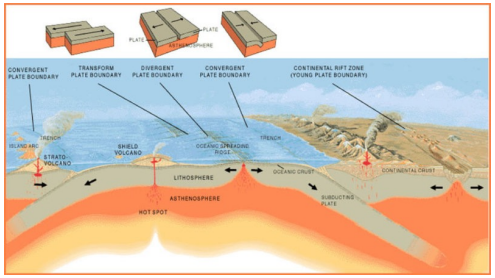
Tectonic Plates and Changes in the Crust

Plate boundaries interact with different types of plate interaction zones. Interaction zones are responsible for geological activity in the earth

The earth is under constant change due to *continental drift*, the movement of plates through the process of earthquakes and volcanos



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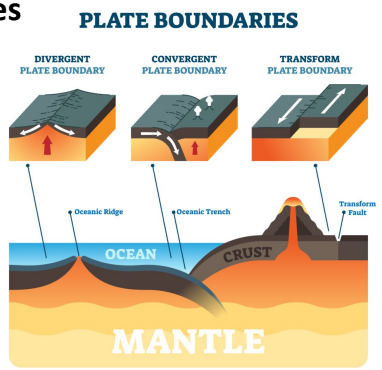
Tectonic Plate Boundaries

At the plate boundaries the plates move relative to each other

All plates on the earth are connected to each other based on the *continental drift* theory

When one plate expands (*divergent boundary*) another plate contracts (*convergent boundary*)

Plates can also slide past each other (*transform boundary*)



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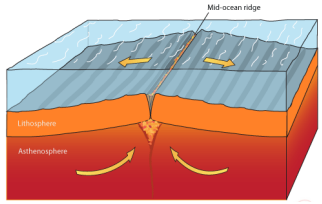
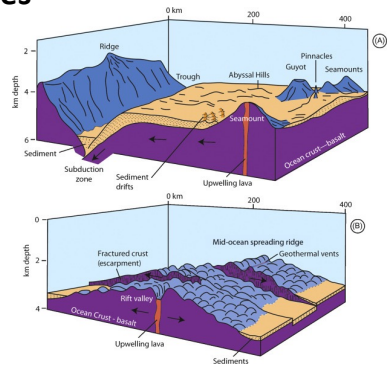
Tectonic Plate Boundaries

Divergent Plate Boundary

Plates separate allowing lava to push up forming an oceanic ridge and volcanic (*lava flow*) activity





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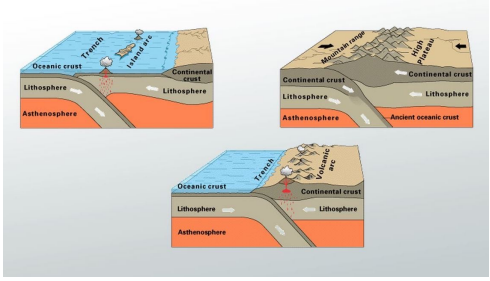
Convergent Plate Boundary

Plates collide at a *subduction zone*. One plate pushes below another plate with the extra crust being absorbed into the lower mantle layer

Oceanic – Oceanic
Ocean trench forms below the water

Ocean – Continent
Volcanos rise by ocean trench on crust

Continent – Continent
Mountain ranges form with high plateau



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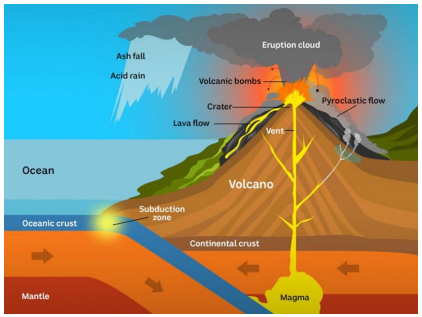
Parts of a Volcano

Convergent boundaries allows magma to flow to surface

Subduction Zone
Location of crust movement
Lava Vent
Location of lava flow from magma to surface
Crater
Large hole formed due to lava vent and explosions
Eruption Cloud
Gas / Rock discharge from lava



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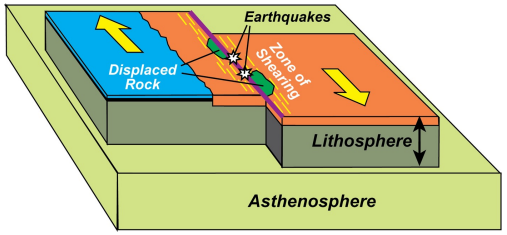
Tectonic Plate Boundaries

Transform Plate Boundary

Plates slide along each other causing shear forces (*quick shock to crust*) that lead to earthquakes (*shaking of crust by shear plate forces*)



Transform boundaries move quickly jolting the ground for many seconds. The intensity of the quake is measured by the *Richter Scale.*

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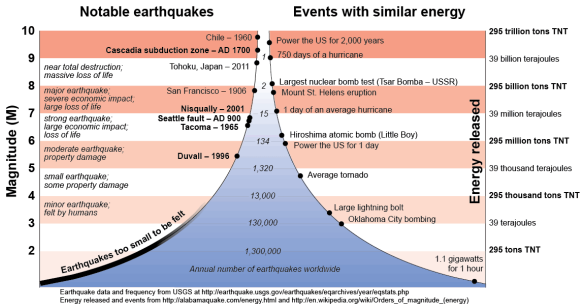
Earthquake energy and frequency

Scale: 1 – Weakest Quake
Scale: 10 – Strongest Quake



Most Powerful Earthquake
April 19, 1908 – Magnitude 7.9

The *Richter Scale* [1-10] is based on the magnitude of an earthquake

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