**Lab Report Terms and Format**

Scientists know that lab reports are a very important part of every experiment. The purpose of an experiment is to answer a question by testing a hypothesis. During an experiment you may collect a lot of information, or data. But that data is not very useful unless it is organized. The purpose of a lab report is ***to organize and communicate*** what you did in your experiment. A good lab report explains exactly what you have done. It can be used to repeat the experiment or to test other hypotheses in new experiments.

**Lab Report Template**

(Name)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Date)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(the name of the lab or experiment)

**Abstract:**

The abstract comes first logistically, should be written last because it is the essence of your report, drawing information from all of the other sections of the report. It explains why the experiment was performed and what conclusions were drawn from the results obtained. A general guideline for an abstract has five sections or areas of focus: why the experiment was conducted; the problem being addressed; what methods were used to solve the problem; the major results obtained; and the overall conclusions from the experiment as a whole. All of this information should be summarized in a clear but succinct manner.

**Introduction/Research:**

In a few words tell what you already know or have found about the problem that will let you make an educated guess. This is your background information from the text, teacher, or other sources. It gives the reader an understanding of underlying principles and content information of the laboratory.

**Materials/Methods:**

This is a list of all equipment and chemicals used to do the experiment. Please include quantities (amounts). Writing it first helps many people establish the proper thought process and understanding of the work that will allow the rest of the report to flow more smoothly.

**Purpose/Problem:**

The purpose or problem states the reason(s) why you are doing the experiment. Write down exactly the problem that will be investigated or experimented. Purposes can be stated as a question.

**Hypothesis:**

What do you expect to find? The hypothesis can be stated as an "If..., then..." statement. The 'If' part of the statement is based on related facts that you know to be true. The 'then' part of the statement is an **educated guess** on the outcome of the experiment. The hypothesis does not have to guess the correct outcome, but the experiment must be set up to test the hypothesis.

**Procedure:**

The procedure tells exactly what you did. Make statements in the **past tense**. Be specific. The procedure you use affects the results. So, it is important to be accurate in explaining what you did. The procedure is written in paragraph form.

**Observations and Data:**

The observations tell exactly what happened when you did the lab. ***An observation is measurable information that comes to you through your senses.*** Results include experimental (raw) data in the form of well-labeled tables, graphs, drawings and other observations. Place your observations and data in this section without discussion or comment. This is where you include any calculations made during the experiment. Answer any postlab questions here.

**Discussion/ Conclusion:**

Conclusions explain your observations and describe how your data relates to the problem. It is written in paragraph/essay form and should include why you did this experiment (restate the purpose/problem). You should explain in your own words what you found out or discovered. Your conclusion should state whether or not the data confirms or rejects your hypothesis. Discuss any errors as well as any patterns you see. Part of the conclusion may be a new hypothesis based on your findings and suggestions for testing the new hypothesis in a different experiment. You may also make any predictions you would expect based on what you discovered.