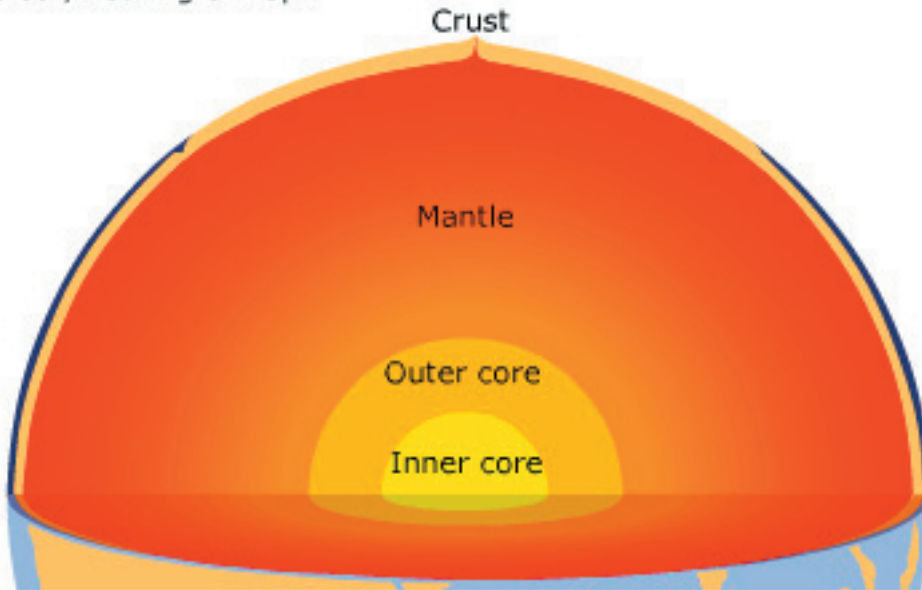
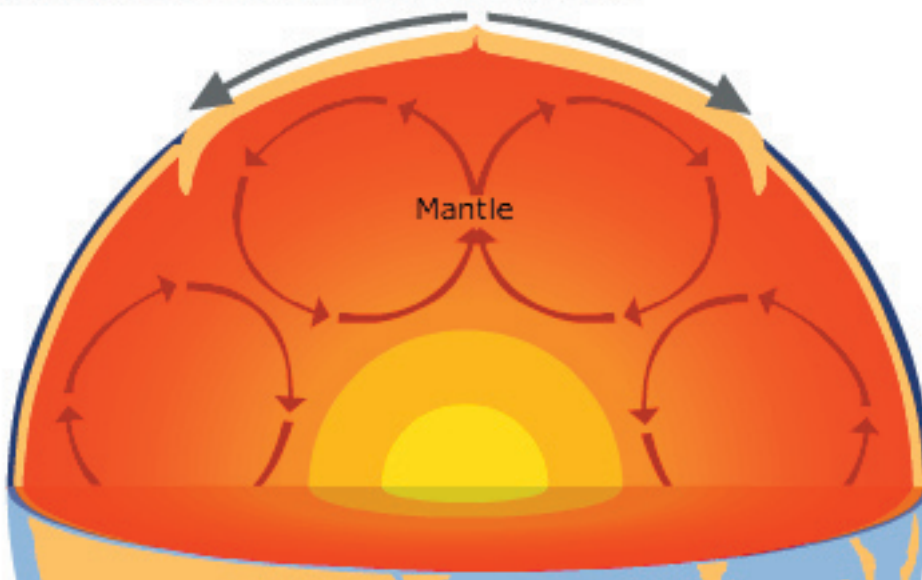


# BBC NEWS How earthquakes happen

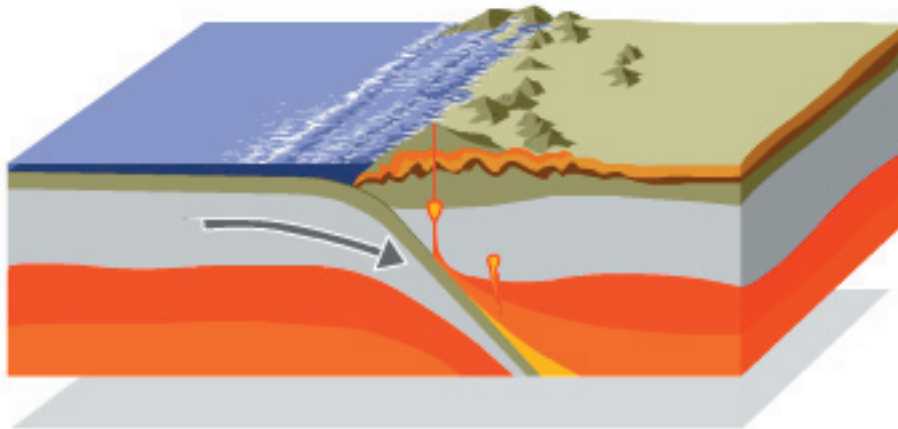
The Earth is divided into a solid core, the molten magma mantle and the crust, floating on top.



