NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Egg-Tectonics**

The Earth’s crust is made up of large plates that are in constant motion. As two adjacent plates move in two different directions, one of three types of plate boundaries is formed: *divergent, convergent, or transform* boundaries. Identifying these plate boundaries helps scientists better understand the processes occurring in the Earth. It can also serve a practical purpose, such as predicting earthquakes.

**In this lab, you will use a hard boiled egg to model the motion of crustal plates on the Earth’s surface.**

**QUESTION:** What effects does the movement of crustal plates have on the Earth’s surface?

**Materials**:

\*hard boiled egg

\*paper towels

\*thin paintbrush

\*small bottle of food coloring

\*magnifying glass

**Conduct the Experiment:**

1.Place the egg on the paper towel, and lightly tap the egg in different plates to produce cracks of various lengths and sizes. Be careful not to tap too hard!

2. Dip the paintbrush in the food coloring, and trace a number of the large cracks to make them more visible.

3. Sketch the egg in your Egg-tectonics Lab Section, and show where the cracks are located. (See the illustration above.)

4. As one partner holds the magnifying glass, the other partner will gently squeeze the egg until slight movement occurs between the pieces of the shell. Use the magnifying glass to help you see the motion. You should be able to distinguish at least three types of motion between the pieces of the shell. Squeeze the egg in different ways to create these types of motion. Indicate on your sketch the motion of the eggshell pieces.

**Observations:** (copy in your notebook!)

5. Describe what happens to the egg shell surface as you make each type of tectonic boundary.

**Analyze the Results:** (copy and answer in your notebook!)

6. What do the egg and the pieces of shell represent?

7. What do the cracks in the shell represent?

8. Describe the three types of motion and their effects on the pattern of cracks?

9. Relate these three types of motion to the three types of plate boundaries mention in your science book on pgs. 276-277.

**Draw Conclusions:**

10. Look up the following landforms and list what type of plate boundary is associated with these landforms. Identify the type of motion for each.

 \*volcano (pg. 277, 309)

 \*mountain range (pg 276)

 \*rift valley (pg. 277)

 \*strike-slip fault (pg. 288)