NAME: PERIOD: DATE:

VOLUME NOTES

VOLUME is:

1. The amount of space an object takes up. **2.** The amount of space a container can hold.

Volume is measured in units such as gallons, cups, quarts, and cubic inches (in^3) in the English system, and liters and cubic centimeters (cm^3) in the Metric system.

Every day, people buy commodities based on their volume: gallons of milk, liters of cola

Medical facilities in the United States use the Metric system to measure things, but abbreviate cubic centimeters as "cc's" instead of (cm^3).
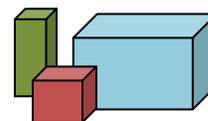
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The volume of "regular" solids (math class shapes like pyramids, cylinders, cubes, spheres, etc.) can be calculated using the formula:

AREA OF THE BASE X HEIGHT = VOLUME

For cubes (and other box-shaped, right, rectangular solids) the Area of the Base = Length x Width so the formula changes to:

LENGTH X WIDTH X HEIGHT = VOLUME
BUT ONLY FOR CUBES AND BOXES!

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We can also measure the volume of irregularly shaped objects (such as a nail, a bubble of gas, your hand, a blob of dried pudding, etc.) by the displacement of water.

**Displacement** means to push out of the way and take the place of.

When an object is put into water, it pushes water out of its way. (It displaces the water.) This makes the water level rise. The amount the water rises can be measured, and that measurement is the same as the amount of space the object takes up.

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In Science class, we use a graduated cylinder to measure the volume of liquids. To make an accurate measurement with a graduated cylinder follow these guidelines:

1. Place the graduated cylinder on a level (flat) surface.
2. Make the measurement at eye level.
3. Look at the bottom of the meniscus.
4. Understand the scale.

THIS IS THE <u>BOTTOM</u> OF THE MENISCUS! ➡
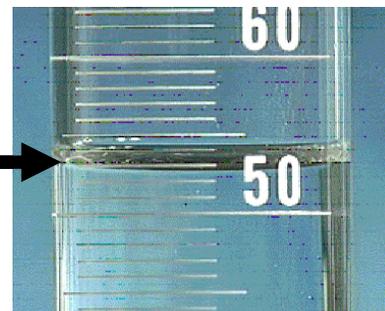
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