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2007-2008 *NEW* General & Human Biology Titles

2008 New Titles

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Biology Laboratory Manual, 8e106
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General Biology - Non Majors

Textbook

International Edition

NEW

ESSENTIALS OF THE LIVING WORLD

2nd Edition

By George Johnson and Jonathan Losos of Washington University-St Louis

2008 (October 2006)

ISBN-13: 978-0-07-330935-4 / MHID: 0-07-330935-4 (ARIS)

ISBN-13: 978-0-07-110211-7 / MHID: 0-07-110211-6 [IE]

In this Essentials version of George Johnson's textbook, *The Living World* which is often considered to be a student favorite. Dr. Johnson has written this textbook from the ground up to be an engaging and accessible learning tool with an emphasis on "how things work and why things happen the way they do". This Essentials textbook features a straightforward, clear writing style and a wide variety of media assets to enhance the content of the textbook. The strength of the second edition is the integration of many tools that are designed to inspire both students and instructors. The multi-media package for the new edition stretches students beyond the confines of the traditional textbook to include high interest video clips and animations of key biological concepts.

NEW TO THIS EDITION

- **Issues Oriented:** The author endeavors to apply biology to current issues and students' lives as much as possible throughout the text. However, he specifically adds boxes entitled "A Closer Look", "Author's Corner" and "Science in Action" to accomplish this objective as well.

FEATURES

- **Learning Modules:** Chapter Concepts are broken into smaller "learning modules" contained on one or two pages.
- **Process Boxes:** Key processes are illustrated via approximately 40 boxes that step a process through frame by frame.
- **Relatively Inexpensive:** Essentials of the Living World covers all of the key biological concepts for a semester course, but costs students about \$25 less than a traditional, full-length text.
- **Early Coverage of Evolution and Ecology:** Evolution and ecology are introduced in the beginning of the text (Chapter 2) and then revisited later.
- **Chapter Devoted to New Discoveries,** Chapter 10, *The New Biology*, focuses on gene technology, genomics, and recent discoveries in cell technology.

CONTENTS

Part 1 The Study of Life 1 The Science of Biology 2 Evolution and Ecology **Part 2 The Living Cell** 3 The Chemistry of Life 4 Molecules of Life 5 Cells 6 Energy and Life 7 Photosynthesis: Acquiring Energy from the Sun 8 How Cells Harvest Energy from Food **Part 3 The Continuity of Life** 9 Mitosis 10 Meiosis 11 Foundations of Genetics 12 DNA: The Genetic Material 13 How Genes Work 14 The New Biology **Part 4 The Evolution and Diversity of Life** 15 Evolution and Natural Selection 16 Exploring Biological Diversity 17 Evolution of Microbial Life 18 Evolution of Plants 19 Evolution of Animals **Part 5 The Living Environment** 20 Ecosystems 21 Populations and Communities 22 Behavior and the Environment 23 Plant Under Stress **Part 6 Animal Life** 24 The Animal Body and How It Moves 25 Circulation 26 Respiration 27 The Path of Food Through the Animal Body 28 Maintaining the Internal

Environment 29 How the Body Defends Itself 30 The Nervous System 31 Chemical Signaling Within the Animal Body 32 Reproduction and Development **Part 7 Plant Life** 33 Plant Form and Function 34 Plant Reproduction and Growth

International Edition

NEW

THE LIVING WORLD

5th Edition

By George Johnson, Washington University-St Louis

2008 (February 2007)

ISBN-13: 978-0-07-325653-5 / MHID: 0-07-325653-6

ISBN-13: 978-0-07-110212-4 / MHID: 0-07-110212-4 [IE]

George Johnson's textbook, *The Living World* is often considered to be a student favorite. Dr. Johnson has written this non-majors textbook from the ground up to be an engaging and accessible learning tool with an emphasis on "how things work and why things happen the way they do". This authoritative textbook features a straightforward, clear writing style and a wide variety of media assets to enhance the content of the textbook. The strength of the fifth edition is the integration of many tools that are designed to inspire both students and instructors. The multi-media package for the new edition stretches students beyond the confines of the traditional textbook to include high interest video clips and animations of key biological concepts.

NEW TO THIS EDITION

- **NEW FEATURE! Inquiry and Analysis**--This new feature appears at the end of all chapters and is intended to help students with developing their skills in analyzing and interpreting data.
- The author provides a 2-page discussion on the presentation of data in Chapter 1, introducing the students to the concepts of variables, relationships between variables, and presentation of data in various types of graphs. To reinforce this concept, the Inquiry and Analysis sections present the student with experimental data and help them analyze the data with a set of questions that walks them through the data.
- **Reorganized Table of Contents**--In response to the comments of our reviewers, the Table of Contents for the 5th edition will contain more, but shorter chapters than the 4th edition. Several of the chapters were sited as being too long and containing too much information for nonmajors. Six of these longer chapters have been split to form the addition of two more manageable chapters. These two new chapters are Chapters 29 and 30; 29 is devoted to the circulatory system and 30 is dedicated to the respiratory system.
- **Art Tie-Ins**--Throughout the text, descriptions of the art have been incorporated into the textual discussion, encouraging the students to look at the art as they are reading the textual descriptions. In many cases, the artwork has been revised to make these art tie-ins in the text clearer and more meaningful. A numbering system has been placed within the figures allowing the text to guide the student through particular areas of a figure.
- **New Boxed Readings!**--The addition of boxes readings in the previous edition (i.e. Author's Corner, Science in Action and A Closer Look) were very well received, so additional topics have been added.
- **UPDATED TEXT WEBSITE!**--McGraw-Hill's ARIS--Assessment, Review, and Instruction System for *The Living World*, 5/e is a complete electronic homework and course management system. Instructors can create and share course materials and assignments with colleagues with a few clicks of the mouse. Instructors can edit questions and algorithms, import their own content, and create announcements and due dates for assignments. ARIS has automatic grading and reporting of easy-to-assign algorithmically generated homework, quizzing, and testing. Once a student is registered in the course, all student activity within McGraw-Hill's ARIS is automatically recorded and available to the instructor through a fully integrated grade book that can be downloaded to Excel.

General & Human Biology

Contact your local McGraw-Hill Publisher's representative for more information on getting started with ARIS.

FEATURES

- **Hallmark Feature! Learning Modules**—Chapter Concepts are broken into smaller “learning modules” so students can absorb difficult concepts in easy-to-digest steps. These one or two page units assist students in easily identifying the details of major chapter concepts. They always end with a summary wrapping up what was just covered.
- **Animated Process Boxes**—We have animated 30 key biological processes directly from the textbook art. These process animations will demonstrate for the student “how it works” by stripping away some of the detail and focus on the essence of the biological process helping them develop a deeper understanding of the science.
- **Digitized Video Clips**—McGraw-Hill has organized a series of 75 digitized video clips that cover all the areas of introductory biology. These high interest video clips are an excellent way to start out your classes, post to a website for study purposes or to assist in demonstrating relevance of key biological topics for your students.
- **Customizable:** The Living World is now color customizable by chapter so instructors can select only the chapters they will need for their course, or couple chapters from The Living World with material from another source.

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International Edition

NEW

INQUIRY INTO LIFE

12th Edition

By Sylvia S Mader

2008 (January 2007)

ISBN-13: 978-0-07-330933-0 / MHID: 0-07-330933-8

ISBN-13: 978-0-07-110213-1 / MHID: 0-07-110213-2 [IE]

From the unique delivery of biology content, to the time tested art program, to the complete integration of the text with technology, Dr. Sylvia Mader has formed a teaching system that will both motivate and enable your students to understand and appreciate the wonders of all areas of biology. Inquiry into Life, 12/e emphasizes the application of all areas of biology to knowledge of human concerns, what the students are able to relate to. This distinctive text was developed to stand apart from all other non-majors texts with a unique approach, unparalleled art, and a straightforward, succinct writing style that has been acclaimed by both users and reviewers.

