

Did you know?

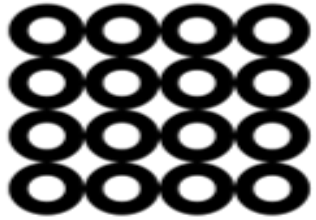
Graphene is a man-made material and has many amazing qualities. It is the world's strongest material, an extraordinary conductor of electricity and heat, and is nearly 100% transparent to light.

Materials

Year 5 Autumn Term

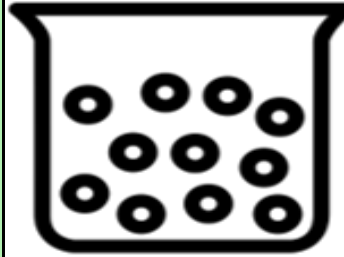


Solid



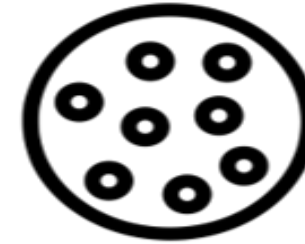
The particles of a solid material are close together. These particles vibrate around a fixed position so do not change shape.

Liquid



The particles of a liquid are close but randomly arranged. These particles move around and begin to take the shape as the container they are in.

Gas

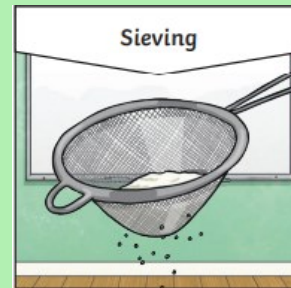


The particles of a gas are far apart and randomly arranged. These particles move around lots as they try to fill the container that they are in.

Key Vocabulary

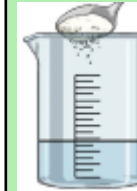
change		To cause something to have a completely different form
condense		To change from a gas to a liquid or solid through cooling.
dissolve		To mix a substance completely with liquid so that it takes that form.
evaporate		To heat a liquid so that it takes the form of a gas
irreversible		A change that is impossible to reverse, or turn back.
material		Anything that can be used to create something else, such as building materials and fabric.
property		The qualities or characteristics that materials are known for.
reversible		A change that can be reversed, or turned back, afterwards.
solution		A mixture that contains two or more unlike substances that combine evenly to make a new substance.

Separating

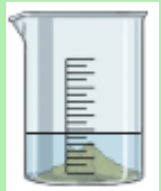


Smaller materials are able to fall through the holes in the sieve, separating them from larger particles.

Dissolving



A solution is made when solid particles are mixed with



liquid particles. Materials that will dissolve are known as soluble. Materials that won't dissolve are known as insoluble.

Did you know?

A plastic bottle will take 450 years to decompose (break down).

Famous Scientists



17th century: English physician and scientist William Gilbert (1544-1603) publishes *On Magnets*, his monumental scientific study of magnetism, and proposes that Earth is a giant magnet.

Materials



Different materials are used for particular jobs based on their properties:



electrical conductivity, flexibility, hardness, insulators, magnetism, solubility, thermal conductivity, transparency.