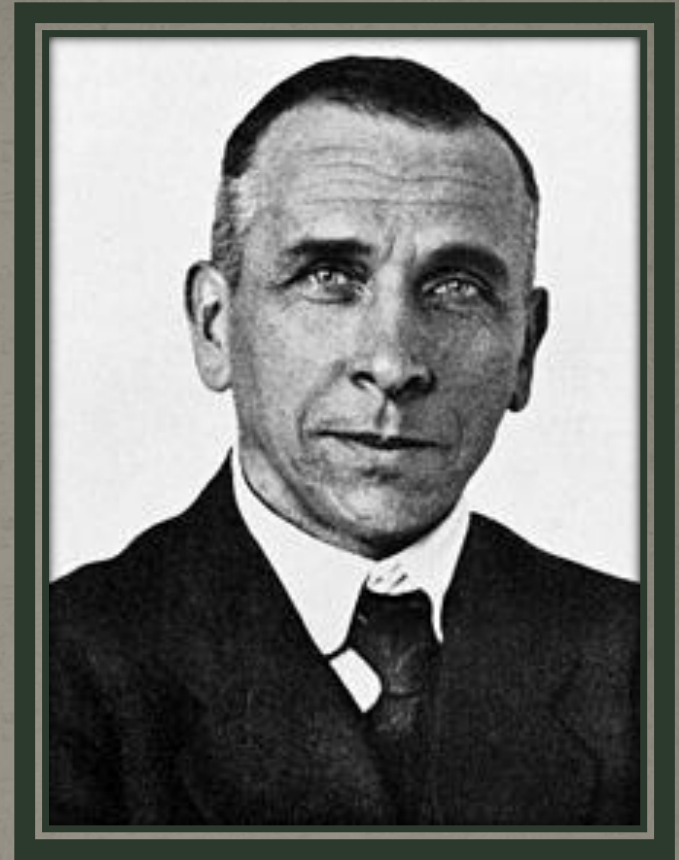




ROCK CYCLE #1:

DESCRIBE HOW THE MOVEMENT OF CRUSTAL PLATES CAN CAUSE EARTHQUAKES AND VOLCANIC ERUPTIONS THAT CAN RESULT IN MOUNTAIN BUILDING AND TRENCH FORMATION.

A little bit of history for you:



