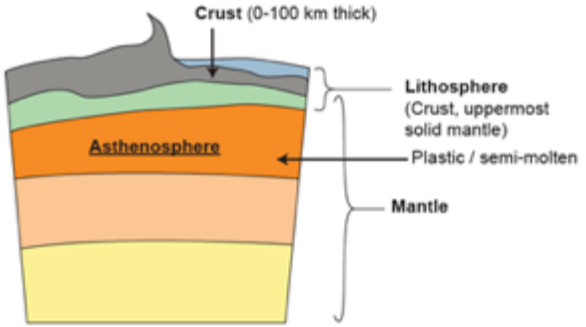
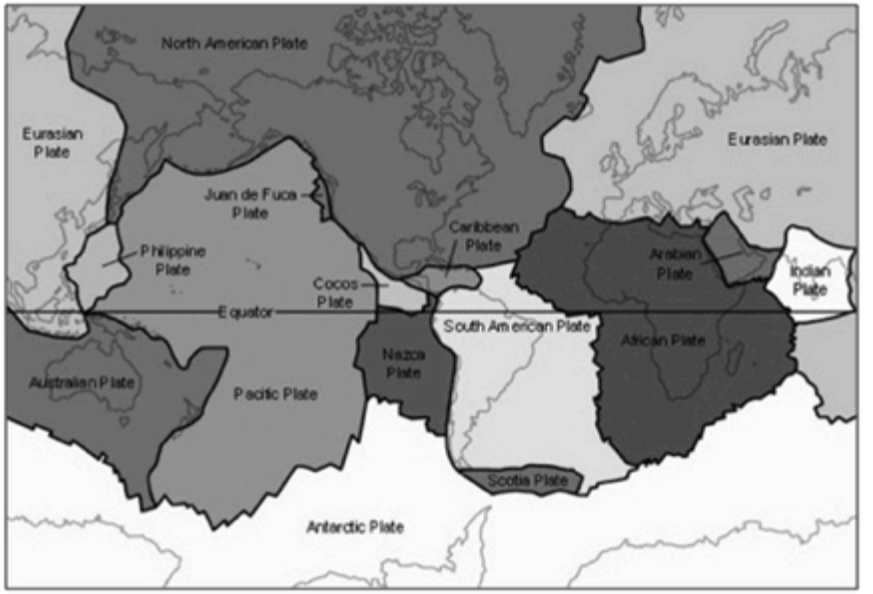
Plate Tectonic Theory

