


Question of the Day

WHAT ARE THE 3 TYPES OF TECTONIC PLATE BOUNDARIES AND HOW DO THEY MOVE?


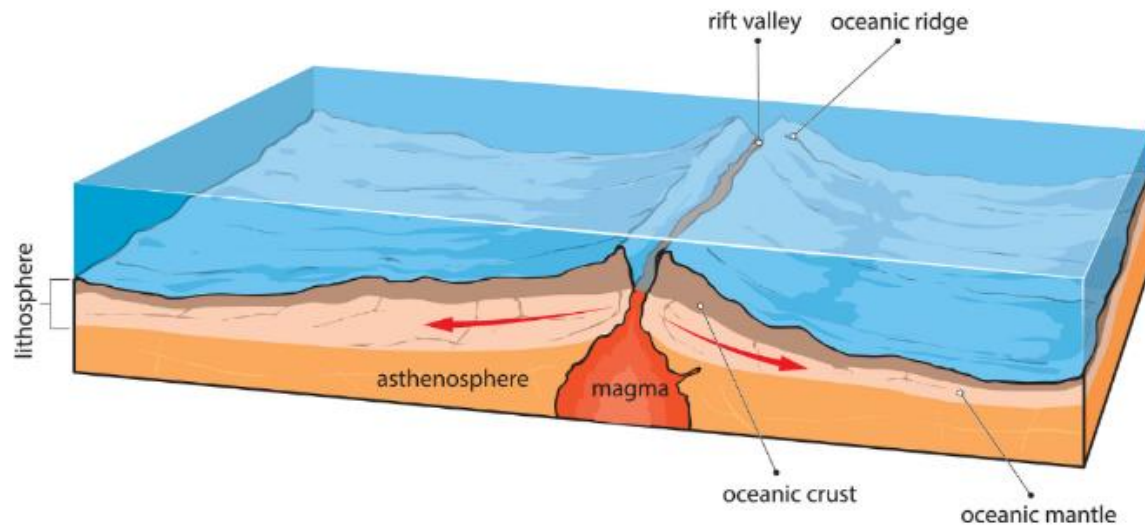


Plate Boundaries

Seafloor Spreading and Mid-Ocean Ridges

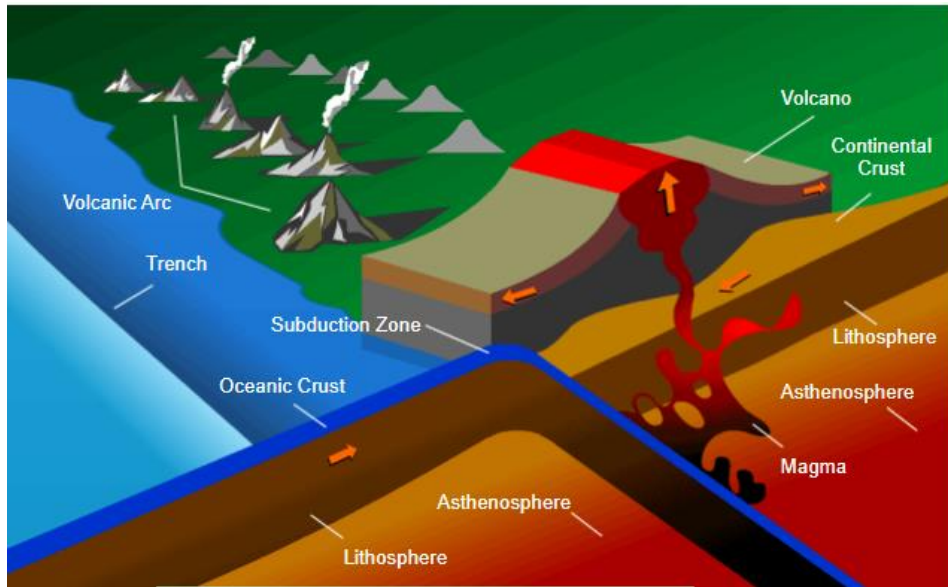


- Divergent boundaries in the middle of the ocean contribute to **seafloor spreading**. As plates made of oceanic crust pull apart, a crack in the ocean floor appears. Magma then oozes up from the mantle to fill in the space between the plates, forming a raised ridge called a **mid-ocean ridge**. The magma also spreads outward, forming new ocean floor and new oceanic crust.



