

# 6TH GRADE

## Science

### Study Guide for Earth Systems, Structures and Processes

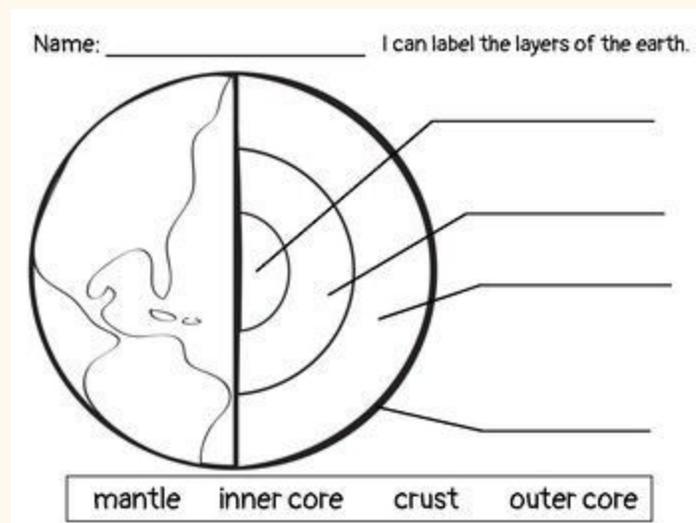
#### 6.E.2 Understand the structure of the earth and how interactions of constructive and destructive forces have resulted in changes in the surface of the Earth over time and the effects of the lithosphere on humans.

6.E.2.1 Summarize the structure of the earth, including the layers, the mantle and core based on the relative position, composition and density.

6.E.2.2 Explain how crustal plates and ocean basins are formed, move and interact using earthquakes, heat flow and volcanoes to reflect forces within the earth.

6.E.2.3 Explain how the formation of soil is related to the parent rock type and the environment in which it develops.

6.E.2.4 Conclude that the good health of humans requires: monitoring the lithosphere, maintaining soil quality and stewardship.



1. Describe each layer after you label the diagram.

2. Which of the following is a fact rather than an opinion about earthquakes? Circle one.

Earthquakes occur along fault lines.

Earthquakes are worse than hurricanes.

Earthquakes are bad for all local businesses.

Earthquakes always cause major damage to homes.

3. What is subduction? Draw a diagram of what it looks like.

4. What is the BEST method for a farmer to prevent soil erosion?

5. Earthquakes occur along the San Andreas Fault in California. Which statement BEST describes plate motion in the area during the time between earthquakes?

Plate motion continues, and plate tension increases.

Plate motion reverses, and plates return to their original positions.

Plate motion stops, and plate tension decreases.

Plate motion stops, and only the mantle moves.

6. What geologic feature results from tectonic plates slowly moving over a hot spot?

\_\_\_\_\_

7. As two continental plates collide, the edges of the plates are crumpled and uplifted. What landform is MOST likely a result of this type of collision? \_\_\_\_\_

8. The Appalachian Mountains formed by \_\_\_\_\_.

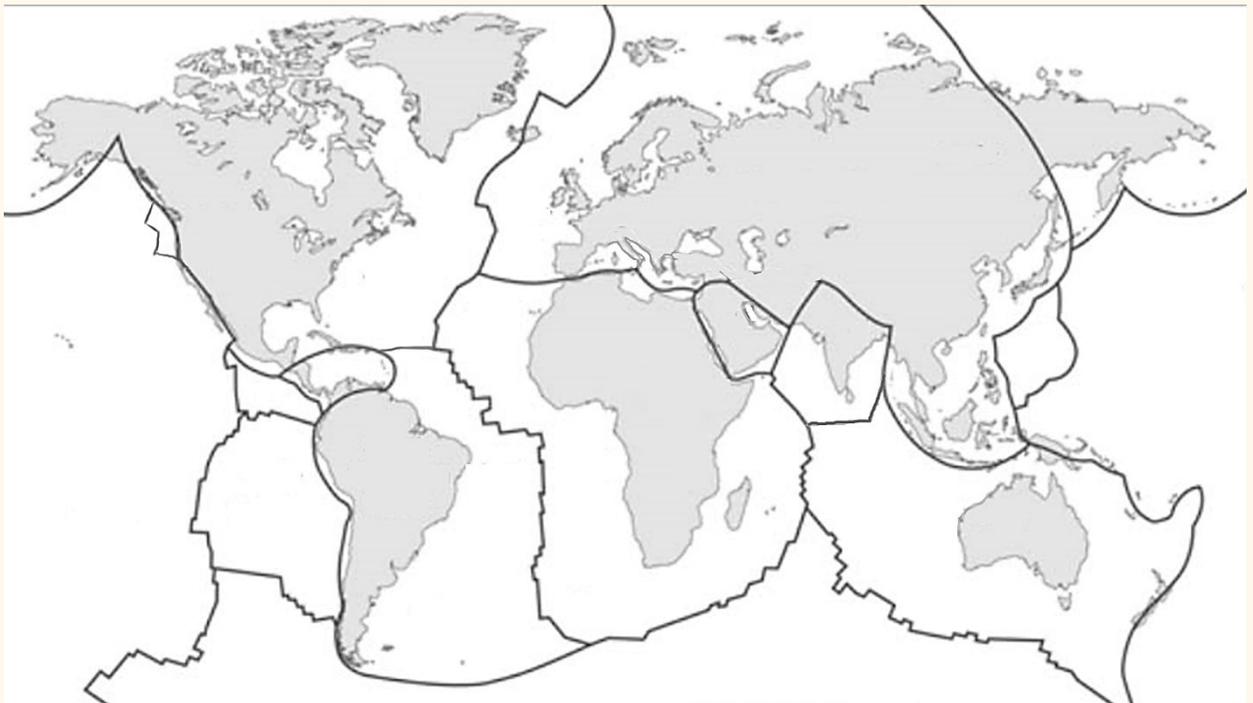
9. Explain the basic composition of Earth's core.

10. At the mid-ocean ridge, new oceanic crust is continually being produced. How does Earth's size change as the new crust is produced?

11. Soil color is closely related to its content. Which element causes soil to appear red?  
\_\_\_\_\_

12. The texture of soil depends primarily on the \_\_\_\_\_.

13. Label the major tectonic plates.



14. What has the greatest direct influence on the movement of the lithosphere?  
\_\_\_\_\_
15. Mount St. Helens was a cone-shaped mountain that formed when molten material reached the surface of Earth and formed layers. Cone-shaped mountains form as a result of what event? \_\_\_\_\_
16. What is the BEST soil mixture for plant growth and drainage?  
\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_
17. A gardener wants to increase the ability of garden soil to retain water. What should the gardener add to the soil to do this? \_\_\_\_\_ material
18. Explain Alfred Wegener's hypothesis of continental drift.
19. A student use clay to build models of an oceanic plate and a continental plate. What characteristic CANNOT be accurately represented by the models?
- The relative sizes of plates.
- The relative densities of plates.
- The shapes of plates.
- The arrangement of plates relative to one another.
20. What property BEST indicates that soil contains nutrients? \_\_\_\_\_
21. What farming method involves planting different vegetables in different places each growing season to maintain soil quality? \_\_\_\_\_
22. Where does the energy from an earthquake originate?
23. What is relative porosity?

24. Why does the continental crust float on top of the mantle?
25. The Andes Mountains in South America formed when an oceanic plate shifted beneath a continental plate. Which other landforms are usually associated with this type of plate boundary? Barrier islands / mid-ocean ridges / ocean trenches / volcanic island arcs
26. What does permeable mean?