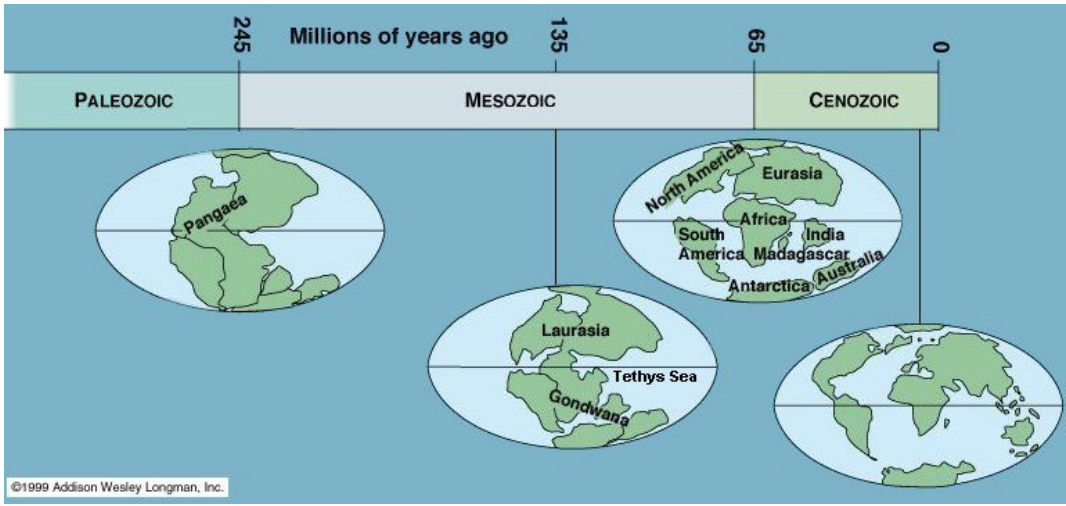
Plate Tectonics

Unit 6 Chapter 9

Chapter 9.1: Continental Drift

Alfred Wegener developed the **continental drift hypothesis**

The **continental drift hypothesis** states that continents had once been joined together to form a single supercontinent, called **Pangaea**



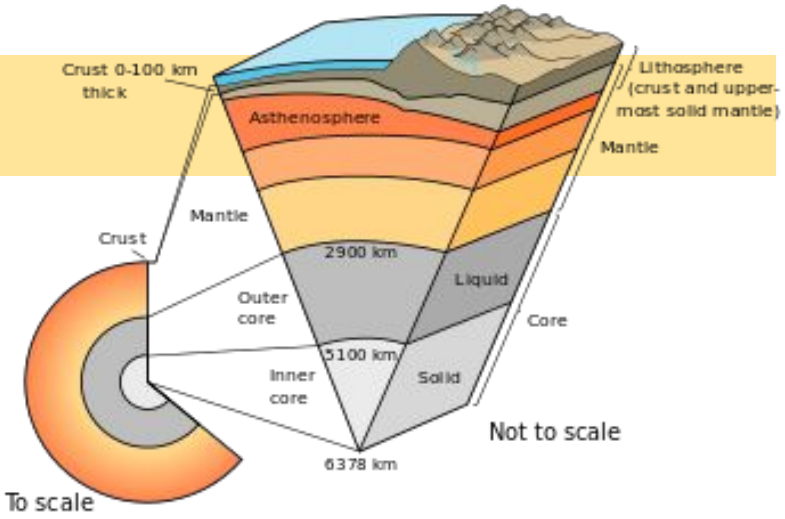
His hypothesis faced much criticism... what was the *mechanism* for this movement?

