

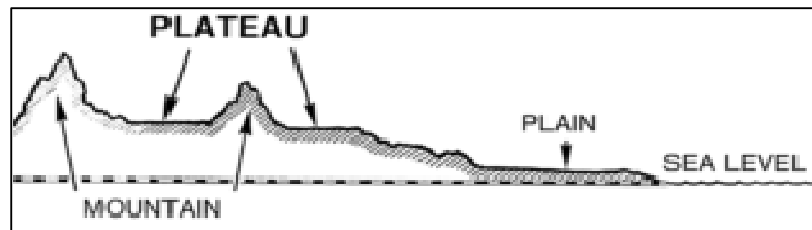
6th – The Major Land Forms - I



The earth has an infinite variety of landforms. Some parts of the lithosphere may be rugged and some flat. These landforms are a result of two processes. The ground you are standing on is slowly moving. Within the earth, a continuous movement is taking place. The first or the internal process leads to the upliftment and sinking of the earth's surface at several places. The second or the external process is the continuous wearing down and rebuilding of the land surface.

The wearing away of the earth's surface is called erosion. The surface is being lowered by the process of erosion and rebuilt by the process of deposition. These two processes are carried out by running water, ice and wind.

Broadly, we can group different landforms depending on elevation and slope as mountains, Plateaus and plains. Weathering, water, elevation, sinking, and erosion of the soil are constantly shaping the surface of the Earth. It doesn't really happen overnight but takes hundreds and thousands of years for us to notice these changes.



INTERNAL FORCES (Theory of Plate Tectonics): Internal forces, or tectonic forces, are forces

from within the Earth that lead to sudden changes on the face of the Earth. The crust of the Earth is actually divided into several pieces which we call plates. These plates float over the liquid molten rock (called magma), which lies below the solid crust.

The core of the Earth heats the molten magma. The molten magma rises upwards when heated, spreads. Cools and then sinks again, to get heated and rise once more. This constant rising and sinking of the magma keeps pushing the plates that rest on it. Thus, the plates are also constantly moving. This movement of the plates is termed plate tectonics.

Plate tectonics is responsible for the formation of mountains and valleys on the surface of the Earth. These features can take millions of years to form. However, sometimes, sudden and strong movements take place within the Earth, which bring about massive changes on the surface of the Earth. Changes brought about on the Earth's surface by earthquakes, volcanoes and landslides. Internal forces are also known as endogenetic forces.

EXTERNAL FORCES: External forces, or gradational forces, are forces acting from above on the surface of the Earth. They lead to slow and steady changes on the face of the Earth, and include all the agents of gradation like wind, water and glaciers. They are also known as exogenetic forces or denudational forces.

The agents of gradation physically change the Earth's surface by eroding (wearing away) land surfaces, transporting the eroded material and depositing the weathered soil, sand and other debris at other places. For example, rain, wind and river erode the mountains and highlands; the eroded particles are carried and deposited further down to form plains.

Mountain: A mountain is any natural elevation of the earth surface. The mountain may have a small summit and a broad base. It is considerably higher than the surrounding area. Some mountains are even higher than the clouds. As you go



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higher, the climate becomes colder. In some mountain, there are permanently frozen rivers of ice. They are called glaciers. There are some mountains you cannot see as they are under the sea. Mauna Kea (Hawaii) in the Pacific Ocean is an example. There is harsh climate. Since the slopes are steep, less land is available for farming.

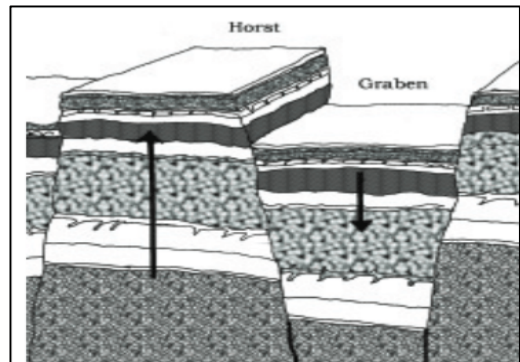
Mountains may be arranged in a line known as range. Many mountain systems consist of a series of parallel ranges extending over hundreds of kilometers.

The Himalayas, the Alps and the Andes are mountain ranges of Asia, Europe and South America, respectively.

There are three types of mountain: Fold Mountains, Block Mountains and the Volcanic Mountain.

The Himalayan Mountain and the Alps conical peaks. The Aravali range in India is one of the oldest fold mountain system in the world.

Block Mountain: are created when large areas are broken and displaced vertically. The uplifted blocks are termed as horsts and the lowered blocks are called graben. The Rhine valley and the Vosges Mountain in Europe are examples are of such mountain system.



Fold Mountains: Fold mountains are formed by the upliftment and folding of land masses due to lateral compression caused by tectonic or internal forces. When two plates move towards each other, the place where the two plates meet or converge get compressed. The crust along the point of convergence gets crumpled or folded. Massive layers of the Earth's crust Formation of fold mountains get uplifted as a result of these converging forces, resulting in the formation of fold mountains.

Volcanic Mountain: are formed due to volcanic activity. Mt. Kilimanjaro in Africa and Mt. Fujiyama in Japan are examples of such mountain.....

