

CATEGORY	4	3	2	1
<b>Background Information</b>	Background information is present and shows that student has done <b>some</b> research on the topic after the initial discussion during class.	Background information is present but student put some effort into adding their own <b>details</b> to what was discussed in class	Background information is just a <b>list</b> of what was identified during class.	Background information is lacking, inaccurate, or irrelevant to the experiment
<b>Question/Purpose</b>	The purpose of the lab or the question to be answered during the lab is <b>clearly</b> identified and stated.	The purpose of the lab or the question to be answered during the lab is identified, but is stated in a somewhat <b>unclear</b> manner.	The purpose of the lab or the question to be answered during the lab is <b>partially</b> identified, and is stated in a somewhat unclear manner.	The purpose of the lab or the question to be answered during the lab is <b>erroneous</b> or irrelevant.
<b>Title</b>	The title is written in "The effect of.." format. The title shows an <b>understanding</b> of the variables to be tested.	The title is written in "The effect of.." format. The title does <b>not show</b> a clear understanding of the variables.	The title is not written in the correct format and shows a <b>lack of understanding</b> of the variables.	The title is <b>inaccurate</b> or irrelevant and does not show an understanding of the variables.
<b>Hypothesis</b>	Hypothesized relationship between the variables and the predicted results is <b>clear</b> and <b>reasonable</b> based on what has been studied.	Hypothesized relationship between the variables and the predicted results is <b>reasonable</b> based on <b>general knowledge</b> and observations.	Hypothesized relationship between the variables and the predicted results has been <b>stated</b> , but appears to be based on <b>flawed</b> logic.	Hypothesis is not accurately written.
<b>Variables</b>	All variables are clearly described with <b>all</b> relevant details including the IV., DV., 3 Constants, control # of trials, and levels.	All variables are clearly described with <b>most</b> relevant details. IV., DV., 3 constants; Control, # of trials, and levels are missing unit details.	<b>Most</b> variables are clearly described with <b>most</b> relevant details. 3 constants are labeled.	Variables are not described OR the majority <b>lack</b> sufficient detail. Fewer than 3 constants or constants are not relevant to testing the IV.
<b>Materials</b>	All materials and setup used in the experiment are clearly and accurately described. Correct units are labeled.	Almost all materials and the setup used in the experiment are clearly and accurately described.	<b>Most</b> of the materials and the setup used in the experiment are accurately described.	<b>Many</b> materials are described inaccurately OR are not described at all.
<b>Procedures</b>	Procedures are listed in <b>clear steps</b> . Each step is numbered and is a complete sentence.	Procedures are listed in a <b>logical</b> order, but steps are <b>not numbered</b> and/or are <b>not in complete</b> sentences.	Procedures are listed but are <b>not</b> in a logical order or are <b>difficult</b> to follow.	Procedures <b>do not</b> accurately list the steps of the experiment.

<b>Data</b>	Professional looking and accurate representation of the data in tables. Tables are labeled and titled with <b>correct units</b> present.	Accurate representation of the data in tables. Tables are labeled and titled. <b>Some</b> units may be incorrect or missing.	Accurate representation of the data in written form, but no tables are presented. OR Tables may be inaccurately labeled and described.	Data are not shown OR are inaccurate. Data table is not set up in the correct format.
<b>Graphs</b>	Correct type of graph is chosen for data (line, bar, pie, etc...). Each axis is labeled correctly including <b>appropriate units</b> . Clear descriptive title. Data is graphed correctly and neatly. Scale is appropriate on the x- and y- axis.	One of the requirements is missing or incorrect.	Two of the requirements are missing or incorrect.	More than two requirements are missing or incorrect.
<b>Calculations</b>	All calculations are shown and the results are correct and labeled appropriately.	Some calculations are shown and the results are correct and labeled appropriately.	Some calculations are shown and the results labeled appropriately. <b>Calculations are limited.</b>	Calculations are not shown but are described OR results are inaccurate or mislabeled.
<b>Error Analysis</b>	Experimental errors, their possible effects, and <b>ways to reduce</b> errors are discussed.	Experimental errors and their <b>possible effects</b> are discussed but not in detail.	Experimental errors are mentioned but no effect or recommendations for future experiments.	There is no discussion of errors but a recommendation is included for future experiments.
<b>Conclusion</b>	Conclusion includes whether the findings supported the hypothesis, possible sources of error, and what was learned from the experiment.	Conclusion includes whether the findings supported the hypothesis and what was learned from the experiment.	Conclusion includes whether the findings supported the hypothesis.	Conclusion shows little effort and reflection and is missing important information for future scientists.