

may have different dimensions. Let it then observe the colour of the brick and notice what other objects have a similar colour, and in this way it will be enabled to form an abstract conception. So far it has been mainly detecting identities. Now have it compare the shape of the brick with a stone or pebble and note that their shapes differ, and in some way give the impression that the brick has an artificial shape or is moulded while the pebble is natural; here will arise discrimination. If all this be carefully done there is but little doubt that the child will retain it. In all such cases it is well to keep clearly in mind that education is designed to be largely disciplinary, leaving extended knowledge to be obtained in later years. Though the leading idea is to impart discipline, yet if the objects to be studied are carefully selected, a good deal of useful information may at the same time be imparted. When a child not trained in observation has grown to maturer years, it is apt to think that there are many objects which present themselves that are not worth the while to notice, they are too trifling. This is a deplorable and injurious habit which not only deprives the person of a great deal of useful knowledge, but is apt to be detrimental no matter what occupation be pursued. There are very few men who would think to stop and count the toes on a dog's paw, yet such information as this is doubtless valuable. Teach a child to notice these things—the number of toes on a dog and a cat, the number of legs on a fly—and both the habit formed of noticing details and the facts themselves will be worth acquiring. When animals and insects are studied, the child should be carefully taught to avoid the infliction of pain, to deprive unnecessarily a living thing of that which no human agency can restore. Let it be taught to have a real reverence

for that which possesses the wonderful and mysterious thing we call life.

Just here, too, is a lesson for older people. How few realize, even in a slight degree, what Clifford so beautifully expresses in "Seeing and Thinking,"—that "In every speck of dust that falls lie hid the laws of the universe; and there is not an hour which passes in which you do not hold the Infinite in your hands."

Again, simple objects may be assigned as models for drawings, and later on the object may be given for careful inspection, and then removed and a drawing made from memory. This will result in increased accuracy of observation and is moreover imparting a training in what may be of great service in later years.

When the pupil has become apt in observational studies of objects, the attention may be directed towards natural phenomena. The action of gravitation may be selected. The child will be familiar enough with the fact that a stone will fall to the earth when not supported. Now let it be given two objects, of similar material but of different weights. Let it release these at the same instant and note that they strike the floor at the same moment. Vary this experiment until the idea is clearly grasped that all bodies fall through a given distance in the same time. It may be advisable in some cases to introduce the conception of the resistance of the air to the free fall of bodies. This may be illustrated in various ways. A sheet of paper when folded will fall faster than when spread out.

Michael Faraday was one of the most successful teachers of science to children, and his methods are worthy of study. His lectures on Chemical History of the Candle are especially suggestive of what may be taught children as they were delivered to juvenile audiences. Some of the facts which he taught the children by