

Trail of the Molten Land Student Journal

Step 1 – Step Into Another World

Definitions: Pause the video to write down definitions for the following terms. You may also explain the term in your own words or draw a picture.

1. Molten-
2. Igneous rocks-
3. Cinder cone volcano-

What stopped the lava flow? Write down what you think may have stopped the molten lava from flowing further into the forest.

Patterns in Rock Formations: Use the table below to write descriptions or draw pictures of the different types of rock formations at Lava Lands. Pause the video, if needed.

Your description or drawing goes here

Volcanic Ash or Pumice Soil	Basalt Lava Flow	Cinder Cone Volcano
Type of igneous rock: Pumice	Type of igneous rock: Basalt	Type of igneous rock: Cinder

Stop 2 – It Began With a Bang ...

Definitions: Pause the video to write down definitions for the following terms. You may also explain the term in your own words or draw a picture.

1. Volcanic vent-
2. Magma chamber-
3. Pyroclasts-

Different types of eruptions: Write down or draw a picture showing the difference between explosive and effusive eruptions.

Explosive Eruption	Effusive Eruption

Layers of a cinder cone volcano:

1. Make drawings below, or if you have playdoh, molding clay, or other materials at home, use it to make a mini cone to represent the explosive eruption of a cinder cone volcano.
2. Each explosive eruption built up layers of rock to make the cinder cone taller. Add more layers to your playdoh cone to make a multi-layered cinder cone model.
3. You may also think about the effusive eruptions and add a low spreading lava flow around your cinder cone volcano.

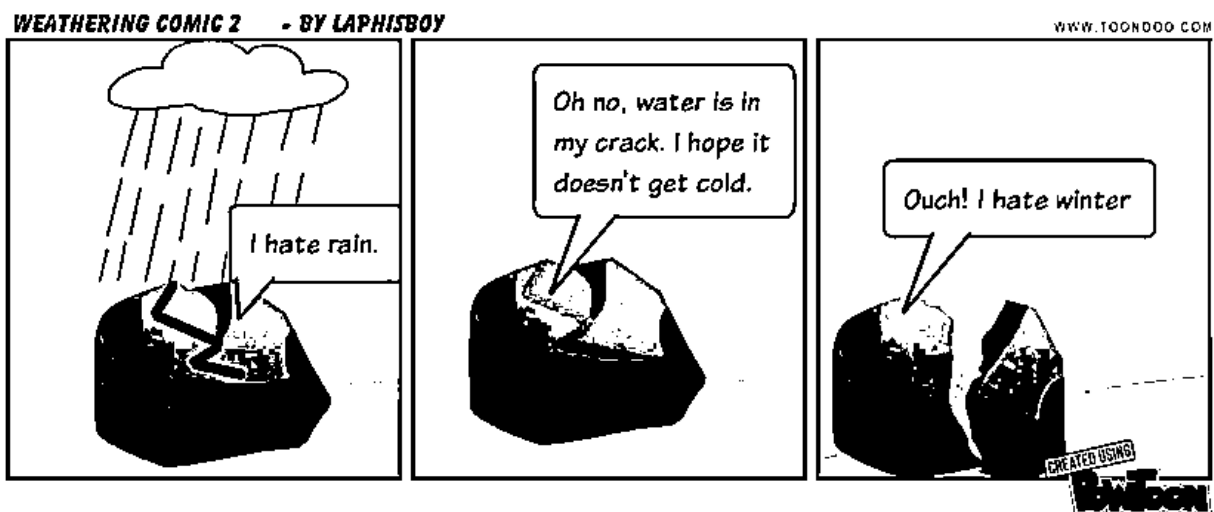
1 st Explosive Eruption	2 nd Explosive Eruption	3 rd + Explosive Eruption	With lava flow from Effusive Eruptions

Stop 3 – Great Balls of Fire

Lava Balls: Draw a picture of the lava balls you have viewed during this video or seen before, as many as you would like. Also, imagine what the inside of a lava ball looks like.



