

AP Biology Formal Lab Report Format

Anytime we conduct a lab investigation / experiment, you will construct a lab report using the guidelines listed below. You will need to be extremely familiar with these labs for the AP Exam in May.

- ✓ Lab reports will be typed and can be submitted electronically (see instructions below).
- ✓ Lab reports should be written in APA format (see separate handout).
- ✓ This write-up is to be your own work. Once you finish taking data, you are on your own. Except for the data, NOTHING in this report (including graphs) should be identical to your partner's.
- ✓ Any information taken from outside sources must be properly cited. Large amounts of information should not be copied and pasted into your report—even if it is cited. This may not be necessary in all lab reports.

Format:

- **Title** (should be detailed enough to give an overview of the lab. "Enzyme Lab" is too vague. "The Effect of Temperature, pH and Salinity on Enzyme Activity" is better.
- **Background** Any pertinent background information should be included as an introduction to the lab report.
- **Purpose/Objective**
 - Include variables (independent and dependent); state specifically what you will be measuring.
 - Examples:
 - Good: "To measure the effect environmental variables such as light intensity, humidity, and wind on the rate of transpiration in plants".
 - Not so good "To look at the effect various conditions on water loss in plants."
 - Variables
 - Independent—Include the variable(s) and the conditions.
 - Dependent—State the variable(s) and discuss how it will be measured.
 - Identify the control group and the experimental group.
 - Experimental Controls/Constants—experimental variables that will be held constant; include at least two.
 - Hypothesis will also be included in this section.
 - Should be written as an "If...then" statement
 - Use clear and precise words
 - Explain what observations led you to come up with your prediction..
- **Procedure**
 - In paragraph form, describe what you did.
 - Provide a thorough *overview*, and *explain* what you are doing.
 - Do not copy the procedure word for word(if you had lab instructions).
 - Should include enough detail that someone would be able to replicate your experiment by reading your report.

- **Data/Observations**
 - Include data tables and any charts and graphs. It is ok to copy/paste data tables I post on my website (for group data).
 - Charts and graphs should be computer generated.
 - All graphs should be based on class data unless otherwise indicated.
 - Requirements for a good graph:
 - Title
 - Label axes with title and units
 - Calibrate axes in regular increments
 - Plot all points
 - Add a line or curve of best fit— NOT a connect the dots graph
 - Include a legend if more than one set of data is on the same graph.
 - Data section should also include a short paragraph describing observations, or qualitative data.

- **Conclusion**
 - What did you learn by doing this experiment? Explain your findings.
 - Go back to your purpose and answer the question that was posed.
 - Include specific numerical data in the discussion.
 - Include background information on the topic to frame your discussion.

- **Analysis**
 - Answer all analysis questions in the lab handout (or other questions I may specify). For some labs, there may not be any questions.
 - Analyze your data, explaining any possible sources of error, how the investigation could be improved, and any new questions that arise.

- **Bibliography**
 - Any outside sources used must be documented in the bibliography in APA format; failure to do so is plagiarism.

To submit electronically:
Upload to Canvas