



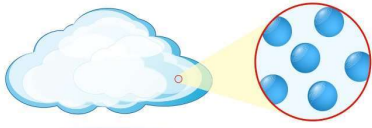
structure of material

everything made from atoms and molecules

atom = smallest known part of any material

molecule = two or more atoms, bonded

particles = atoms + molecules

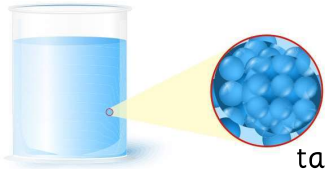


gas

air-like
can flow

no fixed shape

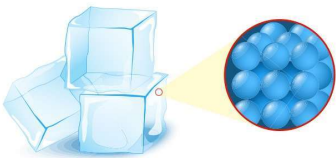
particles moving apart quickly



liquid

can flow

take shape of the container
particles very close but not fixed



solid

own shape
can't flow

fixed volume

particles very close and fixed position

uses and properties of materials

conductor



material that allows heat or electricity through



insulator



material that does not allow heat, electricity or sound through very well



hardness



how easily a material can be scratched



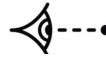
solubility



how well a substance mixes into a liquid



transparency



how see-through a material is



transparent



translucent



opaque

magnetism



when a material is attracted by magnetic force

physical change

generally reversible



2 or more materials combined

dissolving melting freezing evaporating

solid



liquid



gas



chemical changes

irreversible



cannot change back

heating

frying an egg



mixing certain materials

vinegar and bicarbonate of soda



burning

ash and smoke



dissolving



solute

+

solvent

=

solution

a substance put into a liquid

the liquid that a solute is put into

mixture formed when a solute dissolves in a solvent



salt

+

water



=

saltwater



separating



sieving



mixture made of solid particles

sand from pebbles

filtering



separate mixtures filter paper

sand from water

magnetism



separate magnetic material

iron from plastic

evaporating



separate solutions heating

salt from water salt left behind