

Where does sugar go when it is dissolved in water?

Word	Definition
hardness	How hard a material is.
solubility	The ability of a material to dissolve.
transparency	An object that lets light through, so it can be looked through. E.g. glass.
conductor	A material the heat or electricity can easily travel through.
Insulator	A material that heat or electricity can not easily travel through.
reversible	When something can be changed back
irreversible	When something cannot be changed
dissolve	When particles of a solid mix with particles of a liquid to make a solution.
soluble	A material that can be dissolved in liquid. E.g. sugar
insoluble	A material that cannot be dissolved in liquid. E.g. sand
separate	When 2 materials are split back into their original state.
magnetic	Having the properties of a magnet, exerting a strong attractive power.

Properties and Changes of Materials

States of Matter	Properties				
	Can Be Weighed	Occupies Space	Fixed Shape	Fixed Volume	Can Be Compressed
Solids 	✓	✓	✓	✓	✗
Liquids 	✓	✓	✗	✓	✗
Gases 	✓	✓	✗	✗	✓

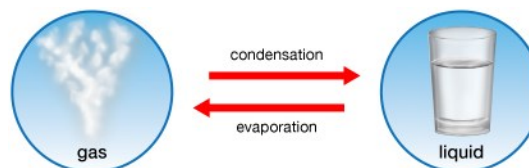
Dissolving

A **solution** is made when solid particles are mixed with liquid particles. Materials that will **dissolve** are known as **soluble**, for example sugar. Materials that will not dissolve are **insoluble**, for example sand.

You can often return the **solution** to its original state by **evaporating** the liquid which leaved the solid this is the reverse of **dissolving**.

Different materials are chosen for different uses depending on their properties: electrical and thermal conductivity, flexibility, hardness, insulators, magnetism, solubility, transparency.

For example, glass is used for windows for its hardness and transparency. Oven gloves are made out of a thermal insulator to keep the heat away from your



When chocolate is melted it can solidify again. The change is reversible.

Cooking eggs by frying, baking, scrambling, or poaching is always an irreversible change. It cannot go back to its original

5 Electrical Conductors

silver

gold

copper

steel

sea water

5 Electrical Insulators

rubber

glass

oil

diamond

dry wood