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| Names: | Date: | Period: |

**Cells - Gummy Bears Transport Lab**

In this lab you will observe the movement of water in response to the concentration level of sugar.

**PART 1 PROCEDURES**

1. Using a ruler measure, the length of your Gummy Bears in cm. Enter measurement into data table.
2. Fill your cup to the appropriate line with water. **🡪 3cm**
3. Place the Gummy Bears into the cup of water and **wait 10 minutes.**
4. Carefully remove the Gummy Bears from the cup.
5. Measure the length of the Gummy Bears in cm again. Enter measurement into data table.
6. Determine the change before and after placing the Gummy Bears in the water. (important to include + and – signs)
7. Answer post lab questions.

**Gummy Lifesaver Data Table (4 Points)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Trial # | Length (cm)Before water | Length (cm)After water | Change in Length | Which way did the water move? |
| Trial 1 |  |  |  |  |
| Trial 2 |  |  |  |  |
| Trial 3 |  |  |  |  |
| Average |  |  |  |  |

**POST LAB QUESTIONS**

1. Explain the difference between active and passive transport**. (2 Points)**
2. Is the Gummy Lifesaver lab a form active or passive transport? Justify your answer in complete sentences. **(2 Points)**
3. Which way did the water travel, into the bear or out of the bear? **(1 Point)**
4. Using the above information, in the beginning…. **(2 Points)**

Where was there a greater percentage of water? Where was there a smaller percentage of water?

Where was there a higher concentration of sugar? Where was there a smaller concentration of sugar?

1. Based on the answers above, what did you notice about the relationship between the amount of water and the amount of sugar? **(2 point)**
2. In this lab what was the solvent? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ What was the solute? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **(1 Point)**
3. Draw a picture of an animal cell placed in a hypertonic solution, hypotonic solution, and an isotonic solution. Draw arrows showing the movement of substances in or out of the cell. **(6 Points)**

|  |  |  |
| --- | --- | --- |
| Hypertonic Solution | Hypotonic Solution | Isotonic Solution |

8. Looking at the pictures below, circle the images that demonstrates turgor pressure in green and those which

 demonstrates plasmolysis in blue?

