

**THE STUDY OF
TREES IN OUR
PRIMARY SCHOOLS**

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The study of trees in our primary schools by Clarence Moores Weed

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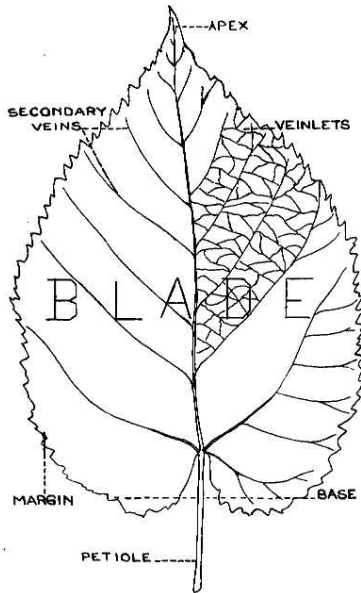
UNDER THE DIRECTION OF
Prof. FRANK WM. RANE, M.S.
Massachusetts State Forester



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A DIAGRAM OF LEAF STRUCTURE



INTRODUCTORY NOTE

THIS publication is offered by the State Forester for the use of teachers in elementary schools, kindergartens, the home, etc., believing that our future results in forestry development in Massachusetts and the nation will be largely in proportion to the love for trees, woods and forestry, imbued in coming generations.

Any teacher who will take a class of children into the open and call their attention to the trees, explaining how they live and grow, the different kinds, etc., will find there is little difficulty in exciting lasting interest.

Young folks like to get out into the exhilarating open air in the fall to kick up their heels and enjoy unrestraint. If, in addition to this, it can be demonstrated that there is a real purpose for such excursions or tramps, the occasions will be productive of great good.

There are few subjects in Nature offering a more interesting and well-equipped laboratory for the teacher and class than this method of studying trees. Trees are ever with us, summer and winter, autumn and spring, and to the thoughtful observer offer constantly changing and untiring interest.

In the fall when school is opening, there are the nuts, fruits and autumnal foliage to gather; in the winter the twigs, buds and forms of the trees to study; and, with the

THE STUDY OF TREES IN OUR PRIMARY SCHOOLS



bursting verdure of spring and early summer, come the flowers, growth, seedlings, shade, etc.,—a yearly round of charming association.

ACKNOWLEDGMENTS

Dr. Clarence Moores Weed of the Lowell State Normal School was selected to prepare this manuscript. Professor Weed needs no introduction to the public school fraternity in New England, being a well-recognized educator and author in natural history lines.

Mr. George H. Martin, Secretary of the Massachusetts State Board of Education, kindly read the manuscript and has given it his hearty approval.

The drawings for the illustrations were made by Miss Alice Manning of the class of 1906 of the Lowell Normal School.

It is the purpose of the office of State Forester to encourage modern forestry in every way possible throughout this State. Superintendents and teachers in our schools will always receive our heartiest co-operation. It is hoped that this pamphlet on "The Study of Trees in our Primary Schools" will serve as a good beginning for greater ultimate results in practical forestry.


F. W. RANE,
State Forester

State House, Boston, Mass.,
Oct. 1, 1907

Approved by the State Board of Publication

The Study of Trees in our Primary Schools



 **A**MONG all the living things in the outer world that may be utilized in the Nature study of the schools, the trees may fairly claim a leading place. They are found practically everywhere that schools flourish; they are always present in a condition worthy of study at any season of the year; they change from week to week and from month to month, so that they present in spring, summer, autumn and winter, varying phases of great interest and beauty. Perhaps more important than all else, they furnish, for the taking, a great wealth of material which may be brought into the schoolroom for actual first-hand contact by the pupil with the infinite variety of Nature. In autumn, the wonderful hues of the falling leaves, as well as the glorious forms and colors of the maturing fruits, furnish an almost embarrassing richness of material for the teacher. In winter, the leaves, cones and branches of the evergreens, as well as the buds and twigs of the deciduous trees, furnish almost equally interesting opportunities for study. In spring and summer, the buds unfolding into leaves, and the blossoms maturing into fruits, furnish again a wealth of material so vast that one must select with much discretion that which is to be used.

It is often recommended that the Nature work with trees, in the lower grades, be confined to a single tree or a single kind of tree, which is to be exhaustively studied throughout the year. This advice is based upon the principle that a complete whole is to be studied rather than any part, but it does not take into account two facts: first, that the leaf of a tree is an organic unity, and second, that little

THE STUDY OF TREES IN OUR PRIMARY SCHOOLS



children are more interested in and better able to appreciate the small unit of the leaf than the large unit of the tree. It also fails to take into consideration that a little child touches Nature in a cursory way at a thousand points rather than makes an exhaustive investigation at any one point. Consequently, the wise teacher in the primary school will utilize the natural interest of the children in the brightly-colored leaves of autumn, to give them vivid images of a considerable number of kinds of trees rather than to attempt to give them a complete knowledge of any one tree.

Every resourceful teacher will have her own methods of making her pupils acquainted with the more distinctive trees in their environment. Fortunately, practically all of our trees may be most easily known by their leaves, which are to be had in such abundance and in such beauty through the autumn months, and which the children naturally love to gather on their way to school, even from the very gutters of the city streets.

Every teacher will, of course, realize that any successful method of getting the children acquainted with the leaves of trees will depend upon actual contact with the real thing through the senses of the pupil. Seeing, feeling, smelling, tasting, hearing—all these may be utilized in leading the children to get definite and vital images of the trees and their leaves; and the more definite and vital these images are, the more complete will be the acquaintance of the pupil with this important feature of the great outer world. And the thoughtful teacher will also realize that these images are best obtained through such activities of the pupil as will enlist his interest throughout his whole being—that the sense games are most successful when the images appear to be a matter of secondary importance, of the significance of which the pupil may be entirely unconscious. Some of the methods by which the natural activities of the pupils may be utilized in the study of trees are indicated in the following paragraphs.

THE STUDY OF TREES IN OUR PRIMARY SCHOOLS



EXERCISES FOR VISUAL IMAGES

ASSORTING LEAVES



It is well known that in the case of very young children color appeals before form. Consequently, the teacher in the lowest grade who desires to have her pupils work with the autumn leaves may well use a little care in selecting material of distinctive colors. From certain trees, like the Red Maple, it is a simple matter to get leaves in quantity whose prevailing tones are distinctly red. From others, like the Sugar Maple, the Large-toothed Poplar, or several other species, it is equally simple to get leaves whose prevailing tones are distinctly yellow. From still others it is easy to get brown leaves, while, of course, it is the simplest matter to provide the green leaves. If each child is furnished with a little portfolio having several leaves of each of several distinct colors, their assortment, as to coloring, into piles will be a pleasurable activity. After some experience of this kind, the assortment of a set of green leaves of the same species as the colored ones, in which the form of the leaf serves as a basis of assortment, will be comparatively easy and will serve to give the pupils definite images of the more distinctive leaves.

At first, little children will do this assorting by picking out one kind of a leaf at a time, as it is easier for them thus to keep in mind but one image at a time.

This assorting is, of course, an exercise in discrimination and has decided value for development of mental power, in addition to giving the children definite visual images of the leaves utilized.