

Name _____ Date _____ Hr _____

Edible Plate Tectonic Activity

Each pair needs a plate, a knife, and two FULL graham crackers. Please use only the amount of icing you need. If there is extra icing then you may come back for more.

SET-UP

Take a dollop of icing and place it on your plate. You should spread the dollop so it is the approximate surface area of a full graham cracker but about 0.5 cm thick.

Part ONE:

Take one graham cracker and split it into two squares. Place them LIGHTLY on the frosting touching each other. Lightly press down on each cracker while you are pushing them away from each other. Observe. Make both written and illustrated observations. Remove the crackers from the frosting, scrape off any frosting and replace it on the plate. DO NOT EAT ANYTHING YET! =)

Part TWO:

Re-build your layer of frosting so it is approximately the same size as it was before. (use more frosting if necessary). Break your second graham cracker in half, and then each half in half again. (so you have four smaller segments of cracker) Set two of the small segments aside to be used later. You now have two small graham cracker segments to be used in part two. Dip one end (no more than 2 cm) into the cup of water at your table. Only allow them to be in the water for 2-3 seconds. Set the crackers on the layer of frosting with the wet ends nearly touching. Slowly push the two crackers towards each other. Observe. Make both written and illustrated observations. Remove the crackers, scrape off any frosting and replace it on the plate. DO NOT EAT YET!!!

Part THREE:

Re-build your layer of frosting so it is approximately the same size as it was before. (using more frosting if necessary). Remember the two parts we set aside in part two? Grab those now. Place them on the frosting so that they are long side to long side, ensure that they are touching. Place one hand on each of the graham cracker pieces, push them together while also pulling one towards you and the other away so they slide past one another.

Make sure to complete your drawings of both the food and what the actual plates will do on the next page.

You may NOW eat all of your materials, other than the plate and the knife =) Please make sure you clean up your work station, when your area is clean check in with Ms. Anderson.

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Part A

Food Drawing and Observations

Landform Drawing and Observations

Part B

Food Drawing and Observations

Landform Drawing and Observations

Part C

Food Drawing and Observations

Landform Drawing and Observations

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Questions:

- 1.) What do the crackers represent? The icing?
- 2.) How does this relate to plate tectonics?
- 3.) How many major plates make up the Earth's crust?
- 4.) Define a convergent boundary.
- 5.) Define a divergent boundary.
- 6.) Define a transform boundary.
- 7.) What type of boundary was represented in part one?
- 8.) Name a specific location on Earth where this type of boundary activity takes place.
- 9.) What type of geographic feature does this movement produce?
- 10.) What type of boundary was represented in part two?
- 11.) Name a specific location on Earth where this type of boundary activity takes place.
- 12.) Why did we wet the graham crackers for part two?
- 13.) What feature do the resulting ends of the wet crackers represent?
- 14.) What type of boundary was represented in part three?
- 15.) Name a specific location where this type of boundary takes place.
- 16.) How could we have modified this experiment to include subduction?