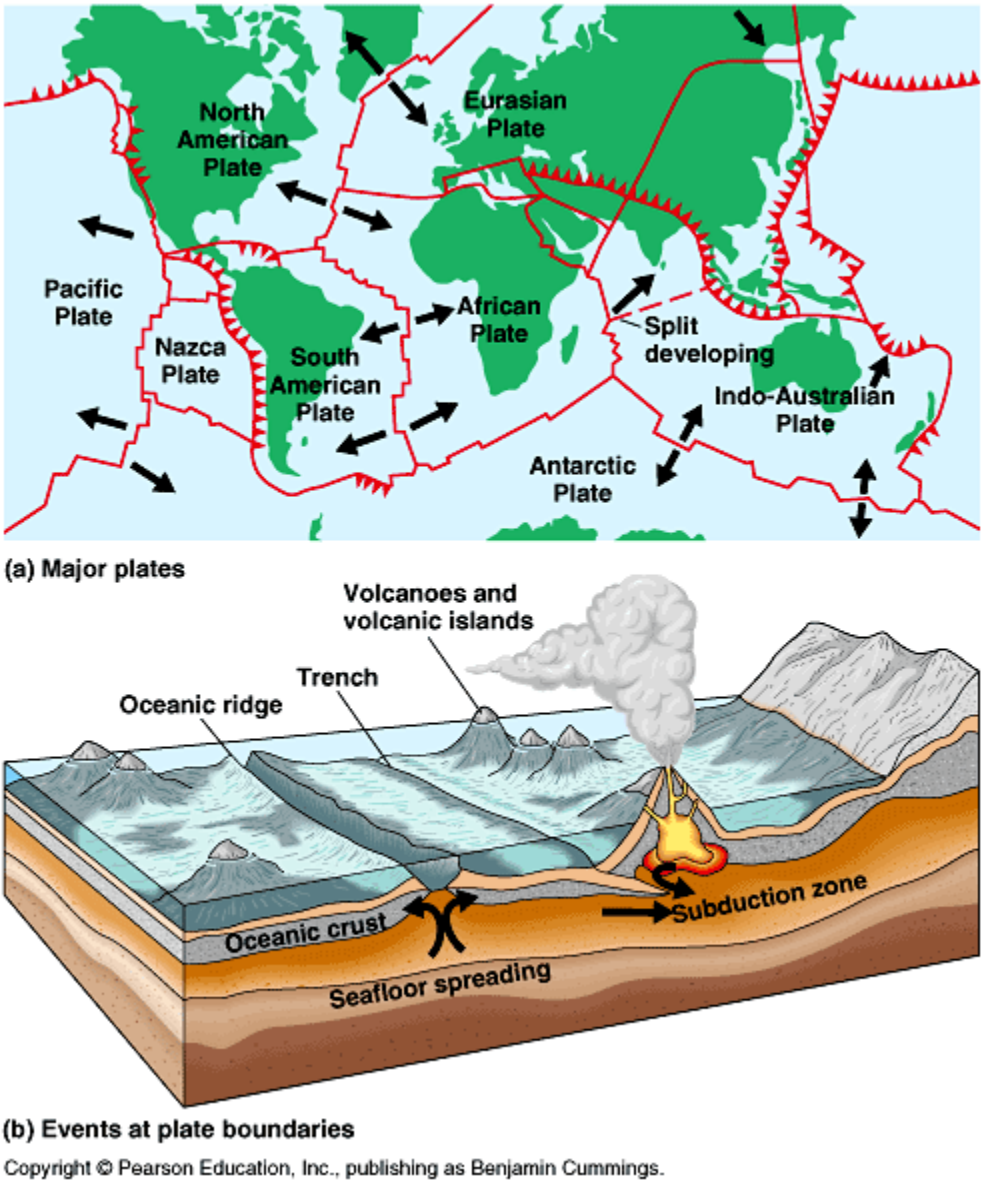
