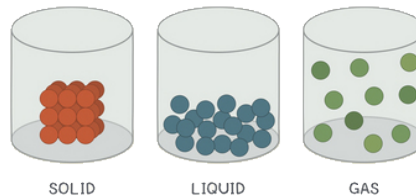




Density of Solids, Liquids, and Gas

The only way the density of a substance will change is if it changed states.

Ex) Liquid water is a different density than solid water and water vapor



Water

Both liquid water and water vapor have the same type of particles and the particles are all the same size.

Why is water vapor less dense than liquid water?

According to the particle theory of gas, gas particles have more space between them than liquid particles. Therefore, water vapor would have fewer particles than liquid water.

The density of the water vapor is less than the density of the liquid water.

Dolphin can leap through the air and dive back into water smoothly and effortlessly.



Solid objects can move easily through liquids and gases. The particle theory states that fluid properties of water and air allow water particles and air particles to move out of the way solids.



You cannot push through a solid substance, like ice, since the particles are held strongly together and will not push aside.



How are Mass and Volume Related?

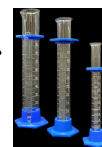
-To determine a substance density, you first must find out how much of the substance occupies a space.

Mass – The amount of matter in a substance
- Measured in kilograms (Kg) or grams (g)



Volume – The amount of space occupied by a substance

- Volume of liquids can be measured using measuring cups, graduated cylinders.



- Volume of gases can be determined by measuring volume of the containers that hold them

Capacity – The greatest amount of fluid that a container can hold. (Measured in Liters or millimeters)

Attachments

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