



Name \_\_\_\_\_

## Moving Bodies

**Question:** How does the amount of mass of a body in motion affect its tendency to remain in motion?

**Hypothesis:**

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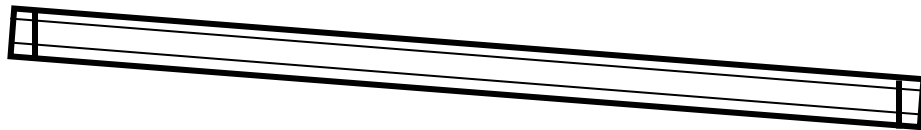
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**Materials:**

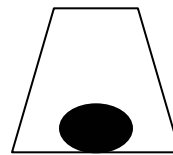
2 Meter sticks	String	Rubber bands
3 marbles	Wooden block	Paper cup

**Procedure:**

1. Use the string to make “guard rails” down the length of the meter stick. Fasten the strings to the meter stick with the rubber bands.



2. Make a ramp from the wooden block and the meter stick.
3. Cut a small hole in the paper cup.



4. Put the cup at the end of the meter stick ramp. Face the hole in the cup so that a marble can roll down the ramp and into the cup.
5. Put a marble at the top of the meter stick ramp and let it roll down the ramp and into the cup.
6. Use the second meter stick to measure how far the cup moved. Record your data.
7. Repeat for a total of 5 trials.
8. Add a second marble to the top of the meter stick, so that two marbles roll down the ramp. Roll both marbles together. Repeat steps 5 – 7.
9. Add the third marble to the top of the meter stick so that three marbles roll down the ramp. Roll all 3 marbles together. Repeat steps 5 – 7.

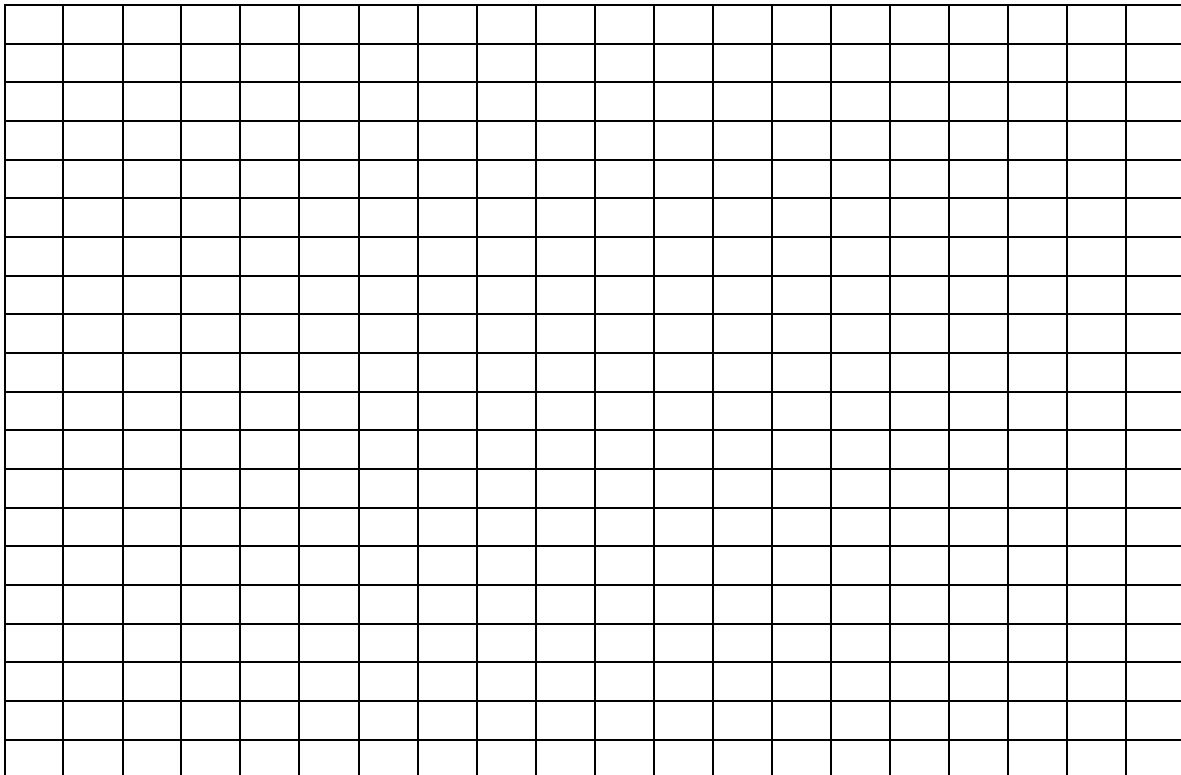
**Data:**

<b>Cup Movement Distance (cm)</b>						
<b>Number of Marbles</b>	<b>Trial 1</b>	<b>Trial 2</b>	<b>Trial 3</b>	<b>Trial 4</b>	<b>Trial 5</b>	<b>Average</b>
<b>1</b>						
<b>2</b>						
<b>3</b>						

**Data Analysis:**

Make a bar graph to compare the average distance the cup moved. Remember to plot the independent variable on the X-axis and the dependent variable on the Y-axis.

Title \_\_\_\_\_



How does increasing mass (more marbles) affect the object (marbles) in motion?

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**Conclusion:**

Write a brief paragraph answering the original question. Describe whether or not your data supports your hypothesis. Use actual data from your investigation as evidence.

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