

2.11 Video: Cascadia - The Hidden Fire

10 points

Name _____

Due Date _____

(These questions relate to the following video which is available at the Circulation Desk of the school library.)

Lineau, M. and Knorr, L., 2004, *Cascadia: the hidden fire* [DVD video], Global Net Productions, Inc.

Answer the following questions:

1. The Cascadia region faces a "seismic triple threat." What do geologists mean by this statement?
2. What are the specific sources of this threat?
3. Scientists in the 1980's were unsure if the Cascadia Subduction Zone (CSZ) was active and could produce large "super" earthquakes. What were the 2 conflicting theories about earthquake occurrence in the CSZ? Circle the one that was found to be correct
4. Describe the the main piece of scientific evidence found to determine which of the theories was correct.
5. What was the scientific evidence found to support the idea that the last great Cascadia Subduction Zone earthquake occurred about 315 years ago (in 1700 AD).

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6. The "Decade of Terror" hypothesis suggested that the Cascadia Subduction Zone breaks in sections and produces several major earthquakes over a relatively short period of time (a decade). The "Instant of Terror" hypothesis suggested that the entire 700 miles of the CSZ breaks and produces one great magnitude 9 earthquake. Which of these appears to be correct?

7. What are slow silent earthquakes?

8. How often do slow silent earthquakes occur?

9. How much energy is released by slow silent earthquake events?

10. Do slow silent earthquakes increase or decrease the chances of a large earthquake along the subduction zone?

11. What type of earthquake was the 2001 Nisqually earthquake?

12. What causes these types of earthquakes?

13. What are the dates (years) of two other similar earthquakes that caused significant damage to the Puget Sound area?

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14. What type of earthquake presents the worst case scenario for cities like Seattle, Tacoma, and Portland?
15. How frequently does this type of earthquake occur?
16. How long ago did the Seattle Fault last rupture?
17. Describe two ways in which Seattle will be impacted economically if one of these types of events were to occur today.
18. Describe a few positive sides to the geologic forces that affect the Cascadia region.
19. You decide to use information from this video in your Earthquake Hazard and Risk paper. Write a correctly formatted bibliographic reference for the DVD-video.