare and license men for a particular work, and to come to their aid in old age, enabling them to live in reasonable comfort. The latter part—the humane part—the Government has repudiated, and the teachers of the country, men and women, are left to devise some means of meeting this serious state of affairs. We expect when the intelligent citizens of our Province understand the serious consequences involved in the changes recently introduced into our system of school management that they will insist upon one of two things—either that the Government shall discontinue its efforts to prepare teachers for their work, or else restore, in all its integrity, the humane system devised by the late Chief Superintendent for the assistance of men and women who had spent their best days in the public service.

A most important step was taken in this direction by the High School Masters' Section at the last meeting of the Ontario Teachers' Association. It is evident that the time has come for masters to recognize the duty they owe to themselves and to their country by forming a much closer union than that afforded by the Association, though that has been important in its effects upon the education of the country. It has given us pleasure to observe one teacher after another all over the country recognizing that in the interests of the real life of education, the educators as a united body should make their influence felt. Not long since we had at the head of our Education Department one whose chief work and pride it was to look after the best interests of the country educationally, to consider in a friendly spirit the efficiency and comfort of the educators; we had a council of gentlemen, able, learned and above suspicion, in the administration of school matters, and on this council the teachers of the country had representatives. Where, now, are all these

pledges of good government, these guarantees of good faith, decency and honour. How has it come about that the rights of intelligent electors, Public School masters, High School masters and teachers have been ruthlessly withdrawn? Has the country profited by the changes which have been made during the last few years? Has education advanced intelligently under the new management? Have teachers gained in any way by the constant run of changes to which they and their schools have been subjected? To these matters we shall refer again. Meanwhile we earnestly ask the friends of education to consider, discuss and write about those vital questions, for such discussion the pages of this magazine are open.

WHY SHOULD NOT THE BIBLE BE TAUGHT IN PUBLIC SCHOOLS?

IS it so difficult as some persons think for a sensible teacher to read, *and teach*, the Bible in a public school without teaching the theology of a particular sect? Is there, after all, so much "wrangling" among the various "sects" in Canada? A minister in one of our cities or towns preaches, say a hundred, sermons in the year. In how many of them does he deal with controverted points? Probably not in more than four or five; in some cases not in more than one or two. That is to say, ninety-five per cent. of the sermons preached are on the great themes about which all the churches are agreed; for it is becoming clearer every year that the points on which Christians are agreed are both far more numerous and vastly more important than those on which they differ.

May we not, then, trust the average teacher to deal wholly with those great themes which lie on the surface of the Bible, and are wrought into the texture of Biographies, and Psalms, and Gospels, and Epistles? May we not

be sure that courtesy and common sense will restrain the Episcopalian teacher from entering into an argument before Presbyterian pupils about the necessity of a diocesan bishop to the existence of a true church, or the Presbyterian teacher from propounding predestinarianism, or the Baptist teacher from insisting on immersion, or the Methodist teacher from desecrating on the value of the class meeting? Doubtless, there would be exceptions: some small minds would seize the opportunity of trying to make the little ones say "Shibboleth"; but the instances would be rare, and the evil-doers would be condemned by the public opinion of the profession. Besides, if a teacher should prove incorrigibly sectarian, the remedy, is close at hand.

Why, then, should not the Bible be in the hands of both teachers and scholars to be used every day? The "Scripture Readers" authorized are good; but the book containing them will not be in the hands of scholars; and every teacher knows the importance of having the eye as well as the ear exercised in order to secure that the contents of what is read shall be mastered. Besides, the "Regulations" prescribe that the selections "shall be read without comment or explanation." The teacher must not so much as tell the children from what book in the Bible the selection is taken! Nor is he at liberty to explain where Bethel was, or in whose reigns Isaiah prophesied, or what is the meaning of John the Baptist being "not worthy to unloose the shoe's latchet" of Jesus. In the name of common sense, why not? And further, why should not every teacher be permitted and encouraged to emphasize the *religious* lessons contained in the selections? Is it impossible to distinguish between teaching religion and teaching theology? We shall recur to this point.

ADMISSION TO HIGH SCHOOLS.

Is the upper limit of Public School work ability on the part of the scholar to pass the examination for admission to a High School? Is it to be assumed that, as soon as a pupil has attained to the standard for entrance to the High School, therefore, he should not be any longer in the Public School? If this is not so, how is it that we hear of examinations being held at points in different counties, other than at the High Schools? We should say that the tendency of such arrangement is to entice unduly young scholars to leave the primary and to go into the secondary school. It may be safe and proper to order that no child should leave school to engage in any industrial pursuit till he has a certificate of having passed the examination for admission to a High School. But to make arrangements to facilitate or induce scholars to leave the Public School is neither proper nor safe; and as such we regard the practice which is growing up amongst us. It is not necessary that we should point out the results which are sure to follow the adoption of the practice to which we have referred without some safe-guard: an increase of a class of teachers already too numerous, viz.: those holding permits and third-class certificates, lower salaries, general lowering of the standard of Public Schools. On the other hand, are High Schools to be restricted to pass pupils only? Is the father of a boy eleven or twelve years old to be told "your son has not passed the entrance examinations, and, therefore, he cannot be admitted" even if the father wishes his boy to be prepared for a university course? This is a question which is continually coming up for answer in our secondary schools. Is the master to be powerless in dealing with a case of this kind? The master is not at all as-

sisted when he recollects what the entrance examination has been for years.

