

SCIENCE

A Weekly Journal devoted to the Advancement of Science, publishing the official notices and proceedings of the American Association for the Advancement of Science, edited by J. McKeen Cattell and published every Friday by

THE SCIENCE PRESS

11 Liberty St., Utica, N. Y. Garrison, N. Y.
New York City: Grand Central Terminal

Annual Subscription, \$6.00 Single Copies, 15 Cts.

Entered as second-class matter January 21, 1922, at the Post Office at Utica, N. Y., Under the Act of March 3, 1879.

VOL. LVI OCTOBER 20, 1922 No. 1451

CONTENTS

<i>The British Association for the Advancement of Science:</i>	
<i>The Teaching of Science:</i> SIR RICHARD GREGORY	433
<i>Frog and Toad Tadpoles as Sources of Intestinal Protozoa for Teaching Purposes:</i> PROFESSOR R. W. HEGNER.....	439
<i>Scientific Events:</i>	
<i>Alexander Smith; The Total Solar Eclipse of September 21; The Fiji-New Zealand Expedition of the State University of Iowa; The New England Intercollegiate Geological Excursion; Lectures of the Lowell Institute; Installation of the Chancellor of the University of Buffalo; The Presidency of the Massachusetts Institute of Technology</i>	441
<i>Scientific Notes and News</i>	445
<i>University and Educational Notes</i>	447
<i>Discussion and Correspondence:</i>	
<i>The Production of Species:</i> DR. DAVID STARR JORDAN. <i>The Teaching of Evolution:</i> J. HOWARD BROWN. <i>Tingitidæ or Tingidæ:</i> DR. H. M. PARSHLEY. <i>The Vacuum Tube Amplifier in Academic Work:</i> PROFESSOR ROSWELL H. JOHNSON. <i>Chemical Spelling:</i> DR. L. O. HOWARD.....	448
<i>Quotations:</i>	
<i>Biological Stains</i>	450
<i>Scientific Books:</i>	
<i>Newman's Readings on Evolution, Genetics and Eugenics:</i> PROFESSOR M. F. GUYER.....	451
<i>Special Articles:</i>	
<i>Static Deflections of the Vacuum Gravitation Needle:</i> PROFESSOR CARL BARUS.....	452
<i>The American Chemical Society:</i> DR. CHARLES L. PARSONS.....	453
<i>The American Astronomical Society:</i> PROFESSOR JOEL STEBBINS.....	459

THE TEACHING OF SCIENCE¹

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.

Science

56 (1451)

Science **56** (1451), 433-460.

ARTICLE TOOLS

<http://science.sciencemag.org/content/56/1451.citation>

PERMISSIONS

<http://www.sciencemag.org/help/reprints-and-permissions>

Use of this article is subject to the [Terms of Service](#)

Science (print ISSN 0036-8075; online ISSN 1095-9203) is published by the American Association for the Advancement of Science, 1200 New York Avenue NW, Washington, DC 20005. The title *Science* is a registered trademark of AAAS.

Copyright © 1922 The Authors, some rights reserved; exclusive licensee American Association for the Advancement of Science. No claim to original U.S. Government Works.