

# Diversity of Living Things

eEdition

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## Unit Features



FRONTIERS IN SCIENCE <i>Chilling Changes</i>	2
TIMELINES IN SCIENCE <i>Discoveries in Biodiversity</i>	78

## 1 Single-Celled Organisms and Viruses 6

### the BIG idea

Bacteria and protists have the characteristics of living things, while viruses are not alive.

1.1 Single-celled organisms have all the characteristics of living things.	9
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1.2 Bacteria are single-celled organisms without nuclei.	16
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1.3 Viruses are not alive but affect living things.	24
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1.4 Protists are a diverse group of organisms.	30

## 2 Introduction to Multicellular Organisms 40

### the BIG idea

Multicellular organisms live in and get energy from a variety of environments.

2.1 Multicellular organisms meet their needs in different ways.	43
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2.2 Plants are producers.	51
2.3 Animals are consumers.	58
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2.4 Most fungi are decomposers.	66
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*How does an organism get energy and materials from its environment?*

## **3** Plants 82

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### **the BIG idea**

Plants are a diverse group of organisms that live in many land environments.

- 3.1** Plants are adapted to living on land. 85
- 3.2** Most mosses and ferns live in moist environments. 92
- 3.3** Seeds and pollen are reproductive adaptations. 98
  - CHAPTER INVESTIGATION *Which Seeds Will Grow?* 104
  - EXTREME SCIENCE *Seed Survivors* 106
- 3.4** Many plants reproduce with flowers and fruit. 107
  - MATH IN SCIENCE *Using Grids to Estimate* 115

## **4** Invertebrate Animals 120

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### **the BIG idea**

Invertebrate animals have a variety of body plans and adaptations.

- 4.1** Most animals are invertebrates. 123
  - MATH IN SCIENCE *Line Symmetry* 127
- 4.2** Cnidarians and worms have different body plans. 128
  - CHAPTER INVESTIGATION *Worm Behavior* 134
- 4.3** Most mollusks have shells and echinoderms have spiny skeletons. 136
  - THINK SCIENCE *Eating Well* 141
- 4.4** Arthropods have exoskeletons and joints. 142

## **5** Vertebrate Animals 154

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### **the BIG idea**

Vertebrate animals live in most of Earth's environments.

- 5.1** Vertebrates are animals with endoskeletons. 157
  - MATH IN SCIENCE *Dividing by Decimals* 163
- 5.2** Amphibians and reptiles are adapted for life on land. 164
  - CONNECTING SCIENCES *Sticky Feet* 172
- 5.3** Birds meet their needs on land, in water, and in the air. 173
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- 5.4** Mammals live in many environments. 182

## **Handbooks and Resources** R1

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Scientific Thinking Handbook	R2	Appendix	R52
Lab Handbook	R10	Glossary	R60
Math Handbook	R36	Index	R68
Note-Taking Handbook	R45	Acknowledgments	R77

## Features

### MATH IN SCIENCE

<i>Making a Line Graph</i>	15
<i>Using Circle Graphs</i>	50
<i>Using Grids to Estimate</i>	115
<i>Line Symmetry</i>	127
<i>Dividing by Decimals</i>	163

### THINK SCIENCE

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### CONNECTING SCIENCES

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### SCIENCE ON THE JOB

<i>An Animal's World</i>	65
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### EXTREME SCIENCE

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### FRONTIERS IN SCIENCE

<i>Chilling Changes</i>	2
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### TIMELINES IN SCIENCE

<i>Discoveries in Biodiversity</i>	78
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## Internet Resources @ ClassZone.com

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<i>Bacteria</i>	18
<i>Viruses</i>	25
<i>Bee Dance</i>	41
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<i>Interpreting Circle Graphs</i>	50
<i>Perimeter and Area</i>	115
<i>Line Symmetry</i>	127
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# INVESTIGATIONS AND ACTIVITIES

## EXPLORE THE BIG IDEA

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### Chapter Opening Inquiries

1. Where Can You Find Microscopic Life? How Quickly Do Bacteria Multiply? Internet Activity: Microscopic Life and You 7
2. Where Does It Come From? How Can a Multicellular Organism Reproduce on Its Own? Internet Activity: Bee Dance 41
3. How Are Plants Alike, How Are They Different? How Are Seeds Dispersed? Internet Activity: Sprouting Seeds 83
4. Worm-Watching. Insects and You. Internet Activity: Invertebrate Diversity 121
5. What Animals Live Near You? How Is a Bird like a Frog? Internet Activity: Where in the World? 155

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3. Which Seeds Will Grow? 104
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## EXPLORE

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## INVESTIGATE

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### Skill Labs

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