Not only is the attempt made by it to ascertain who are prepared to begin the High School course, but also to show teachers in the Public Schools how the subjects on the programme should be taught. By the effort to instruct the teachers the entrant suffers. It seems to be settled policy at the Education Office to assume the patience and docility of teachers; the ability and infallibility of examiners, and that teachers must be to blame for any unsatisfactory results connected either with schools or examinations. May we humbly quote Mr. Mundella's words to his interviewers: "I beseech you believe that you may be mistaken." The characteristic part in the Public School programme is the three R's; in the High School preparation for the universities; in the university the infinite in human knowledge. These programmes must overlap: what they lose in symmetry they gain in usefulness; but beyond these, over all these, liberty, more liberty to the men who carry the burden in these schools.

INSPECTION.

THERE is a good deal of feeling at present about the inspection of schools, especially among High School Masters. All the masters are familiar with the manner in which this work is performed, and from their standpoint the case may be very briefly presented.

Masters and teachers must possess the legal qualifications in order to be engaged by the local authorities of the different High Schools. These qualifications, the programme of studies, the kind of school building, its furniture and equipment, are all fixed by the rules and regulations of the Education Department, and to that Bureau regular certified returns are made. In addi-

tion to this the pupils from time to time pass certain examinations prescribed by the Department, and in many cases by the colleges and universities. The inspector is an official appointed by the Government to visit the schools at stated times in order to ascertain from personal observation whether the laws and regulations are complied with, and if matters are found satisfactory a small grant (which year by year is becoming less) is made to each High School by the Education Department. Here, we think, with safety to all parties the inspector's duty should end; but, in addition to this, we have in his report remarks about the efficiency of the staff and other particulars which we hold are quite outside the sphere of the inspector's duty, and which lead to wrong inferences and invidious distinctions, because these reports are forwarded to the Department, returned to the Board of Trustees, and in some cases published in the local newspapers. Many reasons might be given to show that such a state of matters is unfair and undesirable. The masters possess the legal qualifications and also practical experience in school-keeping gained by everyday knowledge of the work in which they are engaged; in not a few cases they have as high scholastic attainments and longer experience in dealing with young people than the government official; besides this, the inspector is present in the school for a very short time and is a stranger; the pupils become flurried and neither do themselves nor their teacher justice; or it may happen that on the occasion of his visit the attendance may be small and the best pupils absent. In judging also of the master's management, it is not unreasonable to suppose that he knows more about the local needs of his school than a stranger. It may

here be suggested, that if, in the exercise of his duty, the inspector feels bound to note errors in management or immaturity of judgment, it were well to mention these things to the master himself at least more than once. We unhesitatingly affirm that it is neither in the interest of the schools nor favourable to the existence or continuance of good-fellowship to have periodical visits from men who appear to be only too ready to report unfavourably, and who are not in a position always to judge with fairness respecting the diligence or efficiency of the masters. Holding this opinion, we therefore venture to ask the following questions:— Should there be any inspection of High Schools? Does the present system of inspection exert a healthful influence upon the school or strengthen

the position of the masters and teachers? Should any grant of money be made by the Government? Are secondary schools treated in the same manner in any other country?

Surely in these days of examinations, conducted by the Education Department, the College and the University, there is no lack of trying tests; no lack of opportunity, recognized diligence and efficiency. But the infallible proof is furnished by the class of men and women our High Schools turn out. Do they show application, power, and truthfulness? Do they walk according to the principles of honesty and common sense? Are they fit for life's work? If so, then, no official's report can shake the confidence of a discerning public in the schools, or weaken the influence of the masters.

SCHOOL WORK.

MATHEMATICS.

ARCHIBALD MACMURCHY, M.A., TORONTO,
EDITOR.

SOLUTIONS TO QUESTIONS IN APRIL NUMBER.

By Geo. Ross, Math. Master Galt Coll. Inst.

17. Draw $BD = AC$ and DF at right angles to AD to meet the bisector AF in F as indicated. Produce CA to E and make $AE = AB$, join EB . Then angle $AEB = \frac{1}{2}$ angle $BAC =$ angle DAF ; also $EC = AD$. \therefore triangles EBC and DAF are equal in all respects, \therefore etc.

18. If we join the centre with each of the angular points, it can be readily shown that one pair of opposite angles is equal to the other pair. Since the four angles of every quadrangle equal four right angles, the proposition follows.

19. If BAC and BDC are angles in the same segment, then join B and C to a point F in the remaining segment of the circle. BAC and $BFC = 2$ right angles, also BDC and $BFC = 2$ right angles, etc.

20. The converse of first part of 18 can be deduced indirectly by describing a circle through three of the points of a quadrangle, and supposing it to cut the fourth side in a point other than D .

21. Let P be point of intersection of circles about ACQ and BCR . Draw AF and BF at right angles to AC and CB , then F is centre of a circle passing through A and B and cutting $QABC$ at right angles. If P lies on this circle then must angle $AFB = 2(2$ right angles $- APB)$; but since angle $AFB = 2$ right angles $-$ angle ACB , we must have 2 angle $APB = 2$ right angles $+$ angle ACB . Now angle $APB = 4$ right angles $-$ angles $APC -$ angle $CPB = 4$ right angles $- (2$ right angles $-$ angle $CQA) - (2$ right angles $-$ angle $CRB) = CQA + CRB = CAQ + CBR$
 $=$ right angle $- \frac{1}{2}$ angle $BCR +$ right angle $- \frac{1}{2}$ angle QCA
 $= 2$ right angles $- \frac{1}{2} (2$ right angles $-$ angle $ACB)$
 $=$ right angle $+ \frac{1}{2} ACB$, \therefore etc.