Picture Vocabulary

7.E 6.5 and 6.7 Plate Tectonic Theory

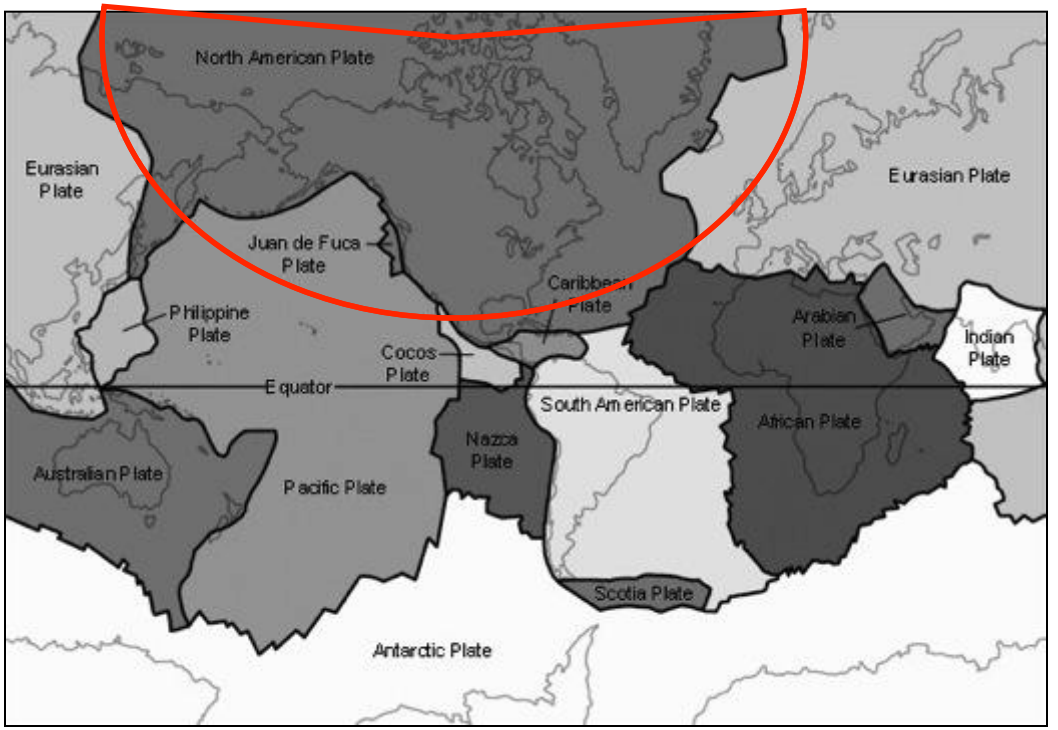
Tectonic Plates





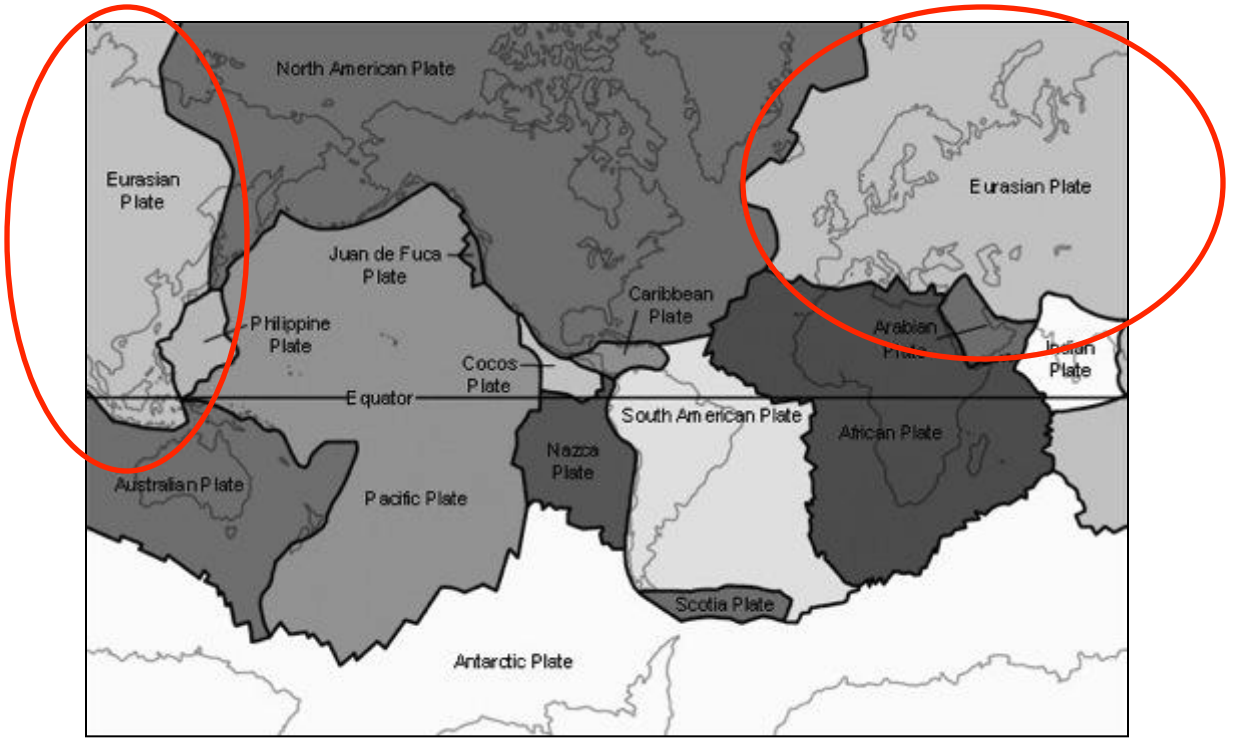
Huge pieces of lithosphere that slowly move on the asthenosphere and consist of the crust and the rigid, uppermost part of the mantle

