

Unit 1 ..... Handout 23 .....

Lesson 5: Osmosis and Gummy Bears

**Purpose:** To observe how osmosis affects gummy bears (hey, why not?)

**Research/Background:**

Osmosis is a natural process that involves the diffusion of water. Diffusion is when particles move from an area of high concentration to an area of low concentration. Its effects can be seen in all organisms and in some abiotic factors. To understand osmosis, you will conduct a simple activity demonstrating its effects.

**Procedure**

1. Collect as much quantitative data as you can about your gummy bear.

Measurement	Value (unit)
Mass	
Length	
Width	
Height	
Volume (L x W x H)	

2. Make at least two predictions about what will happen to the gummy bear. Your predictions **must** be about your data you have collected. Be as specific as possible (i.e.: don't say "it'll get bigger.") Write your predictions on the next page. Then, explain why you think your prediction is true.

Prediction	My explanation

3. Place your gummy bear in the water and clean up your area around you.

**Post-Lab**

1. Retrieve your gummy bear and re-record your data in the tables below. Note any differences between your original data and the new data.

Measurement	Starting Value	Ending Value	Difference?
Mass			
Length			
Width			
Height			
Volume			

2. At the beginning of the lab, what had the **higher** concentration of water: the solution or the gummy bear? \_\_\_\_\_

3. At the beginning of the lab, what had the **lower** concentration of water: the solution or the gummy bear? \_\_\_\_\_

4. Use the following words to complete this sentence: **solution** and **gummy bear**. In this lab, the water moved from the \_\_\_\_\_ to the \_\_\_\_\_.

5. How did the gummy bear change? Cite specific data from your investigation.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

6. Was the gummy bear placed into a hypertonic, hypotonic, or isotonic solution?  
\_\_\_\_\_

7. Explain how you know your answer for number 6.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_