22. Let AD and BE intersect in R , CF

and AD in Q , BE and CF in P . Triangle $ABD : AED :: BR : RE$, but ABD is $\frac{2}{3} ABC$ and AED is $\frac{1}{3} ADC = \frac{1}{3} ABC \therefore BR = 6 RE$. Similarly $AQ = 6 QD$, and $CP = 6 FP$. Again, $ABR = \frac{2}{3} ABE = \frac{2}{3} ABC$, and $BRD = ABD - ABR = \frac{1}{3} ABC - \frac{2}{3} ABC = -\frac{1}{3} ABC$, $\therefore AR : RD :: 3 : 4$. Hence, if $AR = 3$, $RQ = 3$, and $QD = 1$. $\therefore PRQ = ARP, = \frac{2}{3} ABE, = \frac{1}{3} ABC$.

UNIVERSITY OF TORONTO.

ANNUAL EXAMINATIONS: 1885.

Junior Matriculation.

MATHEMATICS.—PASS.

Examiners { A. K. Blackadar, M.A.
J. W. Reid, B.A.

1. If two angles of a triangle be equal, the sides opposite them shall also be equal.

Draw a straight line so as to divide a given right angled triangle into two isosceles triangles.

2. If a straight line be divided into two equal, and also into two unequal parts, the rectangle contained by the unequal parts, together with the square of the line between the points of section, is equal to the square of half the line.

3. Angles in the same segment of a circle are equal.

Also, state and prove the converse of this proposition.

4. Find the radius of a sphere whose volume is equal to the sum of the volumes of three spheres whose radii are 7, 8 and 9 feet respectively.

5. I borrow \$6,000, agreeing to pay principle and interest in four equal annual instalments. Find the annual payment, interest being calculated at 5 per cent.

6. The present income of a railway company would justify a dividend of 6 per cent., if there were no preference shares; but as £400,000 of the stock consists of such shares which are guaranteed $7\frac{1}{2}$ per cent. per annum, the ordinary shareholders receive only 5 per cent. Find the amount of ordinary stock and the company's income.

7. Prove $\frac{y-z}{1+yz} + \frac{z-x}{1+zx} + \frac{x-y}{1+xy}$

$$= \frac{(y-z)(z-x)(x-y)}{(1+yz)(1+zx)(1+xy)}$$

Show that if $a+b+c$ is zero, the expression

$$\frac{a^2}{2a^2+bc} + \frac{b^2}{2b^2+ca} + \frac{c^2}{2c^2+ab} \dots 1$$
 is also zero

8. Prove the rules for finding the G. C. M. and L. C. M. of two algebraic quantities.

Find the G. C. M. of $x^2 - (2a+b)x^2 + a(2a+b)x - a^2(a+b)$, and $x^2 - (2b+a)x^2 + b(2b+a)x - b^2(b+a)$,

and the L. C. M. of $a^3 + b^3 + c^3 - 3abc$ and $(a-b)^2 + (2a+c)(2b+c)$.

9. Solve the equation $ax^2 + bx + c = 0$, and state and prove the relations between the roots and the co-efficients of the equation.

If α and β be roots of the above equation, find the values of $\frac{\alpha}{\beta} + \frac{\beta}{\alpha}$ and of $\alpha^2 + \beta^2$.

10. Solve the equations:

(1) $3x(x-101) + x + 495 = 0$.

(2) $x + 2 = \frac{x^2 + 8}{x^2 + 5}$.

(3) $\begin{cases} x+y+z = a+b+c \\ bx+cy+az = cx+ay+bz = bc+ca+ab. \end{cases}$

MODERN LANGUAGES.

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

EXERCISES IN ENGLISH.

1. Select, classify and give the relation of the phrases in the following:—

(a) Calling his officers together he laid before them his plan of attack.

(b) To punish them he kept them in at noon to finish it.

(c) In the evening they returned to the camp, laden with plunder.

(d) On these conditions the agent of the company offered to accompany him.

(e) After a short rest they resumed their journey in the hope of reaching the camp before night.

2. Contract the following into simple sentences:—

(a) He left orders that the rest of the force should follow him.

(b) He entered the carriage and drove off at full speed.

(c) It was not till the following day that he learned the news.

(d) As there was no one in the office I left a note for him.

(e) It might be as well that you should make another copy of it.

(f) Those who desire to compete must notify the secretary.

3. Combine the following groups into single sentences:—

(a) I struck a light. I took a survey of the room. It contained a stove. It contained a supply of bed-clothing. I rejoiced to see this.

(b) The bloodhound had broken loose. It had missed its master. It had gone in search of him. It had found him. It saved him from death. It was just in time. The death would have been a horrible one.

(c) He equipped himself thus. He advanced to the wall. He leaned on his sword. He did so with a pompous air. He listened to the herald. He did so coolly. The herald advanced. He summoned the village to surrender.

4. Change to indirect narrative:—

Before he died he paid the victorious army this magnanimous compliment: "Since it was my misfortune to be discomfited and mortally wounded, it is a great consolation to me that I have been vanquished by so brave and generous an enemy. If I could survive this wound, I would engage to beat three times the number of such forces as I commanded this morning, with a third of British troops."

5. Supply the ellipsis in each of the following:—

(a) He looks better than when I last saw him.

(b) It seems as if he were afraid to try.

(c) It is better to do that than to starve.

(d) I could not but feel sorry for him.

(e) Wherever tried they have given satisfaction.

(f) When not in use it should be kept covered.

6. Rewrite in prose order:—

(a) And his chief beside, smiling, the boy fell dead.

(b) When to battle fierce came forth all the might of Denmark's crown.

(c) Till a feeble cheer the Dane to our cheering sent us back.

