taining mineral matter and gases dissolved in it, is carried up to the leaves. Some of this water is kept for use in the tree. The larger part of it, however, merely acts as a "carrier," taking up mineral matter in solution, depositing it in the leaves and then passing out into the air as vapor These little mouths through little mouths. (stomata), so small that our eyes could not see them were they many times sharper, are constantly breathing in from the air oxygen and another in-The sunlight visible gas called carbon dioxide. and the little particles of leaf-green (chlorophyll) in the leaf acting upon the gases, the water and mineral substances form, by a wonderful chemical change, the plant food starch. This, changed for the time into sugar, in order to be dissolved in the ever useful water, is carried down, just inside the bark, to branches, stem and root to build up the growing parts of the plant or to be stored up for future use.

Do we realize that the leaves of our Red Maple are doing work? That all the world's food supply is being made in those busy waving grasses and other leaves that seem only to be idly swaying to and fro in the summer wind?

In a future number the different kinds of maple trees and their uses will be described. We have five native species of maple in Eastern Canada. In two of these the flowers come out *before* the leaves; in one the flowers and leaves come out together; in the two others the flowers come out *after* the leaves. These maples differ in their shape, their bark, flowers, fruit and leaves. Will school children plant their seeds this season, and then learn to know the maple trees near their homes by the flowers, fruit and leaves? Will the teachers help them?

Out of the 100,000 and more school children in the Maritime Provinces, probably not one hundred know the different maple trees. We should try to make children acquainted with what is about their homes; and what is more interesting than the trees?

The total enrolment of the public schools of the United States exceeds 15,000,000; attendance nearly 11,000,000. There are 95 manual training schools with more than 33,000 students. The total number of teachers approaches half a million, of whom 70 per cent are women. The average monthly pay for a man is \$50, for a woman \$40.

Drawing for the Lower Grades. V.

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The figures in the last article were, on account of space, reproduced smaller than the originals. It should be understood, however, that the larger the children can make the drawings, the better will be the results, both as regards the drawing, and more especially the effect on the pupil. A length of from four to five inches is a good size to start with, and this may be increased as the children become more proficient. The suggestions offered will be found to give sufficient material to cover quite a number of lessons. Meanwhile the ruler drawings may be continued on the following lines: If set squares are obtainable, it will be well to introduce them at this stage. Two kinds should be used, one with angles of 90, 60 and 30 degrees, the other with angles of 90, 45 and 45 degrees. The first exercise is to make use of the set squares to draw parallel lines. Fig. 14 shows the method. The ruler is held with



the thumb and the third and fourth fingers, leaving the first and second fingers free to manipulate the set square. Care must be taken that the square sits firmly on the ruler. At first the children will find it easier to move the set square with the right hand, but after a little practice, they should be encouraged to use one hand only, except in cases where the square has to be moved some distance. Plenty of practice can be given in this kind of work in constructing designs based on straight and

parallel lines. Angles and degrees will form the subject of the next lesson. This is about the most difficult lesson yet, and requires some careful handling. A good introduction is as follows: Describe a large circle on the blackboard, and draw two diameters at right angles to one another. Fit the square corner of the set square into each of the four angles, and show that each is a right angle. Now explain that as we use long measure to determine length, avoir-