

Name: _____

Date: _____

Science Period: _____

Movement of Molecules LAB

Objectives:

- ★ To observe diffusion by using food coloring in water, and by using magic marker on a paper towel.
- ★ To correctly explain the processes of diffusion and osmosis by answering the questions to the following activity.

Materials:

food coloring paper towel  stop watch  test tube thick marker water

Procedure:

1. Working in groups determined by the teacher, please obtain all of the materials listed above for your group, **except** for the food coloring.
2. With one student carefully holding the test tube, fill it $\frac{3}{4}$ - $\frac{1}{2}$ with cold water from the sink. Wait for the teacher to add **a drop** of food coloring to the water in the test tube.
3. Get your stopwatch ready. Everyone in the group should then CAREFULLY watch the test tube and observe what happens after the food color is added. Be sure to time how long it takes for your test tube turns color. Write down the time here: _____
4. One member of the group should then pour the water down the drain and rinse the test tube, gently drying the outside of it with a paper towel (NOT the paper towel you already have).
5. Next, hold up the dry piece of paper towel you have, and using the marker, touch the underside of the paper towel with the tip of the marker. The marker should be **under** the paper towel so that everyone can see the ink spot it makes. Hold the marker there (touching the same spot on the paper towel) for about 30 seconds. Observe the ink spot.
6. Return all materials from where you picked them up, and then *answer the following questions*.

Questions: (Answer neatly in pen, using complete sentences & correct science vocabulary)

1. *Describe* what happened when the food coloring was added to the water in the test tube.

2. What process is this (the spreading of the **food coloring**) an example of?

3. Approximately, how long did it take for the color to fill the test tube?

OVER →

