

Logbooks

Logbooks are encouraged for students in Grades 7-12. Please note that Canada Wide Science Fair will require students to submit logbooks beginning in 2023.

What is a Logbook?

- It is a complete, permanent record of how you did your experiment/research project. It is sometimes called a research notebook.
- A logbook shows what you did and thought about during the course of your project, so it needs to be started right from the beginning!
- It includes:
 - your ideas
 - questions you have
 - what worked what didn't work
- A logbook **is not** a polished report. It is simply your notes as a scientist as you progress through the stages of your work.

Starting A Logbook

- Timetable:
 - Plan how you'll do each step of your project.
- Choose a Topic:
 - Pick a topic that interests you - something you're curious about and that you want to find answers to.
 - Explain why you decided to study a particular topic.
- Background Research:
 - Record your background research on your topic from books, TV, the Internet (with supervision), people and companies.
 - Keep track of where you gathered your information for your bibliography, list of references, and acknowledgements.
- Testable Question/Purpose:
 - Using your background research, write down your testable question/purpose
- Hypothesis:
 - What do you think the results of your experiment/design will be? Explain your prediction based on the research that you've done.

Planning Your Work

- Materials:
 - List everything that you will need to do your experiment.
 - Include equipment, ingredients, amounts of ingredients, measuring tools etc.
 - Give lots of details in case someone else wants to repeat your work!



- Procedure:
 - List the steps you will go through to do your experiment.
 - If you need to change your procedure after you start your experiment, describe them in your logbook with an explanation about why you made the change and if the change will affect the results already collected.
- Variables:
 - List the controlled variables (things you won't change), the manipulated variable (what you change), and the responding variable (what you measure).
- Data:
 - Record all of your measurements/raw data that you collected on data sheets in your logbook.

Presenting Your Results

- Results:
 - Present your collected data in charts, tables, graphs, or pictures.
 - Use these figures to help you explain what happened in your testing.
 - Describe any problems you might have run into during your project, any changes that you had to make to your original plans, and whether those changes would affect the results collected before you made the changes.
- Conclusions:
 - Write down your conclusions, whether or not your hypothesis was correct and why.
 - It's OK if your results do not support your hypothesis - the information you collected is still valid and still supports science!
- Recommendations/Applications:
 - Make recommendations for improving your project, for further study, and applications that can be made from your research.

Other Pointers

- Your logbook can be done in a dedicated notebook, or digitally
- Make an entry every time you work on your project
- Date your entries
- Use point form
- You do not need to re-write a “good copy”
- Write everything down, even if you think it is insignificant; it may be useful later
- Remember, you must create your logbook as you go. It is not acceptable to create a logbook after you have finished your project

