

# Logbook Guide



“Remember kids, the only difference between messing around and science is writing it down.” *Andy Savage, Mythbusters*

Your logbook is like a diary or your 4-H record book where you keep all the information about your project. You write in it every time you work on your project – the more detailed your logbook is, the easier it will be to write your report and create your PowerPoint display. Your logbook is any notebook you have available but make sure there are lots of pages to hold all your findings! It doesn't have to be pretty, but it should include the following sections:

## Brainstorming notes

Draw web diagrams, make lists, and flow charts, doodle, add photos...get your creative juices flowing!

## Topic ideas

Once you've done some brainstorming, which topic jumps out at you? Which one interests you the most? Write down your main topic ideas to help narrow down your project topic.

## Questions you've asked

What questions do you have about your topic? Is there a particular aspect of this topic that puzzles or interests you? These questions will guide your research as you work to answer them.

## Your research

Do general research first and then dive in and get more specific. Have fun with it! Make detailed notes and if you are using the information in your final project, you must include the source in your bibliography.

## Your hypothesis or objective

Based upon your research, create a hypothesis about the results you expect to get. If you are doing an innovation or study project, you should have an objective that you are working toward. State your hypothesis or objective clearly and refer back to it often to make sure that you are staying on-topic.

## Your project procedure

Write all the steps that you will follow in your experiment, innovation, or study. Your procedure should be so clear that a stranger could follow along and get the same results, just like a recipe.



## Design sketches and blueprints

This refers to the materials and expenses required to conduct your project. Keep a list of any materials you use, whether physical (e.g. soil, water, seeds) or digital (e.g. apps). Be detailed with your list and keep track of any costs.

## Any observations and challenges you've experienced

Write down **everything** you do or observe...really! This is a key part of your Science Fair project. What did you see, smell, or hear? What changed or stayed the same? Why? Also include any challenges, mistakes, or issues you encountered to show that you recognized the problem and what you did to fix it.

## Data you've collected

Record all the numbers, measurements, calculations, graphs, or charts that you created. These can also be put in your Observation section, but it may be more useful to put them in a section of their own.

## Your conclusion

Your experiment, innovation, or study is now done, but what conclusions did you come to?

Based on the results you got, was your hypothesis supported? Did you meet your objective?

## Your bibliography

Keep a list of all the sources you use here. It will make it easier to cite them in your PowerPoint display and report. When putting together your bibliography, use the [APA citation format](#).