

What Causes Earthquakes and Volcanoes?

Name: _____

Date: _____

Volcanoes

- How safe would you feel standing on the flanks of Mt. St. Helen?
- Both volcanoes produced spectacular eruptions, but most the time, volcanoes are relatively _____.
- To understand how and why a volcano erupts, you must understand the _____ of a volcano.
- A volcano sits over a large _____ of molten rock, forming a conical structure.
- The volcano _____ with each eruption of molten rock.
- The base of the volcano is a broad, _____ structure.
- This molten rock is called _____.
- The magma travels up a long pipe, called a _____, toward the surface.
- As the conduit nears the surface, it expands, forming the _____.
- The _____ is the opening in the volcano at Earth's surface.
- At the summit of a volcano, the vent may form a large, bowl-shaped area called a _____.
- If a crater and the land around it collapse after an eruption, a large depression called a _____ forms.
- If the volcano becomes unstable, smaller conduits, called _____, may transport magma to Earth's surface along the side, or flank, of the volcano.
- The branch pipes feed _____ that form along the volcanic flank.
- If a branch pipe does not reach Earth's surface, the magma forms a _____ or a _____.
- A sill is a layer of igneous rock that is _____ to the surrounding bedrock.
- A dike is a layer of igneous rock that cuts through the surrounding bedrock _____.

Types of Volcanoes

- Volcanoes can be classified according to their composition and their overall _____.
- Three are _____ main types of volcanoes:

- _____ Cone Volcanoes
- _____ Volcanoes
- _____ Volcanoes
- **Cinder Cone Volcanoes** are small, _____-shaped mountain with steep flanks and _____-shaped crater at summit
 - They erupt volcanic _____ and cinders that form the steep flanks of the volcano
 - They are not associated with any specific _____ boundary
- **Composite Volcano** is a large _____ with steep sloping flanks
 - They erupt _____ lava, volcanic ash, and cinders
 - They produce highly _____ eruptions
 - They form along convergent (subducting) plate boundaries
- **Shield Volcanoes** are a broad mountain with _____ sloping flanks
 - They erupt _____ lava
 - They produce _____ eruptions
 - They form at _____

Effects of Volcanoes

- Not all volcanoes erupt the _____ way.
- Shield volcanoes are fueled by magma from the _____ mantle.
- The lava that erupts from shield volcanoes has low silica content and _____, or resistance to flow.
- This runny lava is called _____ lava.
- Unlike shield volcanoes, composite volcanoes have _____ eruptions.
- The lava that erupts from these volcanoes has high silica content and high _____.
- This thick, pasty lava that erupts from these volcanoes is called _____.
- In addition to the lava produced by volcanic eruptions, _____ flows may also be produced.
- A *pyroclastic flow* is a mixture of deadly _____, like sulfur dioxide and carbon monoxide, and ash that races down the flanks of the volcano.
- Another danger is a _____, a mixture of flowing water, dirt, and rock.
- Lahars usually form when a volcano erupts under _____ or ice.
- The heat of the eruption quickly _____ the snow and ice, causing torrents of water, mud, and debris.