

Name _____



Gummy Bear Graphing

Question: How does the size of a Gummy Bear change when it is soaked in water?

Hypothesis: I think the size of a Gummy Bear will

when soaked in water because

Background Information: Mass is the amount of matter in an object.

Materials:

Gummy Bear Candies

Beaker

Paper towels

Triple beam balance

Distilled water

Wax paper

Procedure:

1. Fill the beaker $\frac{1}{2}$ full with water.
2. Place the piece of wax paper on the pan of the triple beam balance.
3. Find the mass of one of the Gummy Bears. Record this mass in the data chart.
4. Find the length of the Gummy Bear in mm. Record the length in the data chart.
5. Put the Gummy Bear in the beaker with distilled water. Let it soak for 2 minutes (use the clock or your watch to time this!)
6. After two minutes, take the Gummy Bear out of the water. CAREFULLY pat it dry with a paper towel.
7. Find the mass and length again. Record. Put the Gummy Bear back in the water for another two minutes.

8. Repeat steps 7 and 8 until the Gummy Bear has soaked in water for a total of 20 minutes. Record all data.
9. Leave the Gummy Bear in the distilled water overnight.
10. Measure and record the mass and length of the Gummy Bear after soaking in water overnight.

Data:

Mass (g) and Length (mm) of Gummy Bears in Water

<i>Distilled Water</i>		
<i>Time (min)</i>	<i>Mass</i>	<i>Length</i>
<i>Start</i>		
<i>2</i>		
<i>4</i>		
<i>6</i>		
<i>8</i>		
<i>10</i>		
<i>12</i>		
<i>14</i>		
<i>16</i>		
<i>18</i>		
<i>20</i>		
<i>24 Hours</i>		
<i>Total Change</i>		

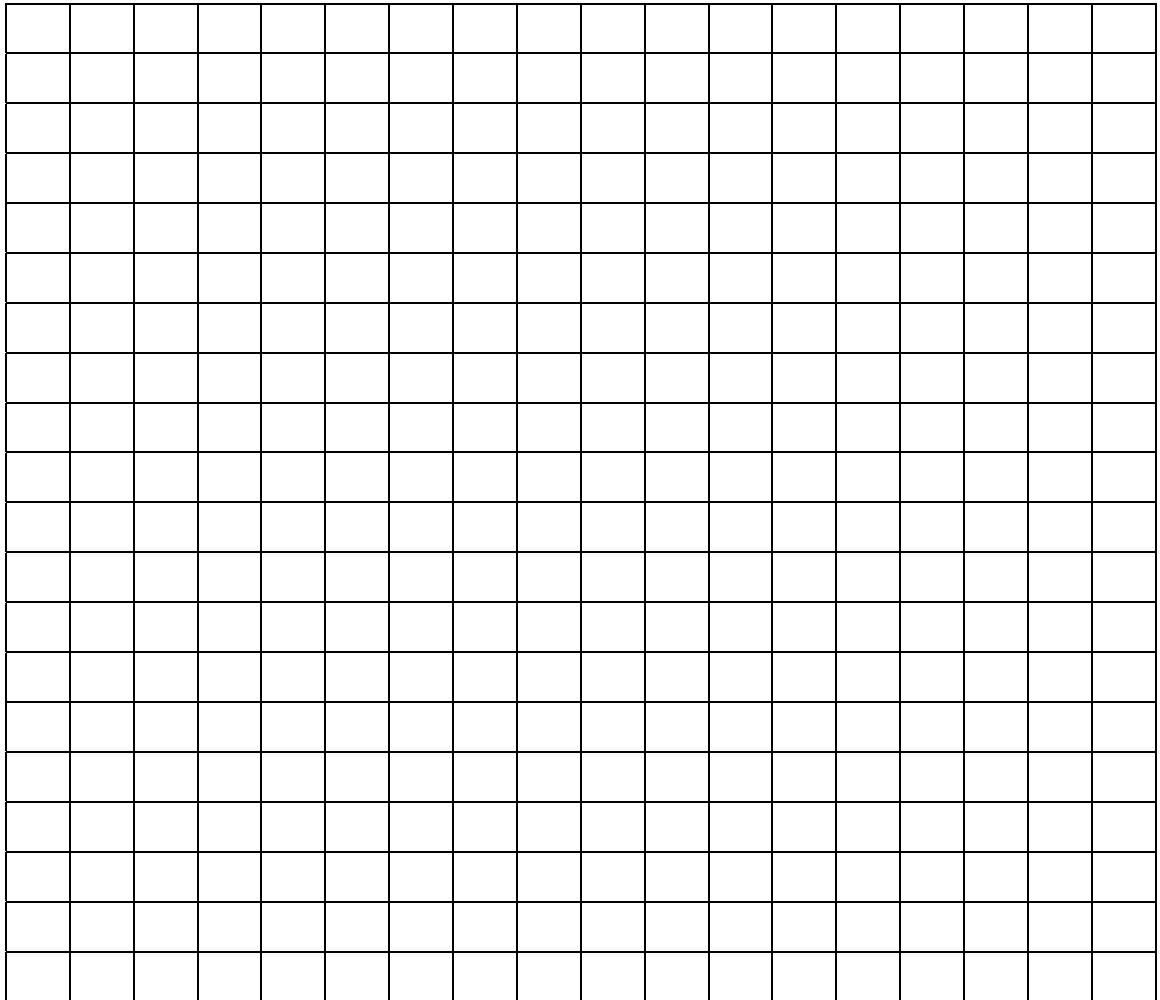
Data Analysis:

Make two LINE GRAPHS to help examine this data. Plot the mass data from the experiment on graph 1, and plot the length data from the experiment on graph 2.

