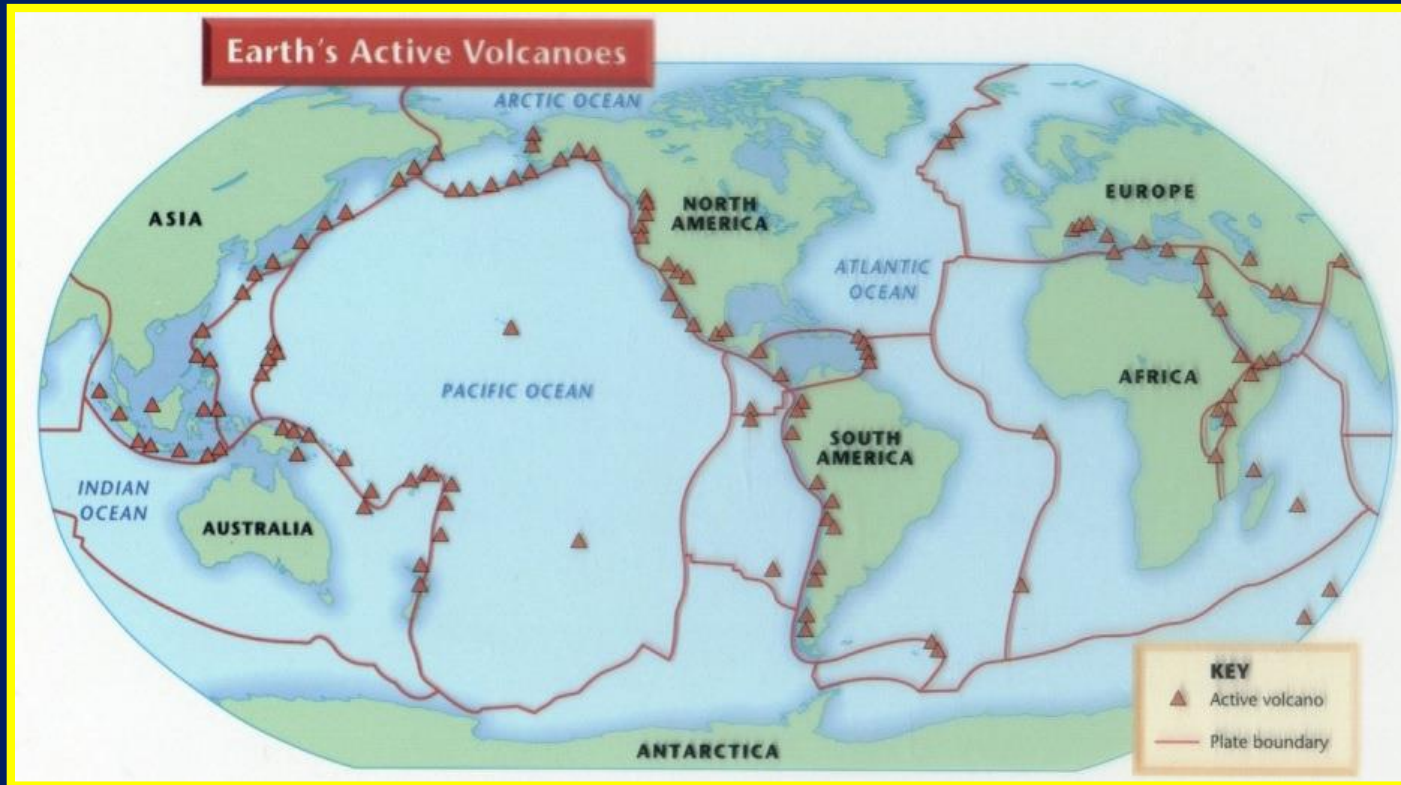


Location of Volcanoes

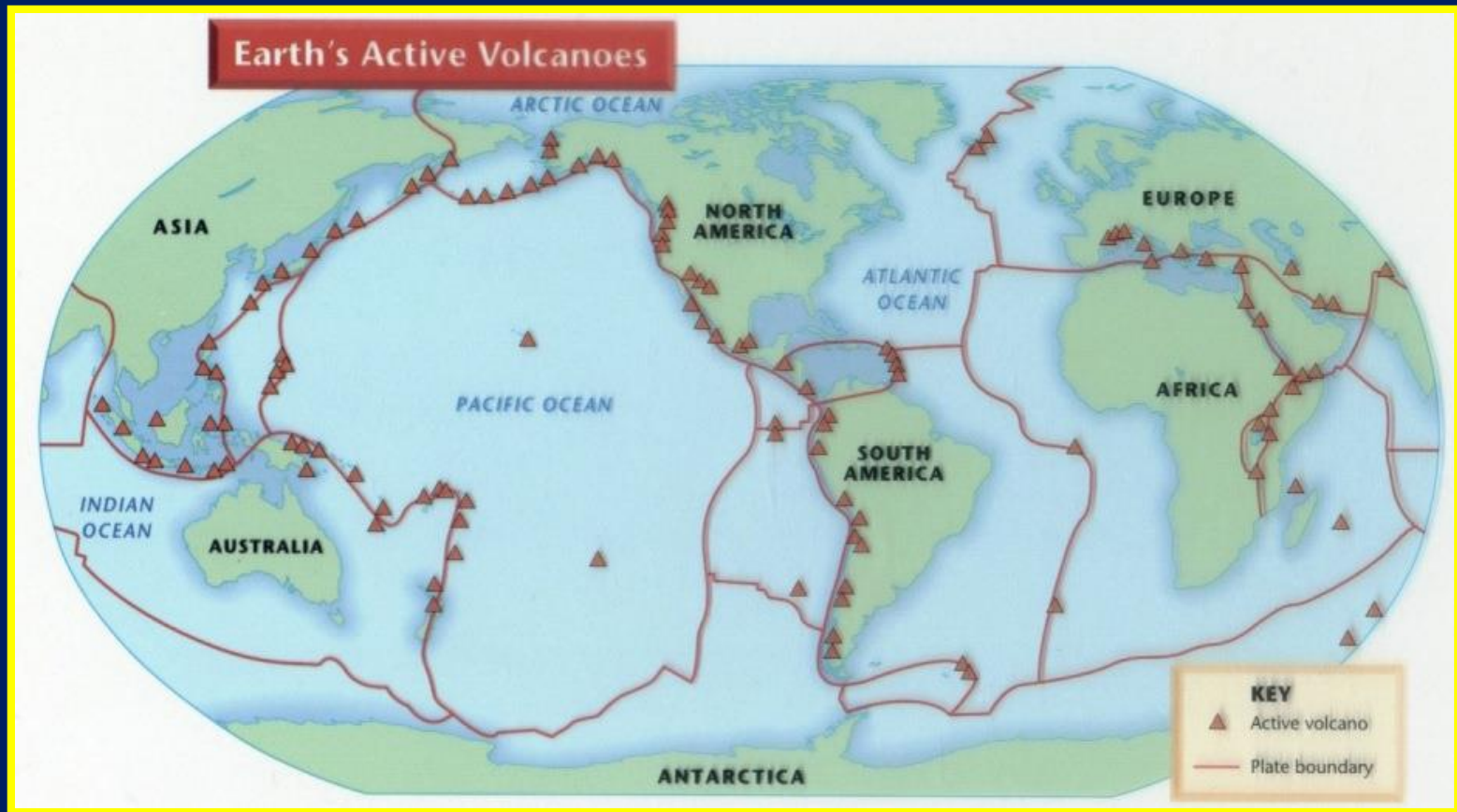


Essential Standard 2.1: Explain how processes and forces affect the lithosphere

Objective 2.1.2: Predict the location of volcanoes, earthquakes, and faults based on information contained in a variety of maps.

