

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. In general, you must assemble one document which will be uploaded to Moodle.

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. **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.
2. **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.
3. **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. Remember, in the actual laboratory experiment your group will probably vary from the handouts given. Make sure your methods match what is truly done!
4. **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.
5. **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.
6. **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 an MLA writer's manual for details.

7. Check List: In general, your lab report is uploaded but, this check list is handed in. This page is located as a document on the class web page. This is done to prove that you have checked your document for completeness. Print it out, fill it out, and hand it in.

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 their own lab report written in their own words. Plagiarism will result in a grade of zero.

Example Points Breakdown:

Checklist:	3 points
Cover Page:	2 points
Introduction:	5 points
Methods and Materials:	5 points
Results:	20-25 points
Conclusions:	10 points
Works Cited: (when needed)	5 points

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 created a single document, which can be uploaded.
- ___ 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 or 12 pt) and type style (ie New Times Roman)
- ___ 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 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 briefly describes the major result 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 what specific results were used to reach your conclusions .
- ___ Conclusion contains the answers to any additional questions assigned to this lab exercise .
- ___ If you used any outside sources to write the report, a work cited page is included .
- ___ You have completed and signed this check list.

Name (Printed): _____

Student Signature _____

Date _____

Lab Grade: