

Name (lab partners)  
Lab Station  
Date(s) data was collected  
Course title  
Period during which data was collected

**Title of Formal Lab Report**

(Your title should indicate the problem presented to the group and the solution attempted.)

5 pts

**Problem**

State the problem.

**Hypothesis**

What was hypothesis for your investigation?

**Experimental Design**

Describe the details of the experimental design your group created to attempt to meet the desired outcome of the laboratory investigation. Include the materials needed, procedure, and explanation of why those materials and that procedure were chosen to complete the investigation. The explanation must include a description of the physical meaning of each measurement described and how that measurement will help meet the desired outcome of the investigation.

15 pts

**Experimental Data, Observations, and Results**

Include a clearly labeled table of all of your experimental data, observations, and results with the appropriate units.

10 pts

**Data Analysis**

Describe the data and how you completed each calculation. Show all your work and graphs in this section, including unit conversions. Explain why you completed each calculation based on your understanding of the physical meaning of each piece of data. Summarize your experimental results if appropriate.

20 pts

**Discussion**

What are some sources of error? How could you have minimized your experimental error? Did the data and results yield a clear trend, or was the range of error too large to allow you to draw a clear conclusion?

5 pts

**Conclusion**

State your conclusion. What do the results of your investigation tell you? Remember to use appropriate scientific terminology and support your conclusion with your data. What is the physical meaning of your results? Was your hypothesis correct? Why or why not?

20 pts

**Answers to Assigned Questions**

The teacher will indicate which questions need to be answered in this section.

15 pts

**Questions for Further Research**

State three questions for further research that your investigation has raised. Suggest experimental investigations that could be completed to answer each of these questions.

5 pts

**Application of Experimental Results to Practical Situations**

How can the results of your investigation be applied to two different practical situations? Describe each of these situations in a few sentences that clearly illustrate the direct connection between your results and the application you choose.

5 pts