Modeling Plate Movement & Landforms Created

Name: Answer Key Period #

Objective: To model different types of plate movements and to observe the resulting feature.

Problem: What is the effect of plate movement at different boundaries on the landforms created on the crust?

Research: *Hint – you will use your notes from the past week to research. You will want to find out information on the independent variable and dependent variable in the problem that you wrote above.*

IV = Plate movement at different boundaries.

DV = Landforms created on the crust.

Hypothesis: If plates move differently at different boundaries, then the landforms created will differ because of the different plate movements.

Important Information:

1. You must model the following boundaries (in this order!):
   - Transform
   - Oceanic-Oceanic Divergent
   - Continental-Continental Convergent
2. Plan how you will model each of these boundaries with materials listed below. You will not get more supplies! Think about how the 4 pieces of graham cracker can be used for 3 different boundaries.
3. Remember the ways to write successful procedures. Look at your notes from yesterday for hints! It may be helpful if you write the procedures as 3 separate sections (like three mini-experiments!) for the 3 boundaries. Diagrams are often helpful in procedures as well.

Materials:

		What does this represent in your model?
1 whole graham cracker (divided into 4 pieces)	=	tectonic plates / lithosphere
1 scoop of pudding	=	asthenosphere (magma)
30 mL water		

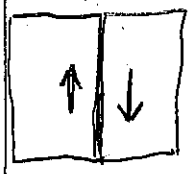
One piece of wax paper – 30 cm x 30 cm (for easy clean-up purposes!)

Procedures:

1. Gather materials
2. Carefully break your graham cracker into 4 equal pieces along the perforation.

Transform Boundary:

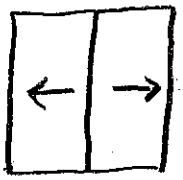
3) Place two of your cracker sections side by side along the vertical edge.



4) Apply equal pressure to both crackers and move them in opposite directions along the vertical edge.
5) Record data and observations.

Divergent Boundary: Oceanic - Oceanic

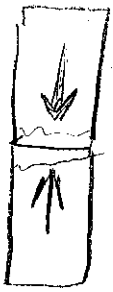
6) Use the remaining two crackers and place them side by side vertically on top of the pudding your teacher has put on your wax paper.



7) Apply gentle pressure to each of your crackers and gently move them away from each other.
8) Record data and observations.

Convergent Boundary: Continental - Continental

9) Use the two crackers you used to model the transform boundary and dip the small end of each in the cup of water for a few seconds (3)



10) Place a finger on each cracker and move them together causing the small ends that were moistened to run into each other.
11) Record data and observations.

Post Lab:

12) Clean up thoroughly.
13) Begin writing your conclusion.

If you need more space, attach a separate sheet