Name_____

Acceleration 1

Materials:

Flat board	Toy skateboard	3 washers
Rubber band	Calculator	Meterstick

Procedure:

1. Make a ramp from the board and a wooden block.
2. Roll the skateboard down the ramp.
3. Use the meterstick to measure how far the skateboard travels. Record.
4. Repeat steps 2 & 3 for a total of 5 trials.
5. Use a rubber band to attach a washer to the skateboard.
6. Repeat steps 2 – 4.
7. Add another washer to the skateboard.
8. Repeat steps 2 – 4.
9. Add a third washer to the skateboard
10. Repeat steps 2 – 4.

Data:

Number of Washers	Distance (cm)					Average Distance (cm)
	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	
0						
1						
2						
3						

Data Analysis:

Graph your data using a bar graph. Remember to title and label your graph.

Title_____

REMEMBER:
The independent variable goes on the X-axis.
The dependent variable goes on the Y-axis.

Before you plot your graph – **THINK**! What did you change, what did you measure?

Describe the relationship shown in the graph. What effect does the independent variable have on the dependent variable?

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Conclusions:

1. How does increasing mass affect the motion of objects? Explain your answer using data from your experiment.

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2. Predict how far the skateboard would roll if you added 5 washers. Explain your answer.

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3. Acceleration is a change in velocity. This may be a change in speed and/or direction. What affect does mass have on acceleration. Explain your answer using data from your experiment.

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