North American Plate



A tectonic plate division of the lithosphere that includes the continental crust of Greenland, North America, Siberia, and the surrounding oceanic crust

Eurasian Plate



A tectonic plate division of the lithosphere, including most of the landmasses of Europe and Asia

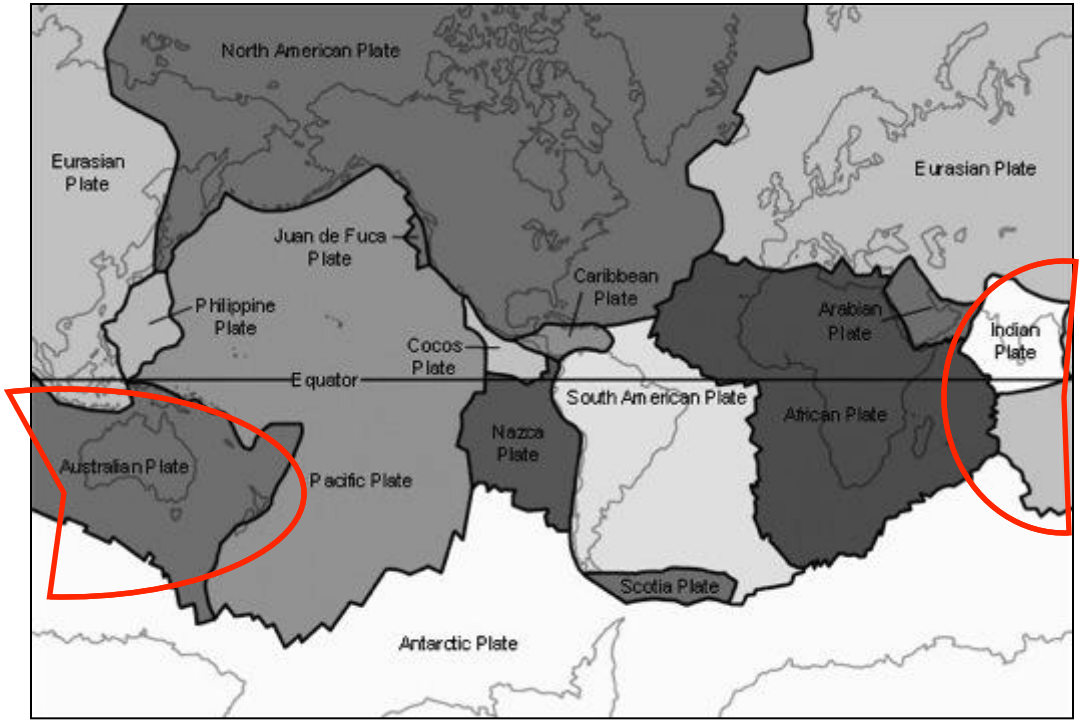
African Plate

A tectonic plate division of the lithosphere that includes the continental crust of Africa and the surrounding oceanic crust