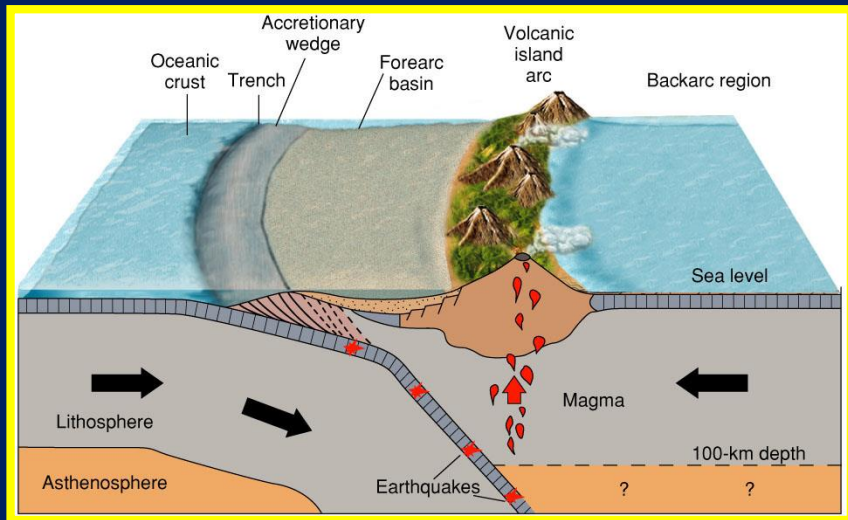
Where Volcanoes Occur

Most volcanoes form at plate boundaries.

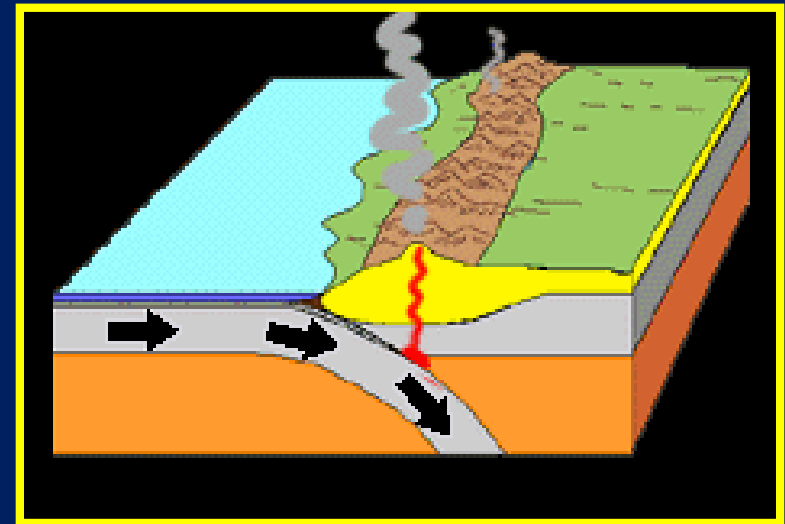


Convergent Boundaries

80% of all volcanoes occur at convergent plate boundaries where subduction of oceanic plates occurs.