7. Divide the following into clauses, and tell the nature and relation of each:—

(a) *On a rock, whose haughty brow
Frowns o'er old Conway's foaming
flood,*

*Robed in the sable garb of woe,
With haggard eyes the poet stood.*

(b) *As o'er the verdant waste I guide my
steed,*

*Among the high, rank grass that
sweeps his sides,*

*The hollow beating of his footsteps
seems*

A sacrilegious sound.

(c) It is possible that in his anxiety to find out where they went after leaving the boat he may have lost his way.

8. Parse the italicized words in the preceding sentences.

9. Write (a) the plural of calico, lasso, scarf, beef, chief, diary, valley, oasis; (b) present participle and 3rd singular, present-perfect indicative of lose, undo, deny, prefer, mistake, permit.

10 Give two examples each, of an infinitive phrase, equivalent to a noun, an adjective, an adverb.

11. In what is a relative said to agree with its antecedent? Show its agreement by examples as far as you can.

12. Give two examples of the misplacement of the word *only* and of *her* wrongly used for *she*.

13. What do the following contractions stand for respectively:—Rev., Dr., Hon., Co., do., Bp., M.P., J.P., e.g., i.e., a.m., viz.?

14. Which is correct?

(a) The committee consist (*consists*) of Messrs. A, B and C.

(b) Every boy and girl in the school are (is) interested.

(c) He was overcome by (with) the heat.

(d) He dropped it in (into) the water.

(e) There is a boy whom (who) I think knows it.

(f) I'd just as leave (lie) go as not.

15. Point out any misused words in the following, and substitute proper ones:—

- (a) It is funny that you did not see us.
- (b) He was learning them to make nets.
- (c) We were stopping with some old friends.
- (d) I expect that he forgot to tell her.
- (e) They felt sort of lonesome at first.
- (f) Most every girl in the class has one.
- (g) He is plenty old enough to try.
- (h) The stage will start inside of an hour.

16. Give sentences illustrating the differences between

- (a) Emigrant and immigrant.
- (b) Precede and proceed.
- (c) Accede and exceed.
- (d) Tract and track.
- (e) Troop and troupe.

17. Indicate the pronunciation or soiree, leisure, grimace, hearth, ally, vaccine, decadé, forehead.

18. What other words are pronounced in the same way as ere, fair, hues, pours, vain, sight, choir, meat.

19. Correct any errors (giving your reasons) in the following:—

- (a) He told her she could go if she liked.
- (b) She hadn't an answer correct, hardly.
- (c) Is there any boy that don't know how to do it?
- (d) Were either of the girls at church last night?
- (e) I will not be sorry when you and her leave.

(f) It may have been she that you seen talking to him.

(g) Haven't you no idea who done it?

(h) One of the girls that goes to the Model School gave it to me.

(i) Nobody but Tom and me know how it was done.

(j) Who were you talking to when Mary and me passed you.

20. Point out the main fault of the following sentences, and show it may be remedied in each case.

(a) I received the books yesterday, and I am very much pleased with them, but you sent me one too many, but I find I may need it, and so I will keep it.

(b) He returned to England in 1839, and the next year he was persuaded to enter

parliament, but he soon lost his seat, and then he retired and pursued his literary tastes, and died suddenly in 1859.

UNIVERSITY OF TORONTO.

ANNUAL EXAMINATIONS, 1885.

Junior Matriculation.

ENGLISH.

Examiner: T. C. L. Armstrong, M.A.
LL.B.

I.

Composition: All Candidates.

The St. Lawrence: Its grandeur and its history.

II.

Grammar: All Candidates.

1. *Fair* as the earlier *beam* of eastern light,
When *first*, by the bewildered pilgrim
spied

It smiles upon the dreary brow of night
And silvers o'er the torrent's foaming
tide,

And lights the fearful path *on mountain*
side;

Fair as that beam, although the fairest
far,

Giving to horror grace, to danger *pride*,
Shine martial Faith and Courtesy's bright
star,

Through all the wreckful storms that
cloud the brow of War.

(a) Write out and classify the separate clauses, and parse the words in italics.

(b) Write etymological notes on: as, when, first, pilgrim, torrent, danger, martial, courtesy, that.

(c) Give other forms for: beam, by, pilgrim, path, courtesy, through, cloud, of.

(d) Substitute classical words for: fair, earliest, beam, eastern, smiles, fearful, faith, brow.

(e) Explain the origin and uses of the various adjective and noun affixes in the extract.

(f) Name the stanza: Scan and name the first and the last line, and show how they differ from prose.

(g) It smiles. What rule of Syntax does the inflection of the verb follow here? State some of the subrules under the general rule.

III.

Grammar: Honors in Medicine Only.

1. Mention in their historical order the changes that have been made in English vocabulary and grammar.
2. Point out and define the figures of speech in the extract in II.
3. Account historically for the present distinction between shall and will as auxiliaries of the future tense, and show by what other means we indicate the future.

IV.

Authors: Candidates in Arts only.

1. Mention and account for the chief peculiarities of the form and substance of the poetry in the age of Scott and Cowper, and compare these two poets as to their relative position with regard to the poetry of their time

2. "The secret of the success of Scott's poetry lay partly in his subjects, partly in his mode of treating them, and partly in his versification."

Show to what extent this is true in each of these respects, making special reference to the *Lady of the Lake*.

3. Point out any improbabilities you have observed in the plot of the *Lady of the Lake*.

4. "My vision's sight may yet prove true,
Nor bode of ill to him or you.
Sooth was my prophecy of fear;
Believe it when it augurs cheer.
Would we had left this dismal spot;
Ill luck still haunts a fairy grot.
Of such a wondrous tale I know—"

(a) Paraphrase the first couplet; (b) What prophecies are alluded to, and how did they prove true? (c) Name the "dismal spot"; why did ill luck haunt such places? what is the "wondrous tale"?

