



# Write-A-Lab Worksheet

This worksheet is designed to help you organize your lab work into well-written lab reports! If you are unclear about any section, refer to the **General Information** section of your lab manual (see **General Information III. C.**).

## **TITLE PAGE**

The first page of your lab report should be the title page. This page should be neat, concise, and easy to read. You should include the name of the experiment, your name, the date you turned the lab in, the lab section number, your instructor's name, and the name of your partner(s). There is a title page template at the end of the **General Information** section.

*The most important things (the experiment title and your name) should be centered in the page for easy identification.*

## **ABSTRACT**

An abstract is used to let the readers know the bare bones of the articles so they can decide if they want to examine it in detail. *This should be the first section of your written report!* (An example of an abstract can be found the **General Information** section mentioned above.)

✓ **Objectives (Why did you do this experiment?):**

✓ **Results (Important numbers and/or conclusions):**

## **INTRODUCTION**

Your introduction should be a description of the experiment in *your own words*. It should include two general areas: theory and procedure.

### **THEORY:**

✓ **Major Concepts or Theories:**

✓ **Processes related to concepts:**

✓ **Important Equations that are part of the concepts or theories (and what they mean):**

### **PROCEDURE:**

✓ **How you acquired and analyzed the data (the steps to the lab):**

✓ **Principal pieces of equipment (and how and why you used them):**

The introduction section *follows the abstract*, and should be clear and thorough enough for someone who has NOT done the lab to follow and understand. You don't need itty-bitty details ("I double clicked on the file name to open the MtFuji.color file."), but you should include major themes ("I used NIH Image to view several pictures of Mt. Fuji.").

The length of this section will vary with experiment, but plan on at least one page!

### **DATA ANALYSIS**

This is where you put all those important measurements, readings, observations, graphs, and calculations! Make sure you use the correct number of significant figures, estimated experimental error, and units!

✓ **Important measurements/readings:**

✓ **Data Observations (sketches):**

✓ **Calculations (start with the general equation and show all work!):**

✓ **Graphs:**

✓ **Procedures you improvised or are different from the write-up:**

✓ **Comments on anything that may have adversely affected your measurements (accidents, clouds, mistakes, etc.):**

It is important that you are *meticulous* in this section. Your data and observations will be very important in the next section.

Watch your units....your instructor will be looking for them!

## DISCUSSION

This is the critical thinking section. You have the observations and measurements, now what do they mean? *All creative thinking should go here!* This section may include:

✓ **Questions in the lab (either throughout the lab, on worksheets, or in a discussion section):**  
(Make sure you don't miss any!)

✓ **What does your data tell you and why is it important?**

✓ **What is the weakest aspect of your experiment? (Scientifically? Mathematically? Largest source of errors?)**

✓ **How would you make this lab better?**

✓ **Suggest future experiments that can build on your work:**

✓ **Relate the concepts in the lab to Astronomy and to your everyday life.**

### **PUTTING IT TOGETHER!**

When you have identified everything that is relevant to your lab, you are ready to write! Make sure you use a *paragraph format* with *smooth transitions, good grammar, and correct spelling*.

***Before you write, go through the lab to make sure you haven't missed anything!***