

Resting Bodies

Question: How does the amount of mass of a body at rest affect its tendency to remain at rest?

Hypothesis:			

Materials:

2 Meter sticks	String	Rubber bands			
3 pennies	Wooden block	Paper cup			
Marble					

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 the marble can roll down the ramp and into the cup.
- 5. Put the 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. Tape 1 penny to the top of the cup. Repeat steps 5-7.
- 9. Tape a second penny to the cup. Repeat steps 5-7.
- 10. Tape the third penny to the top of the cup. Repeat steps 5-7.

Data:

Cup Movement Distance (cm)								
Number of pennies	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	Average		
0								
1								
2								
3								

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.

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How does increasing mass (adding more pennies) affect an object at rest (the
cup)?
Conclusion:
Write a brief paragraph answering the original question. Describe whether or no your data supports your hypothesis. Use actual data from your investigation as evidence.
