Features of a Sample Report Format

Title of Report

Author's Name **Date of Experiment**
Partner's Name(s)

Abstract:

Provide a brief description of what you determined in this experiment. Obviously, you won't be able to write this section until you have completed the experiment and have a good grasp of the concept that was developed as a result of interpreting the data. A "good" abstract typically contains four parts: 1) a statement of the purpose/problem; 2) a *very* brief statement of the method/technique used; 3) a *brief* statement of results; 4) a conclusion or future direction of the experiment.

Introduction:

This section introduces your reader to the experiment on you are about to report. It should not and does not need to be long, a few sentences is plenty. Your introduction should describe the purpose of the experiment in terms of the question or concept you are testing. If there is an important mathematical or chemical equation, include it in the introduction.

Experimental:

[Draw a labeled diagram of the experimental set up not trivial items like lonely test tubes]

Give a description of the actual technique used in the experiment. As appropriate, use a labeled ***diagram*** to describe the experimental setup. This section should be written in past tense and passive voice. For example, "When HCl *was added* to the solution …", not "Now *I add* HCl to the solution…" or "Now *you add* HCl to the solution… ". Use Word's "Find" feature if you need to. Indicate the equipment used and all quantities you measured (refer to tables as necessary for quantities). Do not duplicate the procedure written in your lab manual; summarize. Avoid stating procedures you can assume the reader of the report knows*, e.g., "The spectrophotometer was calibrated by first turning on the power switch..."* Mention should be made either here or in the results/discussion of the purpose of steps in the procedure that are not self evident. For instance, the nesting of two beakers inside each other is a critical step in one lab. It helps to reduce a certain kind of error, and by stating the reasoning for these steps, you will be able to write a better conclusion.

Results and Discussion:

This section will generally include all **observations, data and calculations involving data (including graphs) obtained from the laboratory and answers to any questions in the laboratory manual**. All graphs should be clearly labeled with proper axis labels (and units), names of authors, etc. All data and calculations should be presented in an organized fashion. Tabulate data whenever possible (in the notebook as well). When generating graphs, make sure that the graph and the associated legends etc. cover at least 75% of the page (this can be accomplished by looking at print preview or copying into word and resizing, for example). All data and results should indicate proper significant figures! Sources of error (often a result of a limitation in the procedure) should also be included in this section. This shows a reader the limitations of the techniques employed and identifies areas that could be improved in the future.

The questions in the laboratory manual should be addressed in this section in narrative form (not "Yes, No, Blue, 10^{o}C"… but rather "as the central atom of the polyatomic ion moved to the right on the periodic table, an overall trend in increasing pH was noted, consistent with notes presented in lecture"), referring back to the experimental results you have obtained. These questions are designed to guide you through the important features of the laboratory exercise and to demonstrate to the instructor that you have understood the principles involved.

Conclusions:

This section should reflect the overall results of the experiment. What does it all mean? Ask yourself, what did I learn; what is the final/overall result from the experiment? This section should be short! If you find yourself writing extensive amounts in this section they should probably have been written in the discussion section! Your "Conclusions" section should mirror your "Introduction". This is also an appropriate place to include tips for the next time you perform the experiment, even though you will probably not do this experiment again. "To minimize error, a minimum of 4 repeat measurements should have been recorded." "More data should have been collected at the higher and lower ends of the concentration range to allow easier visualization of trends."