**Scientific Writing – Components of a Lab Report**

**Abstract**
One paragraph that summarizes the report. Includes why the experiment was performed; what problems were addressed; what major conclusions were found; and what major conclusions were drawn. Does not include general background information. Belongs at the very beginning of the paper, but should be written last.

**Introduction**
Includes the reason the study is being done, relevant background information about the organism or process being examined, and the hypothesis or questions being asked in the study.

**Materials and Methods**
States what you did with enough detail to allow the reader to repeat the experiment. Lists the steps of the procedure in order and the reasons for each. Includes all calculations or formulas needed to obtain the final results. Write this section with the audience in mind; most people do not need to be told how to find the mean or standard deviation of the data, but will need to know the formula used to find the rate of oxygen consumption of an organism.

**Results**
Presents the results in text and graphic form (figures, tables, graphs) and describes the general trends seen in the data. All figures and tables should be referenced in a narrative. Do not re-draw the graph in words; let it do the work for you. Ex. Temperature had a pronounced effect on seedling growth rate (Figure 6). In particular, seedlings at 25 degrees Celsius consistently grew more rapidly than those at 20 degrees Celsius.

Do not offer any explanation for the results in this section.

**Discussion**
Tries to answer the question "Why?" Explains what was expected and what was found. Does the data support the original hypothesis? Why or why not? This section presents reasons for the results obtained in the experiment and references related studies. It also includes potential sources of error. The discussion is the meat of the paper. Do not use the word "probably."

**Conclusion**
Consists of a single paragraph. Restates the objective, the results, and important discussion findings. Does NOT introduce new material. A conclusion is sometimes used in lieu of an abstract.

**Literature Cited**
Presents complete citations for all factual material referred to in the text of the report. Each citation should include the names of all authors, the year of publication, and the full title.

Information is from *A Short Guide to Writing about Biology* by J. Pechenik.