5. "Wrathful at such arraignment foul,
Dark lowered the clansman's sable
scowl."

State briefly Fitzjames' accusations and Roderick's answers. How does this dialogue affect the plot? In what respects are the characters of the two men contrasted here and elsewhere in the poem?

6. "Yet trust not that by thee alone,
Proud chief, can courtesy be shown."

(a) What courtesy did each show the other?

(b) Quote the lines describing the fight that follows.

7. "I guess by all this quaint array,
The burghers hold their games to-day,
James will be there."

(a) What was the quaint array?

(b) What burghers are meant?

(c) Mention the sports, and show why the king would probably attend.

(d) Contrast the actions and the sentiments of the monarch and the Douglas at the close of the games.

(e) Relate briefly what took place on the same day on the shore of Loch Katrine.

8. Illustrate from the *Task*: (a) Cowper's peculiar use of words; (b) his religious sentiments; (c) his sarcasm; (d) his descriptive powers.

HISTORY AND GEOGRAPHY.

Examiner: David R. Keys, B.A.

1. Briefly indicate the influence of physical geography on the ancient history of Greece and Italy.

2. Name the cities of Gallia Cisalpina, Latium, Achaia and Ionia, adding brief descriptive notes, and giving, where possible, the modern name.

3. Describe a voyage from Iolchos to Colchis.

4. Mention towns or districts in Europe and America noted for the manufacture of china, silk, toys, wines, woollens.

5. Describe as fully as you can any one of the following districts: Warwickshire, Antrim, Midlothian, Calvados, Grisons, La-Mancha.

6. Show to what extent the history of the United States might be recovered from geographical names.

7. Locate as nearly as you can: Murcia, Chemnitz, Mulhausen, Spezia, Spalatro, St. Gall, Cherbourg, Ghent, Merville, Abbotsford, Coventry, Lake Mistassini.

8. Mention and explain the causes that contributed to the glory of Queen Anne's reign.

9. Sketch the history of parliamentary government during the reign of George III.

10. Trace the course of the Roman conquest of Greece from the beginning of the Second Macedonian War to the Fall of Corinth.

11. Describe the civil conflicts in Rome from the death of Marius to that of Julius Cæsar.

12. Compare the Greeks and Romans with special reference to their sports, their literatures, and their treatment of women.

13. What changes took place in Greece between the years B.C. 479 and B.C. 431?

Arts and Medicine.

FRENCH.

Examiner: Chas. Whetham, B.A.

For Pass candidates in Arts, and all candidates in Medicine. *Full paper—five-sixths.*

I.

1. Translate: Their apples. His apple. Her hat. My friend (fem.). Their pen. Your fans are better than mine. Hers are worse than your sister's. My mother's are the best but they are the smallest.

2. Give masc. and fem. forms, sing. and pl., of the French equivalents for: new, low, jealous, happy, old, fat, soft, foolish, favourite, white, sweet, beautiful, tall, Christian, ready, frank, dry, long.

3. Write brief notes on the comparison of adjectives; the formation of adverbs, and the use of the auxiliaries *être* and *avoir*.

4. Write in full the cardinal numbers from fifteen to twenty-five, indicating the pronunciation. Translate: Two hundred men and eighty horses died on the thirtieth of June and the first of July, sixteen hundred and seventy-seven. Three hundred and fifty soldiers left home on the tenth inst., and probably not more than two hundred and thirty-five will return.

5. Shew by examples the use of *ce, cet, celui-ci, celui-là*. Give pl. forms (masc.); also corresponding fem. forms, sing. and pl.

6. Translate: We have seen her to-day. I shall perhaps speak to him about it. She would send them two horses if they wished. He and she are there now. We gave her some. They (masc.) gave her to us. John and I like walking. They will have told

her what you sang to them (fem.) and me. Which book had you had? Where is he whom they speak of? Whose pen is that? Both of them came nearly every day. Are there any potatoes in that basket? Are there none in it? You and he put some in it.

7. Translate: "A man knocked at the door a few minutes ago and asked to see you. Mary told him you had gone out before sundown, intending to return in about an hour and a quarter. He appeared very tired, but when I invited him to come in he thanked me, and said he had rather not wait. His name is Alexander, and he lives on James Street—number 91, I think. His son has just fallen from a horse, and broken his leg, and they are afraid he has otherwise injured himself. His wife too is very sick, and they do not know what is the matter with her."

'Poor fellow!' I have known him now for sixteen years, and he has always been most unfortunate, but I am glad I can help him a little this time. It is getting late, and is most disagreeable weather for me to be out; still I feel better than I did, and I should be ashamed not to go when such worthy people need me."

II.

Translate: Cette noble indépendance . . . cœur plus sensible que le mien?

LAZARE HOCHÉ.

1. *Tous ces biens* (l. 2). Translate: *C'est un homme de bien. Un homme qui a du bien. Un homme qui est bien. On est très-bien ici. Ils sont fort bien ensemble.*

2. *laisse-le marcher* (l. 8). Add the negative.

3. *que jamais surtout il ne sache qu'il y a* (l. 14). Why is *pas* not used?

4. *il s'occupe de* (l. 18). Give the pret. indef. indic. in full, interrogatively with negative.

5. *langage* (l. 22). Distinguish between *langage* and *langue*, giving examples of their use.

6. *beaucoup de choses* (l. 25). Express the same idea with *bien* instead of *beaucoup*.

