

## Types of Mountains

### How are mountains formed?

Mountains are formed by slow but gigantic movements of the earth's crust (the outer layer of the Earth).

The Earth's crust is made up of 6 huge slabs called plates, which fit together like a jigsaw puzzle. When two slabs of the earth's crust smash into each other the land can be pushed upwards, forming mountains. Many of the greatest mountain ranges of the world have formed because of enormous collisions between continents.

#### Did you know?

**Earthquakes** occur when two plates pushing past each other cause a fracture in the Earth's crust.

### Mountains form in different ways

Sometimes the crust has folded and buckled, sometimes it breaks into huge blocks. In both cases, great areas of land are lifted upwards to form mountains. Other mountains are formed by the earth's crust rising into a dome, or by volcanic activity when the crust cracks open.

### What different types of Mountains are there?

There are five basic kinds of mountains:

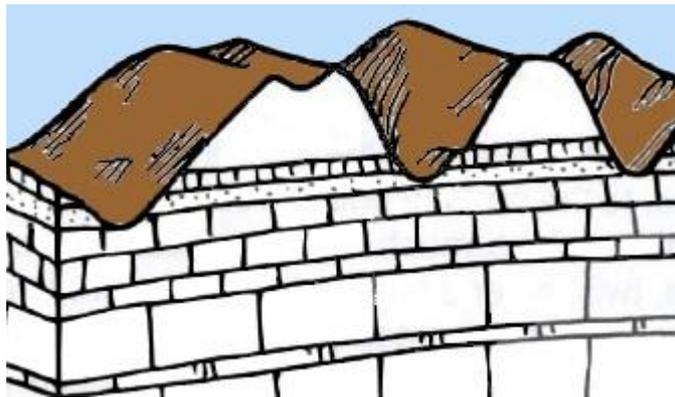
1. Fold Mountains (Folded Mountains)
2. Fault-block Mountains (Block Mountains)
3. Dome Mountains
4. Volcanic Mountains
5. Plateau Mountains

These different types of mountain names not only distinguish the physical characteristics of the mountains, but also how they were formed.

## **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.

Fold mountains are formed when two plates collide head on, and their edges crumbled, much the same way as a piece of paper folds when pushed together.



The upward folds are known as anticlines, and the downward folds are synclines.

Examples of fold mountains include:

- Himalayan Mountains in Asia
- the Alps in Europe
- the Andes in South America
- the Rockies in North America
- the Urals in Russia

The Himalayan Mountains were formed when India crashed into Asia and pushed up the tallest mountain range on the continents.

In South America, the Andes Mountains were formed by the collision of the South American continental plate and the oceanic Pacific plate.

### Did you know?

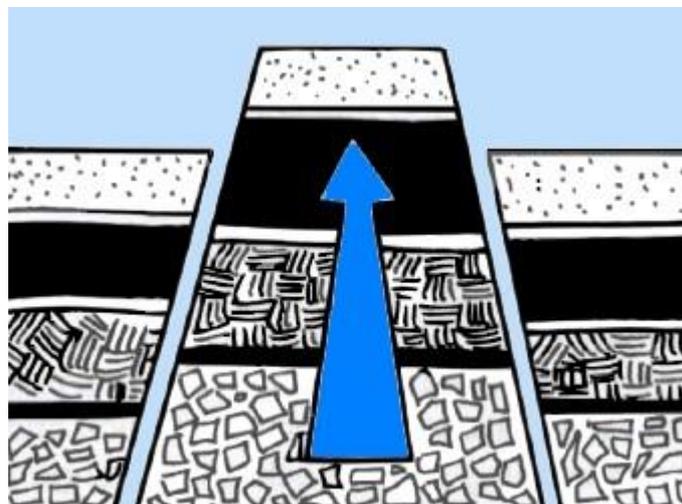
Two Tectonic Plates meet along the Southern Alps. This is called a fault line. The Southern Alps are constantly changing because the Pacific Plate is being pushed down under the Australian Plate and that causes the Alps to rise up.



### Fault-block Mountains

These mountains form when faults or cracks in the earth's crust force some materials or blocks of rock up and others down.

Instead of the earth folding over, the earth's crust fractures (pulls apart). It breaks up into blocks or chunks. Sometimes these blocks of rock move up and down, as they move apart and blocks of rock end up being stacked on one another.



Often fault-block mountains have a steep front side and a sloping back side.

