

Cookie Plate Tectonics

Our dynamic planet is constantly moving and changing shape throughout geologic time. In this fun and delicious activity, we'll use a cream filled cookie to demonstrate **plate tectonics!**

The Earth's **crust** is hard and broken up into pieces or "plates." The process of those rigid plates moving around on top of a squishy, flowing **mantle** is called **plate tectonics**. Let's use a scientific model to see the different ways plates can move around and interact!

You Need

-A cream filled cookie (such as an Oreo or Newman-O's)
"Double Stuff" varieties make for a great mantle.

Directions

- 1) Prepare your Earth - Take your cookie and twist off one half but don't eat the filling! In this scientific model, the filling represents the hot **mantle** while the top cookie represents the **crust**. Gently break your crust cookie in half and place it back on top of the mantle.
- 2) Make a **Divergent Plate Boundary** – New crust forms when plates move away from each other. This reveals hot melted lava that rises and cools to form new rock. Press down on your cookie plates and slide them apart.
- 3) Make a **Convergent Plate Boundary** – When plates collide, mountains are formed. Can you make a mountain range by sliding your cookies towards each other so one goes under the other?
- 4) Make a **Transform Boundary** – Plates can slide past one another but it's never smooth. Move your plates past one another but let them stick and let go. Each time they crack it's like an earthquake along the San Andreas Fault!

