



Experimental Log Part 3

The Composition Book

Reminder: other than the recommendation section, there are to be NO YOU's/ Me's/ we etc written!!

KEEP A SCIENTIFIC LOG OF EVERYTHING THAT HAPPENS WITH YOUR EXPERIMENT!!

This will be a composition book that will be placed in the back pocket of your science notebook.

First, get a composition book

- o Before you begin, you need to get a journal or notebook to record everything.
- o This will be your log or diary
- o Include the date in the top corner, and record everything you did that day, as it relates to your SF experiment.
- o This may be retroactive, meaning, what things you have already done (ie, purchased equipment....)
- o Example: 10/30 Today I received permission from my teacher to survey every student in her class. This includes 75 boy and 80 girls, which should provide me with roughly 155 students.

Second, make a to-do list

- o Make yourself a check off list of everything you need to do BEFORE starting the experiment
- o Maybe you need permission from an adult/coach/teacher
- o This includes obtaining all of your supplies and materials!

Third, Collect Materials This could be tricky!

- o Obtain ALL of your materials
- o Make sure you have EVERYTHING you need before starting the experiment.
- o Perhaps you need a video camera, ball machine, digital camera, etc.
- o For each day in your "diary", be clear about what materials you got.
- o Example: 9 / 4 Today I borrowed 100 50ml beakers from school. I will use these for my samples, but I still need to get 50 more.

Fourth, prepare to collect data

There are two types of data to record:

- o Quantitative Data - using numbers! this is data you can count and measure.
example: the growth of the plant in cm
- o Qualitative Data - using adjectives! this is description of your observations such as the color and shape of things, what they look like, what changes you saw. example: the color of the flower petal

Part a: Quantitative: Create Data Tables

- o Based on your variables, prepare charts and/or data tables to use during the experiment.
- o Create one for each variable you are changing, paired with the variable you are measuring.
- o This will help you stay organized during the experiment, when things may get hectic and you don't have time to make a cool little chart.

Part b: Qualitative: Take Pictures

- o Use a camera and take pictures of everything
- o Paste copies into your composition book
- o Make extra copies to use in your results section and to put onto your backboard
- o Also, describe EVERYTHING that occurs during your experiment - conditions, observations, problems, solutions, back up plans, etc.

Fifth, obtain permission: This is VERY important

- o If you are doing an experiment involving people (surveys or testing) YOU MUST have signed permission slips
- o Create a permission slip form where you get their name, age, signature, and parent signatures to participate in your experiment
- o Keep these - you will need them in your SF notebook appendix
- o If you are doing an experiment involving bacteria/ hazardous materials/chemicals, animals, etc, there are special forms you must complete and have signed BEFORE you being! Ask Mrs Gillum for these forms.

Ok, are you finally ready?

- o You have all of your materials
- o You've received permission from all necessary participants/adults
- o Your procedures have been approved
- o You made data tables and put them in your notebook...
- o Sounds good to me! **Begin the experiment!**

Some additional tips to consider!!

1. Make sure to record the conditions of your experiment and changes that you are making(so you can update your procedures) Did you skip a step? Add a step? What is the weather like? Does this matter or could it affect your results?
2. You need to record EVERYTHING! Be honest, you can explain mistakes or negative results later.
3. Tip: It is always better to write as much as you possibly can, than to be "short" of info later.
4. All of this info will end up in your final notebook under the "observations" and "results" sections... make it neat and professional.
5. In the results sections, you will include all of your observations, data, tables, charts, pictures, diagrams, sketches, statistical analysis, and general descriptions.
6. This part will be at least 2 pages long, without even adding your pics and diagrams.