CHAPTER 3 Review

Using Key Terms

Use each of the following terms in a separate sentence.

- 1. tectonic plate
- 2. erosion
- radiation
- 4. ozone
- salinity

For each pair of terms, explain how the meanings of the terms differ.

- 6. lithosphere and asthenosphere
- 7. conduction and convection
- 8. crust and mantle
- 9. closed system and open system

STUDY TIP

The Importance of Nouns Most multiplechoice questions center around the definitions of nouns. When you study, pay attention to the definitions of nouns that appear to be important in the text. These nouns will often be boldfaced key terms or italicized secondary terms.

Understanding Key Ideas

- The thin layer at Earth's surface where life exists is called the
 - a. geosphere.
 - atmosphere.
 - c. hydrosphere.
 - d. biosphere.
- The thin layer of the Earth upon which tectonic plates move around is called the
 - a. mantle.
 - b. asthenosphere.
 - c. lithosphere.
 - d. outer core.

- Seventy-eight percent of Earth's atmosphere is made up of
 - a. oxygen.
 - b. hydrogen.
 - c. nitrogen.
 - carbon dioxide.
- 13. The ozone layer is located in the
 - a. stratosphere.
 - b. mesosphere.
 - c. thermosphere.
 - d. troposphere.
- Convection is defined as the
 - a. transfer of energy across space.
 - b. direct transfer of energy.
 - c. trapping of heat near the Earth by gases.
 - d. transfer of heat by currents.
- 15. Which of the following gases is not a greenhouse gas?
 - water vapor
 - b. nitrogen
 - c. methane
 - d. carbon dioxide
- Liquid water turns into gaseous water vapor in a process called
 - a. precipitation.
 - b. convection.
 - c. evaporation.
 - condensation.
- Currents at the surface of the ocean are moved mostly by
 - a. heat.
 - **b.** wind.
 - c. salinity.
 - d. the mixing of warm and cold water.
- 18. Which of the following statements about the biosphere is not true?
 - a. The biosphere is a system closed to matter.
 - b. Energy enters the biosphere in the form of sunlight.
 - Nutrients in the biosphere must be continuously recycled.
 - d. Matter is constantly added to the biosphere.

Short Answer

- 19. How do seismic waves give scientists information about Earth's interior?
- Explain the effect of gravity on Earth's atmosphere.
- Explain how convection currents transport heat in the atmosphere.
- 22. Why does land that is near the ocean change temperature less rapidly than land that is located farther inland?
- 23. Why is life on Earth confined to such a narrow layer near the Earth's surface?



