**Gummy Bear Lab Name:**

What do you think will happen to a gummy bear when you put it in water over night?

**Independent Variable:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Dependent Variable:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Hypothesis:** If \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ then,\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Part A:** Describe the physical properties of your gummy bear below.

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| --- | --- |
| **Sense** | **Description** |
| Smell |  |
| Sight |  |
| Feel |  |
| Sound |  |

**Part B:** Use the equipment available to measure your gummy bear and record the data in the chart for Day 1.

**Measurements:**

• The **length** of your gummy bear should be measured from the top of its head to the bottom of its feet to the nearest tenth of a centimeter.

• Measure the **width** at the widest point across the back of the bear to the nearest tenth of a centimeter.

• Measure the **thickness** from the front to the back at the thickest point to the nearest tenth of a centimeter.

• Calculate the **volume by multiplying the length, width, and thickness**. Round to the nearest hundredth.

• Measure the **mass** using a triple-beam balance or other scale to the nearest tenth of a gram.

• Calculate the **density** by dividing the mass by the volume. Round answer to the nearest hundredth.

**Experiment Data:**

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| --- | --- | --- | --- | --- | --- | --- |
| **Day** | **Length (cm)** | **Width (cm)** | **Thickness (cm)** | **Mass (g)** | **Volume****(mL/cm³)** | **Density****(g/mL)** |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |
| Amount of Change |  |  |  |  |  |  |

**Part C:** Put the bear in a cup labeled with your group’s name and class period. Add 50 ml of water to the cup and allow it to sit overnight. On Day 2, ***CAREFULLY*** remove the gummy bear from the cup of water and use a towel to dry it off to prevent it from dripping all over the place. **Repeat the measurements from Part A** and record your data in the correct portion of the chart. Determine the amount of change for each measurement and record in the chart.

**Analysis/Conclusion:**

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Create a double bar graph comparing the mass, volume, and density of the gummy bear on day 1 and day 2. Don’t forget your title and labels of the x and y axis!

Write a conclusion paragraph describing the results of the lab. Does you data support or reject your hypothesis? Why or why not? How do your results compare to those of your classmates? Are your results accurate? Why or why not?

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*Fill in the blanks using the word bank to find out why this happened:*

It has to do with a process called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Imagine the gummy bear is a real living thing. It would be made up of tiny, living units called \_\_\_\_\_\_\_\_\_\_\_\_\_\_. Each cell is surrounded by a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that protects the cell by keeping the cells parts inside and keeping other things outside. While it stops most things, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ can pass through it. We call the membrane \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, because it decides what comes in and out. Water moved from the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the Gummy Bear to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to “even out” the concentration of water. As more and more cells gained water, the Gummy Bear became larger as more water filled it up.

**water** **membrane** **cells** **permeable** **osmosis** **inside** **outside**