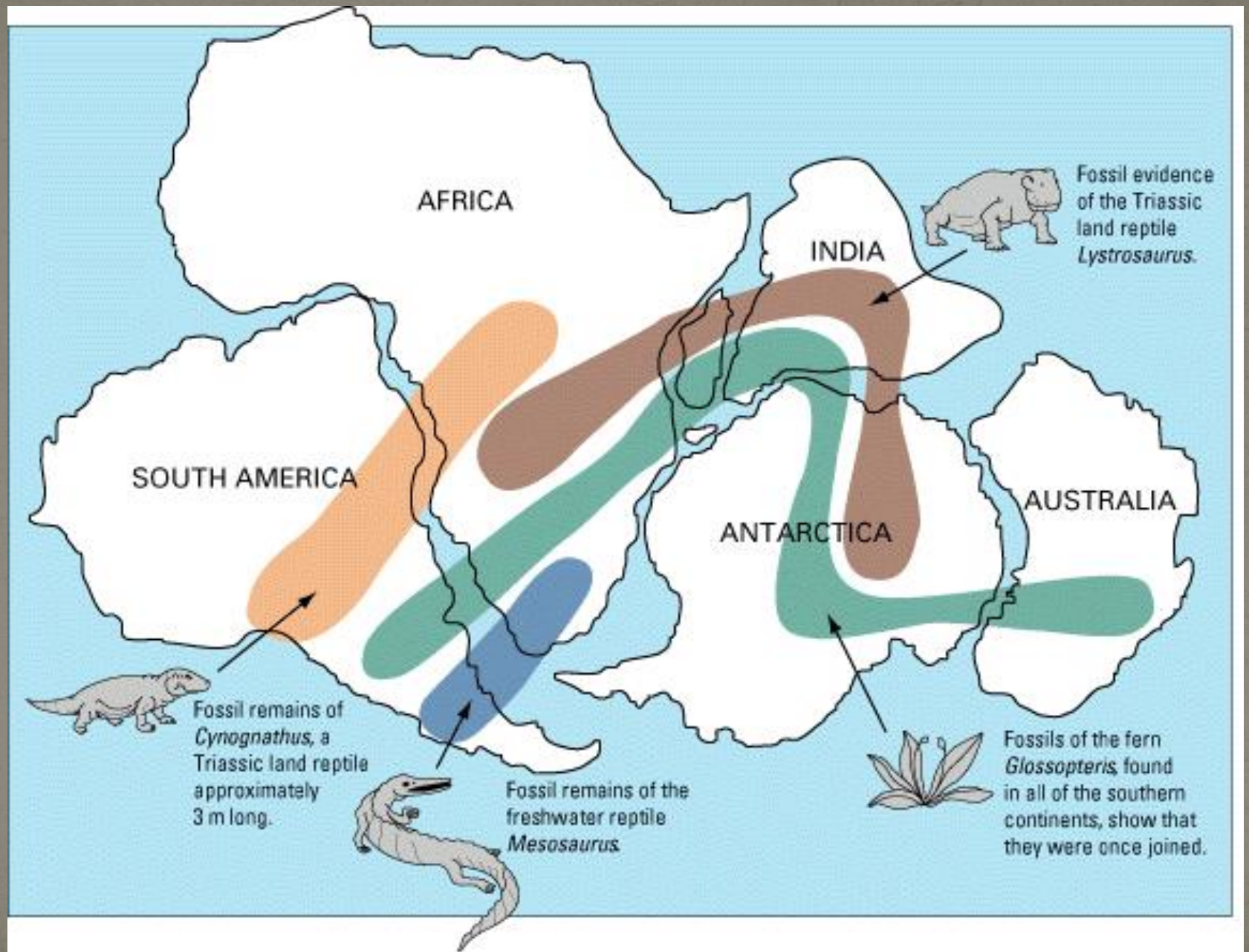
Alfred Wegener

Developed the theory of Pangea & Continental Drift.

Plate Tectonics: The movement of Earth's crustal plates.

Pangea →



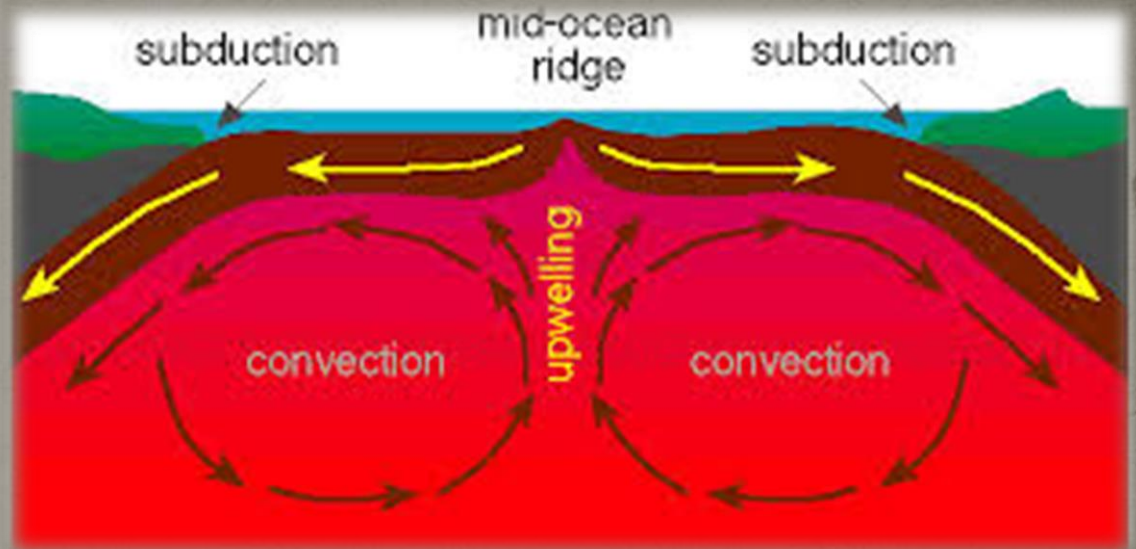
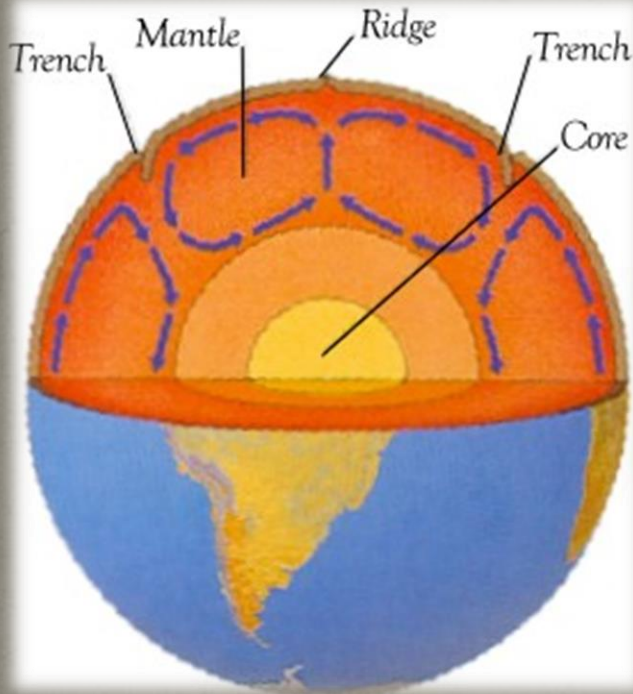


Continental Drift:

- The hypothesis that the continents are slowly moving across Earth's surface.



