MOUNTAIN FORMATION ASSIGNMENT:

1. Create a 4-triangle foldable.
2. Outside flaps: Label each of the triangles with the purple topics below
3. Inside: Use the reading on the next two pages to summarize the information.

TYPES OF MOUNTAINS

Define: What is a mountain?

FOLD MOUNTAINS

Type of boundary where they form:

Summarize how these mountains form

Real-world example:

Draw a diagram

FAULT-BLOCK MOUNTAINS

Type of boundary where they form:

Summarize how these mountains form

Real-world example:

Draw a diagram

VOLCANIC MOUNTAINS

Type of boundary where they form:

Summarize how these mountains form

Real-world example:

Draw a diagram

Mountain Formation

What is a mountain?

A mountain is a geological landform that rises above the surrounding land. Usually, a mountain will rise 1,000 feet or higher above sea level. Some mountains are more than 10,000 feet above sea level, with the highest mountain in the world (Mount Everest) rising 29,036 feet! Small mountains (below 1,000 feet) are called hills.

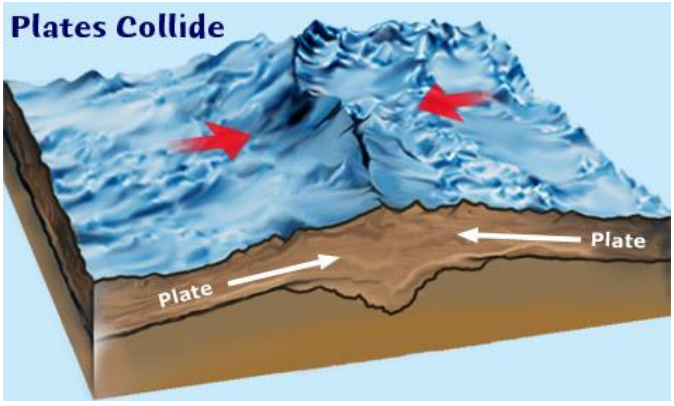
How are mountains formed?

Mountains are most often formed by movement of the tectonic plates in the Earth's crust, or by other tectonic activity. Large mountain ranges like the Himalayas often form along the boundaries (edges) of these tectonic plates. Tectonic plates move very slowly – only a few centimeters per year. It can take many millions of years for mountains to form.

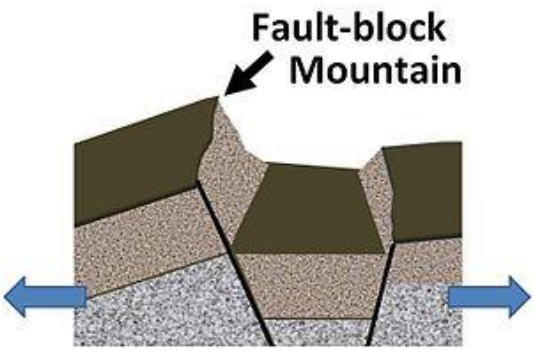
Types of Mountains

There are three main types of mountains: fold mountains, fault-block mountains, and volcanic mountains. They get their names from how they were formed.

Fold Mountains - Fold mountains are formed at convergent boundaries. This can happen when two continental plates collide, or when an oceanic plate is subducted underneath a continental plate at a subduction zone. The force of the two plates pushing together causes the Earth's crust to crumple and fold. The pushed-together rocks bend and curve, forming a mountain. Many of the world's large mountain ranges are fold mountains including the Andes, Himalayas, and the Rockies.

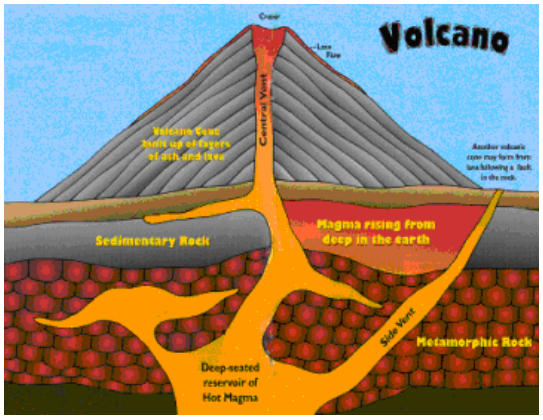


Fault-block Mountains - Fault-block mountains are formed along fault lines, which are cracks in the Earth's surface. These mountains form at divergent boundaries, where two continental plates are pulling apart. As the tectonic plates pull apart, the rocks get stretched until they break into huge chunks called fault blocks. As the tectonic plates continue to move, some of the fault blocks are pushed up, while others are pushed down. This difference in elevation (height) forms fault block mountains. The Sierra Nevada Mountains in the western United States are fault-block mountains.



Volcanic Mountains - Mountains that are formed by volcanic activity are called volcanic mountains. Volcanic mountains are formed when magma erupts all the way to the surface of the Earth. The hot magma will cool and harden on the Earth's surface, forming a mountain. Examples of volcanic mountains include Mount Fuji in Japan and Mount Arenal in Costa Rica.

Volcanic mountains can form at different types of plate boundaries. Some form at divergent boundaries, where the plates are pulling apart. The magma rises up between the crack, cools, and the new rock forms volcanoes. Every time the volcano erupts, it gets bigger as new rock is formed.

Others form at convergent boundaries called subduction zones, where a thick continental crust is pushing into a thin oceanic crust. Because the continental crust is thicker, it pushes the oceanic crust down, melting the crust. The volcanoes in the Ring of Fire are caused by subduction.

Finally, some volcanoes form at "hot spots", which are areas where the magma is much hotter than normal and can break through the tectonic plate. Hot spots can happen anywhere on a tectonic plate (not just the edges). An example of hot spot mountains are the Hawaiian Islands.