**Video Study Guide: Earth Revealed  
Episode 9: Earthquakes**

Read the questions first. Then answer them while watching this episode of "Earth Revealed". If you miss it in class you are still responsible for the viewing this segment and answering the questions. The video is available online at <http://www.learner.org/vod/video.html?sid=78&po=9> . The index for these programs is online at [**http://www.learner.org/resources/series78.html#**](http://www.learner.org/resources/series78.html) . If you do not have an internet connection at home, view it after school or during study hall in the media center. Each segment is 30 minutes long.

1. What is the ultimate cause of movement within the earth's crust?
2. What are the benefits of living in a world that experiences earthquakes?
3. What causes earthquakes?
4. What is a fault?
5. What happens to the energy released during an earthquake?
6. Summarize the different types of seismic waves. Be specific.
7. Describe how seismologists use seismic velocities to locate earthquake epicenters.
8. What is a seismograph and how does it work?
9. Describe the Richter magnitude scale.
10. What is the difference in energy released between one Richter value and the next?
11. How does the period of an earthquake relate to a building's natural period?
12. What happens when they match?
13. Why was the Parkfield area chosen as a good location to study earthquakes?
14. How are geophysicists studying the San Andreas fault near Parkfield?
15. What do scientists hope to see before the next Parkfield earthquake?
16. What are foreshocks and how do they relate to earthquake prediction?
17. What factors complicate earthquake prediction?