

Here are a few suggestions for your next lab report. In class, I suggested reading the paper on how to write a discussion section. I graded based on what was written in that document. The URL for the website is:

<http://www.mhhe.com/biosci/genbio/maderinquiry/writing.html>

At the top of each person's discussion section, I wrote the following:

Interpretation, relation to existing knowledge, suggestions for improvement, future experiment suggestions, shows working knowledge of lab, and explanation of logic. All of these were mentioned in the handout. For further clarification, here is a little information on what I would have taken points off for and what I will take off points for in the future.

- Interpretation: Did you accurately and precisely explain what your results meant? In the context of the lab and in real life since these are supposedly directly applicable to the "real" world.
- Relation to existing knowledge: What background information have you read that helped you understand the lab? If it is UV-Vis, what is Beer's law and why do you care? Statistically speaking why is your sample population too small if you are only testing 4 bills? What instrument did you use and why? Etc.
- Suggestion for improvement: Aka. Error analysis. How might the experiment have gone wrong and if you were to repeat it, how might you change what you did? Think outside the box. You can suggest a complete redesign of the lab if it is needed.
- Future experiment suggestions: Maybe you think the UV-Vis is the worst experiment in the world (It is not, and FYI, you can rarely blame your instrument) then what other instrument could you use instead, or in addition to help prove your specific aim.
- Shows working knowledge of the lab: Do you know why you performed the experiment and did you effectively demonstrate this to the reader?
- Explanation of logic: as it relates to your hypothesis: Now that you have proven or disproven your hypothesis, now what do you do? Who cares? How does this benefit the scientific world? Or how does it affect the criminal? Would this data stand up in court? What questions might arise that the lab did not answer? Etc.

Hope this helps you in writing your next lab report. The discussion section is where you prove you can think critically and explain yourself well.

Also the conclusion: Restate your aim and then explain using the results how you proved or disproved it.

Have a great weekend, and also, once you guys show that you can write at a senior level, I will relax a little bit on the grading! 😊

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