

trench Deep area of the ocean where two colliding plates pull each other down.

tsunami Huge wave usually caused by an earthquake on the ocean floor or underwater volcanic eruption .

volcanic neck The rock that is left standing when erosion exposes the hard volcanic rock inside an ancient volcano.

Earth's Surface: Focus Questions

1. Write a paragraph outlining the benefits of volcanoes.

2. Sketch a rift valley - also known as a graben.

3. Sketch a block mountain - also known as a horst.

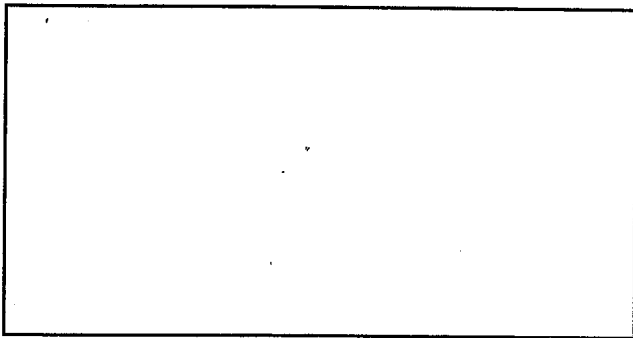
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4. Along the Pacific coastline of Washington and Oregon frequent signs appear along Highway 101 warning people to move to higher ground in case of tsunami. What is a tsunami? Why is a tsunami only a threat when it enters shallow water? Why is this coastline susceptible to tsunamis?

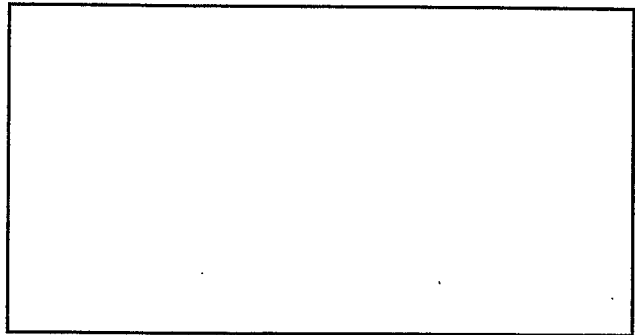
5. When Mount St. Helens (near Portland, Oregon) erupted on May 18, 1980, the water depth in Portland harbour, nearly 100 kilometers from the mountain, decreased from 13 meters to just 3 meters. What caused this sudden decrease in water depth and why?

6. Explain the difference between a hot spring and geyser. Why do geysers erupt only intermittently? Draw diagrams to demonstrate your explanations.

Hot spring Drawing



Geyser Drawing

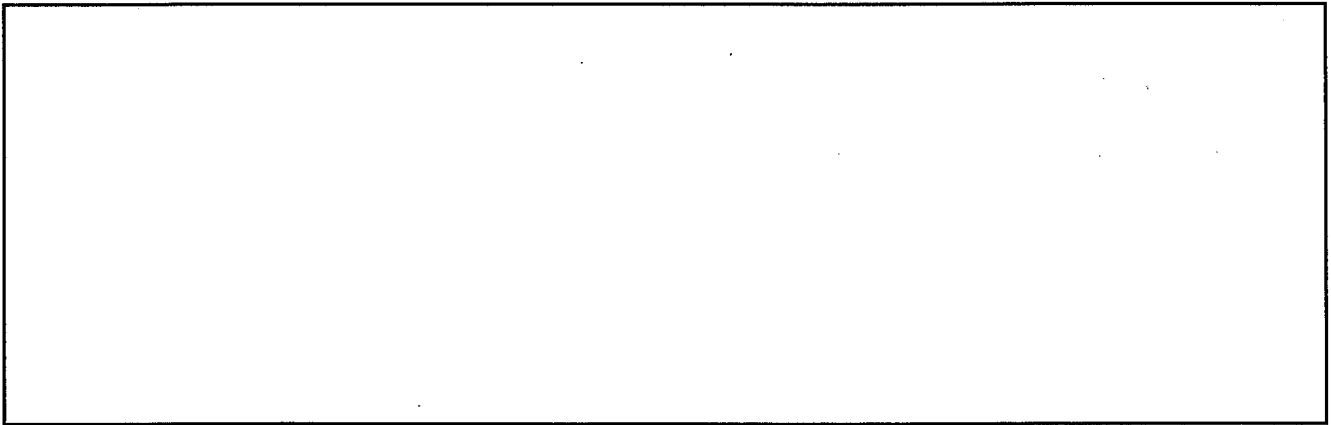


7. The formation of fossil fuels takes millions of years. Describe how coal and oil form.

Coal -

Oil -

8. Sketch a subduction zone. On your sketch include the following terms: continental shelf - trench sial - sima - convection currents - mesosphere - asthenosphere - composite cone volcanoes - continental slope - benioff zone



9. Explain why the death toll was so high in the disastrous December 2004, Indian Ocean tsunami.

10. Choose a volcano, possibly one from the Pacific Ring of Fire. Research its history. When did it last erupt? What type of plate boundary is it near? Did the eruption include lava, lahars, nuees ardentes, or pumice and ash? Was there loss of life? How was the environment affected? Present your findings to the class. Ask your teacher about the form of your presentation, eg. power-point, oral presentation, online media poster, handmade poster, etc.