ESS 100 (Stapleton) Name: _____
Plate Tectonics, Part 2

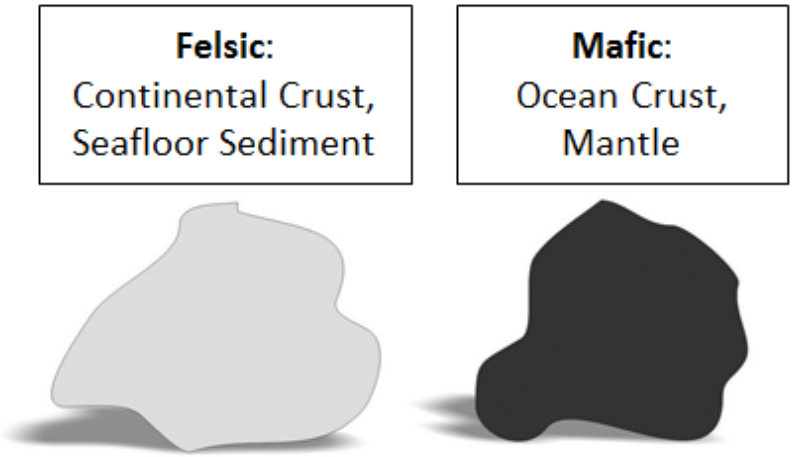
Two General Categories of Rocks: **Mafic and Felsic**

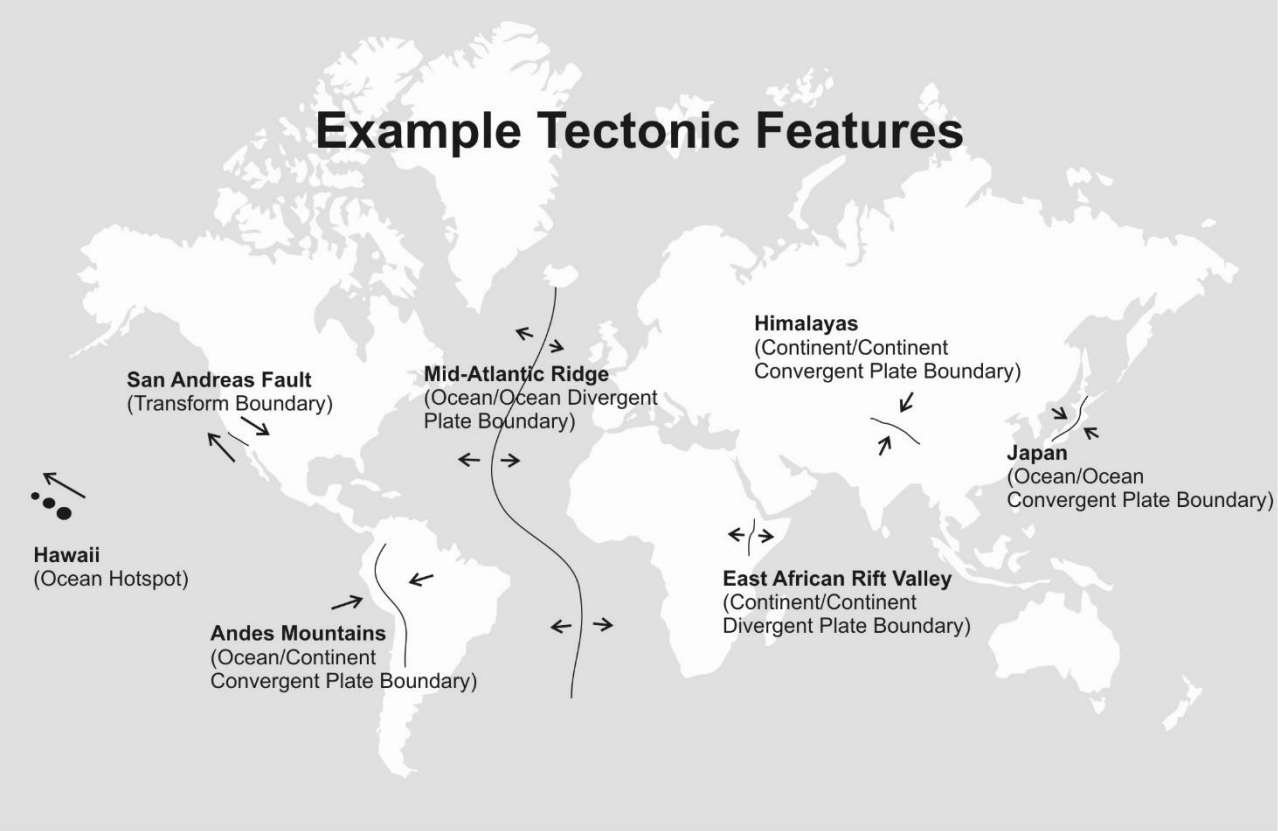
Characteristics of Mafic Rock:

- Dark in color
- More Dense
- Low Viscosity (runny) when turned to magma
    - Does not build up high pressure, so it roduces gentler eruptions
    - Does not pile up, so volcanoes are lower and rounder
- An example of this type of rock is basalt
- Found mostly in the mantle and in ocean crust (because it is dense, and it sinks)
- It is called "mafic" because it contains the elements Magnesium (symbol **Ma**) and Iron (symbol **F**e).

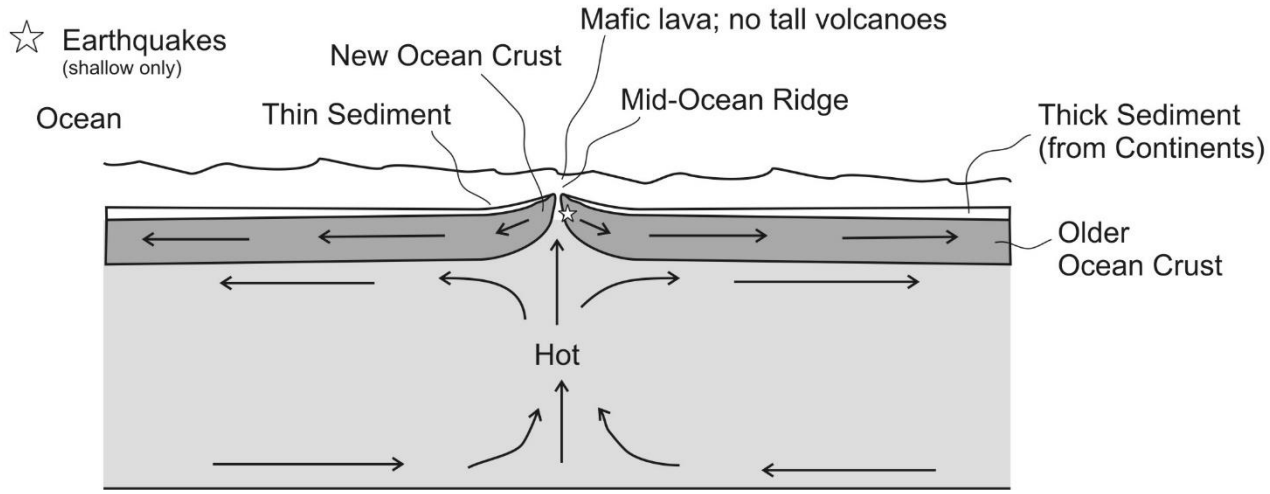
Characteristics of Felsic Rock:

- Light in color
- Less dense
- High Viscosity (gooey) when turned to magma
    - Builds up pressure and makes volcanoes more explosive
    - Piles up, so it makes volcanoes steeper
- An example of this type of rock is granite
- Found mostly in continental crust and in seafloor sediment.
- It is called "felsic" because it contains the minerals **Fel**dspar and **Si**lica.

