

Name _____

Period ____

Date _____

Graham Cracker Tectonics

Purpose: To model the interactions of Earth's tectonic plates as they move about its surface.

Describe the 4 types of plate boundaries.

Plate Boundary	Description	Landforms/Features

Materials:

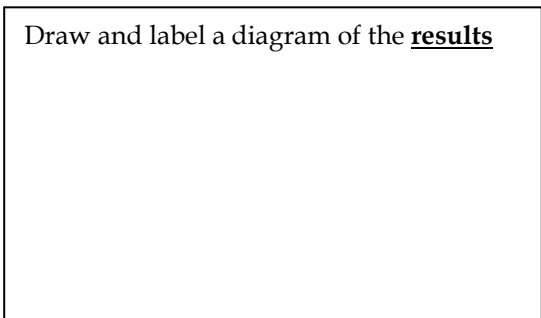
- 2 Graham Crackers
- Water
- Plate
- Paper towel
- Frosting
- 1 piece of Bread

Procedure: Create each model and draw a diagram of the results and draw a diagram of what the process looks like on the Earth.

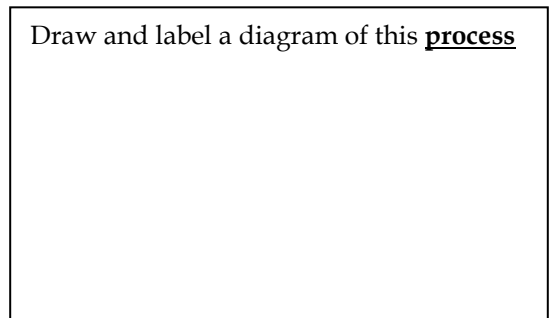
Trial 1: _____ **Plate Boundary**

- Break a whole cracker into two squares
- Lay the squares against each other on the frosting.
- Press down lightly as you slowly push the two squares in opposite directions. The opening between the crackers should be about 1 centimeter.
- What happens to the frosting?

Draw and label a diagram of the results



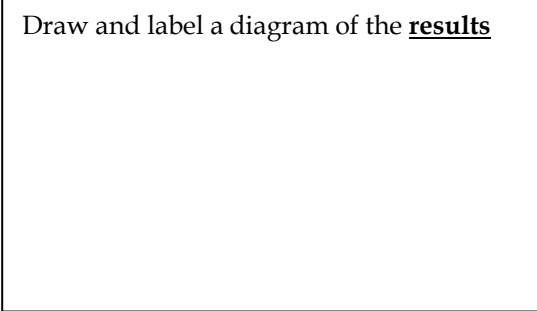
Draw and label a diagram of this process



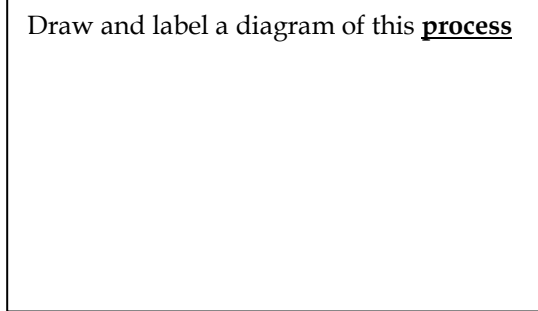
Trial 2: _____ **Plate Boundary**

- a. Lay a whole cracker and the bread end to end on your table. The cracker represents the thin, dense oceanic plate and the bread represents the thicker, less dense continental plate.
 - b. Push these two models together. Which plate rides up over the other?
-

Draw and label a diagram of the results



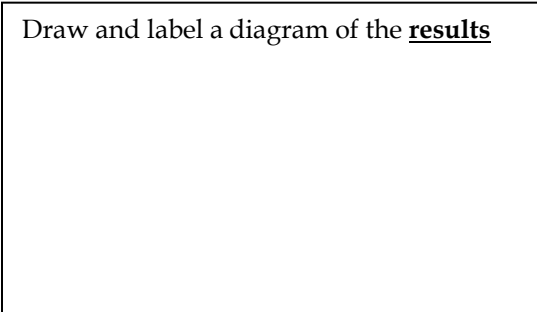
Draw and label a diagram of this process



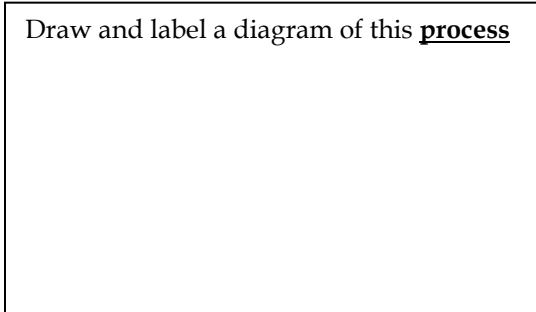
Trial 3: _____ **Plate Boundary**

- a. Break your cracker into four pieces.
 - b. Fit two of the pieces back together side by side and set the other two aside for later.
 - c. Put one hand on each cracker piece and apply steady pressure pushing them together. As you do this, push one piece away from you and pull the other toward you. What happens to the cracker?
-
-

Draw and label a diagram of the results



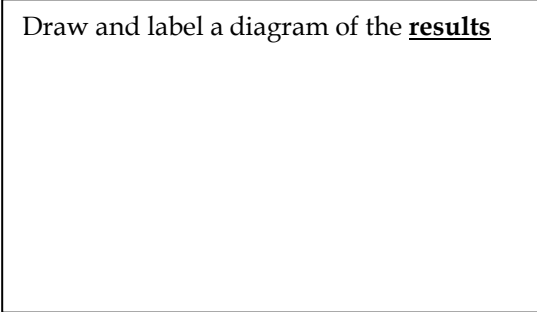
Draw and label a diagram of this process



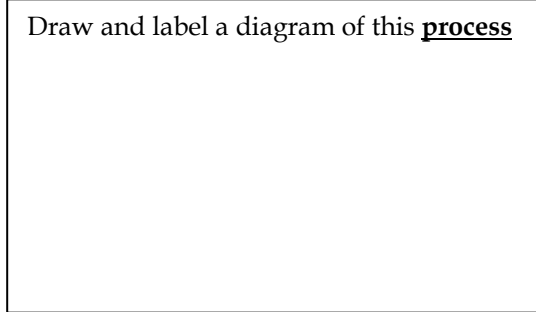
Trial 4: _____ Plate Boundary

- a. Using the two remaining quarters of the cracker, dip one end of each cracker in the water about 2 centimeters and then immediately lay them end to end on the desk with the wet ends nearly touching.
- b. What happens when you slowly push the two crackers together?

Draw and label a diagram of the **results**



Draw and label a diagram of this **process**



When finished all four trials, you may eat the frosting and crackers and discard of all other supplies. Remember to clean up your lab tables!!

Analysis Questions:

1. What do the graham crackers model? _____
2. What does the frosting model? _____
3. What does the bread model? _____
4. What types of plate boundaries were modeled for each trial? How do you know?
 - a. Trial 1 _____
 - b. Trial 2 _____
 - c. Trial 3 _____
 - d. Trial 4 _____

5. For each trial, indicate which features were formed and which features were missing from your model.

Trial number	Features Formed	Features Missing
Trial 1		
Trial 2		

Trial 3		
Trial 4		

Conclusion: Write a conclusion for this lab where you, explain what you learned while doing this lab (at least 3 different things!) and, suggest a way to extend this lab beyond what you did today (For example, how could you model one or more of the features missing for a trial above).