Name _____ Date _____ Period _____ 74

GEOSPHERE UNIT REVIEW

1. What are the two major sources of Earth's internal heat energy?

2. How did the bombardment of Earth by solid particles affect its temperature?

3. What is radioactive decay? How do scientists use it to determine the date of a rock?

4. What difference allows scientists to separate the Earth into the crust, mantle, and core?

5. What difference allows scientists to separate the Earth into the lithosphere, asthenosphere, mesosphere, outer core and inner core?

6. How do earthquake (seismic) waves allow scientists to determine the physical characteristics of Earth Layers?

7. Why must scientists infer the composition of the Earth's layers?

8. What substances must earth's core be composed of to create the magnetic field and density needed to match estimates of Earth's mass?

9. Why would the composition of a meteorite resemble Earth's interior?

10. What do seismic waves indicate about the physical properties of the asthenosphere?

11. Why are the properties of the asthenosphere important to plate tectonics theory?

12. What is convection, and how is it related to the movement of tectonic plates?

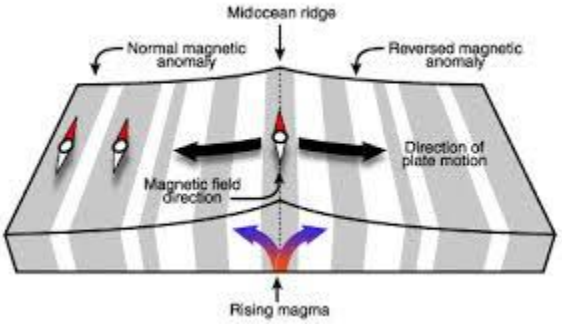
13. How do scientists explain the movement of Earth's tectonic plates?
14. What is the main idea Alfred Wegener proposed in the Theory of Continental Drift that he published in 1915?

15. What observations did Wegener make that led him to develop the theory of continental drift?

16. How does the fossil record support the continental drift theory?

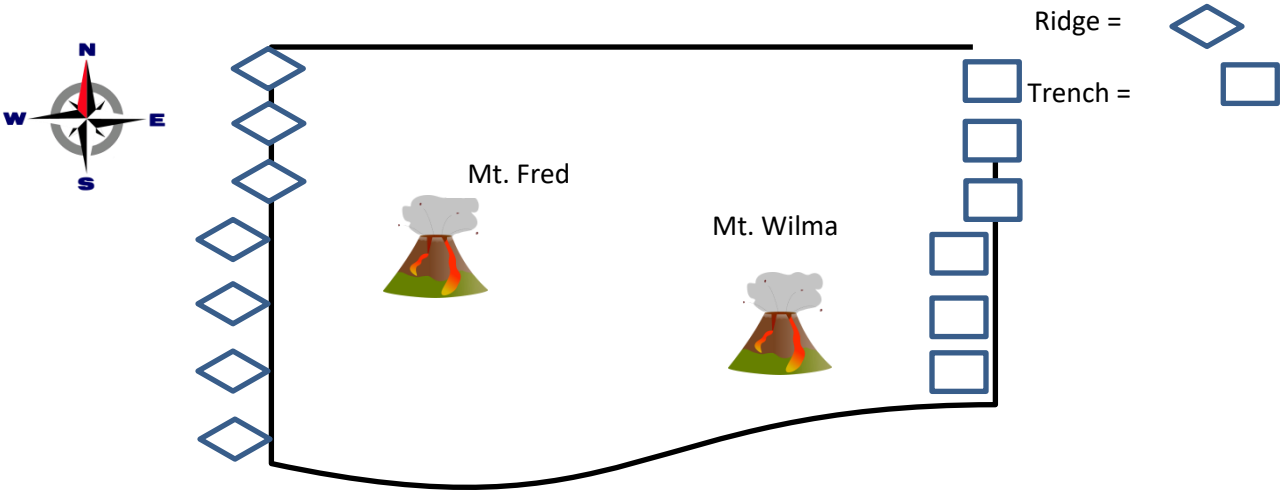
17. How does the discovery of sea-floor ridges affect the ability of the scientific community to accept Alfred Wegener's ideas?

18. Use the diagram of the ocean floor to answer the next question



19. What does the "striping" of the sea floor indicate about the Earth?

Use this diagram to answer the following questions 20 – 22.

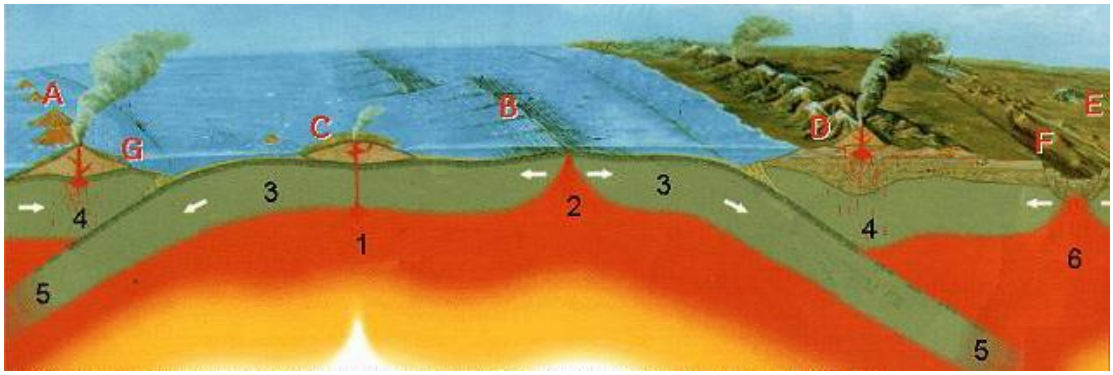


20. What direction would the plate move?

21. If the volcanoes formed over a mantle plume, which one is older? Why?

22. If the volcanoes formed over a mantle plume, which one would be active? Why?

Use this diagram to answer questions 23 - 26



23. What direction are the plates moving in relation to each other at point 2? What is the name of this type of boundary?

24. Where would you expect to find the hottest rock?

25. Why does rock begin to sink at point 3?

26. What effect does a subducting plate have on the rest of the plate behind it?

27. Movement on plate boundaries has created spectacular volcanoes. What effect do volcanoes have on living things over time?

28. The collision of two continental plates results in which land feature?

29. Where are earthquakes most likely to occur on Earth?

30. What kind of movement on a plate boundary causes mountain building?

31. The Earth's crust is broken into pieces called plates. Explain how scientists classify the different plate boundaries.

32. What are two different ways volcanoes are created at plate boundaries?

33. What is the biggest reason most people would not accept Wegener's theory of continental drift?

34. The transfer of heat energy through a fluid (liquid or gas) is called _____.
35. What are the features found at convergent boundaries?

36. How do p and s– waves help scientists understand more about the Earth's core?