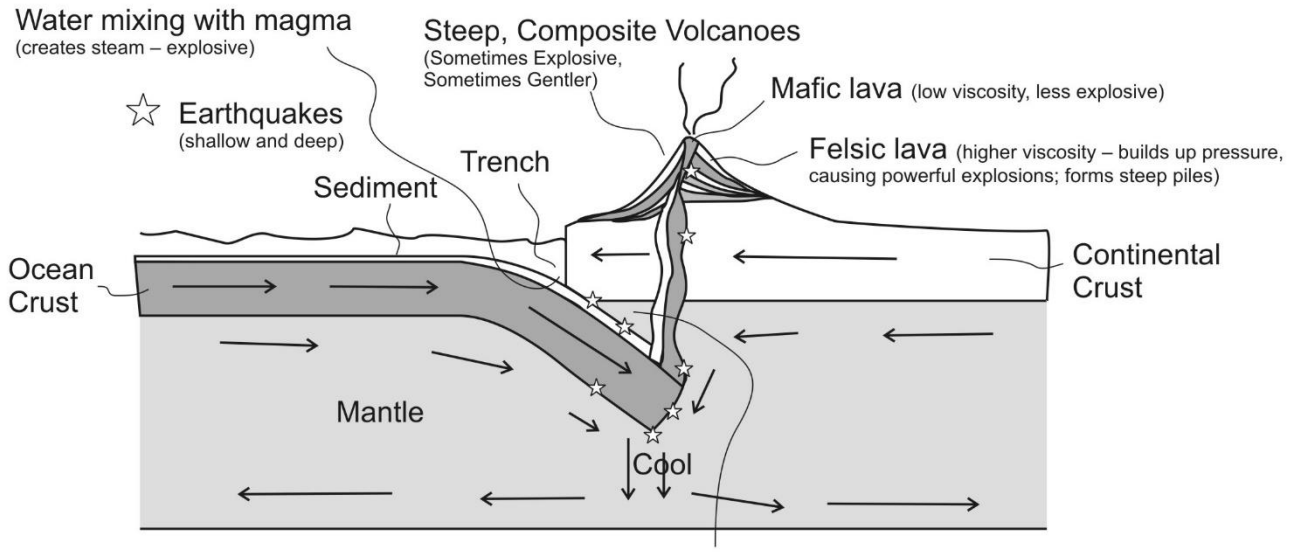




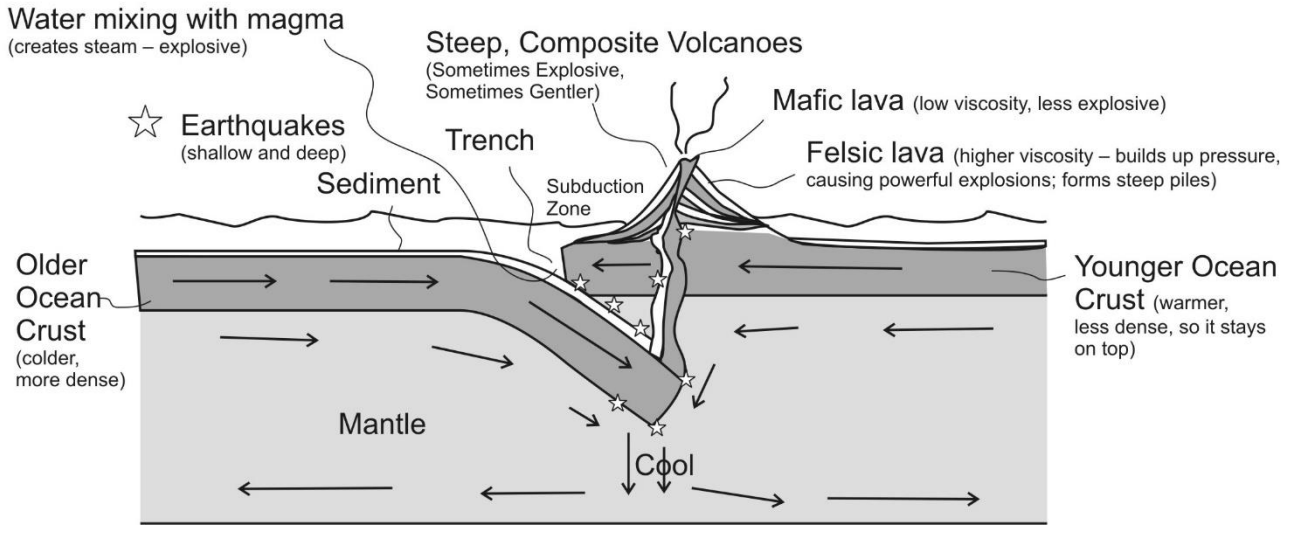
Ocean/Ocean Divergent
Example: Mid-Atlantic Ridge



