

Earth's Layers, Continental Drift, Plate Tectonics, Convection Study Guide

Layers of the Earth

1. What are the 4 layers of the earth?
2. Be sure to know different characteristics of each layer.
3. What are 2 sub layers of the crust?
4. Compare and contrast the 2 sub layers of the earth. Be sure to specifically mention the composition, density and age.
5. What are the 2 sub layers of the mantle?
6. What does lithos mean and what does astheno mean?
7. Where is the lithosphere located?
8. What is so special about the asthenosphere?
9. Where does Earth's magnetic field come from?
10. What causes earth's magnetic field?
11. Why is the earth's inner core a solid?

Seismic Waves and Inferences About the Layers of the Earth

12. What are seismic waves and where do they travel?
13. Draw a venn diagram comparing and contrasting P waves and S waves.
14. What does it mean if something is reflected? What does it mean if something is refracted?
15. What is the main reason as to why scientists are able to infer the characteristics of the layers of the earth?

Continental Drift

16. Explain continental drift.
17. Who was Alfred Wegener?
18. What are the 6 pieces of evidence we discussed involving continental drift?

19. How were fossils a key piece of evidence in supporting continental drift?
20. How was rock evidence a key piece of evidence in supporting continental drift?
21. How were glacial deposits a key piece of evidence in supporting continental drift?
22. What scientist suggested that the seafloor might be spreading?
23. Explain how scientists know that the seafloor is spreading.
24. What is the Mid Atlantic Ridge and where is it located?
25. What does paleo mean?
26. What does paleomagnetism have to do with continental drift?
27. How do scientists know that the earth's magnetic field has reversed?
28. In what direction are the 2 oceanic plates moving that make the Atlantic Ocean?

Plate Tectonics

29. What is plate tectonics?
30. About how many centimeters do the plates move per year?
31. How many major plates are there?
32. What are the 3 types of plate boundaries
33. What types of landforms occur at each type of boundary?
34. What are the differences between the 3 types of convergent boundaries?
35. Be able to name a place on Earth where each of the different types of plate boundaries occurs.
36. What is the difference between a continental rift and an ocean ridge?
37. What type of plate boundary were the Andes Mountains formed by?

38. Be able to explain how the graham crackers and frosting model plate tectonics.

Convection

39. It might be a good idea to watch the Khan Academy video again.

40. What is convection?

41. How was convection displayed in the demo and the experiment?

42. Be able to EXPLAIN how the plates move by convection using words such as heat, hotter, colder, more dense, less dense, etc.