**Lab #3: Measurement & SI Units**

Purpose: Practice converting between metric units

Objective:

-Obtain 20 Measurements of the size, volume, or mass of various objects

-Give measurements in the base unit, and select 2 other units to convert to

-Calculate the density of each sample

Data Table: Create a data table that allows for measurement in (a) SI standard units, and (b) two other conversions. For example, if you are measuring your height, the data needs to be recorded in meters (m), centimeters (cm), and kilometers (km). Must show all calculation set up in “calculation” section.

Analysis: No graph, but answer the following:

1. What is the importance of standard units of measure
2. Calculate the density of each sample using the formula density= mass/volume.
3. Does mass depend on the size or shape of an object? Explain
4. Identify the variables you used to determine the volume of each sample
5. List the standard units you used in this investigation

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Record in your notes

SI Base Units

Length

Mass

Time

Amount of Substance

Electric Current

Area

Volume

Density

Energy

Prefixes and Symbols:

Giga- 1000000000x base (10^9)

Mega- 1000000x base (10^6)

Kilo- 1000x base (10^3)

Hector- 100x base

Deka- 10x base

Deci- 1/10x base

Centi- 1/100thx base

Milli- 1/1000th x base

Micro- 1/1000000th x base

Nano- 1/1000000000th x base