NEW TO THIS EDITION

- **More Critical Thinking Emphasis**—Discussion questions have been provided at the end of each “Focus” boxed reading and at the end of each chapter. Is it important that your students be able to apply what they’ve learned to real-life applications? Do you think this better prepares them for the future?
- **Instruction questions** are available with this project and can be found on the A.R.I.S. site. Instruction is a wireless student response system that allows for the ultimate in classroom participation, giving you immediate feedback from every student.
- **Content Revised Throughout**—Content has been revised throughout the book by contributing experts in the field.
- **Integrated Disease Coverage**—More human disease coverage will be integrated throughout the text. Each of the systems chapter will have a new Disease and Disorder section.
- **A.R.I.S.**—McGraw-Hill’s ARIS (Assessment, Review, and Instruction System) is an electronic homework and course management system which is designed for greater flexibility, power, and ease of use than any other system. Homework is easy-to-assign, automatically graded, and recorded in a robust grade book. Instructors can even share their course materials and assignments with colleagues. Whether you are looking for a “ready-to-use-straight-out-of-the-box” system or one you can customize to fit your specific course needs, ARIS is your solution. Contact your local McGraw-Hill Publisher’s representative for more information on getting started with ARIS.

- **Enhanced Art Program**—The content and clarity of the art program within Inquiry Into Life have always been a hallmark of the text. Great care has been taken to maintain this high standard in making this revision. Vibrant colors and added dimension have been put into place to help create an even more beneficial art program.

FEATURES

- **Digital Assets**—containing 60 pieces of active art, which are text art files developed to allow instructors the opportunity to manipulate illustrations so you can “tell your own story”, all art and photos from the text, and PowerPoint lectures.
- **An Emphasis on the Scientific Process**—The introductory chapter begins with a new and expanded explanation of the scientific process. New art contributes to this expanded coverage; Science Focus readings occur throughout the text. These readings discuss recent biological research in the area under discussion.
- **Bioethical Issues**—No general biology book covers as many issues or devotes as much space to this growing area of biology. Most chapters of Inquiry into Life end with a bioethical issue.
- **Chapter Opening Vignette** A short, thought-provoking vignette applies chapter material to a real-life situation.
- **Digitized Video Clips**—McGraw-Hill’s Biology Digitized Videos are an exciting new presentation tool for introductory general biology instructors to use in lecture or lab! Licensed from some of the highest-quality life science video producers in the world, these brief video clips on DVD range in length from 15 seconds to two minutes and cover all areas of general biology from cells to ecosystems. Engaging and informative, McGraw-Hill’s digitized biology videos will help capture students’ interest while illustrating key biological concepts, applications, and processes.
- **Inquiry into Life has Four Types of Boxed Readings:**
 - » **Health Focus** review procedures and technology that can contribute to our well-being.
 - » **Science Focus** readings describe how experimentation and observations have contributed to our knowledge about the living world.
 - » **Ecology Focus** readings show how the concepts of the chapter can be applied to ecological concerns.

» Bioethical Focus readings describe modern situations that call for value judgments and challenge students to develop a point of view.

- End-of-Chapter Material—Through the wide variety of the The End-of-Chapter material, students can be assured that they have grasped the concepts just discussed. Each chapter ends with Understanding Key Terms—Bold terms within the chapter are presented at the end of the chapter for review which include page references. Summarizing the Concepts, Testing Yourself review questions, and finally Thinking Critically questions.

- Chapter by Chapter Customization—Inquiry into Life is chapter-by-chapter color customizable so you and your students use only the chapters you want.

- Customize this book through Primis Online! This title is tentatively planned to be part of the Primis Online Database: www.mhhe.com/primis/online

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1 Exploring Life and Science **Part I Human Organization** 2 Chemistry of Life 3 Cell Structure and Function 4 Organization and Regulation of Body Systems **Part II Maintenance of the Human Body** 5 Cardiovascular System: Heart and Blood Vessels 6 Cardiovascular System: Blood 7 Lymphatic System and Immunity ** 8 Digestive System and Nutrition 9 Respiratory System 10 Urinary System and Excretion **Part III Movement and Support in Humans** 11 Skeletal System 12 Muscular System **Part IV Integration and Coordination in Humans** 13 Nervous System 14 Senses 15 Endocrine System **Part V Reproduction in Humans** 16 Reproductive System 17 Development and Aging **Part VI Human Genetics** 18 Patterns of Chromosome Inheritance ** 19 Cancer 20 Patterns of Genetic Inheritance ** 21 DNA Biology and Technology ** **Part VII Human Evolution and Ecology** 22 Human Evolution 23 Global Ecology 24 Human Population, Planetary Resources, and Conservation



BIOLOGY

Dimensions of Life

By Joelle C Presson, University of Maryland-College Park and Janann Jenner

2008 (January 2007)

ISBN-13: 978-0-07-322736- 8 / MHID: 0-07-322736-6

Presson/Jenner: Biology: Dimensions of Life, 1e is a one-semester biology text with an engaging, conversational style which encourages basic understanding of biology, issues, and applications leading students to a greater awareness of how they interact with the world around them. The goal of this text is to help students understand how biology relates to their lives and why they should develop a desire to obtain knowledge about science and biological issues.

FEATURES

- Accessible writing style
- Fundamental biological concepts are presented with less complexity in terms of detail, but with more attention paid to conveying a deeper understanding that students are sure to grasp.
- Applied topics of particular interest to students (e.g. Psychoactive Drugs chapter) are covered in greater detail than normally expected in a text for this course.
- Modern Biology emphasizes the use of scientific processes to understand nature.
- Each chapter starts with an interesting story or scenario and then ends with a section that returns to the story and asks the question “How Do You Know?” The introductory scenario sets up intriguing issues and questions and, after covering the material in the chapter, the last section returns to the opening scenario and addresses these issues and questions in detail.

- Key terms are boldfaced when they are first presented and formally defined. Then this definition is repeated in the margin space that is close to the relevant text.

- Key questions appear in the margins throughout the text and ask students to rephrase what they have learned.

- Illustrations, photos, graphs, and other visual items complement the written text to provide the most accessible definitions of basic biological concepts.

- A complete set of instructor and student media ancillaries accompanies Modern Biology, including Students Online Learning Center, Life Science Animations, Instructor’s Digital Content Manager, Instructor’s Testing, and Primis Online customizable digital and print versions.

- Use of analogies and deeper explanations

- Added Dimensions

- Full applications chapters

- End of Chapter Now You Can Understand

- What Do You Think?

- Quick Checks

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General & Human Biology

International Edition

NEW

CONCEPTS IN BIOLOGY

12th Edition

By Eldon Enger, Delta College

2007 (March 2006)

ISBN-13: 978-0-07-322737-5 / MHID: 0-07-322737-4

(with ARIS Card)

ISBN-13: 978-0-07-110946-8 / MHID: 0-07-110946-3

[IE with ARIS Card]

Enger/Ross/Bailey: Concepts in Biology is a relatively brief introductory general biology text written for students with no previous science background. The authors strive to use the most accessible vocabulary and writing style possible while still maintaining scientific accuracy. The text covers all the main areas of study in biology from cells through ecosystems. Evolution and ecology coverage are combined in Part Four to emphasize the relationship between these two main subject areas. The new, 12th edition is the latest and most exciting revision of a respected introductory biology text written by authors who know how to reach students through engaging writing, interesting issues and applications, and accessible level. Instructors will appreciate the book's scientific accuracy, complete coverage and extensive supplement package.

NEW TO THIS EDITION

- All new chapter dedicated to coverage of biotechnology.
- Former biochemical pathways chapter is now separated into two chapters. The first covers cellular respiration and the second covers photosynthesis.
- Hundreds of new photographs and illustrations appear in Concepts in Biology, 12/e.
- Concepts in Biology is now organized with physiological processes appearing as the last major part of the text.
- Brief vignettes of 2-3 paragraphs in length now appear at the beginning of each chapter.
- Each chapter now ends with an illustrated summary, organized by major heading, and then many new objective questions.
- McGraw-Hill's Biology Digitized Video Clips are correlated to topics covered in the text and identified by an icon on the appropriate book pages.

FEATURES

- Evolution and ecology coverage appear in the same unit, unlike most texts that have evolution in the first 1/3 of the text and ecology at the end.
- Many new and updated high-interest boxed readings appear throughout the text.