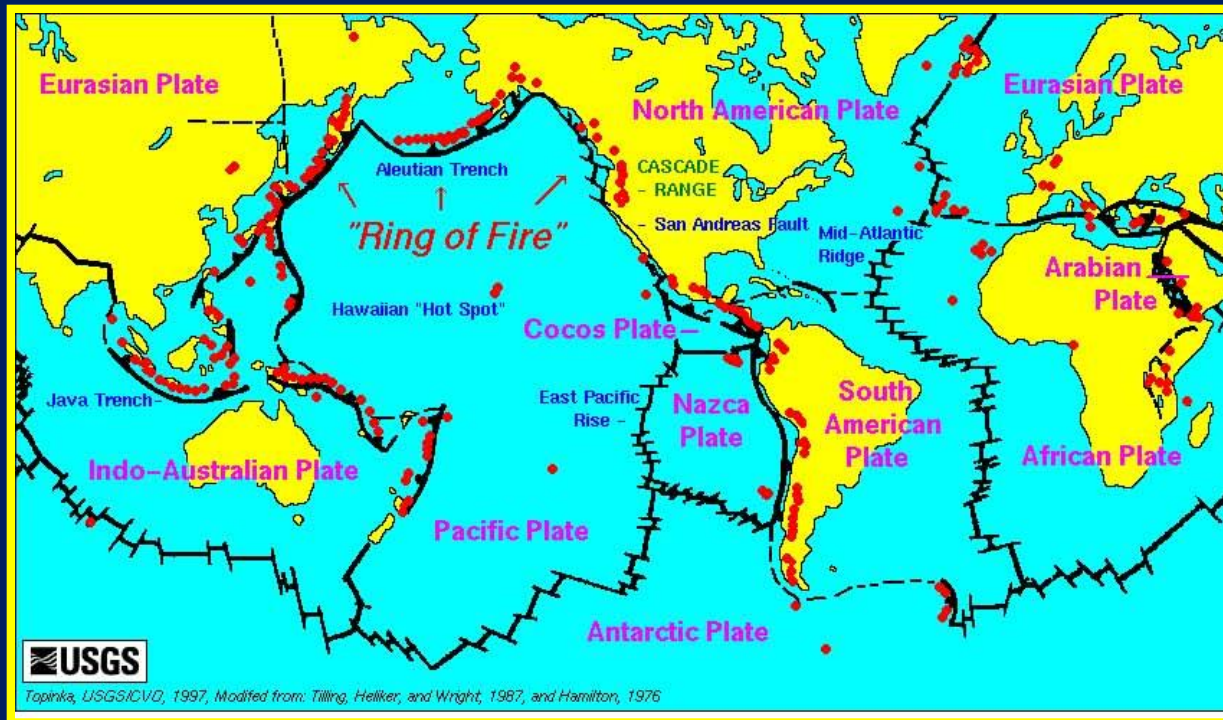
Oceanic-Oceanic
Volcanic Island Arc



Oceanic-Continental
Volcanic Mountain Range

Pacific Ring of Fire

The volcanoes associated with convergent boundaries form two major belts.



The larger belt is called the Circum-Pacific Belt, also known as the Pacific Ring of Fire.

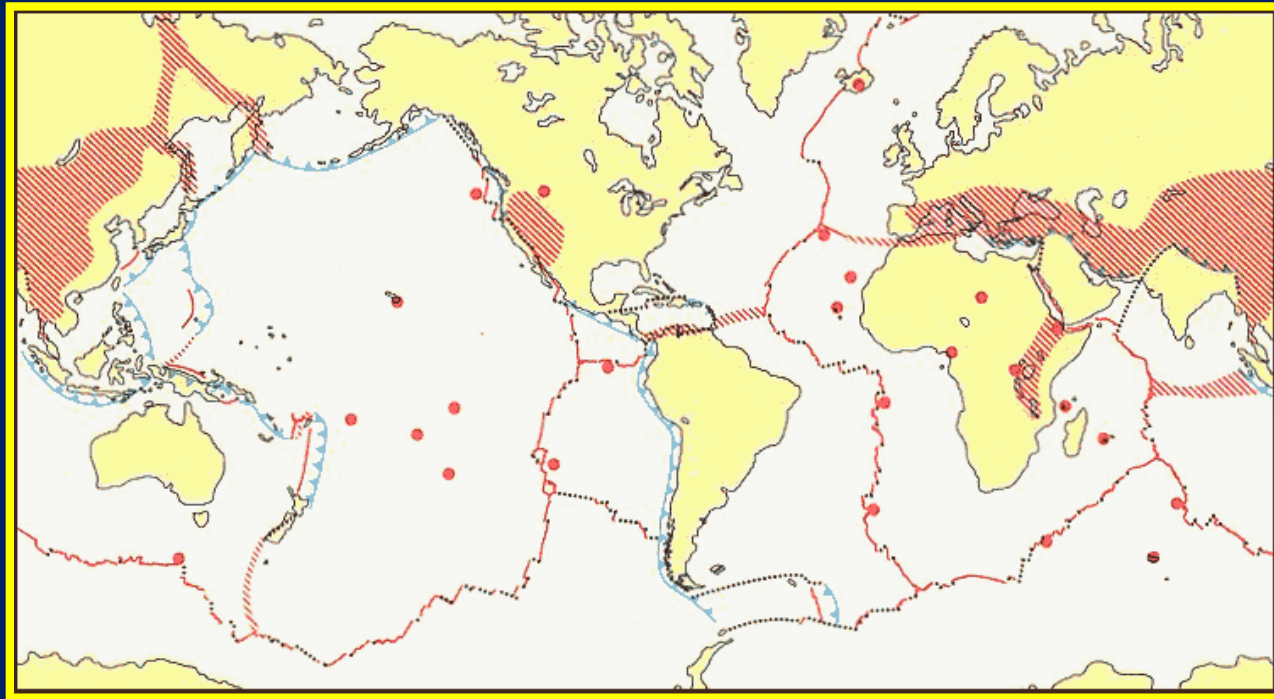
Mediterranean Belt

The smaller belt is known as the Mediterranean Belt.



