

The Geology of a Snicker's Bar: Tectonic Plates

Grade level:

4-5 grade

Material:

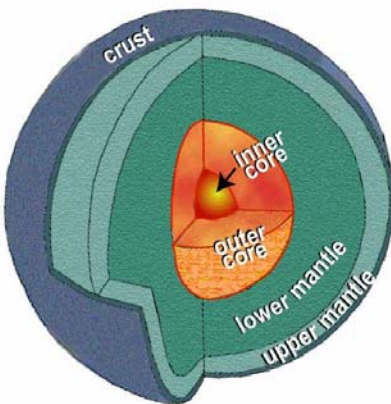
- Introduction worksheet
- Snicker bar
- Paper towel

Objective:

- Teach students about different layers of Earth
- Teach about tectonic plates and their effects

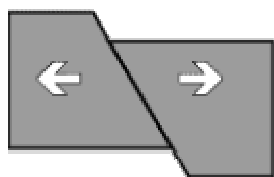
Introduction:

The Earth consists of an inner core, outer core, lower mantle, upper mantle, and crust.

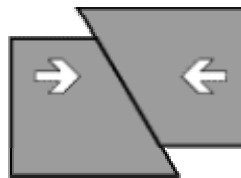


The crust is the thin, solid outer portion of Earth. The mantle contains hot magma. Earth's crust is made up of many rigid pieces that float on top of magma. These pieces are called tectonic plates and are like jig saw puzzles that make up the Earth's surface. These plates are continuously moving towards or away from each other. This is called continental drift, which creates the geologic features we see and experience on Earth's surface, such as volcanoes, mountains, and earthquakes.

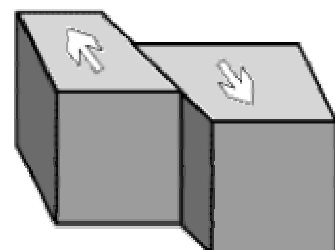
There are three main tectonic plate environments:



1) Extensional



2) Compressional



3) Transform

All three types of plate movement cause Earthquakes. Extensional or divergence of the plates cause rift valleys to form. For example: If the seafloor was spreading, then new seafloor forms as molten rock as Earth's interior rises towards the surface which pushes the existing seafloor out of the way and causing

extensional of the plates. Compressional can cause subduction of the tectonic plates. This means that one plate is being forced down into the mantle where it melts into magma. Compressional can also cause mountains to form if both plates converge and neither is being forced down into the mantle.

Lesson:

- Teach students the name of the layers of the Earth
- Teach students the three tectonic plate environments and what they form
- Ask student to get a partner
- Give each group a snicker
- Ask them to identify the snicker parts (nougat, peanuts, caramel, milk chocolate covering) and see if they can identify which Earthly layer the snicker's parts could represent.
- Ask students to demonstrate one type or each type of plate environment and what type of land form the snicker becomes.
- Let students eat the remaining candy (Make sure no one is allergic to peanuts)

Note:

Mentor's can make a worksheet for the students or make a powerpoint to teach the students with.

Cite:

http://www.agu.org/focus_group/SEDI/main/images/Earthlayers.html

<http://www.scienceclarified.com/Ph-Py/Plate-Tectonics.html>

<http://www.seismo.unr.edu/ftp/pub/louie/class/100/plate-tectonics.html>