



Our Changing Earth

EARTH MOVEMENTS

- The earth movements are divided on the basis of forces.
- Endogenic forces.
- Exogenic forces

EXOGENIC FORCES

- **Exogenic** refers to external processes and phenomena that occur on or above the Earth's surface.
- Weathering effects and erosion are exogenic processes.

ENDOGENIC FORCES

- The term Endogenic refers to internal processes and phenomena that occur beneath the earth's surface - or any other celestial body.
- earthquakes and volcanoes are all endogenic processes.

VOLCANO

- A **volcano** is an opening, or rupture, in a planet's surface or crust, which allows hot, molten rock, ash, and gases to escape from below the surface
- The word *volcano* is derived from Italian *volcano*, after Vulcan, the Roman god of fire.

(inside)
Exo
(outside)

Gases and ash

Crater

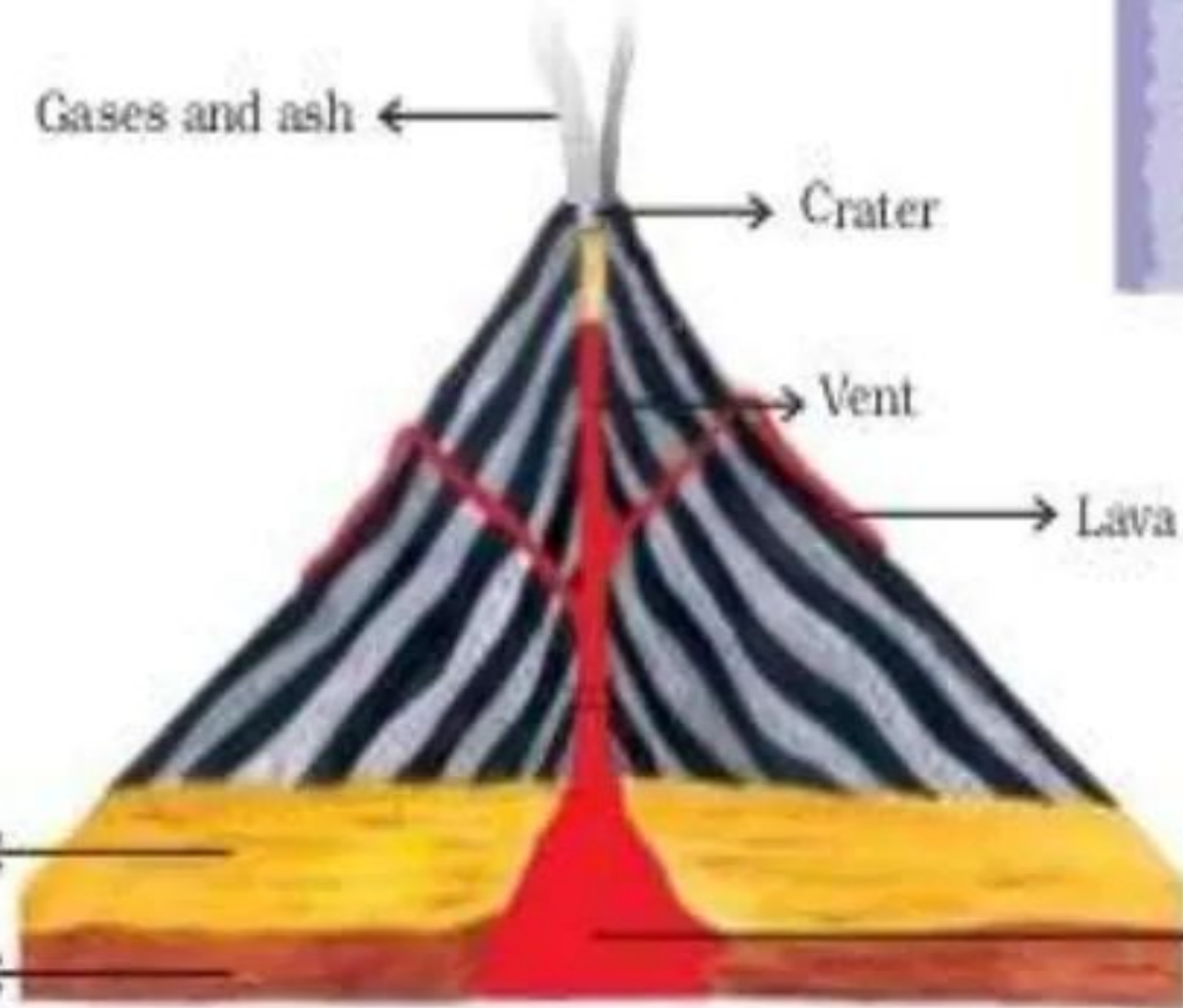
Vent

Lava

Crust

Mantle

Magma
Chamber





EARTHQUAKES

- ▶ When the Lithospheric plates move, the surface of the earth vibrates.
 - ▶ The vibrations can travel all round the earth. These vibrations are called earthquakes.
-
- An **earthquake** (also known as a **tremor** or **temblor**) is the result of a sudden release of energy in the Earth's crust that creates seismic waves. Earthquakes are recorded with a seismometer, also known as a seismograph.

