

## How to Write a Lab Report

Use this as a guide whenever you have to write up a report. All virtual labs and at home labs should follow these guidelines.

**Title:** Always write the title of the lab as a heading at the top of the paper.

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**Purpose/Introduction:** re-write the purpose of the lab that is given

-skip a line-

**Hypothesis:** Some labs are conducive to you giving a hypothesis or educated guess as to what conclusions may be drawn from the data. Some labs are not conducive to a hypothesis.

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**Procedure:** Give a very short summary of the steps taken to collect data. You may copy and paste these directly from the lab.

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**Data:** This is what you have collected in the lab. Remember to always use significant digits and units when recording measurements. There are two types of data - quantitative (numerical) and qualitative (observed with the senses, non-numerical). You may have either of these or both in a lab. Remember to only record observations here and not inferences, or conclusions based on observations.

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**Calculations:** Show work here for any calculations necessary to complete the lab. Remember to use significant digits and appropriate units! If the same calculation is repeated with different sets of data, you may show the steps of the calculation with the first set of data only.

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**Graph/Results:** Some labs require you to plot data and see a relationship between the variables. Explain what the slope of the line means if the graph is linear and tell how the variables are related to each other, ie. inversely related, directly related, exponentially related. If your graph is created in Graphical Analysis, copy and paste your graph into this section of the lab report. If no graph is required, skip this section.

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**Conclusion:** Answer the purpose in this section. If the purpose of a lab is to find the density of aluminum, then tell what the experimental value for the density of aluminum is in this section. If the purpose is to observe physical and chemical changes, give examples of physical and chemical changes seen in the lab. DO NOT WRITE "Physical and chemical changes were observed". This gives no new information. If you made a hypothesis, tell whether the data supported or refuted it. For example, if your hypothesis was that burning was a chemical change, in the conclusion, you would write "The hypothesis was supported because the burning process showed different products and is, therefore, a chemical change." The conclusion should be in complete sentences.

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**Experimental Sources of Error:** What procedure or equipment used in the lab could lead to error? Do not discuss human error because this is always present...after all, we are all human! How can the lab be improved so there will be less error?

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**Questions:** If questions are part of the lab, answer them here. The answers do not have to be in complete sentences as long as you have included the question in this section.