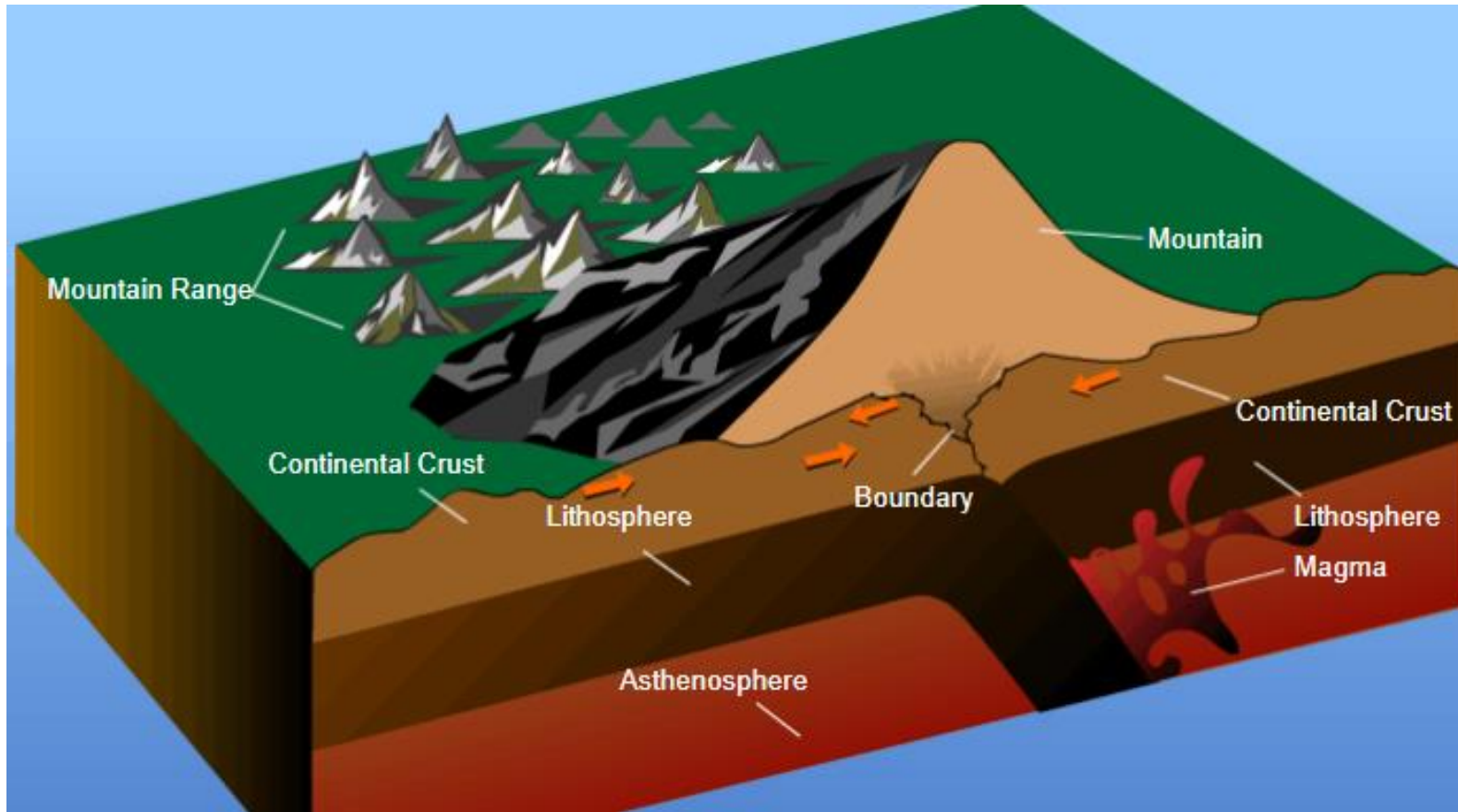
Subduction Zones, Volcanoes and Islands

- Oceanic crust is denser than continental crust, so the denser oceanic crust gets bent and pulled under the lighter continental crust. This forms what is called a **subduction zone**.
- As the oceanic crust sinks, a deep oceanic **trench**, or valley, is formed at the edge of the continent.
- The crust continues to be forced deeper into the earth, where high heat and pressure cause trapped water and other gasses to be released from it. This, in turn, makes the base of the crust melt, forming magma. The magma formed at a subduction zone rises up toward the earth's surface and builds up in magma chambers, where it feeds and creates **volcanoes** on the overriding plate.

