

Biol 322 Comments on the Lab notebook

Table of Contents

*At the beginning of the notebook, you should have a table of contents that clearly indicates on what pages each exercise is recorded. **Because most of the experiments will span two or three laboratory periods, you should organize your notebook by experiment and not by class period.** Here is an example of a detailed, clearly laid out ToC:*

<http://fire.biol.wvu.edu/trent/trent/TOC.pdf>

ORGANIZATION by Classes of Information: recommended (but not required) format

LEFT SIDE of open notebook:

- *Notes taken in class*
- *Detail of expected progeny classes: genotypes, phenotypes and ratios*

RIGHT SIDE of open notebook:

- *Records of crosses and other experimental manipulations*
- *Records of qualitative observations and progress of experiment (i.e. mating did not work)*
- *Data collection: records, table, etc (ie progeny counts)*
- *Data analysis & conclusions*

The point allocation for lab notebooks (indicated on the course syllabus) does not reflect the relative importance of this activity in the general context of scientific experimentation, but rather the difficulty of collecting notebooks and accurately assessing their content in a timely fashion.

Your notebook will be used to record your activities and observations during each laboratory period, as well as your analysis of and conclusions from each experiment. Leave plenty of room in your notebook for data collection & analysis and for notes relating to the progress of your experiments. I encourage you to keep your notebook as if it were a journal of your laboratory activities. In other words, you should record what you did in lab before you leave the lab. If you are working with a lab partner, you should record what your partner did in lab as well as what you did.

Work up and analyze your data as soon as you've completed the experiment and while it is still fresh in your mind. Your notebook should be neat, well organized and detailed enough such that another person can determine exactly what you did and what your results were for any given experiment. For at least

one of the lab exercises you may be required to write a formal lab report (which must be generated on a word processor). The format of these reports will be discussed in class.

Biology: Tips on keeping a good Lab Notebook

- Include detailed subheadings for each exercise in the Table of Contents
- Descriptions of crosses and other manipulations carried out in class should be recorded directly into your notebook *before you leave the lab for the day*.
- Data analysis done during class should also be recorded directly into your notebook *before you leave the lab for the day*.
- Data analysis performed outside of class can be recorded directly into your notebook. Alternatively, the analysis can be word-processed and a printed copy pasted into your notebook.
- For labs where you work with a partner, you are responsible for recording all manipulations and data collected by your partner.
- Each page should have a date or dates (including the year) at the top

Records of crosses

- At beginning of each experiment, the **complete (formal) genotype** of each parental strain should be written out. Genotypes of subsequent generations should be indicated by appropriate symbols.
- Allele symbols should be clearly designated
- Any shorthand notations used should be thoroughly explained in your record of the experiment.
- Genotypes and phenotypes of animals at each & every generation (P, F1, F2 etc) should be written out using your designated symbols.
- ***Don't lose the thread of an experiments – you should be able to easily track generations over several pages in your notebook***

Records of data (such as tables/figures/graphs) should be

1. Titled and dated (I shouldn't have to figure out what you were scoring or when)
2. Well-organized and easy for others to read