

Intro

As we know, our lithosphere is not the same everywhere! it is made up of different kinds of landforms.

Now, landforms are natural features on Earth's surface, such as mountains, valleys, plains and plateaus.

Process of internal forces

the stiff and the brittle lithosphere is broken up into several pieces called **tectonic plates**. *stiff and brittle are hard plates of earth*

These plates float over the **viscous molten** rock (called magma) which makes up the lower mantle. heat from the core of the Earth heats the magma in the mantle.

So the tectonic plates float over viscous molten rock- which is magma and it is hot, melted rock from the inside of the Earth. and when these plates float over magma it makes the lower mantle hot. and the heat comes from the core of the Earth

The heated magma now rises up spreads, then cools a little then sinks again, to get heated and rise again

The rising and sinking streams of magma push against the tectonic plates, causing them to move. The movement of plates is known as **plate tectonics**.

The rising and sinking streams of magma refer to how the magma rises and sinks, and these streams push the tectonic plates and they move, so the movement of tectonic plates is known as plate tectonics.

What are the different types of landforms?

Types of landforms can be Mountains, plateaus and plains.

Fold mountains

Fold mountains are formed by the upliftment and folding of landmasses due to lateral compression caused by tectonic or internal forces.

so fold mountains are mountains that go up-ward and bend up wards- this happen due to the lateral compression caused by tectonic or internal forces, it means that this force is caused by internal force, or this force is caused cause the force inside the earth gives a output on the force like this

When two plates move towards each other, the place where two the two plates meet or converge, gets compressed. the crust along the point of convergence gets crumpled or folded. Massive layers of the Earth's crust get uplifted as a result of these converging forces, resulting in the formation of fold mountains.

So when these plates move towards each other in upward the place where they meet gets compressed and due to this the crust gets folded and the layers of the Earth's crust get uplifted as a result of the converging forces- thats how mountains are formed. converge = meet at a certain point. The physics converge and geo converge is very different.

The Himalayas and the Alps were formed in this way in the recent geological past, and are therefore known as young fold mountains. They have rugged relief, and high, sharp peaks.

Fold mountains (cont)

So the himalays and the alps were formed in the recent geological past- means that mountains were created because of the movement of tectonic plates in the past. these mountains are young but have rough surfaces and tall sharp peakes. we say that these mountains are young even though the force was old because it is young compared to other mountains. Rugged relief refers to the rough and uneven surface of the land.

Aravalli Range in Rajasthan is one of the oldest fold mountain ranges in the world.

The Urals in Russia and the Appalachians in North America are also examples of very old fold mountains.

Urals are a type of mountain range

Forces that change the earth's surface

The surface of the Earth, and the landforms on it, constantly undergo changes due to the action of various forces. the forces are of two types- **internal forces** and **external forces**.

so this means the surface of the earth undergo changes (experinces changes) all the time. the ground, vally, mountain is always changing. so these changes occur by diffrent forces or actions.

More on the process of internal forces

Sometimes, the plates move towards each other or converge, sometimes the plates move away or diverge and sometimes the plates slide by each other or perform transverse movement.

A lot of forces can change the face of the earth, haha



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More on the process of internal forces (cont)

Plate tectonics is responsible for the formation of the mountains and valleys on the surface of the Earth. As the plates move very slowly (just a few centimeters a year) these features can take millions of years to form.

if the plate tectonics move slowly it can take millions of years to form mountains and valleys.

However, sometimes, sudden and strong movements take place within the earth, which bring about massive changes on the surface of the Earth. These changes can be brought about by Earthquakes, volcanoes and landslides.

Internal forces are also known as endogenetic or endogenic forces and tectonic forces.

Mountain

A mountain is a natural elevation of the Earth's surface rising high above its surroundings.

So mountain is a natural elevation- it has a natural high height compared to the land, it rises high above its surroundings, its really tall and it rises.

Mountains have narrow summits (peaks), steep slopes and broad bases. They are found both on land and on the ocean floor. A chain of mountains is called a mountain range.

So, narrow summits or peaks mean that the top of the mountain is small and pointed. steep slopes means the mountain is very steep- it increases the height as you move up and this makes it easier to slip off, broad bases- the bottom of the mountain is wide so it can support the whole mountain.

Mountain (cont)

The higher reaches of the mountain can be very cold. This is because temperature falls with altitude.

The temperature falls with altitude means that the temperature falls down and becomes cold.

Hills are highlands that are not as high as mountains, and have gentler slopes.

They have gentler slopes means that they are easier to climb.

Volcanic mountains

Sometimes, conical or dome-shaped structures are formed as a result of magma escaping to the surface of the Earth called a vent. These are called Volcanic mountains or volcanoes.

so conical or dome-shaped structures- structures that are conical or cone shaped and dome shaped means that it looks like a upside down bowl- round and smooth on the top. so these structures are formed when the magma (lava) escapes or goes out of the volcano to the surface of the earth through a pathway known as vent. when this whole process happens you can say its a volcanic mountain.

Internal forces

Internal forces or **tectonic forces** are forces acting within the earth that led to sudden changes on the face of the earth.

So this means that internal forces are forces which occur inside the earth's plates and that effects the outside of the earth's plates

External forces

External forces or gradational forces are forces acting from above on the surface of the Earth.

This means that the forces are happening on outside of the surface, where we walk instead of inside like internal forces.

They lead to slow and steady changes, by wearing away and rebuilding the Earth surface. They are also known as Exogenic forces or denudational forces, and include all the agents of gradation like wind, water and glaciers.

External forces cause slow changes in the earth as when the rocks get piled up make land due to rain and all, it can create a slow process which later can impact on our land. such as floods and all. Gradation is the process of reshaping the earth's surface.

The agents of gradation physically change the Earth's surface through the process of weathering, eroding and depositing the weathered material at other places. For example, rain, wind and rivers erode the mountains and highlands and deposit the eroded material further down from plains.

So weathering is the process of breaking down rocks into smaller parts, eroding moves the broken pieces and deposition drop and creates a surface with the peices. for example rain, wind and rivers erode down the mountains, get broke down and slide and deposit the eroded material which creates land

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More on mountains

The area of lowland found between hills or mountains is called a valley. Many valleys have rivers flowing through them.

There are different types of mountains such as **fold mountains**, **block mountains** and **volcanic mountains**.

Block mountains

When two plates on the Earth's crust diverge or get pulled apart, fractures appear on the Earth's surface. These fractures are called faults.

So when the two plates of the earths surface move apart from each other (which mean diverging in geo) The earths crust gets stretched, and the stretch causes creaks or breaks in the Earth's surface and these cracks are called faults

When two faults are formed alongside each other, large areas get displaced vertically along the two fault lines.

so when two faults form next to each other, land in between can move upwards or downwards, this movement happens vertically- the can move up or down. large areas of land get displaced or shifted because of the movement

The land between the fault lines either subsides (falls) or gets uplifted (rises). The uplifted part of the land is called **horst** or block mountain. The subsided part of the mountain is called a graben or rift valley.

Sometimes rivers can flow through the rift valleys. The **Narmada River** flows through a rift valley



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