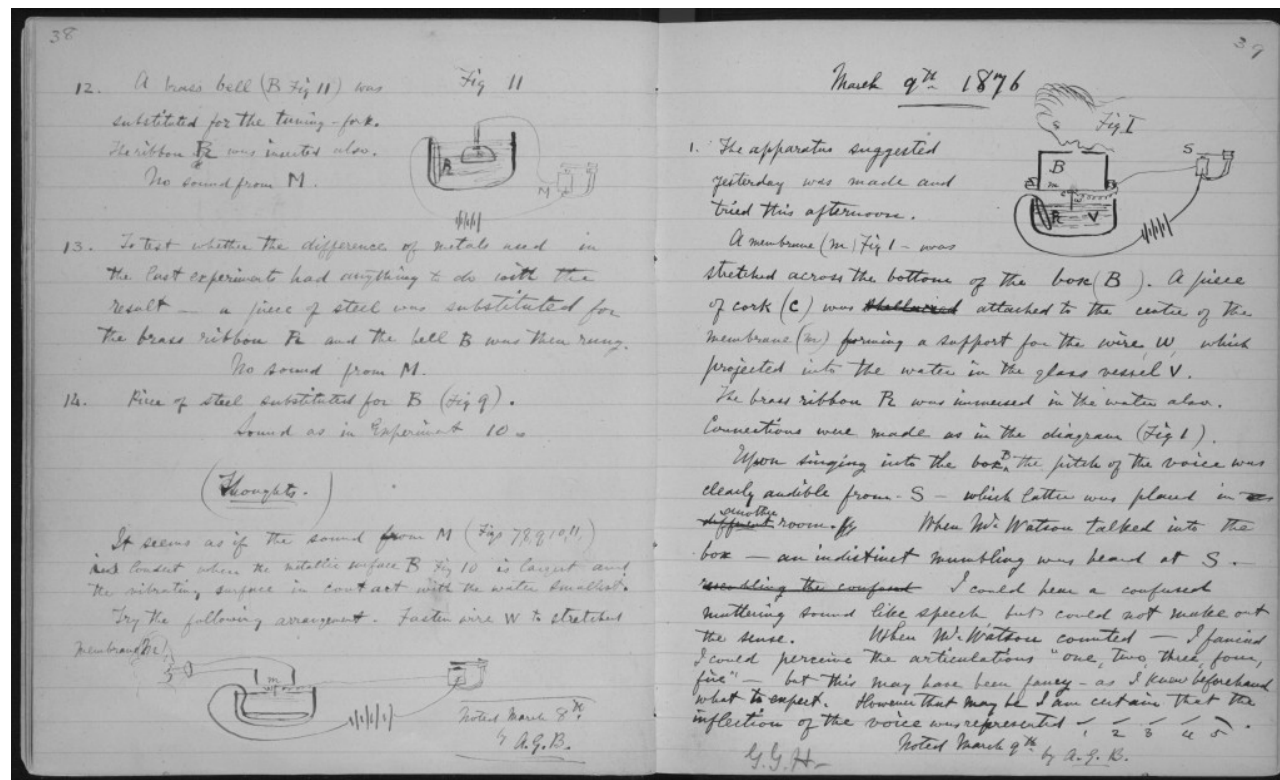


Keeping a Lab Book

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Alexander Graham Bell's unpublished laboratory notebook (1875-76), page 38-39, describing his experiment inventing a telephone. Alexander Graham Bell. (d. 1922), [Alexander Graham Bell Family Papers in the Library of Congress' Manuscript Division](#).

Why keep a lab book?

It is important to document your work and keep a record of the environment, your decisions, settings, observations and results.

If you are undertaking research, a lab book (or laboratory book) has a formal roll as a record of your activities and it can be a record of your contributions to a project or your inventions. As such a formal lab book is usually bound with numbered pages. Entries are dated and made permanently, i.e. using a ballpoint pen rather than a pencil. The log is usually written on the spot. The record includes the experimental set-up, collected data, observations and initial insights. It has to include enough information that another scientist can reproduce the experiment.

Lab books or work log books have also a roll in normal engineering practice, e.g. during development and

commissioning. While the requirements might not be as rigid, it is important to keep a record of completed tasks, settings, issues encountered, etc. As above, the aim is that the lab book or log include enough information for another person to reproduce decisions or to continue the work. It also serves as an archive for the book keeper themselves. Things that are obvious right now might not be as clear in a couple of months, or years.

What should be included in a lab book?

The short answer is - it depends. What is the purpose of the log book? Are you documenting the work for your self, for colleagues, or for regulatory or legal reasons? The document has to include enough information that somebody else could take over and continue the activity at any time. In other words, using the original documentation and your lab book, somebody at a similar skill level should be able to reproduce your work.

For the purpose of practice activities in our courses, it has to include:

- activity titles,
- dated entries,
- answers to focus and background questions,
- system diagrams, overview sketches,
- local settings, adaptations and corrections to the lab manual,
- your observations, interpretation and conclusions.

For the practice activities, you are welcome to maintain an electronic lab book. Make sure you save it somewhere you can access it easily each week.