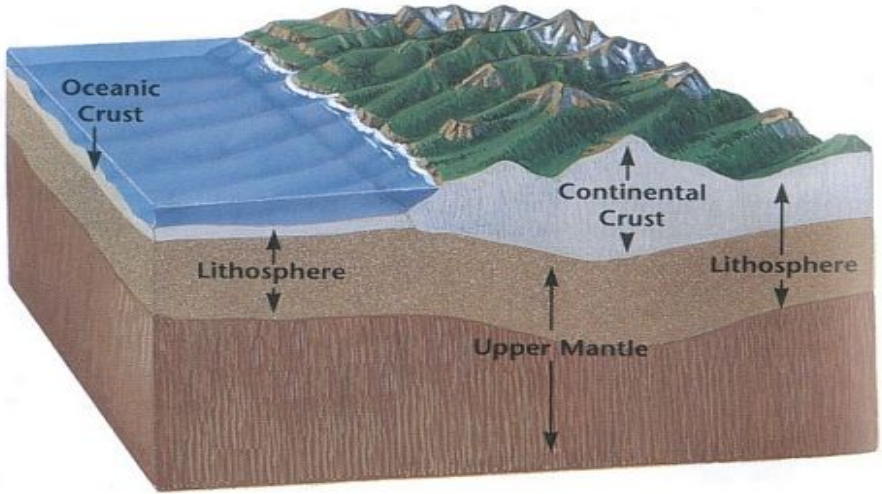
Chapter 9.2 Plate Tectonics

The **theory of plate tectonics** was developed in 1968 after extensive evidence. Was gathered.

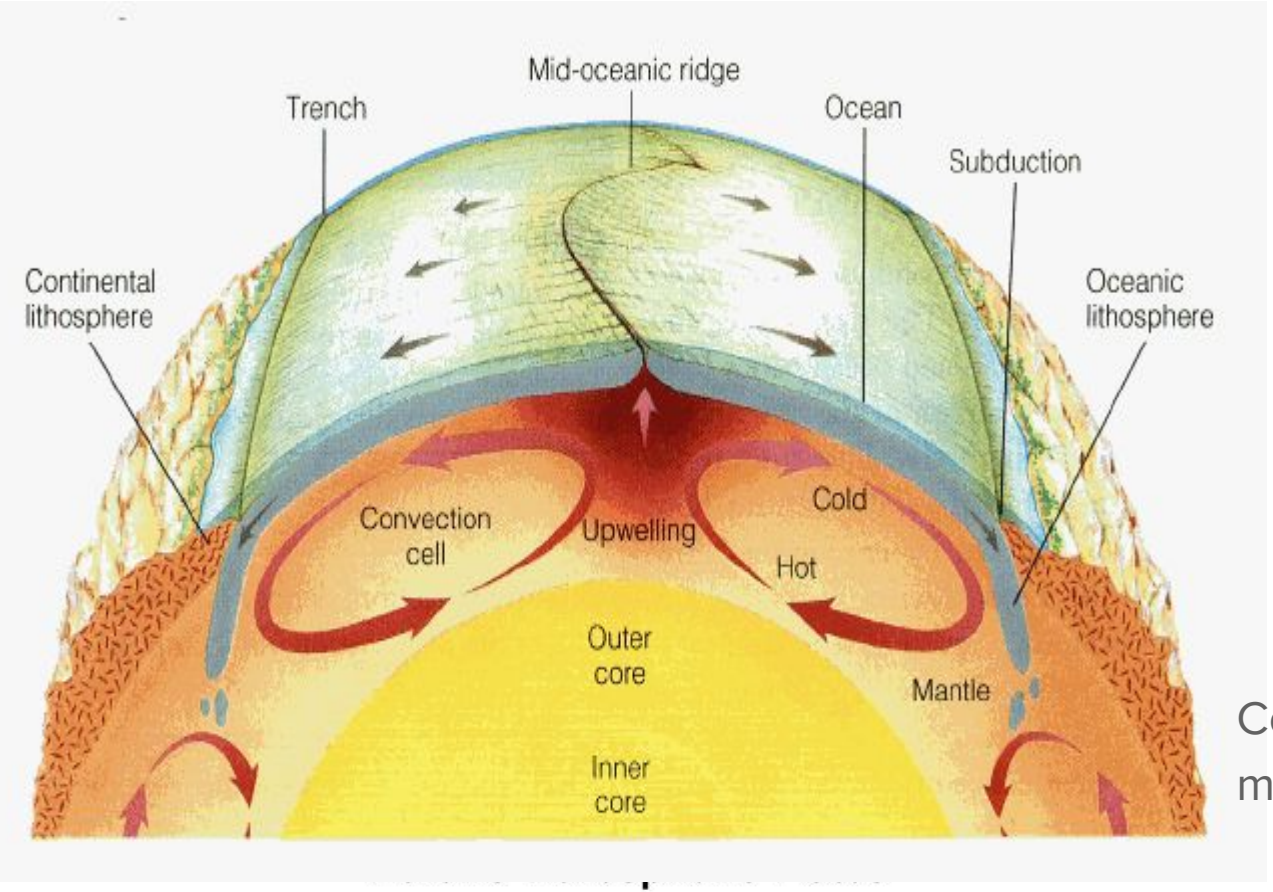
According the plate tectonics theory, the uppermost mantle along with the overlying crust behaves as a strong rigid layer.

