

many exercises, and calculations of time, distance, velocity and acceleration; for instance, what velocity must a shell have on leaving an anti-aircraft gun if it is to reach a height of three miles, or how long would it take a man to reach the ground if falling from that height?

All the ordinary formulae can be derived and may be used but the pupil should be taken back to first principles from time to time, and should not be allowed to use formulae unless it is certain that he thoroughly understands them. If he uses the formulae $S = \frac{1}{2}at^2$ it must not be necessary to tell him that the acceleration is five feet per second; it should be sufficient to tell him that a body which is moving with a velocity of twenty feet a second at a given instant is moving with a velocity of a hundred and seventy feet a second half a minute later.

Such training involves the expenditure of time and a great deal of care on the part of the teacher; but definiteness of this kind is invaluable to those pupils who intend to carry on the study of physics to an advanced stage.

School Science and Mathematics.

THE EDUCATIONAL VALUE OF THE SCHOOL GARDEN

Perhaps now, more than at any time in the history of our land is there need for a better education to be given our young people. There is a call for increased production. There is need in every community for men and women imbued with the spirit of masterful action, thoroughly prepared to cope with the difficulties of life.

We are now in the midst of a great national crisis, meeting problems which call for the best intellectual ability in our country for their solution. Once these are solved and our country at peace, who will meet the new conditions, solve the many problems which must necessarily arise in the advancement of so great a Dominion as ours? We have not to think twice to realize that it is the boys and girls of today who are to become these acting men and women of tomorrow. With us lies the responsibility of preparing these same boys and girls for the very best service they can render their country and fellow-men. Where shall this be done if not in the public schools of Canada.

We do not need the intellectual ability of a few in this district, a few more in another, but we need the service of every boy and every girl in every community. With this comes the problem of better education. By this we do not mean cramming, study from books alone, but rather the drawing out of the powers of the individual and the development of that person. It is estimated that a man who has been educated only in the common school has about one-third the producing capacity of the high school graduate and one-fifth that of the college graduate.

With the better education problem comes the problem "How to keep the child at school," for of the 16,000

children who enter Grade 1, only about 350 finish Grade XI. One of the greatest factors in the solution of this problem is the school garden. Through it the work in school is vitalized, the child becomes interested in actually doing, not merely by listening. He learns to value manual labor and comes to desire knowledge the longer he remains at school. Character building is the work of the schools. Where can we better gain strength of character than from the study of the soil, the hills, the valleys, the streams and the innumerable things of Nature and what calls for keener judgment, greater activity of mind, more determined purpose than is required in solving the problems of Nature? Thus from the schools must we get the strong minded thinking men and women so necessary to the advancement of our country.

Through the child the parents too become interested in the school. The fact that Johnny is learning to like the farm, takes an interest in making his home plot a success is a great inducement to the parents to send him back to school the next year. While the child is learning the practical, he is also getting a deeper knowledge of subjects not usually regarded as important by the unlearned. He does not leave the farm to fall in ruins because the nearby town or distant city lends an attraction, for this too has been a great drawback to the progress of our country. For a long time there has been a decadence of country population and an increase in the town population. Men are trying to meet this problem which the war has intensified. If there were ever a time when practical education should be given it is now. The schools are the best agencies to remedy this difficulty.—*Elva Claire Doton, in Rural Educational Monthly.*

BOOKS AND MAGAZINES RECEIVED

Tests of Progress in Arithmetic—pupil's edition—price 1 shilling net. Tests of Progress in Arithmetic—teachers' edition. Tests of Progress in English—pupil's edition—1 shilling net. Tests of Progress in English—teachers' edition. The Teachers' Book of Drawing Chats, by Clara E. Grant. Geography Stories and Famous Explorers, by R. J. Finch, F.R.G.S. All the above books belong to the Kingsway Series, published by Evans Brothers, Limited, Montague House, Russell Square, London, W. C. 1. England.

Pen Pictures of British Battles. Eyre and Spottiswoode, Limited, London, publishers. This book gives in short form an account of eleven important engagements in the recent war, including The Victory of the Falkland Isles, the Battles of the Marne, etc.

Overseas, the monthly journal of the Overseas Club, vol. III, No. 31, August, 1918.

Music is man's greatest pleasure from cradle to grave.