HOW EARTHQUAKES ARE FORMED

- ▣ The place in the crust where the movement starts is called the **Focus**.
- ▣ The place on the surface above the focus is called the **Epicenter**.
- ▣ Vibrations travel outwards from the Epicenter as **waves**.
- ▣ Greatest damage is usually closest to the Epicenter and the strength of the earth quake decreases away from the centre

A scenic landscape photograph showing rolling green hills under a blue sky with light clouds. A small, winding river flows through the valley floor. The hills are covered in lush green grass, and the overall scene is peaceful and natural.

LAND FORMS

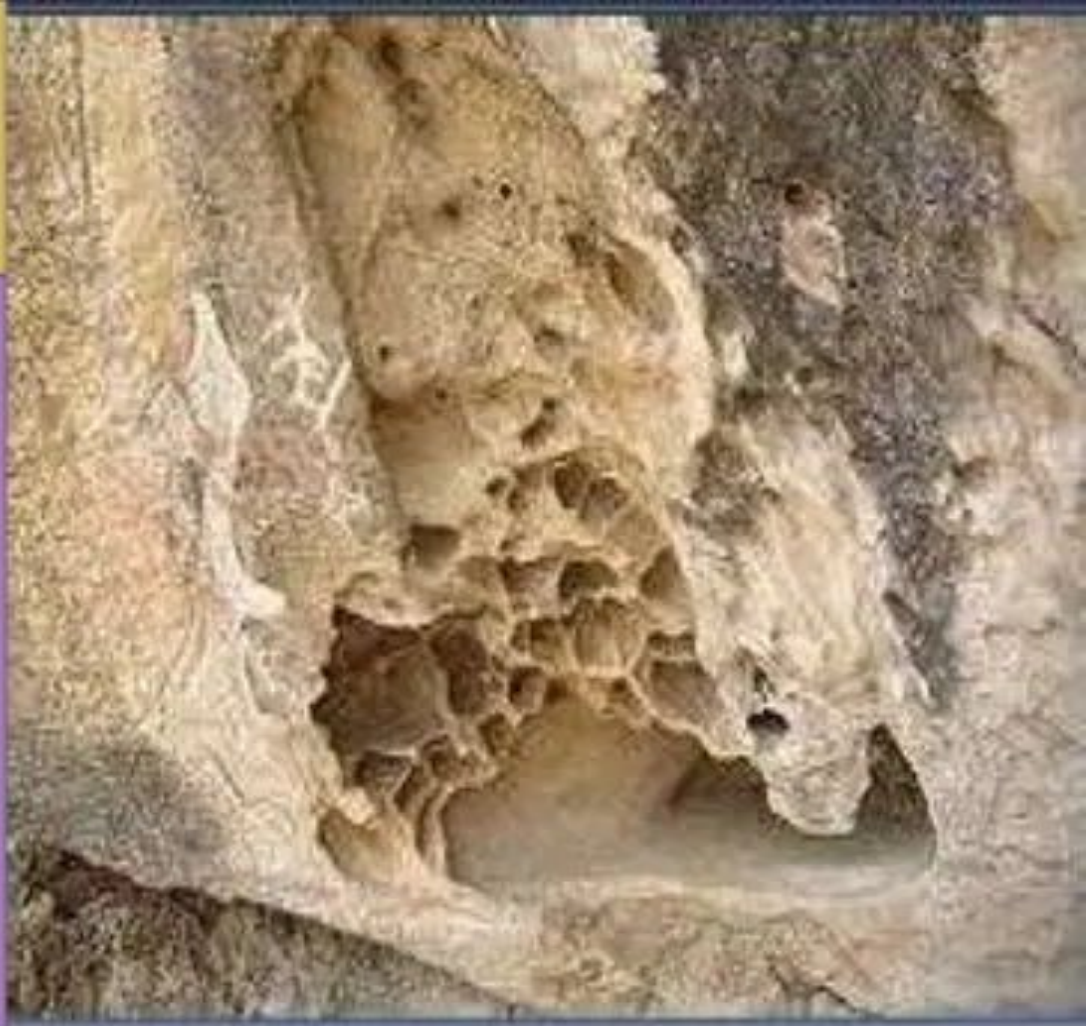
MAJOR LAND FORMS

The landscape is being formed by two processes:

- ❑ Weathering
- ❑ Erosion

WEATHERING

Weathering is the breaking up of the rocks on the earth's surface.



