

Appendix 1 Student Lab Report Guidelines

Note: These are the exact instructions received by the students.

1. Lab reports are due at the beginning of the period on their due date. Late reports will be deducted 10 points, but no reports will be accepted more than 1 week late.
2. A lab report is on a particular topic/organism (as indicated on the syllabus), NOT on the experiments performed on a particular day; most days in lab you are performing more than one experiment. Thus, your report will cover experiments performed on more than one day.
3. You are allowed and encouraged to discuss the results of the lab with other students, your partner, and your instructors. However, each student must turn in their own original work, written in their own words.
4. Your instructor will take off points for multiple grammar and spelling mistakes, more so if the grammar is of such quality that the author's intentions are unclear.
5. If you have a question concerning your grade or feel that you have been graded unfairly, please feel free to discuss your lab report grade with your instructor.
6. Lab reports should read like a literature paper. They must be typed, contain page numbers, and EACH of the following sections:

Title: Should be representative of lab work completed.

Introduction and Purpose: Briefly (1-2 paragraphs) mention the background relevant to the experiment, including papers discussed in lecture (where relevant). This may be a good place to write about the different constructs, strains, or conditions that you tested. Make sure that it is clear WHERE the dsRNA will come from and what constitutes a silenced versus nonsilenced phenotype. For the purpose, you should describe in a few sentences what you were attempting to accomplish; save any in-depth explanation of methods used for the Materials and Methods section.

Materials and Methods: Using a paragraph format, briefly summarize the procedure(s) used, highlighting the main points of each protocol. You should cite the relevant protocols within this text of this section. For this section, I am looking for you to demonstrate that you understand the protocol performed. It is not necessary (or desirable) to list the materials used or to write down every step of the protocol. However, you should include all numbers that you obtained or calculated during the lab session (e.g., if protocol had a chart that you needed to fill out, here is where you should report your numbers). Make sure that you indicate any changes made to the protocol (by your instructors or yourself). Do NOT include results in this section.

Results: This must contain TEXT describing your results as well as any tables or figures that you generated during, or as a result of the lab. Tables may be helpful in summarizing the results, but should NOT constitute the whole of your results section, likewise for figures. Tables should be labeled as tables, and anything else as a figure. Figures and tables should also include a figure legend or table heading (for example a DNA gel figure legend may have a title and then list what is in each lane). You should not describe the results of your experiment in the figure legend; this is what the textual portion of the results section should contain. I will take off a minimum of 5 points for any report without text in the results section (not including figure headings). Images of gels/blots generated during lab must be included in the report, and lanes must be labeled. Make sure that you include all of the observations and data that the protocols asked you to write in your lab notebooks.

Discussion: The discussion section should include a brief summary of the results, and a statement concerning whether or not the results were as expected. You should discuss why or why not the results were as expected, as well as any errors that you or your partner made during the lab. You should also discuss the meaning of the results; for instance, if you find that a certain condition lead to "silencing", then you must explain what a silenced result means in the biological sense. This is the section in which you need to demonstrate that you understand why each of the conditions was tested, how they compare to each other, why the results of the lab are what they are, and the implications of any deviation from the expected results. When provided, compare your results to the class data. Discussion questions at the end of the lab protocols highlight topics to be mentioned in this section.

References: Lab protocols and relevant primary literature papers.