Introductory and General Biology

• Supplemental Modules (Molecular Biology)
  ◦ Agricultural Biotechnology and Gene Therapy
  ◦ Bird Flu
  ◦ Case Studies: Diseases
  ◦ Cloning and stem cells
  ◦ DNA and the genome
  ◦ Prions
Concepts of Biology is designed for the typical introductory biology course for nonmajors, covering standard scope and sequence requirements. The text includes interesting applications and conveys the major themes of biology, with content that is meaningful and easy to understand. The book is designed to demonstrate biology concepts and to promote scientific literacy.

- Front Matter
- 1: Introduction to Biology
- 2: Chemistry of Life
- 3: Cell Structure and Function
- 4: How Cells Obtain Energy
- 5: Photosynthesis
- 6: Reproduction at the Cellular Level
- 7: The Cellular Basis of Inheritance
- 8: Patterns of Inheritance
- 9: Molecular Biology
- 10: Biotechnology
- 11: Evolution and Its Processes
- 12: Diversity of Life
- 13: Diversity of Microbes, Fungi, and Protists
- 14: Diversity of Plants
- 15: Diversity of Animals
- 16: The Body's Systems
- 17: The Immune System and Disease
- 18: Animal Reproduction and Development
- 19: Population and Community Ecology
- 20: Ecosystems and the Biosphere
- 21: Conservation and Biodiversity
- Back Matter
Biology is a natural science concerned with the study of life and living organisms, including their structure, function, growth, evolution, distribution, and taxonomy. Modern biology is a vast and eclectic field, composed of many branches and subdisciplines. However, despite the broad scope of biology, there are certain general and unifying concepts within it that govern all study and research.

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Unit 16: The Anatomy and Physiology of Plants

- Unit 17: Ecology
- Unit 18: Evolution
- Unit 19: The Diversity of Life
- Unit 20: General Science
- Back Matter

**Book: General Biology (Boundless)**

- Front Matter
- 1: The Study of Life
- 2: The Chemical Foundation of Life
- 3: Biological Macromolecules
- 4: Cell Structure
- 5: Structure and Function of Plasma Membranes
- 6: Metabolism
- 7: Cellular Respiration
- 8: Photosynthesis
- 9: Cell Communication
- 10: Cell Reproduction
- 11: Meiosis and Sexual Reproduction
- 12: Mendel's Experiments and Heredity
- 13: Modern Understandings of Inheritance
- 14: DNA Structure and Function
- 15: Genes and Proteins
- 16: Gene Expression
- 17: Biotechnology and Genomics
- 18: Evolution and the Origin of Species
- 19: The Evolution of Populations
- 20: Phylogenies and the History of Life

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• 21: Viruses
• 22: Prokaryotes- Bacteria and Archaea
• 23: Protists
• 24: Fungi
• 25: Seedless Plants
• 26: Seed Plants
• 27: Introduction to Animal Diversity
• 28: Invertebrates
• 29: Vertebrates
• 30: Plant Form and Physiology
• 31: Soil and Plant Nutrition
• 32: Plant Reproductive Development and Structure
• 33: The Animal Body- Basic Form and Function
• 34: Animal Nutrition and the Digestive System
• 35: The Nervous System
• 36: Sensory Systems
• 37: The Endocrine System
• 38: The Musculoskeletal System
• 39: The Respiratory System
• 40: The Circulatory System
• 41: Osmotic Regulation and the Excretory System
• 42: The Immune System
• 43: Animal Reproduction and Development
• 44: Ecology and the Biosphere
• 45: Population and Community Ecology
• 46: Ecosystems
• 47: Conservation Biology and Biodiversity
• Back Matter

• Map: Raven Biology 12th Edition
Front Matter
1: The Science of Biology
2: The Nature of Molecules and the Properties of Water
3: The Chemical Building Blocks of Life
4: Cell Structure
5: Membranes
6: Energy and Metabolism
7: How Cells Harvest Energy
8: Photosynthesis
9: Cell Communication
10: How Cells Divide
11: Sexual Reproduction and Meiosis
12: Patterns of Inheritance
13: Chromosomes, Mapping, and the Meiosis-Inheritance Connection
14: DNA- The Genetic Material
15: Genes and How They Work
16: Control of Gene Expression
17: Biotechnology
18: Genomics
19: Cellular Mechanisms of Development
20: Genes Within Populations
21: The Evidence for Evolution
22: The Origin of Species
23: Systematics, Phylogeny and Comparative Biology
24: Genome Evolution
25: The Origin and Diversity of Life
26: Viruses
27: Prokaryotes
28: Protists
29: Seedless Plants
30: Seed Plants
31: Fungi
32: Animal Diversity and the Evolution of Body Plans
33: Protostomes
34: Deuterostomes
The Principles of Biology introduces biology as a scientific discipline for students planning to major in biology and other science disciplines.
Front Matter
- BIOLOGY 211: Cell Biology
- BIOLOGY 212: Genetics
- BIOLOGY 213: Ecology and Evolution
- Back Matter

Thumbnail: A tigress having a bath in Ranthambhore Tiger Reserve, Rajasthan (CC BY 2.0; Koshy Koshy via Wikipedia)