

connection really exists, and, I think, can be developed without difficulty upon a general plan for the lower grades already briefly outlined. The natural phenomena indicated are observable out-of-doors, and are susceptible of representation upon the neighborhood map that figures so largely in the suggestions previously made. We have no such perfect artificial ventilating system as we find out-of-doors in the circulation of the atmosphere, and the direction and force of the winds can be observed daily and plotted upon the local map. The oral explanation and experimental demonstration of ventilation,—or the circulation of a small portion of the atmosphere,—is not an isolated topic, but full of interest and significance.

The weather changes accompanying wind changes—or the connection of sunny, cloudy, or rainy weather with particular winds—is easily revealed by a method of tabulation of local observations. With the knowledge of geographical distribution of land and water expected at this stage, the whole topic of evaporation, condensation and freezing of water can be treated in connection with the weather observations. In cold weather the ordinary school-room furnishes abundant illustration of these transformations as applied to weather, in the evaporation easily demonstrable in the body of the room, and the condensation of moisture or frost upon the window panes. A closer examination of the phenomena alluded to, if found practicable, offers no break in the continuity of the whole subject.

In the remaining three grades the additions offer no new difficulties to the teacher. The work is a logical extension of that already treated, and text-books can be studied with profit if the foundation has been well laid along the lines suggested.

Neighborhood Study is, then, an appropriate synonym for the Nature Study of the common school course, and the term is suggestive of methods of teaching absolutely necessary to success.

It has been stated that if the suggested change of title could be justified, the subject could not be taught by text-book assignments. The reason given,—that the book telling all about your neighborhood is not in print,—is a cogent one. But similar objects to those of your own neighborhood are also found in other neighborhoods, and books have been written about them. To a certain extent the lessons on nature require the use of such books. Their *proper* and *legitimate* relation to teaching, and use by the pupils, is a difficult and troublesome, but extremely important problem. A few simple general considerations have a bearing upon their use by the pupils in nature study. Words are symbols. Books on this study are essentially descriptive, and the words used are symbols for objects. The symbols can mean nothing to the child that has no knowledge of the object for which the word stands. We, as adults, know that unintelligible expressions such as dialectic or foreign words or phrases diminish our interest in and even cause an abandonment of an otherwise interesting story.

How much more uninteresting and distasteful will books on nature prove to the child if the objects written about are unknown? There would seem then to be one safe rule—limit the book study to things that are a part of the child's own experience.

It is my own conviction that the rule holds good in the study of the natural history and physical sciences, regardless of the age of the student. Especially the introductory study of all such sciences should be observational, and observation ought to accompany closely the use of books in the more advanced stages. The objects themselves should always supersede in interest and authority the books that have been written about them. Our power of observation is vitiated by the use of books if they are not kept in a subordinate relation.

Granting then that the Nature Study of the common school course means Neighborhood Study, and that it cannot be taught by any cut-and-dried text-book-and-recitation system, is the method that has been suggested one that can be applied with a fair degree of success by the average teacher in the common schools? If I were to enumerate the leading qualifications for its successful application, I would place at the head of the list interest in natural objects and a longing for knowledge about them. If a teacher possesses this qualification, objects out-of-doors will be appealing to his or her senses continually. Going out with the children for study will prove the most delightful part of the school course, for the scope of seeing is marvelously widened by the multiplication of youthful eyes. Until this interest has been deadened by unwise treatment, it requires no effort or unnatural stimulus from the more mature student to enlist their aid. Again, nothing secures attention like the genuine interest of another. A child with the slightest promise intellectually will seek to share the knowledge that produces it. Genuine interest and a spirit of investigation are therefore the prime essentials to success in teaching the Nature Study of the common school course.

The second qualification in the enumeration offered is a desire to cultivate in the pupils a similar interest in natural objects, and to satisfy their longings for knowledge about them. A teacher who knows by experience the enjoyment and intellectual gratification obtainable from natural history pursuits will naturally seek to cultivate in a pupil, or impart, a similar capacity for enjoyment. In specialization and advanced investigation such interest may beget a selfish indifference to instruction, but even in such a case, the discovery of aptitude or interest in a student will banish indifference to their needs. Teachers of the latter type are scarcely to be found outside of the universities, and must be rare or wholly absent from those engaged in common school work. Unfortunately, teachers in the common schools, possessed of the first qualification to a degree sufficient to secure the second, are doubtless also rare, or, at least, exceptional. On the other hand, there must be many who would find