Follow the format below for all of your lab reports in science. Words in italics are instructions to you. They do not need to be copied. The headings should be copied and underlined exactly as this format shows. Use this format as a reference for all MYP inquiry labs in science.

**Title:** A concise, yet descriptive title

Title: ________________________________________________________________________________

**INQUIRING AND DESIGNING (Criterion B) – to know how this is accessed, refer to the rubric**

This part of your process will include:
- Defining the Problem/Question (B.i)
- Hypothesis (B.ii)
- Variables (B.iii)
- Materials (B.iv)
- Procedure (B.iv)

The first part of any inquiry will be deciding on what question you will try to answer, and then how you will answer the question.

**Defining the Problem or Question:** What question(s) are you trying to answer? Write one to two sentences explaining why we are doing this lab- what we were trying to find out, or what problem we were trying to solve. Then write a question that asks about a part of it.

**Problem:** ________________________________________________________________________________

____________________________________________________________________________________

**Question:** ________________________________________________________________________________

____________________________________________________________________________________

**Variables:** Variables are the part of your experiment that you will change and measure. In a scientific inquiry you will change only one type of thing, and only measure one type of thing. The independent variable is the one you manipulate (change) and the dependent variable is what changes and is measured.

  Independent – (input): ________________________________________________________________
  
  Dependent – (output): ________________________________________________________________
  
  Control – (stays the same): __________________________________________________________

**Hypothesis:** Write a possible solution for the problem. This is written as a complete sentence. Make sure the statement is testable. A way to decide is it is testable is stop and think, “Can this be done in our classroom with the materials we have?” A typical hypothesis is an “If ... then” statement. The statement should reference the independent and dependent variables: such as “The plant group receiving fertilizer (independent variable) will produce more fruit (dependent variable) than the plants that did not receive fertilizer (independent variable)

**Hypothesis:** IF ________________________________________________________________

THEN ________________________________________________________________
Materials: Make a list of all items used in the lab, including quantities.

Procedure: Write a numbered list which explains what you did in the lab. Your procedure should be written so than anyone else could repeat the experiment. BE SPECIFIC!

Procedure:

PROCESSING AND EVALUATING (Criterion C) – to know how this is accessed, refer to the rubric

After you have properly planned your inquiry, you may conduct your investigation! You will collect your data, then process it to create graphs and tables. This will help you evaluate your hypothesis by finding patterns in the data.

This part of your process will include:

- Observations and Collecting Raw Data (C.i)
- Data Processing (C.i)
- Graphing (C.i)
- Patterns (C.ii)
- Conclusion - evaluating the Hypothesis (C.iii), evaluating the method (C.iv), and suggesting improvements (C.v)

Qualitative and Quantitative Data: This section contains a summary of your data in the form of graphs, tables, diagrams, calculations, etc. All of these should be labeled appropriately. This section can also include written or qualitative observations.

Written observations. (Qualitative) – descriptions such as sights, sounds, smells, etc. you have observed during your experiment. ________________________________________________________________
Representing data. (Quantitative) – a table that shows collected data properly. Be sure to include a title, labeled boxes, and use proper units. The data table you make to is to organize and record measurements during your experiment.

Data Table – Make a table. Add a title and label the variables of the data collected. After data is collected, calculate the average for each category. Add this to your data table too. This data is what you will graph, NOT the raw data.

Graph: All graphs should be labeled appropriately. Graphs can be any type that is appropriate (bar, line, circle). Your first step is to include a title and label data and units for the graph correctly. Include a legend if necessary.

Identifying Patterns: Explain what your data is describing using words like “increase” or “decrease”, and phrases such as “the data shows...” or “the dependent variable...”. This can be just a sentence or two.
Conclusion:

First paragraph – explain any research completed or background information, state the purpose of the experiment, the question you intend to answer, your variables and your hypothesis. Then briefly explain how you did the experiment.

Second paragraph – summarize your collected data and qualitative observations. Explain what you think the collected data means for the experiment. If a graph was made, analyze the trends and patterns you found. This would be a sentence or two from your analysis section above.

Third paragraph - explain whether you hypothesis was proven, disproved or inconclusive, based on the data collected. Specifically state relevant data that was collected in order to justify your claim about the hypothesis.

Fourth paragraph - Don’t give the procedure again, but do point out possible sources of error that may have occurred in the collection of data and suggest improvements to the procedure if you were to do this lab again. And/or, you may discuss an extension to this experiment.