South American Plate

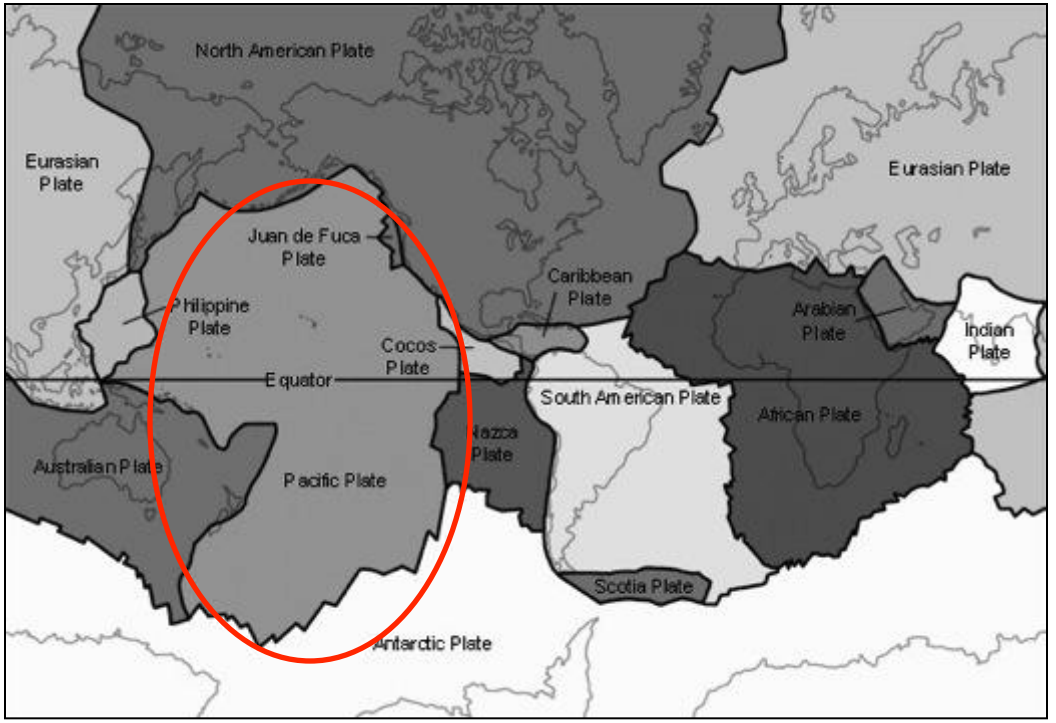
A tectonic plate division of the lithosphere that includes the continental crust of South America and the oceanic crust extending to the Mid-Atlantic Ridge

Indo-Australian Plate



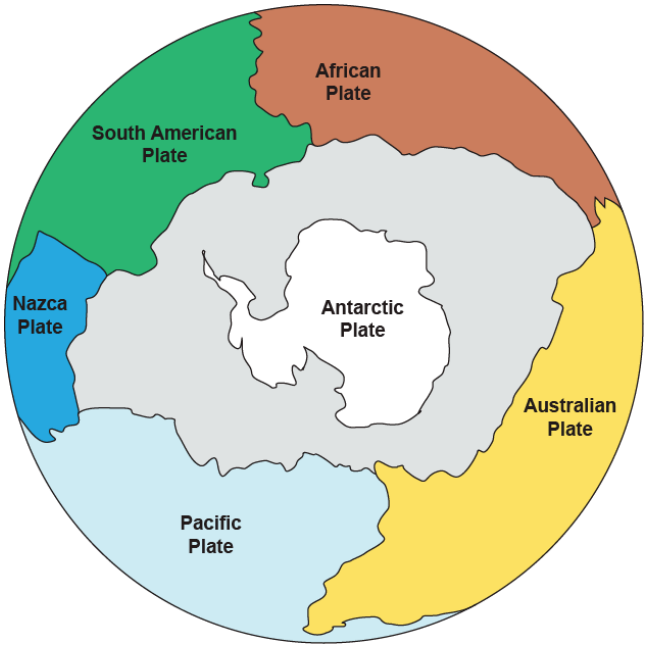
A tectonic plate division of the lithosphere that includes the continental crust of India and Australia and the surrounding oceanic crust

Pacific Plate



A tectonic plate division of the lithosphere that is composed entirely of oceanic crust and lies beneath the Pacific Ocean

