ACTIVITY: Types of Volcanoes and Volcanic Features

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Objective: Learners will use diagrams to describe differences and similarities between the different types of volcanoes and why each type forms.

Introduction: A Volcano is a vent where molten rock material emerges from the Earth's interior and the mountain or cone that forms around that vent during eruption(s). Volcanoes exhibit a diverse range of shapes and sizes. The three main types of volcanoes vary widely in size and shape.

The appearance of any given volcano depends on a variety of factors including:

- **Composition and viscosity** of the magma
- **Gas content** of the magma
- **Types of eruption**, **styles of eruption**, and **eruption rates**
- **Volume of erupted magma**
- **Age of the volcano**

Have learners:

1. Label the **three main types of volcanoes**, then discuss the following questions:
   - *What are the similarities between these three volcano types? Highlight them on the diagrams.*
   - *What feature makes each volcano type unique? Make an argument about the defining feature of each volcano type. Why did you choose these features?*
2. Compare the sizes of each volcano type. Consider how this might relate to their features.
3. Identify each NPS volcano picture as a cinder cone, composite volcano, or shield volcano.
4. Explore **NPS Units with each volcano type**.

HANDOUT: Types of Volcanoes and Volcanic Features

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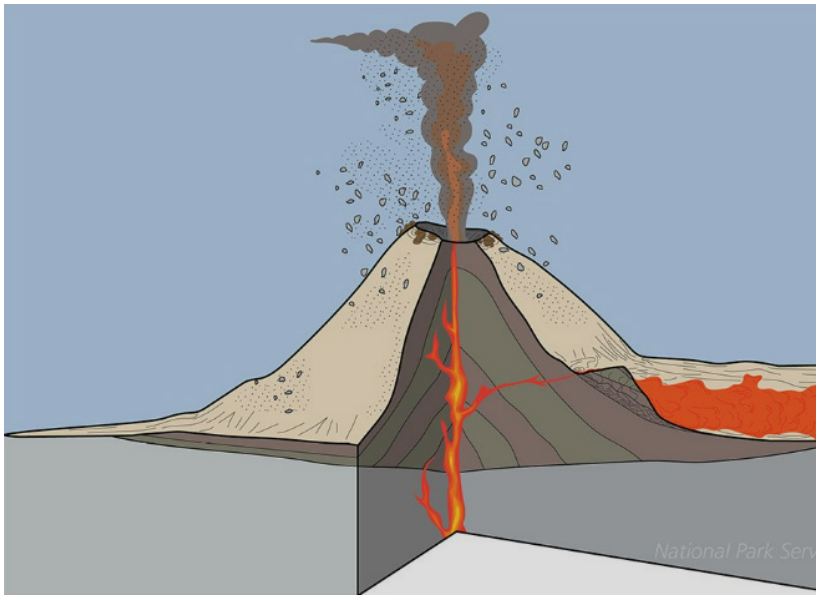
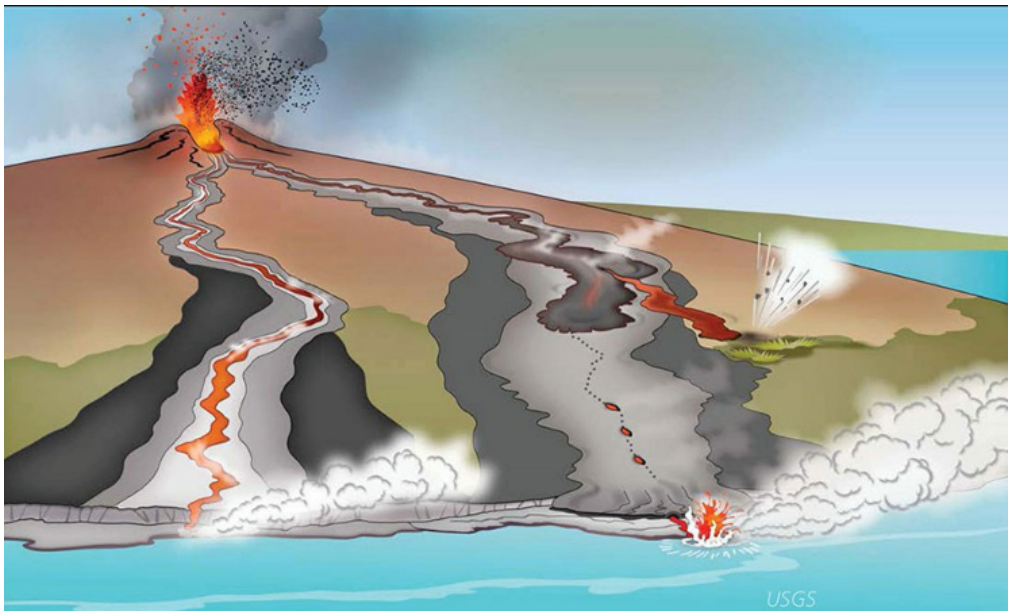
▶ Label the features of each of the three types of volcanoes:

A CINDER CONE VOLCANO



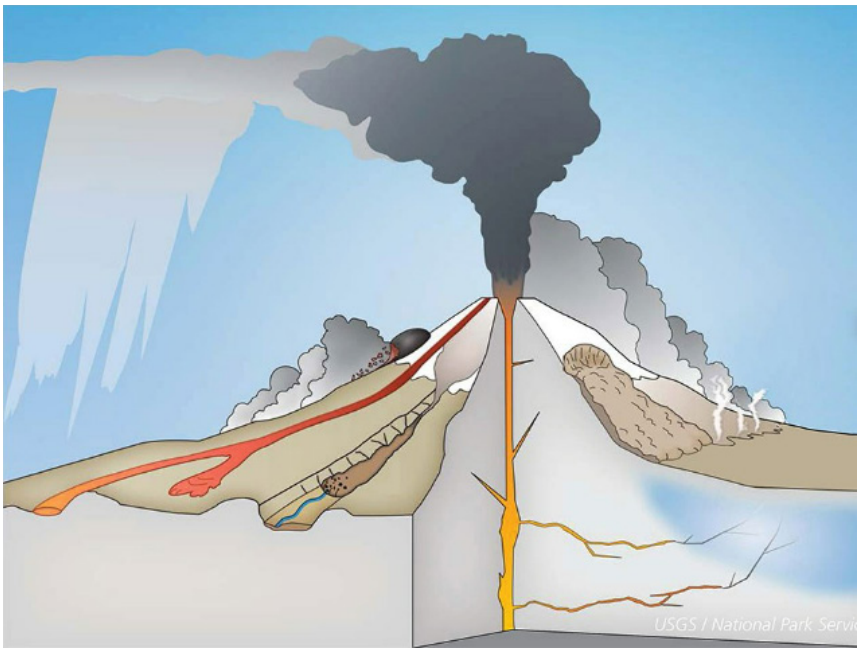
Modified from **NPS**

A SHIELD VOLCANO



Modified from a **USGS illustration**

A COMPOSITE VOLCANO

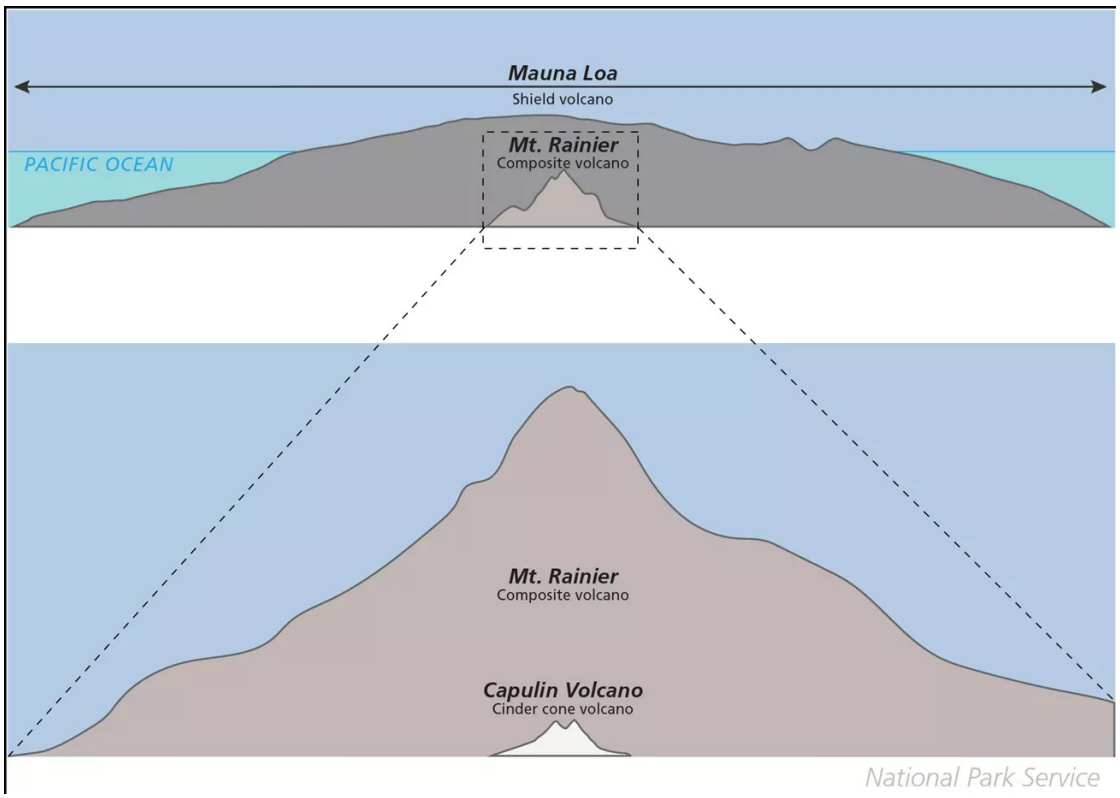


Modified from a **USGS illustration**

- Describe two similarities between the three volcano types. Why do you think all volcanoes have these features?

- Identify a feature that is unique to each volcano. How does each feature make the volcanoes differ from the other types?

The size of volcanoes varies depending on a number of factors, which are based on the volcano type:



Credit: **NPS illustration by Trista Thornberry-Ehrlich (Colorado State University)**

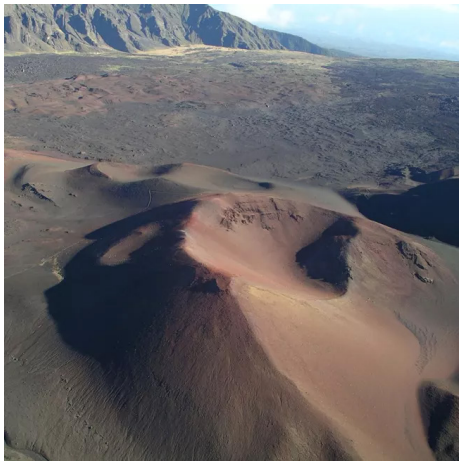
- Compare the relative size of each volcano type.

Identify volcano types in National Parks:

LAKE CLARK NATIONAL PARK (ILIAMNA VOLCANO)

Credit: McGimsey, R. G., AVO/USGS

HALEAKALĀ NATIONAL PARK, (KA MOA O PELE)



Credit: Russell Shurtz, NPS

SIERRA GRANDE, VIEWED FROM CAPULIN VOLCANO NATIONAL MONUMENT

Melissa Weih, NPS

- Compare the images of the different volcanoes in terms of angle and/or distance from each volcano. Why do you think the images were taken like this?