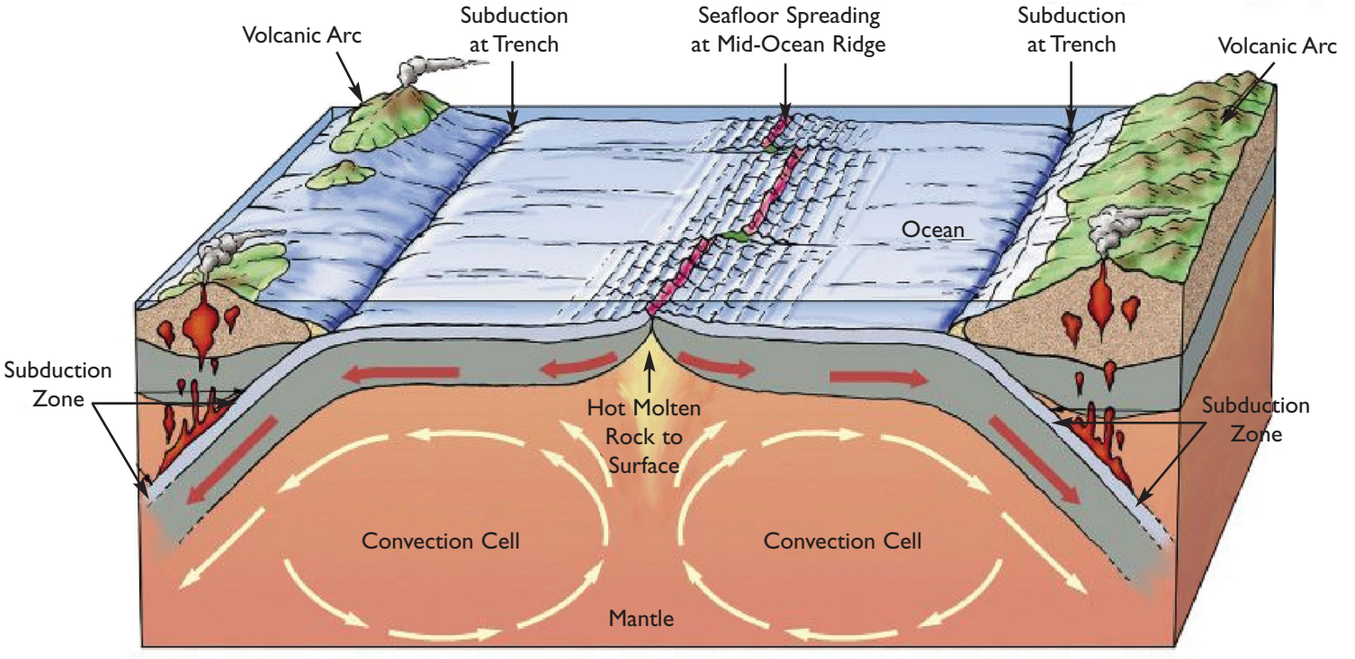

Model of global plate tectonics includes 3 types of plate boundaries that shape the seafloor bathymetry. Seafloor spreading creates an axial rift and corrugated hills. Spreading ridges are offset by transform faults where some of the most destructive earthquakes occur. Subduction of the cooled plate into the mantle creates the deep ocean trenches and produces major earthquakes and tsunami. The plates act as giant radiators of heat. They cool, thicken, and gradually subside as they progress from ridge to trench, forming the broad-scale patterns of ridges and deep ocean basins.