

CHAPTER

1

Single-Celled Organisms and Viruses

the BIG idea

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

Key Concepts

SECTION

1.1

Single-celled organisms have all the characteristics of living things.

Learn about characteristics shared by all living things.

SECTION

1.2

Bacteria are single-celled organisms without nuclei.

Learn about the characteristics of bacteria and archaea.

SECTION

1.3

Viruses are not alive but affect other living things.

Learn about virus structure and how they affect other cells.

SECTION

1.4

Protists are a diverse group of organisms.

Learn about protists and how they affect the environment.

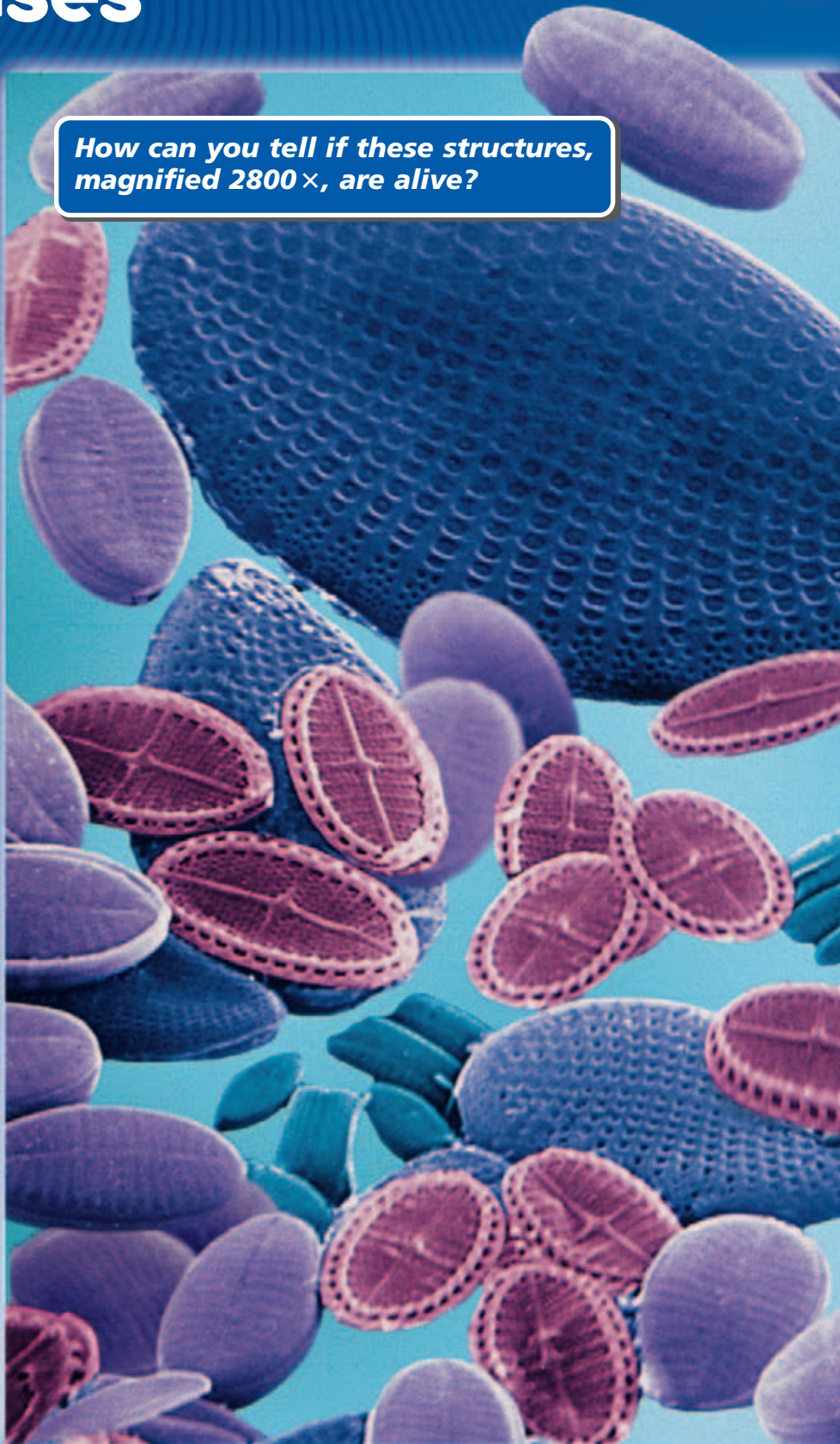


Internet Preview

CLASSZONE.COM

Chapter 1 online resources:
Content Review, two
Visualizations, three
Resource Centers, Math
Tutorial, Test Practice.

