

Geology 12

Unit 2 – Earth: Core to Surface

Day 4 – Mechanisms of Plate Motion

Name: _____

Date: _____

Block: _____

Why do plates move? _____

gravity and mantle convection

Mantle Convection: Mantle convection describes the movement of the mantle as it transfers heat from the white-hot core to the brittle lithosphere. The mantle is heated from below, cooled from above, and its overall temperature decreases over long periods of time. All these elements contribute to mantle convection.

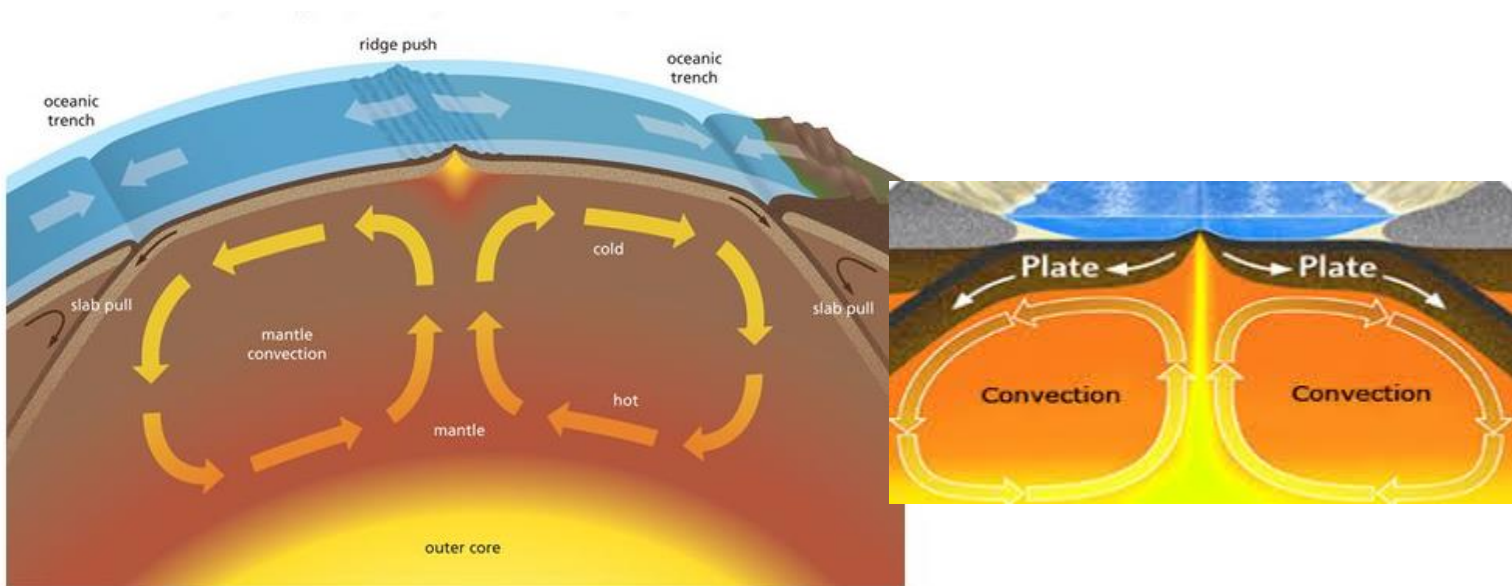
Like a lava lamp!!!!

3 Main Mechanisms of Plate Motion:

Slab Suction: _____

due to mantle convection

currents flow underneath the plates and through friction pull them along at the surface as well as when they are subducted



Slab Pull: _____

a gravitational force pulling the cold subducting plate down into the mantle at a subduction zone

Ridge Push: _____

This is a gravitational force pushing down on the elevated ridge and because of the plates curvature it results in a horizontal force pushing the plate along the earth's surface