Definitions: Pause the video to write down definitions for the following terms. You may also explain the term in your own words or draw a picture.

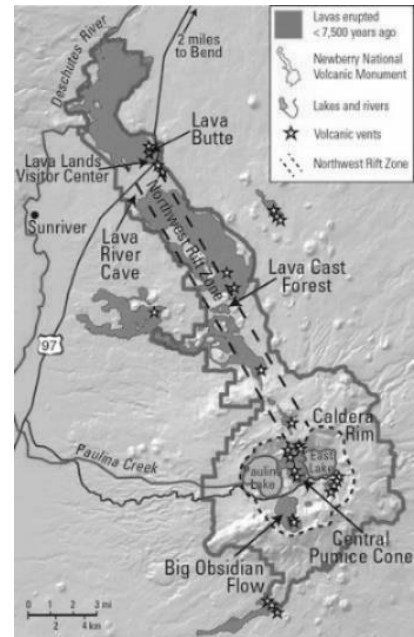
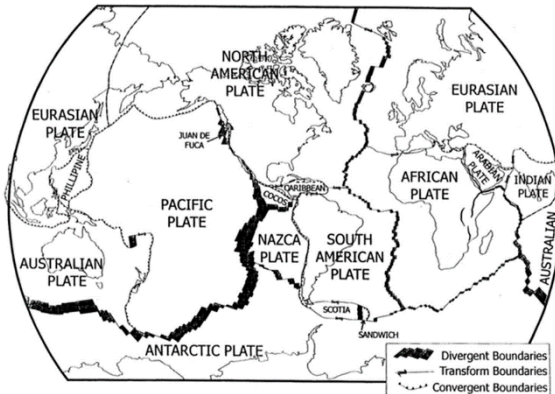
1. Weathering-
2. Erosion-
3. Deposition-



From: <https://www.youtube.com/watch?v=C2qm7Ott6pl>

Stop 4 – Central Oregon’s Sleeping Giant

Match the Terms to the Picture: Pause the video to match the term with the picture using  .

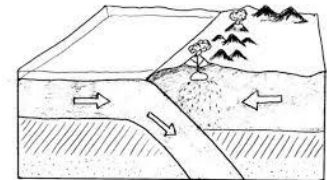


Active volcano- a volcano that has erupted since the last ice age (in the past ~10,000 years)

Plate tectonics- slabs of solid rock or plates that make up the surface of the Earth’s crust (on both continents and the ocean floor)

Subduction- process of an oceanic plate colliding with and sinking beneath a continental plate

Rift Zone- area of weakness in a volcano where the land is being pulled apart, providing pathways for volcanic gases and magma to travel underground and erupt along the side of a volcano.



Volcanic Monitoring Tools: Pause the video to look at the USGS Volcanic Monitoring graphic.

Imagine what impacts a volcanic eruption might have on your community. Think about the 2 different types of eruptions and write down what impacts an explosive eruption might have versus an effusive eruption. Consider impacts based on which direction the wind is blowing for explosive eruptions, or which side of the volcano lava flows might cover for effusive eruptions.

Stop 5 – Lava Finds a New Path

Definitions: Pause the video to write down definitions for the following terms. You may also explain the term in your own words or draw a picture.

1. The Breach-
2. Volcanologist-

Types of Flow Lava: Describe or draw the differences between two types of flow lava, 'A'ā and Pāhoehoe.

Stop 6 – Volcanic Peaks, Shrinking Glaciers

Definitions: Pause the video to write down definitions for the following terms. You may also explain the term in your own words or draw a picture.

1. Lava Dams-
2. Glaciers-
3. Public Lands-

Older and Younger Volcanoes: Look for glacial erosion on the peaks of the mountain tops to determine how old a volcano is. Pause the video as you look at each peak.

Use the back of this page to draw your own pictures of what a *young, middle-aged, and old volcano* look like after very few to many years of glacial erosion.