CONTENTS

Part 1 Introduction 1 What is Biology? **Part 2 Cells: Anatomy and Action** 2 The Basics of Life: Chemistry 3 Organic Chemistry: The Chemistry of Life 4 Cell Structure and Function 5 Enzymes 6 Respiration 7 Photosynthesis 8 DNA and RNA: The Molecular Basis of Heredity **Part 3 Cell Division and Heredity** 9 Mitosis: The Cell-Copying Process 10 Meiosis: Sex-Cell Formation 11 Mendelian Genetics 12 Biotechnology **Part 4 Evolution and Ecology** 13 Diversity Within Species 14 Natural Selection and Evolution 15 Speciation and Evolutionary Change 16 Ecosystem Organization and Energy Flow 17 Community Interactions 18 Population Ecology 19 Evolutionary and Ecological Aspects of Behavior **Part 5 The Origin and Classification of Life** 20 The Origin of Life and Evolution of Cells 21 The Classification and Evolution of Organisms 22 Microorganisms: Bacteria, Protista, and Fungi 23 Plants 24 Animals **Part 6 Physiological Processes** 25 Materials Exchange in the Body 26 Nutrition: Food and Diet 27 The Body's Control Mechanisms

and Immunity 28 Human Reproduction, Sex, and Sexuality Appendix 1: The Metric System Appendix 2: Acronyms

International Edition

NEW

ESSENTIALS OF BIOLOGY

By Sylvia S Mader

2007 (Jan 2006)

ISBN-13: 978-0-07-322479-4 / MHID: 0-07-322479-0

ISBN-13: 978-0-07-110801-0 / MHID: 0-07-110801-7

[IE with ARIS Card]

Essentials of Biology is an essentials level introductory general biology text for non-majors students that combines Dr. Sylvia Mader's superb and accessible writing style with clear visuals, a comprehensive learning system, and abundant supplements. Essentials of Biology emphasizes the relevance of biology to students' lives within a framework of biodiversity and basic-concepts coverage of all main areas of general biology. The three key features of Essentials of Biology include:

1. Dr. Sylvia Mader's succinct, precise writing style. Sylvia's writing is what has earned her a reputation as one of the most successful introductory biology textbook author ever, and it is what will be most compelling in this text.
2. A comprehensive learning system to help students get the most out of each chapter's text content and an incredible instructional visual program.
3. Our package would not be complete without our robust media technology package with quality animations, digitized videos, OLC, and student interactive CD-ROM.

Each chapter features numerous pedagogical tools that are carefully developed to help students grasp challenging concepts. These include:

-A numbered outline at the beginning of each chapter with accompanying concept statements for the main topics in each chapter.

- Check Your Progress questions and answers at the end of each major heading within the chapter to help students assess their understanding of the previous section.

- The boldface terms in each chapter are page referenced in an Understanding the Terms list at the end of the chapter, and a matching exercise allows students to test their knowledge of the terms.

- A Thinking Scientifically section at the end of each chapter gives students the opportunity to use critical thinking skills to respond to scientific questions.

- The Bioethical Issue at the end of each chapter briefly discusses a controversial issue confronting society and poses questions to help students fully consider the issue and arrive at an opinion.

-Numbered summary at the end of the chapter to help students review.

-Testing Yourself objective questions at the end of the chapter to help students prepare for the test.

FEATURES

▪ Essentials of Biology is authored by Dr. Sylvia Mader, one of the most respected and successful introductory general biology authors in the history of college textbook publishing.

▪ Each chapter features numerous learning aids that are carefully developed to help students grasp challenging concepts. Examples include:

» A numbered outline at the beginning of each chapter with accompanying concept statements for the main topics in each chapter.

» Check Your Progress questions and answers at the end of each major heading within the chapter to help students assess their understanding of the previous section.

» Testing Yourself questions at the end of the chapter to help students prepare for the test.

» The boldface terms in each chapter are page referenced in an Understanding the Terms list at the end of the chapter, and a matching exercise allows students to test their knowledge of the terms.

» A Thinking Scientifically section at the end of each chapter gives students the opportunity to use critical thinking skills to respond to scientific questions.

» The Bioethical Issue at the end of each chapter briefly discusses a controversial issue confronting society and poses questions to help students fully consider the issue and arrive at an informed opinion.

- Short, cost efficient paperbound text.
- Outstanding photographs and vibrantly colored and simple, yet accurate and effective, illustrations are featured through Essentials of Biology.

▪ Outstanding instructor's media package that includes:

» McGraw-Hill's Biology Digitized Video Clips DVD. Licensed from some of the highest-quality science video producers in the world, these brief segments range from 15 seconds to two minutes in length and cover all areas of general biology from cells to ecosystems.

» Approximately 70 new animations of key biological processes, most of which are also available in a Spanish version.

» A Digital Content Manager CD-ROM provides easy access to all photos, tables, and artwork from the text, plus a complete set of PowerPoint lectures organized by chapter.

» The Instructor's Testing and Resource CD-ROM includes the Instructor's Manual; a Test Bank in EZ Test, McGraw-Hill's flexible and easy-to-use electronic testing program; and questions for the Classroom Performance System (CPS).

- Outstanding media study tools for students.

» The Online Learning Center (OLC) provides study aids such as chapter quizzes, art exercises, flashcards, case studies, and access to an online tutor.

» The quizzes and other tutorial exercises from the OLC, as well as animations of key biological processes, are on the Student Interactive CD.

▪ In Essentials of Biology, Dr. Mader focuses on providing non-majors with exactly what they need to understand key biological concepts instead of emphasizing greater detail.

▪ Each chapter opens with several captivating photos and an accompanying brief vignette that relates to students' lives.

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Transport Systems 24 The Maintenance Systems 25 Human Nutrition 26 Defenses Against Disease 27 The Control Systems 28 Sensory Input and Motor Output 29 Reproduction and Development **Part 7 Ecology** 30 Ecology of Populations 31 Communities and Ecosystems 32 Human Impact on the Biosphere

BIOLOGY

3rd Edition

By Bruce Knox (Deceased), Pauline Ladiges and Barbara Evans of University of Melbourne and Robert Saint, Australian National University

2004 (Sept 2004) / 1240 pages

ISBN-13: 978-0-07-471325-9 / MHID: 0-07-471325-6

[McGraw-Hill Australia Title]

Website: <http://www.mhhe.com/au/knox3e>

The new third edition of the leading Australian Biology text has been significantly reviewed and revised to incorporate the needs and requests of Australian universities and academics. Drawing from the many strengths of the second edition of the text, this third edition successfully strikes a balance between the academic rigour that instructors demand and the simplicity that students need. New international examples are accompanied not only by Australian examples, but also by examples from New Zealand. Knox 3e offers students the key principles essential to an understanding of fundamental introductory Biology challenges. The appearance, structure and presentation of the new edition is substantially different to the previous edition in many respects. Technology is now part of the text, rather than being an added extra. Animal form and function and Plant form and function are now grouped as two individual parts. Students who purchase the new edition automatically get access to online content such as self-quizzing exercises as well as local and international journal articles. Visually, the text is clear and engaging, especially with regard to figures, photos and other graphics, ensuring that the learning process is an enjoyable one.

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Introduction—The nature of biology and science **Part 1 – Cell Biology and Energetics** 1 Molecules of life 2 The chemistry of life 3 Functioning cells 4 Movement across membranes 5 Harvesting energy 6 Cells, tissues and signals 7 Cell division **Part 2 – Genetics and Molecular Biology** 8 Inheritance 9 Genes, chromosomes and DNA 10 The genetic code 11 Gene expression 12 Genomes, mutation and cancer 13 Genetic engineering and biotechnology **Part 3 – Plant Form and Function** 14 Reproduction, growth and development of flowering plants 15 Structure of plants 16 Plant nutrition, transport and adaptation to stress 17 Plant hormones and growth responses **Part 4—Animal Form and Function** 18 Animal reproduction 19 Animal development 20 Animal and human nutrition 21 Gas exchange in animals 22 Circulation 23 Water, solutes and excretion 24 Innate defences and the immune system 25 Hormonal control in animals 26 Nervous systems 27 Animal movement 28 Animal behaviour 29 Animals responding to environmental stress **Part 5—Evolution and Biodiversity** 30 Evolving life 31 Evolving earth 32 Mechanisms of evolution 33 Bacteria 34 Viruses 35 The protists 36 Plants 37 Fungi 38 Simple animals: sponges to flatworms 39 Annelids, molluscs, nematodes and arthropods 40 Echinoderms and chordates **Part 6 – Ecology** 41 Australian biota 42 Population ecology 43 Living in communities 44 Ecosystems 45 Human impacts / Appendix 1 Classification of cellular organisms / Glossary / Credits / Index

General & Human Biology

Laboratory

NEW

LABORATORY MANUAL TO ACCOMPANY INQUIRY INTO LIFE

12th Edition

By Sylvia Mader

2008 (February 2007) / 512 pages

ISBN-13: 978-0-07-298682-2 / MHID: 0-07-298682-4

The laboratory exercises in this manual are coordinated with Inquiry into Life. The text emphasizes how we can apply biological knowledge to our own lives and to our relationships with other organisms. Although each laboratory is referenced to the appropriate chapter in Inquiry into Life, this manual may be used in coordination with other general biology texts. This manual can be adapted to a variety of course orientations and designs. There are a sufficient number of laboratories to permit a choice of activities over the length of the course. Many activities may be performed as demonstrations rather than as student activities, thereby shortening the time required to cover a particular concept.

