Name:_____ **Physics Lab Writeup - Criteria**

Criteria	1	2	3	4	Mark
Data, Recording & Completeness	Minimal effort	Insufficient data and/or significant parts missing	Minimum of data collected, missing element or minor error	Sufficient data, thorough	
Calculations & Physics principles	Please come for help	Significant errors	Some minor errors	Correct: 1 minor error	
Graphing	Please come for help	Significant errors	2 minor errors, or 1 major error, or four graphing conventions are present but enough of the graph is present and correct that the analysis could be done	Correct or 1 minor error	
Presentation/ Organization	Very rough work	A lot of corrections/ rough work & disorganization	Some corrections, or some rough work, or some disorganization	Immaculate	
Results	Poor results	Results within typical experimental errors	Results significantly better than usual and/or excellent experimental technique		
Conclusion/ evaluation	Not supported by the data or unclear	Mostly correct, or weakly supported by the data	Correct, supported by data, 1 minor error		
Total/Comments					

Total   # 22 marks

Graphing Conventions
- The title is in the form "responding variable as a function of manipulated variable"
- The axes are labelled with the variable, including powers of 10 if required, and units
- The scales are such that the data, when plotted, cover a majority of the graph **and** interpolation or extrapolation of points based on the line of best fit is convenient
- All the data points are plotted
- The line of best fit, either a line or a curve, provides the best approximation of the trend of the data given the context of the data (i.e., students should be able to predict the shape of a graph based on physics knowledge and mathematical graphing)

Minor Errors
- A data point that has been plotted incorrectly by a margin of more than one-half of a grid box
- Missing one set of units on one of the axes
- Reversing the order of the variables in the title
- The line of best fit is an appropriate trend but is not the best line of best fit

Major Errors
- Reversed axes
- Dot-to-dot line of best fit
- Missing line of best fit
- Plotting inappropriate data

Calculations and/or Physics Principles Major Errors
- Substituting appropriate values into a formula from the data sheets without stating the formula
- Starting with memorized, derived formulas not given on the equations sheet
- Substituting the value from one calculation into a second formula without communicating that the physics quantity in the two formulas is the same
- Using off-line points (most often, this is calculating the slope using data points that are not on a linear line of best fit)
- Using a single data point ratio as the slope
- Missing powers of 10 in interpolating or extrapolating

Minor Errors
- Misreading a data value by a margin of up to one-half of a grid while interpolating or extrapolating
- Stating the final answer with incorrect (but still respectful) units
- Stating the final answer with incorrect (but still respectful) significant digits
- Missing one of several different formulas