

Book Reviews

GREAT PAPERBACK CONTEST

Scholastic Magazines, Inc. is sponsoring its second *Great Paperback Contest* which features prizes for descriptions of unique ways to use paperbacks to motivate reading in the school library and classroom. Ten grand prize winners will receive one hundred paperbacks of their choice from Scholastic's *Readers' Choice Catalog*, a free table-top book rack, and book bag. Runners-up will each receive an Interest Category from the *Readers' Choice Catalog* which contains as many as fifty paperbacks related to a single theme.

The contest is open to all librarians, school administrators, and teachers in public, private, and parochial schools in the United States and Canada, whether or not they use any Scholastic material.

Applicants should describe their technique for bringing young people and paperbacks together on no more than four double-spaced typewritten pages. Their name, school, school address, grade and subject taught (if applicable), home address, and a telephone number where they can be reached after March 1, 1978 should also be included.

Entries to *The Great Paperback Contest* will be judged by a panel of distinguished educators and editors on the basis of practicality and originality.

All entries must be postmarked no later than March 1, 1978, and should be mailed to: Susan Fritsch, Scholastic Magazines, Inc., 50 West 44th Street, New York, NY 10036.

Anatomy and Physiology

COMPARATIVE ANATOMY: GROCERY STORE ZOOLOGY: BONES AND MUSCLES.

by Joan Elma Rahn. 1977. Atheneum, (122 East 42nd Street, New York 10017). 145 p. \$6.95.

The title is misleading. The book should be called "Kitchen Anatomy."

Rahn, an able botanist turned general biologist, has taught extensively and written many books and articles for young people. She has kept up her good work with this one.

Part I is seven chapters devoted to comparative skeletal anatomy using well-known animals and man. The simple text and fine diagrams present a clear picture of the similarities and differences found in the bony structure of cow, pig, rabbit, chicken, and man. The second part treats the principle muscles of the thorax and extremities. Each part includes a well-written introductory chapter; one to bone, the other to muscle.

The idea used by Rahn is so obvious that no one saw it. Our daily food contains all of the elements needed for an introduction to simple comparative anatomy. It was observation of this sort that led Buffon in mid-18th century to lay the groundwork for Darwin a hundred years later. To be sure, bones and packaged meats from the supermarket and TV dinners, will not be of much help. However, an occasional roasted chicken will and can supply the practical applications the text suggests. Grades 7 through 12—and probably some teachers—will benefit from this book. It can easily be used as the base for a mini-course at any of those levels.

F. Martin Brown
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ANATOMY AND PHYSIOLOGY

by John Raynor. 1977. Harper and Row (10 East 53rd Street, New York 10022). 435 p. \$13.95.

This textbook that presents the basic concepts of human anatomy and physiology was written for students planning a career in one of the health professions. The author has included and emphasized material that the student will probably find useful in later professional courses. Basic structural features and normal physiological processes of the human body are presented with emphasis on the reasons these processes take place.

Behavioral objectives are listed at the end of each chapter, which outline the essential material students should retain and will also serve as a self test on the subject matter. A brief glossary defines some terms related to anatomy and physiology.

The sharp line drawings of anatomic structures are in color and are done in a manner that give them depth and clarity. Schematic illustrations are included to clarify physiological processes and flowcharts sum up sequences involved in various processes.

This book will rank among the better group of basic textbooks of anatomy and physiology currently on the market.

Ray Reed
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ANATOMY AND PHYSIOLOGY LABORATORY TEXTBOOK—SHORT

by Harold J. Benson and Stanley E. Gunstream 2nd ed., 1977. William C. Brown and Company, Publishers. (2460 Kerper Boulevard, Dubuque, Iowa 52001). 314 p. Price not given.

The authors have eliminated 12 exercises and substituted rat dissection for cat dissection to make this revision the "short" version of their laboratory manual. But the workbook still contains a superabundance of factual material, which in the authors' words is "an overwhelming amount of material to be covered in one semester."

Presentation of the dissection of a freshly killed rat as a single exercise predicates that the students will be able to expose, identify and study organs of the integumentary, skeletal, muscular, nervous, circulatory, lymphatic, respiratory, digestive, urinary, endocrine and reproductive systems all within a single laboratory period. There are 28 other exercises on anatomy and 12 on physiology making a total of 41 comprehensive, well organized, succinct presentations of human anatomy and physiology.

I would classify most of the physiology exercises as descriptive and technique-oriented. Quantitative procedures are seldom used—there are no observations of biological variations or comparisons of mean values of groups within the class such as male-female, weight groups, state of physical fitness, etc.

Work sheets to be filled out, torn from the book and handed in, accompany each exercise. These appear to be good learning activities, but it seems a shame that the manual has to lose much of its future usefulness because these pages must be ripped out.

I believe this workbook would be helpful for anatomy-physiology courses designed for students preparing for health-related careers, but the abundance of

factual material in the manual requires it to be used in a two-semester course.