FEATURES

- Customizable. Inquiry into Life Lab Manual is chapter-by-chapter color customizable through Primis Online so you and your students use only the exercises you want.
- Integrated Opening. Each laboratory begins with a list of learning objectives that are organized according to the major sections of the laboratory. The major sections of the labs are numbered on the opening page, in the lab material, and in the review.
- Self-Contained Content. Each lab contains all the background information necessary to understand the concepts being studied and to answer the questions asked. This feature will reduce student frustration and increase learning.
- Scientific Method. All laboratories stress the scientific method, and many opportunities are given for students to gain an appreciation of the scientific process. The first laboratory of this edition explicitly explains the steps of the scientific method and gives students an opportunity to use them.
- Student Activities. A color bar is used to designate a student activity. Some student activities are observations and some are experimental procedures. An icon appears whenever a procedure requires a period of time before results can be viewed. Sequentially numbered steps guide students as they perform an activity.
- Live Materials. Although students work with living material during some part of almost all laboratories, the exercises are designed to be completed within one laboratory session. This facilitates the use of the manual in multiple-section courses.
- Laboratory Safety. Lab safety is of prime importance, and the listing on page vii will assist instructors in their efforts to make the lab experience a safe one.
- A Laboratory Resource Guide—The lab resource guide is available to instructors and lab assistants via the password protected Instructor Center of Mader: Human Biology's A.R.I.S., text specific website.
- Each lab exercise is designed to be completed within one laboratory session.
- Each lab exercise concludes with review and thought questions.

CONTENTS

To the Instructor / To the Student / Laboratory Safety / **Part 1 Cell Biology** 1 Scientific Method 2 Metric Measurement and Microscopy 3 Chemical Composition of Cells 4 Cell Structure and Function 5 Mitosis and Meiosis 6 Enzymes 7 Cellular Respiration **Part 2 Plant Biology** 8 Photosynthesis 9 Organization of Flowering Plants 10 Reproduction in Flowering Plants **Part 3 Maintenance of the Human Body** 11 Animal Organization 12 Chemical Aspects of Digestion 13 Basic Mammalian Anatomy I 14 Cardiovascular System 15 Features of the Cardiovascular System 16 Basic Mammalian Anatomy II 17 Homeostasis **Part 4 Integration and Control of the Human Body** 18 Nervous System and Senses 19 Musculoskeletal System **Part 5 Continuance of the Species** 20 Development 21 Patterns of Inheritance 22 DNA Biology and Technology 23 Genetic Counseling **Part 6 Evolution and Diversity** 24 Evidences of Evolution 25 Microbiology 26 Seedless Plants 27 Seed Plants 28 Introduction to Invertebrates 29 Molluscs, Annelids, and Arthropods 30 Echinoderms and Chordates **Part 7 Behavior and Ecology** 31 Sampling Ecosystems 32 Effects of Pollution on Ecosystems / Appendix A Preparing a Laboratory Report/Laboratory Report Form Appendix B Metric System Appendix C Classification of Organisms

NEW

LABORATORY MANUAL TO ACCOMPANY CONCEPTS IN BIOLOGY

12th Edition

By Eldon Enger and Frederick Ross of Delta College

2007 (March 2007) / 304 pages

ISBN-13: 978-0-07-298663-1 / MHID: 0-07-298663-8

NEW TO THIS EDITION

- Each exercise begins with a set of objectives detailing what the student should be able to accomplish after completing the exercise.
- Each exercise begins with a "Safety Box" describing important safety procedures for the exercise.
- The first exercise introduces students to the scientific method.
- Each exercise has a detailed introduction describing what students will encounter in the exercise.

CONTENTS

Lab Exercise 1: Metric Measurement and the Scientific Method Lab Exercise 2: Atoms and Molecules Lab Exercise 3: Diffusion and Osmosis Lab Exercise 4: Structure of Some Organic Molecules Lab Exercise 5: The Microscope Lab Exercise 6: Survey of Cell Types: Structure and Function Lab Exercise 7: Enzymes Lab Exercise 8: Photosynthesis and Respiration Lab Exercise 9: The Chemistry and Ecology of Yogurt Production Lab Exercise 10: DNA and RNA: Structure and Function Lab Exercise 11: Mitosis-Cell Division Lab Exercise 12: Meiosis Lab Exercise 13: DNA Extraction Lab Exercise 14: Genetics Problems Lab Exercise 15: Genetic Ratios and Chi-Square Analysis Lab Exercise 16: Human Variation Lab Exercise 17: Sensory Abilities Lab Exercise 18: Population Demographics Lab Exercise 19: Population Genetics Simulation Lab Exercise 20: Bacterial Selection Lab Exercise 21: The Effect of Abiotic Factors on Habitat Preference Lab Exercise 22: Successional Changes in Vegetation Lab Exercise 23: Behavioral Differences in Small Mammals Lab Exercise 24: Plant Life Cycles Lab Exercise 25: Plant Structure and Function Lab Exercise 26: Natural Selection Lab Exercise 27: Species Diversity Lab Exercise 28: Frog Dissection Lab Exercise 29: Roll Call of the Animals Lab Exercise 30: Intraspecific and Interspecific Competition Appendix A: Chi-Square (Goodness of Fit) Test Appendix B: Math Review



LABORATORY MANUAL TO ACCOMPANY ESSENTIALS OF BIOLOGY

By Sylvia Mader

2007 (May 2006) / 304 pages

ISBN-13: 978-0-07-340341-0 / MHID: 0-07-340341-5

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INTERACTIVE LABORATORY AND BIOLOGICAL SIMULATIONS

Version 2.0, 2nd Edition

By Deanne Raineri, University of Illinois

2004

ISBN-13: 978-0-07-285012-3 / MHID: 0-07-285012-4

(CD and Workbook)

Interactive Laboratories and Biological Simulations dynamically illustrate molecular genetics and biotechnology through lively, engaging tutorials and interactive, inquiry-based labs. Developed as a collaboration between instructors and students, iLaBS provides rigorous yet entertaining exercises that relate lecture and lab content to real-life applications.

CONTENTS

Interactive Laboratories / Cystic Fibrosis Lab (Case A) / Cystic Fibrosis Lab (Case B) / Sickle Cell Anemia Lab / Huntington's Disease Lab / Hemophilia Lab / Restriction Mapping Lab / Solving a Murder Mystery / Lac Operon Exercise 1 / Lac Operon Exercise 2 / Biological Simulations / Basic Techniques in Molecular Biology / A Murder Mystery / The Romanov Mystery / DNA Replication / The Polymerase Chain Reaction / Sequencing / Transcription / Viruses / Regulation of Lactose (Lac) Operon

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General Biology Non Majors & Majors Combined Textbook

International Edition



LIFE

6th Edition

By Ricki Lewis, SUNY-at Albany, Bruce Parker, Utah Valley State College-Orem, Douglas Gaffin and Marielle Hoefnagels of University of Oklahoma-Norman

2007 (Jan 2006) / 1024 pages

ISBN-13: 978-0-07-322480-0 / MHID: 0-07-322480-4

ISBN-13: 978-0-07-110802-7 / MHID: 0-07-110802-5 [IE]

Classroom concepts "come to life" with this exciting new edition of Life by Lewis, Parker, Gaffin and Hoefnagels. For over 15 years, Life has been known for its ability to weave together solid biology content with interesting stories, real-life case studies and applications to student life. The sixth edition offers the depth of content, pedagogical organization, accuracy and visual appeal to serve both majors and non-majors biology students.

NEW TO THIS EDITION

- McGraw-Hill's Biology Digitized Video Clips DVD. Licensed from some of the highest-quality science video producers in the World, these brief segments range from 15 seconds to two minutes in length and cover all areas of general biology from cells to ecosystems.
- Of Atoms and Molecules: Chemistry Basics chapter (Chapter 2) has been separated into two distinct chapters, entitled Chemistry and Organic Molecules, to help make these concepts easier for students to master.
- Integrated, end-of-chapter Study Guide, containing a summary, quiz questions and additional study aids.
- Concise chapter opening vignettes.
- A dedicated Genetic Technology chapter now appears in the text, combining information into one area for cohesive coverage of topics such as cancer research, DNA replication, gene therapy and biological weapons.

