

Name:

Plate Tectonics: Our Restless Planet
Video Questions

1. How do scientists identify tectonically active regions?
2. How many major plates compose Earth's surface?
3. Why is the crust of Earth barely visible on scaled drawings? How does its thickness compare with Earth's other layers?
4. How do rifts form? Where do rifts usually occur?
5. What is the Mid-Atlantic Ocean Ridge? How does it affect the Atlantic Ocean? How does it affect America and Africa?
6. What is subduction? Why is it important?
7. What causes oceanic trenches?
8. How do mountains form?

9. The video states that not all tectonic movement is up and down. What does this mean?

10. What kind of plate tectonic movement created the San Andreas Fault?

11. Who was Wegener? On what evidence did he base his continental drift theory? What was missing in Wegener's understanding of continental drift?

12. What did scientists think about the ocean floor before World War II? What did they discover after the war? What allowed them to make this discovery?

13. How can the ocean crust be different ages? Is the crust older or younger near ocean ridges?

14. What is Pangaea? Do students think the face of Earth will continue to change in the future?

15. How does the study of plate tectonics help us to understand Earth?

Glossary.....

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continent—One of the principal land masses on Earth.

earthquake—A sudden movement of Earth's crust caused by the release of stress that accumulates along geologic faults or by volcanic activity.

lithosphere—The outer part of Earth composed of rock, typically the surface, which is measured to average 50 miles in thickness.

mantle—The layer between the crust and the core.

mid-ocean ridge—A series of mountain ranges on the ocean floor that extends through the North and South Atlantic, the Indian Ocean, and the South Pacific.

Pangaea—A hypothetical supercontinent that included all the landmasses of Earth before the Triassic Period.

subduction zone—A geologic process in which one edge of one plate is forced below the edge of another.

trench—A long, steep valley on the ocean floor.

volcano—An opening in Earth's crust through which molten lava, ash, and gases are ejected; a mountain formed by the materials ejected from a volcano.

Wegener's theory—The idea of Pangaea and continental drift, which theorize that one large landmass broke up and its pieces dispersed and drifted, eventually reaching their present positions. This theory did not account for the mechanism or process that moves the land masses.