

Purpose	This is a statement of the variable/s to be investigated. It provides the overall direction for laboratory investigation and must be addressed in the conclusion.
Apparatus	List all laboratory apparatus used in the investigation, along with a labeled diagram to indicate the configuration of the apparatus.
Procedure	In this section you should tell me the important components of how you performed the experiment. All experimental variables should be identified and you should describe how the independent variables are controlled. Anyone should be able to take your procedure and then perform the experiment as you did.
Data	<p>Data consists only of those values measured directly from the experimental apparatus. No values obtained by way of mathematical manipulations or interpretations of any kind may be included in this section of the report. Data should consist of as many trials as judgement would indicate necessary (never less than eight, unless cleared through me). Spread out the range of your independent variable as far as your equipment allows. Equalize the intervals between your trials as much as possible.</p> <ol style="list-style-type: none"> 1. Arrange the data in a neat table. 2. Make sure you completely label the data. 3. The units for physical measurements (kg, m, s, etc.) in a data table should be specified in column heading only.
Evaluation of Data	<p>This section should include all graphs, analysis of graphs, and post laboratory calculations to linearize it.</p> <p>If your data required you to straighten the graph you need to include those calculated values in this section.</p> <p>In some experiments you may be asked to do a calculation on the data by hand. A single example of this will be required of you and should be placed under this section as well (before the table of values that you calculated)</p> <p>Underneath each linear graph write the mathematical model (equation) for the graph.</p>
Conclusion CER	<p>This is the section that will separate the A's from the B's. Even if the group has helped put the lab together, each member of the lab team is to <u>write his or her own conclusion</u>.</p> <p>CLAIM</p> <ol style="list-style-type: none"> 1. State the relationship between the variables identified in the purpose in a clear, concise sentence. Please state how y is related to x using the variables studied in lab. 2. When a mathematical expression was derived from graphical analysis, write a general equation for it. A general equation has no numbers and will apply to everyone's lab. The slope and intercept are replaced with variables. If it has been justified that the y-intercept should be zero, don't include an intercept. Identify the variables that each symbol in the equation represents. <p>EVIDENCE and REASONING</p> <ol style="list-style-type: none"> 3. State <i>what the slope represents</i>. Define the slope as the change in y over the change in x. (substitute in your variables) What does this mean? Use your data to explain the meaning of the slope and comment on its accuracy if the accepted value is known. (Sometimes the inverse of the slope will have meaning if the slope doesn't seem to. Use the units to try and deduce the meaning of the slope.) Remember, the slope represents something that did not change during the experiment!! 4. Discuss the <i>what the y-intercept represents</i>. Define the y intercept at the y when x is equal to zero. (substitute in your variables) Explain the meaning of the y-intercept, share your data, and comment on the accuracy if the accepted value is known. (should it be zero?, why? if it isn't zero, why not?). 5. Describe any new terms that arise as a result of your evaluation of data. 6. When your results differ from what is expected, provide a plausible explanation. For example, describe any problems you may have had with a piece of equipment or sources of error inherent in the equipment. If your lab results do not agree with those obtained by others, do not simply say that you must have made a mistake. Bad results due to sloppy technique on the part of experimenters are not acceptable.

