Middle School Lab Report Guide

Directions

Now that the lab is complete, it is time to write your lab report. The purpose of this guide is to help you write a clear and concise report that summarizes the lab you have just completed.

The lab report is composed of three sections:

Section I: Experimental Overview
- Provide background information.
- Include the hypothesis.
- Summarize the procedure.

Section II: Data and Analysis
- Include graphs to display trends in the data.
- Identify trends in the data.

Section III: Conclusions
- Identify if the hypothesis was supported or refuted.
- Provide logical reasoning based on data.
- Explain how the experiment could be improved.

To help you write your lab report, you will first answer the eight questions listed below based on the experiment that you have just completed. Then you will use the answers to these questions to write the lab report that you will turn in to your teacher.

You can upload your completed report with the upload tool in formats such as OpenOffice.org, Microsoft Word, or PDF. Alternatively, your teacher may ask you to turn in a paper copy of your report or use a web-based writing tool.

Questions

Section I: Experimental Overview

1. **What is the purpose of the lab?**

2. **What is your hypothesis for this experiment?**

3. **What methods are you using to test this hypothesis?**
   Outline the steps of the procedure in full sentences.

Section II: Data and Analysis

4. **What graphs would clearly represent the trends in your data?**
   Your Student Guide includes information on which graphs to construct. Each graph should have the following items:
   a. An appropriate title
   b. Appropriate labels for each axis
   c. An appropriate scale for each axis
   d. The correct units for the data

   Complete a rough sketch of each graph.

5. **What do the data in your graphs tell you?**
   Explain in one or two sentences what trend is shown in each of your graphs.

Section III: Conclusions

6. **What do the data tell you about your hypothesis?**
   State how your hypothesis is either supported OR refuted by the data.

7. **How do the data support your claim above?**
   Explain your statement above. Be sure to refer to specific pieces of data from your experiment that support your argument.

8. **If you could repeat the experiment and make it better, what would you do differently and why?** There are always ways that experiments can be improved. Now that you are a veteran of this experiment and have experience with the procedure, offer some advice to the next scientist about what you suggest and why.

Writing the Lab Report

Now you will use your answers from the eight questions above to write your lab report. Follow the directions below.

Section I: Experimental Overview

Use your answers from questions 1 through 3 as the basis for the first section of your lab report. This section provides your reader with background information about why you conducted this experiment and how it was completed. It should be one to two paragraphs in length.

Section II: Data and Analysis

Use your answers from questions 4 through 5 as the basis for the second section of your lab report. This section provides your reader with the data from the experiment and a visual way to see any trends in the data. No paragraphs are required for this section, but you do need to include the appropriate graphs to display the data.

Section III: Conclusions

Use your answers from questions 6 through 8 as the basis for the third section of your lab report. This section provides your reader with your interpretation of the data set. It also demonstrates your understanding of the experiment through your ability to offer constructive criticism about its design. This section should be one to two paragraphs in length.

Overall

When complete, the lab report should be read as a coherent whole. Make sure that you connect different pieces with relevant transitions. Review for proper grammar, spelling, punctuation, formatting, and other conventions of organization and good writing.