

permanent inspiration can come only through knowledge. It would be pessimistic and uncharitable to hold that no good work in Nature Study can be done by teachers who are not scientists; it would be insanely optimistic to hold that we can ever do the best work in Nature Study until we have a corps of teachers who have done enough work in science to catch the scientific spirit. Nature Study for elementary schools and natural science may be very different things--indeed they are different--but their difference is a difference in method, in spirit, in point of approach, in quantum, in continuity, in intensity, in purpose, rather than a difference in knowledge demanded of the teacher.

Only those who have tried to map out a course in Botany that will have some organic significance and yet be comprised in a dozen lessons, know the difficulties that meet a teacher in planning a course for a Summer School. The course followed at the Ottawa school comprised Germination, Roots, Stems and Buds, Leaves the Plants' Stomach, Plants and Insects, Plant Societies, Plants and their Environment, Monocotyledons and Dicotyledons, Plant Structure, Seed Dispersal and A Flower Garden. These subjects served as centres round which it was possible to group the most elementary and essential facts about the way plants live and the work they do.

It had constantly to be kept in mind that a summer class is made up of students having widely varying information of plant life. Some have a fair knowledge of elementary botany, others know almost nothing of the subject. Under such circumstances only one line of action was possible—to begin at the bottom. The growth of a plant, like the life of a human being, is in its way an epic. This epic may, like the story of the Prodigal Son, be told in a hundred ways, and yet every one of the hundred may embody all that is essential.

Germination was illustrated by a series of experiments. Three weeks previous to the lesson, germinating cases were prepared. Each of these consisted of two pieces of glass 16 in. x 5 in. with a layer of moistened cotton wool between. Just under the upper glass a layer of black cloth was stretched over the cotton. Then each day a single seed was inserted between the glass and the dark cloth. The moistened cotton behind the seed supplied the water. As the germinating seed was between the glass and the black cloth, the whole process was plainly visible. At the end of fifteen days the story of the germination of every seed under observation was told in fifteen chapters of twenty-four hours each. Experiments of this kind were made with peas, beans, scarlet runners, barley, Indian corn, flax, vetch, white lupin, radish and Boston Ivy. This selection gave an opportunity to observe seeds of slow germination and seeds of rapid germination, seeds with one