Divergent Boundaries

15% of Earth's volcanoes occur at divergent boundaries or rift zones.



The majority of these volcanoes occur underwater along ocean ridges. (Red Lines)

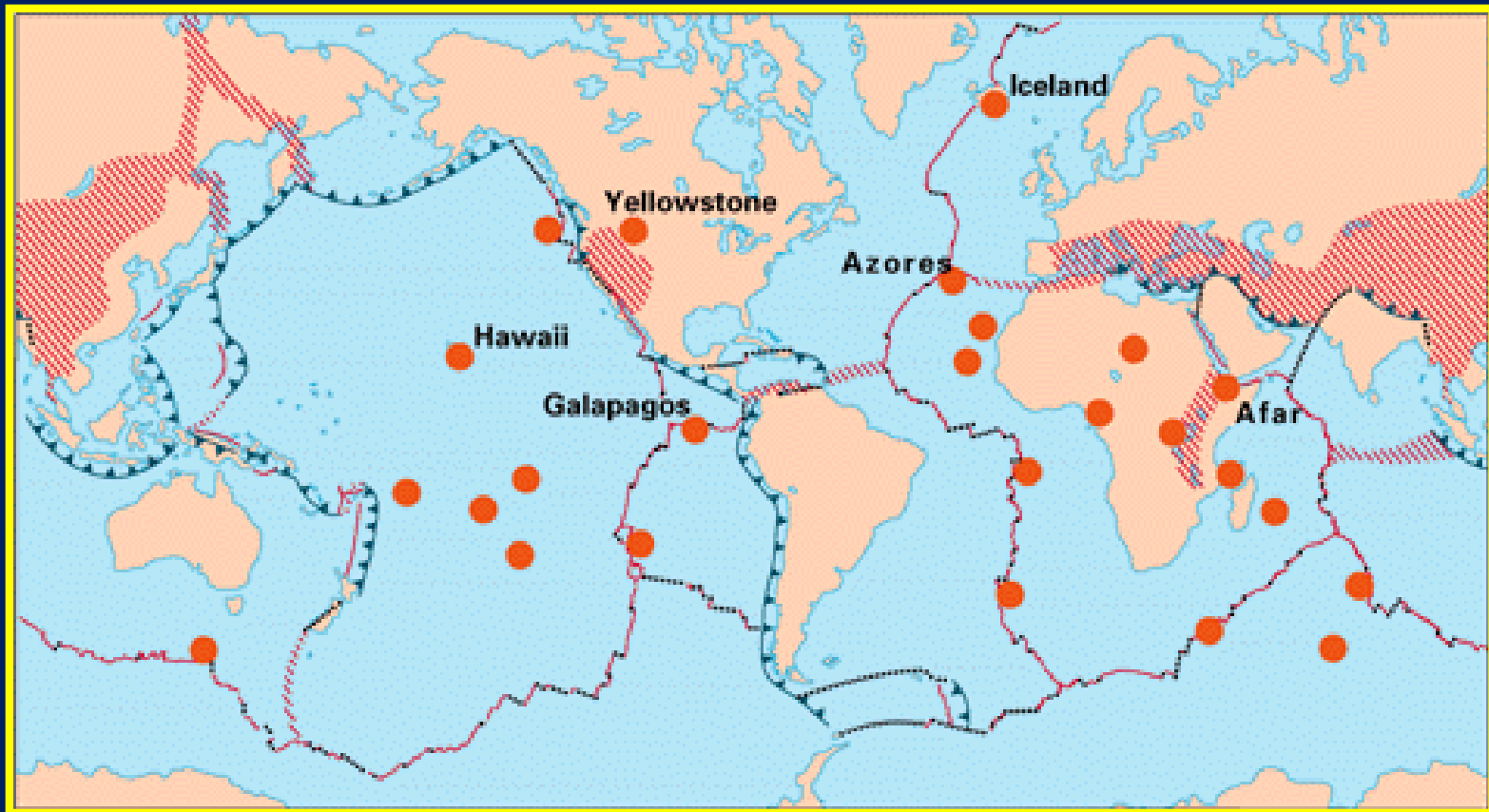
Iceland

One of the few places where divergent volcanoes occur above sea level is in Iceland. This island is part of the Mid-Atlantic Ridge and contains several volcanoes.



