

Lab Report Rubric

TITLE: (5 pts) _____

PROBLEM: (5 pts) _____

- subject or specimen identified
- how is the subject being used?
- manipulated variable included
- duration of experiment included
- in the form of a question

HYPOTHESIS (9 pts) _____

- format of If,...then... because... used correctly
- hypothesis is related to the problem

MATERIALS (4 pts) _____

- list of all materials
- use of correct name of equipment

PROCEDURE/DESIGN (15 pts) _____

- given in numbered steps
- separate control procedure from the experimental procedure
- manipulated variable clearly identified
- control clearly identified and described
- three (3) constant factors clearly identified and described

DATA (25 pts) _____

- qualitative (elaborate/detailed info) data present
- quantitative (numbers) data present
- titles on tables and graphs
- correctly labeled charts
- correctly labeled graphs
- experimental and control data graphed showing mean results
- experimental and control data charted showing mean results and overall growth rate (2 charts)
- correct units on graph
- correct units on charts
- appropriate use of statistics (mean and growth rates)
- shows calculations used in determining the growth rates
- correctly scaled graph axes
- computer generated graphs or graph paper used

ANALYSIS (25 pts) _____

- what effect did the manipulated variable have on this experiment (What?)
- use of data to support results (Give evidence in terms of growth rates)
- explanation of why the manipulated variable affected results (Why did this happen?)
- explanation of control results and compared to experimental group
- include research in this section (See below)

CONCLUSION (5 pts) _____

- hypothesis either supported or not supported by data
- explain why are why not

PRESENTATION (6 pts) _____

- turnitin.com/ correct grammar/ correct spelling/ neatness

PARTICIPATION (6 pts) _____

- overall involvement during experiment
- verified by other members that participation was active

TOTAL POINTS _____ **100** _____

GRADE _____

Directions for Lab Reports

Problem: Be clear and to the point. Pose as a question. Include the specimen being used, the purpose of the study, identify the manipulated variable used, identify the time period of study.

Remember: **DRY MIX (D=Dependent R=Response Y=y-axis M=Manipulated I=Independent X=x-axis)**

Hypothesis: If, then, because...

The “If” is to be a restatement of the problem while the “then” gives the expected prediction of what will happen. The “because” is an explanation that provides a biological, chemical, or physiological concept.

Materials: list of all the materials needed in order to successfully carry out and implement the experiment.

Procedure/Design: Describe the manipulated variable tested, describe factors that are being controlled for, and a description of the control being used in the experiment.

Data: Present all data into a graph and chart. Make sure to include both qualitative and quantitative data. Qualitative data are detailed observations while quantitative data are numerical info. Observations are given in a paragraph.

Analysis: Explain the results. Describe how the manipulated variable affected the outcome of your experiment. Give supporting evidence to show how the manipulated variable affected the outcome. Explain the outcome. Relate the outcome of the experimental group with the control group. Include any research suggested.

Conclusion: Relate back to the hypothesis. Is the hypothesis being supported by the data? Be sure to explain why or why not. Include any/all mistakes that were or could have been made to change the result of outcome.

IMPORTANT:

- ✓ Write or print neatly and legibly. If I cannot read it, I will not grade it!
- ✓ Erase mistakes or mark through them with one line-DO NOT scribble or scratch out.
- ✓ Label all drawings clearly.
- ✓ Use sentences to communicate your observations, plans, explanations, and conclusions.
- ✓ DO NOT tear out pages from your science journal.