



## SECTION 7: OSMOSIS

### LAB

### INTRODUCTION

Osmosis is the movement (diffusion) of water in and out of cells. Water moves from an area of higher concentration of water to area of lower concentration of water through a cell membrane. Thus it enters a cell full of waste, diluting the particle concentration. The cell then has a higher concentration of water than the blood, thus water carries waste from inside the cell into the blood, moving towards the lower concentration of water. The blood carries waste to the kidneys. Kidneys filter waste from the blood and send the waste to the bladder to be expelled from the body.

Osmosis can be observed by putting raisins in water. After 30 minutes, the raisins will feel squishy because they expanded in the water. Water enters raisins, as there is a lower concentration of water and more dissolved material in the raisin. Blood enters a cell full of waste like the water entered the raisin.

### ASSESSMENT ANCHORS ADDRESSED

**S4.B.1.1** Identify and describe similarities and differences between living things and their life processes.

### PURPOSE

The students will study the basics of osmosis with raisins and water, and then make their own blood vessel to study how osmosis works in the body.

### MATERIALS

**For the class:**

8 cups of water	45 raisins
Transparency worksheet	Dialysis tubing
Corn syrup	1 pint jar
4 metal twist ties	2 clear straws
2 cups	Red food coloring

*Teacher provides items marked with \**