helping to prevent their suicide by getting professional help for those who need it from a crisis center.

A list of crisis-intervention centers in the United States is included. It lists names of directors as well as business and emergency phone numbers of these centers. It is catalogued by states and is an excellent resource.

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Microbiology

MICROBIOLOGY FOR HEALTH STUDENTS
by C. Thomas Settlemire and William T. Hughes. 1978. Reston Publishing Company, Inc. (Reston, Virginia 22090). 244 p. Price not given.

This textbook is not meant to cover the entire range of subjects included in microbiology. Only highlights of this broad field are presented with an emphasis upon those areas that would be of more interest to students of the health sciences.

Well-presented sections in this publication include the chapters dealing with optical instruments and the fundamental laboratory techniques of microbiology. Other chapters of merit include the coverage of host-microbe interactions and the topic of immunological response to antigens. The topic of immunology is summarized in a manner that the beginning student can comprehend. The chapter that discusses how chemical and physical agents affect microbes is also a well-organized presentation.

A valuable portion of the book are its numerous tables and figures. Many of the tables do an exemplary job of condensing and summarizing great amounts of information. Two examples would include the chronology of microbiology and the physical and chemical methods of sterilization. Many of the tables and figures could be made into useful overhead transparencies.

The textbook has an appendix devoted to suggested laboratory activities for beginning students in microbiology. This section also includes information on several techniques for sampling body fluids and wastes products for bacteriological examination.

Human pathogenic microbes that are not extensively covered include the rickettsiae, fungi, and protozoa. Also, the material on disease transmission is brief.

Despite a few shortcomings, this textbook would be a useful addition to the classroom reference bookshelf. The textbook could also serve as a supplementary source in a second-level high school course as well as a resource for beginning undergraduate studies in microbiology.

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MICROBIOLOGY
by Eugene W. Nester, C. Evans Roberts, Nancy N. Pearsall, and Brian J. McCarthy. 2nd ed., 1978. Holt, Rinehart, and Winston (383 Madison Avenue, New York 10017). 769 p. $15.95.

Why yet another microbiology text? The answer according to the authors is to teach basic microbiological concepts and the role of microorganisms in health and other applied areas. The revised edition follows the same general approach as the first edition. Two new chapters have been added "Bacteria of Medical Importance" and "Looking Ahead."

This book is adaptable to a high school advanced placement biology or nursing programs. The numerous examples and cross-referencing in the margins are big advantages to the student. For high schools offering a course in microbiology, this text should be considered. The text is suitable to students interested in the various aspects of microbiology. Along with the core chapters 1-10, 16, 19 and 20), there are chapters that would apply to specialized areas, such as health sciences and application of Micro to areas outside the health field.

A laboratory manual and an instructor's manual accompany the text.

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Physiology and Anatomy

BIOLOGY OF REPRODUCTION
by Peter J. Hogarth 1978. Halsted Press, a division of John Wiley and Sons, Inc. (605 Third Avenue, New York 10016). 189 p. Price not given.

If I were planning a special topics course in reproductive physiology, I

would use this monograph for the textbook. This little book is well organized, concise, direct, readable and presents up-to-date material. It is designated a tertiary-level biology book, but this classification does not refer to the level of difficulty. It indicates that the book is restricted to a single topic—specialized not "advanced," not difficult.

More is known about the reproductive processes of the laboratory rat than any other animal; thus there is a tendency for treatises on reproductive physiology to be primarily about rats. This book avoids that limitation and presents information about humans and domestic animals as well as rats.

I was slightly disappointed that the author did not report more fully on the practical applications of reproductive physiology which are being carried out by veterinarians and animal husbandry specialists who commonly practice *in vitro* fertilization, freezing of embryos, which are subsequently implanted into donor mothers, and artificial insemination of cattle, swine, and turkeys. The author indicates that A.I. is widely used and that it accounts for the production of more than 70% of British swine, but the details of sperm collection, treatment, and the problems of cryogenics and storage are omitted.

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Related Fields

LIFE SCIENCE PHYSICS
by Joseph W. Kane and Morton M. Sternheim. 1978. John Wiley and Sons (One Wiley Drive, Somerset, New Jersey 08873). 664 p. $17.95.

There is a definite need for life science students to have knowledge of basic concepts of physics and how these can be used to understand life processes. This need can be met either by the introduction of physical concepts into life science courses or by the presentation of physics courses oriented towards life science majors. This textbook follows this latter course and is designed to be used with a two-semester course in life science physics.

The book includes 34 chapters grouped into nine units, a prologue and epilogue, six appendices, and a useful subject index. The first two units discuss some basic concepts of physics such as laws of motion, work energy, power, impulse, momentum and elasticity. Units three and four focus on heat, thermodynamics, and the physical characteristics of fluids. A number of aspects concerning electricity and magnetism are presented in unit five. Unit six discusses wave motion, sound, properties of light, mirrors, lenses, and optical instruments. The last three units discuss physical concepts of atomic elements such as wave properties of matter, nuclear physics, ionizing radiation, the structure of matter, quantum mechanics, the light photon, and special relativity. The appendices provide specific mathematical help to the student whose background in mathematics needs strengthening. The book is filled with useful illustrations and applications of physics concepts to life science processes. Each chapter contains problems that apply the concepts presented. Answers to these problems are presented in the fifth appendix. Each chapter also includes a list of additional reading for the interested student.

The authors have prepared an excellent book which includes much more material than can be presented in even two semesters. They have worked hard and successfully to produce a textbook which clearly shows the application of physics to life processes. However, they do not consider one significant question: