SCIENCE

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THE TEACHING OF SCIENCE[1]

THE prime claim of science to a place in the school curriculum is based upon the intellectual value of the subject matter and its application to life. This conception of education through science as the best preparation for complete living was Herbert Spencer's contribution to educational theory; and to its influence the introduction of science into the school is largely due. Spencer's doctrine was in accord with the principles of Pestalozzi as to the sequence in which facts and ideas should be presented and be related to stages of development, in order to be effective in creating or fostering natural interests in the mind of the child. Scientific instruction implies, therefore, not alone knowledge that is best for use in life, but knowledge adapted to the normal course of mental development. Both substance and method should be judged by the criterion of what is of greatest immediate worth or nearest to the pupil's interest at the moment. When this standard of psychological suitability is applied to the school science courses now usually followed, it must be confessed that they rarely reach it, many topics and much material being remote from the pupil's natural interests and needs.

The truth is that in the design of science courses for schools "trial-and-error" methods have been followed. In the absence of accurate knowledge these are the only possible methods of construction, but sufficient is now known of child psychology to produce a scheme of scientific instruction which represents not merely the views of advocates of particular subjects, but is biologically sound because it is in accord with the principles of mental growth, and, therefore, with those of

[1] From the address of the president of the Section of Educational Science, British Association for the Advancement of Science, Hull, September, 1922.