Balloon Rock Lab 2

Last time, we observed how a rocket's movement depends on ***Newton's Third Law of Motion – For every action there is an equal and opposite reaction.*** What other factors affect a rocket's motion? For this lab you will choose to test one of two variables that may or may not affect a balloon rocket's speed. You will conduct the lab, and a lab write up will be turned in.

Problem: What affects a balloon rocket's speed?

With your team, choose one of the following INDEPENDENT variables to test. (Note: You can only test one!) ***Balloon Size or Type of String***.

Hypothesis: (Use an if, then statement or I think, because statement)

_____

_____

_____

Identify Variables:

Independent Variables:

_____

_____

Dependent Variables:

_____

_____

Controlled Variables:

_____

_____

Materials: balloon, string/fishing line, scissors, tape, straw.

Procedure:

1. Blow up the balloon and clamp it shut with the clothespin again.
2. Thread the string through the drinking straw. Tape the long side of the balloon along the length of the straw.
3. Have two people hold the ends of the string. Make sure the string is stretched tight.
4. Slide the balloon-straw system down the string until the clamped end reaches the end of the string held by a person.
5. Release the clothespin. Record your observations.
6. Blow up the balloon and repeat steps 5 and 6.
7. Then change the variable (string or balloon). Repeat trial 5 times.
8. Change the variable the final time. (Repeat trial 5 times)

Variable 1: _____

Trial	Distance traveled in m	Time in seconds (to the nearest .10)	Average Speed
1			
2			
3			
4			
5			
Average			

Variable 2: _____

Trial	Distance traveled in m	Time in seconds (to the nearest .10)	Average Speed
1			
2			
3			
4			
5			
Average			

Variable 3: _____

Trial	Distance traveled in m	Time in seconds (to the nearest .10)	Average Speed
1			
2			
3			
4			
5			
Average			

Lab Report Requirements: (This is what you will turn in for a grade!)

1. Problem
2. Hypothesis
3. Variables (In complete sentences)
4. Data Tables (Drawn with a ruler)
5. Graph (See me if you need graph paper.)
6. Conclusion (See conclusion notes for requirements. Should be 6 – 8 sentences minimum.)

Make sure to title each section. The lab report must be neat and legible. If you have access to a computer, it may be typed. Font: Times New Roman Size 12.

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