What causes the plates to move?

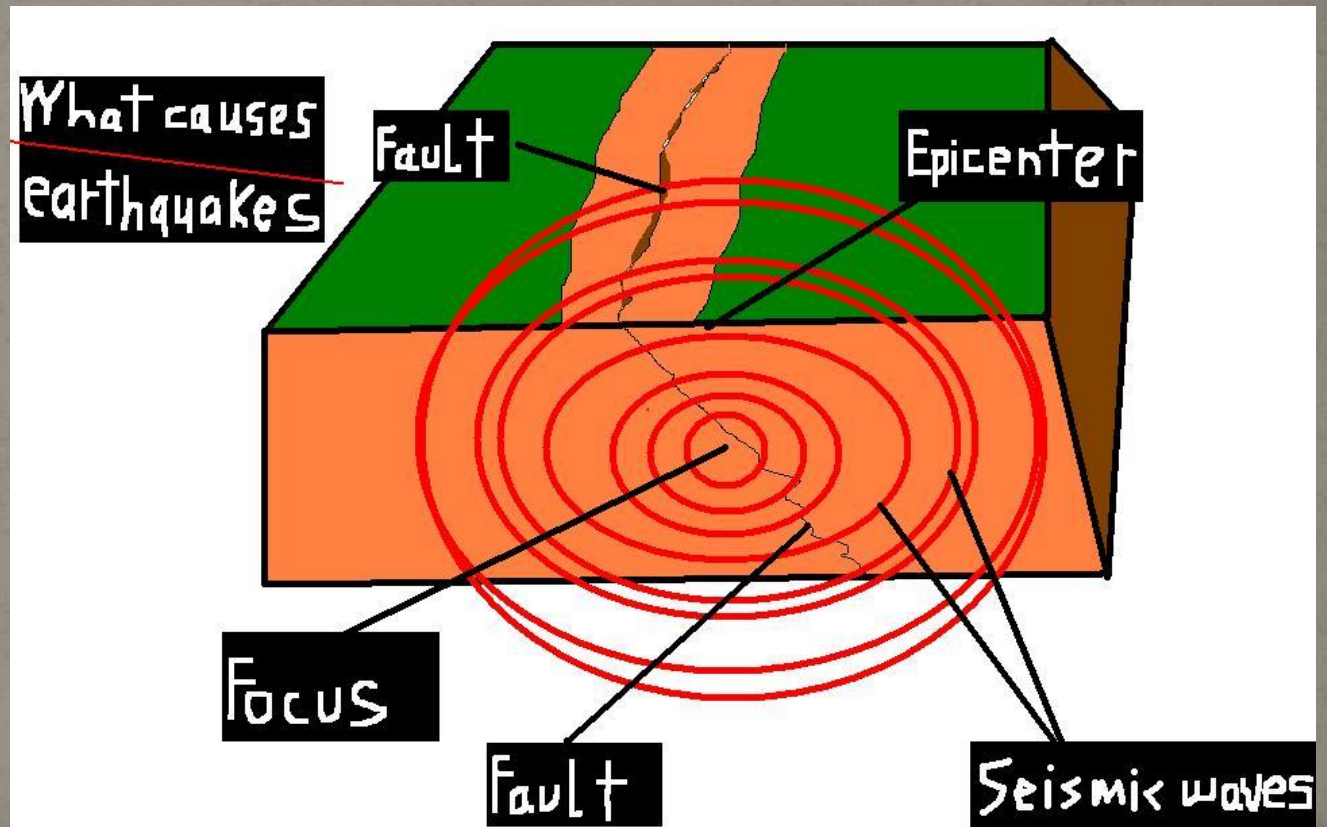


- Geologists believe the movements of Earth's plates are caused by convection currents within the Earth's mantle.

