

Recent Books

A Brief Course in Physics. CHARLES H. LAKE, First Assistant Superintendent of Schools, Cleveland, Ohio; GEORGE P. UNSELD, Head of the Department of Physics, The West High School, Salt Lake City, Utah. D. C. Heath and Co., New York City, 1931. vi + 468 pp. 318 figs. 10 Illustrations. 13 X 19 cm. \$1.68.

The aim of the book, as set forth by the authors in the preface, is to present the usual subject matter of an elementary physics course in such a manner as to give the pupil an understanding of the fundamental principles of the science and not merely a mass of facts and formulas, and also to avoid diverting the pupil's attention from these principles by numerous descriptions of the ever-multiplying mechanical devices.

The introduction includes explanations and definitions of many of the fundamental terms such as matter, space, motion, mass, force, and energy, without which an understanding of physics is impossible.

A unique feature of the book is the provision made in the early pages for a thorough review of the simple mathematical processes which are involved in the solution of standard physics problems. The formulas for the area and circumference of a circle, the volume of a sphere and the like, are given in addition to a set of problems involving percentage, decimals, square root, and the solution of equations in one unknown. Many of the later sections are followed by a page or two of "Mental Arithmetic." The problems are given in the form of sentences to be completed and should be of considerable value to the student. The number of numerical problems of the older type is somewhat too small. A series of non-numerical questions on each chapter is provided at the back of the book.

The space allotted to sound is about one-half that given by most textbooks. The essentials are included but the statement is brief and less than the normal attention is given musical instruments and scales. The treatment of heat is also brief. There is no separate section entitled "Light" as in the older textbooks. The essential facts concerning light are included in the section entitled "Radiation." The authors have departed entirely from the usual procedure by introducing the discussion of magnetism after electrostatics and current electricity and its chemical production have been taken up. Magnetism is thus more closely linked with the discussion of the electromagnetic production of current.

Those topics which were formerly left for the last few pages of the textbook have become an integral part of the subject matter from the beginning. The student is not confronted by a mass of isolated theories which, to him, seem contradictory to those which he has already learned. A simple and clear explanation of the recent theories of the structure of matter is introduced in the first chapter and developed throughout the book. The photoelectric effect and quanta are introduced at the logical point. Spectra are explained in terms of the passage of electrons from one stationary state to another and spectral series are presented in an understandable manner. The Bohr atom is also given considerable space.

The book meets a great need by presenting this type of material in so able a manner and should be very stimulating. The presentation of mechanics, heat, and sound, however, leaves something to be desired.

GRACE HOOPER

GREENWOOD SCHOOL
RUXTON, MARYLAND

Teaching the Bright Pupil. FAY ADAMS, Supervisor of Student Teaching and In-