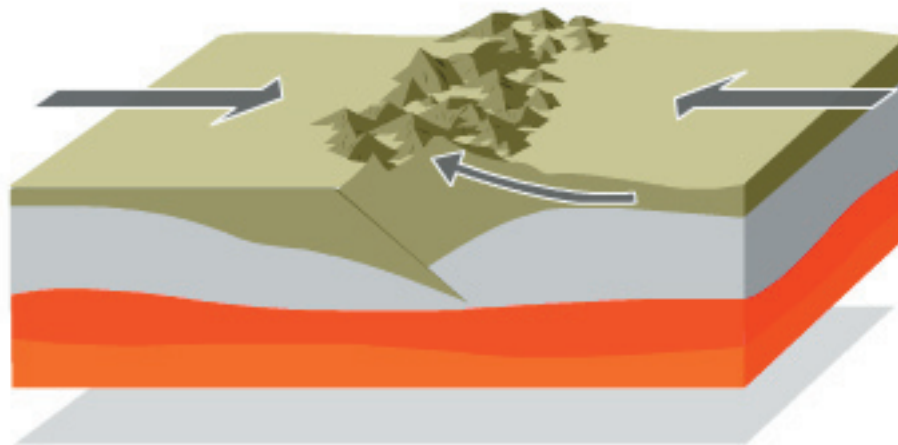
The crust is broken up into plates. Convection currents in the magma cause the plates to move in different directions.



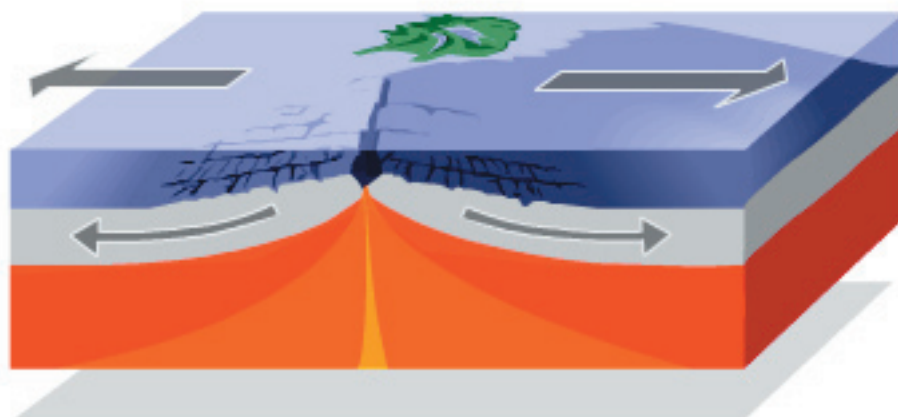
Where plates converge, one plate is drawn slowly beneath the other. This takes place over thousands of years.



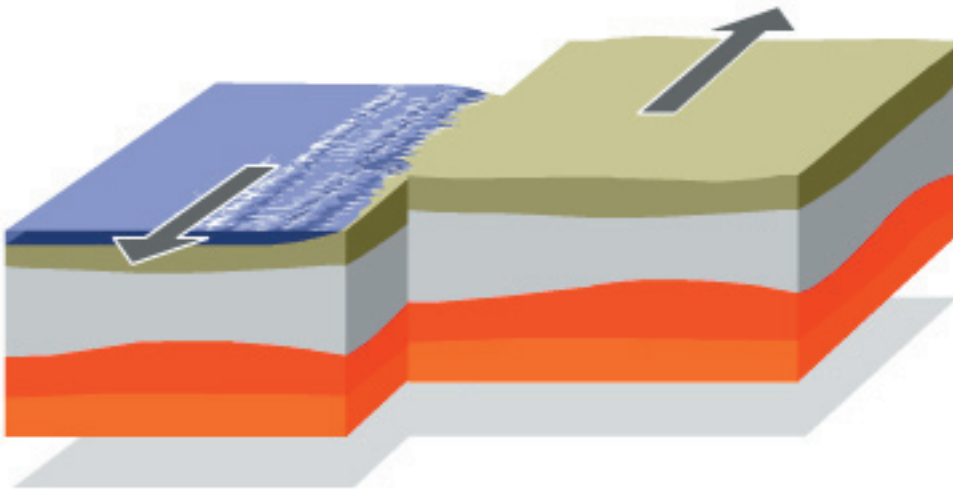
Where plates collide, rock layers are forced upwards creating mountains.