FEATURES

- Many chapters feature a new organization of major headings within the chapter.
- Life, 6/e is customizable.
- Where appropriate, chapters include genetics problems for students to solve with answers in an appendix.
- A carefully-developed art program coordinates colors throughout the book for instructional value.
- Numbered process figures walk students through key processes such as the cell cycle.
- Engaging writing combines solid biology content with interesting stories, real-life case studies and applications to student life.
- Online Learning Center located at <http://www.mhhe.com/life6>
- Life employs a lively, story-telling style and uses current, true-life examples to engage student interest.

General & Human Biology

CONTENTS

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International Edition

NEW

BIOLOGY

9th Edition

By Sylvia S Mader
2007 (Dec 2005)

ISBN-13: 978-0-07-320928-9 / MHID: 0-07-320928-7

ISBN-13: 978-0-07-110780-8 / MHID: 0-07-110780-0 [IE]

Biology is a comprehensive introductory biology textbook for non-majors or mixed-majors courses that covers biology in a traditional order from the structure and function of the cell to the organization of the biosphere. The book, which centers on the evolution and diversity of organisms, is appropriate for a one- or two-semester course. It's no wonder that Sylvia Mader's Biology continues to be a text that's appreciated as much by instructors as it is by the students who use it. The ninth edition is the epitome of Mader's expertise: Its concise, precise writing uses an economy of words to present the material as succinctly and clearly as possible, thereby enabling students—even non-majors—to understand the concepts without necessarily asking the instructor to explain further.

NEW TO THIS EDITION

■ McGraw-Hill's Biology Digitized Video Clips DVD. Licensed from some of the highest-quality science video producers in the world, these brief segments range from 15 seconds to two minutes in length and cover all areas of general biology from cells to ecosystems.

■ Approximately 70 new animations of key biological processes accompany Biology 9e. Approximately 50 of these animations are available in a Spanish version.

■ Key content updates are based on reviewer suggestions and biological discoveries:

» Chapter 9 The Cell Cycle and Cellular Reproduction This chapter was reorganized and updated. The description of stages now applies to both plant and animal cells with differences still clearly designated. A new section, "The Functions of Mitosis," includes a Science Focus reading on Reproductive and Therapeutic Cloning. The cancer section has been completely rewritten to include the origin of cancer and how it relates to the regulation of the cell cycle. The action of oncogenes and tumor repressor genes is stressed.

» Chapter 15 Regulation of Gene Activity and Gene Mutations The importance of gene activity control has taken on new significance because we now know that humans have far fewer genes than previously estimated before the sequencing of the human genome. This chapter was

revised to reflect the importance of chromatin organization, transcription factors and activators to the control of gene activity within the nucleus. Translational control within the cytoplasm including the possible role of RNA to expand each gene's functions is discussed as is the importance of gene mutations to the development of cancer.

» Chapter 16 Biotechnology and Genomics This chapter updated and the topic of genomics was expanded to include a discussion of a genomic profile, proteomics, and bioinformatics. The importance of all these advances for improved health care is explored.

» Chapter 18 Process of Evolution This chapter was reorganized to include a section on microevolution and macroevolution. Under macroevolution a more thorough discussion of speciation due to reproductive isolating mechanisms precedes real-life examples of allopatric speciation.

» Chapter 20 Classification of Living Organisms This chapter was rewritten and now includes a better explanation of the phylogenetic tree and its relationship to the classification and evolutionary relationships between organisms. The utilization of molecular data to guide classification from domain to species is stressed. A new Science Focus reading describes the proposal to use DNA differences as a basis to develop bar codes for all living species.

» Chapter 23 The Fungi This chapter was reorganized to reflect the classification of fungi based on DNA sequencing. Fungi previously classified as imperfect fungi have been incorporated into the ascomycetes, and this chapter now has an expanded discussion of the sac fungi and their relationship to human beings.

» Chapter 25 Structure and Organization of Plants A generalized flowering plant has been developed to present the basics of plant anatomy. New additional structural information pervades this chapter, which seeks to have students understand the overall functioning of a flowering plant. The discussion of primary versus secondary growth has been expanded to provide a better explanation for plant growth.

» Part VI Animal Evolution This part has been reorganized to be consistent with molecular data regarding the relationship of groups of animals. Traditional classification is the backbone of this part but new hypotheses regarding the classification of animals are introduced. To accommodate the new hypotheses, Chapter 30 now includes molluscs, annelids, arthropods and echinoderms. Chapter 31 is devoted exclusively to the vertebrates.

» Chapter 33 Animal Organization and Homeostasis Reorganization of each section in this chapter will lead to better student understanding of tissues, organs, and organ systems. Professors will particularly appreciate the new homeostasis diagrams that explain negative feedback mechanisms. A new Health Focus regarding nerve regeneration stresses advances in this field and touches on the possible use of stem cells to cure paralysis.

» Chapter 35 Lymph Transport and Immunity This chapter has been updated and revised to include updated explanations of nonspecific and specific defenses. New data regarding the role of chronic inflammatory response to human illnesses is included. This chapter also has a new Health Focus reading regarding Opportunistic Infections and HIV.

» Chapter 42 Hormones and the Endocrine Systems This chapter now begins with an overview of the endocrine system, which includes a contrast between hormone and nervous signaling. An in-depth look at hormone signaling follows. The review of endocrine glands and their hormones includes an updated discussion of diabetes mellitus.

» Chapter 44 Animal Development This chapter is reorganized to present a more logical progression of animal developmental stages before developmental processes are explained. The discussion of developmental processes places an emphasis on experimental data to explain the orderliness of development. As before, the chapter ends with a look at the stages of human development.

» Chapter 46 Ecology of Populations This chapter was reorganized and rewritten to better present the modern principles of population ecology. The sections now include demographics of populations, population growth models, and regulation of population size before life history patterns and human population growth is considered.

- Phonetic pronunciations have been added to the Glossary.
- All text, artwork, and photos necessary to understand a particular concept (e.g., prokaryotic vs. eukaryotic replication) appear either on the same page or facing pages.

FEATURES

- Every piece of artwork in Biology 9e is either new or revised. Additionally, scores of photographs are new to this edition. The new creative paging process retains the functional page spreads but enhances the role of art and photos in creating the most effective and appealing pages possible.
- Multi-level perspective figures combine macroscopic (e.g., section of intestine) and microscopic (micrograph slice of intestinal tissue) images to illustrate subject from larger to smaller. See body systems chapters for many examples.
- The accompanying Online Learning Center serves as a comprehensive study tool for students and location for a vast array of teaching resources for instructors. Online Learning Center content examples include sample quiz questions, learning objectives, flashcards, art labeling exercises, and access to current articles and research.
- Brief "Focus" boxes covering Science, Health, and Ecology present relevant applications issues to students.
- Bioethical Issue topics end many chapters and present both side of contemporary issues such as the use of alternative medicines available over the counter.
- Connecting the Concepts boxes appear at the end of most chapters and establish connections between the concepts of the chapter and other concepts throughout the book.
- Full-Color Customization—Professors have the option of creating a customized version of the text by selecting only the chapters they cover in lecture, providing students with significant savings in book costs. Customization can occur in two ways:—Chapter-by-chapter color customized printed book or a full-color Primis eBook.

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Laboratory



LAB MANUAL TO ACCOMPANY BIOLOGY 9th Edition

By Sylvia S Mader

2007 (March 2006) / 576 pages

ISBN-13: 978-0-07-298955-7 / MHID: 0-07-298955-6

The Laboratory Manual to accompany Biology reflects all of the exceptional features of the Biology text. Instructors appreciate the refined exercises that are so numerous you won't need to look anywhere else for student activities. Author Sylvia Mader's writing in the laboratory manual, just as in the text, emphasizes clarity, with carefully worded study questions that are direct in their intent and purpose. The lab manual's accessible writing accompanies unparalleled illustrations to provide students with clear exercises and questions. The visuals have been updated to be even easier for students—both majors and non-majors—to comprehend. The dramatic illustrations and photographs not only help students understand concepts and process, but also give them an appreciation for the beauty of organisms and biological structure. McGraw-Hill's Biology Digitized Video Clips on the accompanying DVD will capture students' interest while illustrating key biological concepts and processes.

