

# Lab 1: Guide/Rubric

For Lab 1, you are responsible for ONLY these four sections of the formal report:  
Research Question, Data Collection, Analysis, Appendices

Use the following lists as a GUIDE as you write the report.  
I will use it as a RUBRIC when I grade the report.

**Research Question:** please use suggested research questions from lab instructions

## **Data Collection:**

1. What factors were considered when choosing units of time & distance.
2. How units of time and distance were defined (be as specific as possible!)
3. How track & glider were set up
4. What (if anything) was measured *prior to trials*.
5. What time trials consisted of
6. What was measured during each trial
7. How subsections of track were defined
8. Where (specifically) in the appendices the data can be found
9. ALL measurements should specify FROM & TO

## **Analysis:**

1. How trial data was averaged
2. Where (specifically) in appendices averaged values can be found
3. What equation was used to calculate average speeds
4. Equation correctly named
5. Equation correctly formatted
6. What values were substituted into equation: we're looking for explanation, not specific #s
7. Where (specifically) in appendices calculated average speeds can be found
8. Whether significant variation was found
9. Why variation was/was not considered significant
10. Discussion: what physical factors might account for variation or non-variation in Ave. Speed
11. What general conclusions can be drawn about movement of gliders on air-tracks.

## **Appendices:**

1. Tables showing:
  - a. all raw data from trials (times & distances) with units and uncertainty.
  - b. averaged trial data (This need not be a separate table)
  - c. calculated average speeds (Again, this need not be a separate table)
2. All tables clearly organized and labeled: it should be easy to tell at a glance which time and speed data goes with which segment of the track.
3. One final graph or table showing *just* the average speeds, organized in a way that reveals any trend which might exist: i.e. whether the glider sped up or slowed down as it traveled down the track.