

another plant of the same species or kind. In order to direct and concentrate the observation, it is well to set a certain number of attributes or marks or qualities to be looked for. 1. Suppose any two or more plants of corn are compared in the following points, the pupil endeavoring to determine whether the parts exactly agree. See that the observation is close and accurate. Allow no guesswork. Instruct the pupil to measure the parts when size is involved :

- (1) Height of the plant.
- (2) Does it branch? How many secondary stems or "suckers" from one root?
- (3) Shade or color.
- (4) How many leaves?
- (5) Arrangement of leaves on stem.
- (6) Measure length and breadth of six main leaves.
- (7) Number and position of ears ; color of silks.
- (8) Size of tassel, and number and size of its branches.
- (9) Stage of maturity or ripeness of plant.
- (10) Has the plant grown symmetrically, or has it been crowded by other plants or been obliged to struggle for light or room?
- (11) Note all unusual or interesting marks or features.
- (12) Always make note of comparative vigor of the plants.

NOTE TO TEACHER. — The teacher should always insist on *personal work* by the pupil. Every pupil should *handle and study the object by himself*. Books and pictures are merely guides and helps. So far as possible, study the plant or animal *just where it grows naturally*.

Notebooks. — Insist that the pupils make full notes and preserve these notes in suitable books. Note-taking is a powerful aid in organizing the mental processes, and in insuring accuracy of observation and record. The pupil should draw what he sees, even though he is not expert with the pencil. The drawing should not be made for looks, but to aid the pupil in his orderly study of the object ; it should be a means of self-expression.

Laboratory. — Every school, however small, should have a laboratory or work-room. This work-room may be nothing more than a table at one side of the room where the light is good. Here the specimens may be ranged and studied. Often an aquarium and terrarium may be added. A cabinet or set of shelves should be provided for a museum and collection.

The laboratory may be in part out of doors, as a school garden ; or the garden may be at the pupil's home, and yet be under the general direction of the teacher.