

malities. His demonstration of biologically harmful radiation from certain television sets brought about manufacturing modifications. Ott, who is personally convinced of the direct benefit to humans of the full spectrum of natural sunlight, sees implications in this for wearers of tinted lenses and for manufacturers of artificial lighting.

Scientists and laymen alike may find the book interesting from the standpoint of possible new directions in research on the biologic effects of light. However, even though references and the author's publications are listed, a paucity of detail about scientific experiments is apparent. Few photographs and graphs of experimental data are included.

Ray Reed  
Jefferson Community College  
Louisville

**BLUEPRINT FOR MEDICAL CARE**, by David D. Rutstein. 1974. MIT Press, Cambridge, Mass. 308 p. \$8.95.

*Blueprint for Medical Care* is an operational manual for those organizing and implementing effective health care systems. Although there are, I'm sure, numerous specific books already available in this area, Rutstein's book is probably the most thorough, comprehensive, and authoritative outline of all phases of a national health care system. The 19 chapters include everything from care of individual patients to sources of financial support for such a program. It is written for the layman as well as the professional. The writing style is concise, and diagrams are used wisely. Unlike so many other writers dealing with future change, Rutstein first discusses the why's of change and then the what's and how's of it.

I highly recommend this book for anyone interested in investigating what is probably the most accurate account of an effective national health care program. And if reading materials could be required on a professional level, I'd say this book is a must for hospital administrators.

Darrell Davies  
Kalamazoo (Mich.)  
Valley Community College

**HEALTH INSTRUCTION: THEORY AND APPLICATION**, by John T. Fodor and Gus T. Dalis. 2nd ed., 1974. Lea & Febiger, Philadelphia. 158 p. \$7.50 (hardback).

This book is intended as a guide to the development of curricula and the improvement of instruction in health education. It has eight chapters, on defining health, education, and the school health program; selecting content; structuring knowledge; formulating objectives; developing learning opportunities; organizing instruction; evaluating instruction; and identifying competencies of persons responsible for effective

## What is an Amphibian?

### Amphibians

By  
J. F. D. Frazer

In *Amphibians* Dr. Frazer describes the classification and evolution of amphibians, their zoogeography, and speciation. The anatomy and physiology of amphibians as well as behavior and ecology are discussed. The amphibian's life in damp surroundings, its adaptations to drier surroundings and above ground level are included. Other chapters contain a discussion of amphibian communities, amphibians and man, and possible lines of research on amphibians.

"It is well written. It is interesting."

*The American Biology Teacher*  
February 1974

Wykeham Science Series, Volume 25  
1973. vi, 122p. 22 illus. paper/\$5.80  
ISBN 0-387-91105-7

### Experimental Studies of Amphibian Development

By  
E. Hadorn

Translated from the German by D. Turner  
Professor Hadorn demonstrates that it is possible to discuss, in remarkable detail, most of the major problems of development using only amphibians as the experimental system. His primary aim in utilizing this in-depth "case study" approach is to enable the student to *understand* the experiments, rather than merely memorize facts.

Some of the interesting topics under discussion include: a hormone as a trigger of egg laying, functions of the genetic material during oocyte maturation, experimental production of identical twins, the mechanism of embryonic induction, the male toad as mother, and wound healing and regeneration.

1974. x, 137p. 45 illus. paper/\$8.20  
ISBN 0-387-06644-6

Examination copies available

For further information write to



Springer-Verlag  
New York Inc.  
175 Fifth Avenue  
New York, NY 10010

health instruction. Emphasis is placed on the development of an articulated K-12 health curriculum and the organization of the curriculum around broad concepts of health.

Although the topics and emphasis reflect important aspects of curriculum development and instruction, the book has such severe weaknesses that its usefulness is questionable: (i) Many of the topics and subtopics are treated so briefly that they are of little or no value to the curriculum-developer or teacher. For example, less than a page and a half is devoted to the psychology of learning. Checklists, observations, questionnaires, self-appraisals, interviews, sociodramas, small-group discussions, and informal essays are mentioned as possible evaluative techniques; but examples of the instruments, descriptions of their limitations, and directions for their use are lacking. (ii) The discussion of means of selecting content and structuring knowledge fails to distinguish clearly between "concept" and "principle"; the authors' statements, together with the examples they give erroneously suggest that the two terms are synonymous. (iii) The importance of objectives in selecting content is mentioned, but the chapters on selecting content and structuring knowledge give the impression that these tasks are completed before the objectives are identified. Furthermore, the chapter on objectives follows the chapters on selecting content and structuring knowledge.

This book is not recommended for its stated purposes. Persons interested in these endeavors would be better served by consulting any of the general-curriculum and methodology textbooks that are currently available.

Thomas P. Evans  
Oregon State University  
Corvallis

### History-Philosophy

**SCIENCE, TECHNOLOGY, AND FREEDOM**, ed. by Willis H. Truitt and T. W. Graham Solomons. 1974. Houghton Mifflin Co., Boston. 284 p. \$4.50.

The baker who writes a book on baking stands a good chance of being credible and accurate. However, the nonscientist who does not research, design, or "do science" cannot possibly interpret the scientific endeavor with accuracy.