FEATURES

- All labs stress the scientific method.
- A Laboratory Resource Guide is featured on the Instructor Edition of the Online Learning Center.
- Customization. An adopting professor has the option of creating a full-color customized version of this lab manual by selecting only the exercises covered in a particular lab course. Adding additional professor-developed exercises is easy as well.
- Integrated Opening. Each laboratory begins with a list of learning objectives that are organized according to the major sections of the laboratory.
- Self-Contained Content. Each lab contains all the background information necessary to understand the concepts being studied and to answer the questions asked.
- Student Activities. A color bar is used to designate a student activity. Some student activities are observations and some are experimental procedures. An icon appears whenever a procedure requires a period of time before results can be viewed. Sequentially numbered steps guide students as they perform an activity.

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General & Human Biology

INTERACTIVE LABORATORY AND BIOLOGICAL SIMULATIONS

Version 2.0, 2nd Edition

By Deanne Raineri, University of Illinois

2004

ISBN-13: 978-0-07-285012-3 / MHID: 0-07-285012-4

(CD and Workbook)

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International Edition

SCHAUM'S 3000 SOLVED PROBLEMS IN BIOLOGY

By Stephen Bernstein and Ruth Bernstein of University of Colorado at Boulder

1989 / 406 pages

ISBN-13: 978-0-07-005022-8 / MHID: 0-07-005022-8

(Out of Print)

ISBN-13: 978-0-07-099157-6 / MHID: 0-07-099157-X [IE]

[A Schaum Professional Publication]

(International Edition is not for sale in Japan)

General Biology Majors Textbook



BIOLOGY

By Robert Brooker, University of Minnesota-Minneapolis, Eric Widmaier, Boston University, Linda Graham, University of Wisconsin-Madison and Peter Stiling, University of South Florida-Tampa

2008 (January 2007) / 1488 pages

ISBN-13: 978-0-07-326807-1 / MHID: 0-07-326807-0

Coming in January 2007, McGraw-Hill will publish the most carefully developed NEW biology textbook in the history of our company. Brooker et al Biology combines the talent of four active researchers and experienced textbook authors to create a comprehensive modern text featuring an evolutionary focus with an emphasis on scientific inquiry.—Four active researchers—Four experienced text authors—Comprehensive and modern approach—Evolutionary focus—Emphasizes scientific inquiry—Realistic, integrated (3-D) visual program

FEATURES

- Evolution—A strong evolutionary approach

The author team delivers a clear theme of evolution through natural selection through out each chapter by use of genomes and proteomes. This engages students who are reading popular press about these topics and encourages their study of biology. It sets the stage of future biology courses and/or career opportunities.

- Content—Top notch and break through content

Provides the most accurate and up to date reference book on the market that will assist students throughout their college career and beyond. The Brooker texts will also provide a useful resource to students.

- Investigative Approach—From the first chapter, the Brooker author team guides the reader through how the investigation of living things leads to discoveries that no one would have imagined. This is emphasized in the Feature Investigation boxes throughout the text. Each Feature Investigation highlights important experiments in the various fields of biology and the relevance to the discoveries.

- Art—Instructive visuals

The student can understand what is going on in the figures/photos with out necessarily reading the narrative. Visual learners will especially benefit from the clear and concise art/photos. Brand new art, all consistent!

- Integrated Scientific method—You get the traditional TOC, but the benefit of integrated feature investigations throughout the narrative at appropriate areas in every chapter.

- Strong Author Team—The best education tool is available with this new textbook because this new author team is current researchers, active/award-winning teachers, and experienced authors with current textbooks in their field of expertise.

- Balanced pedagogy—Everything in the book is important and the student is not overwhelmed by lots of pedagogy (boxes, tables, insets...).

- 360 Degree Development Plan—The development of Brooker Biology has truly gone full circle to guarantee customers the most accurate, authoritative new majors biology textbook ever launched in this market. This plan includes:

7 Developmental Focus Groups – 1 for each unit of the book. Never before done in publishing development...Each unit was extensively reviewed and critiqued by experts in the field from across the country to make sure the development of this textbook met the needs of instructors/students. This step was taken with the authors present to improve the early draft writing of the manuscript.

6 Freelance Developmental Editors—A monumental undertaking to bring in a large staff of developmental editors to make sure the content was accurate, concise, and well connected between the other authors and it's important illustration program.

Steps Taken to Assure Accuracy—*11 Accuracy Checkers *3 Photo Consultants *Board of Consultants for Textbook *Board of Consultants for Media

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- **Experimental Focus**—The authors use existing scientific evidence to reinforce biological concepts within the narrative when a particularly elegant story exists. Talking about actual experiments within the flow of text, rather than a boxed reading or solitary figure, helps students make the connection between actual people doing science and the contents of the textbook they are reading.

- **Updated Molecular Coverage**—The team has brought more modern information by incorporating even more molecular information throughout the text, which is most evident in the evolution section where two new chapters on molecular evolution have been added.

- **Organizational Changes**

- * **Pattern of Inheritance** divided into two chapters allowing more focus on heredity and Mendelian principles, and the expanded explanation of chromosomal theory of inheritance (12 & 13).

- * **Evolution Unit**—Expanded coverage of Evolution based on latest research in molecular biology.

Jonathon Losos of Harvard expanded and updated this key unit of text. Moved Systematics & Phylogeny Chapter to this unit from Diversity unit. = new chapter 23. Split old chapter 24 into two new chapters:

24 Genome Evolution

25 Evolution of Development

- * **Systematics and the Phylogenetic Revolution Chapter (23)** has been greatly expanded creating this new chapter. Systematics

- * **Expanded Diversity Unit**—Chapter 26. This new dedicated chapter on diversity coverage was developed by taking content from the previous edition, plus adding new information on key events in evolution. This chapter can be used as a stand alone chapter for instructors who are only able to cover a small amount of diversity in their course. Includes Expanded coverage of new molecular understanding of phylogeny

- * **Animal Unit**—Reorganized and expanded coverage of animal biology starting with Nervous System (like Campbell)

- **A.R.I.S.**—McGraw-Hill's ARIS (Assessment, Review, and Instruction System) is an electronic homework and course management system which is designed for greater flexibility, power, and ease of use than any other system. Homework is easy-to-assign, automatically graded, and recorded in a robust grade book. Instructors can even share their course materials and assignments with colleagues. Whether you are looking for a "ready-to-use-straight-out-of-the-box" system or one you can customize to fit your specific course needs, ARIS is your solution. Contact your local McGraw-Hill Publisher's representative for more information on getting started with ARIS.

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International Edition

NEW

BIOLOGY

8th Edition

By Peter Raven, Missouri Botanical Gardens, George Johnson, Washington University-St Louis, Kenneth Mason, Purdue University-West Lafayette, Jonathan Losos, Washington University-St Louis and Susan Singer, Carleton College

2008 (January 2007)

ISBN-13: 978-0-07-322739-9 / MHID: 0-07-322739-0

ISBN-13: 978-0-07-110202-5 / MHID: 0-07-110202-7 [IE]

BIOLOGY is an authoritative majors textbook with evolution as a unifying theme. In revising the text, McGraw-Hill has consulted extensively with previous users, noted experts and professors in the field. It is distinguished from other texts by its strong emphasis on natural selection and the evolutionary process that explains biodiversity. The new 8th edition will feature the latest in cutting edge content reflective of the rapid advances in Biology and will also offer a Dynamic, Realistic, Accurate New Visual Program.

NEW TO THIS EDITION

- **Dynamic Author Team**—This new team is comprised of Susan Singer, Plant Geneticist—Carleton College, Jonathan Losos, Evolutionary Biologist—Harvard University, and Ken Mason, Molecular Biologist—Purdue University have joined forces and completely overhauled the textbook. They were able to successfully modernize the content of the material, while maintaining the historical context to the subject matter.

- **Thorough Reorganization of Material**—The author team worked closely in conjunction with a copy editor to create a sense of unity, providing a seamless and balanced presentation of the material. The material has been reorganized, including splitting excessively long chapters into more manageable components where appropriate. These adjustments were made in response to feedback from our many reviewers

Part of the reorganization has been to ensure that a tightly structured pedagogical framework is carried throughout each chapter. This consistent flow gives the student a better learning tool. It also allows an instructor ease in assigning or eliminating specific sections from a chapter.

