

# ACTIVITY: Volcanoes and Geoheritage



**Objective:** Learners will use data to describe populations that have a history of inhabiting land near volcanoes and the connection those populations have to the history of the land.

**Introduction:** Overall, while acknowledging their hazards, people value volcanoes for their scientific, aesthetic, recreational, and economic significance. Volcanoes are vital for geological research, providing insights into Earth's inner workings and the processes shaping the planet's surface. They also support unique ecosystems, sometimes hosting rare species adapted to extreme environments. Furthermore, volcanic eruptions enrich surrounding lands by depositing nutrient-rich ash and lava flows, creating some of the world's most fertile soils. This fertility supports agricultural practices, sustaining communities and economies. Additionally, volcanoes attract tourists and enthusiasts fascinated by their beauty and unique attributes. Volcanic landscapes offer opportunities for recreation, adventure, and cultural exploration, contributing to local economies.

## Have learners:

1. Read through the **geoheritage values defined by the National Park Service**.
2. Brainstorm ideas on the learner handout about the scientific, economic, cultural, and aesthetic/artistic value of volcanoes.
  - a. **Scientific:** Geothermal energy, fertile lands created when volcanic deposits are broken down, insight into plate tectonics and the mantle's composition, atmospheric effects of eruptions.
  - b. **Economic:** Tourism, geothermal energy, products made from igneous rocks (building materials, artwork, pumice), farming near volcanoes.
  - c. **Cultural:** Stories passed down about volcanoes, eruptions forcing evacuations or moving to new areas, agricultural societies' reliance on volcanoes.
  - d. **Aesthetic/Artistic:** Unique landforms, inspirational, change frequently.
3. Write an argument for the conservation/preservation of lands around volcanoes, such as making National Parks at these sites.
4. Learn about the **traditional knowledge of prehistoric eruptions**. Describe how people's lives may have changed following the volcanic eruption.

# HANDOUT: Volcanoes and Geoheritage



Aesthetic/Artistic	Scientific
Cultural	Economic

A photograph of a snow-capped mountain peak, likely a volcano, centered in the four quadrants of the handout form.

Image credit: McGimsey, R. G., AVO/USGS

- Use the information you collected above to explain why people live near volcanoes and why there are over 90 national parks that help conserve volcanic resources.