

## Mountains

The surface of the earth is called the **crust**. The crust is divided into separate pieces called **plates**. These plates fit together like a jigsaw, but they can also move around very slowly. Sometimes, plates push against each other and force the land up into peaks and ridges and folds. These are mountains. Mountains can be found under the oceans as well as on land.

Some mountains are **volcanoes**. Volcanoes form when two of the earth's plates collide and hot, melted rock from below them is forced up. It erupts from the top of the volcano like a bursting river of fire. Ash, gas, steam and hot rocks also erupt from the volcano. There are about 1500 active volcanoes in the world.

A group of mountains together is called a **range**. Some famous mountain ranges are: The Alps (in Europe), The Rockies (in North America), The Andes (in South America) and The Himalayas (in Asia). The most famous of all mountains is Mount Everest. This is the highest mountain in the world, at 8,848 metres. It is in the Himalayas in a country called Nepal. The people who live close to it call it Chomolungma, which means Holy Mother. It is over 60 million years old, and is growing by about half a centimetre every year! More than 3000 people have climbed to the summit, but 210 people have died trying.

Mountains are special places with their own special kind of **climate**. The higher up a mountain you go, the colder the air becomes. This is why there is often snow on the peaks of high mountains even in the summer. It is also often windy at the top of mountains. Powerful storms called blizzards are common and can make mountains dangerous places to be. Even on sunny days there can be dangers. The air is thinner high up in the mountains, so it's very easy to get sunburnt. It can also be hard to breathe on very high mountains because there isn't as much oxygen in the air.

There are huge rivers of ice which form on the peaks of the highest mountains. These are called **glaciers**. They are formed when snow collects at the top of a mountains and becomes so deep that it is pressed into ice and starts to move downhill, just like a river of water, but very very slowly. As the ice moves, deep cracks can form, called crevasses. These can be up to 45 metres deep and are very dangerous for climbers, so they use safety ropes.

It is not only climbers who need to be especially careful in the mountains! **Animals** also have to have special features so that they can survive in such high altitudes. Some mountain goats have special hollow hooves which act like suckers to help them cling on to steep rocks. Other animals like the marmot hibernate to save energy in the winter. There's even a kind of lizard which has special blood that does not freeze but stays liquid even when the temperature drops to below freezing. This way it can survive on icy peaks in Mexico, where it lives.

Life can be difficult for **plants** in the mountains too! They have to be able to survive in places where there is lots of burning sun but also freezing temperatures. There are very strong winds, but not much soil to sink roots into. Some birch trees can grow high up in the mountains, but they don't grow very tall. They hug close to the ground to avoid the strong winds. Lichens are another type of plant that can grow even on bare rock. They send tiny roots into the rock itself to suck up any goodness that they can find.

Of course, **people** also live in the mountains, and have done for hundreds of years. Life in the mountains can be harsh, so people have come up with clever ways of coping with difficulties. Farmers build terraces on the mountain side to stop soil washing away and provide a flat place to grow crops. Strong animals like yaks can be used for transporting things up steep slopes. Roads are constructed in a zigzag shape so that cars can get up even the steepest mountains. Special railways have been built high in some mountains to carry people and goods.

Even huge, modern cities can exist in the mountains – like Quito, which is the capital city of Ecuador in South America. It is the highest capital city in the world at 2,800 metres above sea level. It is a beautiful city, built on the slopes of an active volcano!

Mountains can be **fun** too! If you have the right equipment and clothes, you can ski, hike, snowboard, climb, raft, mountain bike and hang-glide in the mountains. You need to make sure you're prepared though. Warm and waterproof clothes are necessary – and sunscreen even on cold days! Sometimes you will need safety ropes, harnesses and helmets. Climbers who are trying to reach the summits of the very highest mountains even need to take oxygen with them so that they can breathe as they get higher.

Some mountain explorers have reported seeing glimpses of a legendary creature called a **Yeti**. It lives high up on the glaciers and is only seen very rarely when it descends to find food. It is taller than a man, stands on two feet, and has long hair and sharp teeth...and it leaves enormous footprints in the snow. However, not even scientists can prove whether this mysterious creature actually exists or not!

One of the biggest (and real) dangers in the mountains is from the risk of **avalanches**. An avalanche happens when a chunk of snow and ice breaks loose from the mountain and crashes downhill. Avalanches are most often caused by people skiing, hiking, sledging or snowboarding on top of snow that is not safe. Some avalanches are very small, but some are huge, and can move as fast as a race car down the mountain. They swallow up everything in their path, including trees, people and even houses.

Normally there are no problems. However, if you do get into trouble on a mountain, there are teams of trained people ready to rush to the rescue. These **mountain rescue teams** have lots of equipment – and sometimes even use specially trained dogs to help find people lost in the mountains. Helicopters are also used to reach high peaks quickly. An injured person can be lifted off the mountain by the helicopter crew and then flown to safety.

These mountains places are precious. They have to be protected, and people who visit or live in the mountains must respect them. It is easy for a mountainside to be spoiled by litter, which looks horrid and harms the wildlife that lives there. Even though they look huge and strong, mountains can be quite fragile places. We must protect them so that people can enjoy them for years and years to come!

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Match each of these words with the correct meaning. (AF2)

precious	peaks, distance (height)
altitude	seeing something very quickly
hibernate	sleep, hide away
legendary	goes down
glimpses	mythical
descends	very, very special/important

What is special about the weather in the mountains? (AF2)

Why do you think Mount Everest is also known as 'Holy Mother' by some people? (AF3)

Find the correct numbers to complete these sentences: (AF2)

Mount Everest is \_\_\_\_\_ metres high.

Mount Everest is more than \_\_\_\_\_ years old.

\_\_\_\_\_ people have died on Mount Everest.

Why are glaciers compared to rivers in the text? (AF3)

Give TWO ways that animals have adapted to living in the mountains. (AF2)

Why do plants have to be tough to survive in the mountains? (AF2)

Why do roads have to be built in a zigzag pattern on steep mountains? (AF3)

Find and copy one phrase which shows that mountains can be dangerous places. (AF2)

What is unusual about the capital city of Ecuador? (AF3)

Use the information in the whole text to find out which RANGE of mountains the city of Quito is found in. (AF3)

What must you remember if you're going to do any activities in the mountains? (AF2)

Some of the words in the text are written in grey. Why is there only ONE grey word in each paragraph? (AF4)

Why is it important not to drop litter in the mountains? (AF3)

Find and copy one sentence which contains a LIST. (AF5)

Mountains are huge and can be dangerous places, so why does the text say that they need protecting? (AF7)

Find and copy one FACT in the text and one OPINION. (AF6)

Why are there more facts than opinions in this piece of writing? (AF6)

Choose the sentence below which fits you best. Underline it! Then write a short paragraph explaining your choice. (AF6)

I would like to go to the mountains to try a new sport.

I would like to go to the mountains to learn about the wildlife at high altitudes.

I would like to go to the mountains to see how people live at high altitudes.

I would like to work in a mountain rescue team one day.

I wouldn't like to go to the mountains because it sounds dangerous