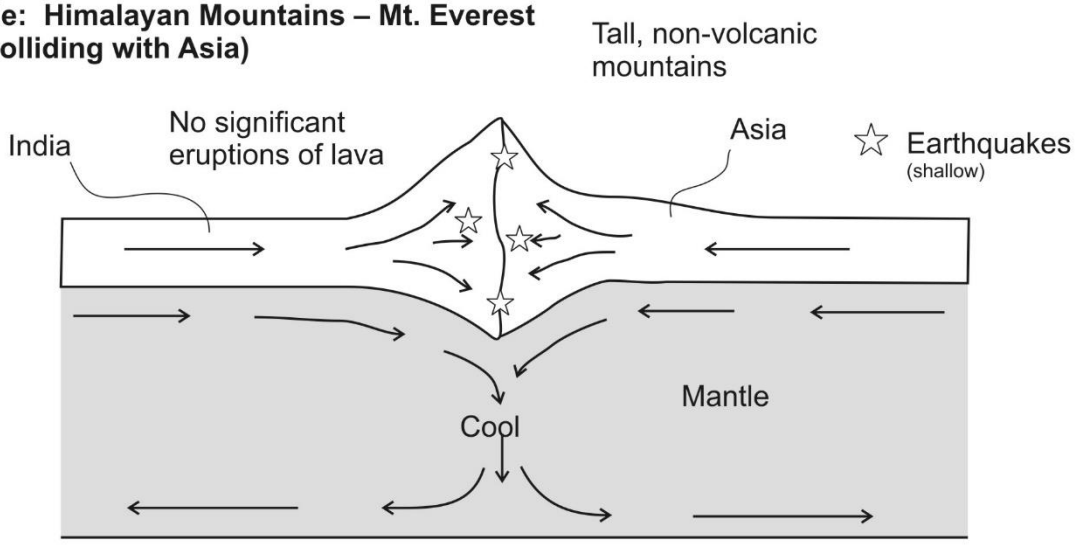
Ocean/Continent Convergent
Example: Andes Mountains, South America



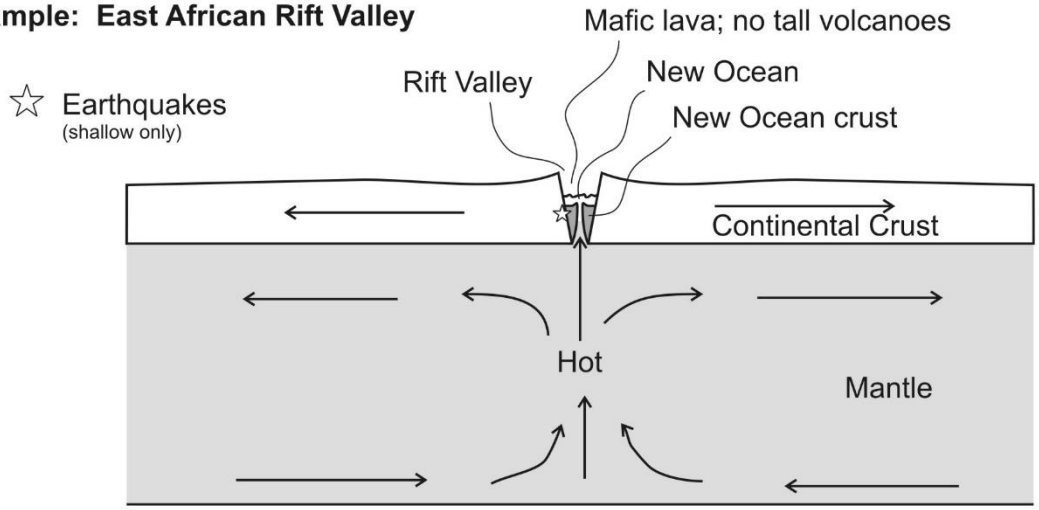
Ocean/Ocean Convergent
Example: Japan



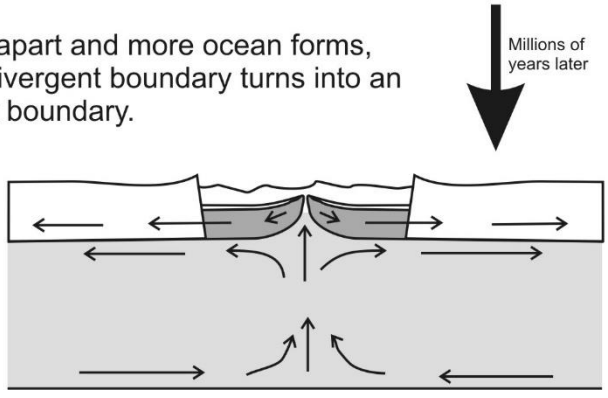
Continent/Continent Convergent
Example: Himalayan Mountains – Mt. Everest
(India colliding with Asia)



