Answer Key

Directed Reading A

SECTION: WHAT ARE EARTHQUAKES?

1. Seismology is the branch of Earth science devoted to studying earthquakes.
2. seismologists
3. Most earthquakes take place near the edges of tectonic plates.
4. tectonic plates
5. faults
6. Earthquakes happen along faults because of the sliding of the blocks of Earth's crust.
7. C
8. A
9. D
10. B
11. Rocks deform in response to the stress caused by the pushing, pulling, and slipping of tectonic plates.
12. The rock breaks, and elastic rebound occurs.
13. an earthquake
14. C
15. C
16. B
17. A
18. Most earthquakes happen in the earthquake zones along tectonic plate boundaries.
19. B
20. A
21. B
22. D
23. C
24. C
25. A
26. B
27. B
28. It depends on the kind of material the wave travels through.
29. Answers may vary. Accept either P waves, pressure waves, or primary waves.
30. Answers may vary. Accept either S waves, shear waves, or secondary waves.
31. Answers may vary. Sample answer: Surface waves travel along the surface of Earth and body waves travel inside Earth. Surface waves travel more slowly and are more destructive.
32. B
33. C
34. A

SECTION: EARTHQUAKE MEASUREMENT

1. C
2. A
3. B
4. D
5. Answers may vary but should include two of the following: calculating when an earthquake began, finding an earthquake's epicenter, determining an earthquake's strength.
6. S-P time method
7. seismograms
8. epicenter
9. Answers may vary. Sample answer: I could draw a circle around each station. The radius of the circle is the distance from each station to the epicenter. The point at which the three circles intersect is the epicenter of the earthquake.
10. D
11. C
12. A
13. C
14. B
15. D
16. A
17. The Richter scale measures the ground motion from an earthquake and adjusts for distance to find its strength.
18. Intensity values are usually highest near the epicenter.

SECTION: EARTHQUAKES AND SOCIETY

1. Earthquake hazard is a measurement of how likely an area is to have damaging earthquakes in the future.

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