7. *je te traite en ami* (l. 26). Translate: *Il l'a traité de fou.*

8. *est-il un cœur* (l. 36.) Give the more usual form of expression, and translate: There are six of them now. There was only one yesterday. They (*ce*) are the men.

9. Write in full the pret. indef. indic. and the imperf. subj. of *veut, doit, naissant, obéisse, sache, s'épanche, vas, sera.*

10. *un cœur plus sensible* (ll. 36-37). Translate: A sensible man.

11. Sketch briefly the character of Lazare Hoche as drawn by Bonnechese.

Medicine: for Pass and Honors.

GERMAN.

Examiner: Rev. R. von Pirch.

Candidates in Arts will take Parts I., II., III., and IV.; those in Medicine Parts I., IV. and V.

I.

Grammar.

1. Decline: *My good friend; this high tree; old men.*

2. Draw up a table of the prepositions, according to the case they govern.

3. Conjugate the auxiliary verbs of mood.

4. Give rules for the formation of the passive voice and translate: The most diligent pupils have been praised. The battle would have been won.

5. Decline the relative pronoun *welcher*, and write a note on the construction of relative sentences.

6. Give rules for the translation of *some*.

7. Write a comprehensive note on *separable* and *inseparable* verbs.

8. Conjugate: *Ich betrage mich.*

9. State points of difference between German and English construction.

10. Translate: Having no money, I could not depart. The old man having spoken thus, left the room. Wishing to see him, I went to his house.

11. Give rules for the use of the subjunctive mood.

II.

Translate:

Un die Ritter . . . in dem furchtbaren Höllenrachen.

SCHILLER, *Der Taucher.*

1. *Und keiner . . . will* — *Das Auge . . . hinuntersah.* Notice deviations from grammatical rule.

2. *Ist keiner.* When must *es gibt* be used?

3. *Keiner.* Translate *no good man.*

4. *ob's . . . schlief.* Parse.

5. *Es.* Decline.

6. *Vernahmen's.* State briefly in German what they heard.

III.

Translate:

Und tausend Stimmen. . . versammelt worden.

SCHILLER, *Der Kampf mit dem Drachen.*

1. Supply the auxiliary, where it is omitted.

2. *Das ist der Held.* Account for the gender of *das*.

3. *Das ist—; der ihn—.* Explain the difference in the construction, and give reasons.

4. *Strauss.* What other meaning has this noun?

5. *Sanct . . . Orden.* Parse.

6. *Sind versammelt.* Write a note on the position of the auxiliary.

7. *Viel andre . . . Strauss.* How would this read in prose?

8. *Den kühnen . . . ehren.* Put into the passive voice.

IV.

Translate:

Er verschaffte den Schiffen . . . Brücke zu vollenden.

SCHILLER, *Belagerung von Antwerpen.*

1. Make a list of all the strong verbs in the above extract, giving their infinitive, imperf. tense and past part.

2. Give the gender of *Schiffen, Erzeugnisse, Orten, Enden, Werke.*

3. Give the genitive sing. and nom. plur. of *Schiffen, Weg, Kanal, Land, Mangel Vorrath.*

4. *Er verschaffte.* Substitute a noun for *er*.

5. *Sichern.* Form the comparative degree.

6. *Kannte.* Distinguish between *kennen* and *wissen*.

7. *Wodurch.* Explain the formation.

V.

Translate:

Unter diesen Anstalten . . . bloss seine Festigkeit fichtbar. *Ib.*

1. *Inconsequenz.* Explain the allusion.

2. *Schelde.* Give comprehensive rules for the declension of feminine nouns.

3. *Auf dasselbe.* Decline *dasselbe*.

4. *Aber es stand.* Write a note on the influence of conjunctions on construction.

THE CLASS-ROOM.

DAVID BOYLER, Editor, Toronto.

EXAMINATION FOR ADMISSION TO
HIGH SCHOOLS AND COLLEGI-
ATE INSTITUTES.

The next Entrance Examinations to High Schools and Collegiate Institutes will be held on Monday, Tuesday and Wednesday, December 21st, 22nd and 23rd, 1885.

The following is the limit of studies in the various subjects :

READING.—A general knowledge of the elements of vocal expression, with special reference to emphasis, inflection and pause. The reading, with proper expression, of any selection in the Reader authorized for Fourth Book Classes. The pupil should be taught to read *intelligently* as well as *intelligibly*.

LITERATURE.—The pupil should be taught to give for words or phrases, meanings which may be substituted therefor, without impairing the sense of the passage ; to illustrate and show the appropriateness of important words or phrases ; to distinguish between synonyms in common use ; to paraphrase difficult passages so as to show the meaning clearly ; to show the connection of the thoughts in any selected passage ; to explain allusions ; to write explanatory or descriptive notes on proper or other names ; to show that he has studied the lessons thoughtfully, by being able to give an intelligent opinion on any subject treated of therein that comes within the range of his experience or comprehension ; and especially to show that he has entered into the spirit of the passage, by being able to read it with proper expression. He should be exercised in quoting passages of special beauty from the selections prescribed, and to reproduce in his own words the substance of any of these selections, or of any part thereof. He should also obtain some knowledge of the authors from whose works these selections have been made.

ORTHOGRAPHY AND ORTHOEPY.—The pronunciation, the syllabication and spell-

ing from dictation, of words in common use. The correction of words improperly spelled or pronounced. The distinctions between words in common use in regard to spelling, pronunciation and meaning.

WRITING.—The proper formation of the small and the capital letters. The pupil will be expected to write neatly and legibly.