- **Strengthened Evolutionary Emphasis**—From the inception of Biology, evolution has been the underlying theme of the text. The Eighth edition has been written with an even greater focus on evolution, beginning with the first chapter and more consistently threaded it throughout the entire text. There has been a significant increase of coverage at the molecular level to create more depth in this area, again balancing the amount of evolutionary coverage throughout.

General & Human Biology

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Laboratory

International Edition

NEW

BIOLOGICAL INVESTIGATIONS LAB MANUAL

8th Edition

By Warren Dolphin, Iowa State University

2008 (January 2007) / 512 pages

ISBN-13: 978-0-07-299287-8 / MHID: 0-07-299287-5

ISBN-13: 978-0-07-110201-8 / MHID: 0-07-110201-9 [IE]

This independent lab manual can be used for a one or two-semester majors level general biology lab and can be used with any majors-level general biology textbook. The labs are investigative and ask students to use more critical thinking and hands-on learning. The author emphasizes investigative, quantitative, and comparative approaches to studying the life sciences.

NEW TO THIS EDITION

- The instructor's manual to the lab manual can be found at www.mhhe.com/labcentral
- Revised Art Program—More than 90 figures have been revised or replaced throughout the textbook.
- How To Evaluate Web Material—Information on evaluating material gathered on the web has been added to Lab Topic 1.

FEATURES

- Emphasis on Hypothesis Testing—Throughout the manual, the concept of hypothesis testing as the basic method of inquiry has been emphasized. Students are asked to form hypotheses to be tested during their lab work and then are asked to reach a conclusion to accept or reject their hypotheses.
- Labs Consistently Organized—Icons throughout the lab manual distinguish activities and critical thinking questions.
- “Understanding Scientific Terminology”—This useful chart is located on the inside of the back cover of the Lab Manual. This is a table of Greek and Latin prefixes and suffixes that will help students decipher the meaning of scientific terminology.
- Customizable!—Instructors can customize this text using our do-it-yourself website! The Primis Content Center features more than one million items, including this and hundreds of other best-selling McGraw-Hill textbooks, laboratories, case studies, and readings. These materials, along with others including your own notes, can be customized into a black and white, high resolution printed textbook or a full-color Primis eBook that saves your students 1/3 off bookstore prices. Log on to our website, register, and create your own complimentary copy. www.primiscontentcenter.com

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NEW

BIOLOGY LABORATORY MANUAL

8th Edition

By Darrell S Vodopich, Baylor University and Randy Moore, Univer-
sity of Minnesota-Minneapolis

2008 (January 2007) / 576 pages

ISBN-13: 978-0-07-299522-0 / MHID: 0-07-299522-X

This laboratory manual is designed for an introductory majors biology course with a broad survey of basic laboratory techniques. The experiments and procedures are simple, safe, easy to perform, and especially appropriate for large classes. Few experiments require a second class-meeting to complete the procedure. Each exercise includes many photographs, traditional topics, and experiments that help students learn about life. Procedures within each exercise are numerous and discrete so that an exercise can be tailored to the needs of the students, the style of the instructor, and the facilities available.

NEW TO THIS EDITION

- Clearer information on Safety—A new safety icon will be used throughout the text, replacing the current “CAUTION” that appears in red font. Plus a Laboratory Safety Rules table has been added to the Welcome chapter.
- Process of Science Exercises—A new exercises on Process of Science now appears in Chapter 1.
- New Figures and Tables—More than 70 tables and figures have been extended with additions, revisions or replacements.

FEATURES

- Clearly Marked Steps—Procedures have been numbered consecutively and the steps of the procedures have been highlighted within each exercise making it easier for students to follow the necessary steps.
- Objectives Clearly Identified—The objectives of the labs and the steps of each procedure are clearly identified to help students identify the goals of the lab and how to achieve them.
- Critical Thinking Skills Enhanced—Questions embedded within the procedures help students see the big picture by making them think beyond the next step in the procedure. Questions are available on the website as a handout, which enables the instructor to collect the answers to these questions if desired.

- “How to Write a Scientific Paper or Lab Report”—This useful information has been moved from an appendix to the Front Matter directly before the first exercise.

- Optional Writing Assignments—Writing to Learn Biology and Doing Biology Yourself activities found throughout the manual provide further avenues of study, and give students an opportunity to express their understanding of biology in written form.

- An investigation section at the end of most labs walks students through the process of designing an experiment based on what they just learned.

- Instructor’s Manual—The instructor’s manual to the lab manual can be found at www.mhhe.com/labcentral

- Fully Customizable—Instructors can customize this text using our do-it-yourself website! The Primis Content Center features more than one million items, including this and hundreds of other best-selling McGraw-Hill textbooks, laboratories, case studies, and readings. These materials, along with others including your own notes, can be customized into a black and white, high resolution printed textbook or a full-color Primis eBook that saves your students 1/3 off bookstore prices. Log on to our website, register, and create your own complimentary copy. www.primiscontentcenter.com

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INTERACTIVE LABORATORY AND BIOLOGICAL SIMULATIONS

Version 2.0, 2nd Edition

By Deanne Raineri, University of Illinois

2004

ISBN-13: 978-0-07-285012-3 / MHID: 0-07-285012-4

(CD and Workbook)

Interactive Laboratories and Biological Simulations dynamically illustrate molecular genetics and biotechnology through lively, engaging tutorials and interactive, inquiry-based labs. Developed as a collaboration between instructors and students, iLaBS provides rigorous yet entertaining exercises that relate lecture and lab content to real-life applications.

CONTENTS

Interactive Laboratories / Cystic Fibrosis Lab (Case A) / Cystic Fibrosis Lab (Case B) / Sickle Cell Anemia Lab / Huntington’s Disease Lab / Hemophilia Lab / Restriction Mapping Lab / Solving a Murder Mystery / Lac Operon Exercise 1 / Lac Operon Exercise 2 / Biological Simulations / Basic Techniques in Molecular Biology / A Murder Mystery / The Romanov Mystery / DNA Replication / The Polymerase Chain Reaction / Sequencing / Transcription / Viruses / Regulation of Lactose (Lac) Operon

Human Biology

Textbook

International Edition

NEW

HUMAN BIOLOGY

10th Edition

By Sylvia Mader

2008 (February 2007)

ISBN-13: 978-0-07-298686-0 / MHID: 0-07-298686-7

ISBN-13: 978-0-07-330934-7 / MHID: 0-07-330934-6 (ARIS)

ISBN-13: 978-0-07-128579-7 / MHID: 0-07-128579-2 [IE]

This market leading human biology text emphasizes the relationships of humans to other living things. Human Biology remains user friendly; relevancy and pedagogy are among its strengths. In this edition, as in previous editions, each chapter presents the topic clearly and distinctly so that students will feel capable of achieving an adult level of understanding. Detailed, high-level scientific data and terminology are not included because Dr. Mader believes that true knowledge consists of working concepts rather than technical facility.

NEW TO THIS EDITION

- New Artwork!—New art will be presented throughout the text. Several of the new figures have been created specifically for Human Biology incorporating a new updated style. Chapter summaries will also be more visually focused with the addition of art and sections of art brought into the summary.

- A.R.I.S.—McGraw-Hill’s ARIS—Assessment, Review, and Instruction System for Human Biology, 10/e is a complete electronic homework and course management system. Instructors can create and share course materials and assignments with colleagues with a few clicks of the mouse. Instructors can edit questions and algorithms, import their own content, and create announcements and due dates for assignments. ARIS has automatic grading and reporting of easy-to-assign algorithmically generated homework, quizzing, and testing. Once a student is registered in the course, all student activity within McGraw-Hill’s ARIS is automatically recorded and available to the instructor through a fully integrated grade book that can be downloaded to Excel. Contact your

General & Human Biology

local McGraw-Hill Publisher's representative for more information on getting started with ARIS.

- **New Chapter Openers Throughout**—Each chapter begins with an engaging, real-life vignette that captures the student's attention. The vignette is referenced throughout the chapter with connections/applications woven into the chapter and finally at the end of the chapter students are asked to consider the vignette in light of the chapter concepts by discussing critical-thinking questions related to the chapter opener.

- **Human Disease Coverage Expanded**—Human Disease coverage has been enhanced and is covered as each system is discussed. Additionally each of these chapters will have a Disease and Disorder section.

- **Updated Genetics Coverage**—The entire genetics chapter has been updated to include the most recent information possible. This edition now combines genetics and genetic counseling topics in one chapter.

