

Name _____

Lab #1 Introduction to the Chemistry Laboratory

**** Before you start this lab, be sure to complete the inventory sheet and submit it to your instructor.**

A. Identification of Lab Materials (Lab Partners)

Identify the 7 numbered items on the counter. List their names below:

#1 _____

#2 _____

#3 _____

#4 _____

#5 _____

#6 _____

#7 _____

B. Filtering Techniques (Lab Partners)

It is often necessary to separate a precipitate from a liquid. The most common process of separation used in the laboratory is filtration. First, the liquid is separated from the precipitate by carefully pouring off the liquid leaving only solid material (decanting). To avoid splashing and to maintain control, the liquid is poured down a stirring rod. (See Figure C on the back of the Lab Information and Safety Sheet.)

Then, the solution is usually filtered through filter paper to catch any precipitate that has not settled to the bottom of the beaker. Fold a circular piece of filter paper along its diameter, and then fold it again. Separate the folds of the filter paper with three thicknesses on one side, and one on the other; then place the filter paper cone in the funnel. (See Figure D.)

Practice these techniques by mixing 100 mL of tap water with 1 scoop of dirt in a beaker. Filter the dirt from the water using the techniques described above. The remaining water should be clear.

C. Using the Electronic Balance (Lab Partners)

Record the mass (in grams) of the 4 coins listed below. If the electronic balance is not "on" push the "on" button. When starting the balance, it takes a few seconds for the balance to zero itself. Do not turn the balance off unless you are the last person to use the balance during your lab period.

Mass of Penny _____

Mass of Nickel _____

Mass of Dime _____

Mass of Quarter _____

D. Laboratory Burner / Glass Tubing (Individual Work)

Most Bunsen burners are constructed similarly. There is an inlet for gas and a vent or valve for the adjustment of air which is mixed with the gas. See Figure A. For maximum heat, the air-gas mixture must be correct, and the object to be heated should be placed just above the place blue inner cone of the flame. (See Figure A on the back of the Laboratory Information and Safety Sheet.)

When setting up apparatuses for various experiments in the laboratory, it is often necessary to manipulate glass tubing. Your instructor will demonstrate the proper techniques to fire polish and bend glass tubing. Your goal is to produce a clean, slightly rounded, 90-degree bend. **CAUTION:** Glass cools slowly. Do not touch glass that has been heated unless sufficient time has been allowed for cooling.