

Name: \_\_\_\_\_ Date: \_\_\_\_\_:Period: \_\_\_\_\_

## What is the Mantle Like?-Lab

**Introduction:** If you pull Silly Putty apart very slowly, what happens? What if you pull a strand apart rapidly?

**Objective:** In this activity, we will investigate the properties of the Earth's mantle. The mantle has the ability to behave both as a liquid and as a solid.

**Materials:**

**Procedure:**

1. Add 8 teaspoons of cornstarch to your plastic cup.
2. Add 25 mL of water to the cornstarch in the cup.
3. Use the spoon to stir the solution.
4. The solution should be about as thick as pudding.
5. Conduct each investigation and record your observations in the data table.

**Data:**

INVESTIGATION	OBSERVATIONS
A. Try to stick a spoon into the "mantle."	
B. Try to stir the "mantle" rapidly.	
C. Pour into your hand. As you are pouring, have your partner "swipe" a finger through the flow.	
D. In your hands, try to roll it into a ball.	

Name: \_\_\_\_\_ Date: \_\_\_\_\_:Period: \_\_\_\_\_

### **Conclusion**

1. Describe two examples of how our “mantle” behaved like a liquid.
2. Describe two examples of how our “mantle” behaved like a solid.

### **Within the Mantle (use the book; chapter 1 sec 2):**

3. Describe how convection currents form.
4. What happens to convection currents when a fluid reaches a constant temperature?
5. What will happen to the flow of hot rock in Earth’s mantle if the planet’s core eventually cools down? Explain your answer.