Explore Mountain Climates

Mountains are the tallest features on Earth. They are much taller than any man-made structure.

The tallest Mountain is Mt Everest, in the Himalayas it is 29,028 feet high (8,848 meters). The Himalayas are between China and India.

The highest point in Africa is Mt Kilimanjaro; it's 19,344 feet high (5,896 meters).

In Europe, the highest point is the Mont Blanc, at 15,770 feet high (4807 meters).

In Russia, the highest peak is Mt Elbrus: It's 18,510 feet high (5,642 meters).

Mt Aconcagua, in the South American Andes, is the tallest American mountain: 22,834 feet (6,960 m).

Mt McKingley, in Alaska, is the highest mountain in the USA: 20,320 feet (6,194 m).

Mountain chains are formed by subduction zone. (Where two tectonic plates collide, and one goes under another, lifting the one above it).

Mountains can also be the result of volcanic eruptions. (Volcanoes, like Mt. St. Helen in Washington).

Mountains can either grow or shrink with time. They can grow, if the tectonic activity has an impact greater than the rate of erosion.

Erosion is the result of winds and water, slowly loosening the hard surface, and therefore "eating it away." The results are found in glaciers, and at glacier mouths -- at the bottom of mountains-- in the form of sediments, boulders, rocks etc…

We can usually find lots of sediments and boulders that originated higher up and have been carried downward by the glaciers.

Climate and temperatures vary by altitude on mountains: The higher you go, the colder it is.

The temperature goes down about 11 F (6 C) every 3,281 ft (1000 m.) With these temperature differences, the vegetation also changes.

At the bottom of the mountain, you can find pastures, above which (at 3,937 ft -1,200 m) are Deciduous Trees.

Deciduous loose their leaves in the winter. This zone is called the Broadleaf treeline, with vegetation similar to that of the Taiga.

At 8202 ft (2500 m), is the Conifer treeline.

Higher, we find vegetation very similar to that of the Artic Tundra (low and rough grassy areas).

At the summit there is usually very little vegetation.

Animal Life in Mountains also varies with altitude, as well as geographic location.

Sheep and goats can be found on most mountains, because they are very agile, and can climb up and down the steep mountain slopes.

In European mountains we find Chamois, which have a great sense of balance. Chamois can jump up two meters high and six meters in distance.

Eagles use the strong winds along the mountain slopes to glide and fly great distances, and use the rising hot air to fly to great heights.

The higher you get up a mountain, the thinner is the air: There is less oxygen. Climbers must take oxygen bottles with them when they try to climb Mont Everest.

The first men to climb Mt Everest were Edmund Hillary and Sherpa Tenzing, in 1953.

More on the next page

Mountain climate links and additional information:

-We are about to embark on a journey across the continents to learn about the mountain regions of the world.
Link: http://www.chariho.k12.ri.us/faculty/riordan/Mountains/MountainsoftheWorld.html

-Climate of Himalayas: The Himalayas influences the climate of the Indian subcontinent by sheltering it from the cold air mass of Central Asia.
Link: http://www.adventure-india-tour.com/about-himalayas/himalayas-climate.html

-Facts about Mountains, Climate and Mountains, Uses of Mountains, World Mountains, Wildlife in Mountains, Mountain Ranges, and Different Types of Mountains.
Link: http://www.woodlands-junior.kent.sch.uk/Homework/mountains.htm#climate

-Ann Bowker's Home Page containing information and photographs on mountains and molehills across the world.
Link: http://www.keswick.u-net.com/

-About mountains by K12 students.
Link: http://www.brunswick.k12.me.us/bjh/stusites/mountains/home.html