Why keep a lab notebook:

- perform a similar test years from now
- somebody else in the laboratory has to perform a similar test
- you will forget everything
- prove that an invention was made (court)
- prime information to write thesis, paper, progress report, etc.
- ethical obligation to report “the truth”
- permanent record
- do you remember the brand and type of your coffee maker?
Some standard procedures that you will have to follow:

1. The notebook must be permanently bound and the pages numbered.

2. Leave the first 2-4 pages blank initially: Table of Contents that you fill as you go along.

3. Date every page and sign after you are done for the day (end of lab session).

4. Start each new lab session on a new page.

5. Handwriting must be legible: all the writing should be done in ink and are part of the permanent record: neatly cross out mistakes by a single line, so that it remains readable, don’t tear out pages!
6. You may glue in drawings, graphs, excel data sheets, handouts, etc. Sign or leave circles around the corners of the paper that you glue in.

7. The lab notebook should be current, so write while performing work, or finish the notebook entries just after finishing your work. We will check this.
8. It is reasonable to make corrections. Corrections are made by drawing a single straight line through text, so that it remains readable.

9. Everything should be recorded including:

   a. Title of experiment and date

   b. Note the members in the lab who assisted you.

   c. Purpose: one sentence

   d. Introduction: what you are trying to do and why you are trying to do it.

   e. Calculations
f. Procedures: this should not be an exact copy of the SOP, but reworked so it is easy for you to follow and full of tips on how to do it. It also should include where materials are located and which equipment was used (and its location).

g. Information: which chemicals did you use, the calculations and procedures how to mix the chemicals if this was performed. Write down the actual time when you start and end an experiment, so for example use from 3:15 pm to 5:15 pm rather than for 2 hours.

h. Equipment manufacturer, model, specific details.

i. Any deviations from the SOP.
j. Observations: everything that happens during the experiment that may be important for the results or the interpretation of the results.

k. Data: raw and calculated, sample calculations are needed because you may forget how they were done (for example a conversion of units).

l. Results.

m. Discussion and conclusions: interpret your results and draw conclusions on your experiment.
10. If you need to add information later, please date, sign, and mark what was added.

11. You may refer to a page number when you do a test over again in a similar manner.

12. Never use loose pieces of paper

13. Information in stored in the computer is not a permanent record, add, glue and date all information in the lab notebook.
Random ideas/tips

- Write all the materials that you order, the vendor, confirmation numbers, and their phone numbers down.

- Use your notebook while writing your thesis, report, poster, or paper

- Besides the notebook you need to prepare a standard operating procedure (SOP) or protocol for all the new analytical tests or other procedures that you develop

- Don’t ever be afraid that you are writing too much information. Everything in one book, no other papers!
More random …

- You cannot rely on your memory; you also have to write the mistakes and the problems that you observed.

- The lab notebook can also be used to prove that an invention was made on a certain day. Hence, date and sign your notebook!
More random …

- When your advisor or a colleague explains and shows you a new procedure, write every step down carefully. Make sure the person that explains things remain at a slow speed of showing you, so that you can write everything down. You will have to be instructed again if you forget to do this!!!

- Somebody else needs to be able to read your notebook and should be able to perform the same test or protocol you just described.
More random …

- This is a work in progress!! So, sometimes it is not necessarily that tidy!!

- Remember, that you will forget everything that you do!!

- Do you remember what you did exactly 2 years ago??

- Draw figures when setting up an experiment.