

# Misty Mountain Sierra

## Mountains

A mountain is a large, rocky raised part of the Earth’s surface that is much higher than a hill. A mountain’s highest point is called its peak, or summit. Mountains are 610m in height or taller. They are usually found in groups called ranges.



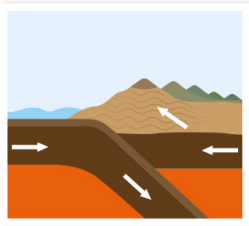
San Juan Mountains, Colorado

## Mountains around the world

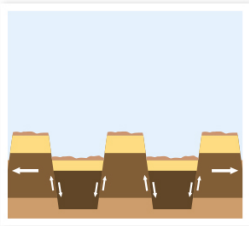
Name	Range	Continent	Height
Mount Everest	Himalayas	Asia	8848m
K2	Karakoram	Asia	8611m
Aconcagua	Andes	South America	6962m
Mount Kilimanjaro	Eastern Rift	Africa	5895m
Mount Kenya	Eastern Rift	Africa	5199m
Mount Ararat	Armenian Highlands	Europe	5137m
Mount Olympus	Olympus	Europe	2917m
Mount Kosciuszko	Snowy Mountains	Australia	2228m
Ben Nevis	Grampian Mountains	Europe	1345m

## Mountain formation

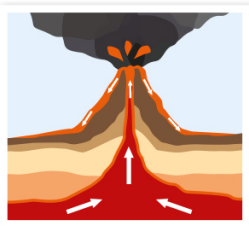
Mountains form over millions of years. They are made when the Earth’s tectonic plates push together or move apart. Mountains are also formed when magma underneath the Earth’s crust pushes large areas of land upwards. There are six types of mountain.



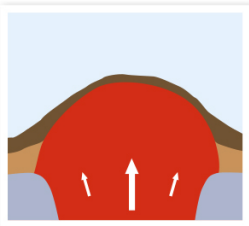
fold mountain



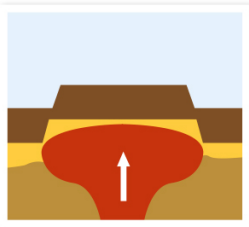
fault-block mountain



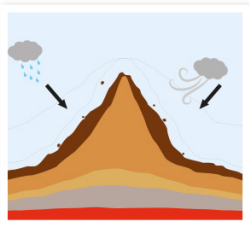
volcanic mountain



dome mountain



plateau mountain



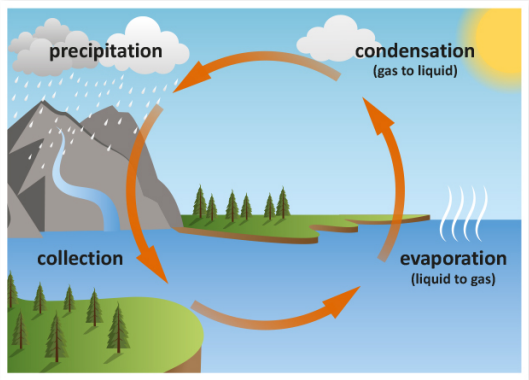
erosional mountain

## Climate

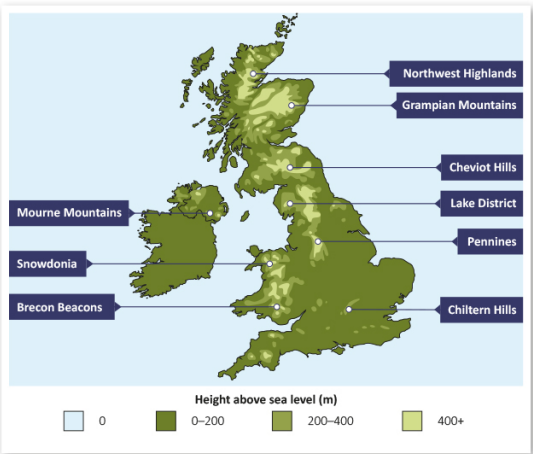
At the bottom of a mountain, in the lowland area, the temperature can be mild. Many different plants and trees grow, providing food for a variety of animals. Higher up the mountain, in the upland area, it can be very cold and windy. There are fewer plants and animals and those that live there are adapted to survive in the harsh conditions. Mountain weather can change very quickly, from clear skies to intense thunderstorms and blizzards.

