

Guidelines for Writing a Lab Report

These are the guidelines you should use when you write your lab reports for this course. Occasionally you will have a lab that requires a different format, but these guidelines will be appropriate for most labs. Notice that these guidelines may be slightly different from those of other science teachers you have had in the past. The differences will be minor and reflect variations in the approach to labs each teacher takes with his or her classes. Always keep in mind that the primary purpose of a lab report is to communicate the details of your work clearly, accurately, and concisely to a reader who may not be familiar with your experiment.

Sections of the Report: Your lab report will consist of several different sections, each with its own unique function. Be sure that you include each section, clearly labeled, with the appropriate information.

1. Check List: The first page must be the lab report check off list. This is the second page of this document. Print it out, fill it out, and attach it to your lab report.
2. Cover Page: The cover page should include your name, a title, the date the report was due, and the names of your lab partners. Feel free to be creative with pictures, designs, etc.
3. Introduction: Think of the introduction as an advertisement. It should contain enough information to let the reader know what she/he will find in the main body of the report. The introduction should include the following.
 - a. A very brief summary of what you did in the lab. Avoid details that belong in the Methods and Materials section.
 - b. A brief discussion of the major concepts or principles studied during the lab exercise and why they are important.
 - c. A concise statement of your hypotheses.
 - d. A brief summary of your major results and conclusion. Again, avoid details that belong in the Results or the Conclusion sections.
4. Methods and Materials: There are two parts to this section. In the first part simply *list* the materials you used to do this experiment. The second section should be an *outline* of the steps you followed to complete the experiment. The Methods and Materials section should be detailed enough to give the reader a clear picture of how this experiment was conducted. Avoid trivial and irrelevant details.
5. Results: This is where you put all your data. Organize this material in a clear manner so the reader can easily review the results of your experiment. Use tables and graphs whenever appropriate. Be sure to include the appropriate units and calculate averages. Avoid making conclusions in this section.
6. Conclusions: In this section you need to review your hypotheses and decide if the data support them. Your discussion should always use examples from your results to support your conclusions. Refer to the tables and graphs to explain your conclusions. If you got unexpected results, suggest reasons why. If you were assigned any additional questions, answer them in this section.
7. Works Cited: If you needed to use citations in your report, the last page should be a list of works cited in the correct format. See your writer's manual for details.

Additional Points:

- Be sure that your lab reports are typed. Handwritten reports will not be accepted.
- Be sure that each section is clearly labeled with a heading and includes only the information appropriate for that section.
- Be sure graphs and tables are correctly constructed and clearly and accurately labeled.
- Proof read your work for spelling and grammatical errors.
- Avoid using personal pronouns (e.g. I, We, Our, etc.) in your discussions. Omit minor details and personal comments.
- Even if you work with lab partners, each student is required to submit her own lab report written in her own words. Plagiarism will result in a grade of zero.

Lab Report Check List

This is a summary and check list of the major points you should be paying attention to when you write your lab report. When you think you have completed your report, go through this list and check off each item to verify to yourself that you have adequately addressed each point. You must then staple this page to the front of your lab report. Lab reports without this check off list will not be accepted and they will be considered late.

- ✓ You have proof read and spell checked your work correcting spelling and grammatical errors.
- ✓ You have avoided using personal pronouns such as "We calculated the density of ..." Use the passive voice if necessary to avoid personal pronouns.
- ✓ You have stapled or used a paper clip to bind the pages of the report together. Do not use plastic folders.
- ✓ Your report is written in your own words. Remember that plagiarism will result in a grade of zero.
- ✓ Your report is typed or word processed with standard font size (ie 10 to 12 pt) and type style (ie Arial, New Times Roman, etc).
- ✓ You have all the required sections of the report clearly labeled.
- ✓ Cover page includes the lab title, your name, your lab partners' names, and the due date.
- ✓ Introduction identifies the major scientific concepts and you have briefly discussed how this experiment addresses those concepts.
- ✓ Introduction very briefly explains what you did in this lab exercise avoiding details that belong in the methods section.
- ✓ Introduction briefly but fully states each hypothesis tested in this lab.
- ✓ Introduction very briefly describes the major results and conclusions you reached in this lab avoiding details that belong in the results or conclusion sections.
- ✓ Methods/Materials section has a list of all the relevant materials used in this lab, but avoids listing trivial items such as pencils, pens, etc.
- ✓ Methods/Materials section has a detailed description of how this lab was conducted in outline format, but avoids trivial details such as "your teacher gave each group a graduated cylinder."
- ✓ Results section includes all of the class data (unless otherwise instructed) including averages and correct units. These results are organized in a clear fashion and appropriately labeled.
- ✓ Results section includes appropriate tables and graphs, clearly labeled, with the independent and dependent variables correctly placed, and correct units.
- ✓ Conclusion summarizes the hypotheses, and you state if the results support or do not support them.
- ✓ Conclusion discusses the specific data, graphs and, tables you used to reach your conclusions.
- ✓ Conclusion includes the answers to any additional questions assigned to this lab exercise.
- ✓ If you used any outside resources to write this report, a work cited page is included.
- ✓ If you are submitting this report electronically, it is saved either as a PDF file, MS Word (.doc), or Rich Text Format (.rtf) document, not Pages, Word Perfect, or MS Works document. When emailing reports, send the document as an attachment.
- ✓ You have attached this completed and signed form to the front of your lab report.

Student Signature _____ Date _____ Lab Grade _____