

apparatus with any other pupil who has completed his work. In this way the same apparatus serves for each member of the class in succession.

To meet the requirements of a given class, the preceding method of working may need modification. Thus, while individual work should be encouraged, it may sometimes be advisable to allow two pupils to work together. Further, there is a very limited class of experiments which may often best be performed by the teacher before the class. The essential principle to be kept in view is that, in the main, the pupil, not the teacher, must do the work.

With regard to apparatus, a consideration of practical importance is its cost. Expensive and elaborate apparatus is not indispensable. A boy can investigate the law of falling bodies almost as well with a smooth board and a rubber ball as with the most costly Attwood's machine. And in no other department of a teacher's work has his ingenuity so wide a field as in the devising of simply-constructed apparatus to take the place of costly appliances.

An objection frequently urged against the experimental study of physics is want of time. By those who hold that quantity of work should be subordinated to quality, it will be estimated at its true worth. He who has wrested from nature the fact that change of motion is proportional to the impressed force, even were this the sum of his physical knowledge, would be a better physicist than if he had learned to recite the whole of Newton's *Principia* without having gained an adequate conception of its meaning. And moreover, the book-taught pupil has been deprived of that admirable mental discipline which the study of physics affords, but affords only when taught in the living language of experiment.

Section D, Advanced Schools, met in the Leinster street school, St. John, on Thursday, at 9 a. m., July 19th. Principal Kennedy of the Albion street school, Halifax, was chosen chairman, and L. A. McKenna, of Dartmouth, N. S., secretary. "The Aims and Processes of Moral Culture," by J. W. Hickson, Principal of the Winter street school, Portland, N. B., was the first paper read. He showed the difficulties presented in the education of children on account of so many influences that are brought to bear on the child in the home, school, and in society. He believed in the inculcation of piety, justice, truth and honor.

"Physical and Moral Culture in the Playground," by W. T. Kerr of Woodstock, was the subject of the next paper. Mr. Kerr spoke of the advantages of physical exercises, and spoke of the moral atmosphere that should pervade the playground, under the superintendence of the teacher.

R. H. Campbell, of P. E. Island, read a paper on "Moral Culture." Both physical and intellectual training should be subordinate to the moral training. There is too much change in the employment of teachers for the sake of false economy, as it robs the children of the training and the experience of teachers whose place is supplied by the raw material turned out from the normal schools without any experience whatever. Train the conscience as well as the mind and the body, as morality cannot be taught from books, but by the actions of the teacher. Principle could be the guide in leading the pupils in the right way.

L. A. McKenna of Dartmouth, N. S., followed in an address on the same subject. The results of moral teaching are not always seen at once, but may be latent and working in the character, to be found in after life. Public opinion of the school was useful in cultivating this feeling. Religion is the foundation of morality and its support.

D. H. Burbidge, Principal of the Morris street school, Halifax, (since deceased) contributed a paper on "Grammar in the Common Schools," which was read by Principal Kennedy. He freely criticized, with much ability, defects in teaching English grammar, pointing out glaring inconsistencies in concord and government that needed to be eliminated from the study, and cited authorities in support of his position. Excessively minute parsing, he considered, is of little use, and only a waste of time in schools.

Geo. T. Miller, Principal of Hants County Academy, N. S., read a paper on the same subject. Scientific grammar is, in his opinion, the cause of all the trouble and drudgery when introduced into the common school work.

John D. McIntyre, of P. E. Island, contributed a paper on the same subject, read by Mr. A. C. Stewart. He thought too much time is devoted to the teaching of grammar.

Addresses followed by H. Y. Corey, of Acadia College, Mr. Lawrence of the Deaf and Dumb Institution, Halifax, and others.

THE YORK COUNTY TEACHERS' INSTITUTE will meet in Fredericton, Dec. 20th and 21st. Papers and addresses will be given by Mrs. Philips, Mr. Alonzo Kelley, Miss Ella Thorne, Principal Mullin, B. D. Branscombe and N. W. Brown. A public educational meeting on the evening of the 20th will be addressed by Mayor Hazen, Supt. Crocket, Dr. Bailey, Principal Mullin and Principal Parkin. The programme for the institute is a very interesting one and ought to attract, especially at the time named, a large gathering of teachers from all parts of the country.