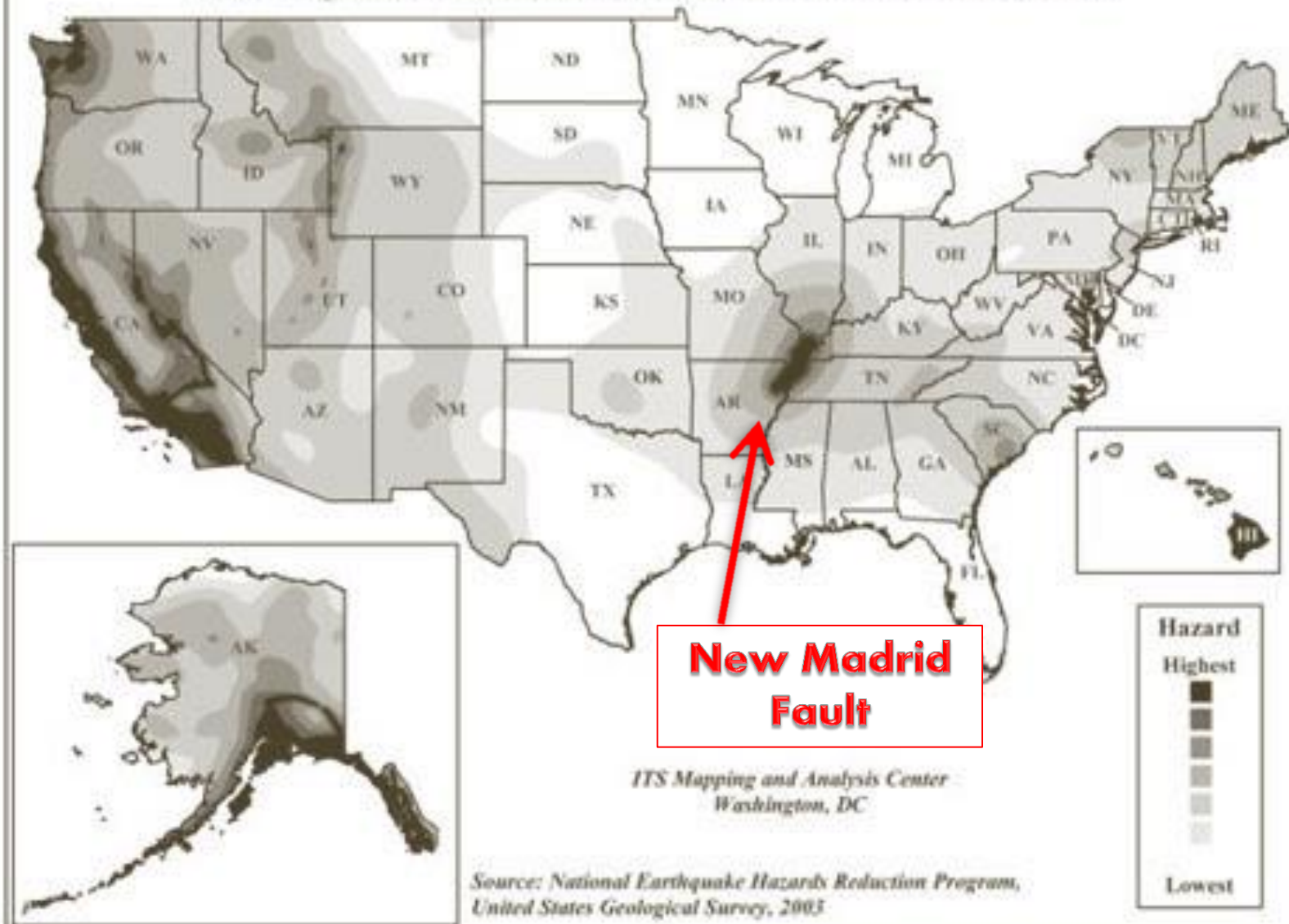
Convection Currents in the Mantle:

Hot liquid rock (magma) rises, cooler rock sinks. After hot liquid rock rises, it will cool down as it reaches closer to Earth's surface, and then sink again until it melts, and then rise again until it cools, and sink again until it melts, and rise again until it cools, and sink again until it melts....and so on (I think you get the point). This is called the Rock Cycle.

Fault: A break in Earth's crust where masses of rock slip past each other.