Examples of fault-block mountains include:

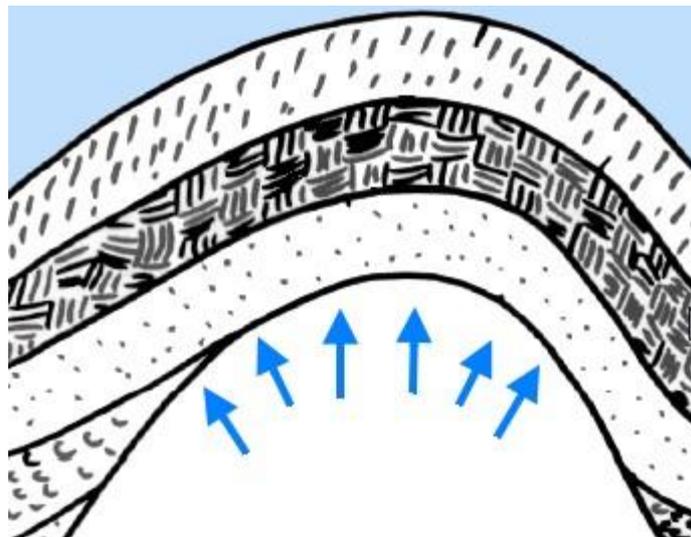
- the Sierra Nevada mountains in North America
- the Harz Mountains in Germany

## Dome Mountains

Dome mountains are the result of a great amount of melted rock (magma) pushing its way up under the earth crust. Without actually erupting onto the surface, the magma pushes up overlaying rock layers.



At some point, the magma cools and forms hardened rock. The uplifted area created by rising magma is called a dome because of looking like the top half of a sphere (ball). The rock layers over the hardened magma are warped upward to form the dome. But the rock layers of the surrounding area remain flat.



As the dome is higher than its surroundings, erosion by wind and rain occurs from the top. This results in a circular mountain range. Domes that have been worn away

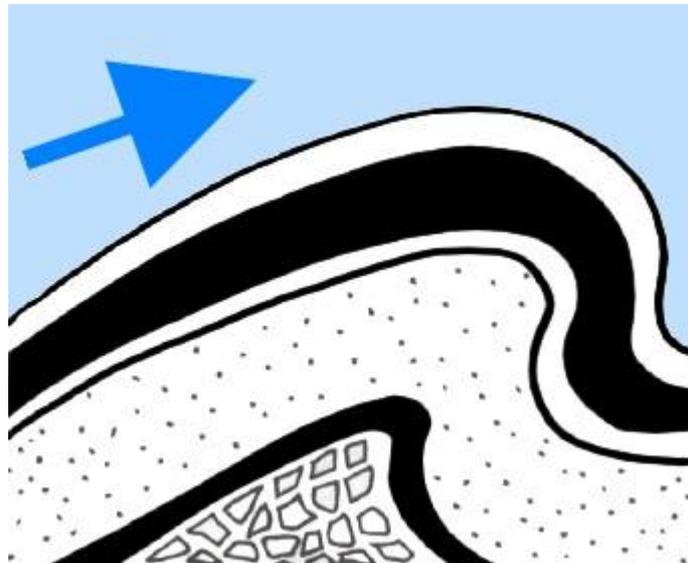
in places form many separate peaks called Dome Mountains.

## Volcanic Mountains

As the name suggests, volcanic mountains are formed by volcanoes.



Volcanic Mountains are formed when molten rock (magma) deep within the earth, erupts, and piles upon the surface. Magma is called lava when it breaks through the earth's crust. When the ash and lava cools, it builds a cone of rock. Rock and lava pile up, layer on top of layer.



Examples of volcanic mountains include:

- Mount St. Helens in North America
- Mount Pinatubo in the Philippines
- Mount Kea and Mount Loa in Hawaii

[Find out more about volcanoes](#)

## Plateau Mountains (Erosion Mountains)

Plateau mountains are not formed by internal activity. Instead, these mountains are formed by erosion. Plateaus are large flat areas that have been pushed above sea level by forces within the Earth, or have been formed by layers of lava. The dictionary describes these as large areas of 'high levels' of flat land, over 600 meters above sea level.

Plateau mountains are often found near folded mountains. As years pass, streams and rivers erode valleys through the plateau, leaving mountains standing between the valleys.

The mountains in New Zealand are examples of plateau mountains