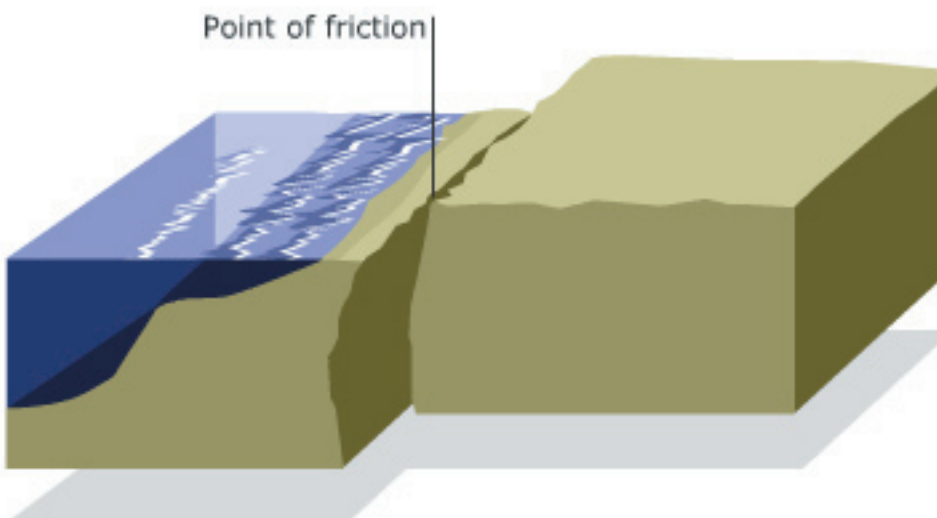
Where plates diverge, lava emerges from the mantle and cools to form new sections of crust. Diverging plate boundaries are often found underwater.



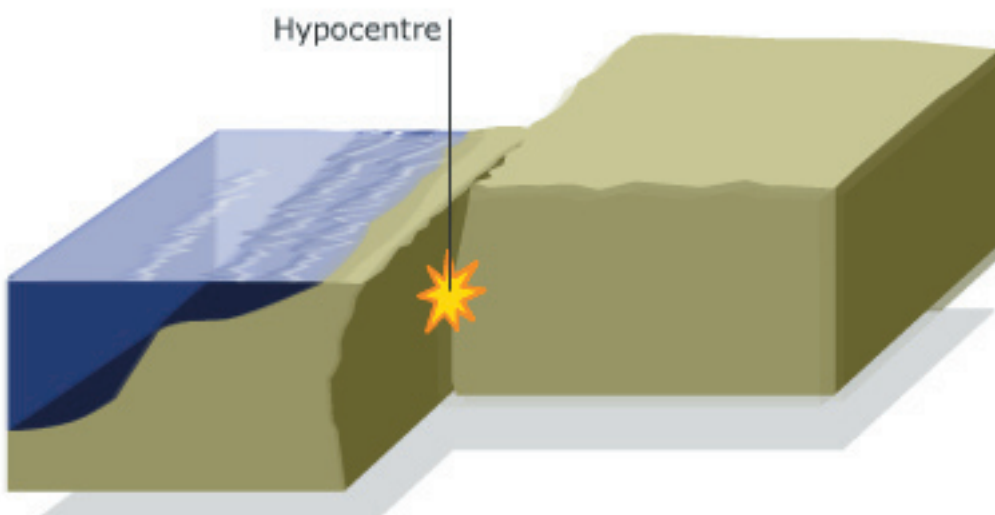
Other plates move very slowly alongside each other. Faults are found at the edges of the plates where the crust is moving in different directions.



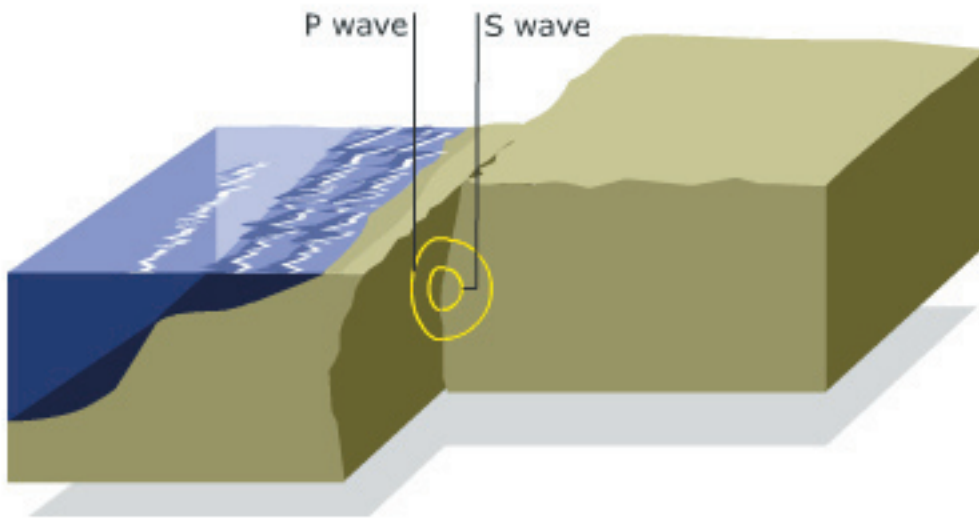
In some places the plates become locked together. Kinetic energy builds up in the locked plates.



When the plates give, the stored energy is released in the form of an earthquake. The point of the earthquake's origin beneath the surface is called the hypocentre.



An earthquake emits its power as three waves of energy. Primary, or P-waves are felt as a sudden jolt. Secondary, or S-waves arrive a few seconds later and are felt as a more sustained side-to-side shaking.



Surface waves radiate outwards from the epicentre - the point on the surface directly above the hypocentre - and arrive after the main P and S waves.