FEATURES

- **Updated Boxed Readings Throughout**—Human Biology features three different types of boxed readings. These readings have been thoroughly updated by Dr. Mader, as well as experts in the field, throughout the book to remain current.

Health Focus boxes provide relevant information and ideas that contribute to our overall well-being.

Science Focus boxes describe how experimentation and observations have contributed to our knowledge about the living world.

Bioethical Focus boxes describe modern situations that call for value judgments and challenge students to develop a point of view.

- **eInstruction**—eInstruction is a wireless student response system that allows for the ultimate in classroom participation, giving you immediate feedback from every student. These questions can be found on the text specific website under the instructor assets.

- A complete set of chapter learning aids includes a listing of chapter concepts, brief concept summaries within the chapter, boldface key terms, summary, and objective questions. Students value tools within the text that help them grasp the concepts.

- **Customize this book through Primis Online!** This title is tentatively planned to be part of the Primis Online Database: www.mhhe.com/primis/online

- **Emphasis on Homeostasis**—Homeostasis is emphasized throughout the text. The homeostasis sections at the end of specific chapters and the accompanying homeostasis illustrations, have been revised for greater clarity and explain in depth how the body systems work together to maintain homeostasis.

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Laboratory



LABORATORY MANUAL TO ACCOMPANY HUMAN BIOLOGY

10th Edition

By Sylvia Mader

2008 (March 2007) / 320 pages

ISBN-13: 978-0-07-298690-7 / MHID: 0-07-298690-5

(Details unavailable at press time)

LABORATORY MANUAL TO ACCOMPANY HUMAN BIOLOGY

9th Edition

By Sylvia S. Mader

2006 (June 2005) / 320 pages

ISBN-13: 978-0-07-285799-3 / MHID: 0-07-285799-4

The laboratory exercises in this manual are coordinated with Human Biology, a text that has two primary functions: 1) to understand how the human body works and 2) to understand the relationship of humans to other living things in the biosphere. This laboratory manual can be adapted to a variety of course orientations and designs. There are a sufficient number of laboratories to permit a choice of activities over the length of the course. Many activities may be performed as demonstrations rather than as student activities, thereby shortening the time required to cover a particular concept.

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1 Scientific Method 2 Metric Measurement and Microscopy 3 Chemical Composition of Cells 4 Cell Structure and Function 5 Human Body Tissues 6 Basic Mammalian Anatomy I 7 Chemical Aspects of Digestion 8 Energy Requirements and Ideal Weight 9 Cardiovascular System 10 Features of the Cardiovascular System 11 Basic Mammalian Anatomy II 12 Homeostasis 13 Musculoskeletal System 14 Nervous System and Senses 15 Human Development 16 Mitosis and Meiosis 17 Human Genetics 18 DNA and Biotechnology 19 Infectious Disease and Immunology 20 Human Evolution 21 Effects of Pollution on Ecosystems Appendix: Metric System Practical Examination Answer Sheets

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Biology Multimedia

BIOLOGY DIGITIZED VIDEO CLIPS

By McGraw-Hill

2006 (August 2005)

ISBN-13: 978-0-07-312155-0 / MHID: 0-07-312155-X

(Details unavailable at press time)

INTERACTIVE LABORATORY AND BIOLOGICAL SIMULATIONS

Version 2.0, 2nd Edition

By Deanne Raineri, University of Illinois

2004

ISBN-13: 978-0-07-285012-3 / MHID: 0-07-285012-4

(CD and Workbook)

Interactive Laboratories and Biological Simulations dynamically illustrate molecular genetics and biotechnology through lively, engaging tutorials and interactive, inquiry-based labs. Developed as a collaboration between instructors and students, iLaBS provides rigorous yet entertaining exercises that relate lecture and lab content to real-life applications.

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DIGITAL ZOOLOGY VERSION 2.0 CD-ROM

By Jon Houseman, University of Ottawa

2003

ISBN-13: 978-0-07-256481-5 / MHID: 0-07-256481-4

(with Workbook)

Website: www.mhhe.com/digitalzoology

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Unit Names: Annelida / Apicomplexa / Arthropoda / Cheliceriformes / Ciliophora / Cnidaria / Crustacea / Ctenophora / Echinodermata / Hemichordata / Lophophores / Mesozoa / Microspora / Mollusca / Myxozoa / Nematoda / Nemertea / Other Chordata / Other Pseudocoelomates / Placozoa / Platyhelminthes / Porifera / Sarcomastigophora / Uniramia / Vertebrata / Workbook chapters: Protozoans / Porifera / Cnidaria / Platyhelminthes / Annelida / Mollusca / Nematoda, Gastrotricha, Rotifera, including Acanthocephala / Arthropoda / Bryozoa and Brachiopoda / Echinodermata / Hemichordata / Urochordata and Cephalochordata / Agnatha / Jawed Fishes / Amphibia / Mammalia

MICROBES IN MOTION III

CD-ROM

3rd Edition

By Gloria J Delisle, Queen's University and Lewis L Tomalty, Queen's University/Kingston General Hospital

2002

ISBN-13: 978-0-07-233438-8 / MHID: 0-07-233438-X

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Anaerobic Bacteria / Antimicrobial Action / Antimicrobial Resistance / Bacterial Structure & Function / Control—Physical & Chemical / Environmental Microbiology / Epidemiology of Infectious Diseases / Microbial Genetics / Gram Negative Organisms / Gram Positive Organisms / Immunology / Metabolism and Growth / Miscellaneous Bacteria / Mycology/Fungal Structure and Function / Parasitology/Parasite Structure and Function / Microbial Pathogenesis—Specific Immunology / Vaccines / Virology/Viral Structure & Function / Glossary

BIOCOURSE.COM

By Mark Decker, University of Minnesota-Minneapolis

2001

ISBN-13: 978-0-07-248557-8 / MHID: 0-07-248557-4

Website: www.biocourse.com

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General & Human Biology

Supplements



PHOTO ATLAS FOR GENERAL BIOLOGY

2nd Edition

By Dennis Strete, McLennan Community College and Darrell S. Vodopich, Baylor University

2007 (August 2006) / 272 pages

ISBN-13: 978-0-07-284610-2 / MHID: 0-07-284610-0

(Details unavailable at press time)

SCHAUM'S A-Z BIOLOGY

By Bill Indge

2003 / 320 pages

ISBN-13: 978-0-07-141934-5 / MHID: 0-07-141934-0

[A *Schaum Professional Publication*]

Schaum's A-Z handbooks make excellent complements to course textbooks and test preparation guides. Ideal for ambitious high school seniors—especially AP students—and college freshmen, they feature concise, thoroughly cross-referenced definitions of hundreds of key terms and phrases that help students quickly break through the jargon barrier. Clear explanations of key concepts, supplemented with lucid illustrations, help build mastery of theory and provide a ready reference to supplement class work.

- Each entry begins with a clear, one-sentence definition and is followed by an explanation and examples.
- A-to-Z format for ready reference
- Clear definitions and explanations, cross-referenced and enhanced with numerous worked examples and illustrations
- Extended explanations of more important concepts
- Review lists of entries that relate to main topics in the Appendix aid review

HOW TO STUDY SCIENCE

4th Edition

By Kristin L.D. Milligan and Frederick W. Drewes, Suffolk Community College—Selden

2003 / 128 pages

ISBN-13: 978-0-07-234693-0 / MHID: 0-07-234693-0

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PHOTO ATLAS FOR GENERAL BIOLOGY

By Dennis Strete, McLennan Community College and Darrell Vodopich, Baylor University

2002 / 256 pages

ISBN-13: 978-0-07-234855-2 / MHID: 0-07-234855-0

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SCHAUM'S EASY OUTLINE OF BIOLOGY

By George H. Fried and George J. Hademenos

2001 / 154 pages

ISBN-13: 978-0-07-136971-8 / MHID: 0-07-136971-6

[A *Schaum Professional Publication*]

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SCHAUM'S OUTLINE OF BIOLOGY

2nd Edition

By George Fried, Brooklyn College

1999 / 455 pages

ISBN-13: 978-0-07-022405-6 / MHID: 0-07-022405-6

[A *Schaum Publication*]

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Part I: Fundamentals of Biology. Part II: Biology of the Cell. Part III: Genetics and Inheritance. Part IV: Plant Biology. Part V: Animal Biology. Part VI: Evolution and Ecology. Part VII: Biological Diversity.

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