

## Concept of Plate Tectonic

In 1960, an exciting hypothesis came out. It can easily explain all the geological processes of past and present. The processes of mountain building, earthquakes or volcanic eruption can be explained with the idea of “Plate Tectonic”.

### What is plate?

Plates are rigid masses of earth’s lithosphere. There are seven major plates and twenty minor plates on the earth’s surface. Seven major plates are:- Eurasian plate, Indian- Australian plate, North American plate, South American plate, Pacific plate, African plate and Antarctic plate.

Plates are not static. They move in response to the flow of the “asthenosphere” beneath it.

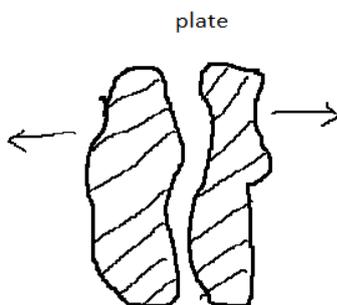
### Plate movement and plate boundaries:

There are three main plate boundaries-

1. Divergent plate boundary
2. Convergent plate boundary and
3. Transverse plate boundary

### Divergent plate boundary: (constructive)

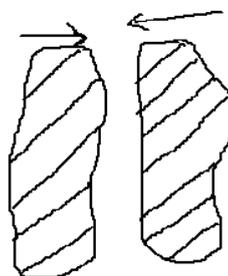
When plates move apart from each other, it is called divergent plate movement. The boundary is called divergent plate boundary. It is



Divergent plate boundary

constructive.

Constructive



Convergent plate boundary

Destructive



Transverse plate boundary

Plate pass through one another

### Convergent plate boundary: (Destructive)

When two plates come close to each other, it is called convergent plate movement and the boundary is called convergent plate boundary. It is destructive. It may lead to mountain building.

### Transverse plate boundary:

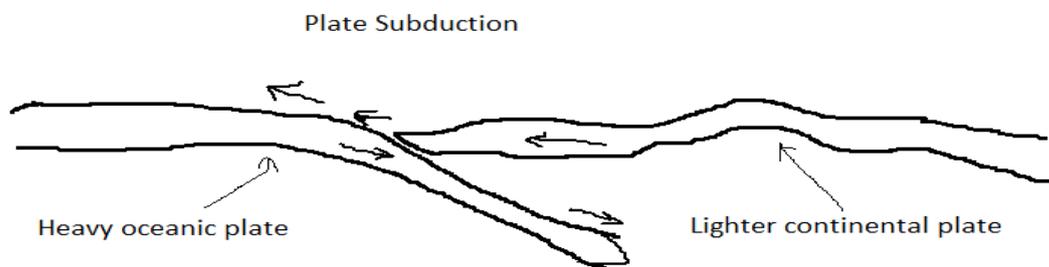
Here plates move past one another in opposite directions. Frequent collisions between plates may take place.

### Rifting and plate divergence:

Rifting occurs due to the current produced in the asthenosphere. This current produces a pulling apart motion and tears the plates. The tear of a plate into smaller plates is called "Rifting".

### Plate convergence and Subduction:

- Plates may converge to each other.
- Two oceanic plates may come closer
- Two continental plates may come closer
- One oceanic and one continental plate may converge. Oceanic plate is denser and continental plate is lighter. When they come closer, heavy oceanic plate sinks beneath the lighter continental plate. It is called plate "Subduction".



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