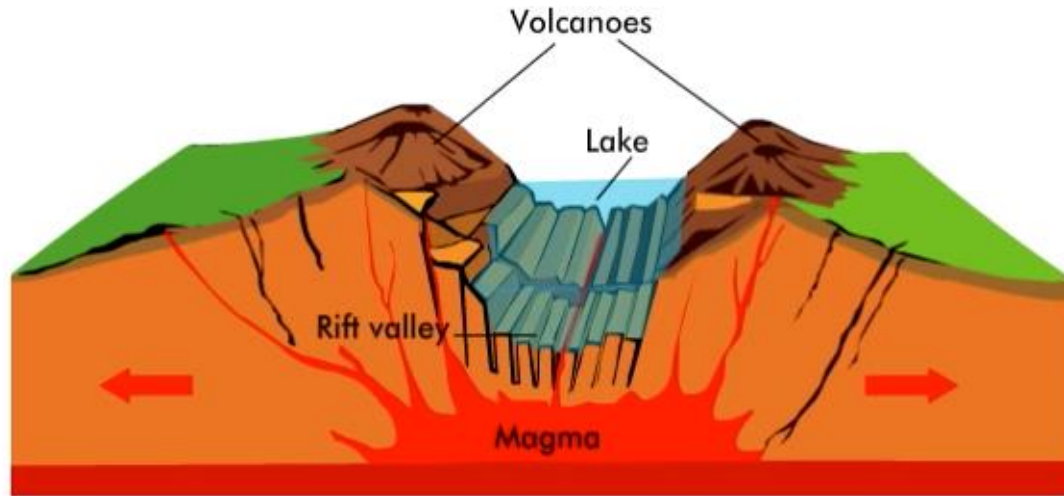


Collision Zones and Mountains

- A collision between two continental plates crunches and folds the rock at the boundary, lifting it up and leading to the formation of **mountains** and **mountain ranges**.

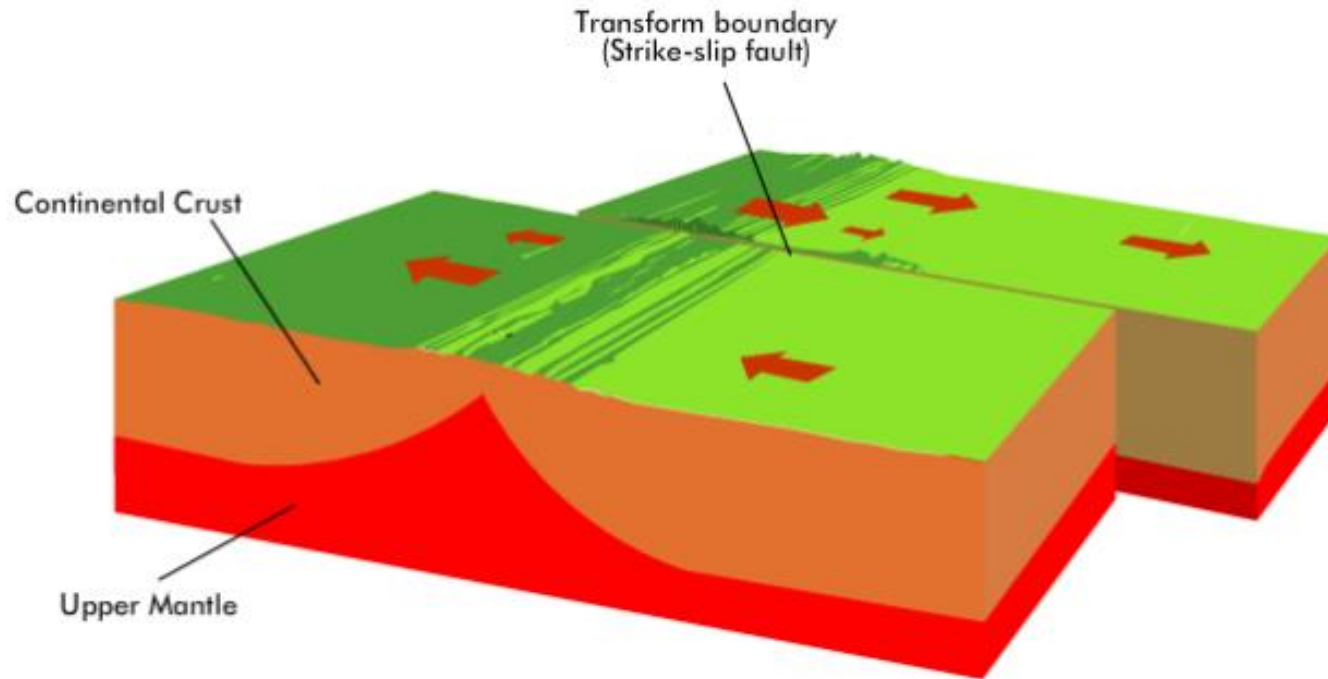


Rifts



- When two continental plates diverge, a valley like **rift** develops. This rift is a dropped zone where the plates are pulling apart. As the crust widens and thins, valleys form in and around the area, as do volcanoes.

Strike-Slip Faults and Earthquakes



Transform boundaries and the resulting faults produce many earthquakes because edges of tectonic plates are jagged rather than smooth. As the plates grind past each other, the jagged edges strike each other, catch, and stick, "locking" the plates in place for a time. Because the plates are locked together without moving, a lot of stress builds up at the fault line. This stress is released in quick bursts when the plates suddenly slip into new positions. The sudden movement is what we feel as the shaking and trembling of an earthquake.