How can you tell if these structures, magnified 2800×, are alive?



EXPLORE the BIG idea

Where Can You Find Microscopic Life?

Make a list of places where you might find living things that are too small to be seen by your unaided eye. Then use a hand lens, magnifying glass, or microscope, to investigate some of the places on your list.

Observe and Think What do microscopic organisms look like. Why are there so many places where you can find microscopic life?



How Quickly Do Bacteria Multiply?

Tape a funnel to the top of a two-liter bottle. Place one bean in the funnel. After one minute, drop two more beans into the funnel. Continue adding beans to the bottle every minute, adding twice as many beans as you did before. When it is time to add 64 beans, use 1/8 of a cup, and then continue to double the amounts.

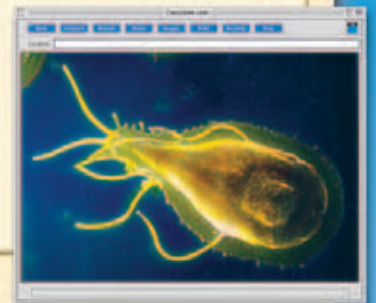
Observe and Think How long did it take to fill the bottle?



Internet Activity: Microscopic Life and You

Go to ClassZone.com to learn about the single-celled organisms.

Observe and Think What types of organism live in the human body?



Kingdom Protista Code: MDL039

Getting Ready to Learn

CONCEPT REVIEW

- All living things interact with their environment to meet their needs.
- The cell is the fundamental unit of life.

VOCABULARY REVIEW

See *Glossary* for definitions.

cell
matter
molecule
organism
species



CONTENT REVIEW

CLASSZONE.COM

Review concepts and vocabulary.

TAKING NOTES

MAIN IDEA WEB

Write each new blue heading in a box. Then write notes in boxes around the center box that give important terms and details about that blue heading.

SCIENCE NOTEBOOK

They are organized, with an outside and an inside.

They increase in size.

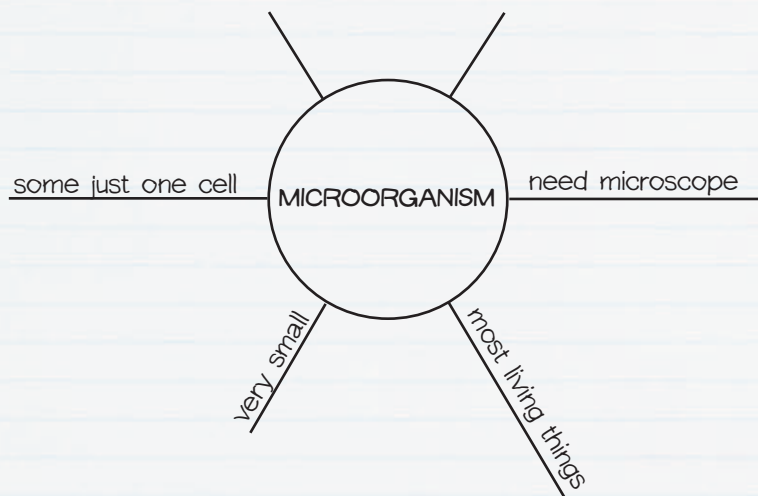
Living things share common characteristics.

They reproduce and form other organisms like themselves.

They respond to changes in the environment.

VOCABULARY STRATEGY

Place each vocabulary term at the center of a **description wheel diagram**. Write some words describing it on the spokes.



See the *Note-Taking Handbook* on pages R45–R51.