

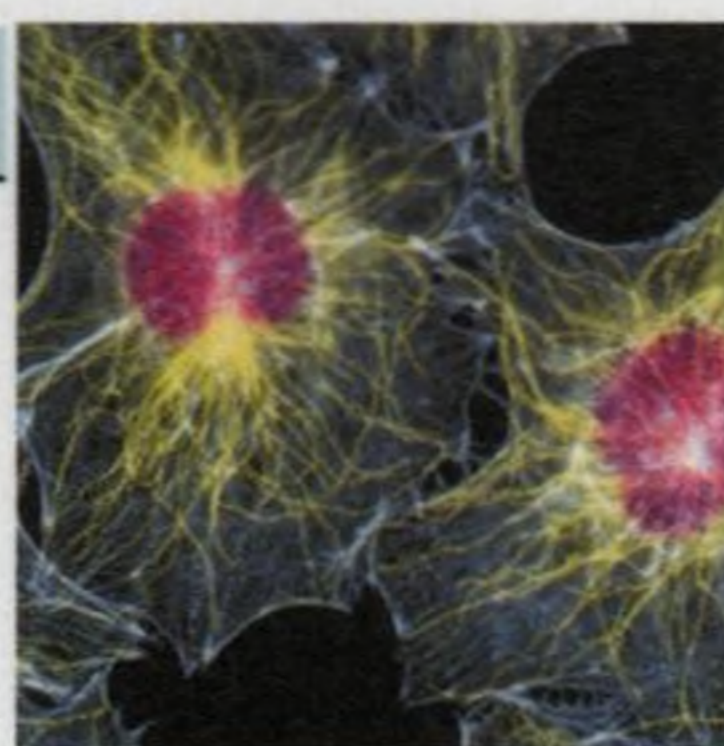
Brief Contents

- 1 Biology: *Exploring Life* 42

UNIT I

The Life of the Cell

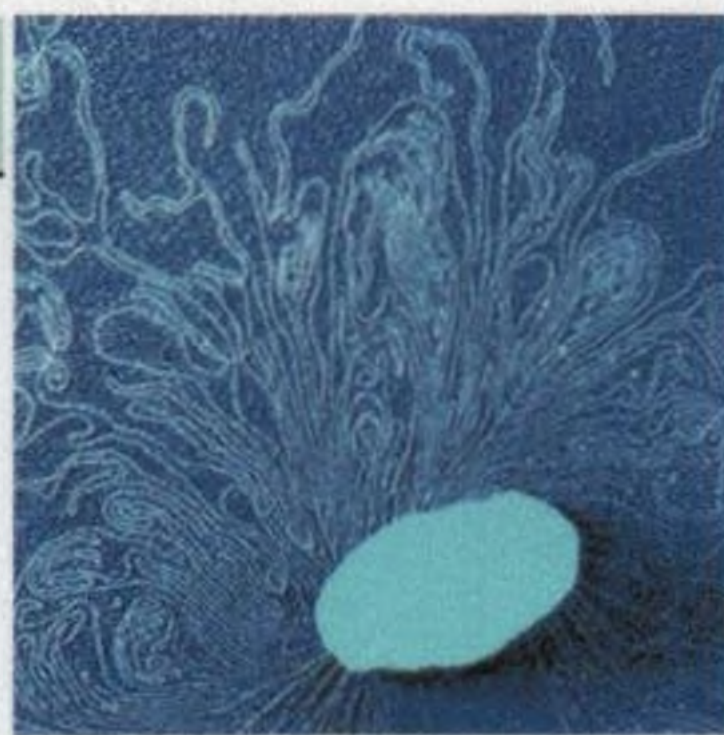
- 2 The Chemical Basis of Life 62
3 The Molecules of Cells 78
4 A Tour of the Cell 96
5 The Working Cell 118
6 How Cells Harvest Chemical Energy 134
7 Photosynthesis: *Using Light to Make Food* 152



UNIT II

Cellular Reproduction and Genetics

- 8 The Cellular Basis of Reproduction and Inheritance 170
9 Patterns of Inheritance 198
10 Molecular Biology of the Gene 226
11 How Genes Are Controlled 254
12 DNA Technology and Genomics 276



UNIT III

Concepts of Evolution

- 13 How Populations Evolve 300
14 The Origin of Species 322
15 Tracing Evolutionary History 338



UNIT IV

The Evolution of Biological Diversity

- 16 Microbial Life: *Prokaryotes and Protists* 364
17 The Evolution of Plant and Fungal Diversity 386
18 The Evolution of Invertebrate Diversity 410
19 The Evolution of Vertebrate Diversity 434



UNIT V

Animals: Form and Function

- 20 Unifying Concepts of Animal Structure and Function 458
21 Nutrition and Digestion 474
22 Gas Exchange 498
23 Circulation 512
24 The Immune System 530
25 Control of Body Temperature and Water Balance 550
26 Hormones and the Endocrine System 562
27 Reproduction and Embryonic Development 578
28 Nervous Systems 608
29 The Senses 632
30 How Animals Move 648



UNIT VI

Plants: Form and Function

- 31 Plant Structure, Growth, and Reproduction 666
32 Plant Nutrition and Transport 688
33 Control Systems in Plants 706



UNIT VII

Ecology

- 34 The Biosphere: *An Introduction to Earth's Diverse Environments* 724
35 Behavioral Adaptations to the Environment 744
36 Population Ecology 768
37 Communities and Ecosystems 784
38 Conservation Biology 806

