

## CONVECTION AND EARTH'S INTERIOR

Directions – Complete each of the following sections to help you understand how convection works inside the Earth

### Activity 1 – Convection Currents Lab

Procedure:

1. Fill the large beaker 2/3 of the way with cold tap water.
2. Fill the small beaker completely with hot water. Add a drop of food coloring and mix.
3. Cover the small beaker with plastic wrap and secure with a rubber band.
4. Carefully lower the smaller beaker into the larger one.
6. Slowly use the tip of a pencil to poke two holes in the saran wrap.

**Be careful to not disturb the water.**

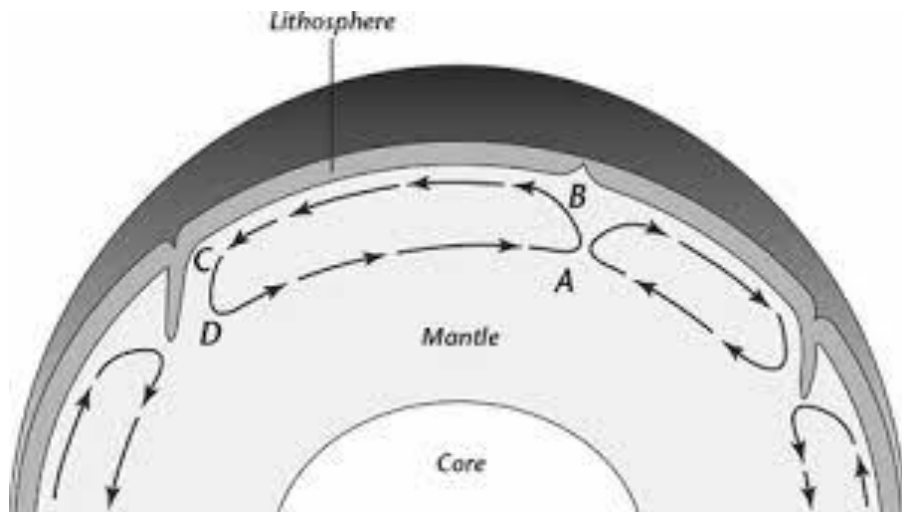
7. Observe the colored water and the paper pieces. Record your observations and draw a basic **colored sketch** in the data table below every 30 seconds for 2 minutes.

Time	30 Seconds	60 seconds (1 minute)	90 seconds (1 min 30 seconds)	120 seconds (2 minutes)
Observations				
Colored Sketch				

8. What happened to the colored water when it reached the top of the water in the larger beaker?
  
9. How is the density of the hot and cold water different? Support your explanation with evidence from the observations
  
10. Convection currents transfer large amounts of heat through Earth. Convection currents in the asthenosphere transfer heat as warm rock slowly rises toward the top of the mantle. As it reaches the top of the mantle, it begins to cool. This causes the rock to then sink back down into the mantle. a. Explain how your model illustrated convection.?

## Activity 2 – Convection Currents Graphic Organizer

Complete the graphic organizer by cutting out the descriptions that are on a separate page and glue each description for A, B, C and D in the diagram. Then describe the cause and effects of convection currents in the mantle and the result of the actions.



A

B

C

D

Cause

Effect

Result