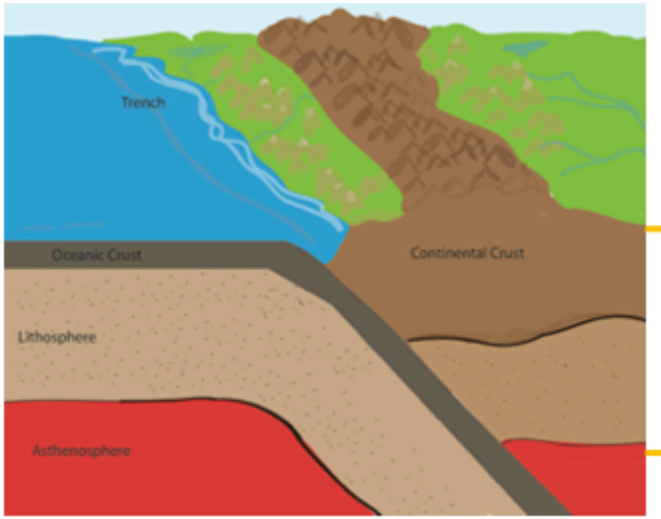
Antarctic Plate



A tectonic plate division of the lithosphere that includes the continental crust of Antarctica and the surrounding oceanic crust

Density of Plates

Dense Oceanic Plate, composed of iron-rich basalt rocks



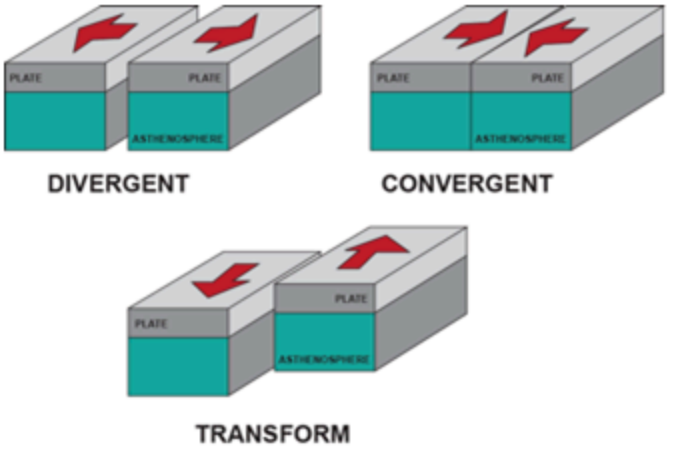
Less Dense Continental Plate, composed of silica-rich granite rocks

Density is the amount of matter in a given space or volume; oceanic crust is thinner, but denser, than continental crust.

Crustal Rock Material

Crust can be either oceanic, which is thin and dense, or continental, which is thick and less dense.

