The Journal

Your journal contains original raw data. It is special and precious. It must be treated with care and respect.

Reasons for Keeping Notes

1. To preserve experimental data and observations.
2. To preserve clear, unambiguous statements of "The Truth" as observed by the investigator.
3. To allow any scientist to repeat your experiment exactly.
4. To help you remember how to repeat your experiment exactly.
5. To study the data and observations collected.
6. To provide you with a platform to analyze, evaluate, interpret and discuss your experiment.
7. To provide a basis for reports, abstracts, and papers.
8. To maintain contact with scientists.
9. To review your work and plan future work.
10. To record your mathematical calculations.
11. To make safety notes.
12. To keep track of supplies and names of manufacturers.
13. To record your drawings; good drawings can save pages of writing.
14. To allow you to refocus your ideas.
15. To prevent endless loops.
16. To give you a binding legal document.

Some general ideas on note keeping

1. Your notes must be clear, concise and complete.
2. Your notes must preserve failed experiments as well as successful ones.
3. Your journal must be bound so that pages do not fall out. Slip-in pages are not acceptable.
4. Your journal must follow a consistent format.
5. Your journal pages must be numbered in sequence.

A proper journal page

Each page must be:

1. Clearly dated as each day's work begins.
2. Clearly headed with identifications that describe the work at hand.
3. Immediately entered, before the investigator leaves the lab.
4. Neat, legible and grammatically correct.
5. Written in permanent ink (blue or black only)
6. Must include a sketch of a part or activity for that day. Be creative!
7. Must include a vocabulary word and definition in your own words.
8. Sign the bottom of the page when you are done for the day.

Organization of the journal

1. The key to the journal is clarity; clear layout, descriptions, good penmanship and well thought out organization.
2. The format is flexible and should suit the student's personality. All formats, however, should be logical, legible, complete, and concise.
3. A journal may contain a table of contents.
4. Pages are numbered and dated.
5. Each section should have:
    a. a purpose and experimental plan (one or two sentences)
    b. clear concise statements such as "To determine the effects or role of…"
    c. labeled diagrams (if appropriate)
    d. clearly described methods and materials
    e. concentrations of solutions (percentage, molarity or normality must be shown, along with the calculations leading to them.
    f. Observations and data. THIS IS THE HEART OF THE WORK. Temperatures, times and any other measurements must be recorded here along with all graphs and tables.
    g. Conclusions drawn from the work.