

# Volcanoes and earthquakes



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focus the point beneath the earth's surface where the rocks break and move; origin of the earthquake epicenter directly above the focus on land

ONVOLCANOES AND EARTHQUAKES SPECIFICALLY FOR YOU FOR ONLY \$13.90/PAGE Order Now Surface Waves L waves; arrives lastly; the slowest moving but the most damaging; travel in a circular motion primary waves P waves; arrive first and travel through 3 phases of matter; longitudinal waves Secondary waves S waves; arrive secondly and travel through solids only; travel in an S pattern Seismograph instrument that detects and measures seismic waves tsunamis sea floor earthquakes; can travel 700-800 km/hr and reach a height of 20 meters magma hot liquid rock found underground in magma chambers lava hot liquid rock outside the earth and comes to the surface through volcanoes hot spots usually hot regions of earth's mantle where plumes of magma rise to the surface pyroclastic flow violent eruptions of gas, ash, and other tephra, thousands of degrees, can move 200 km/hr caldera large crater crater when the top around the vent becomes bowl shaped tephra the material thrown into the air during eruptions magnitude a number that characterizes the relative size of an earthquake intensity a number describing the severity of an earthquake in terms of its effects on the surface and on humans and their structures how do P waves and S waves travel differently through the layers of the Earth? P waves travel through 3 phases of matter while S waves travel through only solids what is an earthquake and what causes them? An earthquake is the shakes and trembling that results from the sudden movement in earth's crust; faulting causes earthquakes. Why is geothermic energy used near volcanoes? It's easier to dig to the mantle near a volcano describe a volcano either violent or gentle cinder cone volcano diagram <http://i1095.photobucket.com>

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pngcomposite volcano diagramhttp://www. enchantedlearning.  
com/subjects/volcano/gifs/volcanodiagram. GIFDescribe a cinder cone  
volcanosteep sides; generally small; has violent eruption patternDescribe a  
shield volcanoa mountain with broad, gently sloping sides; nearly a round  
base; formed by gentle eruptions and later after layer of lava  
accumulationsDescribe a composite volcanolarger than cinder-cone but  
smaller than shield; made of alternating layers of cinders and lava; gently  
eruption first then explosiveHow is the location of an earthquake  
determined? Seismologists use the difference in arrival time between P and S  
waves to calculate the distance between the earthquake source and the  
recording instrument (seismograph). how many seismic stations are needed  
to determine where the epicenter is? at least 3