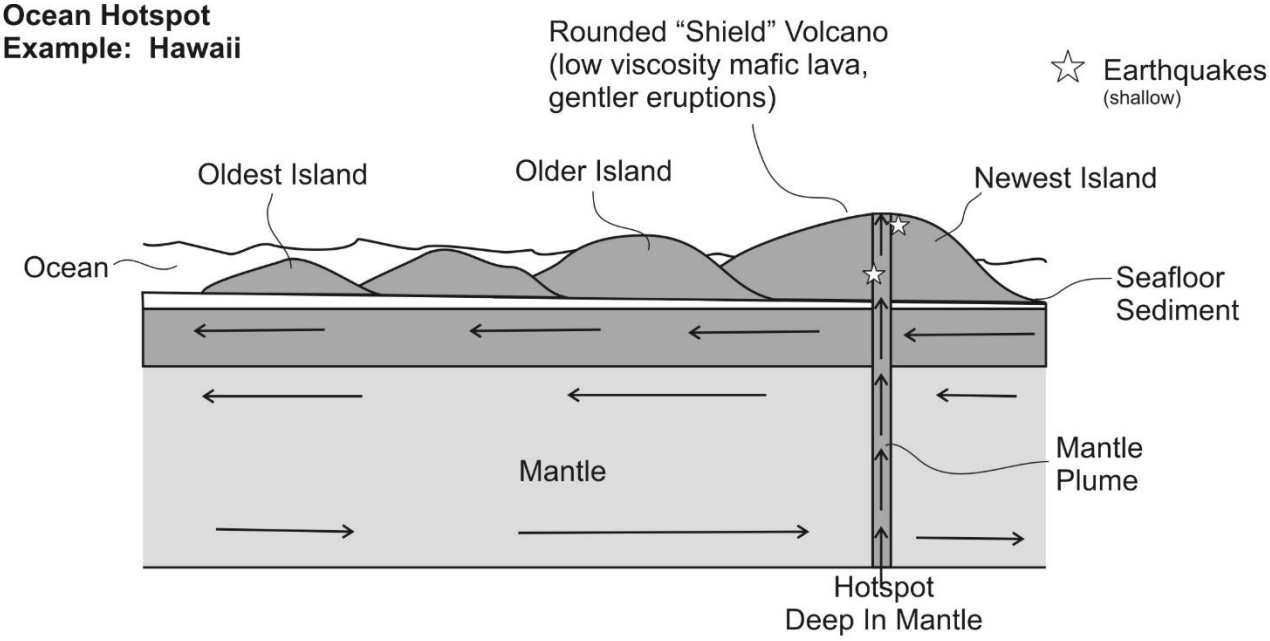
Continent/Continent Divergent
Example: East African Rift Valley



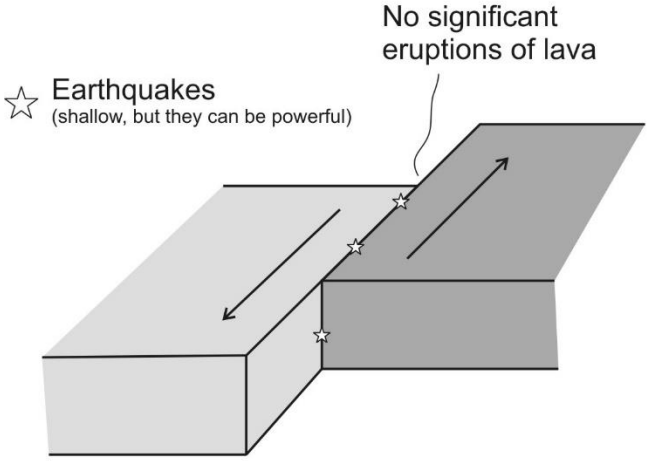
As the continents split apart and more ocean forms, a continent/continent divergent boundary turns into an ocean/ocean divergent boundary.



Ocean Hotspot
Example: Hawaii



Transform Plate Boundary
Example: San Andreas Fault, California



Transform boundaries can form along jagged divergent and convergent boundaries.