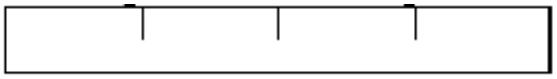
Name:_____ Per:_____

Activity- Measuring With Significant Figures

Lab Station 1- Measuring with a Ruler

1. a. Record the length and width of the microscope slide as accurately as you can.
   _____ Length _____ Width (*include the units)*

   b. Draw the graduations on the ruler you are using showing all the lines (big and small) & numbers around your measurement.

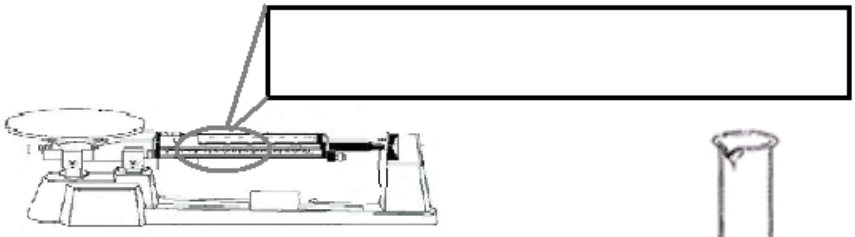


2. Calculate and record the surface area of one side of the slide. (Length x Width)

Lab Station 2- Determining Mass with a triple beam balance

1. Record the mass of the penny and also the nickel (by themselves) as accurately as you can.
   _____ mass penny _____ mass nickel (*include the units)*

2. Draw the graduations the beam on the triple beam balance you are using showing all the lines (big and small) & numbers around your measurement.



Lab Station 3- Volume: Determine the volume of water that a test tube can hold

1. a. Fill a test tube completely with water & pour the contents into a 100 mL graduated cylinder. Record the volume. *Make sure you are eye level & take reading from bottom of the meniscus.
   _____ volume using graduated cylinder (*include the units)*

   b. Draw the graduations the graduated cylinder you are using showing all the lines (big and small) & numbers around your measurement.

2. a. Fill the test tube again and pour the contents into a 150 mL beaker. Record the volume.
   _____ volume using beaker (*include the units)*

   b. Draw the graduations the beaker you are using showing all the lines (big and small) & numbers around your measurement.

3. It is unlikely that you recorded the same measurement for the beaker and graduated cylinder even though the amount of water in the test tube didn't change.
   a. Why do you think there is a difference?
   b. Which device is most accurate?

Lab Station 4- Temperature:

1. Record the temperature of the water in both beakers.
   _____ Temp beaker A _____ Temp beaker B (*include units)*

2. Draw the graduations the thermometers you are using showing all the lines (big and small) & numbers around your measurement.

Introduction to Metrics Activity

Lab Station 1- Length & the metric system

Directions:	Record Object/Answer:
1. Find something obvious on your body that is **1 mm** long or thick.	
2. Find something obvious on your body that is **1 cm** (10 mm) long or thick	
3. Find something on your body that is **1 meter** (100 cm) long or thick	
4. Using the meter stick, determine your height in meters. (ex 1 meter 86 cm)	

Lab Station 2- Mass & the metric system

Directions:	Record Object/Answer:
1. Find some form of money (coin or bill) that weighs **1 gram**.	
2. Find something or combination of things that weighs **0.5 kilograms** (500 g)	
3. How much do you weigh in kilograms? 1 Lb = 0.45 kg	

Lab Station 3- Volume & the metric system

Directions:	Record Object/Answer:
1. How many **drops of water** does it take make **1 milliliter** (mL)?	
2. How many **mL** in a standard water bottle?	

Lab Station 4- Temperature & the metric system

Directions:	Record Object/Answer:
1. What is the approximate temperature of this room in **celcius (°C)**?	
2. Hold the thermometer in your hand and determine body temperature is in **celcius (°C)**?	
3. If you were traveling in another country and the temperature was going to be 30 °C, what kind of clothes would you need to bring?	

General Questions:

1. Put the following metric prefixes in order from Largest → Smallest: meter, centimeter, millimeter, kilometer

2. If you wanted to measure the length of a football field, which prefix & metric unit would be best suited?

3. If you wanted to measure the mass of a Tylenol pill, which prefix & metric unit would be best suited?