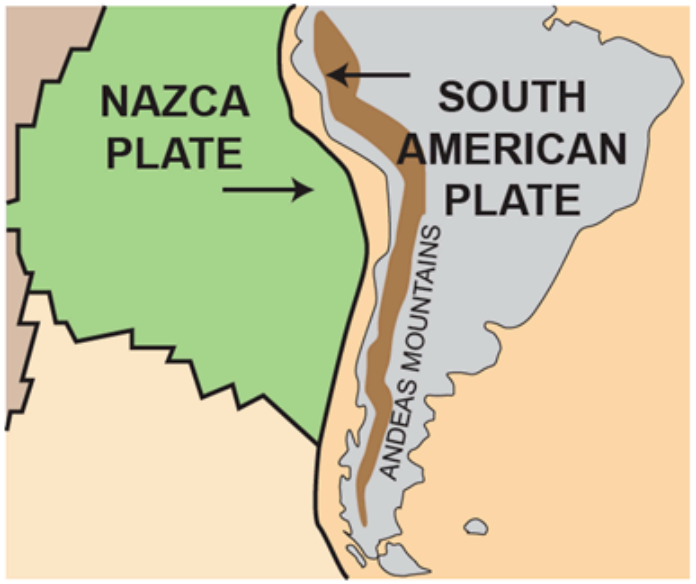
Plate Boundary



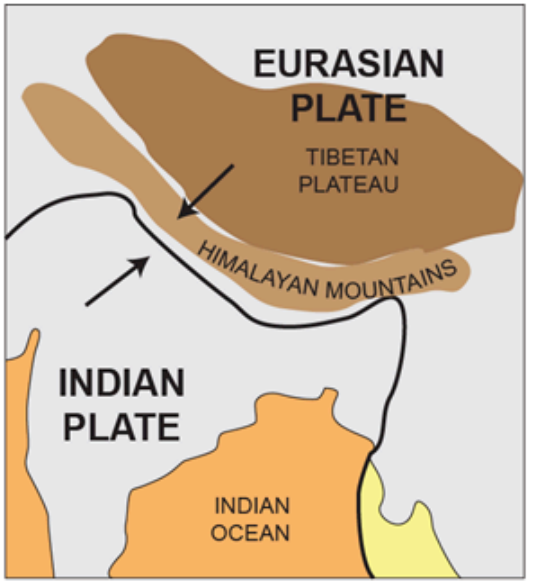
The place where two different plates have contact

Convergent Boundary

Oceanic Plate / Continental Plate



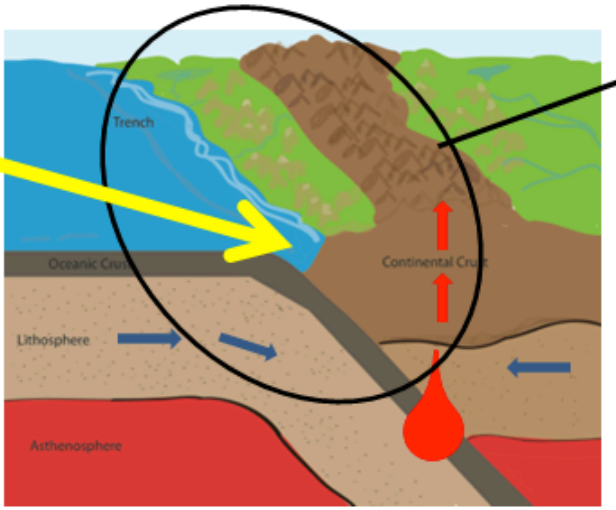
Continental Plate / Continental Plate



Occurs when two tectonic plates move toward each other and collide

Subduction

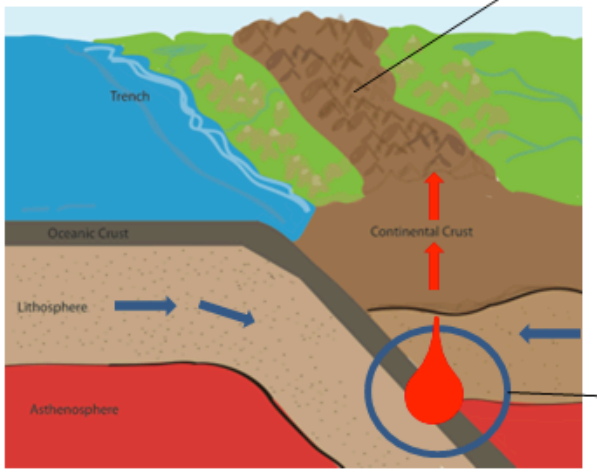
Note the formation of a trench within the Subduction Zone