This is called the **lithosphere**.





The lithosphere is divided into segments called **plates**.



These plates move approximately 5cm/year and continually change size and shape

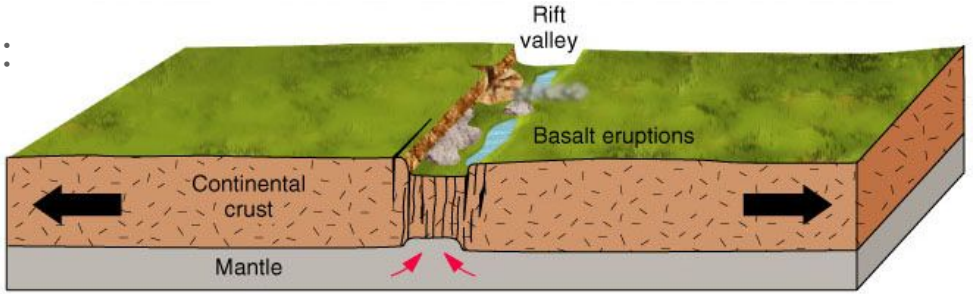
What drives plate movement?

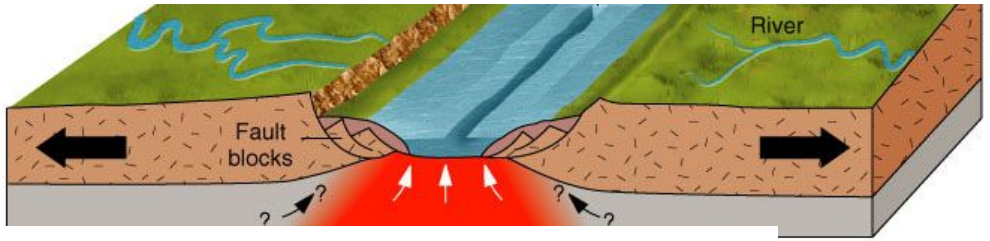
https://youtu.be/Kg_UBLFUpYQ

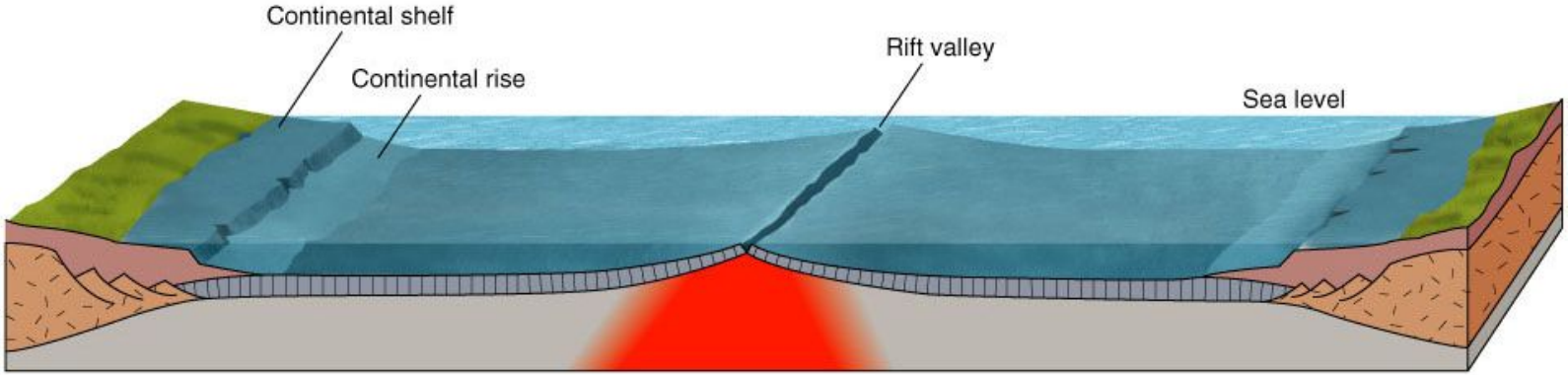
Convection currents within the mantle drive plate movement