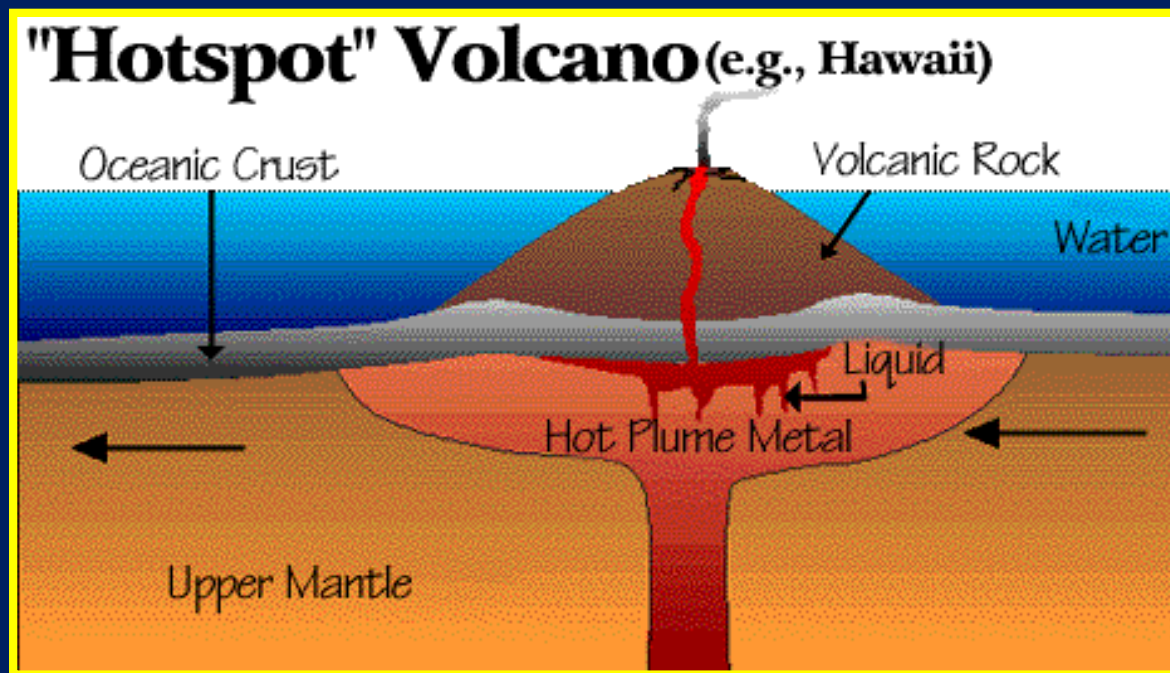
Hot Spots

5% of Earth's volcanoes occur far from plate boundaries and form as the result of hot spots.



