

Drosophila Investigations Summary Report

Upon completion of your experiments with the model organism *Drosophila melanogaster*, you must complete a Laboratory Report in your lab notebook following the Scientific Notebook Format. Additional requirements are identified below. Please follow the outlined criteria.

For the information below (unless indicated, you are using the data you collected from your assigned test cross. You did one cross using only two flies (single pair) and another crossing using a given population from your stock cultures. Please identify your specific test cross including the sex of the flies and its related phenotype (white eyes vs. red eyes).

Your write-up must follow heading requirements and include the following components:

- Purpose statement
- Focus question
- Hypothesis statement (on the outcome of your test crosses including the probability of each phenotype)
- Materials used and the procedures you followed for your test crosses
- Data collected – you need two data tables. One for your single pair cross and one for your population cross. Data entries must be dated
- Data analysis section
- Conclusion statement

Additional Required Documentation

Directly following your conclusion statement (not in a new section or in the back) you need to include Appendix A and Appendix B. Please title each section and follow the criteria identified below.

Appendix A Pre-Lab Investigations

Appendix A is the data you collected from your pre-lab investigations during which you learned how to culture and maintain your stock populations. Your data should include dated entries and observation for the tasks you completed during the process. Your pre-lab experience lasted approximately five weeks so you should have an abundance of data. Data and observations need to be documented in a table format. Your data should include:

- The Date of the event/task
- Qualitative data – observations
- Quantitative data – number of flies involved
- Observations (on flies, larvae, pupa and on the culture medium)
- Diagrams/illustrations – microscopic examinations (dissecting microscope)

Appendix B Laboratory Reflection

Appendix B is your reflective piece. Here you will reflect on what you learned and comment on the following:

- *Drosophila*'s Life Cycle
- *Drosophila* sexing – pupae and adults
- Problems with sexing, culture media, transferring and anesthetizing and any other
- Your overall educational experience – was it worth the time for what you learned? Did you enjoy the experience? Why or Why not?