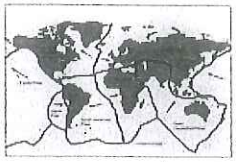
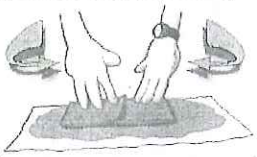
Name _____ Date_____ Period _____



Graham Cracker Model of Plate Tectonics



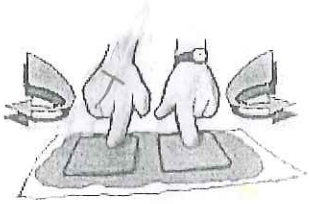
Background

The Theory of Plate Tectonics states that the crust of the Earth is composed of seven major plates and numerous smaller plates. These plates "ride" on the hot plastic upper mantle known as the asthenosphere. This theory also says that most of these plates are in motion, due to convection in the mantle, creating a variety of interactions at plate boundaries. At plate boundaries, plates may converge, diverge or slip past each other in a horizontal motion. In addition, some plates may be inactive.

Materials:

2 whole graham crackers
1 index card
1 cup of water*
1 cup of frosting
1 piece of wax paper
1 knife*

Items with an asterisk (*) will be reused for the next period. All other items may be disposed of at the end of the period.



Procedure:

Part I **Divergent Plate Boundaries-Oceanic vs. Oceanic**

1. Break a whole graham cracker into two square pieces by following the perforations on the cracker.
2. Using the knife spread a thick layer of frosting in the center of the wax paper. The icing should cover an area large enough for the two crackers.
3. Lay the two pieces of graham crackers side by side on top of the frosting.
4. Imitate the movement of diverging oceanic plates. Make sure to press down firmly and do not push the crackers more than 1 centimeter apart.
5. Draw observations of the crackers and the icing.

Questions:

1. What happened to the frosting between the crackers?
2. What do the graham crackers represent?
3. What does the frosting represent?
4. Provide an example of a location where this type of boundary is found on Earth.
5. What type of feature is produced by this type of plate movement?