Contents in Brief

1	Introduction to Genetics 1
2	Chromosomes and Cellular Reproduction 17
3	Basic Principles of Heredity 47
4	Sex Determination and Sex-Linked Characteristics 81
5	Extensions and Modifications of Basic Principles 111
6	Pedigree Analysis, Applications, and Genetic Testing 149
7	Linkage, Recombination, and Eukaryotic Gene Mapping 179
8	Chromosome Variation 223
9	Bacterial and Viral Genetic Systems 257
10	DNA: The Chemical Nature of the Gene 293
11	Chromosome Structure and Organelle DNA 317
12	DNA Replication and Recombination 345
13	Transcription 379
14	RNA Molecules and RNA Processing 405
15	The Genetic Code and Translation 435
16	Control of Gene Expression in Bacteria 469
17	Control of Gene Expression in Eukaryotes 501
18	Gene Mutations and DNA Repair 525
19	Molecular Genetic Analysis and Biotechnology 569
20	Genomics and Proteomics 615
21	Epigenetics 651
22	Developmental Genetics and Immunogenetics 675
23	Cancer Genetics 705
24	Quantitative Genetics 731
25	Population Genetics 765
26	Evolutionary Genetics 797
	Reference Guide to Model Genetic Organisms A1
	Working with Fractions: A Review B1
	Glossary C1
	Answers to Selected Problems D1
	Index E1