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THE JOHNS HOPKINS ATLAS OF HUMAN FUNCTIONAL ANATOMY

George D. Zuidema, ed. 1977. The Johns Hopkins University Press (Baltimore, Maryland 21218). 108 p. \$16.50 hardback, \$6.95 softback.

This totally new atlas of human anatomy is intended for students in medicine, nursing, and allied health fields. Illustrations and accompanying descriptions have been prepared to help the student understand functional living anatomy.

The atlas consists of a discussion of 22 systems and organs starting with fetal circulation and ending with the skin. A short glossary and more extensive index aid the reader in more effectively using the descriptive portion of the atlas. Forty-four plates, mostly in color, illustrate structure and emphasize the interrelation of body systems.

The discussion, in general, is quite accurate and has interesting clinical considerations. However, because of the brevity of the atlas, the descriptions of the various systems and organs are limited and do not provide much detail or explanation.

Illustrations and diagrams are attractive and contain considerable information, both anatomical and physiological in nature. The interrelationship of body systems is apparent in many of the illustrations.

This atlas is both interesting to look through and very pretty in appearance, but it lacks sufficient depth and detail to be used in a semester functional human anatomy course. It seems best suited for use in short courses or in combination with a more conventional longer text.

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INTRODUCTORY PHYSIOLOGY AND ANATOMY: A LABORATORY GUIDE

by Robert E. Haupt, Delma E. Harding, Oscar E. Tauber and Adela S. Elwell. 4th ed., 1977. Macmillan Publishing Company, Inc. (866 Third Avenue, New York 10022). 266 p. Price not given.

This lab manual is designed for freshman college students who may not have taken courses in either biology or chemistry in high school. Because of this lack of background in biology, the collection of basic physiological exercises is supple-

mented with the minimum of anatomical information needed for understanding functional concepts. This book does not emphasize muscle anatomy, for there are only three drawings to label for muscle identification. The section on muscle physiology is very adequate, so a happy balance between anatomy and physiology is established for the students lacking background courses. This balance is maintained throughout the book.

The drawings detract from the overall quality of the text. They are heavily shaded and this makes identification of specific parts difficult.

Each section begins with stated objectives which are general enough to allow great latitude in the accomplishment of those objectives.

The use of optional activities allows students with more background to pursue more varied and in-depth laboratory activities with each section covered. The exercise on frog anatomy is especially useful for students with no previous background in biology.

For those students with adequate background there is a section on mammalian anatomy with a fetal pig dissection.

The book contains appendices for metric system conversion, preparation of solutions, special procedures and a table of prefixes and suffixes.

This is a very useful lab manual if it is used for the specific group of students who have backgrounds lacking biology or chemistry.

Jack Whiting
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A LABORATORY MANUAL AND STUDY GUIDE FOR ANATOMY AND PHYSIOLOGY

by Kenneth G. Neal and Barbara H. Kalbus. 3rd ed., 1976. Burgess Publishing Company (7108 Ohms Lane, Minneapolis, Minnesota 55435). 426 p. \$8.95.

This is a laboratory manual that could be used with any text in an introductory college course in anatomy and physiology. It is well written with an attractive format and scientific vocabulary. Directions are clear and concise. The many diagrams are sharp and distinct. The use of color in the circulatory system is an excellent added attraction. With the objectives stated at the beginning of each exercise, followed by a self-test after completing the work is an excellent check for the individual student to measure his/her mastery of the material.

Sister Helen O'Connell
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Ecology and Environmental Biology

THE ECOLOGY GAME, BASIC BIOLOGY COURSE—UNIT 2: ORGANISMS AND THEIR ENVIRONMENT

by Michael Tribe and Derek Peacock. 1976. Cambridge University Press (32 East 57th Street, New York 10022). \$23.50.

The ecology game is a simulation of the ecological effects of an actual oil spill near the coast of England. It was developed as part of the Basic Biology Course at the University of Sussex. It is used as an adjunct to fieldwork and requires a knowledge of ecological principles.

The game was designed for groups of from five to eight students. The optimum time for completion is four to six hours. A faculty member acts as moderator and dispenser of research grants and requested data. It contains a tutors guide and six student guides.

A large number of cards containing maps, climate and weather data, biotic data, and physical and chemical data are available for solving the problems posed by the game. Most of the cards are obtained in exchange for one or more research grant cards worth two weeks each. A series of slides or transparencies, available separately, are used to introduce the problem, illustrate various organisms, and the characteristics of the chemicals involved with the oil spill and the clean up.

The students play the game by viewing slides of the area before the disturbing event and seven years after. They must determine what changes have occurred, investigate possible reasons for the changes, and recommend suitable courses of action in a similar situation.

Students must decide what data they will need and request it from the moderator with the appropriate payment of research time. They must prepare progress reports that serve as the basis for awarding more research time. Short research papers may also be "published" if they have arrived at a significant conclusion.

The material in these papers can be used by other groups. A final conference ends the game during which each participating group gives a short verbal report on their findings and conclusions.

This game will be of little value to high school and beginning college biology students because they lack the ecological background necessary for successful participation. It should be a valuable