

leaf-buds, leaves, flowers, fruit (including some common weeds of the district). Parts of flower. Special attention should be given to native trees, shrubs, flowers, and fruit.

(b) *Animals*.—The general characteristics and habits of interesting birds, insects, &c., common in the locality. Life-histories more closely studied. At this stage the pupils might begin to rear insects from the caterpillar. Every effort should be made to enable the pupils to acquire a knowledge of the native birds and insects common to the locality. Pond and river life. In seaside schools a study of marine life should begin.

(c) *General*.—More systematic weather observation of clouds, fog, mist, rain, hail, snow, frost, wind. Rising and setting of the sun. Position of sun at mid-day. If the school is near the sea, observation of waves and tides.

STANDARDS III AND IV.

1. AIMS.—In this division the teacher should definitely aim to lead the pupils to recognize in an elementary manner the relation of cause and effect in nature. The method of investigation into causes by experiments, including interference with nature's processes, should be used. The pupil should be trained to seek on his own account explanations of the results of his investigations. The question "Why?" should be ever before both teacher and pupils. The training the pupil receives should lead to a love for and an appreciation of all that is beautiful and wonderful, though possibly perplexing, in nature. The practical work in the school-gardens must each year have a definite aim beyond that of merely presenting a fine display of well-grown vegetables.

2. COURSE OF STUDY.—A selection from the following:—

(a) *Plants*.—The phenomena of plant-life more closely studied. Simple experiments in pollination. Methods of propagating plants. Seed-protection. Seed-dispersal, with special reference to noxious weeds—*e.g.*, pipiriri (bidibidi), thistle. Condition of effective growth such as warmth, moisture, a sufficiency of suitable plant-food, sufficient room. Identification of common native plants. Some of the commonest pests might be studied in connection with the rearing of insects.

The carrying-out of experiments and investigations in school-gardens.

The growing of young trees. General principles of seed-sowing and tree-planting.

Simple study of mushrooms and toadstools.

Some of the principal grasses.

(b) *Animals*.—Native and imported birds in the district, their songs and their habits. Various ways in which birds are of benefit to man. Preservation of birds. Sea and river birds. Birds of special interest: kea, kiwi, native cuckoos. The flight of different birds. Flocking and migration of birds. Insects of peculiar interest: *Hepialus virescens* (huge green moth), *Vanessa gonerilla* (red admiral butterfly), *Nyctemera* (black and slate coloured day-flying moth); mantis, *Acanthoderus horridus* (stick insect), *Deinacrida megacephala* (weta), *Oedipoda cinerascens* (New Zealand locust), *forficisila littorea* (earwig); dragon-flies, particularly *Uropetala carovei* and *Cordulia Smithii*; mosquito; ladybird; cicada. A lizard. A fish. Hedgehog. (NOTE: The above scientific names are not to be taught, but are given to assist the teacher who desires to consult scientific works on the subject.)

(c) *General*.—Clouds and the weather associated therewith. Observation and drawing of the moon in its various phases. The Southern Cross and one or two other constellations.

The sea, its waves, tides, and currents (without theory of causes), and hence danger to bathers.

Evaporation and condensation.

Mariner's compass and magnets. Dangers connected with electricity.

Recognition of benzine, kerosene, methylated spirit, and turpentine. Dangers in connection with inflammable gases: kerosene, benzine.

Flotation observed in, say, benzine, fresh water, salt water. Difference between solution and suspension.

In schools where in the opinion of the Inspector it is not possible to provide sufficient practical instruction in topics selected from paragraphs (a) and (b), section (c) may be extended to include further simple lessons in the science of common things—*e.g.*, conduction of heat; expansion through heat; friction between different surfaces; heat generated in a bicycle-pump through compression of air; water finds its own level; pressure of air; principle of the balance.