$\qquad$ Date $\qquad$


## Definitions:

Matter: anything that has a mass and a volume.

Mass: the amount of matter in an object. The amount of "stuff" is measured in grams.

Volume: the amount of space an object takes up. We use $\mathrm{cm}^{3}$ or mL to measure volume.

The formula to calculate volume for a rectangular prism is:


$$
L \times W \times H=\mathbf{c m}^{3}
$$

For an irregularly shaped object we use a Graduated Cylinder and water displacement. The volume is found by:

Final reading in mL - the starting reading in mL .


Density: the ratio of mass to volume. Everything has density; it is how much "stuff" is packed into a given volume. The formula used to find density is:

$$
\text { Density = Mass } \div \text { Volume (D=M/V) }
$$

The unit of measurement is $\mathbf{g} / \mathbf{c m}^{\mathbf{3}}$.
The density of water is $\mathbf{1 . 0} \mathbf{~ g} / \mathbf{c m}^{3}$.


A cube measuring $1 \mathrm{~cm} \times 1 \mathrm{~cm} \times 1 \mathrm{~cm}$ takes up $1 \mathrm{~cm}^{3}$ of space,
holds 1 mL of water and has a mass of 1 gram.

$$
1 \mathrm{~mL}=1 \mathrm{~cm}^{3}=1 \mathrm{~g}
$$