Earthquake Hazard Areas in the United States



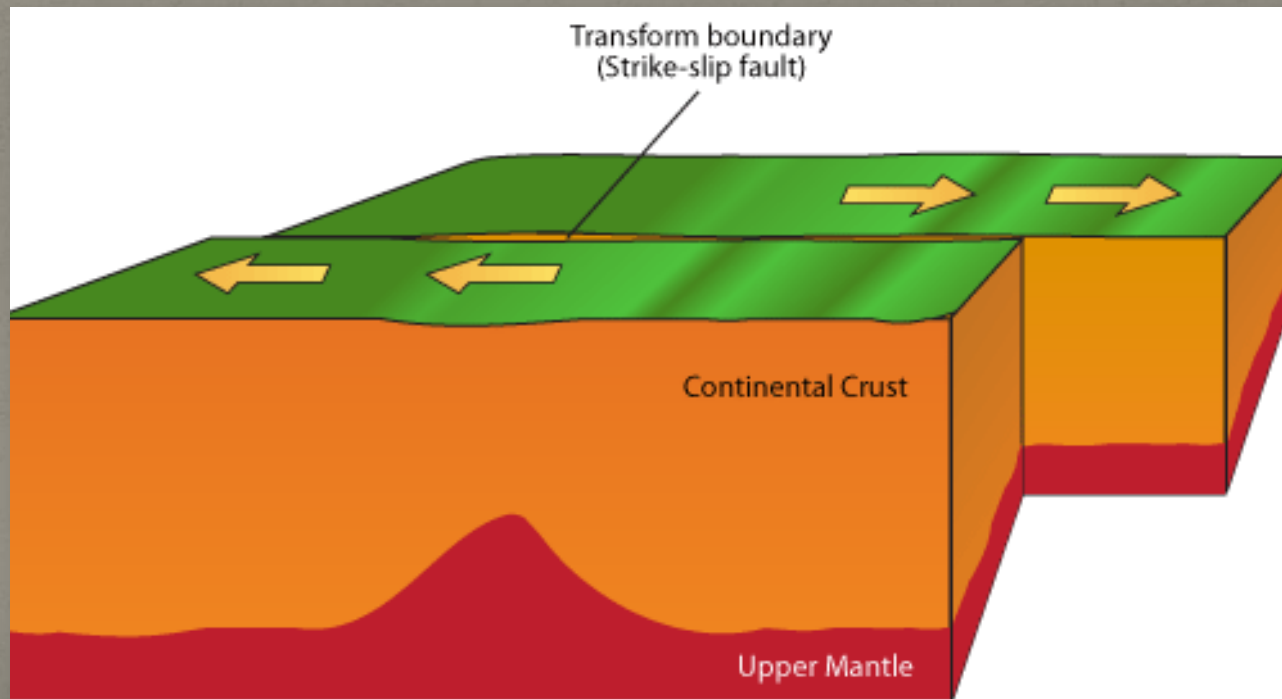
(Click on Picture)



An earthquake occurs every time crustal plates move.

Transform Boundary:

- Where two crustal plates grind past each other.
- Creates earthquakes.



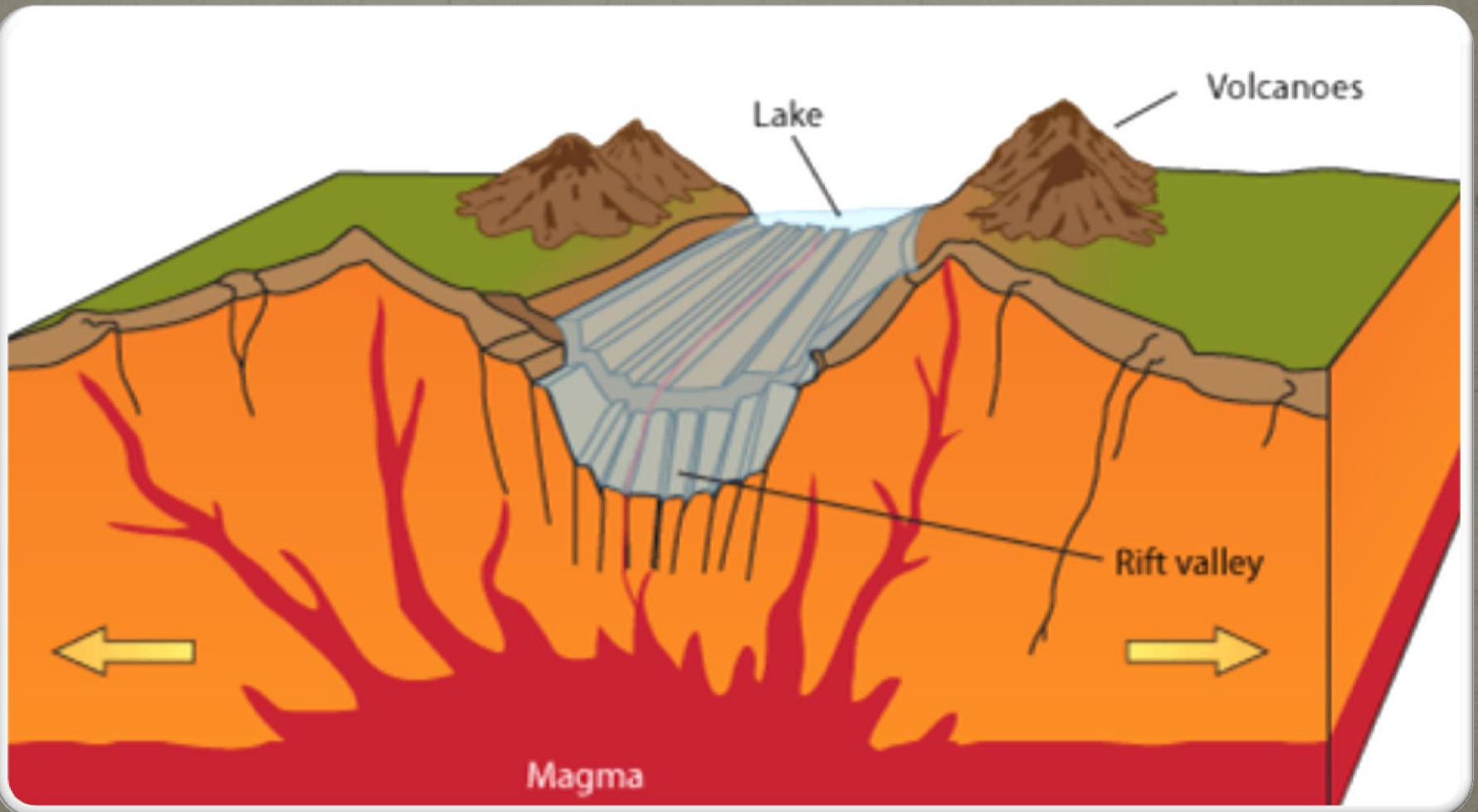
Divergent Boundary: Where two crustal plates move away from each other.



