Welcome to the third part of introduction to plate tectonics.

In last session we spoke about mechanism which leads

to the plate movement.

Now we are going to learn about different types of

plate movements.

Lithospheric plates, commonly called tectonic plates. Fit together on the earth surface like a jigsaw puzzle. There are about 7 to 8 major plates and many more minor plates. These plates float on a hard, semi solid region of a mantle, called the thAsthenosphere sphere. This movement is called plate tectonics. The plate moves slowly at a rate ranging from less than one to about 16 centimeter per year. The plate move in different direction and interact with each other at plate boundaries. Movement of lithospheric plate is most easily observed at plate boundaries where the plates converge, diverge or slip slide ways. Most earthquakes and volcanism can occur along or near plate boundaries. There are three major types of plate boundaries.

Convergent plate boundary, Divergent plate boundary and transform plate boundary. The first one is a convergent plate boundary. Convergence means coming together. At this boundary, two plates move towards each other. One plate either sink beneath other along a subduction zone, or plates collide because neither can be subducted. There are three types of convergence which can be observed. We have Oceanic continent, continent, convergence, Oceanic Oceanic convergence, or continent continent convergence. The first one is Oceanic continental. When a continental and Oceanic plate collide, the three or more dense Oceanic plate. The thinner and more dense Oceanic plate is overridden by the thicker and less dense continental plate. The denser Oceanic plate is subducted below the continental plate. This process is known as subduction. As the Oceanic plate descends, it is forced into higher temperature environment. At a depth of about 100 miles material in the subducting plate begins to melt.

This melt is less dense than the surrounding. And buoyant. The buoyant may begin to begin slow extent to overlying material melting. And fracturing their way upward. If this may rises to the surface, the magma will breakthrough in form of a volcanic eruption. And this mountain range of western South America is the example of this type of plate. The next type of plate convergence is Oceanic Oceanic convergent boundary. When a convergent boundary occurs between two Oceanic plates, one of those plate will subduct beneath the other. Normally the older plate will subduct because of the higher density. The subducting plate is heated as it is forced deeper into the mantle. Where it begins to melt. The magma created due to melting is lower in density than the surrounding rock material. It begins extending by melting and fracturing its way through the overlying rock material. Magma that reach the surface breaks through to form a

volcanic eruption. Effects That are found in this type of boundary are earthquake, Oceanic trench and a change of volcanic islands. The last type of convergent plate boundary is continental Continental convergent boundary. Both continental crust are too light which prevents subduction. In such case the two continents collide and crumble against each other, forming a huge mountain chain. The Himalayas are formed due to this process. The next type of plate boundary is divergent plate boundary. Divergent plate boundaries are the regions where the little spirit plates are moving away or diverging from each other on. In contrast to convergent boundaries that destroy the old crust by subduction, divergent boundaries create a new crust through Formation of volcanoes as the plate moves apart. Magma sells up from the beneath of the surface to fill the space left by the diverging plate. Diverging boundaries with in continent initially produce riftss which produced Rift Valley. The most active divergent boundaries are between Oceanic plate and are often called mid oceanic Ridges.

Mid Atlantic Ridge was formed due to this process.

The third type of plate boundary is the transform plate boundary. The third type of lithospheric plate boundary is a transform boundary, sometimes called its conservative boundary.Because crust is neither created nor destroyed. Transform boundaries occur in a region where plates are sliding horizontally past each other. Transform boundaries are typically found on ocean flow, but occasionally occur on length. Because of friction, the stress is built up in both the plates where energy is released. And when Energy is released, it causes earthquake. The most famous example of this type of process is the San Andreas Fault zone of western North America. So in this session we have seen three types of plate movement convergence. Divergents and transform. And we have also seen three types of plate boundaries depending upon the movement of plate. So in this session we have seen different types of plate

movement, so we have convergence where plates are coming towards each other. Divergent where plates are moving away from each other and transform where they slide past each other. So depending upon the type of movement between the plates, there are three types of boundary. We have convergent plate boundary divergent plate boundaries and transform plate boundary. Divergent convergent plate boundaries are again of three types. Oceanic, Continental, Oceanic, Oceanic, and continental continental. So did this depends upon interaction of what kind of Crust is interacting, when two Oceanic plates interact with each other. We have Oceanic Oceanic plate boundary. When We have Oceanic and continental plate, which are interacting with each other, we have Oceanic, continental, and when two continents collide with each other, we have continental continental type of plate boundary. Then we have a divergent plate boundary, also known as. Constructive plate boundary because new Land is formed in this type of plate boundary. The two plates move

away from each other.

And the last one is transform plate boundary, also known as conservative plate boundaries, where land is neither created nor destroyed.

Where plates slide past each other.