Subduction Zone

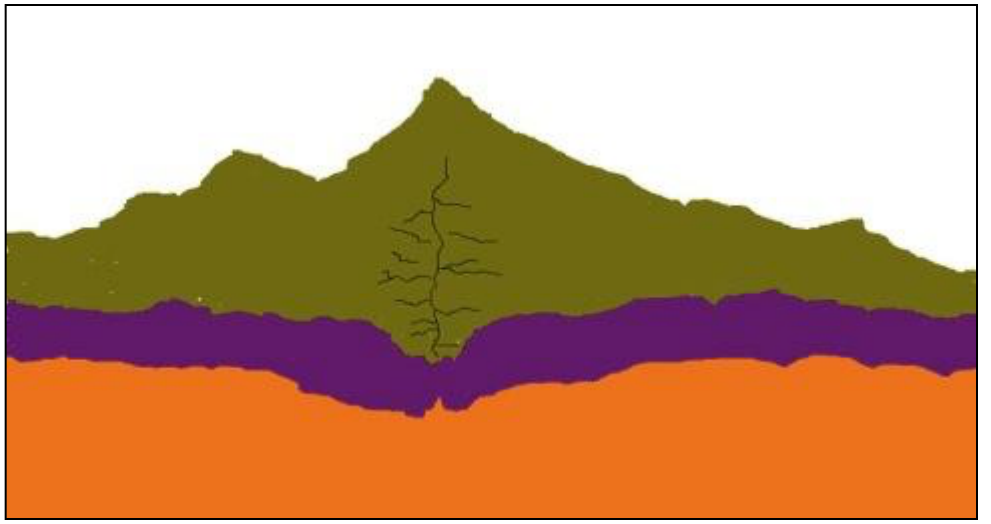
Subduction occurs when one plate is denser than another and is forced below as the two plates converge at their boundary. Oceanic trenches are formed by the subduction of an oceanic plate.

Volcanic Eruptions



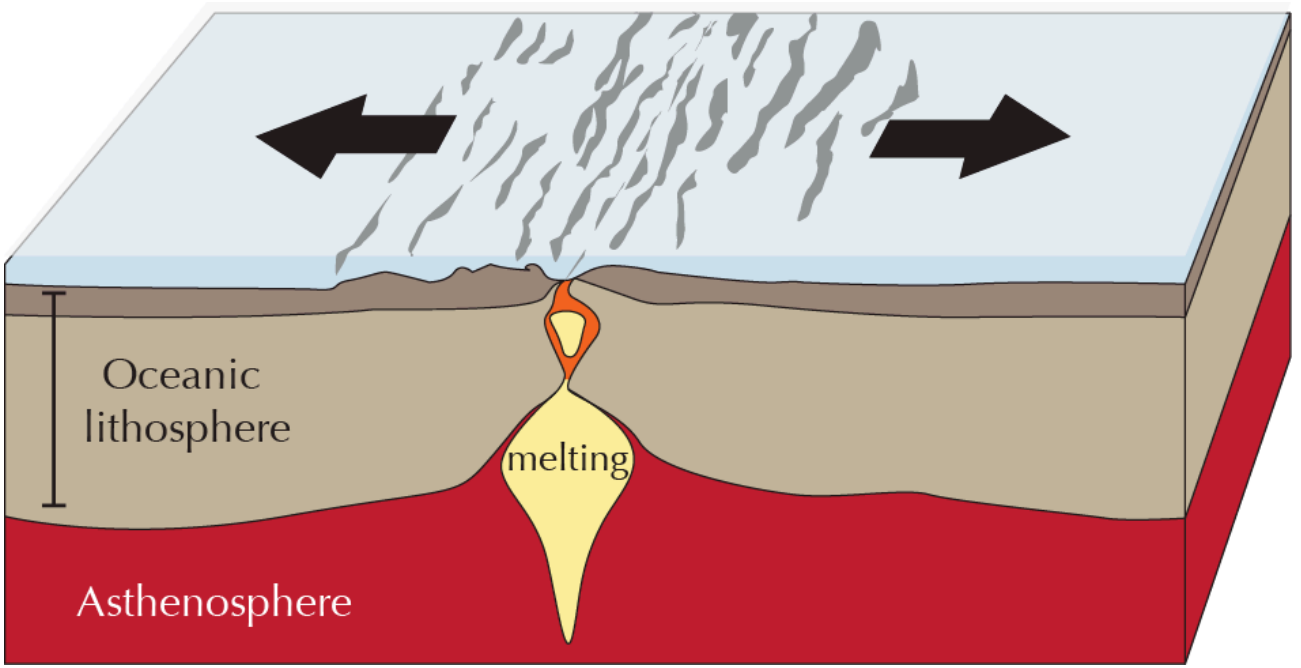
Events in which molten rock spews out from the mantle to the surface of Earth as ash, lava, and gases; major geological events that occur when a dense plate subducts below a less dense plate