Real life Rift
Valley ----->

- Creates: rift valleys (on land), sea floor spreading (in the ocean), and earthquakes.

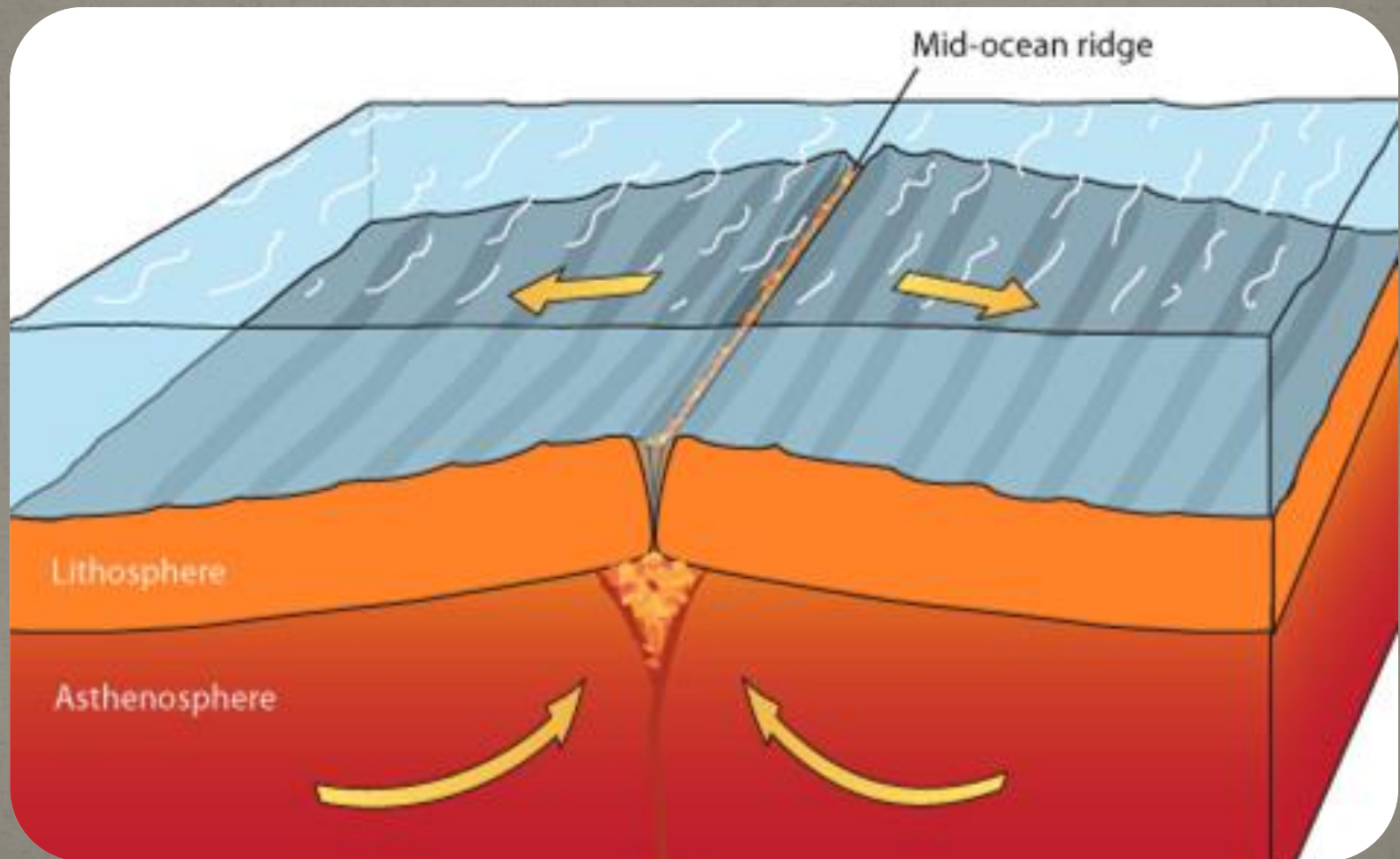
Continental $\leftarrow \rightarrow$ Continental Rift Valley (Divergent Boundary)



