

APPENDIX No. 2

Nature calendar, a record of natural phenomena in chronological order.
The use of the rain-gauge and the recording of the amount of rain-fall.

Winter work.—Experiments in plant physiology. (Macdougall's Nature and Work of Plants; Atkinson's First Studies of Plant Life.)

Analysis of plants to determine the amount of water, dry matter, carbon and ash in their composition.

The atmosphere and its composition, showing presence and amount of oxygen, nitrogen, carbon dioxide, organic matter, and other impurities. Simple experiments to show the union of oxygen and carbon in combustion.

A study of minerals and rocks.

Simple experiments in electricity and magnetism. (Brittain's Manual and Outlines for Nature Lessons; or High School Physics, Pt. II.)

The use of rain-gauge and the recording of the amount of rain-fall.

Spring work.—Plant and care for two or three vegetables such as carrots and beets, using different varieties for comparison.

Give particular attention to the experiments on the larger plots, as outlined in Grade VI.

Study of weeds and the most efficient methods for their identification.

Practice in correct methods of pruning fruit trees. Top grafting, apples, pears, &c.

Study characteristics of two or three great plant groups—a continuation of the work in Grade VI.

A comparative special study of the germination of various seeds such as pine (*Gymnosperm*), Indian corn (*Monocotyledon*), ash, castor oil bean (*Ricinus*), maple and squash (*Dicotyledons*). (See Mrs. Wilson's Nature Study, p. 133.)

The relation of insects to the pollination of flowers. What insects visit flowers? How do they carry pollen? How does each kind of the insect reach the nectar? Which insects are robbers and which are true pollen carriers? The use of pollen by insects.

Observe the habits of humming-birds, particularly in relation to flowers.

Study of galls, noting their cause and general structure.

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GRADE VIII.

Autumn work.—Give special attention to experiments on larger plots, as outlined in Grade VI.

Budding fruit trees, apples and pears.

The care of small fruits and their propagation by layering and stolons.

Collection of seeds, especially those of economic importance, including grain, seeds of weeds and seeds of forest trees.

Study of plant families represented in the garden, *e.g.*:

(a) Gourd family, including squash, pumpkin, cucumber, melons and gourds.

(b) Cabbage family, including cabbage, cauliflower, kale, Brussel sprouts
Kohl rabi, &c.

(c) Grass family, including the various grasses and grains.

Injurious fungi and the use of fungicides.

Injurious insects and the use of insecticides. (See Weed's Insects and Insecticides, and bulletins available from Department of Agriculture, Ottawa, and Guelph Agricultural College.)

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