**Station Answer Guide:**

Hello students!

If you thought you could just…”copy” my answers, THINK AGAIN! This will serve more as a “guide” to help you get the right answers for your stations. Looking forward to grading all 100% papers on Monday. =)

Ps. Remember to write them in COMPLETE sentences that addresses the question. I have set some of them up for you (Don’t just fill in the blanks! Write the whole thing down!)

Love,

Ms. Kwon

**Station 1:**

**What is an SI unit?** What do the letters “S” and “I” stand for?

**Why do scientists prefer to use SI units?** Scientists prefer to use SI units because the conversion is easier. Please answer what unique characteristic that SI units have that makes the conversion easier.

**What do SI units measure? (**this one, I’ll give to you ;)) SI units measure distance (in meters), volume (in mL) and mass (in grams).

**Station 2:**

**Draw the conversion chart found on page 1 of this station. How big is each prefix compare to base?**

(You had to draw the conversion chart and write what each prefix represents. Please copy below)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Kilo | Hecto | Deca | Base | Deci | Centi | Milli |
| 1,000 | 100 | 10 | 1 | 0.1 | 0.01 | 0.001 |

* Note that each prefix that ends with an “i” is in decimal form. That means it’s a fraction of the base.

**What do each unit measure?**

Gram measures mass, meter measures distance/length, and liter measures volume.

**What is the mnemonic phrase that can help you remember the prefixes of the metric system?**

King Henry Died By Drinking Chocolate Milk

**Station 3: Mass**

**Sketch a picture of triple-beam-balance**

**What is the difference between weight and mass?** Weight is the measure of force of gravity on an object (how hard it’s being pulled down) and mass is the measure of how much “stuff”/matter is in an object.

**How do you use the triple beam balance?** (I want the steps here.) Step 1: You must make sure that the balance is at \_\_\_\_\_\_\_\_\_\_\_\_. Step 2: You adjust the \_\_\_\_\_\_\_\_\_\_ if the balance is not at \_\_\_\_\_\_\_. Step 3: Place the object on tray, and move the\_\_\_\_\_\_\_\_\_\_\_ weight first. Step 4: You adjust the weight on the beams until it reaches \_\_\_\_\_\_\_\_\_\_\_\_\_.

**Station 4:**

**Record the mass of the three items on your paper under station 4.** (The answer will vary. Please make sure your items are recorded in grams (g)).

The mass of the items at this station are as follows:

Jenga block: \_\_\_\_\_\_\_g

Box of paper clips:\_\_\_\_\_\_\_\_g

Bag of marbles:\_\_\_\_\_\_\_g

**Order them from largest to smallest mass:** The order of the items from largest to smallest mass is:\_\_\_\_\_\_\_\_,\_\_\_\_\_\_\_\_\_,\_\_\_\_\_\_\_\_\_\_.

**Station 5:**

**How is volume and area different?** Volume measures how much space it takes up in 3 dimensional form. It is found by multiplying it’s \_\_\_\_\_\_\_\_\_by \_\_\_\_\_\_\_\_\_\_\_by \_\_\_\_\_\_\_\_\_. Area is 2 dimensional and is the amount it takes to cover 1 surface. Area is found by multiplying its \_\_\_\_\_\_ by\_\_\_\_\_\_\_\_.

**What do we use to measure the volume of a liquid? Draw & Label**

We use a graduated cylinder to measure the volume of a liquid (include drawing)

**How do we find the volume of a liquid?** You find the volume of a liquid by using the graduated cylinder.

**Find the volume of the Jenga block:** The volume of the Jenga block is 26.35 cm3 (your answer may vary a little bit, and that’s okay!) It is found by multiplying its \_\_\_\_\_\_\_\_\_\_by\_\_\_\_\_\_by\_\_\_\_\_\_\_ which was 7.5cm x2.5cm x 1.4 cm.

**Station 6:**

**List step-by-step how to measure the volume of the liquid using graduated cyclinder.** We find the volume of the liquid by first pouring the liquid into the graduated cylinder, stooping down to the eye level, and reading the measurement at the bottom of the curve that the liquid makes (read the bottom of the meniscus).

**What is the maximum amount of liquid you can measure with the graduated cylinder given at your station?** The maximum amount of volume you can measure at this station is 25mL

**What does each line of the graduated cylinder represent?** Each line of this graduated cylinder represents 0.5 mL.

**What is the volume of the liquid at your station?** The volume of the liquid at this station is 21mL. (You may have gotten 20.5 mL due to evaporation over the course of few days)

**Station 7: Computer station**

**What is a meniscus?** A meniscus is the curve at the top of the liquid. The curve dips down.

**Why does a meniscus form?** (If you don’t know the answer to this one, you need to go back to that link!) [**http://www.wisc-online.com/objects/ViewObject.aspx?ID=gch302**](http://www.wisc-online.com/objects/ViewObject.aspx?ID=gch302)

**All of the correct reading should be given to you on the website. Check to make sure you have the right answers. (Write mL for units!)**

**Station 8: Volume**

**What is the volume of the marble?** The volume of the marble is 9 mL.

**Why do we use the “water displacement” method to find the volume of the marble?** We used water displacement to find the volume of the marble because marble has undefined sides.

**Station 9: Distance/Length**

**How long is a meter in inches?** A meter in inches is approximately 39.25 inches long.

**How long is your foot in centimeters?** (answers will vary. You should have gotten somewhere along the lines of 20-30 cm)

**How tall is the tallest person in your group in meters?** (answer will also vary. But please keep in mind of the conversion chart. If you are 160 cm tall, you are 1.60 m tall. Adjust accordingly)