NATURE STUDIES.

Read before the Kings and Hants Counties Teachers' Institute by Professor E. C. Haycock of Acadia University.

* * * With possible slight exceptions the term Neighborhood Study could be substituted for Lessons on Nature, and be an equally appropriate heading for the specific studies to be taught under it. If Neighborhood Study embodies in its spirit the aims of that section of the prescribed course, no argument is required to convince you that it is essentially an out-of-doors' study, and that it cannot be taught by text-book assignments, as the story of your neighborhood is yet unwritten. A brief consideration of the special prescriptions under Lessons on Nature will, I think, justify the suggested title.

In Grades I and II the "power of accurate observation" is to be "developed by exercising each of the senses on simple or appropriate objects." To obtain exercise for each of the senses, there must be appeals to them, and a physical alertness and vigor that compel their recognition. Should the appeals be unheeded, the senses are dulled, not quickened. The child's senses are never so alert or the appeals to them so varied and numerous in the schoolroom as out-of-doors. Consciously and unconsciously the child in the open air is continuously and actively responding to these appeals. An attitude of listlessness there is so unnatural as almost invariably to arouse concern regarding the state of health. The objects of the neighborhood, wholly apart from the efforts of the teacher, will thus furnish abundant material for sense exercise.

The more definite training specified in these grades — "estimation of direction, distance, magnitude, weight, etc.,"—is secured with equal facility when in the fields, the woods, or on the sea-shore. It is wholly natural to estimate the directions and distances travelled, of visible or invisible familiar objects or places, or of the different sounds of the open. The hands are rarely empty of objects, and the estimation of weight, magnitude, etc., is a natural consequence. "Common colors" are differentiated and nameable in the flowers, but in their purity are less common in nature. "Simple regular solids, surfaces and lines" may lie beyond the scope of out-of-door Neighborhood Study, but may readily be incorporated in the schoolroom discussion. "Simple observations on common minerals, stones, plants and animals" must be made in their natural surroundings to be understood or appreciated, and such are the only ones that can be complete and accurate. Therefore, Neighborhood Study furnishes the best material and the most favorable conditions for carrying out the specifications under Lessons on Nature in the first and second grades.

In Grades III and IV the study of the "geography of the neighborhood" and "use of local or county maps" is prescribed in addition to the work of the preceding grades. In this work more stress is laid on the element of definiteness or precision, justified by the normal mental development of the child. The geography of the neighborhood accessible to children in these grades is not laid down on any local or county maps of Kings or Hants with sufficient detail to enable the subject to be taught in the schoolroom with any profit to beginners. The major portion of the study must be upon the surface of the land itself, and the geographical terms fixed by their correct application to local features. By rough plotting of the roads, streams, or coast-lines, on a suitable scale, with the aid of the children, the conception of the map is obtained; the recognition of the neighborhood and its position upon the county map naturally follows, and the way is opened for the reception of more extended oral or text-book information.

The use of the neighborhood map does not end here, but should form the basis for plans for field excursions, for the introduction of all local surface features, dwellings, etc., for the location of places where the different minerals and rocks, plants and animals were found. As the study is extended, the observations will become too numerous to be recorded on a single plan; classification of data becomes necessary, and multiplication of copies to form mineral, plant, animal, topographic and cultural maps.

In Grades III and IV a larger percentage of work under Nature Study may be done in the schoolroom, but it can nearly all be termed Neighborhood Study, and the material and data for schoolroom work can be obtained by the children themselves out-of-doors. Only by basing it upon out-of-door observations can the spirit of the prescription be kept, interest and enthusiasm sustained, and the normal and healthy mental development of the child secured.

In the remaining four grades of the common school course the prescribed Nature Study is mainly an extension of the observations upon local objects of the neighborhood. The necessity for systematic out-of-door study remains, although an increasing proportion of the work may be done in the schoolroom.

Notable additions, however, are introduced in Grade V. The study of the soil and underlying rock will reveal a relation, and the idea of a process will be reached. The well-directed extension of plant and animal study is designed to reveal types of life forms. "Natural phenomena, such as ventilation, evaporation, freezing" are to be "closely examined;" and, finally, a health reader begun.

From the point of view of the writer, the increasing complexity of the "Lessons on Nature" at this stage is likely to furnish a correspondingly difficult problem to the conscientious teacher. If the additions could be naturally connected with the work of the previous grades, and form merely a logical development of that work, little difficulty would be experienced by the teacher in its incorporation, or by the pupils in its comprehension. Such a natural