

MOUNTAINS, VOLCANOS & EARTHQUAKES

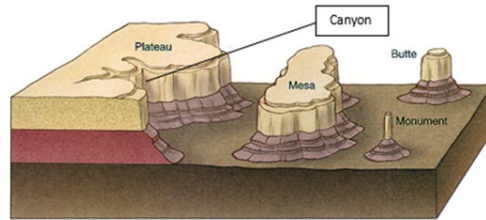
Plateau mountains

Plateau mountains (erosion mountains) are not formed by tectonic activity. Formed by erosion. Plateaus are large flat areas of high land over 600 meters.

Formation

1. Tectonic activity causes land to be pushed up.
2. Streams and rivers flow across the plateaus.
3. The water erodes canyons and valleys through the plateaus.
4. The valleys and canyons leave mountains standing between them.

Features



Fault block mountains

Fault block mountains are formed by slow but gigantic movements of the earth's crust. Earth's crust is constantly moving causing fault block mountains.

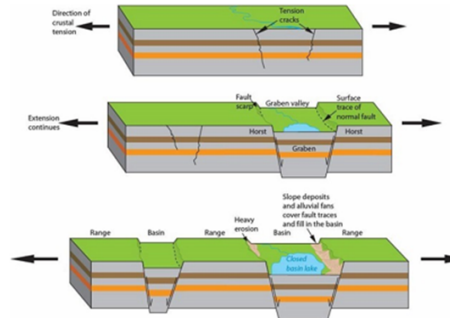
Fault block mountains can be grouped into two classifications:

- lifted – two steep sides;
- tilted – one gently sloping side and one steep.

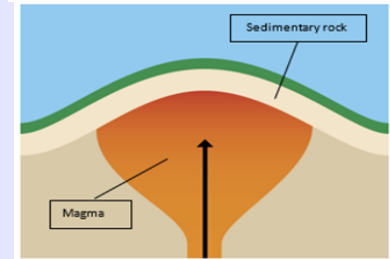
Formation

1. Tectonic forces stretch a plate causing it to fracture and crack.
2. The tension causes the crust to split along fault lines.
3. Large areas of crust are broken up into blocks by faults.
4. Blocks can rise and fall along the faults.
5. A single fault causes a tilted fault block mountain.
6. A double fault causes a lifted fault block mountain.

Features



Dome Mountains



Topography of a dome mountain:

- Early stage - are relatively flat, sloping gradually toward the surrounding lowlands.
- Later stage - Erosion of the sedimentary rock produces steeper protruding walls of harder, older rocks.

The diameter of a dome mountain's base can be up to hundreds of kilometres

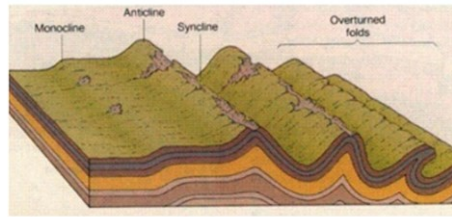
Fold mountains

Fold mountains are the most common type of mountain. The world's largest mountain ranges are fold mountains. These ranges were formed over millions of years.

Formation

1. Tectonic activity causes two plates to collide head on (convergent plate boundaries).
2. The impact causes the edges to crumple.
3. Layers of rock are squeezed together and pushed upwards.
4. Continued pressure of the plates pushing causes the folds to rise higher and higher.
5. Upward folds are known as anticlines, and the downward folds are synclines.

Features



The Three Stages of Volcanoes

Scientists have placed volcanoes in to three different categories.

Active

An active volcano is one that has erupted recently, and there is the possibility that it may erupt again.

Dormant

A dormant volcano is one that has not erupted for a long time, however, it may still erupt in the future.

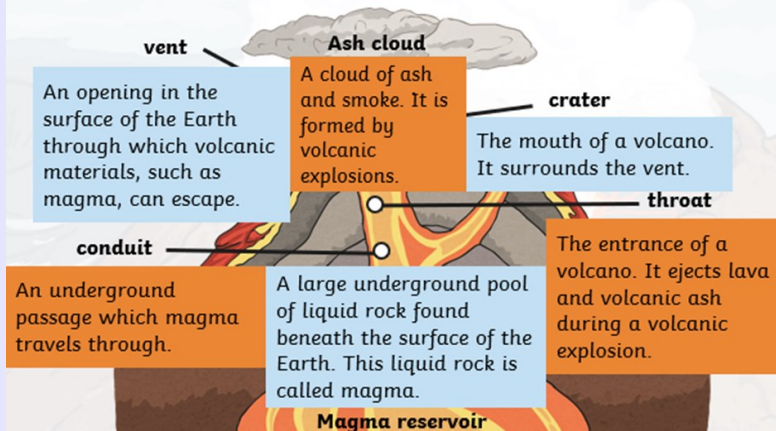
Extinct

An extinct volcano is one which has erupted thousands of years ago, but it will probably never erupt again.

Formation

1. Magma rises through cracks in the Earth's crust.
2. The magma causes the layers of sedimentary rock above to warp or bow out into a dome shape.
3. The magma cools and solidifies before it reaches the earth's surface.
4. Exposed to the weather, the softer sedimentary rock is eroded.
5. Remaining harder and older rock protrusion remains.

Why Do Volcanoes Erupt?



The Earth's Plates



The Earth's plates are always moving. They move so slowly that we usually can't feel it.

The edges of plates are called faults. Faults can rub together, push toward each other, or pull away from each other.

Have a look at the Earth's plates. What do you notice about where New Zealand is?

Where do Earthquakes Occur?

