

Support Materials for Volcanoes 360: Tour of Craters of the Moon National Monument

Objective: The learner will identify types of volcanic features and their importance to scientific understanding of earth and space processes.

Background Reading:

A volcano is a vent in the earth from which melted rocks under the surface of the earth's crust escape the heat and pressure that has built up underground. Craters of the Moon is an otherworldly landscape of 750,000 acres filled with ancient volcanic features. Visitors may observe lava fields, spatter cones, cinder cones, lava tubes, craters, and more. Cinder cones are steep, tall hills of volcanic materials formed by lava fountains that erupted from a single vent deep in the earth. Spatter cones are a pile of fragments formed by spray from a nearby lava flow. Lava tubes are caves formed by underground rivers of flowing lava that left behind an open tunnel. In the vast lava fields, two kinds of lava may be readily distinguished: a'a, which is rough and jagged, and pahoehoe, which is smooth and ropey. A'a is a result of fast-flowing lava that cooled quickly, while pahoehoe results from slower-moving, hotter lava.

Volcanologists research and study the processes that formed our earth. Craters of the Moon is also significant because its chemistry is similar to that of the moon and Mars. Thus, it is a living laboratory for scientists who are trying to understand the forces that shaped the surfaces of other planets. NASA scientists study the area to learn where they might look for microbial life in our solar system.

Learn more at <https://sciencetrek.org/topics/volcanoes>.

Discussion Questions:

- What are three types of volcanic features?
- Why did Native Americans create legends about volcanoes?
- What do volcanologists do?
- How can a site of ancient volcanic activity help scientists figure out how to explore space?