BACKGROUND INFORMATION
Geology Lesson 1: Volcanic Landscapes

FAST FACTS ABOUT VOLCANOES

- There are six main categories of volcanoes: flood or plateau basalts, calderas, composite or stratovolcanoes, shield volcanoes, cinder cones, and lava domes.

- Igneous rocks are classified based on composition and mode of occurrence. The major types of volcanic rocks are rhyolite, andesite, and basalt. Each of these rock types is associated with different categories of volcanoes.

- Aso Volcano had four major explosive eruptions from 270,000 to 90,000 years ago. These eruptions produced pyroclastic flows covering central Kyushu and formed a large caldera. Less violent post-caldera activity has continued since the last major eruption and more than seventeen central cones were formed. Volcanic eruptions at Aso volcano are very frequent events and eruptions occur every 10-20 years. Aso is one of the world's most active volcanoes.

- Yellowstone Volcano has had three major caldera eruptions at 2,100,000 years ago, 1,300,000 years ago, and 640,000 years ago. Pyroclastic flows from these eruptions covered a large area around Yellowstone and ashfall deposits covered large areas of the western United States. Post-caldera rhyolite and basalt lava flows occurred between 164,000 years ago and 72,000 years ago and have filled in much of the most recent caldera. Volcanic eruptions at Yellowstone are very infrequent events.

COMMON MISCONCEPTIONS

One type of volcanic hazard that most people think of first is lava flow, which is the flow of hot molten rock. Yet a lava flow is one of the least deadly of all of the volcanic processes. This is partly because lava flows do not move very fast, only traveling a few miles per hour. There is another type of flow that comes from a volcanic eruption that is much more dangerous than a lava flow, and that is a pyroclastic flow. A pyroclastic flow is a dense collection of fragments and gases from a volcanic eruption that flows down the slope of a volcano. A lava flow is something that might inch towards you giving you time to flee, while a pyroclastic flow is something that races down the side of a volcano, leaving little time to react. The high speeds at which a pyroclastic flow travels, which can be more than 100 miles per hour, make this volcanic hazard very dangerous. Not only are pyroclastic flows dangerous because of their speed, but also because they are very hot (1,000 degrees Celsius, 1839 degrees Fahrenheit) and contain toxic gases.

http://study.com/academy/lesson/volcanic- hazards-definition-types-prevention.html#

Video Link: Pyroclastic flow:
http://www.discovery.com/tv-shows/discovery- presents/videos/ultimate-guide-to-volcanoes- pyroclastic-flow/