

Earthquakes and Earth's Interior

1. Match the definition with the term

- | | |
|----------------|---|
| ___ Fault | A. A small earthquake the occurs before a bigger one |
| ___ Focus | B. The center of an earthquake, often deep in the ground |
| ___ Epicenter | C. A crack in the earth's crust |
| ___ Foreshock | D. An earthquake that follows a bigger one |
| ___ Aftershock | E. The spot on earth's surface directly above an quake center |

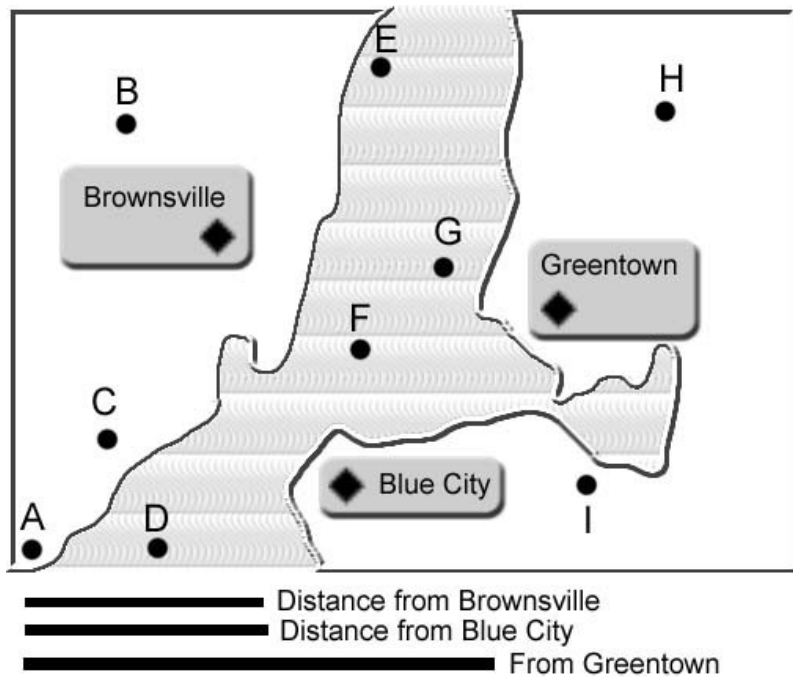
2. Describe how the elastic rebound hypothesis explains earthquakes.

3. Match the type of wave to its description

- | | |
|------------------|---|
| ___ P Wave | F. A rolling wave that does not travel through the earth's mantle |
| ___ S Wave | G. The fastest wave, traveling like a compressed spring, or pulse |
| ___ Surface Wave | H. Medium speed wave characterized by an up-down motion |

4. Seismographs are located in Brownsville, Greentown, and Blue City. Each record a quake, and determined the distance from the city center (see bottom of the picture). Use the picture to determine which letter marks the epicenter of the quake.

The epicenter is located at which letter?



5. Do earthquakes happen at the center of tectonic plates, or the edges? _____

6. Match the type of the quake to the approximate magnitude

- | | |
|--------------------|---|
| _____ Magnitude 2 | J. 100% destruction, more than any measured quake |
| _____ Magnitude 4 | K. Cannot be felt, a very small quake |
| _____ Magnitude 6 | L. May be lightly felt, no damage |
| _____ Magnitude 8 | M. Strongly felt, great damage to buildings |
| _____ Magnitude 10 | N. Moderate quake, some damage occurs |

7. _____ T/F Earthquakes between 4-6 on the Richter Scale are the most common

8. What is liquefaction? _____

9. What is a tsunami? _____

10. Explain how earthquakes can cause fires _____

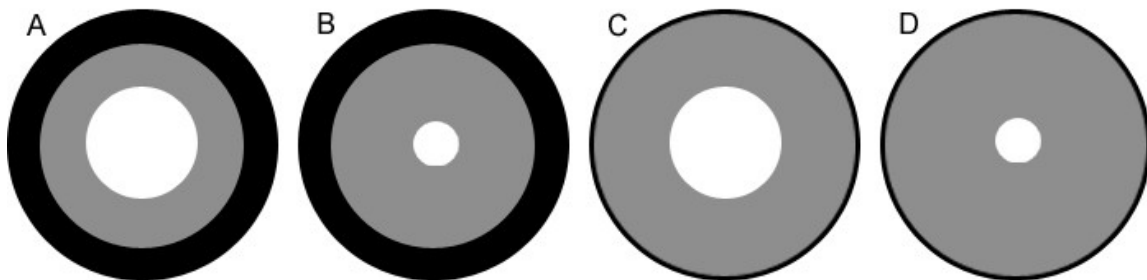
11. Which of the following is true regarding earthquake predictions?

