

Geology 101, Fall 2007

Name:

Assignment 5: Structural geology and solid Earth geophysics

Due Monday, October 29 at noon

Distinguish the following terms:

stress (compression, tension, shearing) vs. strain

plastic (ductile) deformation vs. brittle failure

fold (anticline and syncline) vs. fault (reverse, normal and strike-slip)

orogeny (fold-and-thrust, fault-block) vs. peneplain

focus (hypocenter) vs. epicenter

P-seismic wave vs. S-seismic wave

Love waves vs. Rayleigh waves

Richter magnitude scale vs. Modified Mercalli intensity scale

displacement vs post-earthquake creep

seiche vs. tsunami

Mohorovicic discontinuity (Moho) vs. Benioff-Wadati zone

Does the ground literally “turn to liquid” during **liquefaction** in an earthquake? What actually happens? Where did liquefaction occur during the February 28, 2001 Nisqually earthquake?

How are earthquakes due to fault or plate motion *different* from earthquakes that occur when magma moves underneath a volcano?

What does the “**S-wave shadow**” tell us about the Earth’s interior structure?