Graph 1:

Title _____

Label

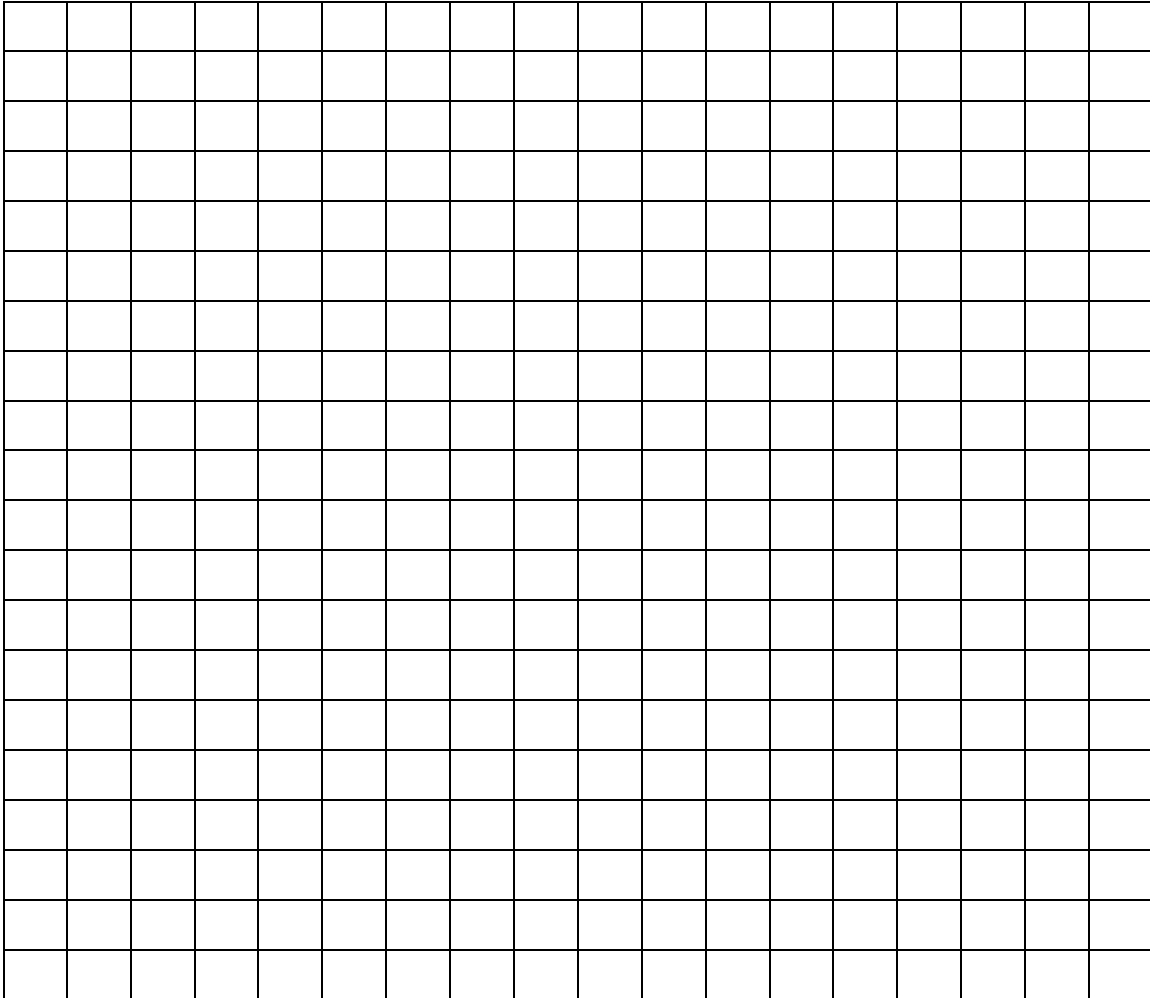


Label

Graph 2:

Title _____

Label



Label

What is the relationship between time and mass? Describe the relationship shown in graph 1:

As time (increases / decreases), mass (increases / decreases).

What is the relationship between time and length? Describe the relationship shown in graph 2:

As time (increases / decreases), length (increases / decreases).

Conclusions:

1. After carefully studying the *trends* in the graphs, what can you say about Gummy Bears and water? What do you know or suspect you know now that you did not know before doing this experiment? Do not describe the data again, describe what the data means.

2. What do you think would happen if you took the Gummy Bear that was soaked in distilled water and put in salt water overnight?_____

3. Describe an experiment to test your answer to number 2 :

4. What was the independent variable in this experiment?

5. What was the dependent variable in this experiment?

6. What were some controlled variables in this experiment?

7. Why was a line graph the best choice in this experiment?
