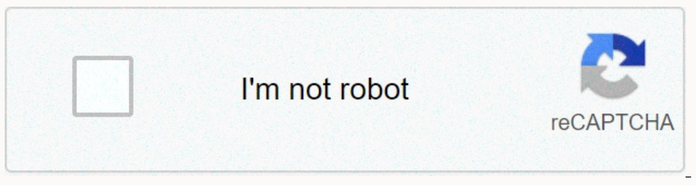

Continue

Plate tectonic crossword puzzle

ThoughtCo uses cookies to provide you with a great user experience. By using ThoughtCo, you accept the use of our cookies. Plate tectonics is a scientific theory that attempts to explain the motions of Earth's tasing that have formed the landscape characteristics that we see globally today. By definition, the word plate in geological terminology means a large solid slab. Tectonics are part of the Greek descent for construction and together with the terms determine how the earth's surface is built up moving plates. Plate tectonic theory itself says that earth's quartz is made up of individual plates divided into more than a dozen large and small rock fragments. These fragmentation sheets go side by side on earth's lower liquid mandation to create the different types of plate boundaries that have shaped Earth's landscape for millions of years. Plate tectonics evolved from a theory first developed in the early 20th century by meteorologist Alfred Wegener. In 1912, Wegener noticed that the coast of the east coast of South America and the west coast of Africa seemed to fit together as a jigsaw puzzle. Further examination of the globe suggests that all of Earth's continents fit together somehow and Wegener proposed an idea that all continents had a time connected in a single supercontinent called Pangaea. He believes the continents gradually began to drift apart about 300 million years ago - this is his theory known as continental drift. The main problem with Wegener's original theory was that he was unsure of how the continents moved apart. Throughout his research to find a continental drift mechanism, Wegener came across fossil evidence that supported his original theory of Pangaea. In addition, he came up with ideas on how continental drift worked in building the world's mountains. Wegener claims that the leading edges of earth's continents collide with each other as they move causing the soil to bundle and form mountain ranges. He used India moving into the Asian continent to form the Himalayas as an example. Finally, Wegener came up with an idea citing the Earth's rotation and its centrifumocon force towards the equator as mechanisms for continental drift. He said pangaea began in Antarctica and the Earth's rotation eventually caused it to break down, bringing the continents towards the equator. This idea was rejected by the scientific community and his theory of continental drift was also rejected. In 1929, Arthur Holmes, a British geosyntheist, came up with a heat-contrast theory to explain the movement of earth's continents. He said that when a substance is heated its density decreases and it increases until it cools enough to sink again. According to Holmes it was the heating and cooling cycle of the Earth's mandest causes the continents to move. The idea attracted very little attention at the time. By the 1960s, Holmes' idea began to become more reliable as scientists increased their understanding of the ocean floor through mapping, discovering its mid-ocean ridges and learning more about its age. In 1961 and 1962, scientists proposed the seabed spread caused by mand manoonic reconciliation to explain the movement of continents and plate tectonics of the Earth. Scientists today have a better understanding of the make-up of tectonic plates, the dynamics of their movement, and the way in which they interact with each other. A tectonic plate itself is defined as a rigid segment of the Earth's quartz that moves separately from the plates around it. There are three main motivations for the movement of the Earth's tectonic plates. They are the earth's manolys, gravity, and rotation. Coating insystlay is the most widely studied tectonic plate motion method and it is very similar to the theory developed by Holmes in 1929. There are large inflows of melting material in the Earth's upper man man manoly. When these currents transmit energy to the lower layer of the Earth (the liquid part of the Earth's lower mand surface beneath the quartz) the new quartz material is pushed up towards the Earth's crust. Evidence of this is shown in the mid-ocean ridges, where younger soil is pushed up through the ridge, causing the old land to move out and out of the ridge, thus moving tectonic plates. Gravity is a second-hand force for the movement of Earth's tectonic plates. In between the ocean ridges, the altitude is higher than the surrounding ocean floor. As the currents in the Earth cause the new sortic material to rise and spread out of the ridge, gravity causes the old material to sink towards the ocean floor and aid in the movement of the plates. The Earth's rotation is the ultimate mechanism for the movement of earth's plates but it is small compared to mano manolytic and gravity-force insym. As Earth's tectonic plates move, they interact in a number of different ways and they form different types of plate boundaries. The boundary is where the plates move apart and new crusts are created. The mid-ocean ridges are an example of de boundaries. The converging boundary is where the arrays collide with each other causing the subduction of one plate underneath the other. Variable boundaries are the last type of array boundary, and at these locations no new crusts are created and no crusts are destroyed. Instead, the plates slide horizontally across each other. No matter the type of boundary though, the movement of earth's tectonic plates is essential in the formation of landscape features that we see globally today. Seven majors (North America, South America, Eurasia, Africa, The Indian-Australian, Pacific and Antarctic) as well as many smaller, micro-plates such as the Juan de Fuca Plate near the U.S. state of Washington (plate map). To learn more about plate tectonics, visit the USGS This Dynamic Earth: The Story of Plate Tectonics website. Assists.