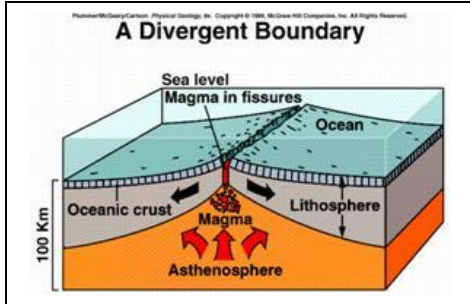


Plate Boundaries

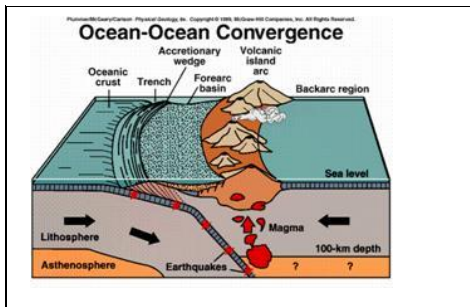
D
i
v
e
r
g
e
n
t



- Most often occurs at mid-ocean ridges
- Magma rises by convection beneath the crust, pressure causes the crust to crack or fissure, and magma pushes the crust away from the fissure.
- New crust is formed at the divergent plate boundary as the magma cools and hardens and pushes the older crust away from the fissure.

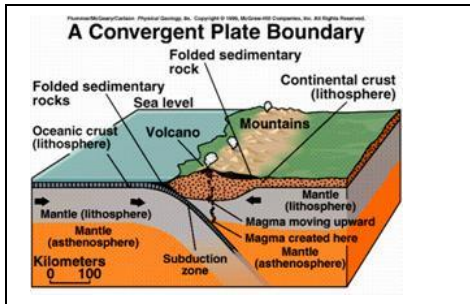
Subduction Zone: sliding of one plate underneath another.

C
o
n
v
e
r
g
e
n
t



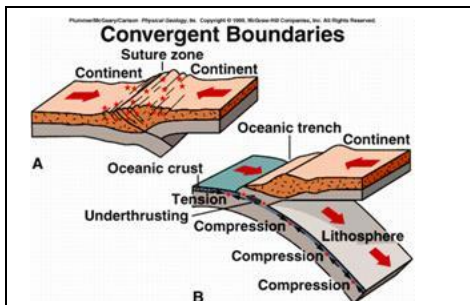
- If two oceanic plates collide the older, denser crust/plate will sink or subduct under the younger lighter crust/plate.
- If the subducting plate melts the resulting magma is buoyant and floats to the surface and if it finds a weakness will flow out as lava.
- The pushing up of crust and lava flow creates a Volcanic Island Arc. The Philippines Islands are an example.

C
o
n
v
e
r
g
e
n
t



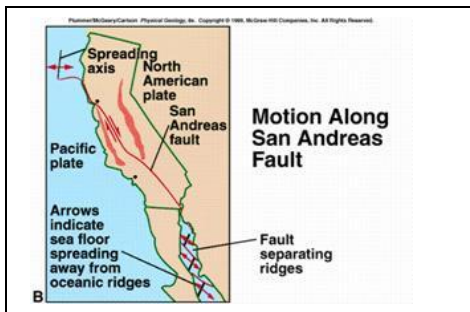
- If oceanic crust collides with continental crust, the oceanic crust is always denser than the continental crust so it is always the oceanic crust that subducts.
- If the plate subducts far enough it will melt, the buoyant magma will rise pushing up the crust above it forming young mountain belts along the coast of the continent which parallels the subduction zone. If the magma reaches the surface an active volcano is formed. The Cascade Mountains are an example.

C
o
n
v
e
r
g
e
n
t



- If two continental crusts collide the older, denser plate sinks slightly but doesn't subduct.
- As the two continents press against each other there is nowhere to go but up and mountains are formed as the land crumples.
- The Himalayas in Northern India are an example.

T
r
a
n
s
f
o
r
m



- Sometimes plates just slip past each other.
- The San Andreas Fault is a famous transform fault boundary.