

Formal Lab Reports

AP BIOLOGY

The formal lab report should document the experiment that was performed and provides a detailed discussion of the results obtained and how those are important. It organizes and clarifies the information that can be found from good lab notes, adding background material and a more detailed discussion of the results. Reports generally have three goals: 1) to justify the reasons for performing the experiment; 2) to record the results of the experiment; and 3) to allow others to evaluate the results.

You should consider your audience to be familiar with the general background associated with your experiment, but none of the specifics. For instance, your target audience has a general background about enzymes but only very limited or no specific knowledge of how an environment could affect their productivity. The report must incorporate grammatically correct sentences, correct spelling, and be structured in a clear and concise manner. In addition, it should contain publication-ready, professional graphics and illustrations. You will be expected to upload your document to your e-portfolio site so it needs to be publication ready so to speak.

Submit a hardcopy for my review.

Make sure you submit the formal write-up as an artifact to your lab section of your e-portfolio and follow instructions for that section of portfolio. I may offer suggestions for editing prior to uploading onto e-portfolio.

Formal reports should include the following:

- Title Page
- Abstract
- Introduction and Background
- Experimental Apparatus Used
- Results and Discussion
- Conclusion

Title Page:

The AP Lab Name and number if given; i.e. AP Lab #2 Enzymes

Which Big Idea the lab covers (Big Ideas 2 Cellular Process)

Your Name

Name of other members of your team

Date Submitted (due date)

Abstract:

The abstract includes one to two paragraphs that clearly provide an overview of the report.

Must be written in complete sentences and should include the following:

- What was done;

- key results;
- key conclusions.
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Introduction and Background:

This section should include all the background needed (**biological principals**) for the reader to appreciate and understand why you did the experiment and be able to follow your results and conclusions. Cite references where appropriate such as from the Lab packet handouts or your biology book or websites you may have used. This section should include:

- The objective of experiment
- Relevant background information (**including biological principals!!!**)

Experimental Apparatus and Procedure:

This section should include the GENERAL STRATEGY used to obtain the data. Identify the equipment used (i.e. biurets for titration) and the data collection techniques. Describe in general how the experiment was performed. **DO NOT COPY FROM YOUR LAB PACKET THE ENTIRE PROCEDURE AND MATERIALS LIST!!!!** This section should include:

- Summarize the experimental strategy (include BP)
- Identify what aspects of the equipment and procedure that are significant to the outcome of the experiment.

Results and Discussion:

All relevant observations made should be included in this section and may include qualitative data as well. Prepare graphs, tables and or diagrams that best display the results of the experiment and discuss them. Indicate trends, analyze why they occurred and explain any significant features or differences from expected results. Did your data fall into the expected range of values, if not then offer an explanation for why not. Try to avoid phrases such as "human error" try to be more specific. All graphs and data tables must be labeled appropriately and units assigned.

Conclusion:

Present the conclusions that can be drawn from the data collected. All conclusions should be clearly stated with evidence for support. Summarize and clarify any discrepancies between experimental data collected and expected data results. Offer any recommendations that could improve results the next time.

Additional Information:

- 1) Graphs and tables should be easy to follow. They should be free standing and carefully labeled. No handwritten data table or graphs. Give both titles and be sure to connect dots, differentiate between various trials and provide a key if necessary.
- 2) Do not copy any material without citing as seen here at the bottom of this document (this document was created using only one source so I have it on the bottom). This includes lab manual/handouts, textbooks, online sources, team

members. *In addition you should NOT turn in the EXACT same lab report as another team member. Although individuals on the same team members attain the same data it is expected that individual team member's write-up their own interpretation of the results and analysis.* Plagiarism will considered cheating and you will not receive credit or be asked to redo the assignment and docked accordingly.

Excerpts taken from: Source: <http://noodle.med.yale.edu/staib/bme355/formal-labreport.htm>