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PRETEST

17 CHAPTER 17

Planet Earth

1. Earth's core is under high pressure. As a result, it is likely to be _____.
   - **a.** very cold
   - **b.** spread out
   - **c.** dense
   - **d.** None of the above

2. Which of the following release energy?
   - **a.** earthquake
   - **b.** volcano
   - **c.** geyser
   - **d.** all of the above

3. How are longitudinal waves and transverse waves different?

_____

_____

_____

4. During an earthquake, the ground moves back and forth suddenly. This change in direction is a sign of _____.
   - **a.** zero acceleration
   - **b.** constant velocity
   - **c.** a force
   - **d.** None of the above

5. Rocks are often identified by their streak color—the color they leave behind when scratched on a piece of ceramic tile. Is this a physical or chemical property? Explain.

_____

_____

_____

6. Most rocks that are found on Earth's surface are _____.
   - **a.** elements
   - **b.** heterogeneous mixtures
   - **c.** liquid solutions
   - **d.** pure substances

7. When molten rock cools and hardens, it undergoes a _____.
   - **a.** physical change
   - **b.** chemical change
   - **c.** Both of these
   - **d.** None of the above

8. When a glacier breaks a rock into smaller pieces, this is an example of a _____.
   - **a.** physical change
   - **b.** chemical change
   - **c.** Both of these
   - **d.** None of the above

9. An example of a chemical change is _____.
   - **a.** wind moving sand
   - **b.** acid rain reacting with rock
   - **c.** running water wearing rock down
   - **d.** glaciers scraping out a valley

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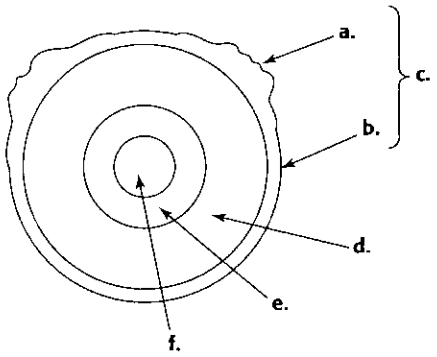
REVIEW

17 SECTION 17.1

Earth's Interior and Plate Tectonics

1. **Label** the major layers of the Earth.



a. _____

b. _____

c. _____

d. _____

e. _____

f. _____

2. **Draw** and label the three types of tectonic plate boundaries. Indicate the direction of movement for each plate.

3. **Identify** the geologic features that form at each of the following:

   a. a convergent boundary between an oceanic plate and a continental plate

   _____

   b. a convergent boundary between two oceanic plates

   _____

4. **Summarize** what scientists discovered when they analyzed the magnetic bands on the ocean floor.

   _____

   _____

   _____

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REVIEW

17 SECTION 17.2

Earthquakes and Volcanoes

1. **Define** each of the following:

   a. P waves

   _____

   _____

   b. S waves

   _____

   _____

   c. surface waves

   _____

2. **Describe** in your own words how a seismograph detects and records earthquakes.

   _____

   _____

   _____

3. **Explain** why most earthquakes occur at tectonic plate boundaries.

   _____

   _____

   _____

4. **Contrast** shield volcanoes and cinder-cone volcanoes.

   _____

   _____

   _____

5. **Explain** why volcanoes form at both convergent plate boundaries and divergent plate boundaries.

   _____

   _____

   _____

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REVIEW

17 SECTION 17.3

Minerals and Rocks

1. **List** the four characteristics of minerals.

_____

_____

2. **Identify** the type of rock described in each of the following:

_____ **a.** will have small crystals if cooled rapidly

_____ **b.** may contain fossils

_____ **c.** forms as a result of heat and pressure

3. **Describe** how each of the following types of rock is formed, and give an example of each.

a. sedimentary

_____

_____

b. metamorphic

_____

_____

4. **Describe** how igneous rock can become sedimentary rock.

_____

_____

_____

5. **Explain** why you would find the oldest fossils at the bottom of a cliff and the youngest fossils at the top of a cliff.

_____

_____

_____

6. **Explain** how the radioactive decay of isotopes is used to determine the age of rocks.

_____

_____

_____

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REVIEW

17 SECTION 17.4

Weathering and Erosion

1. **Name** an example of the cause for each of the following:

   _____ **a.** physical weathering

   _____ **b.** chemical weathering

2. **Identify** whether physical weathering or erosion occurs in each of the following situations:

   _____ **a.** a deep gully forms in a hillside after a rainstorm

   _____ **b.** a U-shaped valley is carved out as a glacier moves through the mountains

   _____ **c.** a rock is slowly broken apart by the force of ice thawing and refreezing

   _____ **d.** sandstone is worn away by the sediment particles carried in the wind

3. **Distinguish** between physical weathering and chemical weathering.

4. **Explain** how underground limestone caves form.

5. **Describe** how rainwater can be an agent of chemical weathering.

6. **Contrast** weathering and erosion.

CHAPTER 17

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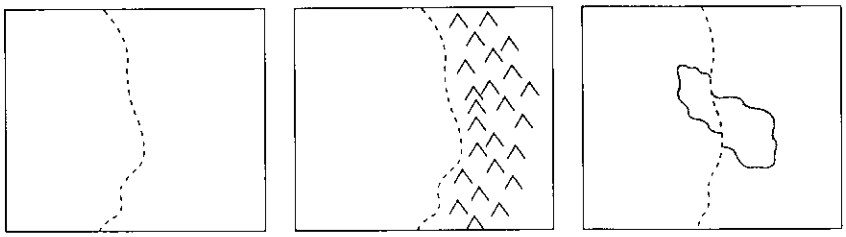
REVIEW

17 CHAPTER 17

Mixed Review

1. **Interpreting Graphics** Draw arrows to indicate the relative directions of movement for the plates on the different plate boundaries shown below. Indicate any geologic features or events that occur at each type of boundary.



Divergent plate Convergent plate Transform fault

2. **Applying Knowledge** Explain how seismic waves provide scientists with information about Earth's interior.

3. **Creative Thinking** How are the Hawaiian Islands evidence of continental drift?

4. **Applying Knowledge** How can sedimentary rock become metamorphic rock?

5. **Problem Solving** Rocks brought back from the moon by Apollo astronauts are almost exclusively igneous. What does this tell you about the moon's geologic history?

6. **Understanding Systems** Would you expect to find more metamorphic rocks in the middle of a plate or near a plate boundary?

7. **Applying Knowledge** What factors influence weathering and erosion rates?

8. **Understanding Systems** How can erosion by liquid water and by glaciers change the shape of a mountain range?

9. **Concept Mapping** Complete the concept map below by writing the correct word or phrase in the lettered boxes.