

Names: _____ Period: _____ Date: _____

Biology
Mr. Croft

Microscope #: _____

Osmosis Lab Activity

30 Points

I. Problem: What happens to plant cells that are placed in hypotonic and hypertonic solutions?

II. Hypothesis:

III. Materials:

- | | | |
|------------------|----------------|--------------------------------|
| 1. Microscope | 4. Red Onion | 7. Tap Water (Isotonic) |
| 2. 2 Slides | 5. Paper Towel | 8. Salt Water (Hypertonic) |
| 3. 2 Cover Slips | 6. Pipettes | 9. Distilled Water (Hypotonic) |

IV. Procedure:

Part 1: Tap Water

1. The outer thick scale of the onion has been removed for you.
2. Peel off a small piece of the outside tissue of one layer (it should be red/purple).
3. Cut a small square of the tissue using a scalpel (if necessary).
4. Place the square on a slide, add two drops of tap water, and place a cover glass on top.
5. Examine the slide under low power and switch to high power to make a drawing (see results section).

Part 2: Salt Water

1. Place two or three drops of salt water to the right of the cover glass.
2. Place a small piece of paper towel to the left of the cover glass.
3. As the towel absorbs the tap water, the salt water will be drawn under the cover glass.
4. Absorb any excess water with a small piece of paper towel.
5. Examine the slide under low power and switch to high power to make a drawing (see results section).

Part 3: Distilled Water

1. Using a **NEW** slide and coverslip, make a slide with a small square of onion and three drops of distilled water.
2. Wait 2 minutes.
3. Examine the slide under low power and switch to high power to make a drawing (see results section).

V. Results: Draw a picture of **ONE CELL** for each solution that you observe (high power).