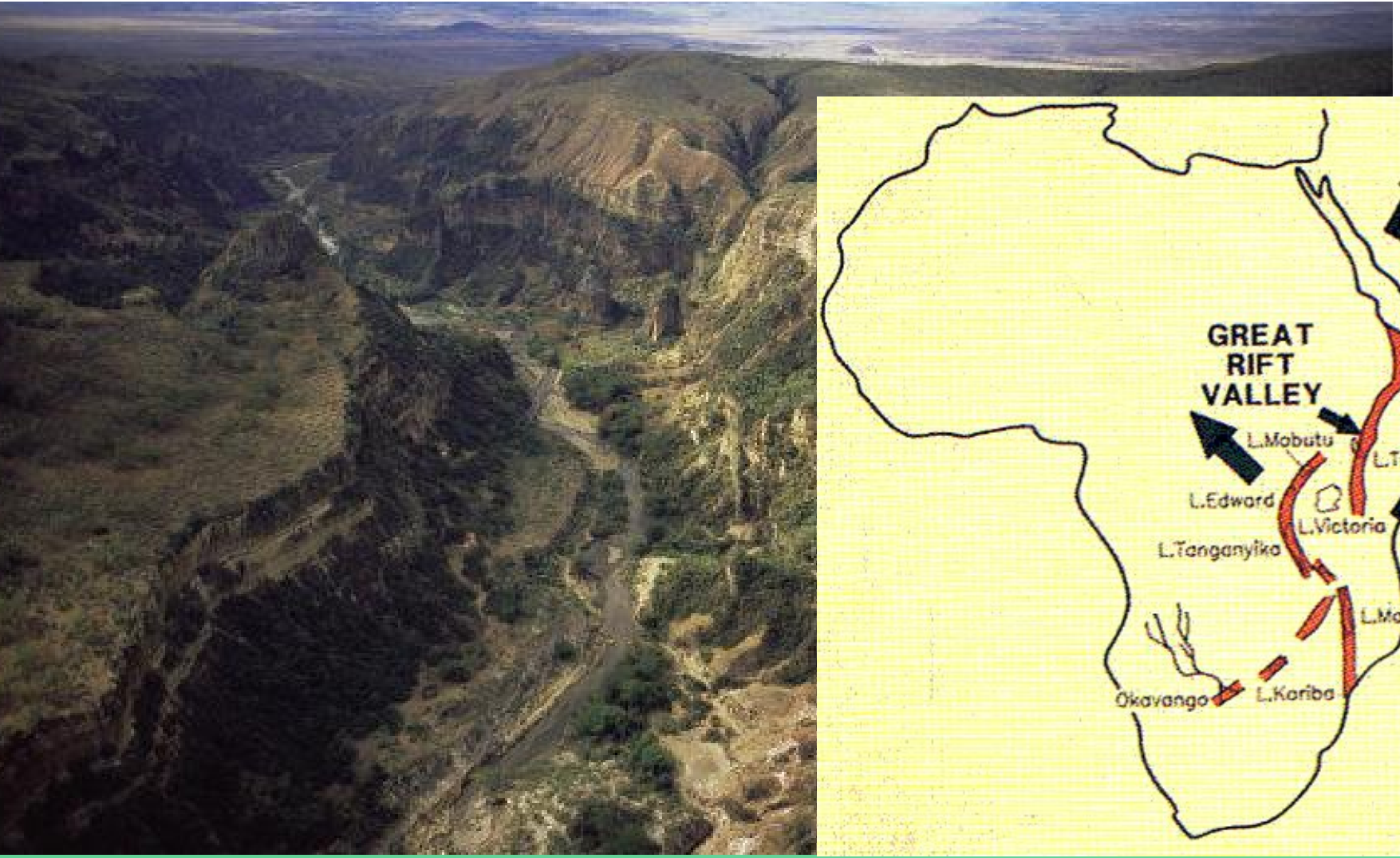
There are 3 types of plate boundaries:

Divergent boundaries: occur where two plates are moving apart. New material is brought to the surface.





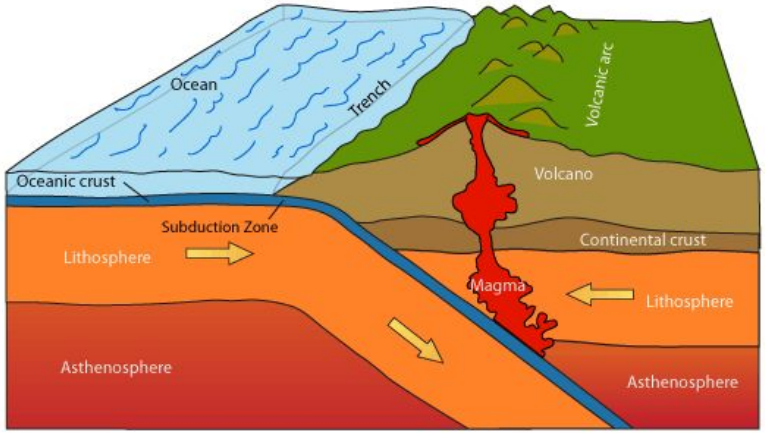



GREAT
RIFT
VALLEY
L.Mobutu
L.Turkana
L.Edward
L.Victoria
L.Tanganyika
L.Malawi
Okavango
L.Kariba

