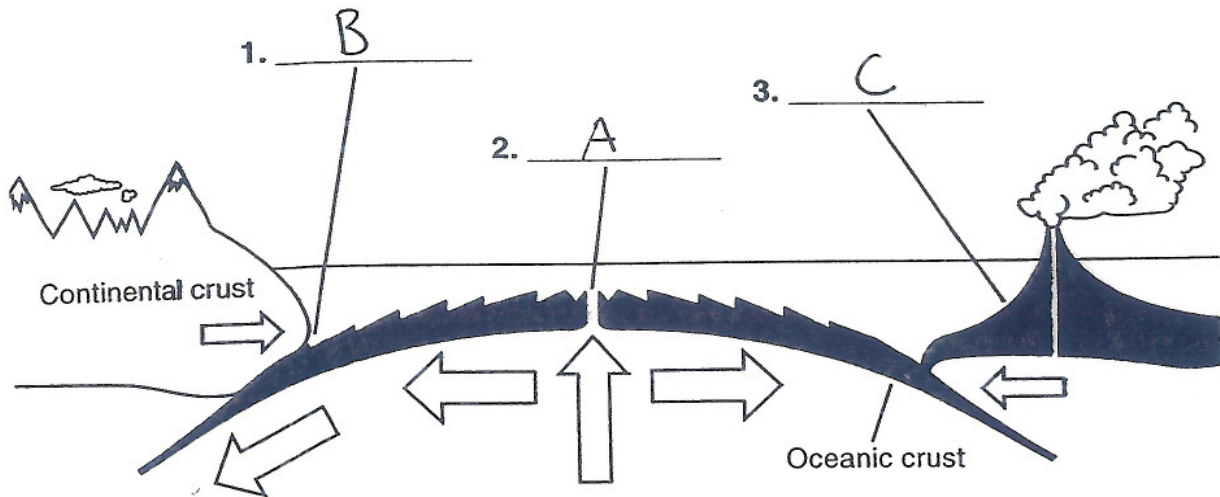


Directed Reading for  
Content Mastery

## Overview Plate Tectonics

**Directions:** Study the following diagram. Then label each part with the letter of the correct description below.

- A. A mid-ocean ridge forms whenever diverging plates continue to separate, creating a new ocean basin. As the rising magma cools, it forms new ocean crust.
- B. When an oceanic plate converges with a less dense continental plate, the denser oceanic plate sinks under the continental plate.
- C. When two oceanic plates converge, the denser plate is forced beneath the other plate and volcanic islands form above the sinking plate.



**Directions:** Circle the words in parentheses that best complete the sentences below.

4. (Fossils) Human bones), rocks, and climate provided Wegener with support for his continental drift theory.
5. The fact that the (youngest, oldest) rocks are located at the mid-ocean ridges is evidence for seafloor spreading.
6. The transfer of (solar, heat) energy inside Earth moves plates.



## Chapter 10

Use with Section 3

## REINFORCEMENT

## • Theory of Plate Tectonics

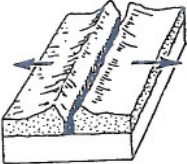
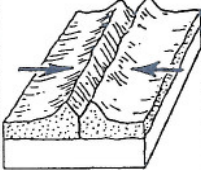
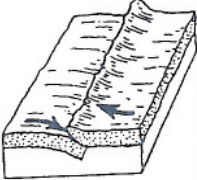
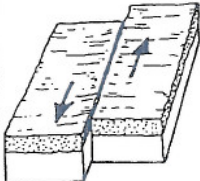
Use the words in the box to fill in the blanks.

~~asthenosphere~~  
~~convection current~~lithosphere  
plates

plate tectonics

- The theory of plate tectonics states that Earth's crust and upper mantle are broken into sections.
- These sections, called plates, are composed of the crust and a part of the upper mantle.
- The crust and upper mantle are called the lithosphere.
- Beneath this layer is the plasticlike asthenosphere.
- Many scientists think hot plasticlike rock is forced upward toward the surface, cools, and sinks. This process is called a convection current.

Four diagrams are shown in the table below. Explain each diagram to complete the table.

Diagram	Type of boundary and motion at boundary	Diagram	Type of boundary and motion at boundary
6. 	* Divergent * Moves away from each other	8. 	* Convergent * Moves toward each other
7. 	* Convergent * Move towards each other & one subducts.	9. 	* Transform * Slide past each other





Directed Reading for **Key Terms**  
Content Mastery **Plate Tectonics**

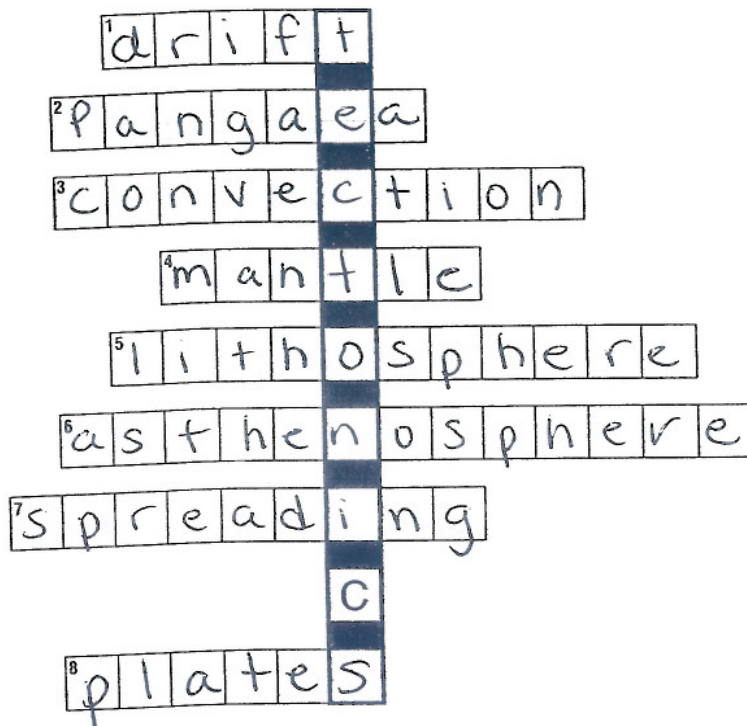
Directions: Use the following terms to complete the puzzle below. The letters in the darker, vertical box complete question 9.

~~Pangaea~~  
~~convection~~

~~mantle~~  
~~plates~~

~~spreading~~  
~~drift~~

~~lithosphere~~  
~~asthenosphere~~



- The hypothesis that continents move slowly is called continental \_\_\_\_\_.
- All continents once might have been connected in a large landmass called \_\_\_\_\_.
- The cycle of heating, rising, cooling, and sinking is a \_\_\_\_\_ current.
- Just below Earth's crust is the \_\_\_\_\_.
- The crust and part of the upper mantle are known as the \_\_\_\_\_.
- Continental plates move on the plasticlike layer of Earth's surface called the \_\_\_\_\_.
- Hot magma forced upward at mid-ocean ridges produces seafloor \_\_\_\_\_.
- Sections of Earth's crust and part of the upper mantle are called \_\_\_\_\_.
- The theory that Earth's crust and upper mantle are in sections that move is called plate tectonics.

Meeting Individual Needs