Materials and Procedures Worksheets

**SPP Materials & Procedures Worksheet**

The information you provide here will become part of your Research Report, Part 1, your Project Plan. The most common problem is not supplying enough detail in each of these sections.

**Materials and Equipment**

In the space below, make a complete list of all the materials and equipment you will use to test your hypothesis. *Plan on revising this list as you complete your experiment.* Follow these rules:

1. Identify any item or product with as much detail as you can. If you are using a particular brand, specify the name and any other information so that another researcher can tell exactly what you used. For example, Tide detergent comes in liquid, HE liquid, powder, and many other formulas with fabric softener, bleach, etc added. Be sure to give complete information. If you do not know the exact brand names, say “brand TBD” (which means “to be determined”) for now, and revise your list of materials after you complete your experiment.
2. Tell the exact amounts you will be using. If you do not know the exact amounts, give an estimate for now. After you complete your experiment, revise your list of materials to include the exact amounts.
3. Report the amounts you use in metric units: grams, kilograms, milliliters, liters, centimeters, meters, °C. If you are using a specific count of something rather than amount, make sure to include the number.
4. Order your list with the most important materials first.
5. *Equipment:* List equipment separately for easier reading. Equipment includes your measuring devices (for example, thermometer, tape measure, stop watch). You do not need to list the brand names of your measuring devices unless it is something very unusual.
6. If you created your own measuring device (for example, a color scale), be sure to include the materials you used to create it in the materials list, and the process by which you created it in your procedure.

**Materials Equipment**

**Procedures**
In the space below, write the steps you will follow to test your hypothesis; attach another page if necessary. At this point, this is just your best idea of what you will do. *You should expect to revise your procedures after you test to reflect what you actually did.* Follow these rules:

1. You do not need to say anything about assembling materials or equipment. You have listed them already so everyone knows what you used.
2. The only exception to #1 is if you created your own measuring device. In that case, you should describe the steps you used to create the device first.
3. It is OK to have multiple procedures. For example, you could describe the procedure by which you sprouted seeds and set up your experimental groups, and then another procedure describing your testing of the plants.
4. Write your procedure in numbered steps. Do not use pronouns. The steps are like a recipe a reader could follow to exactly reproduce your test.
5. Make sure you describe how you are changing your independent variable and how you are measuring your dependent variable.
6. Be very specific about how and what you will measure. “Measure the plant growth” is much too vague. What if the plant is curled up? Are you going to straighten it before you measure? Note which metric units you will use in your measurements.
7. You must perform at least 5 trials for each value of the independent variable. This means different things depending on how and what you are testing. Make sure you tell how you are doing multiple tests. It is OK to say, “Repeat steps 6-8,” as long as you are specific about when to repeat them, for how long or how many times, and for which subjects or experimental groups.
8. Do not describe the analysis and conclusion steps in your procedure. The procedure describes only the testing stage of your project and the data collection.

**Procedure:**