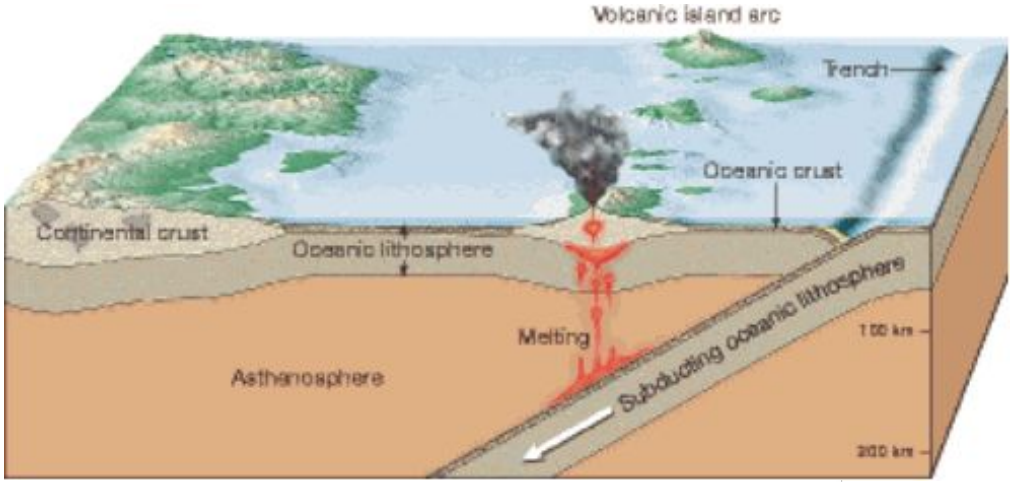

NORTH AMERICAN PLATE
EURASIAN PLATE
ICELAND
MidAtlantic Ridge
Volcano
Atlantic Ocean

Convergent boundary: where plates move together.

