

## 10. Lithosphere – Movements of Tectonic Plates

The Earth's Crust was divided into many segments – **litospheric (tectonic) plates**. These plates are moving. The speed of this movement is 1 – 5 cm per year.

Crustal plates can converge, diverge, collide with each other, slide under each other or move horizontally next to each other. Two basic motions are **convergence** and **divergence**.

Plate boundaries between plates are rift valleys, mid-oceanic ridges, deep-oceanic trenches, fold mountains and horizontal (transform) faults.

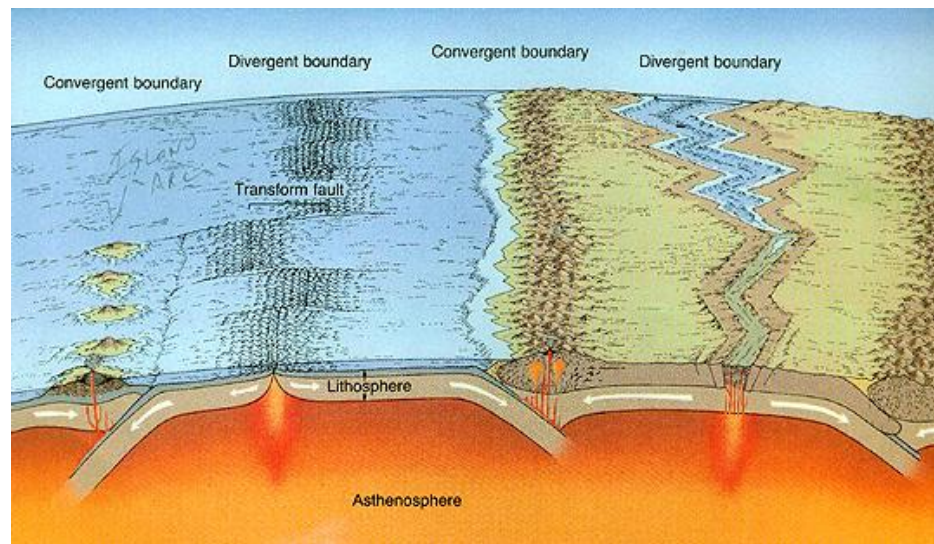
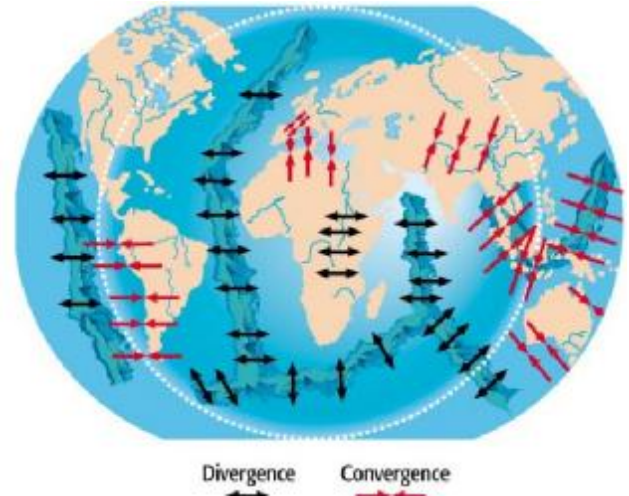
**Mid-oceanic ridges** are created where two ocean plates converge. The magma rises up from mantle and creates new Oceanic Crust. E.g. Mid-Atlantic ridge.

Where one plate slide under the another plate, there are **Deep-oceanic trenches** created. Molten crust rise up as lava and creates Isles and Volcanoes close to the plate boundary. E.g. Mariannas´ trench and Mariannas Isles.

**Rift valleys** are formed when two continental plates diverge. E.g. East-African Rift Valley.

If two continental plates collide, **Fold mountains** are formed at the edges of them. E.g. Himalayas and Alps.

At the **Horizontal (transform) faults** two plates move horizontally and there is huge energy accumulated. E.g. San Andreas fault in California (USA).



Regions, where the Earth's lithosphere is forming or is deteriorating, are typical for huge **seismic and volcanic activity**.

### **Keywords**

convergence, divergence, rift valleys, mid-oceanic ridges, deep-oceanic trenches, fold mountains, horizontal (transform) faults, magma, lava, volcano, isles, seismic/volcanic activity

**Litospheric (tectonic) plates of the Earth**

