**TCSS Geology Unit Test [1]** Name Answer Key

1. Order the layers of the Earth's surface from lowest to highest temperature. (S6E5a)

Crust, mantle, outer core, inner core

2. Identify the thickest layers of the Earth. (S6E5a)

mantle

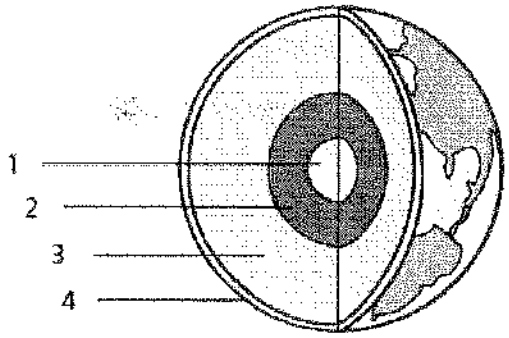
3. Identify the layers of the Earth shown in the diagram to the right. (S6E5a)

1 inner core

2 outer core

3 mantle

4 Crust




4. Identify the layer of the Earth in the diagram to the right which makes up 70% of the Earth's mass and is mostly solid but capable of flow, causing changes in the Earth's surface. (S6E5a) mantle

5. Which is the thinnest layer with large amounts of silicon and aluminum? (S6E5a)

Crust

6. Plate tectonics describes movements mainly in which layer of the Earth? (S6E5a)

lithosphere (crust & upper mantle)

7. Which layer of the Earth has the greatest pressure, density, and temperature? (S6E5a)

inner core

8. Why is the inner core of the Earth solid? (S6E5a)

high pressure from the layers above

9. Explain how convection currents cause the Earth's crust to move. (S6E5a) The transfer of heat inside the Earth provides energy to move plates. Hot air rises then cools and sinks. The motion of the plates is related to the movement of convection currents.

10. Explain the density changes that occur between the layers of the Earth's surface. (S6E5a)

the deeper inside the Earth the density increases

11. Identify evidence that suggests the continents were joined together at one time in the past. (S6E5e, f)

Fossil clues, climate, Rock clues

12. Where do most geologic events take place? (S6E5e, f)

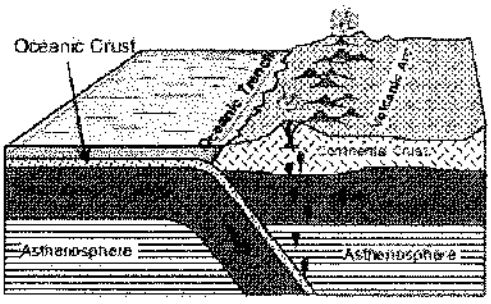
Along plate boundaries

13. At which type of boundary do tectonic plates move apart? (S6E5e, f)

Divergent Boundaries

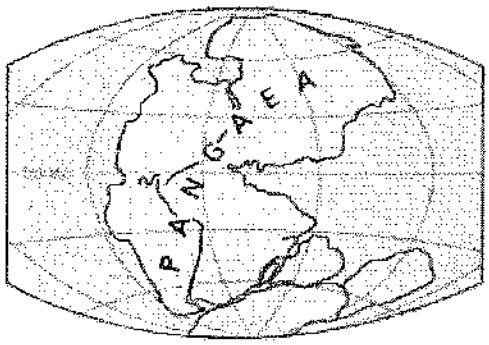
14. Which type of boundary does the diagram to the right illustrate? (S6Ee, f)

Convergent Boundary

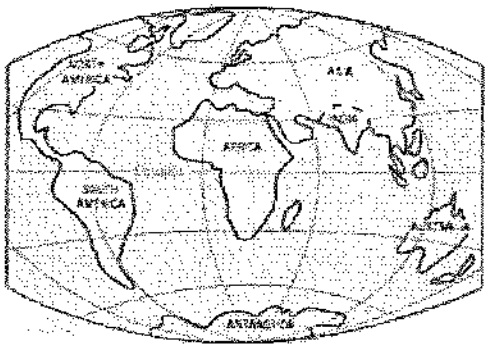



Ocean - Continent Convergence

**TCSS Geology Unit Test [1]** Name_____




PERMIAN
225 million years ago

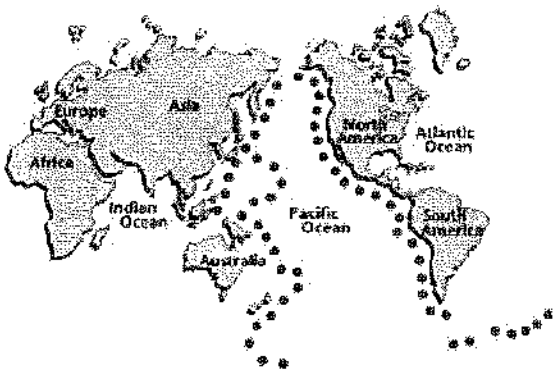



PRESENT DAY

15. The pictures above show how the continents on Earth's surface have changed position over a very long period of time. What explains this change? (S6E5e, f) Continental Drift,

