

part of science which interests the pupil. It begins with lighting when it is a question in the long winter evenings; or it begins with soil when it is a matter of conserving moisture for the spring garden. The first method might be diluted from almost any text book of physics or chemistry. Both methods are scientific. Elementary science is taught for the sake of the subject; general science is taught as the subject is needed.

Although an old book (published 1905) there are teachers who prefer to have an introduction to the specific sciences and this book serves that purpose. The subject is still in an experimental stage and it is well to have teachers trying out all phases.

The book is well illustrated. At the end of each section is a list of questions which are suggestive.

Rhode Island State Normal School, Providence.

W. G. VINAL.

A First Year Course in General Science. By CLARA A. PEASE. Charles E. Merrill Company. Pp. 315.

The problem of writing an elementary science book covering the field now quite generally accepted, and organizing this material in such a way that it is presented to the pupil as a series of interrelated problems, has evidently not been solved. Possibly the material of this field cannot be so organized. Our texts seem too fragmentary and the knowledge content for the present, at least, must be their principal justification.

However, other things being equal, that text which weaves its material about the fewest organizing factors has obvious advantages. From the environment of the pupil such material must be selected for such a text as will be of vital interest and at the same time be susceptible of such scientific explanation as will be within the grasp of the first year student.

First Year Science, judged by the above standard, compares very favorably with any text that has thus far come to the notice of the writer. The topics about which the material is grouped are not large and are presented in a logical way. The book, like most others on the subject, is largely an earth science text. Especially noteworthy are the first two chapters under the heading of "The Place of the Earth in the Universe." Whether or not this approach to the subject is pedagogical, when tested by the class room test, it works.

The use of scientific terminology throughout the book is commendable. It places in the child's vocabulary, and gives meaning to those scientific terms which are to be met with again and again throughout his general reading whether high school is finished or not.

The purpose of and the selection of the questions, as a whole, at the end of each chapter is most excellent. They are not only a review, but are intended primarily to test the pupils' ability to apply the knowledge gained in the chapter to concrete cases.

The style of the text is clear, concise and readable and the minimum of trouble is experienced in the pupil getting the thought. The text is not without minor errors and statements or inferences which

should not have been overlooked. Two or three illustrations will suffice. For instance, in the explanation of springs and artesian wells all layers of soil whether it be gravel, sand, clay or what not are termed rock. In the absence of any such definition of rock it is difficult to see just how the discussion will be very clear to the large number of pupils who have never seen the outcroppings of any bed rock (P. 85) The writer is not yet sure what was meant by the question "Which is more valuable, a gem cut from rock crystals or one made from Amethyst?" (P. 176) Equally confusing appear the questions 4 & 5 (P. 224) asking how we distinguish in "General" and in Particular steep slopes from a contour map.

Traverse City High School, Michigan.

G. H. CURTIS.

Elementary General Science, Book I. By PERCY E. ROWELL. Published by the author. Pp. 197.

In the preface we read, "The science which is most valuable to the child is that which explains the phenomena of the environment—the science of common things—the science of everyday life. No one branch of science can do this. . . . A blending of all branches of science, as a means for the best teaching of it in the grades, is inevitable."

There is a dearth of science books for the elementary schools and many teachers will find this little book of much value in their classes. It has numerous illustrations.

R. M.

Introduction to General Science with Experiments. By PERCY E. ROWELL. The Macmillan Company. Pp. 295.

This was published in 1913 and no later edition has yet appeared. No space is given to drawings or pictures. The work is certainly true to its name, it is *general*. No particular branch of science is emphasized. Chemistry, Physics, Geography and Botany are interwoven. The plan of the book is splendid. A paragraph or two is given on a subject, then a number of definite references are cited where the pupil may find a more extended discussion. An experiment usually follows.

In the front part of the book a good list of references is found with directions for use. The experiments are interesting and stimulating and well within the grasp of a first year high school student. They can easily be performed in a forty-five minute period and no elaborate apparatus is necessary.

I found this book of great service in my first year classes. However, I would not recommend it to an inexperienced teacher as a text, for to be of value it must be used together with the references.

Boston Trade School.

THOMAS D. GINN.

First Year Science. By WILLIAM H. SNYDER. Allyn and Bacon. Pp. 470.

This text is an attempt to unify the elements of some ten special