



MAKING A MODEL OF PLATE TECTONICS with Graham Crackers

Student: _____

Date: _____

Topic: Earth Science

Focus: How tectonic plates move
and interact

Earth's outer layer is broken into large pieces called tectonic plates. These plates move and interact in different ways. You can model these movements using graham crackers!

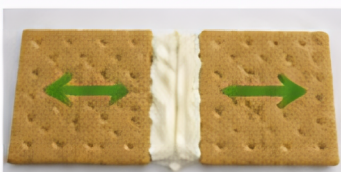
MATERIALS

- Graham crackers
- Frosting (or peanut butter)
- Paper plate or tray
- Plastic knife or spoon
- Small labels or toothpicks (optional)

WHAT YOU'LL MODEL

1. DIVERGENT BOUNDARY

Plates move apart. Magma rises up to fill the gap, creating new crust.



Example: Mid-Ocean Ridge

2. CONVERGENT BOUNDARY

Plates move together. One plate may go under the other, causing mountains, volcanoes, or earthquakes.



Example: Andes Mountains

3. TRANSFORM BOUNDARY

Plates slide past each other horizontally along a fault.



Example: San Andreas Fault

PROCEDURE

1. Place graham crackers on a plate.
2. Use frosting between crackers to represent magma.
3. Create each type of plate boundary model by moving the crackers as shown.
4. Label each model and write what is happening.
5. Observe and record your results.



TIP:

Use frosting as "magma." When plates pull apart, add more frosting in the middle!

WHAT'S HAPPENING?



Divergent: Plates pull apart. Magma rises up and cools, forming new crust.



Convergent: Plates push together. One plate may go under the other (subduction) or both may crumple and form mountains.



Transform: Plates slide past each other. Earthquakes can happen along the fault.

VOCABULARY

Tectonic Plate – a large, rigid piece of Earth's lithosphere that moves slowly over the mantle.

Divergent Boundary – where plates move apart.

Convergent Boundary – where plates move together.

Transform Boundary – where plates slide past each other.

Magma – hot, melted rock beneath Earth's surface.

Crust – Earth's outermost, solid layer.

OBSERVATIONS

Describe what happened in each model.

Divergent Boundary: _____

Convergent Boundary: _____

Transform Boundary: _____

THINK & DISCUSS

1. Which boundary do you think creates new crust?

2. Which boundary is most likely to cause earthquakes?

3. How do these plate movements change Earth's surface over time?