EROSION



- **Erosion** is the removal of solids (sediment, soil, rock and other particles) in the natural environment. It usually occurs due to transport by wind, water, or ice.



FEATURES OF RIVERS

Following features are made by river are :

- Water fall
- Meanders
- Ox-bow lake
- Floodplain
- Levees
- Delta

WATER FALL

- A **waterfall** is a place where flowing water rapidly drops in elevation as it flows over a steep region or a cliff.



MEANDERS

- ▣ The river enters the plain it twists and turns forming large bends known as **Meanders**.



OX-bow lake

- An **oxbow lake** is a U-shaped body of water formed when a wide meander from the main stem of a river is cut off to create a lake.
- This landform is called an oxbow lake for the distinctive curved shape that results from this process.

OX-bow lake



FLOODPLAIN

- ❖ When river overflows its banks, it leads to the flooding of the neighbouring areas.
- ❖ As it floods , it deposits layers of fine soil and other material called sediments along its banks. This lead to the formation of floodplain.



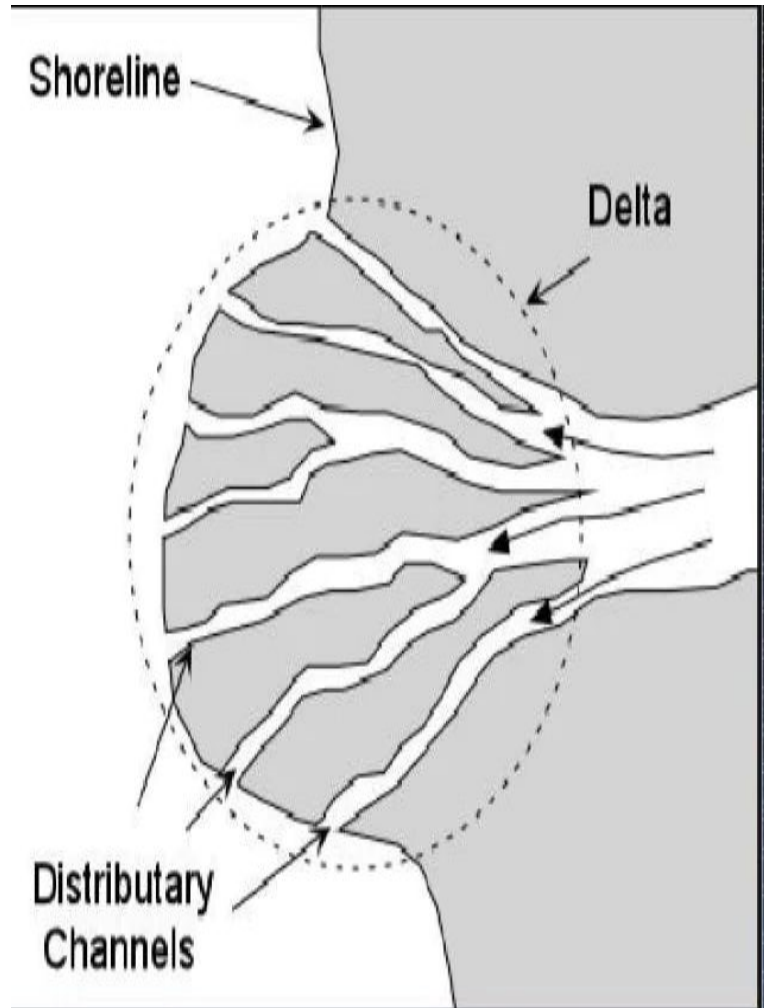
LEVEES

- ❑ The raised banks are called levees.
- ❑ As the river approaches the sea, the speed of the flowing water decreases and the river begins to break up into a number of streams called distributaries.



DELTA

- A **delta** is a landform that is created at the mouth of a river where that river flows into an ocean, sea, estuary, lake, reservoir, flat arid area, or another river. Deltas are formed from the deposition of the sediment carried by the river as the flow leaves the mouth of the river.



FEATURES MADE BY SEA WAVES

- The features are-
- Sea caves
- Sea arches
- Stack
- Sea cliff

SEA CAVE



SEA CAVES

Sea caves

- A **sea cave**, also known as a **littoral cave**, is a type of cave formed primarily by the wave action of the sea.
- The primary process involved is erosion.



SEA ARCHES

- ▣ When sea caves become bigger and bigger only the roof of the caves remain, then form sea arches.



STACKS

- ▣ Erosion breaks the roof and only walls are left. These wall like features are called stacks.