GEOGRAPHY.—The forms and motions of the earth. The chief definitions as contained in the authorized text-book ; divisions of the land and the water ; circles on the globe ; political divisions ; natural phenomena. Maps of America, Europe, Asia and Africa. Maps of Canada and Ontario, including the railway systems. The products and the commercial relations of Canada.

GRAMMAR.—The sentence : its different forms. Words : their chief classes and inflections. Different grammatical values of the same word. The meanings of the chief grammatical terms. The grammatical values of phrases and of clauses. The nature of the clauses in easy compound and complex sentences. The government, the agreement and the arrangement of words, The correction, with reasons therefor, of wrong forms of words and of false syntax. The parsing of simple sentences. The analysis of easy sentences.

COMPOSITION.—The nature and construction of different kinds of sentences. The combination of separate statements into sentences. The nature and the construction of paragraphs. The combination of separate statements into paragraphs. Variety of expression, with the following classes of exercises : Changing the voice of the verb ; expanding a word or a phrase into a clause ; contracting a clause into a word or a phrase ; changing from direct into indirect narration, or the converse ; transposition ; changing the form of a sentence ; expansion of given heads or hints into a composition ; the contraction of passages ; paraphrasing prose or easy poetry. The elements of punctuation. Short narratives or descriptions. Familiar letters.

DRAWING.—For the examination in December next, candidates in drawing may submit to

the examiners books No. 2 or No. 3 of the Drawing Course for Public Schools. For June, 1886, No. 3, No. 4 or No. 5 will be accepted; after that date it is intended to take the numbers prescribed by the regulations for the 4th class.

HISTORY.—Outlines of English history as heretofore.

Examination papers will be set in literature from the different series of authorized readers as follow:

NEW ONTARIO READERS.—DECEMBER, 1885.

1. Tom Brown, pp. 17-22.
2. Boadicea, pp. 35-37.
3. The Fixed Stars, pp. 93-96.
4. The Sky Lark, p. 99.
5. Ye Mariners of England, pp. 193-194.
6. The Heroine of Vercheres, pp. 201-204.
7. Marmion and Douglas, pp. 256-258.
8. After Death in Arabia, pp. 272-274.
9. The Capture of Quebec, pp. 233-239.

JUNE, 1886.

1. Boadicea, pp. 35-37.
2. The Truant, pp. 46-50.
3. The Fixed Stars, pp. 93-96.
4. Lochinvar, pp. 169-170.
5. A Christmas Carol, pp. 207-211.

6. Riding together, pp. 231-232.
7. Marmion and Douglas, pp. 256-258.
8. The Capture of Quebec, pp. 233-239.
9. The Ride from Ghent to Aix, pp. 285-287.

After the 1st January, 1886, the literature will be selected exclusively from the new Ontario Fourth Reader, which will be then the only authorized *Fourth Book*. The selections will be changed from year to year.

**TIME-TABLE OF THE EXAMINATION.—
DECEMBER 21, 1885.**

- 9 a.m. to 10.25 a.m., Geography.
10 35 a.m. to 12 noon, History.
2 p.m. to 4 p.m., Literature.

DECEMBER 22, 1885.

- 9 a.m. to 11 a.m., Arithmetic.
11.10 a.m. to 12 noon, Orthography and Orthoëpy.
2 p.m. to 4 p.m., Grammar,

DECEMBER 23, 1885.

- 9 a.m. to 10.45 a.m., Composition.
11 a.m. to 11.15 a.m., Writing.
11.15 a.m. to 12 noon, Drawing.

Reading to be taken on either day or on both days, at such hours as may best suit the convenience of the Examiners.

CONTEMPORARY LITERATURE.

KINDER-UND HAUSMÄRCHEN DER GEBRÜDER GRIMM. Selected and edited, together with Schiller's Ballad, "Der Taucher," with English Notes, Glossaries and Grammatical Appendices. By W. H. van der Smissen, M.A. Toronto: Williamson & Co., 1885.

For the beginner in German there can hardly be more attractive reading lessons than the pretty fairy tales collected by the Brothers Grimm, and we believe that teachers will rejoice that the University has sanctioned the change from the somewhat heavy "Belagerung von Antwerpen" to the bright and nimble phraseology of the "Kinder-und Hausmärchen" for the junior Matriculation pass-work. True, there are difficulties belonging to Grimm's Tales which

the more polished historical style of Schiller does not possess; but they are difficulties such as distinguish popular from literary speech, and they are possibly more characteristic of the genius of the German language than the literary form with all its indebtedness to outside sources. These Tales, then, will be welcomed in the school-room by both teacher and pupil, and all that will be required in addition will be, firstly, a good vocabulary, and, secondly, good notes. The vocabulary must be more than a mere list of words and meanings, and the notes must not be trivial. Both of these requirements are, we think, supplied by Mr. van der Smissen's little work, and it gives us genuine pleasure to note that what seems to us a sound method

of annotation should appear among us. One is almost surprised that so much downright labour should be expended on a book, which must command a sale comparatively small, but we should be ashamed of our surprise. We have become so much accustomed to see in the school-room, texts, the notes to which are merely pitch-forked together, that we are keenly sensible of an improvement when it appears. Mr. van der Smissen has supplied his little book with a good vocabulary—and that is saying a great deal—while in his notes he attempts something more than helping the scholar to get at the meaning of his author; hints are given of the principles on which peculiarities are based, and in this way to read one tale is to become armed against the difficulties of the next. In his preface Mr. van der Smissen gives his reasons for some changes which he has introduced into his edition. For example, he has adopted the modern spelling in deference to the almost universal present practice of Germany. This may cause some difficulty to the beginner whose grammar uses *thun, roth*, whilst his text has *tun, rot*, but the additional strain on his powers of observation will not be very great. The employment of the Roman type has much to recommend it; the beginner in German has quite enough to contend with without having to struggle with the very letters themselves. We trust, with the editor of the tales, that his little book "may tend to increase the number of students of the noble German language in the schools of this Province," and we also hope to see Mr. van der Smissen's work imitated by others.

