

Properties of Matter

Matter is the 'stuff' that is all around you, it is anything that takes up space.

Scientists group matter by whether it is a solid, a liquid, or a gas. Solid, liquid, and gas are called states of matter.



A solid matter has its own shape, if you put a solid in a container it would keep its own shape.



A liquid is a type of matter that does not have its own shape, it will fill the shape of any container it is in.



Gases do not have a fixed shape. It can spread out in any direction and fill an entire container. The air you breathe is a gas.

Measuring Matter

To measure a solid's height, length and width we use centimetres and inches. To measure its weight we use pounds and ounces or grams.

To measure liquid we measure how much space it takes up. This is called volume. We often measure volume in millilitres, litres, pints and gallons.

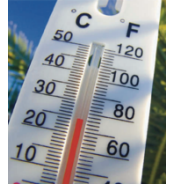
Gases are measured by the amount of space they take up. This measurement is the volume of gas.



Properties of Matter

Heating and Cooling Matter

Temperature is measured in degrees Celsius ($^{\circ}\text{C}$). You can measure it with a tool called a thermometer.



Making matter warmer or cooler causes changes to its properties. For example turning it from a solid to a liquid.

Sometimes matter can go back and forth from one state to another, but sometimes changes cannot be reversed.

Water can be a solid, liquid and a gas. Heating and cooling it can cause it to change among all three states.



Dmitri Mendeleev

Dmitri Mendeleev was a chemist in the 1800's. He studied elements and organised them which formed the periodic table based.

The periodic table is a chart which displays elements, which have been grouped based on their similar properties.