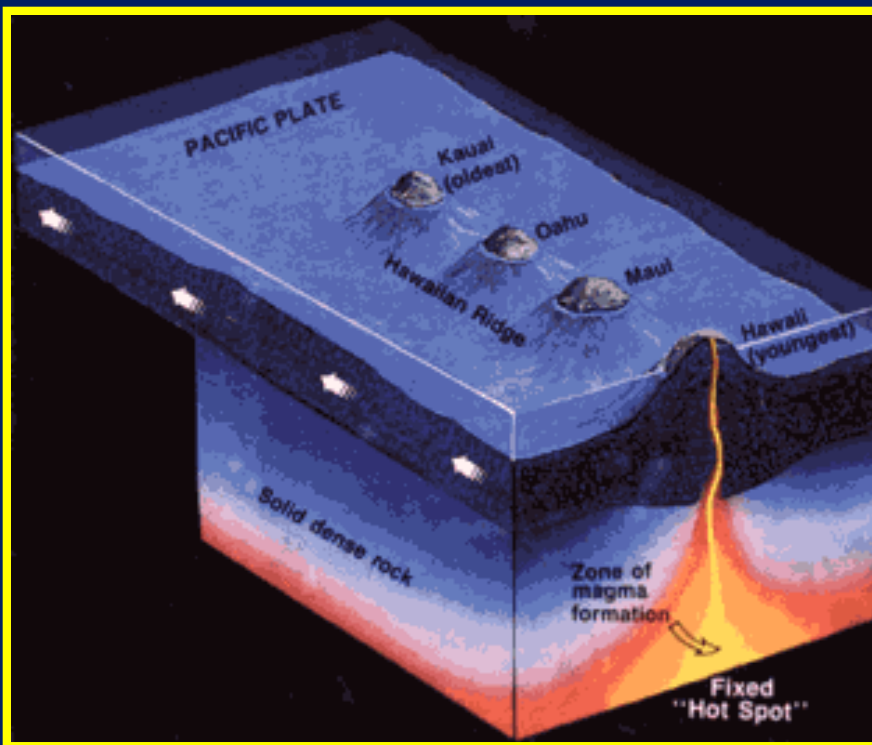
Hot Spots

Hot spots are unusually hot regions of Earth's mantle where high-temperature plumes of mantle rise towards Earth's surface, melting the crust to form volcanoes.



Hot Spots

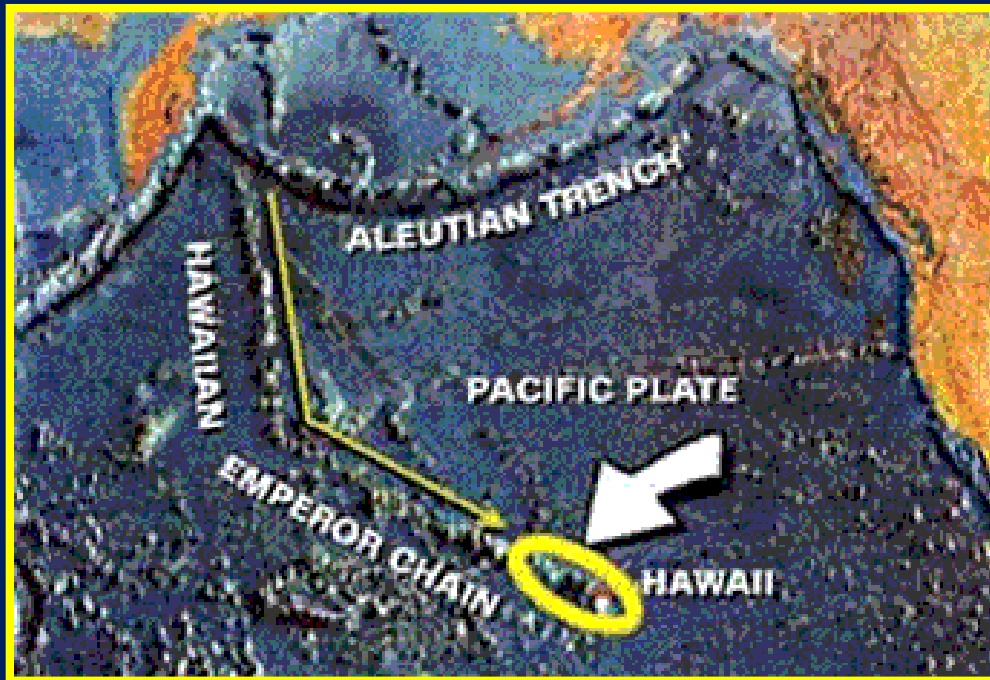
While tectonic plates move, hot spots remain stationary. As a result, over time, trails of progressively older volcanoes form near hot spots.



As the volcano moves away from the hot spot, it goes dormant.

Evidence of Plate Motion

The chains of volcanoes that form over hot spots provide important information about the direction and rate of plate motions.



Even changes in plate motions in the distant past can be found studying ancient hot spot volcano chains.

The End