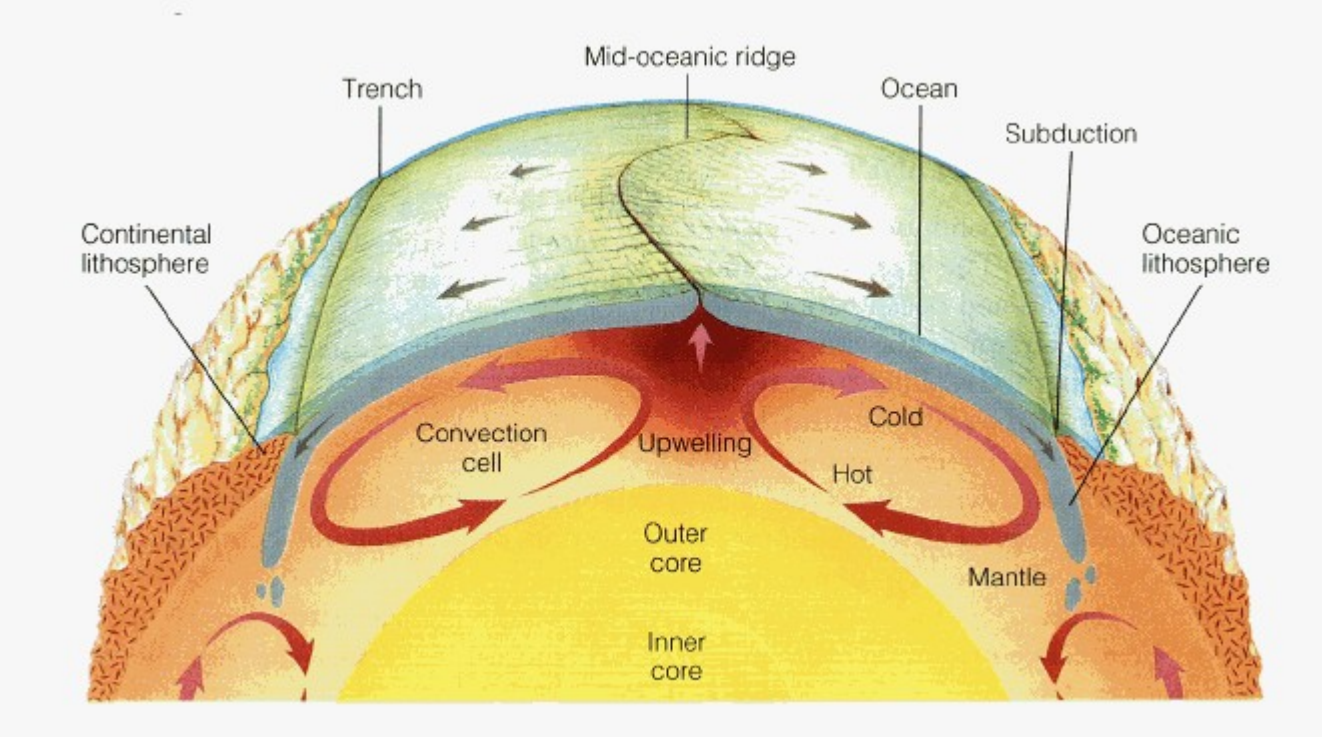
Plate Tectonics

