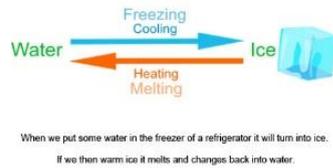


**Topic Intent**

Pupils will be able to compare and group together everyday materials on the basis of their properties, including their hardness, transparency, and conductivity (electrical and thermal). They should be able to give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials.

**Reversible Changes**



**Key Skills**

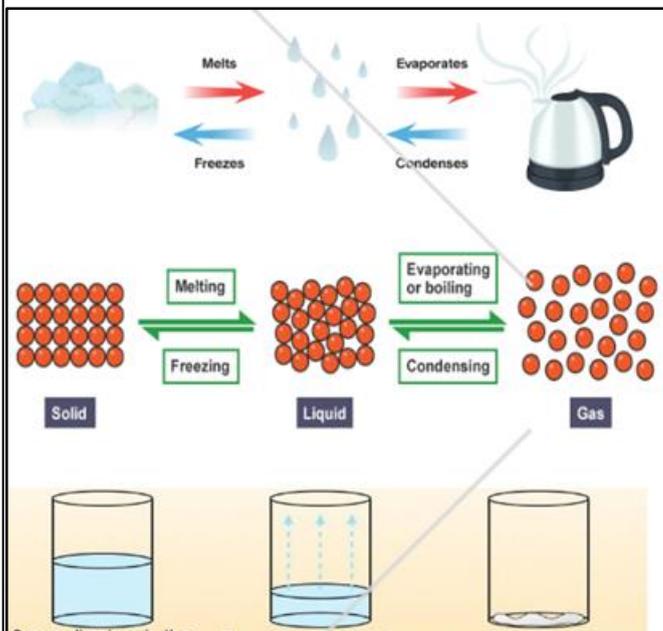
- I can ask scientifically valid questions.
- I can group materials based on a range of properties
- I can explore reversible changes, including, evaporating, filtering, sieving, melting and dissolving, recognising that melting and dissolving are different processes
- I can explore changes that are difficult to reverse, for example, burning, rusting and other reactions, for example, vinegar with bicarbonate of soda.
- I can use scientific vocabulary accurately in context
- I can plan an investigation making a clear predication and drawing conclusions based on my results
- I can demonstrate a developed understanding of a fair test

**Key Knowledge**

<b>Burning, rusting, cooking</b>	These are permanent changes. They cannot be undone by reversing the conditions that brought them about.
<b>Melting and boiling</b>	These are reversible changes produced by heat. Steam from a boiling kettle condenses back into drops of water when it comes into contact with a cold surface, such as a window.
<b>Rusting</b>	Rusting is a chemical reaction between iron, oxygen, and water

**Key Vocabulary**

Conductor	A material or device which allows heat or electricity to carry through
Dissolve	When something solid mixes with a liquid and becomes part of the liquid
Electrical Conductivity	Does a material conduct electricity?
Evaporation	The process of turning from liquid to vapour
Flexible	Capable of bending easily without breaking
Gas	An air-like fluid substance which expands freely to fill any space available
Insulator	A substance which does not readily allow the passage of heat or sound
Irreversible	Cannot be reversed back to its original state
Liquid	A substance that flows freely but can be measured by volume e.g. water or oil
Magnetic	Capable of being magnetised or attracted by a magnet
Material	The matter from which a thing is or can be made from
Opaque	Not able to be seen through, not transparent
Reversible	Able to be reversed back to its original state
Residue	A small amount of something that remains after the main part has gone or been taken or used
Solid	Firm and stable in shape, not a liquid or fluid
Soluble	Able to be dissolved, especially in water
Solubility	The ability for a substance to dissolve (mix into a liquid)
Thermal	Relating to heat
Thermal Conductivity	Does a material conduct heat?



**For Further Information**

<https://www.bbc.com/bitesize/topics/zryyedm>

<https://www.stem.org.uk/resources/community/collection/12742/year-5-properties-materials>