Lab: Metric Measurement

Procedures

Follow the instructions for making each of the following measurements and record in the appropriate data table on the "Datasheet".

I. Length:

1. Estimate the length of the board, in meters, using only your eyes.
2. Use a 1 meter long piece of string to measure the height of the door and the width of your desk.
3. Now use a meter stick to make the same measurements as in #2.
4. Use the ruler to measure the width and length of this sheet of paper in cm and in mm.

II. Volume:

1. Using the graduations on the beaker, measure the volume of liquid in the beaker.
2. Use a graduated cylinder to measure the same liquid.
3. Fill a 250 mL flask completely full of water. Use a large graduated cylinder to measure the capacity of the flask.

III. Temperature:

1. Measure the temperature of 100 mL of tap water.
2. Measure the temperature of 200 mL of tap water.

IV. Mass:

1. Obtain a balance. Follow your teacher's instructions for correctly using the balance.
2. Place a coin directly on the balance and find its mass.
3. Repeat with a different coin for each lab partner.
4. Mass the empty cup.
5. Use a graduated cylinder to measure 50 mL of water and add to the cup.
6. Mass the cup with the water in it.
7. Determine the mass of the water.

Lab: Metric Measurement—Datasheet **Name**_____

I. Length: The metric unit for length is the _____.

estimated length of board_____

	string	meter stick			cm	mm
height of door				**width of paper**		
width of desk				**length of paper**		

II. Volume: A metric unit for volume is the cm^3. It is the same as _____.
1000 mL = _____

beaker_____ graduated cylinder_____
capacity of 250 mL flask _____

Of the 3 instruments you have used, which is the best for measuring volume?_____
Why?_____

III. Temperature: The most common metric unit for temperature is _____.

100 mL tap water _____ 200 mL tap water _____
Does the amount of water affect the temperature? _____

IV. Mass: The metric unit for mass is the _____.

	penny	nickel	dime	quarter
mass				

	empty cup	cup + water	water
mass			