

**Plate Tectonics** ▪ *Guided Reading and Study*

## Earth's Interior

*This section explains how scientists learn about Earth's interior. The section also describes the layers that make up Earth and explains why Earth acts like a giant magnet.*

### Use Target Reading Skills

*Before you read the passage for each heading, fill in the top box with what you know. After you have read the passage, fill in the bottom box with what you have learned.*

What You Know
1. Earth's crust is made of rock.
2.
3.
4.
5.

What You Learned
1.
2.
3.
4.
5.

### Exploring Inside Earth

1. What prevents geologists from directly exploring Earth's interior?

---

---

2. Geologists use direct evidence from \_\_\_\_\_ to learn about Earth's interior.

3. Geologists learn about Earth's interior using indirect evidence from

---

**Plate Tectonics** ▪ *Guided Reading and Study*

**Earth's Interior** *(continued)*

4. Is the following sentence true or false? Earth looks the same today as it did millions of years ago. \_\_\_\_\_
5. Seismic waves reveal the structure of Earth through their \_\_\_\_\_ and \_\_\_\_\_.
6. Circle the letter of each sentence that is true about Earth.
  - a. Indirect evidence of Earth's interior comes from studying rock samples.
  - b. Geologists cannot observe Earth's interior directly.
  - c. It is over 6,000 kilometers from the surface to the center of Earth.
  - d. Geologists learn about Earth's interior by drilling holes.
7. \_\_\_\_\_ waves are produced by earthquakes.

**A Journey to the Center of Earth**

8. How does the temperature change as you go from the surface toward the center of Earth? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
9. How does pressure change as you go from the surface toward the center of Earth? \_\_\_\_\_
10. The three main layers that make up Earth are the \_\_\_\_\_,  
\_\_\_\_\_, and \_\_\_\_\_.

**The Crust**

11. The \_\_\_\_\_ is a layer of rock that forms Earth's outer skin.
12. Is the following sentence true or false? The crust is thinnest under high mountains. \_\_\_\_\_
13. The dark-colored rock that makes up most of the oceanic crust is \_\_\_\_\_.
14. The light-colored rock that makes up most of the continental crust is \_\_\_\_\_.

**Plate Tectonics** ▪ *Guided Reading and Study***The Mantle**

Match the name of each layer of the mantle with its description.

Layer	Description
___ 15. lower mantle	a. Rigid layer that includes the upper part of the mantle and the crust
___ 16. lithosphere	b. Solid material beneath the asthenosphere
___ 17. asthenosphere	c. Soft layer just below the lithosphere

18. Is the following sentence true or false? The asthenosphere is not considered solid because it can bend like plastic. \_\_\_\_\_

19. Is the following sentence true or false? The mantle is nearly 3,000 kilometers thick. \_\_\_\_\_

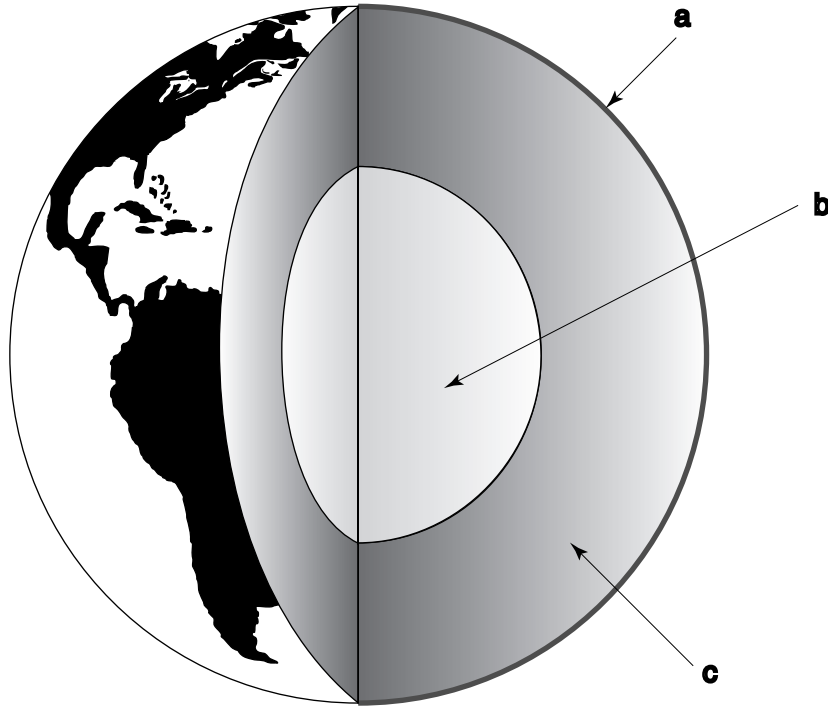
**The Core**

20. Circle the letter of each sentence that is true about Earth's outer core.
- It is under low pressure.
  - It is made of solid metal.
  - It contains iron and nickel.
  - It is a solid.
21. Circle the letter of each sentence that is true about Earth's inner core.
- It consists of molten metal.
  - It is a thick liquid.
  - It is not very dense.
  - It is under extreme pressure.

**Plate Tectonics** ▪ *Guided Reading and Study*

**Earth's Interior** *(continued)*

22. In the drawing, label the three main layers of Earth.



23. Describe how a compass needle aligns itself. \_\_\_\_\_

\_\_\_\_\_

24. What creates Earth's magnetic field? \_\_\_\_\_

\_\_\_\_\_