Mountain Building



Major geological event that occurs when continental plates of equal density converge, resulting in mountain chains

Divergent Boundary

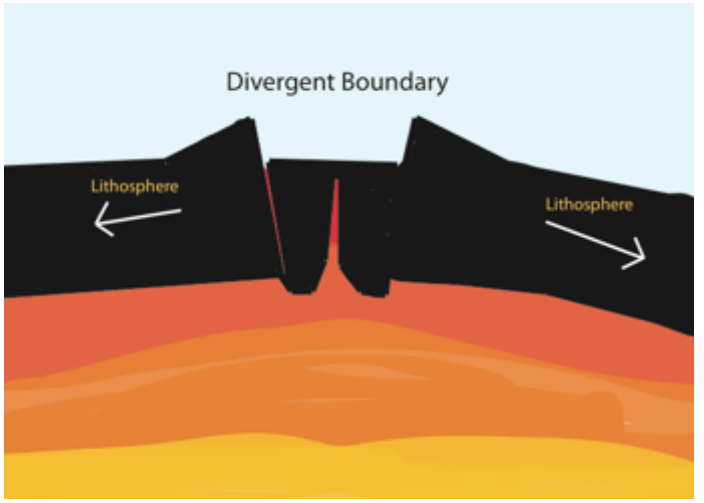


Occurs when two tectonic plates move away from each other

Spreading Ridges

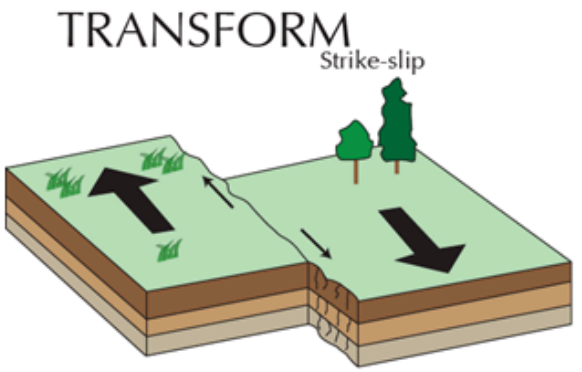
Ridges formed from new crustal material at diverging oceanic plate boundaries

Ocean Basin



An area of oceanic crust covered by seawater and surrounded by areas of continental crust

Transform Boundary

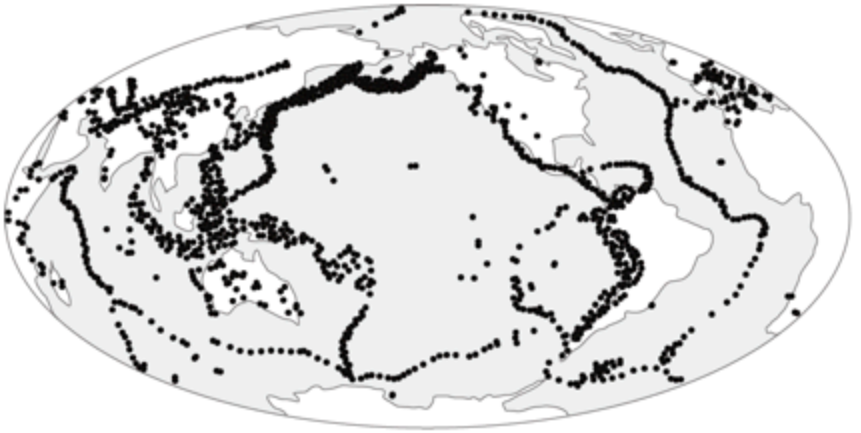


California's San Andreas Fault is along a transform boundary

Occurs when two tectonic plates slide past each other

Earthquakes

Earthquake Epicenters



Major geological events that occur when plates shift suddenly and release stored energy; frequent occurrences along all types of plate boundaries