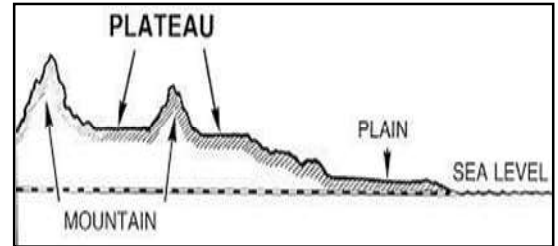


GEOGRAPHY

Major Landforms of the Earth

The surface of the Earth is rugged and uneven. It has various landforms such as mountains, valleys, plateaus and plains. The uneven surface of the Earth is the result of the **internal process** and the **external process**. The internal process results in the elevation and depression of the surface of the Earth at various places, while the external process results in its wearing and upgrading. While the wearing of the surface of the Earth is called **erosion**, its elevation is due to the process of **deposition** which takes place due to the action of winds, running water and ice.



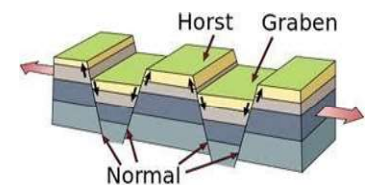
Major landforms of the Earth

Mountain

A mountain is a natural elevation of the surface of the Earth. Mountains have a small summit and a broad base. As we go higher up on the mountains, the climate becomes cooler. Frozen ice on the mountains is known as a **glacier**. Because of the harsh climate and steep slopes, people do not prefer to live on the mountains. Many mountains arranged in a line are known as ranges. Some famous mountain ranges are the Himalayas (Asia), the Alps (Europe) and the Andes (South America). There are three types of mountains:

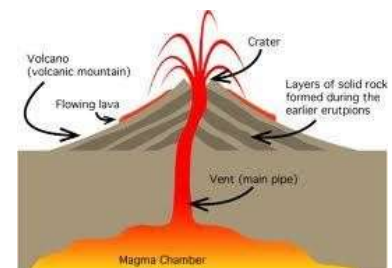
Fold Mountains: These mountains are formed due to the folding of the Earth's crust. The Himalayas and the Alps are young fold mountains with high conical peaks. The Aravalli range in India, the Appalachians in North America and the Ural mountains in Russia are some of the very old fold mountains.

Block Mountains: When large areas are broken and displaced vertically, Block Mountains are created. The elevated blocks are known as **horsts** and the lowered blocks are called **graben**. The Rhine Valley and the Vosges mountains in Europe are examples of Block Mountains.



The diagram showing the formation of the Block Mountains

Volcanic Mountains: These mountains are formed due to volcanic eruptions when molten rock or magma under the surface of the Earth erupts. Magma which flows out onto the surface of the Earth is called lava. The accumulation of lava on the Earth's surface and its subsequent cooling, results in the formation of a volcanic mountain. Mt. Kilimanjaro in Africa and Mt. Fujiyama in Japan are two examples of such mountains.



The diagram representation of the formation of a volcanic mountain

Importance of Mountains

- Many rivers like the River Ganga originate from mountain glaciers. Many reservoirs of water are found in the mountains. This water is used for the purpose of irrigation and the generation of hydroelectricity.
- The fertile land of river valleys and slopes of mountains are used for farming.
- Mountains are home to many varieties of flora and fauna.
- The forests in the mountains provide us with fuel, fodder, food, medicines and with many other products such as gum, honey and raisins.

- Mountains are frequented by many tourists as they are known for their scenic beauty. Many adventurous sports such as skiing, paragliding and river rafting are popular in the mountains. These features help the tourist industry in mountainous regions to prosper.

Plateau

An elevated flat piece of land is known as a plateau. It can be also termed as a flat topped **table land** which stands above the surrounding area. They may have more than one side with steep slopes. The height of a plateau varies. Some may be only a few metres high while others may be several thousand metres in height. Plateaus may be young or old.

The Deccan Plateau in India is one of the oldest plateaus. Some other plateaus are the East African Plateau in Africa, the Western Plateau in Australia and the Tibet Plateau in Asia. The Tibet Plateau is the highest plateau in the world. It has the height of 4000-6000 metres above the mean sea level.



The Deccan Plateau in India

Importance of Plateaus

- Plateaus are a storehouse of minerals. While the African Plateau has huge reserves of gold and silver, the Chhotanagpur Plateau in India is famous for coal, iron and manganese deposits.
- Plateaus also house several waterfalls. In India, two important waterfalls in the plateau regions are the Hundru Falls in the Chhotanagpur Plateau on the River Subarnarekha and the Jog Falls in Karnataka.
- The lava plateaus which are formed due to volcanic eruptions have black soil, and are suitable for cultivation.
- Plateaus have many scenic spots and are great tourist attractions.

Plains

Plains are a large piece of flat land. Plains are usually not more than 200 metres above the mean sea level. Most plains have been formed as a result of the depositional action of rivers and their tributaries. As rivers flow down the mountains, they erode the mountains and carry forward the eroded materials such as stones, sand and silt. The deposition of these materials results in the formation of plains. Some famous plains are the Great North Indian Plains formed by the River Ganga and its tributaries and the plains in China formed by the river Yangtze. Plains are important because:

- They are formed of fertile soil and thus the land is agriculturally very productive.
- Most people settle in the plains as flat land is available for the building of transport facilities, houses, buildings, railways etc.
- Since, they are formed due to the action of rivers; water is available for agricultural purposes.

In India, the Indo-Gangetic plains are thickly populated.



The plain regions are fertile and thus are densely populated

People in Landforms

All kinds of landforms are not equally inhabited by people. While plain regions are densely populated, mountainous regions are sparsely populated. People prefer to live in the plain regions as the land is flat and hence it is easy to build houses and means of transportation. The soil is also fertile which results in surplus agricultural production. It was due to these reasons that many civilisations emerged in the fertile river valley plains, in the early days. On the contrary, in the mountains, it is difficult to grow crops on large scale. The hilly and rugged terrain does not allow easy construction of houses.

Today, the destruction of various landforms is taking place. Sometimes this may also be due to natural calamities such as earthquakes, volcanic eruptions etc. Natural calamities such as floods and landslides are caused due to deforestation and increased mining activities. Hence it is important that we make use of the available lands carefully.