

How to Keep a Good Lab Notebook

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Your research notebook is one of the most important pieces of documents! It is a repository of your ideas, experimental strategies, snags, and successes. It traces every project's path from inception to fruition and therefore it is essential that you maintain an honest and complete record of your experiments. This will not only help you organize your work and to trouble shoot your experiments and write your publications, but will also serve as a useful guide for others who will continue your work.

Better notebook keeping practices:

1. Leave the first few pages of your notebook blank so that you can create an index for that notebook when it is filled.
2. Have a clear date and heading for each day and experiment. Dates and titles will help you organize your work and keep track of your experiments in the long term.
3. It's a good idea to write down your objective for the experiment, so you and others can figure out why you did something months/years later.
4. Plan your experiment in advance and write down your plan. Do you have everything you need for every step of the experiment?
5. Write down your expected results for the experiment.
6. Write down every detail during or as soon as you complete your experiment. No detail is too trivial!! Never assume that you will remember something you did and not write it down! The more detailed your notes are the more easily you'll be able to trouble shoot your experiments.
7. If you are following a standard lab protocol, mention it and be sure to specifically note down any deviations from it.
8. Paste all pictures, graphs, etc. next to your notes for that experiment. Be sure to annotate/label them so they the information they contain is clear.
9. Write down your analysis/interpretation of the results or data. Did the experiment work as expected? If not, what are some possible reasons?
10. Write down your plan of attack in case the experiment needs trouble shooting. What do you plan to do differently and why?
11. And finally, clearly indicate the end of the experiment under a particular heading. Leave any blank space below that heading empty and start the next experiment on a fresh page.