Physical Education.

Last night a lecture was delivered under the auspices of the Teachers' Association, by Mr. Barnjum, in the Normal School. The lecture was an exceedingly interesting one, was well and distinctly read, and listened to by an attentive audience.

The Chair was occupied by Principal Dawson, who called upon Mr. Gibson to open the proceedings by prayer. Mr. Dawson then introduced the lecturer, who after a few remarks went on to say. But the subject, Physical Education, is even as yet recognized more in its theoretical than in its practical aspect, in proof of which we need only look around at our educational establishments. In how many of them shall we find any provision for cultivating the bodily powers—very few. The majority leave the matter to the benevolent care of chance, and whether the people generally exercise or not depends upon their own dispositions. Is not our organization a talent committed to our charge, in order that we may improve it, that it may be perfected to its highest attainable point, and not wrapped up in the napkin of neglect? How otherwise can it be a fitting helpmate to the indwelling mind? Must not the two work in perfect accord, if we would attain a high degree of perfection in either—if we would obtain noble specimens of our race? Then why is it we persistently ignore the claims of the body to equal care and cultivation as the mind? It must be from want of consideration on the part of some, and with others by the homage which is everywhere accorded, and rightly so, to intellectual attainments, so much so, indeed, that people seldom stop to enquire at what an expense of suffering such attainments are too often purchased, of which how many instances are on record. Of noble youths who, having gained high academic honors, have found but a laurel wreath to deck their funeral bier; of others who have devoted themselves so much to their studies, to the utter neglect of their health, that they have become living martyrs, and finally sunk in the unequal contest. If, in the case of boys, this neglect of bodily culture is lamentable, what shall we say of girls who, by the conventional rules of society, are debarred from taking more than the semblance of exercise? They have not the same opportunity for romping as boys. Poor little missie must walk home in the most genteel manner possible, perhaps indulging in a softened laugh with some companion, her arms carefully hugged to her side, motion of the lower extremities only being permitted, added to which her poor little body is in all probability forced in by one of those instruments of death called corsets, binding up the naughty muscles that are begging and praying to be let loose and have an opportunity of strengthening themselves, and the young lady is considered to be in a highly satisfactory condition if she is pale and weak; but, no matter, it is the natural thing for girls to be weak. The lecturer then argued in favor of exercises conducive of health being put on a level with the so-called accomplishments. He said so far from this being the case, that all efforts were devoted to developing the mind only, and every method ransacked to discover how the brain may be stimulated, without pausing to consider that the mental and physical are so interwoven in our organization that one cannot be overtasked and weakened without disordering the other, and that a sound mind in a sound body is a positive necessity, wherever we would attain the highest results. He then went on to argue in favour of a knowledge of Physiology and Hygiene, and the happy results attending a thorough acquaintance with the same. In regard to the kinds of exercise, he said: To commence at childhood—that period when the plastic form is most amenable to influence of every kind—what should be our mode of action? and for these little ones I would, during the first period of their training, most emphatically protest against any exercise other than such as can be performed unaided by apparatus of any kind. After a time I would introduce light, wooden dumb-bells, and, if space permitted, wands. After a certain amount of dexterity had been attained with these, the ring exercises might be taught; which latter are of the highest value in strengthening the muscles of the abdomen and loins. In all these courses I would insist upon a proper alternation of marching exercises, of which the variety may be extended indefinitely. When practicable, all these exercises should be accompanied by music, not only because it is more pleasant, but for another and much more important reason, viz., that the strain on the nervous system is so immensely lessened, that an amount of work is gone through without any injurious fatigue, which would be impossible were the mind concentrated on the act itself during each movement. After boys had gone through these exercises, and their frames were developed, it would be proper to proceed to exercises on the fixed apparatus of the Gymnasium. The details of the exercises of the Gymnasium and their good results were then gone into, and were very interesting. As regards girls, he suggested the same kind of training for them as in the case of boys, excepting of course the fixed apparatus. I do not hesitate to say that any young lady placed under the care of an intelligent, well-educated teacher, cannot fail to attain a degree of health which otherwise she never would have dreamed of. And I beg to remark that no person is competent to teach gymnastics, or to carry out physical education, who is not acquainted with Physiology and Anatomy. I have in common with others found that one great hindrance to carrying out successfully physical training, is that parents do not sufficiently regulate their children's diet, and the consequence is they come to their exercises heavy and debilitated. After some remarks on the bad habit so often acquired by boys in not expanding their chests, in regard to chest expanders he remarked, I need hardly say that all the ingenious inventions called chest expanders are worse than useless, do not cure the evil, but actually aggravate it. The lecturer then resumed his seat amid applause.

Mr. Gibson then made a few remarks, and moved a vote of thanks to Mr. Barnjum, and also that the lecture be published for the benefit of the public. Unanimously carried.

The meeting then adjourned.—*Montreal Gazette*, Jan. 12.

SCIENCE.

The Metric System of Weights and Measures.

A PAPER READ BY MR. C. G. K. GILLESPIE A. C. P., AT A MEETING HELD AT THE COLLEGE OF PRECEPTORS, LONDON.

In considering the various claims made upon us by society, it becomes an important part of our duty as teachers to keep pace, as far as possible, with the advance of practical knowledge, and to familiarize ourselves with such new facts as are most important to the general progress of the community whose rising members it is our office to prepare for an active life. I trust this admitted truth will serve me as a sufficient apology for bringing before you a subject which would at first sight appear to be of a commercial rather than an educational character. I have, however, but little doubt that we shall find abundant and interesting proof that the Metric System, upon which the most approved project for a reform of our weights and measures is based, has a decided claim on our professional attention. That such reform is much needed, there is but little occasion to prove; it is now of more importance for us to consider that the change to a more rational state of things is probably near, that the more widely and speedily society is prepared for it the better, and that there are few agencies more powerful for effecting this preparation, than those to be found in our schools.

Before entering upon a brief sketch of the history of the Metric System, our attention will be turned for a short time to the causes which render the present system objectionable; causes similar to those which have led to the abandonment, in nearly every country but our own, of the old scales, in favour of that now before us.

There are in existence at the present time eleven systems of weights alone, which are well known and extensively used in the British islands, under the sanction of law or of usage, either in science or commerce. Besides these there is a vast number of local denominations of a purely arbitrary nature, in connection with which there can be no attempt at classification. The result is, that not only is our home trade fettered by a complication of accounts most perplexing in their character, but in addition to this great evil, our foreign commerce is further impeded by the fact that none of these can be brought into harmony with the system used abroad; so that many difficulties continually arise, and much time is lost, by the compulsory use of the long tables of weights and measures, which are viewed with such well grounded horror by the schoolboy, and lose little of their repulsiveness on a more practical acquaintance. A powerful example of the inconvenience referred to was furnished by the Great Exhibition of 1851, whose advantages were to a large extent thrown away upon thousands of visitors, even of the more enlightened classes, who could well appreciate its scientific, mechanical, and artistic attractions, but, for want of power to translate the foreign denominations, were unable to grasp its more important commercial features. Similar causes, arising from the great varieties of weights and measures, rendered the task of the jurors one of Herculean magnitude, since, to adjudicate with accuracy, a reliable common standard was in most cases indispensable for the purpose of comparison. Prompted by these and kindred considerations, the Society of Arts memorialised the Government in favour of a uniform system, at the same time specially urging the advantages of the international principle. In 1853, the Statistical Congress at Brussels deliberated on the same subject. The inconveniences of the London Exhibition were repeated at Paris in 1855, and