

gers. He must remain for a considerable time in the simplest and most obvious ideas. Here, if possible, more than anything else, is it necessary that each idea should be, as it were, worked into the texture of his mind before he proceeds to the next. The most complex combination of number are made up of the simplest ideas; and, with many persons, ideas of numbers continue through life indistinct, because the simple elements of which they are composed were never clear in their minds. There should be none of the "senseless parroting" of the multiplication table, but a progressive attainment of real ideas of number from real objects, — addition and subtraction from real addition and subtraction; and from these that species of repeated addition which is called "multiplication," and that species of repeated subtraction which is called "division." Ideas of number, and of the elements of calculation, being obtained from real objects, and from the different kinds of real objects, the mind may be led to clear *abstract* ideas of number. Clear ideas of number tend powerfully to general clearness of mind, and affect many subsequent acquirements. Confused ideas of number spread a haze and dimness over the whole field of knowledge.

Amongst the properties of external objects, of which the child obtains the knowledge by his senses, his attention may be early directed to their size and distances, and he will readily take in the simple ideas of measurement. He will have no difficulty in finding one thing to be longer than another, and, with the help of his clear ideas of number, one thing to be twice or three times as long as another; and two things, which can not be brought together, to be equal, by finding both equal to some third thing. His eye and hand should be exercised in measuring, and the engagement of both will interest him, and gratify the impulse to mental and bodily activity, which is almost incessant in childhood. Real measures of every kind, linear, superficial, solid and liquid, and weights, — as inches, yards, linear, square, and cubic feet, quarts, bushels, ounces, and pounds, — should be set before him, until his eye and touch are perfectly familiar with them. These should take the place of the tables of weights and measures, which, with so bold a defiance of common sense, as well as of the laws of mind, are given to children to be committed to memory, before they have a glimmering of their meaning.

From ideas of distance he will easily and naturally proceed to examine the position of external objects. Being presented with the simplest ideas of position, as straight lines, angles, &c., he delineates them on paper, or a slate, from the outlines of objects progressively set before him. He is gradually led on to many of the relations of triangles and circles, — the elements of geometry and of linear drawing.

When the eye has been in some degree trained to the observation of form, and the hand to the imitation of outline, the child may begin to read; not with letters, but sentences containing words of which the object is before his eyes. He will learn the letters of print by a species of analysis, and by attempting to form them with his pencil, and his formation of the writing character, will be much more free and rapid by the accuracy and pliancy which drawing has given to his eye and hand.

When people attempt to teach children geography, by compelling them to commit to memory a number of proper names, it is almost needless to say, that they are following that wretched system of word-mongering which has so long reigned supreme in every department of education. When they set a globe or a map before his eyes, they do what is, indeed, much better, but they still begin at the wrong end. Here, as in every other branch of intellectual instruction, we ought to begin with the *existing experience* of the child, and evolve out of it, by the most gradual progression, what we want him to know. We must begin with the reality which is *in him and around him*, and make known to him what he can not see, by means of that which is before his senses. A map, or plan, of the school-room or the play-ground, which he should be led to draw for himself, ought to be the first lesson in geography. This should be followed by one of his own town or district, which he can verify by personal observation.

When he thoroughly understands the relation which a map bears to the reality, he may be led to the map of his country, not crowded with names, but a simple outline, with the principal mountains and rivers and a few great towns marked. In conceiving the extent of a large country, or of the globe, his clear ideas of number, acting upon the real distances which he knows, will secure clearness in the combined ideas. The *natural divisions* of the earth should be the first learned, and the productions, tea, cotton, &c., and animals which are before his senses, referred to their several homes.

Naturally connected with ideas of the surface of the earth are those of remarkable events in different places, and of the past history of the earth's principal inhabitants. Although history, properly so-called, should be perhaps the latest of all studies, there are certain leading ideas of great events and characters, which may be advantageously made known at an early period. As a basis of this knowledge the child must be led to the measurement of time. And here, as before, he must begin with what is within reach of his senses, (or what may be popularly said to be so.) He must learn the comparative lengths of small portions of time, — as a minute, an hour, a day, a week. He should be led to think of the trifling events which he can recollect, in the order of time, — his getting up in the morning — his coming to school — his first lessons — his game in the play-ground. Having learned to conceive events of his own experience, in the order in which they occurred, — extending back over a continually increasing period, — his clear ideas of number, acting upon these clear ideas of his own little chronology, will lead him to a conception of the chronology of the human race. The chronological order will be found the most natural and easy way of presenting such interesting facts of past history as the child can comprehend.

Even if education were carried no farther than this, how great would be its effects! How superior a race of men might be produced by such a system thoroughly worked out! What power of observation, arrangement, and deduction, — what rapidity of eye and dexterity of hand, would be ready for application to any branch of the business of society. What independence of judgment would be generated in such men, by the sound and practical nature of their acquirements. Yet what modesty, from a just apprehension of the extent of knowledge above them; and what a tendency upward and onward, from the spirit of progression infused into all their labors.

It is plain, however, that if circumstances admitted of the education being carried farther, the same principles might be continued. The lessons on objects would flow on easily into complete courses of Zoölogy, Botany, Mineralogy, and Geology; the principle being strictly adhered to of examining real objects, when procurable, and when not, of using good pictures. Geometry, Algebra, Trigonometry, and the higher branches of mathematics, would easily follow, upon the thorough comprehension of the simple relations of number and position. The different branches in Natural Philosophy, exhibited by progressive experiments, would be not so much a labor as a recreation.

There are two deeply important branches of study, which, as they are seldom considered proper to form a part of early education, deserve particular notice. They might be included under the single head of the study of the human constitution, but this at once presents two great divisions, which it is more convenient to consider apart. *Every child* then might be made to possess a considerable acquaintance with

1. The structure of his own body.
2. The structure or constitution of his mind.

It ought to require little reasoning to prove the utility of making these studies a part of general education. Indeed, if education were not beyond all other things governed by mere prejudice and custom, this kind of knowledge would seem the most fitting for universal acquisition, as concerning all men alike and affecting all pursuits. A knowledge of the structure of a man's own body, acquired in early life, would prevent many injurious practices, which, in most cases, are persevered in through