**Convection Current Lab**

Purpose:

The purpose of this activity is to discover **how convection currents move**.

Materials:

Water, room temperature water, 3 cups, glass beaker, eye dropper, red food coloring

Procedure:

1. Fill your beaker **200 ml** full of water.
2. Set your beaker on top of 3 Dixie cups turned upside down.
3. Put an **unlit** candle in the center of the three Dixie cups.
4. Set your beaker on top of the Dixie cups.
5. Draw your apparatus you set up below:
6. Do **not** move or touch the table, books, or beaker of water. Be still as possible!!! Your results will be more accurate! Does anyone know **WHY**???
7. Your **teacher** will come around and place a drop of **food coloring** at the bottom of your beaker and **light** the candle.
8. **OBSERVE, OBSERVE, OBSERVE** for five minutes and **record** all your observations below. Also, **draw** what you see happening into your diagram above.

THINK ABOUT THIS WHILE OBSERVING::: **Why is the food coloring moving? In what direction is the warm water moving? The cold water? What is the shape of the pattern forming throughout the beaker?**

Discussion Questions:

1. What does heat rise in?
2. Has the movement stopped now that the food coloring is completely mixed in the water?

Post-Lab : (Please answer the following questions in complete sentences on the back of this paper).

1. Using arrows draw the path of the warm water and the cool water in the diagram above.
2. Which way does the warmed water move?
3. What happens when the warmed water reaches the surface?
4. Which way does the cooler water on the edges of the beaker move?
5. What causes the warmed water to rise?
6. What causes the cooled water to descend?
7. Why does the cooler water move toward the area of heating?