

University Jena; D. Appleton & Co., New York, publishers. This remarkable contribution to the science of psychology is the ninth volume of the International Education Series, edited by Dr. W. T. Harris. It is translated by H. W. Brown, of the State Normal School, Worcester, Mass., with a clearness and force not always found in translations from the German. It is so readable that anyone will be interested in a cursory perusal, whilst its science of the unfolding of the intellect of the child from the earliest period is so full and complete that the mastery of its contents will require careful study. Preyer began his observation of his boy five minutes after birth, and continued them three times a day with very few interruptions for three years. The facts and phenomena recorded are grouped under three headings, "Senses, will and intellect," these again being sub-divided. A conspectus of thirty-one pages brings into easy view for comparison this record, which (excluding theory and hypotheses) deals simply with facts noted down at the moment. Pains were taken to keep the child unconscious of these observations and from all influences, such as learning by rote things he could not possibly understand and silly tricks of mimicry, so that his development should be natural and unforced. *Is there any thinking without words?* In opposition to Max Muller, Preyer, we think, proves to a demonstration that while intellectual development is stimulated by language it is not wholly dependent upon it. Like many another knotty point that philosophers may discuss *ad infinitum* in the closet, the appeal to nature and the study of a child show us that long before he can speak, or even understand speech, he has ideas. It has become fashionable to preserve photographs of children from an early age, and if a diary of facts accurately observed and carefully recorded went with them much light might be thrown on child life, which, as a guide to the educator, would be invaluable. If some of our readers will undertake the task they will find a model and guide in the conspectus. But the desire to prove "forwardness" in a child must be rigorously excluded. The seventeenth chapter on "Parallel between Disturbance of Speech in Adults and Imperfections of Speech in the Child" is a masterly *resumé*. * * * The intelligent reader will agree with Preyer "to observe the child every day through the first thousand days of his life, in order to trace the historical development of speech, was possible only through self-control, much patience and great expenditure of time; but such observations are necessary from the physiological, the psychological, the linguistic and the pedagogic point of view, and nothing can supply their place."

ELEMENTARY CHEMICAL TECHNIQS, by George N. Cross, A. M.; 123 pages. Price \$1.25. Eastern Educational Bureau, Boston, publishers. This is an admirable little work to aid the teacher of chemistry in manipulating his experiments. The directions are clear, terse and accompanying with drawings, and the teacher who uses this book cannot fail to arouse a new interest in his class work.

ELEMENTARY SYNTHETIC GEOMETRY of the point, line and circle in the plane, by N. F. Dupuis, M. A., F. R. S. C., Professor of pure mathematics in the University of Queen's

College, Kingston, Canada. (London: MacMillan & Co., and New York, 1889).

Professor Dupuis is a genius in his way, and his little octavo of some 300 pages contains a most interesting presentation of the subject, altogether free from the cumbrous logical machinery of Euclid. Euclid is a classic; but the impression is growing stronger and stronger upon us that we are sacrificing too much to the idolatry of the antique. The method of treatment in the book before us is simple, yet comprehensive. Its logic is as convincing as that of Euclid, while coming more directly to the conclusion. Both the methods and terms used connect more intimately with the common algebraic, trigonometric, and more modern developments of mathematical science.

ANALYTIC GEOMETRY, by A. S. Hardy, Professor of mathematics in Dartmouth College, and author of "Elements of Quaternions." (Ginn & Co., publishers. Boston, 1889).

We have had, a few years ago, made an acquaintance with Professor Hardy's work in his charming introduction to quaternions above mentioned. The present work which is a handsomely bound, beautifully printed volume of 229 pages, is just such a lucidly arranged treatise as we would expect. We have not had time to test the accuracy of the book in detail, but from a general examination we can say we have never seen the subject treated in a clearer manner for the student who has to work his own way.

Scott's *ROKEBY*, edited with notes and vocabulary by Michael MacMillan, B. A., Oxon. London: MacMillan & Co., and New York. The editor thinks that *Rokeby* has never been as great a favorite as it deserves to be. He claims that it is quite able to bear comparison with the very best achievements of Scott's genius. The introduction is a fine critical essay, and the notes excellent.

Shakespeare's *THE WINTER'S TALE*, edited by K. Deighton, B. A., with introduction and notes. London: MacMillan & Co., and New York. This is a neat and beautifully printed little volume. One excellent feature about the notes is that they do not tell what the average reader ought, unaided, to find out for himself, but are rather suggestive and replete with passages of literature corresponding to those found in the text.

NATURE READERS: SEA-SIDE AND WAY-SIDE, No. 3, by Julia McNair Wright. D. C. Heath & Co., Publishers, Boston, Mass. Those who have read with such delight Nos. 1 and 2 of this series will welcome this volume, not inferior to the others in interest and wealth of illustration.

STICKNEY'S READERS, Nos. I., II., III., IV. Published by Ginn & Co., Boston. This is a series of graded readers for use in schools. They are beautifully illustrated and printed, and seem to be admirably adapted to interest and instruct children.

SECOND SPANISH BOOK. Publishers, A. S. Barnes & Co., New York. This is a work, interesting to students of the Spanish language, by Prof. J. H. Worman. In it, as well as the First Spanish Book, the author works out the natural method of instruction.