



# USING A LABORATORY NOTEBOOK

A laboratory notebook contains a detailed record of the work performed during your internship. This includes study methods, models, raw experimental data of all kinds (including incorrectly performed work), interpretations, calculations, conclusions, and proposed next steps. It may be the only record of the work that you have done, especially if you are the only individual conducting the research. As such, it is an irreplaceable and extremely valuable document. It must be organized, complete, and useful.

Use a standard-sized composition notebook with a hard cover and lined white pages.

- In the space provided on the notebook cover, write your name, email address and phone number. Take the time to number all the pages.

Create a table of contents on the inside cover. This will keep everything organized.

- Create sections in your scientific notebook with chapters like:
  - Purpose
  - Notes and Reflections
  - Research
  - Experimental Set-up
- The name of the chapter should succinctly reflect its content.

Write and record the date into your notebook, using an ink pen as you work.

- Make all data entry readable but make sure to not sacrifice complete data for neatness.
- Do not white-out mistakes or change the data.
- When mistakes happen, cross them out.
- Include a note that explains the change or mistake.
- Have anyone present during the work sign and date the bottom of the entry.
- Cross out any empty lines to prevent further entries.

Make sure every entry is noted with the date and time.

A correct scientific/laboratory notebook can protect you legally, because it outlines when activities are completed. For example, when applying for a U.S. patent, you must show when you conceived the idea, what you did to make the idea work, and when the idea was tested and successful. U.S. patents are not awarded based on when the patent application was filed, but when the end result is a success.

Below is a list of reflective questions to use during your HIP Internship. Your mentor may suggest others or you may come up with one or two of your own. Choose one to respond to each week or every few days.

- What are your job descriptions/tasks?
- What are your responsibilities?
- Discuss how the experience is or is not meeting your expectations.
- How will you apply yourself differently for the remainder of the internship?
- What factors do you think would improve your experience?
- Discuss how your classroom learning applies to your internship experience?
- What information could you take from your internship experience and share in the classroom?
- Describe your short-term and long-term career goals, and design your pathway for achieving these goals.
  - Where are you now in relation to these goals, how do you plan to get where you want to be?
  - How is the internship assisting you on your pathway?
- What have you learned about yourself?
  - Your employer?
  - Your job?
- What have you learned about the value of your education in preparing you for, or not preparing you for your career?
- What have you learned about this occupation or profession?
- What would you have done differently for this internship experience?

**Suggestions for supporting material to reference in your journal:**

- Pictures, news articles, bibliography of professional readings, videos
- Records or other supporting documentation
- Examples of projects, presentations, printouts, memos
- Manuals or brochures
- Handouts received or utilized during your intern experience
- Certificates of training, workshops, seminars
- Letter of recommendation from mentor/supervisor(s)

**Suggestions for Supporting Materials (Optional)**

- Pictures, news articles, bibliography of professional readings, videos
- Records or other supporting documentation
- Examples of projects, presentations, printouts, memos
- Manuals or brochures
- Handouts received or utilized during your experience
- Certificates of training, workshops, seminars