



Vocabulary: Density Laboratory



Vocabulary

- **Buoyancy** – the tendency of an object to float.
 - Buoyancy is a force created by the water that is displaced by an object. The greater the amount of water displaced by an object, the greater the buoyant force pushing the object up.
- **Density** – the amount of mass in a given volume.
 - Density is calculated by dividing mass by volume: $D = m \div V$.
 - Density of liquids is usually measured in grams per milliliter (g/mL).
 - Density of solids is usually measured in grams per cubic centimeter (g/cm³).
- **Graduated cylinder** – device used to measure the volume of liquids.
- **Mass** – the amount of matter in an object.
 - In the metric system, the basic unit of mass is the gram (g). A paper clip has a mass of about one gram.
 - Mass is similar to weight but it is not exactly the same. Your weight depends on the gravity of the planet you are on. If you went to the Moon, your *mass* (amount of matter that makes you up) would be the same, but your *weight* would be much less than on Earth.
- **Matter** – something that occupies space and has mass.
 - Matter can be a solid, a liquid, or a gas.
- **Scale** – instrument used to measure the weight of objects.
 - If the force of gravity is known, a scale can be calibrated in units of mass. For example, on Earth's surface, an object's mass (in grams) is equal to its weight (in Newtons) divided by 0.0098.
- **Volume** – the amount of space an object occupies or takes up.
 - In the metric system, the basic unit of volume is the liter (L), which is about two pints of water.
 - The volume of a small amount of liquid is expressed in milliliters (mL), while the volume of a small amount of solid is expressed in cubic centimeters (cm³ or cc). One cubic centimeter is equivalent to one milliliter.

