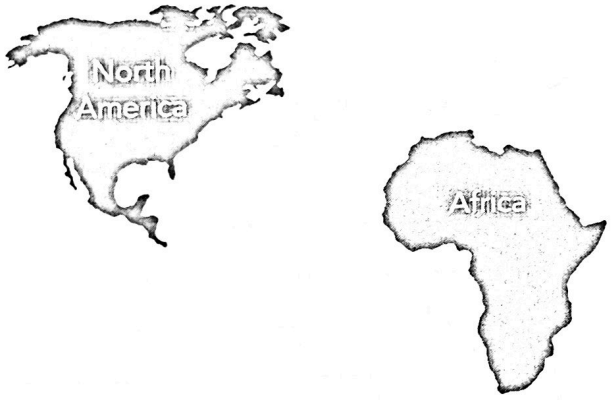
Review and Assessment

LESSON 1 Drifting Continents

1. What did Wegener think happens during continental drift?
   - **a.** Continents move.
   - **b.** Continents freeze.
   - **c.** The mantle warms.
   - **d.** Convection stops.

2. Wegener thought that all the continents were once joined together in a supercontinent that he called _____.

3. **Draw** The drawing shows North America and Africa. Circle the parts of the coastlines of the two continents that were joined in Pangaea.



4. **Make Judgments** Wegener proposed that mountains form when continents collide, crumpling up their edges. Was Wegener's idea about how mountains form consistent with his hypothesis of continental drift? Explain.

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5. **Write About It** Michelle is a scientist working in Antarctica. She learns that fossils of *Glossopteris* have been found on Antarctica. Her colleague Joe, working in India, has also found *Glossopteris* fossils. Write a letter from Michelle to her colleague explaining how these fossils could be found in both places. Define *continental drift* in your answer and discuss how it explains the fossil findings.

LESSON 2 Sea-Floor Spreading

6. In which areas does subduction of the ocean floor take place?
   - **a.** rift valleys
   - **b.** the lower mantle
   - **c.** mid-ocean ridges
   - **d.** deep-ocean trenches

7. A mid-ocean ridge is a _____

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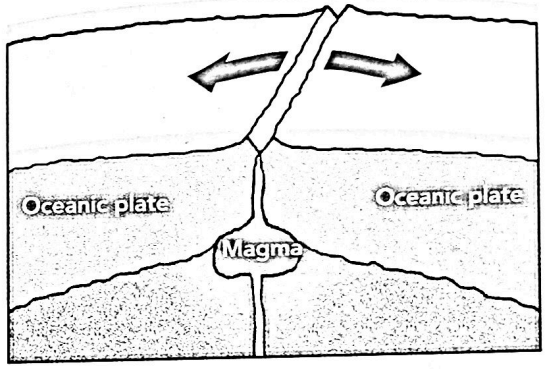
that rises up from the ocean floor.

8. **Compare and Contrast** Look at the diagram. Label the area where new crust forms.



9. **Apply Concepts** Why are the oldest parts of the ocean floor no older than about 200 million years?

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10. **Sequence** Place the following steps of sea-floor spreading in their correct sequence.
    - **A.** The molten material cools and hardens, forming a strip of rock along the ocean floor.
    - **B.** The strip of rock moves away from the ridge.
    - **C.** Molten material from inside Earth rises to the ocean floor at a mid-ocean ridge.

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11. **Write About It** How is pillow lava evidence of sea-floor spreading?

CHAPTER 3

Review and Assessment

LESSON 1 The Theory of Plate Tectonics

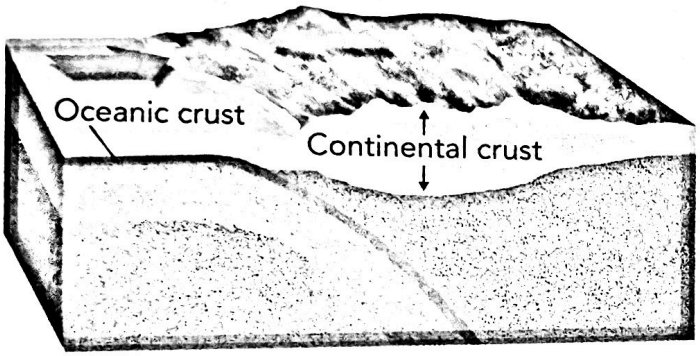
12. At which boundary do two plates pull apart?

a. convergent **b.** transform

c. divergent **d.** mantle-crust

13. When a divergent boundary occurs on land, it forms a _____.

Use the diagram to answer Questions 14–15.



14. Classify What type of plate boundary is shown in the diagram?

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15. Predict What type of landforms will result from the plate movement shown in the diagram?

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16. Compare and Contrast How does the density of oceanic crust differ from that of continental crust? Why is this difference important?

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17. math! It takes 100,000 years for a plate to move about 2 kilometers. What is the rate of motion in centimeters per year?

_____

APPLY THE BIG IDEA How do moving plates change Earth's crust?

18. Summarize Suppose Earth's landmasses someday all move together again. Describe the changes that would occur in Earth's oceans and Earth's landmasses. Use the map and the theory of plate tectonics to explain your ideas.