

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Period: \_\_\_\_\_

## Modeling Sea Floor Spreading

### Procedure:

1. You will be working in groups of two.
2. Get five different colored pencils preferably violet, blue, green, yellow, orange, and/or red
3. Obtain two pieces of line paper, and line the tops together.
4. Line the papers up to match and tape them together.
5. Put the desks together and leave a little space in between the desks.
6. Place the lined paper in the slit between the desks
7. Make sure only one line of the lined paper is showing from the crack.
8. Slowly pull out the paper on both sides of the desk crack.
9. Color each 30 million year period with a different color.
10. Each line represents 5 million years of Earth's history.
11. Start with purple/blue, and move on to green, yellow, orange, and red at the very end

**Directions:** Answer the following activity questions in complete sentences. Be thorough in your answers!

1. Diagram what you are observing in this modeling activity.
  
  
  
  
  
  
  
  
  
2. In the activity, what underwater feature does the desk crack model?
  
  
  
  
  
  
  
  
  
3. What real life material does the pieces of paper model in this demonstration?
  
  
  
  
  
  
  
  
  
4. What do the different colors represent?
  
  
  
  
  
  
  
  
  
5. What colors represent the oldest samples? What colors represent the youngest? Why? **Explain your reasoning.**

6. What colors represent the densest samples? What sample represents the least dense material?  
**Explain your reasoning.**

**Critical Thinking:**

7. Imagine that your hands as you pulled the paper out from the desk represent two continents that were once together, but must move away from each other as the sea floor grows. You have heard about the Continental Drift Hypothesis and why it was not accepted. Why does this model provide very strong evidence for why the continents moved apart?
8. The Earth is about 4.6 billion years old. Based on observations of the sea floor spreading model, why do you think that the oldest ocean floor is only about 200 million years old?