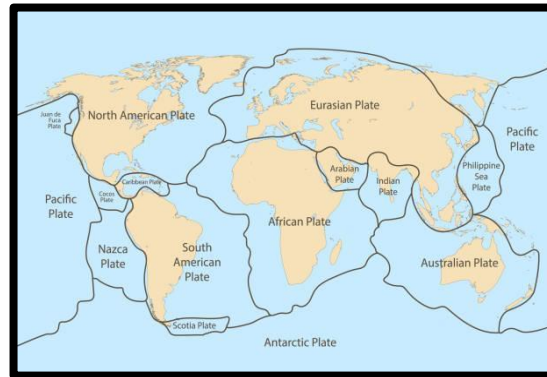


## Volcanoes

This term, we will explore volcanoes. We will be learning about what happens when a volcano erupts and what the resulting impact is upon its surrounding area. We will also discuss why people might choose to live near an active volcano.

### Volcanoes

- Put simply, a volcano is an opening in the Earth's surface.
- They are usually found in mountains on land and even sometime below the sea!
- Gas, hot magma and ash to escape from beneath the Earth's crust to cause eruptions.
- "volcano" comes from the Roman name "Vulcan". He was the Roman god of fire!
- Volcanoes are often found at meeting points of "tectonic plates". These plates are pieces of the Earth's surface that fit together just like a jigsaw puzzle.



*The Earth's tectonic plates*

### Tectonic Plates

- We think land doesn't move on Earth as, however it turns out that it is always moving. We don't notice the earth moving because it only moves between one to six inches per year. It takes millions of years for the land to move a lot.
- Most of the Earth is covered by seven major plates and eight smaller ones. The seven major plates include the African, Antarctic, Eurasian, North American, South American, India-Australian, and the Pacific plates. Some of the minor plates include the Arabian, Caribbean, Nazca, and Scotia plates.

### Key Vocabulary

**Plate tectonics:** The theory that explains how the Earth's outer shell is divided into several large and small plates that move and interact with each other.

**Pyroclastic flow:** A fast-moving mixture of hot gas, ash, and volcanic debris that flows down the slopes of a volcano during an explosive eruption..

**Vent:** An opening or passage through which volcanic materials, such as lava and gases, are released to the Earth's surface during an eruption.

**Volcanic ash cloud:** A large plume of fine ash particles and gases that rises high into the atmosphere during a volcanic eruption, often causing air travel disruptions and affecting weather patterns.

### Key Vocabulary

**Volcano:** A mountain or hill with a crater through which molten rock, gases, and ash can erupt from deep within the Earth's crust.

**Magma:** Molten rock beneath the Earth's surface that becomes lava when it reaches the surface through volcanic eruptions.

**Lava:** Hot, liquid rock that flows from a volcano during an eruption and cools to form solid rock.

**Ash:** Tiny, powdery particles of rock and minerals that are ejected into the air during a volcanic eruption.

**Crater:** A bowl-shaped depression or opening at the top of a volcano where lava, gases, and ash can be expelled during eruptions.

### TASK

During our topic on volcanoes and tectonic plates, we are going to be focusing on many different areas where eruptions took place. Use the information provided to research about volcanoes and present your research in a creative way

You could research any of the topics mentioned on the sheet or anything else of interest; For example, you could research earthquakes, effects of volcanoes, or earthquake proof buildings.

To present your research, you could:

- Create a 3D Volcano
- Bake a lava cake
- Design and build a model of an earthquake proof building
- Paint a picture of a volcano eruption
- Create a PowerPoint about volcanoes

### Montserrat

- Montserrat is an island nation located in the Leeward Islands in the Caribbean Sea. The original inhabitants were the Arawak and the Carib peoples. The first European to arrive was Christopher Columbus during his second voyage to the New World in 1493. Columbus named the island after the Virgin Mary and the Monastery of Montserrat.
- The British gained control of the island when a group of Irish settled the island. African slaves were imported to work the land and the island cultivated sugar, rum, and cotton. Slavery was abolished in 1834. Today Montserrat is a British overseas territory.
- In 1995 the island was devastated by the eruption of the Soufriere Hills volcano. Two-thirds of the population fled the island during the eruption. Since then more volcanic activity has occurred.



*The eruption at Montserrat*

### Yosemite

#### Size of an eruption at Yellowstone Park

Scientists estimate the ash and pyroclastic rocks erupted by the volcano was 1000 times greater than the Mount Saint Helens eruption in 1980. Pyroclastic flows, carried enough pyroclastic material to cover 3,000 square miles.

#### Lava Creek Tuff

The rock from the flows created the Lava Creek Tuff. There were approximately 240 cubic miles of pyroclastic material erupted during the event. This is enough material to cover the entire lower 48 states with 5-inches of ash and pyroclastic rock.



*The famous Yosemite Falls*