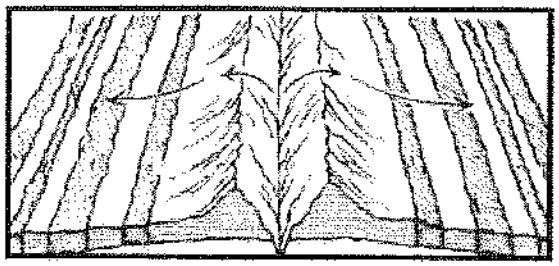
16. The diagram to the right shows the location of volcanoes around the world. Based on the diagram, describe where volcanoes are MOST LIKELY to form? (S6E5e, f)

- plate boundaries
- ring of fire along the edge of the continents




17. The diagram to the right illustrates what type of geologic event? Explain. (S6E5e, f)

Mid Ocean Ridge
Seafloor Spreading



18. The image to the right shows a mountain range. Explain how mountain or mountain ranges are formed. (S6E5e, f) Convergent boundaries plates collide, the forces that are generated cause massive folding and faulting

19. Define Continental drift. (S6E5e, f) a theory that explains how continents shifted positions on the Earth's surface. The continents were one large land mass the spread apart through convection currents

20. Explain how seafloor spreading causes continental drift. (S6E5e, f) The process that occurs at mid-ocean ridges, where new oceanic crust is form through volcanic activity and then moves away from the ridge. Seafloor spreading explains why the plates move

21. Where do earthquakes most likely occur? (S6E5e, f)

Transform Boundaries

22. Describe a volcano. (S6E5e, f) an opening in the Earth that erupts gases, ash, and lava.

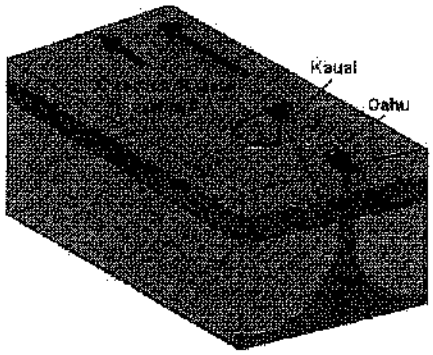
23. Describe a subduction zone. (S6E5e, f) a region of the Earth's crust where tectonic plates meet.

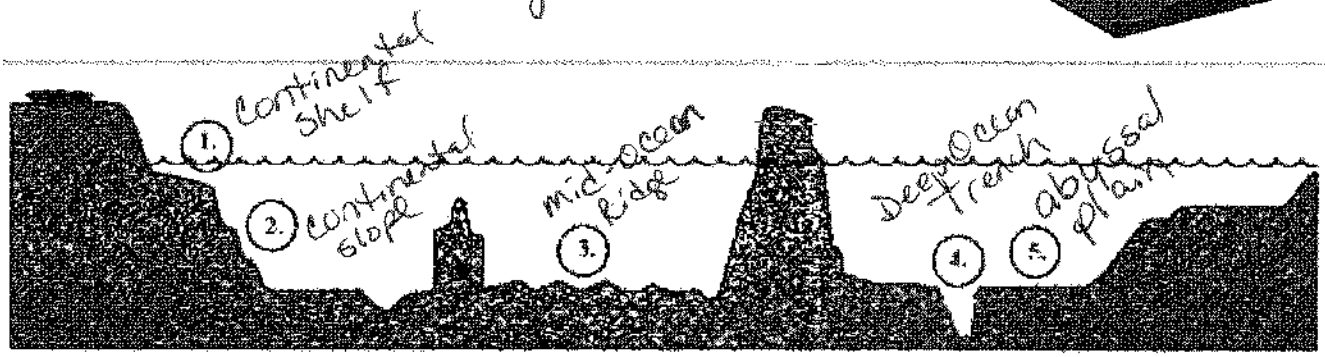
24. Describe how a tsunami is formed. (S6E5e, f) Earthquakes - seismic sea waves that begins over an earthquake focus and can be highly destructive when it crashes on shore

25. Describe an earthquake. (S6E5e, f) - transform boundaries - vibrations produced when rocks break along a fault

26. What causes oceanic features such as trenches, volcanic islands, and mid-ocean ridges? (S6E5e, f)
plate movement

27. The diagram to the right shows how the Hawaiian Islands were formed. Based on the diagram, what is a reasonable hypothesis for the islands in the distant future? (S6E5e, f)
New islands will form following the direction of the plate movement. This will take several million years




28. Identify the physical features of the ocean floor numbered in the diagram above. (S6E3e)

29. Explain the effects-of tectonic plate movement on the Earth's crust. Be sure to explain the formation of different landforms.
Tectonic plates move on the asthenosphere. This movement of plates causes different plate boundaries. Convergent boundaries can cause mountains and volcanos and trenches to form. Earthquakes happen at transform boundaries, under water Earthquakes cause tsunami's. Divergent boundaries produce mid ocean ridges and rift valleys producing new rock.