

## THE SCIENCE NOTEBOOK

Good research techniques include the keeping of a written log that contains observations, impressions, sketches, data entry, and analysis. When doing research, there is a great deal of information that may not be collected formally, or by your instrumentation, but is important to accomplishing the goal of the project. As you work, you should be doing more than simply recording the data or measurements to complete a project. The information contained in the science notebook is essential in helping you interpret what you observed and the data you collected. Remember that a science notebook should be more than a personal record, and shouldn't be confused with a "nature journal." Although it is informal in nature, it should be meaningful and useful to any other scientist who reads it. Be neat, consistent and thorough in writing notes, because once you have completed your data collection you will have to rely on your notes for information—often times after substantial time has passed. Make sure that someone else can use your notebook in the field, or when collecting and analyzing data online, and retrace your steps.

### Elements of the notebook

1. You should have a **table of contents** in your notebook, so leave a few pages at the beginning.
2. **Number each page** from the beginning of the notebook.
3. Whenever you stop, mark down the **time** and the **location (field location or website URL, depending on the nature of your research)**.
4. Describe what you are **measuring, observing, collecting** at each field stop or with each data tool. Draw **sketches or graphs** where you can. Even if you are using a program that does a lot of the data processing (such as graphing) for you, it is important to record rough sketches to double check your work, or in case something is lost.
5. At the end of each day, write a brief **summary** of what you did and what you accomplished.
6. When you leave blank space at the bottom of a page, be sure to cross it out or draw a line through the space until you get to a new "facing" page.

Example Notebook Page: Fieldwork

Date: *month/day/year*

Name of Project

Group Members: *Names of people in your group* Weather:

*Rainy/Cloudy/Windy, etc.*

Location: *Place name / address / lat-long*

Daily Objective: *Briefly describe what you intend to accomplish*

Measurements or Observations: *Tables work well for recording many measurements*

End of Day Summary: *Sum up what you did for the day and if you accomplished your objectives*

Page Number

Example Notebook Page: Cyber-Research

Date: *month/day/year*

Name of Project

Group Members: *Names of people in your group* Data tool/ URL: *Name of website / URL/ Data tool you are using*

Location: *Place name/ lat-long of location(s) being studied*

Research Objective: *Briefly describe what you intend to accomplish, research questions and/or hypotheses*

Data and Observations: *Tables work well for recording data*

Analysis and Discussion: *Sum up what you did for the day and if you accomplished your objectives. Record notable outcomes of your research and new research questions.*

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