

Name:



Laboratory Report Format

Immaculate Conception School



Title: What is the lab about? The title should be short and concise but convey what the lab is about.

Purpose: The question that is going to be answered; this is the purpose for conducting the experiment. The purpose should be phrased as a question, not a statement.

Hypothesis: The most likely answer to the question asked in the *Purpose*. It should be based on any available knowledge about the subject. It must be testable. Do not start the hypothesis with, "I think...." because it is assumed that a hypothesis is an educated guess and not a known fact.

Materials: A BULLETED LIST of the supplies and equipment needed to perform the experiment. When possible, the necessary amount (quantity) of each material should be indicated.

Procedure: A set of NUMBERED steps describing the process that is to be performed during the experiment.

- PRIOR to number 1, indicate in list form the independent variable (what is being tested, controlled by you), dependent variable (what is being measured), control (lacking the independent variable or the "normal" condition, and constants (the controlled variables, what is the same in all trials.)
- The numbered steps will indicate the order, do not use ordinal phrases such as first, then, next, etc.
- Do not use pronouns (I, my, you, we, us, this).
- Assume all materials are available, do not write, "get this," "make this," "gather materials," or "take this."
- Make sure there is only ONE variable being tested.
- Perform at least three (3) trials

Results and Analysis: This section includes the raw data collected during the experiment and the final display of the data.

- The collected data may be quantitative (numerical) or qualitative (observations made using sight, touch, smell and/or hearing.) If possible, the quantitative data should be collected in a table that was made before the experiment began. The qualitative observations may be organized in tabular or paragraph form.
- Proper metric units must be used
- Show any calculations that are necessary and the formulas used
- Whenever possible, the collected data must be organized into a table and graph to make it easier to interpret.
- Summarize the results in a couple of sentences. Stick to the facts; do not include opinions.

Conclusions: This section requires the most thinking. It contains an explanation of how the purpose and hypothesis relate to the data. Do not use pronouns (I, my, you, we, this).

- Discuss whether the findings prove or deny the hypothesis (claim).
- Start the conclusion by restating the hypothesis and indicating whether or not the data support the hypothesis. For example, "The hypothesis states that , however the data do not support the hypothesis." or "The data support the hypothesis that"
- **Use the data (numbers) and observations that were collected** from the experiment to support WHY the hypothesis was either accepted or rejected (evidence).
- Write a detailed explanation for why the evidence supports or refutes the hypothesis (reasoning).
 - WHY do the facts support the claim?
 - What science principles or background knowledge links the evidence to the claim?
- State any problems that were encountered with the procedure or data collection and how the experiment can be improved to avoid these problems.
- Make note of any additional variables in the experiment that needed to be controlled (if applicable). .
- Explain any unusual results and give possible explanations for them (if applicable).
- **Must** discuss new questions that were raised that require further investigation?
- **Must** discuss how the results can be applied to real life.