- O. Scientists can predict earthquakes accurately
- P. Scientists can make short-term predictions, but not long-term
- Q. Scientists can make long-term predictions, but not short-term
- R. Nothing about earthquakes are predictable

12. What and where is the lithosphere? (2) _____

13. What and where is the asthenosphere? (2) _____

14. Which diagram of earth's layers is most accurate regarding the width of layers? Black is the crust, grey is the mantle, and white is the core (both outer and inner core),



15. What is the inner core made from? _____

16. What can humans do to lessen the effects of an earthquake?

The Motion of Plates

17. What was Alfred Wegener famous for? _____

18. Which of the following is NOT evidence Wegener used for his hypothesis?

- Q. The continents fit together
- R. Earth's mantle is in motion
- S. Fossils on different continents match
- T. Similar rock structures, such as ancient mountains
- U. Ancient climates (like glaciers) match

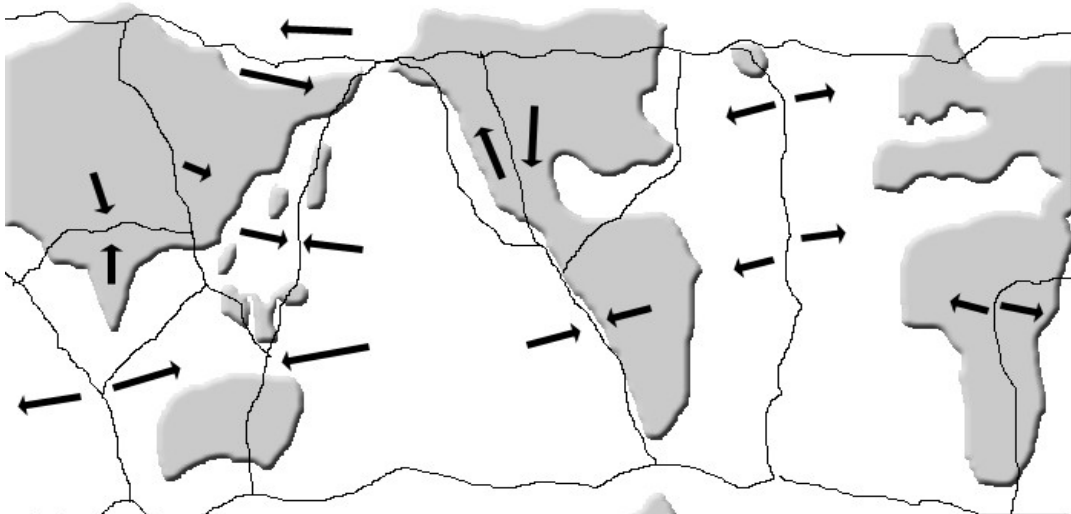
19. Summarize the theory of plate tectonics. _____

20. Match the following plate boundaries with their definition

- | | |
|-----------------------|---|
| _____ Divergent | V. Two plates sliding or grinding past each other |
| _____ Convergent | W. Two plates moving away from each other |
| _____ Transform fault | X. Two plates moving toward each other |

21. Label on the map ONE OF EACH. Simply place the letter on the map.

- A. Divergent ocean/ocean boundary
- B. Convergent ocean/continental boundary
- C. Transform fault boundary
- D. Convergent continental/continental boundary
- E. Divergent continental/continental boundary
- F. Convergent ocean/ocean boundary



Any relation to a real planet or plate boundaries is nearly coincidental.

22. What is Pangaea? _____

23. Which of the following is NOT associated with divergent boundaries
G. Subduction zone
H. Rift valley
I. Mid-ocean ridge
J. Sea-floor spreading

24. Which of the following is NOT associated with convergent boundaries
K. Ocean trench,
L. Volcanic arc
M. Subduction zone
N. Mid-ocean ridge

25. The Himalayas in India (and Nepal and Tibet) were the result of...
P. Oceanic plate colliding with oceanic plate
Q. Continental-Continental collision
R. Continental volcanic arc
S. Slip-strike fault

26. How can magnetism in the rocks help prove the plate tectonic theory? _____

27. What is a hot spot? _____

28. Where is one of earth's hot spots? _____

29. What causes earth's plates to move? _____

30. If new crust is being added at mid-ocean ridges, why is earth not getting bigger?

31. Explain how earthquake waves reveal the earth's layers. Be specific.

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EXTRA CREDIT: What is a moho?
