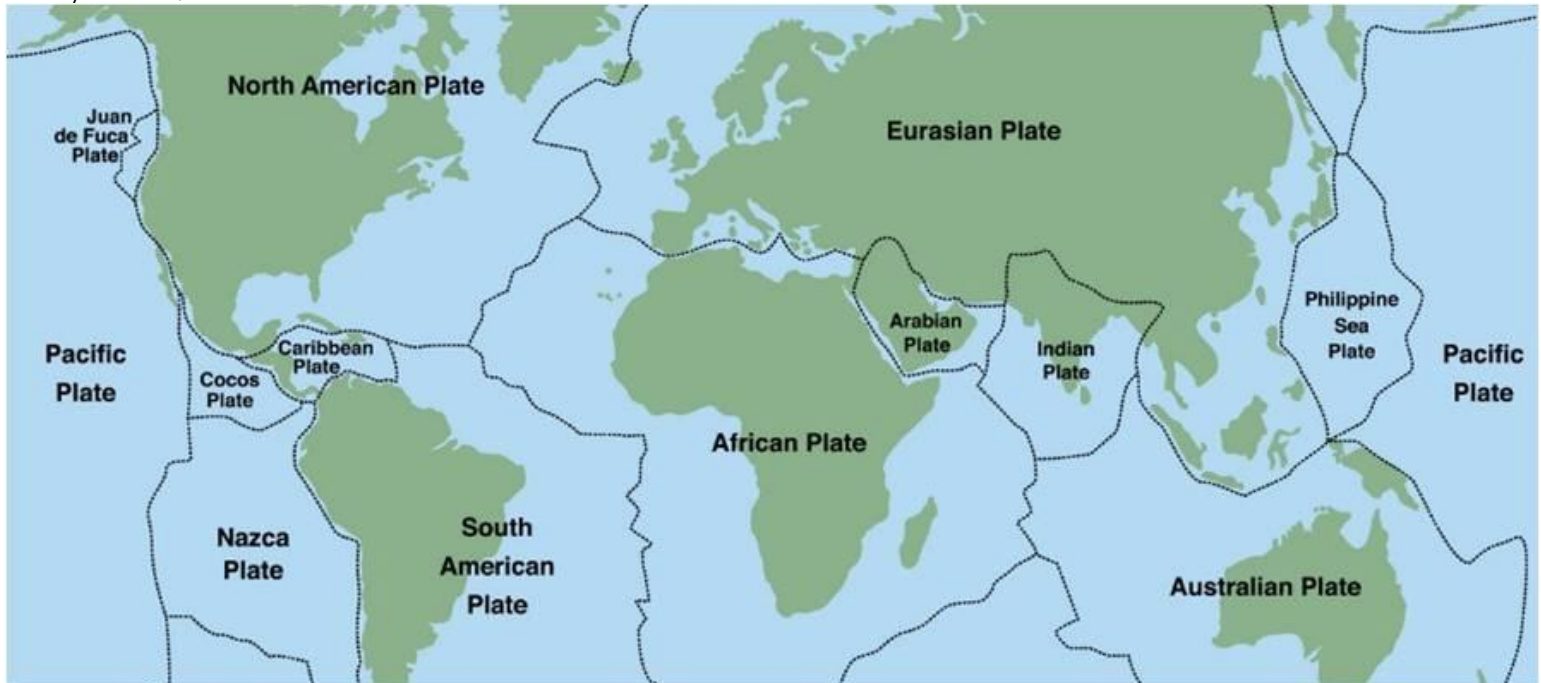


The information in this is primarily from Answers In Genesis.

The word "tectonics" has to do with earth movements; so the study of the movements and interactions among these plates is called "plate tectonics." Plate tectonics refers to the slow movement of the earth's crustal plates.

Cooled oceanic crust is heavier than the hot mantle beneath it, so it tends to sink. The continental crust, in contrast, is much lighter (less dense), so it floats. As a result, the continents "ride" higher than the ocean crust.

If they collide, the ocean crust would slide under the continental crust because it is heavier.



Most active volcanoes are located near the margins of the earth's crustal tectonic plates.

This is especially true where one plate appears to be sinking or is being pushed under the adjoining plate, such as where the Pacific plate is sinking under the North American plate in the U.S. Northwest, or where the Philippine plate is sinking under the Eurasian plate near Japan.

The "subducting" slab causes mantle and crustal rock to melt, which produces magmas that rise to erupt through volcanoes.

Plate tectonics is not directly mentioned in the Bible, but Genesis 1:9–10 suggests that all of the land was once connected as a supercontinent, whereas the continents are now separated. These plates were formed when earth's crust broke apart at the beginning of the global Flood. At the catastrophic initiation of the Flood, huge plumes of molten rock blasted the underside of the earth's crust like massive blow-torches. Eventually the crust was ripped apart, and steam and molten rock burst forth. The supercontinent collapsed. The breakup of the fountains of the great deep continuing for 150 days would have involved not only the bursting out of water from inside the earth, but also steam and prodigious volumes of lavas. Due to unique geological conditions, these plates moved rapidly, reshaping earth's surface. This is known as Catastrophic Plate Tectonics (CPT). The catastrophic plate tectonics model and continental sprint during the Flood can explain the separate continents. After the fountains were closed and plate movements slowed, volcanic activity decreased at the end of the Flood.

An example of how fast these events can occur happened in 2005. In the middle of the Ethiopian desert, a 35-mile-long gash cuts through the earth, a crack in the Earth's crust, ripped open in just days, the product of tectonic activity. It began to open up in September 2005, when a volcano at the northern end of the rift, called Dabbahu, erupted. The speed with which the Ethiopian rift appeared is a suggestion of just how rapidly tectonic events may occur on earth now. This rift is similar to how mid-ocean ridges form. The crack is the surface component of a continental rift forming as the Arabian and African plates drift away from one another. The magma inside the volcano did not reach the surface and erupt as a fountain of lava - instead, it was diverted into the continental rift underground. The magma cooled into a wedge-shaped "dike" that was then uplifted, rupturing the surface and creating a 500-metre-long, 60-metre-deep crack. They found that a 60-kilometre-long, 8-metre-wide dike of solidified magma formed in the rift, causing the crack, in a matter of days.

<https://answersingenesis.org/geology/plate-tectonics/plate-tectonics-reality-behind-theory/>