Lithosphere of Earth divided into plates that move relative to each other.



http://kentsimmons.uwinnipeg.ca/16cm05/1116/25-03-PlateTectonics-L.gif

Movement caused by convection in the Earth's mantle.



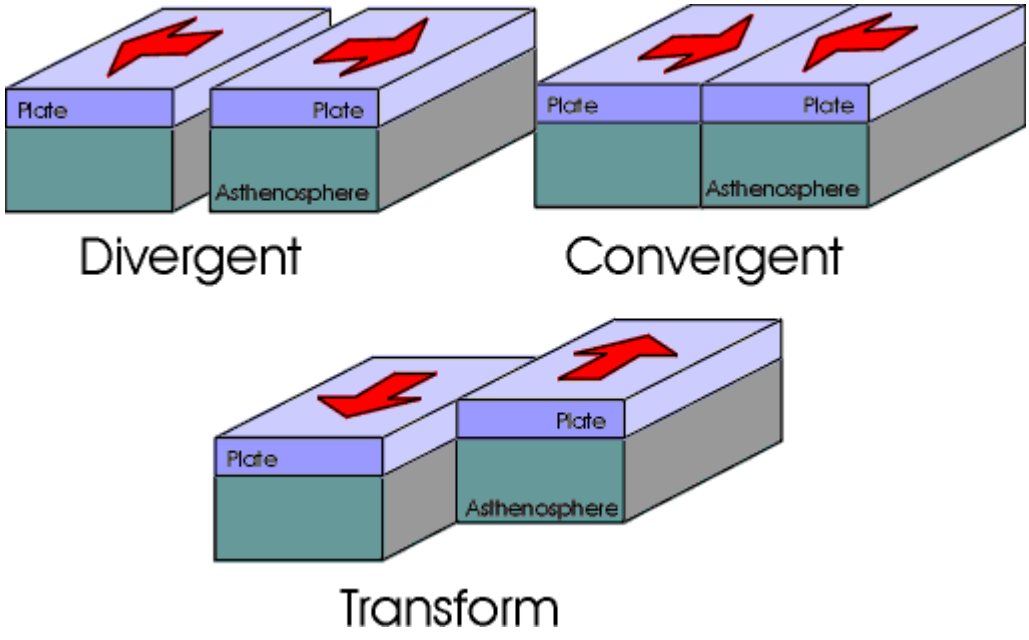
http://bprc.osu.edu/education/rr/plate_tectonics/mantle_convection_cell.gif

Plate Boundaries

Divergent – Plates move apart.

Convergent – Plates move toward each other.

Transform – Plates move sideways.



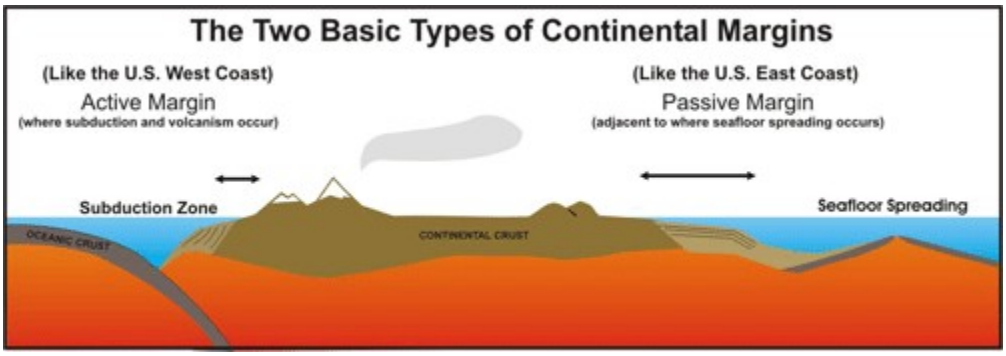
http://geology.csupomona.edu/drjessey/class/Gsc101/boundaries.gif

Each individual plate has all 3 types of boundaries.

Aulocogen: Failed rift. New fault wasn't able to create plate boundary and create new plates.

