

CONTENTS



Foundations

- Chapter 1
Science and Biology 1
- Chapter 2
Biology 15
- Chapter 3
Life and the Cell 27

Chemistry and the Beginnings of Life

- Chapter 4
The Chemistry of Life 38
- Chapter 5
Beginnings 57
- Chapter 6
The First Ecological Crisis: Depletion of Initial Resources 77
- Chapter 7
Oxygen and Life 96

Genetic Biology

- Chapter 8
Continuity of Life Through Time 110
- Chapter 9
Gene Expression in Simple Cells 129
- Chapter 10
Cellular Reproduction: Duplication of Self 142
- Chapter 11
Sexual Reproduction: The Cellular Mechanisms 151
- Chapter 12
The Natural History of Genes: Transmission Genetics 163

Multicellular Life and Evolution

- Chapter 13
Multicellular Organisms 179
- Chapter 14
Organization of Higher Plants 210
- Chapter 15
The Variety of Life 229
- Chapter 16
The Great Explanation 284

Human Biology

- Chapter 17
Human Evolution 308
- Chapter 18
Human Physiology: Regulation 333
- Chapter 19
Human Physiology: Maintenance 367
- Chapter 20
The Brain 411
- Chapter 21
Human Reproduction 447
- Chapter 22
Human Development and Fetal Health 471
- Chapter 23
Problems in Human Life: Disease and Aging 489

Humanity and the Environment

- Chapter 24
The Environment: Organization of the
Ecosphere 519

- Chapter 25
Populations 561

- Chapter 26
Pollution 583

Appendices

- Appendix 1
Numbers and Measurement 627
- Appendix 2
Time Scale of Earth Evolution 630
- Appendix 3
A Classification of Organisms 631
- Appendix 4
The Darwin and Wallace Publications 633

- Index-Glossary** 641