



Lab Report Format

Lab reports are written using complete sentences, in sections, with subheadings.

Lab Title:

The title of the lab is not the title on the lab that was handed to you. The title is a statement created by you that includes:

1. Independent Variable (IV) – the variable that systematically changes.
2. Dependent Variable (DV) – the variable that is being measured.
3. Subject of the lab.

Example: The effect of the (changes in the independent variable) on the (dependent variable) in (subject).

Background:

The background is 3-5 sentences and will cover the theory behind the lab and discuss the purpose/goal of the lab.

- 2-3 sentences on the theory, vocabulary and formulas used in the lab.
- 1-2 sentences on the main purpose or goal of the lab. This is where you state the control, or what the experimental group is being compared to.

Hypothesis:

The hypothesis is your prediction of your expected outcome of the lab. A hypothesis shows the cause and effect relationship between the IV and the DV. It must be testable and yield numeric data.

Example:

IF (independent variable affects/related to dependent variable),

AND (brief explanation of the lab procedure)

THEN (predicted results).

Materials (optional):

List all materials used to perform the lab (this should be a bulleted list and not in complete sentences).

Procedures:

Write out detailed, numbered steps. Make sure to include enough detail so that anyone can follow your procedure and get the same results. NOTE: Check with your teacher if diagrams would be appropriate.

Data Collection:

All data is recorded in this section. Data collection includes tables, graphs and observations.

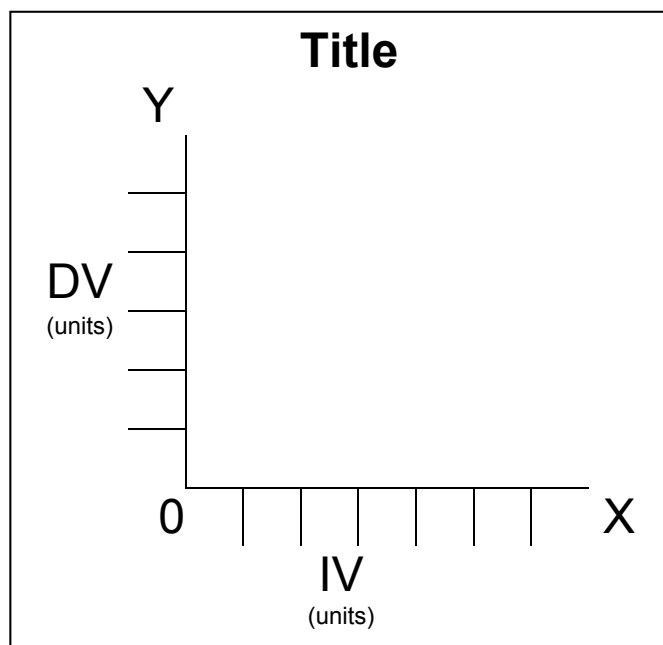
Rules for all data tables and graphs:

1. Needs a title (IV, DV, Subject) written in a complete sentence.
2. Both axes need to be labeled with units.

3. Must be neat - use straight lines (with a ruler) on graph paper or use a computer application.
4. Includes necessary manipulation of data and sample calculations.

See the example below for a general orientation of tables and graphs:

Title	
	DV (units) →
IV (units) ↓	



Discussion Questions:

These questions are from your lab handout. They will help you clarify the concepts interwoven in the lab and can guide you when analyzing your data. Make sure all parts of the question are clearly stated in the answer.

Conclusion:

The conclusion is written using three complete paragraphs. The paragraphs are defined below:

- 1) REE – Results with Evidence and Explanation
 - i) Results – Explain how the goals/purpose of the lab were/were not achieved.
 - ii) Evidence – Support answers with numerical data.
 - iii) Explanation – Do the data support or not support (refute) hypothesis?

- 2) PE – Possible Errors (must have at least 2)
 - i) Explain experimental design errors that would lead to false data.
 - ii) Recommendations on how to improve the experiment to minimize the error.

- 3) PA – Practical Applications
 - i) What have you learned?
 - ii) Recommendations for follow up experiments.
 - iii) How does this information apply to life outside of this classroom? Why is it important for you to know this information?

Post Lab Questions:

These questions are extensions of the lab that will demonstrate your knowledge.