

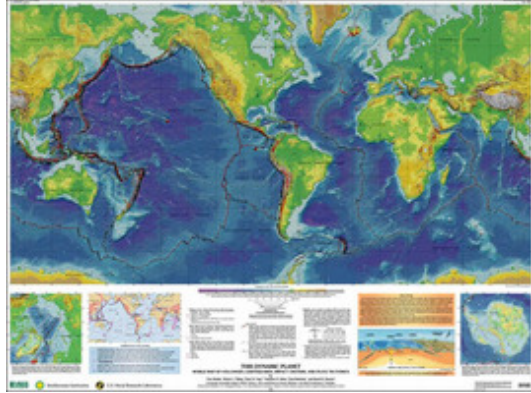
Name _____



Earth's Tectonic Plates

By Cindy Grigg

Caption: This map from the U.S. Geological Survey shows earthquakes and volcanoes, represented by dots. Together, the dots show the boundary lines of the Earth's tectonic plates.



You may already know that the Earth has three main layers. We live on the crust of the Earth. The crust is the outermost layer. Even the oceans have a layer of crust under them.

Under the crust is the mantle. The mantle is made up of rock. It is not solid rock though. Inside the earth it is hot-hot enough to melt rock! The mantle is soft and fluid. It flows like melted plastic.

Under the mantle is the Earth's core. The core is very hot!

The crust is not a hard, solid piece. It is more like a jigsaw puzzle. There are pieces that fit next to each other. The pieces of the crust stay together. But they move about on the fluid, moving mantle. The pieces are called tectonic plates. The plates bump against each other like ice cubes in a glass.

You usually can't feel the Earth's plates moving. That's because the movement happens very slowly. Sometimes, people do feel when the earth's plates move. It's called an earthquake!

When plates move, three things can happen. First, they can pull away from each other in opposite directions. They can move toward each other and smash together. Or they can move past each other side-by-side. Because of these movements, volcanoes erupt. Mountains form. Earthquakes take place.

In the middle of the Atlantic Ocean, two plates are moving away from each other in opposite directions. Each year, the Atlantic Ocean gets about one inch wider. What do you think happens between the two plates as they pull apart? The hot, molten rock from inside the mantle of the earth oozes out. It's like a volcano erupting. New crust is formed at the bottom of the Atlantic Ocean.

In Asia, two plates are pushing against each other, like two goats butting their heads together. This pressure is pushing rock upward. The two plates smash against each other. This pressure formed the Himalaya Mountains. It took millions of years. The pressure of these two plates still pushing against each other is making these mountains taller all the time.

Two plates in California are moving past each other. One is going in a mostly northward direction. The other is moving in a southward direction. As they slowly grind past each other, pressure builds up. Sometimes it breaks loose. People in California feel an earthquake.

The Earth's crust is made up of about a dozen pieces called plates. The plates move in different ways. These movements cause earthquakes, volcanic eruptions, and mountain building. The movements of the Earth's tectonic plates change the surface of the Earth.

Earth's Tectonic Plates

Questions

_____ 1. The Earth's crust is compared to _____.

- A. a hard boiled egg
- B. a jigsaw puzzle
- C. dinner plates
- D. a pie crust

_____ 2. The mantle of the Earth is compared to _____.

- A. a hard boiled egg
- B. a jigsaw puzzle
- C. a pie crust
- D. melted plastic