This collection of readings was apparently compiled by philosophers who "read science." The book is divided into four parts, with a total of thirty articles. The usual names are found: Kass, Ehrlich, Compton, Dubos, Dobzhansky. Nearly two-thirds of the previously published works are older than five years. The articles—some are excerpts from books—are not geared pri-

marily to the presentation of opposing views, but merely to saturate the reader with an exposure to the editors' theme—that science and technology are the “bad guys” of most of the world's ills. “The general thesis of the book . . . is to explore the pros and cons of the expansion of scientific knowledge and technology into human affairs.” But there are presented many more cons than pros. The audience is “the non-science major who is interested in the development of technology as it applies to the human environment.”

I must disagree with some of the editors' statements: “Specialization reinforces social fragmentation and cuts people off from one another.” Communication and transportation are now world-wide phenomena. There is a too-typical, superficial, interpretation. “. . . natural scientists are prevented from clearly seeing the simplest things.” Although there is some occasional truth in that, I suspect that the simplest things are clearer to he who studies them than to he who reads about them. “. . . too much attention to the specifics of science sacrifices the opportunity to achieve a broader and more enriched overview of the field and the vast implications involved for human life and the future of all men.” But too little—or no—attention to the specifics of science sacrifices one's capability to know what he is talking about.

To make a point: the scientist who would compile a list of readings in philosophy, with no or little formal training in philosophy, could very well misinterpret what he reads or compiles. Truitt and Solomons (and nowhere are we told of the latter's vocation) suggest further readings at the end of each of the four parts: all but 7 out of 51 suggested readings or bibliography items are *about* science, and not scientific publications.

I would recommend some of the articles herein for the science major, who would be better qualified to comprehend their content. Some of the better works are by Erich Fromm (“The Revolution of Hope”), Boris Hessen (“The Social and Economic Roots of Newton's *Principia*”), Robert S. Cohen (“Ethics and Science”), and Barry Commoner (“The Closing Circle—Nature, Man, and Technology”).

One wonders if the editors are accurate in their implication that science “threatens to subjugate and annihilate the race,” or if “society” (of which the scientific establishment is a part), has, as Daniel Callahan has said, a “technological drive” that cannot be inhibited anymore than can the sex, hunger, or survival drives. It is so easy to blame elusive technological powers for the desires of the masses. It could be that our culture is overdemanding, and not that our technology is overproductive.

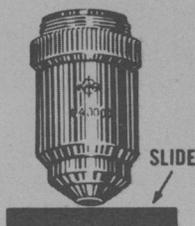
Paul R. Gastonguay  
Stonehill College  
North Easton, Mass.

# SWIFT M-2240 Series—



## NOW...with 360° rotatable head!

Retractable spring-loaded objectives slide into lens on slightest contact to protect valuable slides.



SLIDE



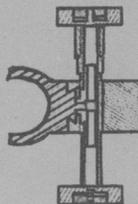
SWIFT 2241-B  
Widefield W 10x Eyepiece, 4x, 10x, 40xR.

Widefield eyepiece is 10 power with high eyepoint of 15.5 mm., designed to accept eyepiece scale.



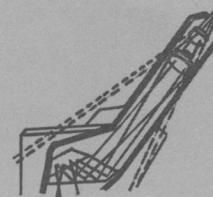
Now, added to its many other practical features, is the new 360° rotatable head on the SWIFT M-2240 Series Microscopes. These instruments are meticulously manufactured to withstand all manner of classroom punishment. Stage clips are locked to stage plate. Eyepiece tubes are oversize. Built-in illuminator. (Also available without illuminator.) Heavy-duty, 3-wire, approved power lead for extra safety. And, of course, each instrument has the famed SWIFT lifetime warranty.

Rack and pinion tension adjustment is tamper-proof, with exclusive patented slip clutch to prevent gear damage.



SWIFT 2246-B  
10x, 40xR, 100xR, Oil Immersion.

Prisms, as used in research bodies, (NOT mirrors), facilitate optical angle for greater control over light rays.



WRITE TODAY FOR LITERATURE AND NAME OF NEAREST DEALER



SWIFT INSTRUMENTS, INC.

Technical Instrument Division, Dept. AB-1  
P.O. BOX 562, SAN JOSE, CA 95106 • 408/293-2380  
(MAIN OFFICE: Boston, MA)

SWIFT AGENCIES are located throughout the U.S. and in most foreign countries.

MAN'S FUTURE BIRTHRIGHT: ESSAYS ON SCIENCE AND HUMANITY BY H. J. MULLER, ed. by Elof A. Carlson. 1973. State University of New York Press, Albany. 185 p. \$3.95 softback, \$6.95 hardback.

Hermann Joseph Muller (1890–1967) was an eminent geneticist, a winner of the Nobel Prize in Medicine for his work on the relationship between x-radiation and mutation, and a humanitarian with considerable social and political consciousness. In addition to his hundreds of papers on technical aspects of genetics and biology, he also wrote on a variety of social issues, in-

cluding atomic warfare, radiation danger, eugenics, genetic disease, and science fiction. He was a great advocate of world brotherhood and of the gradual advance of human societies toward a more rational understanding of their problems through science. Muller was also strongly influenced by the Bolshevik revolution in Russia in 1917, and became for many years an outspoken advocate for and worker towards the goal of international communism. In the life and thought of this colorful and insightful scientist there is much that is exciting, stimulating, and pertinent to the world of the 1970s.

Yet E. A. Carlson's collection of Mul-