

HOW SHALL WE CULTIVATE THE CHILD'S SENSES?

The mind of the child derives its first notions of the external world from the exercise of its senses. "From the hour of birth, through all the waking moments, there pour in through the eye ever-varying impressions of light and color, from the dimness of twilight to the utmost solar refulgence, which are reproduced as a highly diversified luminous consciousness. Impressions of sound, of all qualities and intensities, loud and faint, shrill and dull, harsh and musical, in endless succession, enter the ear, and give rise to a varied auditory consciousness. Ever-changing contrasts of touch acquaint the minds with hard things and soft, light and heavy, rough and smooth, round and angular, brittle and flexible, and are wrought into a knowledge of things within reach. And so, also, with the senses of taste and smell. This multitude of contrasted impressions, representing the endless diversity of the surrounding world, has been organized into a connected and coherent body of knowledge.

"After two or three years, the face that was at first blank becomes bright with the light of numberless recognitions. The child knows all the common objects of the house, the garden, and the street, and it not only knows them apart, but it has extended its discrimination of likeness and difference to a great many of their characters. It has found out about differences of form, size, color, weight, transparency, plasticity, toughness, brittleness, fluidity, warmth, taste, and various other properties of the solid and liquid substances of which it has had experience. It has noted peculiarities among animals and plants, and the distinctions, traits, and habits of persons.

"Besides this, it has learned to associate names with its ideas; it has acquired a language. The number of words it uses to express things, and actions, and qualities, degrees and relations among these things and actions, shows the extent to which its discriminations have been carried; groups of ideas are integrated into trains of thought, and words into corresponding trains of sentences, to communicate them."

Nature to be our Guide.—When a child goes to school, the first duty of the teacher is to continue the method of education which has been pursued by Nature; to increase the acuteness of the senses by suitable exercises, to direct them to appropriate objects, to extend the discriminations of likeness and unlikeness in which its present knowledge consists, and to supply words as they are wanted, to designate the notions and conceptions which the mind gradually accumulates.

Now, Nature's education begins with life, and her school is the school of experience. She teaches nothing but what the child will need to know, and all her lessons are regulated by the degree of development which he has reached and the practical use to which her lessons are to be applied. She is in no hurry. She does not cram. She associates pleasures and pains with the sensations to which she directs attention. She repeats her lessons day after day with unwearying patience and with infinite variety of illustration and exercise. She leaves time for her lessons to be thoroughly assimilated and put in practice. She links on new knowledge to old. She converts every sense into an avenue for conveying new ideas, and every instinct into an instrument for stimulating the infant to exercise his senses. She never wearies her pupil. As soon as he is tired of examining one thing she directs him to another, and when he is tired of examining everything she sends him to sleep. She turns everything to account for the purpose of instructing and educating him, and teaches him invaluable lessons while he seems to be only sucking a coral, or pulling a flower to pieces, or rolling a ball, or smoothing a cat. Examine her pupil at the age of three,

and you will find that he has learnt the leading elementary truths of Physics without attending the lectures of any learned professor; that he has some acquaintance with Botany, and considerable knowledge of Natural History; that he has a deep insight into human character, and that, without the assistance of grammar or dictionary, he has learnt to speak his mother-tongue with tolerable fluency and accuracy; that he has made a commencement in several mechanical crafts, such as those of mason and carpenter; that he is not wholly ignorant of the Fine Arts, and that he has elementary notions of the truths of morality and religion.

We clearly cannot do better, then, than take Nature for our guide when the child leaves the nursery to go to school. She has mapped out for us the course which we ought to pursue in his formal education. "New helps and resources may be needed, but the essential means should be the same. Mental growth is to be carried by cultivation to still higher stages, with the same processes hitherto employed. Nothing is more obvious than that the child's entrance upon school-life, instead of being the wise continuance of processes already begun, is usually an abrupt translation to a new, artificial, and totally different sphere of mental experience. Although in the previous periods it has learned more than it ever will again in the same time, and learned it according to the fundamental laws of growing intelligence, yet the current notion is that education begins with the child's entrance upon school-life. That which does begin it this time is not education, but simply the acquirement of new helps to it."

The Aim which the Teacher should set before him in Cultivating the Senses.—In cultivating the senses our aim should be, not so much to bring them to their highest possible acuteness, as to fit them for the duties of life, as efficient and ready instruments of the mind. It is a simple extravagance to aim at attaining "an eye as keen and piercing as that of the eagle; an ear as sensitive to the faintest sound as that of the hare; a nostril as far-scenting as that of the wild deer; a tongue as delicate as that of the butterfly; and a touch as acute as that of the spider." One is tempted, on hearing such language, to quote the words of Pope:

"Why has not man a microscopic eye?
For this plain reason—man is not a fly.
Say what the use were finer optics given,
To inspect a mite, not comprehend the heaven?
Or touch, if tremblingly alive all o'er,
To smart and agonize at every pore?
Or quick effluvia darting through the brain,
Die of a rose in aromatic pain?
If nature thundered in his opening ears,
And stunned him with the music of the spheres,
How would he wish that Heaven had left him still
The whispering zephyr and the purling rill."

Nor need we have recourse to exercises for the exclusive purpose of cultivating the senses. The same lessons which will supply children with such knowledge as it is most desirable they should acquire will afford adequate opportunities for the exercise of the senses. Herbert Spencer says on this point: "From the Bushman, whose eye, habitually employed in identifying distant objects that are to be pursued or fled from, has acquired a telescopic range, to the accountant whose daily practice enables him to add up several columns simultaneously, we find that the highest power of a faculty results from the discharge of those duties which the conditions of life require it to discharge. And we may be sure, *a priori*, that the same law holds throughout education. The education of most value for guidance must be at the same time the most valuable for discipline."

Children must Use their Senses.—The great thing for the teacher to aim at is to get children to use their senses in the acquisition of all knowledge that is based on observation. This they