

# Guide to Lab Notebooks

**Title Page & Table of Contents:** The first page of your Lab Notebook should have the name of the course, when the course was taken, and the fact that this is a lab notebook.

Ex:

*Chemistry*  
*Fall 2011 - Spring 2012*  
*Lab Notebook*

At the bottom right of that same page should be your name, what period you're taking the class, and the instructor's name.

On the next right-hand page (*not* the back of the title page), you should write "Table of Contents" at the top, and then create a header line a few lines below that with 4 columns: Experiment/Lab #, Title, Date, Page #. That header line should be underlined, and all entries below that should be entered in neatly ordered columns.

Ex:

<u>Experiment #</u>	<u>Title</u>	<u>Date</u>	<u>Page #</u>
1	Rainbow Lab	28 Sep 2011	1 - 4
2	Physical Properties	12 Oct 2011	5 - 8

Avoid writing in the lefthand margin for the Table of Contents (and all future sections). Number your pages, starting with the next right-hand page, by putting the number in the top outside corner of the page. Include both facing pages for the rest of the lab book. *Each* lab should have a title at the top and consist of five sections as listed below. Each lab should start on a new right hand page. Each section should start with a roman numeral and be underlined or otherwise set apart (some students have used highlighters as one way). Make sure to put at least one blank line between each section, and try to avoid having just the section header at the bottom of a page, or just a single line at the top of a page from the previous section.

## **I. Introduction** (5 pts.)

The introduction is in paragraph form, only 3-4 sentences long, and briefly describes what that lab is going to be about and/or what your goals are in doing this lab. Usually the lab instructions (from your instructor) will give you most of what you need for this section.

## **II. Materials** (5 pts.)

This section is in list format, 1-2 columns, neatly lined up. Think of the ingredients section in a recipe. This section should include all materials and equipment used in the experiment whether they're listed in the lab instructions or not. Bullets or dashes in front of each item can help organize this section.

## **III. Methods** (10 pts.)

This section is a numbered list of instructions. The instructions do not have to be in complete sentences, but they need to be detailed instructions that allow someone else to do this lab with no other references or resources than your lab book. Again, think of a recipe – this section would be the set of cooking instructions.

#### **IV. Data** (10 pts.)

This section is where you put the tables or lists of data that you collect. Tables should either be done with a ruler or other straightedge, or they may be printed up on a printer, and cut and pasted into the lab notebook. Be sure to keep the tables as neat and orderly as possible.

#### **V. Discussion** (15 pts.)

This is the analysis portion of the lab. This section should be in paragraph form with complete sentences. Here is where you analyze your data, answer questions (if any were handed out in the lab handout), figure out your sources of error, and propose how you could do the lab better the next time. Be careful to not just “recite” what is in your data section. Don’t just state that in sample #1 we measured 3 g of product, sample #2 had 5 g of product, and sample #3 had 8 g of product. All of that information should already be in the Data section of the writeup. Instead, state that each sample had an increasing amount of product, and possibly propose an idea as to why you think that happened. Analyze! Propose! THINK!!

#### **VI. Conclusion** (5 pts.)

This is also in paragraph form, but like the introduction should only be 3-5 sentences long. Look at what the proposal was in the introduction and answer whether or not your goals were achieved. You can also make some brief general statements about what you concluded from your discussion section.