Active continental margin – edge at boundary

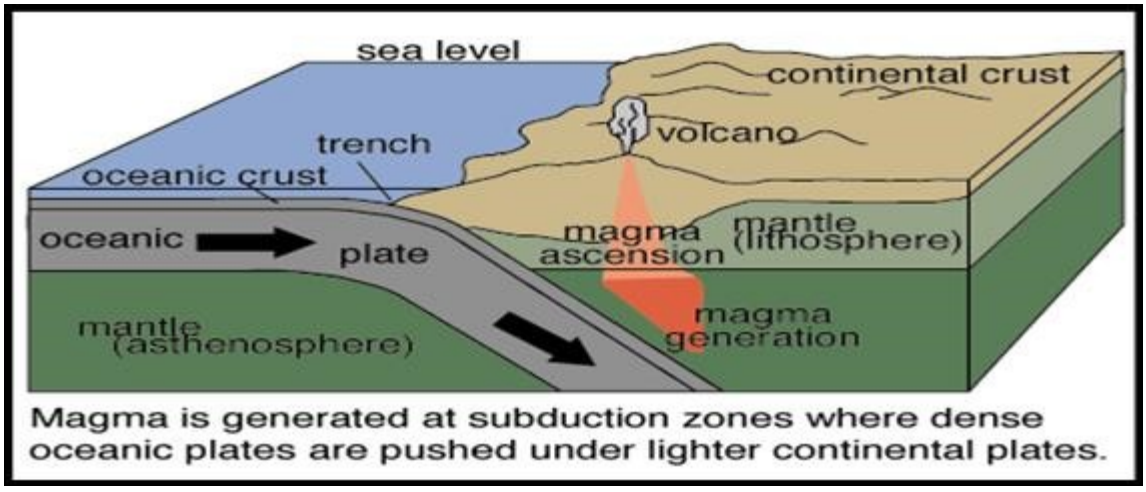
Passive continental margin – created by rifting, edge at center.



http://sio.ucsd.edu/png/science/images/margin-types_sm.gif

Subduction occurs at convergent plate boundary.

Subduction – plates move beneath one another.

