# Laboratory Report Guide for the science fair

This is the format for writing formal lab reports. You are expected to know and use this design when writing your lab reports. It is essential that you understand the logical sequence of ideas in the report.

**Title Page** - Title of the experiment, your name, date, and homeroom, appropriate picture.

 **(Purpose, Problem, Testable Question)**

* This is a precise and concise statement of the purpose, problem, or question.

**Background information: (information about your problem or question giving you insight as to how to make a prediction/hypothesis for your experiment)**

**Hypothesis**

* The hypothesis is an **educated guess** of what you think will happen during the investigation. It should be supported by previously developed concepts through background information/research.
* The hypothesis is written as an: **IF** ........ (I.V.)... **THEN** .....(D.V.) ....**BECAUSE** statement (based on research)**.**

**Materials**

* This is a **list** of all of the materials used to conduct the investigation.This would include but is not limited to measuring devices, containers, chemicals etc.

**Procedures**

* This is a detailed step by step explanation of how to conduct the investigation. The procedures should be written to enable someone to replicate your investigation and left justified.

**Identification of variables:**

Independent or manipulated

Dependent or responding

Constants - conditions kept the same in each trial to obtain accurate data

Control group - lab sample not manipulated

**Data and Observations(Quantitative and Qualitative)**

* **This section contains the facts**
* **Quantitative Data** These are facts gathered with measuring devices and calculations. Data should be well organized and put in a table when possible.
* **Qualitative Data(Observations)** These are facts gathered with the senses. This may be the only data possible to obtain. Or it is used to support the quantitative data.

**Analysis and Results**

* Appropriate graphs should be created from data tables and should be placed following the data table.

**Conclusions:** This is a statement that is your answer (opinion) to the problem/question based on your interpretation of the facts. You should reject or accept your hypothesis potentially modifying your hypothesis so it can be re-tested. One to two paragraphs that contains the interpretation of the facts as they relate to the purpose/question and connects with your background information/research. This should be written in a logical manner.

**References/works cited:** A list of your resources (online/book/print or electronic media) where you found your background/research information.