

High School Science Lab Report Format



Cover Page

Title The title should be descriptive of the laboratory investigation conducted.
Underline the title.

Introduction Briefly state the purpose or **Problem Statement**.
When writing the purpose, you should ask yourself: "What am I trying to show, find or do?" The introduction must be short and precise. No more than one or two paragraphs in length. The Introduction should have background information pertaining to the laboratory.

Hypothesis If required write your hypothesis using one of the following formats:

- **If cause then effect**, because...(give reasons you have to make such claim)
- **If the variable is applied then this result will be observed**, because.....

Materials List the name, size, type of units, and quantity of the equipment and materials used to do the lab. For example:

- One 30 cm ruler
- One 200 g mass scale
- 20 ml of alcohol
- Four 50 ml volumetric cylinders

Procedures List the steps performed in your lab, in your own words. Steps **MUST** be in the correct order.

Variables & Control **Independent (Manipulated) Variable:** what is changed or tested
Dependent (Responding) Variable: what is affected by the change
Constants: what remains the same throughout experiment
Control: what is used for comparison with the Independent Variable

Data (Observations) All descriptive (**Qualitative**) information and also numerical (**Quantitative**) information goes in this section. For example: graphs, data tables, math calculations, and written observations. *This section could be written in pencil.*

Data Analysis and (Results) Use words and math (mode, median, mean or average, range, percents, etc.) to analyze describe your data.
For example: "Over a period of 5 days, three amoebas were observed in the beaker containing .25 M of Na₂NO₃. No species were observed in the beaker containing 0 M Na₂NO₃."

Conclusion A conclusion statement answers the following questions in at least three paragraphs

Introductory Paragraph

- What was investigated?
- Which were the **Independent** (Manipulated) and **Dependent** (Responding) **Variables** that were manipulated?
- Did your results agree, disagree, or don't provide enough information to support your hypothesis?
- What were the major findings in your experiment?

Body Paragraph(s)

- How do your results compare with other people's results?
- Did you find any connections in your data? (Graphs, Tables)
- What differences and similarities did you observe?

Conclusion Paragraph

- What possible explanation can you offer for your end results?
- What recommendations do you have for improving the experiment?
- What are some applications for the experiment? (9th graders one example, 10th-12th two examples)

Lab Report Rubric

Part of Report	Brief Description	Maximum Points
Cover page/Title	Descriptive title of the lab investigation conducted.	1
Introduction	Briefly states the purpose or problem statement. Includes background information pertaining to the laboratory.	3
Hypothesis	Consists of a statement that predicts the outcome of the experiment. Use the "If... then....because" statement format.	3
Materials	List that includes the name, size, type of units, and quantity of the equipment and materials used to do the lab.	2
Procedures	List that outlines the steps performed in your lab, in your own words. Make sure they are in the correct order.	2
Variables & Control	Identify the factors that may change in the laboratory; such as independent variable(IV), dependent variable (DV), constants and control.	4
Data (Observations)	Include descriptive (Qualitative) information such as observations and numerical (Quantitative) information (graphs, data tables, math calculations).	4
Data Analysis (Results)	Use words and math (mode, median, mean or average, range, percents, etc.) to analyze and describe (Results) your data.	4
Conclusions	A conclusion summarizes what happened in the experiment. It needs to accept or reject your hypothesis and answer your problem statement. Should also be written in essay format.	7

Total 30 points