

Name: _____ Date: _____ Period: _____ *Keep this lab in your notebook!*

Plate Tectonics Graham Cracker Lab

One of the major questions with the Theory of Continental Drift is how does it work? We live on a dynamic Earth, in which about twenty 60-mile thick lithospheric plates move about on the fluid-like upper mantle, the asthenosphere.

Directions: Listen to Mrs. Feldmann’s directions to perform each test. Record a written observation and a sketch of your results below.

Test	Written Observations	Sketch
1		
2		
3		

Directions: Use your data to help answer and reason through the following questions.

1. What do the graham crackers represent in this lab?
2. What does the force from your fingers represent? (See pages 460 – 463 for help)
3. Which of the three tests forms mountains?
4. Which of the three tests is a model for seafloor spreading?
5. When a plate descends beneath another plate it is called subduction. Oceanic crust is denser and can subduct under continental crust. Under which of the three tests could subduction potentially occur?
7. For volcanoes to form, magma is forced to Earth’s surface. Which of the three tests could potentially create a volcano?
8. In east Africa two tectonic plates are moving apart creating a rift valley, a long narrow depression. Which of the three tests models the creation of a rift valley?

Directions: Make the match! Match the diagram to the proper type of plate boundary.

9. _____ **Transform Plate Boundaries** are when plates move side by side with each other resulting in frequent earthquakes.

10. _____ **Divergent Plate Boundaries:** Where plates are moving away from each other. This movement is found along the midocean ridges where new crust material is being created.

Convergent Plate Boundaries are where one plate dives (subducts) under less dense crust to be recycled back into the asthenosphere. There are *three types* of convergent plate boundaries:

11. _____ **Type I Ocean – Ocean:** when the ocean crust of two plates meet usually forming island arcs

12. _____ **Type II Ocean – Continental:** when ocean crust subducts under continental crust forming mountain chains and volcanic activity

13. _____ **Type III Continental – Continental:** when two continental plates meet and buckle up forming large mountains.