## The water cycle

Water cannot be made. It is constantly recycled through a process called the water cycle. Water in seas, oceans, rivers and lakes is heated by the Sun and evaporates to form water vapour that rises into the air. The water vapour condenses as it cools and changes back into tiny drops of water, forming clouds. The clouds get blown over high ground, where the water falls back to Earth as rain, snow, sleet or hail, called precipitation. The rainwater runs off the land into rivers and streams and travels back to the sea. The cycle then starts again.

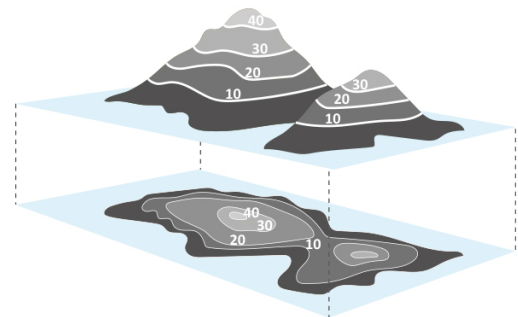


## UK mountain ranges and hills



## Contour lines

Contour lines are drawn on a map to show the shape of the land. Contour lines join together points at the same height above sea level. The height is shown in metres, at 5 or 10m intervals. If contour lines are close together, it means the ground is steep. If they are far apart, the ground is flat.



## Living at high altitude

Living at high altitude can be difficult. The air is thinner and does not contain as much oxygen, making it harder to breathe. It is much colder and can be very windy. There are fewer plants and animals, and those that make their homes at high altitudes have special adaptations.

### Plants

Some plant species have adapted to live at high altitudes, including grasses, mosses and flowering plants. They have adapted to grow in cold temperatures, dry air and have a short growing season. Trees cannot grow at high altitudes because of the cold temperatures and lack of moisture.



alpine fleabane

### Animals

There are some animals, such as yaks, llamas and mountain goats, that have adapted to live high up mountains. Yaks have a thick layer of body fat and long fur to keep warm. Their lungs and heart are large to provide enough oxygen in their blood.



Himalayan yak

### Humans

Some humans have adapted to living at high altitudes. To get more oxygen, some people whose families have lived at high altitudes for generations have developed a larger lung capacity and quicker breathing.



Porters carrying bags in the Himalayas

## Glossary

<b>adaptation</b>	A change in an organism that allows it to better suit its environment.
<b>altitude</b>	The height of an object or point above sea level.
<b>climate</b>	The usual weather patterns of a place.
<b>collection</b>	The process of water gathering in oceans, rivers, lakes and streams.
<b>condensation</b>	The process of a gas cooling and changing into a liquid.
<b>crust</b>	The rocky outer layer of the Earth.
<b>evaporation</b>	The process of a liquid heating up and changing into a gas.
<b>lowland area</b>	An area of land that is usually flat and is not very high above sea level.
<b>magma</b>	Hot molten rock found in the Earth's mantle.
<b>tectonic plate</b>	A large, moving piece of rock that makes up the Earth's crust.
<b>precipitation</b>	Rain, snow, sleet or hail that falls to the ground from clouds.
<b>upland area</b>	Land that is high above sea level.

### The Adi tribe

The Adi tribe live in a beautiful and remote area of the Himalayas. Their way of life and culture has been unchanged for hundreds of years. The Adi hunt for food and grow crops. They are well known for making items from cane and bamboo. The Adi believe living things have spirits and give offerings, perform rituals and dance to avoid misfortune. However, the introduction of electricity, machinery and television is changing the way the Adi tribe live, work and spend their time.