

Brief Contents

1. Introduction	1
-----------------	---

Unit I: The Life of the Cell

2. The Chemistry of Life	27
3. Cells: The Units of Life	55
I. Interactions with the External Environment	
4. Cells: The Units of Life	71
II. Internal Organization	
5. Energy Flow and Biochemical Reactions	94
6. Energy Use in Cells	113

Unit II: Inheritance

7. Cellular Reproduction and the Life Cycles of Organisms	143
8. Principles of Inheritance	167
9. DNA: The Molecule of Heredity	198
10. From Genotype to Phenotype: Gene Expression and Regulation	215
11. Human Genetics	239

Unit III: Evolution

12. Evolution: The Origin of Species	267
13. The Processes and Results of Evolution	290
14. The History of Life on Earth	324
15. The Diversity of Life:	350
I. Microorganisms	

16. The Diversity of Life: II. Animals
17. The Diversity of Life: III. Fungi and Plants

Unit IV: Structure and Physiology of Flowering Plants and Animals

18. Unifying Concepts in Physiology
19. The Structure and Function of Land Plants
20. Plant Reproduction and Development
21. Control of the Plant Life Cycle
22. Animal Nutrition, Digestion, and Excretion
23. Circulation and Respiration
24. The Immune System: Defense Against Disease
25. Chemical Control of the Animal Body
26. Information Processing: The Nervous System
27. Perception and Action: Senses and Muscles
28. Animal Reproduction
29. Animal Development
30. Animal Behavior:
I. Principles of Individual Behavior
31. Animal Behavior:
II. Principles of Social Behavior

Unit V: Ecology

32. Population Growth and Regulation
33. Principles of Ecosystem Structure and Function
34. Ecosystems in Time and Space

Glossary

Photo Acknowledgments

Index