

Science Notebook / Binder Requirements:

Each student is required to maintain a Science Notebook.

Each notebook must be written as an individual effort, **NEVER** as a group project! Even if a lab experiment was performed as a group, each student must complete the notebook sections on their own. (Everyone describes things differently so, the only thing that can be the same as someone else's in your group is measurements (i.e.: 37.2 g)). **Don't let yourself be given a zero by copying or letting someone else copy yours.**

There are several purposes for the science notebook. It will serve as a resource and a record of concepts, experiments, reflections, and questions. It also is designed to enhance organization, thinking, and writing skills (as they are important to scientists) as well as to model how scientists record and reflect on collected data and what has been learned.

How do I set-up my Science notebook?

1. It must be a 3-ring binder (so handouts and writing pages may be added as necessary).
2. Title Page contains the following information:
Name, Course, Class Period, Teacher – Mrs. Donley, School Year 2011-2012
3. Following the title page, you should place all your first day of class handouts (class rules, notebook requirements etc.)
4. **Section 1: Daily Lessons**
 - ~ A page (Front or back--though often more) for each day of class.
 - ~ The date at the top of each page.
 - ~ A record of what was done in class (this includes, but is not limited to: all notes taken in class, all in-class example problems, handouts, all video notes, all homework assignments, reactions and impressions of laboratory experiences).
 - ~ This is to be in chronological order: the most recent pages will always be at the back.
5. **Section 2: Lab Entries**
 - ** Be sure that each experiment begins on the right hand page, even if it means that you must leave the left page (or back of the previous page) blank.
 - **Here you will place formal lab entries, sketches from labs, notes taken during labs including observations (quantitative and qualitative) and any directions you are asked to write down for a lab.
 - **Information here should be written in such a way that someone who does not know anything about the topic can understand what occurred.
 - **The first page of this section should be your copy of the lab safety contract.

Items required in a formal lab entry: (typed and in 12 pt. font)

- ~ **Experiment Title**
- ~ **Date of Experiment** (if absent, put the date of original lab and when you made it up)
- ~ **Names of any lab partners**
- ~ **Purpose of the experiment:** A brief statement of the objectives of the experiment. (What do you want to find out?) **DO NOT** use "I" in the purpose and it should be written in future tense since you write this before you do the experiment.
- ~ **Introduction:** A brief discussion of the important aspects of the experiment, important definitions, information on the concept being studied, mathematical relationships (formulas you need to use). Write this as a narrative with **COMPLETE** sentences.
- ~ **Hypothesis:** What do you think will happen based on your knowledge of the concept? A statement of your expected outcomes.
- ~ **Materials:** What supplies and equipment will someone need to complete this experiment? (As a list.)



~ **Procedure:** Description of what was done.

- This should be a step-by-step list.
- Be sure to include the names of equipment used (pipette, beaker, etc.) You may sketch pieces of equipment and special set-ups that are difficult to describe.

~ **Data/Analysis:** This is your evidence and discussion of results.

- If you make any measurements (quantitative observations), record them along **with their units!!!!** (i.e.: 32.7g of sodium chloride were added to the solution.) This is usually done in a data table.
- Observations should be written immediately so that you do not forget them, they might be important. (i.e.: The solution turned blood red when the unknown was added.)
- Calculations: Any formulas used should always be written, then filled in with knowns, and then solved. **ALWAYS** use **UNITS**. Define any symbols used (i.e.: m = meter, a measure of length or distance) Provide one (1) example of each different type of mathematical calculation performed.
- Answers to any questions in the lab handouts (complete sentences)
- Graphs etc. that are properly labeled (and identified as figure 1 etc. if there are more than 1 in the experiment.)
- Explanation of what the results might mean.
- Discuss factors that you think may have affected your results.

~ **Conclusion:** State the outcome of the experiment in a narrative form, along with the results of your calculations with their **UNITS**. The conclusion should make reference to the **problem**, **hypothesis**, **experimental design**, and the **data**. Here, there should also be reference as to why your results were or were not what was expected (any factors that may have affected the data), and areas for future study and improvements.

~ **Signature and date:** Sign and date your experiment information 2-3 lines below the end of your write-up.

6. **Section 3: Glossary**
 - ~ Vocabulary and their definitions.
 - ~ Each letter of the alphabet has its own page.
7. **Section 4 : Reflective Journal Entries**
 - ~ Use new words learned, good spelling, and good grammar.
 - ~ Record new insights and problem solving strategies realized during discussions.
 - ~ Draw connections between schoolwork and life outside of school
 - ~ Record of your thoughts, ideas, responses and reactions to contents of a lecture, lab activity, group discussion or reading.
 - ~ Questions and any confusion you have about concepts
 - ~ Exploration of possible solutions to problems being raised in class or alternative activities to the ones presented in class.
8. **Section 5: Grades**
 - ~ Grade sheet
 - ~ Graded papers with grade number circled in the upper right hand corner (in numerical order behind the grade sheet.)
 - ~ Grade period grade sheets should also be in chronological order with the most recent toward the back.
 - ** If you do not have a paper because someone else from your group has it in their folder or if it is in another section of your notebook...put a blank sheet of paper in its place with the following information:
 1. Name of assignment
 2. Who has it or where it can be found
 3. Score
 4. Of course the assignment # circled in the upper right hand corner

** **Note: All graded papers must be kept for the entire year!!!**