

Name \_\_\_\_\_

### **Volcanic hazards in *Dante's Peak***

What evidence do the volcanologists in this film have that *Dante's Peak* is likely to erupt soon? List at least two things.

What types of tests or monitoring do the scientists do to determine the level of volcanic activity? List all that you see in the film.

List several of the volcanic hazards seen in *Dante's Peak*.

Describe two things in this film that are *not* geologically or scientifically reasonable or quite unlikely.

List two things in *Dante's Peak* that are scientifically accurate.

## **Terms and concepts from *Dante's Peak***

Volcanic blocks and volcanic bombs

Pyroclastic flow

Ejecta

Cascade Range (part of the Pacific Rim or Pacific Ring of Fire)

Seismometer and seismogram

Shallow earthquakes (<10-20 km)

Precursor earthquakes

"Harmonic tremors" — specific to magma moving around

Composite volcano or stratovolcano

Hot springs

pH or acidity of water

Volcanic gases (carbon dioxide [CO<sub>2</sub>], sulfur dioxide [SO<sub>2</sub>], etc.)

Dead trees and animals from high levels of carbon dioxide

Dormant vs. extinct vs. active volcanoes

Evacuation issues (Mt. Pinatubo in the Philippines is a good example)

Vesuvius and Pompei

Eruption prediction

Tiltmeter — measures changes in size and shape of volcanoes

(remember the bulge that formed on Mt. St. Helens in 1980)

Crater vs. caldera

Geothermal activity — hot springs, steam, etc.

"Microquakes" — less than Richter magnitude 3.0

Lava dome

Seismic activity

Tectonic vs. magmatic earthquakes

Contaminated water

FAA warnings to airplanes during eruptions

Ash and pyroclastic eruptions

Unreinforced masonry, brick, and bridge structures collapsing

Lightning related to volcanic activity

Rockslides or landslides

Lava flows

Melting snow, glaciers, and rain fall resulting in mud flows or lahars

Debris flows

Blast knocking down trees, structures like during the Mt. St. Helens eruption

Explosive, composite volcanoes