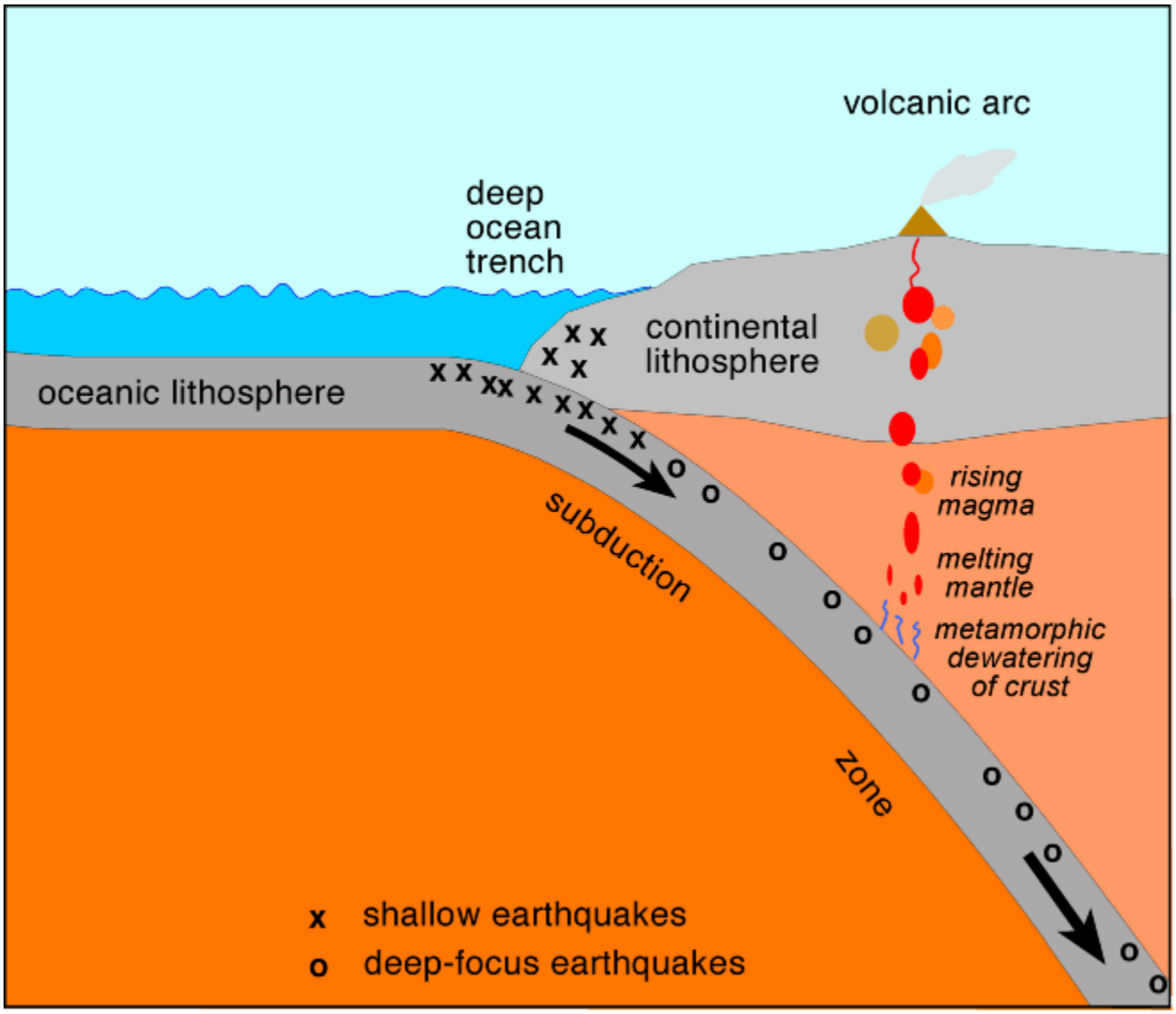


http://www.miracosta.edu/home/JTurbeville/Igneous%20Fieldtrip/regional%20geology_files/image005.jpg

Orogeny – Mountain building.

"Subduction leads to orogeny."

Deep ocean trenches are subduction boundaries.



http://myweb.cwpost.liu.edu/vdivener/notes/subd_zone.gif

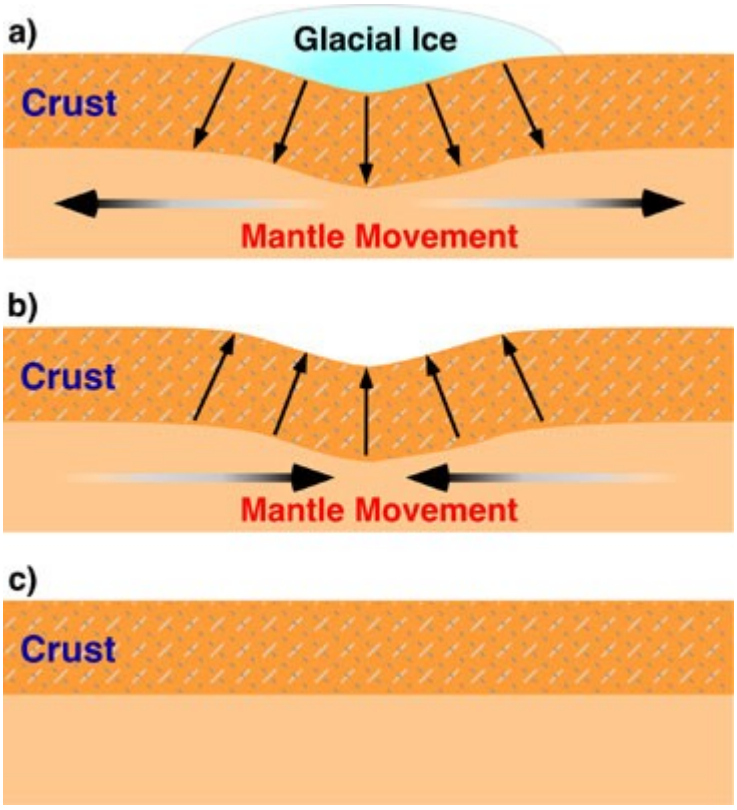
Subduction requires at least one piece of oceanic crust.

Oceanic crust is constantly being recycled and remade by processes of subduction and mid ocean rift.

Continental crust is not dense enough to undergo the process of subduction.

Isostasy – Earth's surface is floating on top of the athenosphere.

Continental crust is lighter and less dense than oceanic crust.



http://www.physicalgeography.net/fundamentals/images/isostasy.jpg