

TABLE of Contents

UNIT 1: Introduction.....	2
A Word to the Student	2
Lesson 1: <i>Gateways to Science</i>	4
Lesson 2: Safety	6
UNIT 2: Existence of Life and Environments	12
Introduction.....	12
Lesson 1: What Allows Life to Exist?	14
Lesson 2: Dichotomous Key	18
Lesson 3: Schoolyard Microhabitat.....	23
Lesson 4: Environments and Organisms.....	27
Lesson 5: Flow of Energy	38
Lesson 6: Biodiversity.....	47
Lesson 7: Cycling of Matter	51
Lesson 8: Variations within Populations.....	59
Lesson 9: Natural Selection.....	67
UNIT 3: Impacting Earth’s Systems.....	76
Introduction.....	76
Lesson 1: Catastrophic Events	78
Lesson 2: Weathering, Erosion, and Deposition.....	90
Lesson 3: Groundwater and Surface Water.....	102
Lesson 4: Ecological Succession.....	111

TABLE of Contents

UNIT 4: Structure and Function of Organisms, Part 1 ..120

Introduction.....	120
Lesson 1: Cells	122
Lesson 2: Plant and Animal Cells.....	134
Lesson 3: Energy Transformation through Photosynthesis.....	139
Lesson 4: Reproduction in Organisms.....	150
Lesson 5: Inherited Traits.....	161
Lesson 6: Understanding Traits and Genes.....	168
Lesson 7: Diversity of Offspring.....	176
Lesson 8: Selective Breeding	186

UNIT 5: Structure and Function of Organisms, Part 2 ..192

Introduction.....	192
Lesson 1: Physical and Chemical Changes in Digestion.....	194
Lesson 2: Breakdown of Organic Molecules.....	200
Lesson 3: Circulatory and Respiratory Systems.....	208
Lesson 4: Work/Skeletal and Muscular Systems.....	215
Lesson 5: Maintaining Balance.....	225
Lesson 6: Levels of Organization.....	237
Lesson 7: Internal Structures.....	243
Lesson 8: Humans and Space Exploration.....	251



TABLE of Contents

Appendix.....	261
Science Notebook.....	262
Description.....	262
Rubric Checklist.....	263
Drawings and Diagrams.....	264
Description.....	264
Rubric Checklist.....	265
Concept Map.....	266
Description.....	266
Rubric Checklist.....	267
Venn Diagrams	268
Description.....	268
Rubric Checklist.....	269
Line and Bar Graphs.....	270
Description.....	270
Rubric Checklist.....	271
Writing in Science.....	272
Rubric Checklist.....	272

TABLE of Contents

Fraye Model.....	273
Folded Models in Science.....	274
Directions.....	274