emgM

Oceanic Plate \leftrightarrow Oceanic Plate

Sea Floor Spreading (Divergent Boundary)



Convergent Boundary:

Where two crustal plates come together.

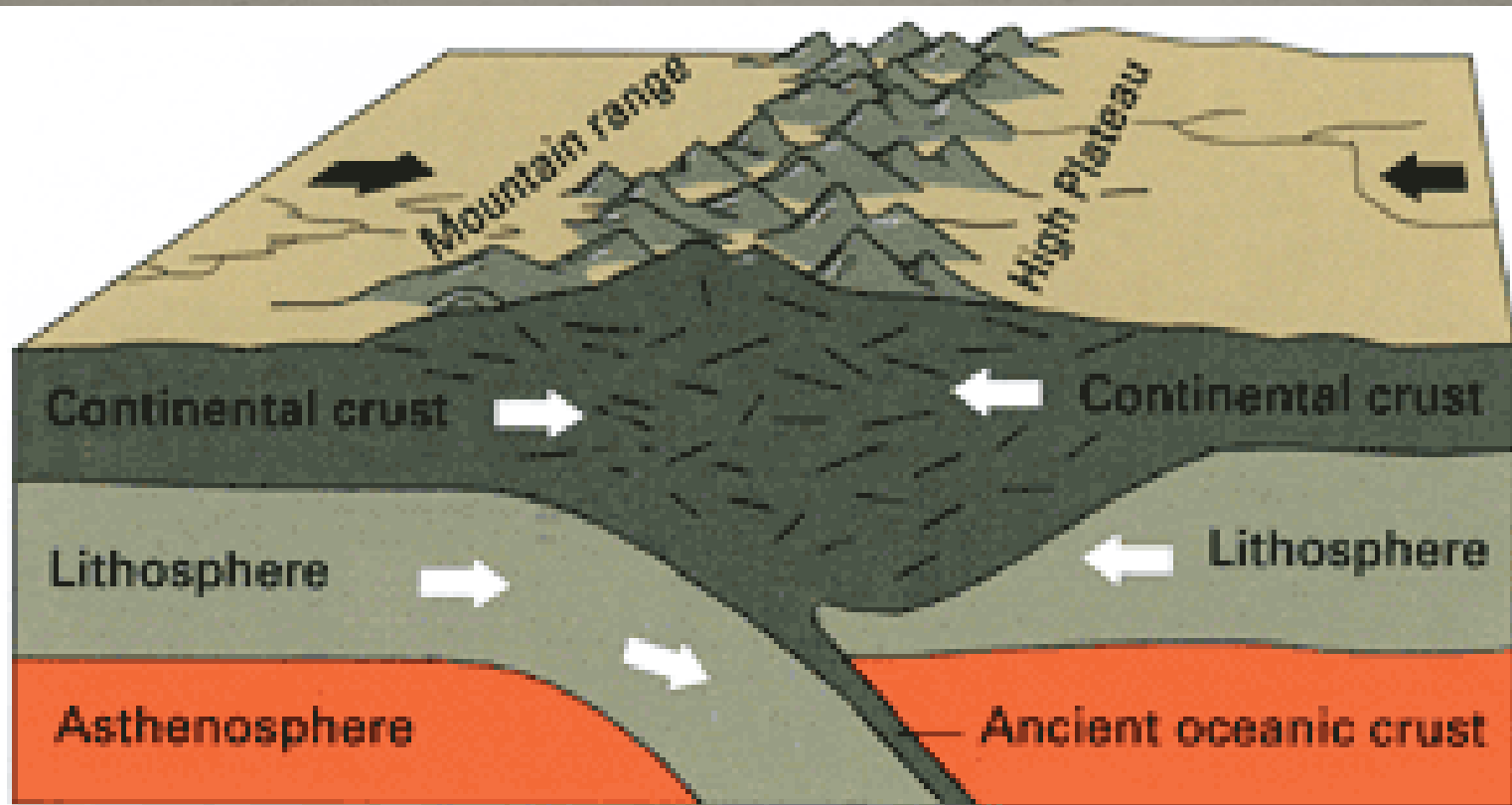
Creates: mountains, volcanoes, ocean trenches, and earthquakes, tsunamis, and island arcs.