CHRISTIE'S EDITION OF HODGSON'S ERRORS IN THE USE OF ENGLISH. Compiled and Edited by J. Douglas Christie, B.A., Master of Modern Languages, Collegiate Institute, St. Catharines. Toronto: Williamson & Co.

The English Masters of our High Schools will welcome this book. For a long time they have felt the need of a good collection of errors in the use of English suited to the work of senior classes. Of many recent works claiming to supply the need some are

useless because exemplifying errors that no Canadian school-boy ever makes, while of the others all are better suited to the lower forms. Hodgson's work on its appearance was welcomed by teachers generally, and the Department of Education soon placed it on the list of recommended text-books. Experience has however shown its unsuitability as a class-book. Though the range of examples is extensive, and the selection judicious, the fact that the errors are always pointed out, and the corrections often indicated renders it a book for the private student and not for the member of a class. Many teachers, therefore, have been accustomed to dictate the examples to their classes without requiring that each pupil procure a copy of the book. To remedy this waste of time Mr. Christie has omitted "the hints," and rearranged the examples in such a way that the pupil is always unconsciously reviewing. For the sake of the teacher's convenience a very simple method of reference to the original work has been adopted, and the book stands complete, being superior to any other for the most advanced of our High School pupils. The size and shape of the book are such as to permit of ready reference, and the binding, typography and general make-up are excellent.

COMPOSITION AND PRACTICAL ENGLISH, with Exercises adapted for Use in High Schools and Colleges. By William Williams, B.A. Toronto: Canada Publishing Company (Limited).

This book, the careful work of a successful teacher of long experience, is worthy of introduction into our Canadian schools. It is, as far as such a book can be, practical. In fact, we know of no treatise on composition that equals it in this important respect. Any class that is carefully taken through its chapters will profit greatly in an increased vocabulary and an improved taste in the use of words. The subject-matter is very extensive, yet thoroughly treated, notwithstanding the fact that the book is not bulky. Beginning with the *choice and use of words* under the heads of *purity, propriety* and *precision* the pupil is brought to the consideration of

the sentence with respect to *kind, formation and connection*. *Variety of expression, figures of speech and prose composition* are then considered, and the work is concluded by a few excellent pages on *invention and punctuation*. What strikes the practical teacher is the number and character of the exercises. A few principles are discussed and then explained by examples followed by exercises for the class. This is a feature omitted from most books on rhetoric, yet certainly very essential to their usefulness. There are only two faults that we have noticed, and of these one is not very serious, and the other will probably be corrected in a future edition. First, no special attention is paid to the construction of the paragraph, though what is said concerning this subject under the *sentence* is certainly good. The art of building up a symmetrical paragraph is the chief characteristic of a powerful writer, and we are inclined to think that it might have been well to have introduced a new subject, the *paragraph*, which would have received the same attention from the student that he pays to the *sentence*. There is also no index, the analytical table of contents being unworthy of such a title. These faults are, however, apparent only because of the main excellence of the book.

HIGHWAYS OF HISTORY. Edited by Miss Louisa Creighton.

THE GROWTH OF THE ENGLISH COLONIES. By Miss S. M. Sitwell. London: Livingtons Second Edition

The story of the founding and development of the English Colonial Empire is well told in the pages of this little book, which many teachers of history will pronounce 'just what I want.' Somewhat different in aim from "Our Colonies," which we recently had the pleasure of reviewing, it is no whit less valuable.

ELEMENTARY ALGEBRA FOR SCHOOLS. By H. S. Hall, B.A., and S. R. Knight. R.A Macmillan & Co. For sale by R. W. Douglas & Co., Yonge St., Toronto.

This is a work by two Cambridge men, it is well arranged and several points neatly

developed. The get-up of the book is worthy of the Macmillans, and that is saying a good deal. We commend it to the attention of the readers of THE MONTHLY.

RIVERSIDE LITERATURE SERIES. Number Sixteen. LARS: A PASTORAL OF NORWAY. With Notes and a Biographical Sketch. Boston: Houghton, Mifflin & Co. Toronto: Williamson & Co.

This favourite poem by Bayard Taylor will be a welcome number of the Riverside Series. The beautiful words of dedication to J. G. Whittier which form a kind of preface to the poem will always find an echo in many hearts.

CÆSAR'S GALLIC WAR. Edited by J. H. and W. F. Allen, and J. B. Greenough. Revised by H. P. Hudson. Boston: Ginn, Heath & Co.

The additions made by the present reviser to the work of the former editors consist chiefly of explanations in regard to the history of the Gallic War and the Roman art of war in general. In addition to the seven books of the text, this volume contains useful maps and illustrations, vocabulary, copious notes and references to many grammatical points; armed with it, the student may consider himself well equipped.

THE ELEMENTS OF ANIMAL PHYSIOLOGY. By J. C. Buckmaster, of the Science and Art Department, South Kensington. London: Longmans & Co. Fourth Edition.

Mr. Buckmaster, who is the author of several other science manuals, has done much in establishing science classes in connection with the South Kensington Department. The fourth edition of "Animal Physiology" contains some additions on various subjects, particularly that of the senses. The style is eminently clear and the information full, though condensed into a very small space. We know of no book on this subject, perhaps with the single exception of that by Professor Huxley, which we should more unhesitatingly commend to teachers as a book of reference.