Lofty Heights Lab Protocol

Physics

Objective: Predict the maximum height of a paper rocket launched from an air compressor

Teams: Work in groups of no more than three while collecting initial data.

Provided/ Suggested Materials: Stopwatch, ruler/meter stick/measuring tape

Instructions:

1. Make sure you have the Big 4 equations correctly written in your notes.
2. With your group, discuss which of the variables we're working with you can determine PRIOR to launching a rocket (either by measurement or by virtue of their being known quantities). **Describe these variables, and how you will obtain them, in your notes**.
3. With your group, discuss which variables you can measure or determine DURING or AT THE END of the rocket launch. It might be useful to think about the launch in separate sections, and identify the variables accordingly. **Describe these variables, and how you will obtain them, in your notes.**
4. With your group, discuss how you will use the Big 4, the information you determined in question 2, and the information you determined in question 3, to calculate the maximum height of the rocket. Try to find other calculations (using the Big 4) you might do in order to verify your answer. **In your notes, show the process and calculations you will use to find the maximum height. Include any steps you discussed that would help you check your work.**
5. On launch day, make sure you collect all the relevant data prior to, during, and at the end of the launch. **Clearly write this data in your notes.**