












Year 5/6 EQ: What are materials and how do they change?

Key Vocabulary		
	Condense	The process of turning a vapour to a liquid.
	Conductor	A material that allows heat or electricity to pass through or along it.
	Dissolve	The process that occurs when a solvent disappears in a solute.
	Evaporate	The process of turning a liquid to vapour.
	Insulator	A material that does not readily allow heat or electricity to pass through or along it.
	Properties	A quality or trait belonging to an object.
	Solute	The substance dissolved in the solvent.
	Solution	A type of mixture where a solute is dissolved into a solvent.
	Solvent	A liquid in which a solute is dissolved to form a solution.
	State	All matter exists in three states: solid, liquid, gas.
	Thermal	Relating to heat (is hot, retains heat, or has a warming effect).

Grouping materials by properties

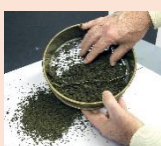
PROPERTY	YES	NO
ELECTRICAL CONDUCTOR	Copper, aluminum, gold, silver, steel, sea water	Glass, air, plastic, rubber, wood, oil, diamond
MAGNETIC	Steel, nickel, cobalt, iron, uranium, platinum	Paper, glass, plastic, rubber, wood, wool
TRANSPARENT	Glass, water, clear plastic	Wood, rubber, oil, steel, copper, iron, silver
WATERPROOF	Plastic, rubber, metal, glass	Tissue, sponge, fabric

Materials are the substances from which things are made. Properties of materials make them useful for different purposes.


Separating Materials

Some mixtures and solutions can be separated.


Sieving
Separating stones and twigs from soil




Filtering
Separating sand from a mixture using filter paper



Evaporating
Separates dissolved salt from water



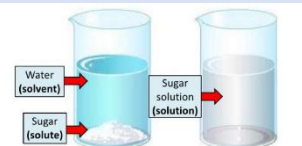
Use of magnets
Magnets in a recycling plant separate steel tins from other recycling




Reversible changes

Reversible changes are where materials can return to their original form after being changed in some way.

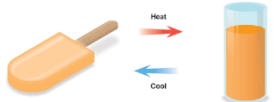
Dissolving
Evaporating the water from a sugar solution will separate the water and sugar.



Mixing
Mixtures can be separated by filtering, sieving and evaporating.




Changes of state
Changes of state occur through melting, freezing, evaporating and condensing.



Irreversible changes

Irreversible changes are changes that cannot be 'undone'. Once materials have been changed, they cannot return to their original state and result in the formation of new materials.

Burning














Rusting



Mixing some materials
e.g. vinegar and bicarbonate of soda



Year 5 Science: Properties and changes of materials

Key Vocabulary		
	<input type="text"/>	The process of turning a vapour to a liquid.
	Conductor	A material that allows <input type="text"/> or <input type="text"/> to pass through or along it.
	Dissolve	The process that occurs when a solvent disappears in a solute.
	Evaporate	The process of turning a liquid to vapour.
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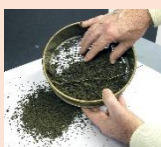
Grouping materials by properties		
PROPERTY	YES	NO
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<input type="text"/>	Steel, nickel, cobalt, iron, uranium, platinum	Paper, glass, plastic, rubber, wood, wool
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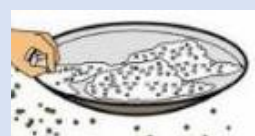
Reversible changes

Reversible changes are where materials can return to their original form after

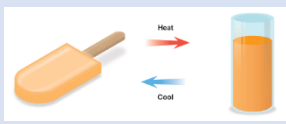
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Mixing some materials
 e.g.

