



## Handout - Water Contamination Experiment

*Follow the instructions below to conduct the experiment, and write your observations in the provided areas throughout the handout.*

### Supplies Required:

- White flowers (3-5)
- Jars (3-5)
- Food coloring (3-5)
- Water
- Markers or labels

**Purpose:** To examine the process of osmosis.

**Activity Summary:** You will observe the way plants—in this case flowers—absorb materials through water, and the way this process of osmosis affects them. ‘

### Part 1 - Procedure

1. With a marker or label, label one jar “control,” and number the rest.
2. Fill each jar with water about halfway. Then add a few drops of food coloring into each numbered jar (leave the control jar free of food coloring), so that each jar has a different color of water.
3. Place 1 white flower (trim the stem if necessary) into each jar.
4. Wait around 24 hours.
5. Draft a hypothesis in the box below. What do you think might happen to the flowers after 24 hours?

## Part 2 - Observations

After 24 hours, use the following chart to examine the flowers:

Jar Label	Observations
Control	
#1	
#2	
#3	
#4	
#5	
#6	

### Part 3- Analysis

Read the definition below, and answer the preceding questions:

**Osmosis:** The movement of a **solvent** through a **semipermeable membrane** into a **solution** with a higher solute concentration that tends to **equalize** the amount of the solute on the two sides of the membrane.

**Solvent:** A liquid into which other substances dissolve.

**Solute:** Substances that dissolve into a liquid.

**Solution:** The result of combining a solvent with a solute.

**Semipermeable membrane:** A tissue that allows certain molecules to pass through it.

**Equalize:** A situation in which the amount of a material on either side of a boundary is equal.

Using the information above, draw a line between the term and the material used in the experiment:

**Solvent**

**Flower plant cells**

**Solute**

**Water**

**Solution**

**Food coloring**

**Semipermeable membrane**

**Water combined with food coloring**

Next, write a description of what you hypothesize happened in the experiment using the terminology above (*solvent, solute, solution, semipermeable membrane, equalize, osmosis*):