SEA CLIFF

- ❖ The steep rocky coast rising almost vertically above sea water is called sea cliff.
- ❖ The sea waves deposit sediments along the shores forming beaches.



FEATURES OF ICE

- These are the following-
 - Glaciers
 - Glacial monaries



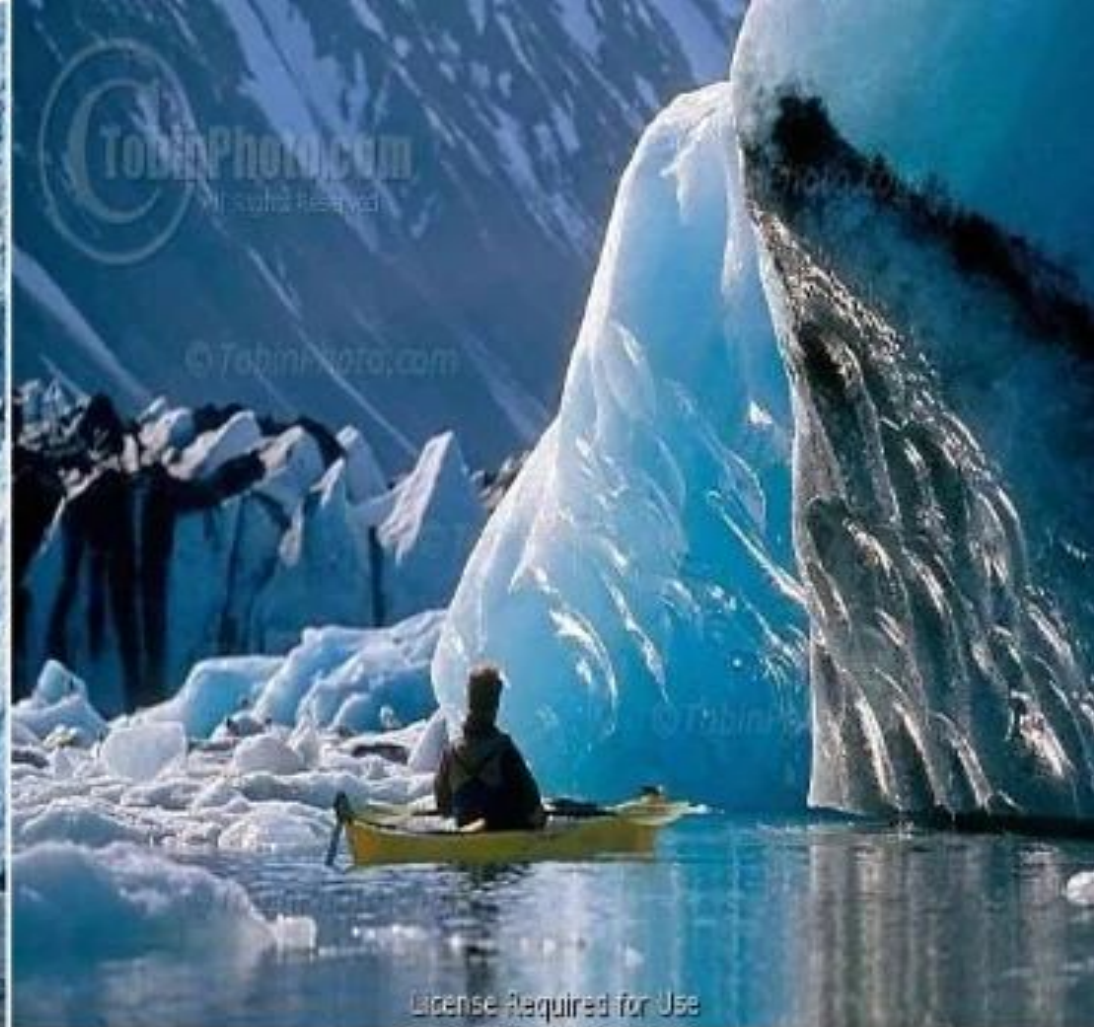
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GLACIAL MORAINES

- ▣ The material carried by the glacier such as rocks big and small, sand and silt gets deposited. These deposits form



FEATURES OF WIND

- These are the features-
- Mushroom rocks
- Sand dunes
- Loess

MUSHROOM ROCKS

- ▣ An active agent of erosion and deposition in the deserts is wind .
- ▣ In deserts rocks in the shape of a mushroom , commonly called mushroom rocks.





SAND DUNES

When the wind blows, it lifts and transports sand from one place to another. When it stops blowing the sand falls and gets deposited in low hill - like structures called sand dunes.

LOESS

- ▣ When the grains of sand are very fine and light, the wind can carry it over very long distances. When such sand is deposited in large areas, it is called loess.
- ▣ Large deposits of loess is found in China.

