Lab Report Format:

Title: Usually identifies the type of lab you will be doing.

Purpose: A summary of the concepts involved in the chemical process of the lab.

Background Information: This area contains the pertinent information needed to answer the most of the conclusion questions. Often, a historical perspective is provided or chemical equations/reactions are shown. This should give a preview of the laboratory experiment.

Procedure: The steps you should follow in order with careful attention to detail. How well you carry out each step will determine the accuracy of your data.

Safety: Identify the safety concerns that will be addressed in the laboratory. Include 5 safety rules and specific safety concerns.

Materials: Not required if you have a detailed procedure.

Data Table: The data table has a title that describes the information recorded in the table. It should contain **neat** (use a ruler) column and row headings. If a table is not provided, you will have to draw one.

- Units (ºC, mol, g, mL, etc.) must be recorded with each piece of data recorded in the data table or in the parentheses provided at the top of the column.
- Use correct significant figures and scientific notation
- No fractions, only decimals!

Usually each of the above sections is provided for you.

Data Analysis: This section is where math calculations and graphical analysis are made using data collected from the lab. **All work must be shown with equations for credit.** You will get an automatic revisit for this section if your work is not shown.

1) Write all calculations in this section. One sample calculation is needed where the same calculation is repeated. Make sure the equation is written, numbers are plugged into the equation with units and final answer represented with units and proper significant figures.

- All graphs must have a title (X vs Y for (name of the lab))
- Each axis must be labeled with the quantity and units.
- Draw a best-fit line or best-fit curve.
- Use the whole graph!
- Staple the graphs to the back of your lab write-up.

Conclusion: This section contains questions that test your understanding of the lab and the concepts involved. In a few paragraphs

a. Was the lab successful, was your data acceptable (precision, accuracy, reliability) discuss percent error in mentioning the lab's success. State your purpose and apply background information on the lab to discuss the lab's success.

b. Relate the information to the concepts you are studying. Discuss the patterns of the graphs how they relate to the concept. If there is no graph, use the data to help explain the concept.

Error Analysis: This is the last section where you explain what errors were committed during the lab. No experiment is perfect. There is always some fault, whether it is human error or scientific error. Include as many possible sources of error although only 3 are required.

- You should explain how your errors impacted the data
- What could be done to improve the experiment next time.

Discussion Questions: Include all discussion questions associated with the lab in the end. Write the question (or summarize) and answer in complete sentences.