

Designing Osmosis Lab

HONORS BIOLOGY: UNIT 2

Introduction: Your task is to design a controlled experiment to demonstrate the **osmosis** of water in **hypotonic**, **isotonic**, and **hypertonic** solutions. To simulate a cell you will utilize a potato. The available materials to conduct the experiment are listed below. You will work with a partner to design the experiment. Once you have designed the experiment (*completed this handout*), you and your partner will conduct the experiment. When you have completed the experiment you will prepare a **formal lab write-up** (see attached handout).

Materials:

- One raw potato
- Knife
- Metric ruler (with mm)
- Distilled water
- Tap water
- Graduated cylinders
- Salt (NaCl)
- Measuring spoon
- 100 ml Beakers
- Electronic balance (scale)

PART 1: Write your hypothesis below (remember it must be an **if/then/because** statement):

PART 2: Identify the following:

1. Dependent variable-
2. Independent variable-
3. Controlled variables (list at least 4)-

PART 3: List the **procedure** to complete the lab-numbered list of steps. You must also include a **blank data table** with columns and rows labeled for collecting data during the course of the experiment. (*Use the other side of page to complete*)