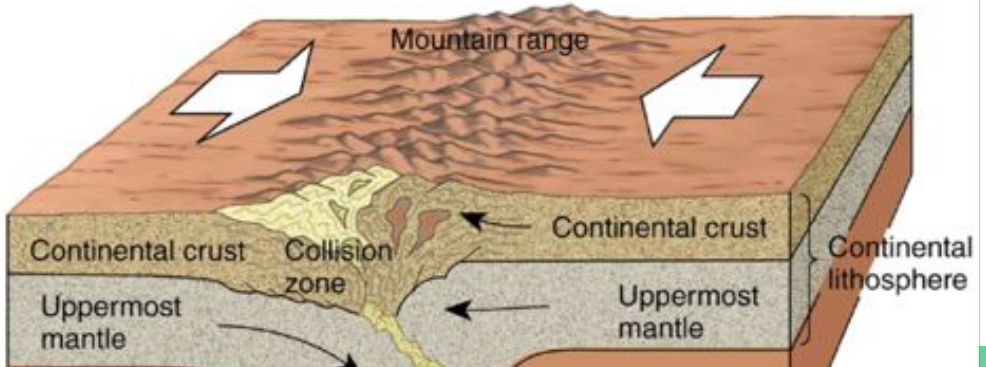
Continental- oceanic

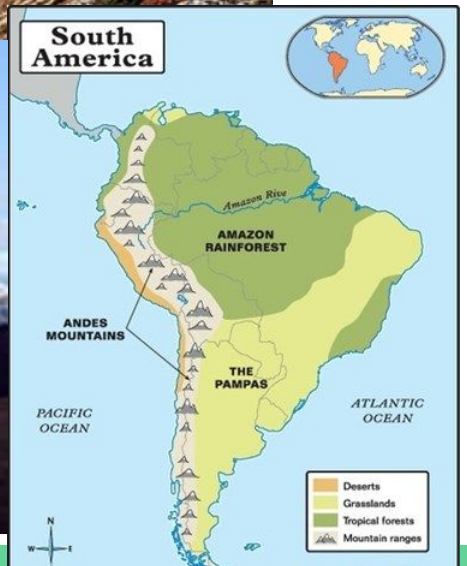


Oceanic- oceanic

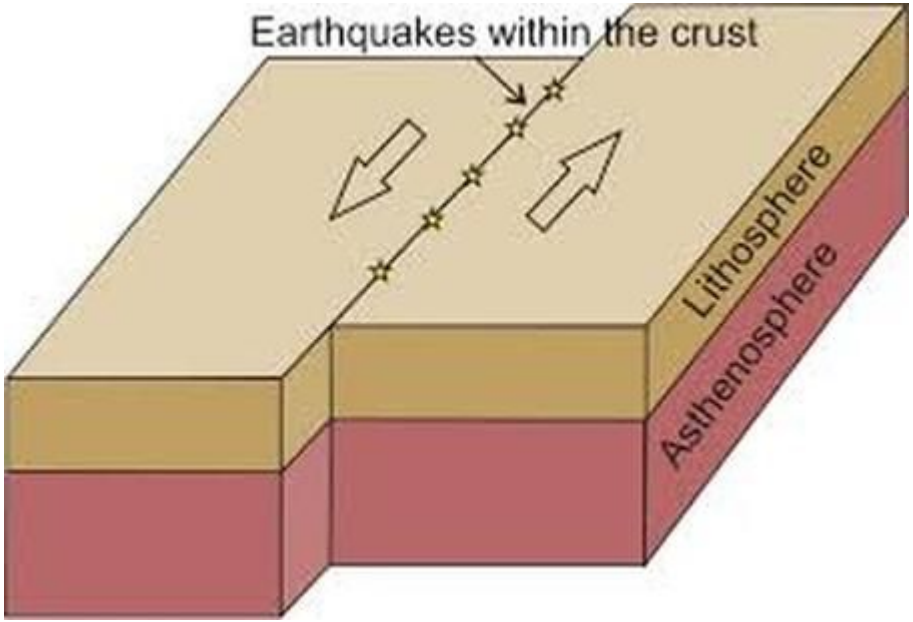


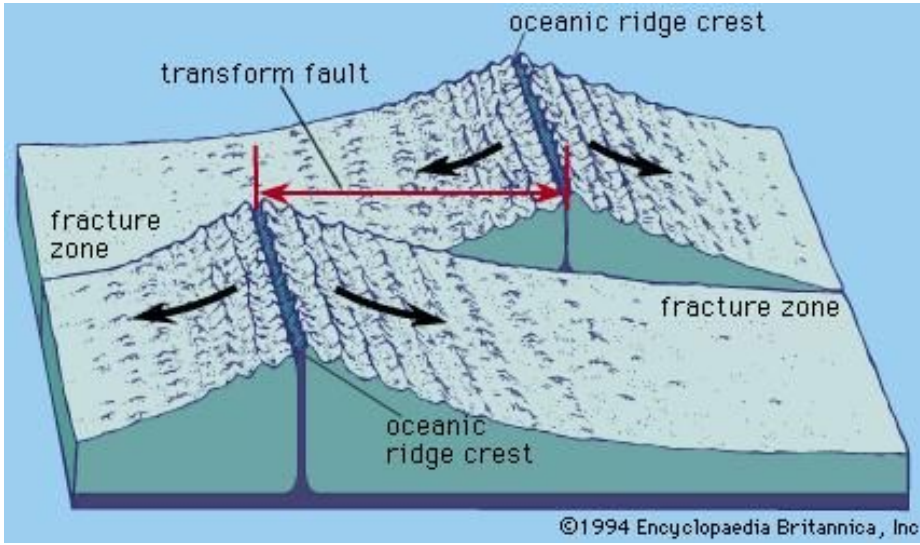
Continental- continental




South America
Amazon River
AMAZON RAINFOREST
ANDES MOUNTAINS
THE PAMPAS
PACIFIC OCEAN
ATLANTIC OCEAN
Deserts
Grasslands
Tropical forests
Mountain ranges

Transform fault boundaries: margins where two plates grind past one another, without the production or destruction of new lithosphere.






Transform Boundary
California
North American Plate
San Francisco
San Andreas Fault


San Andreas Fault Zone
Tomales Bay
PRNS Archives


Salmon Creek
Bodega Bay
San Andreas Fault
The "Hole"
Pinnacle Rock
Data CSUMB SFML, CA OPC
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