**Measurement & The Metric System Notes**

Measurement: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* To measure, we use a measuring tool to compare some dimension (amount) of an object to a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,

*an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.*

| Measurement | Definitions | Base Unit (abbr) | Instrument(s) Used |
| --- | --- | --- | --- |
| Mass | The amount of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  | Balance/scale |
| Volume | The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ matter occupies |  | Graduated cylinder, beaker, Erlenmeyer flask |
| Temperature | The average \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the particles in matter |  |  |
| Length | Longest \_\_\_\_\_\_\_\_\_\_\_\_ dimension of matter |  |  |
| Time | C:\Users\macedok\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\42F3B636.tmp  Stands still in this class |  |  |

**Why are units important?!**

You are driving to visit a friend and get lost - Google Maps is not working!!!  You stop and ask a stranger walking his dog for directions, and he seems to know where you want to go.

“Take a left at the next stoplight, and then go five \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. ”

“After that, make a right and go through three \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.”

“You should see a Starbucks straight ahead, go two \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ past that.”

“Your friend’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ should be fifth on the right.”

**Quantities Practice**

Identify the QUANTITY (and UNIT) that is listed in each statement. After each quantity, list whether it is a measurement of length, mass, volume, time, or temperature.

**Quantities are measurable, therefore, each quantity will be described with a number and a unit.**

*Example:* STATEMENT: A baseball player throws the baseball 51 m. QUANTITY: **51 m – length**

1. A 55.0 g sample was placed into a small cardboard box.
2. The water measured 403.2 K.
3. A large piece of copper occupies 123.55 cm3.
4. Ron Weasley ran for 30.15 minutes.
5. Hermione Granger measured out 703.50 g of sodium chloride.
6. Harry crossed the river where it was the narrowest, only 1.505 m.
7. A teaspoon of medicine is 5.0 mL. 12. Professor Snape needs 70.445 nm of ribbon.
8. A football field is 9144.0 cm. 13. One mole of CO2 occupies 22.40 L.
9. A dime is 1.132 mm thick. 14. Dumbledore ran 13.010 miles when he wanted to find Harry.
10. The plank is 31.28 mg. 15. Ginny Weasley would love to have 3125.0 mL of Cherry Coke.
11. A soccer ball is about 0.4005 kg. 16. Flowers and at least 15,550,000 g of chocolate make great gifts.