Real Life
Volcano ----->



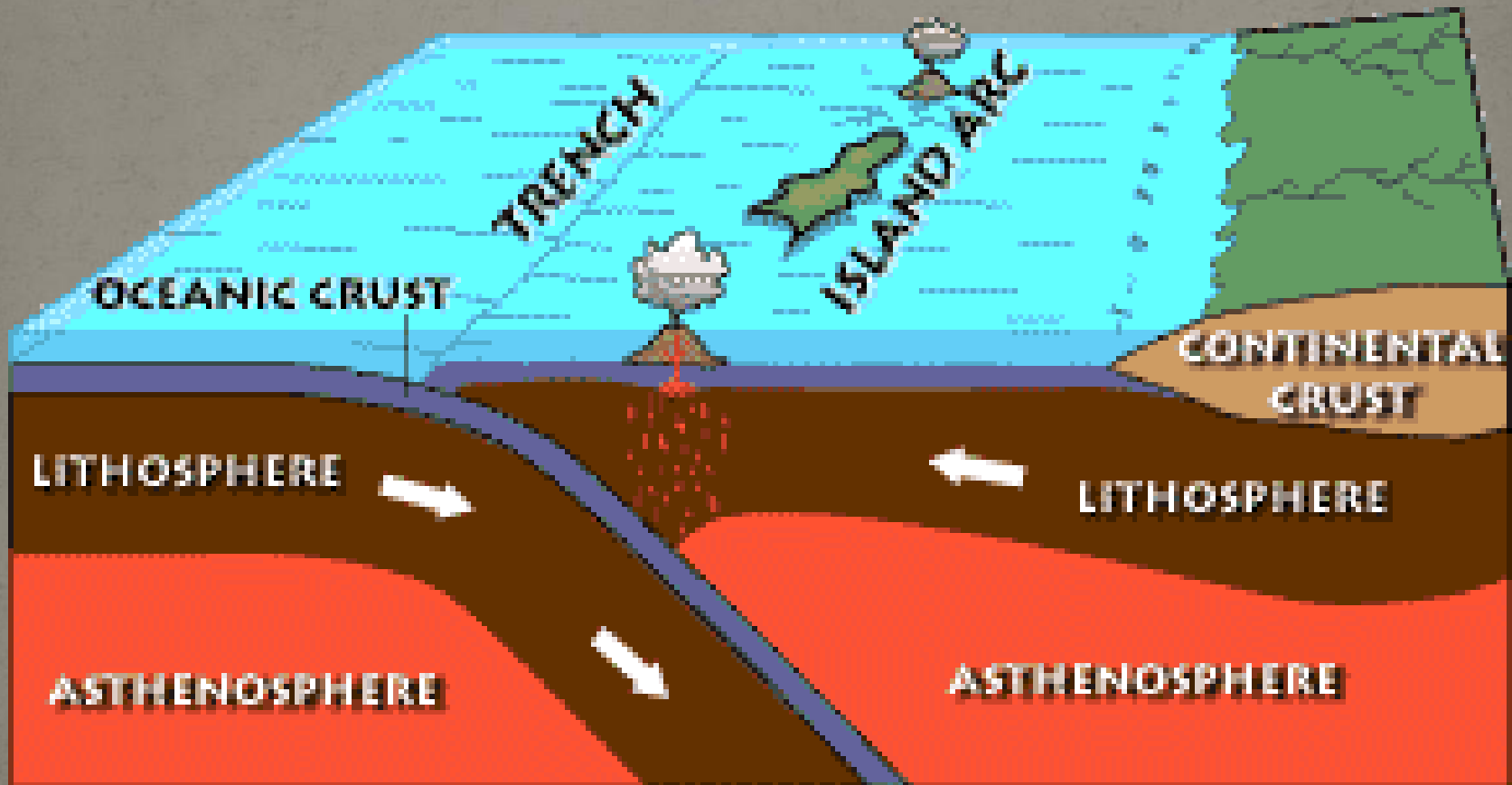
(Click on Picture)

Convergent Boundary: Continental → ← Continental



Continental-continental convergence

Convergent Boundary: Oceanic → ← Oceanic



Convergent Boundary: Oceanic → ← Continental

