



Science – Year 5 Properties and Change

(Previous knowledge – refer to
Knowledge Organiser Year 4 – States of
Matter)

Vocabulary

Tier 1	Tier 2	Tier 3
Material	Natural	Conductor
Temperature	Synthetic	Insulator
Heat	Transparency	Thermal
Separate	Magnetic	Electrical
Reversible	Dissolve	Soluble
Irreversible	Evaporate	Insoluble

Useful Resources

- Water, sugar, sand, bicarbonate of soda and magnets to investigate reversible changes.
- Range of different materials to investigate their properties and group.

Key Scientists:

Spencer Silver (1941-2021) –
was an American inventor
who created the glue for
sticky notes.

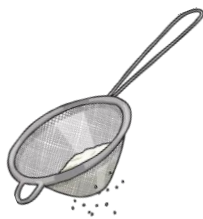


Some changes to materials are reversible,
which means that they can be changed back
to their previous state.

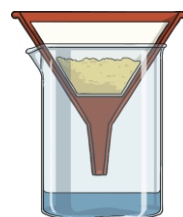
Some methods to separate materials that have
been mixed are:



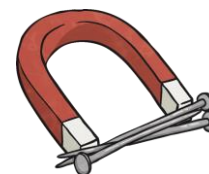
Evaporation



Sieving



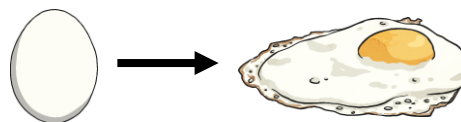
Filtration



Magnetic
attraction

Some changes to materials are irreversible,
which means they cannot be changed back to
their previous state.

For example,
frying an egg.



Key Questions/Facts

What are the different types of material?

- Natural materials are used in the way they are found in nature, such as stone.
- Synthetic or human-made materials are altered with the help of heat or chemicals, such as plastic.

What is the difference between a thermal conductor and a thermal insulator?

- Heat can travel easily through thermal conductors, such as metal pots and pans.
- Thermal insulators do not let heat travel through them easily. Some fabrics, wood and plastics are good thermal insulators. Thermal insulators can keep heat out or in.

What is the difference between an electrical conductor and an electrical insulator?

- Electricity can travel easily through electrical conductors but some materials do not let electricity pass through them. These are known as electrical insulators.
- All materials have some electrical resistance. Resistance is the opposition to the flow of electricity through a material.

How can solids dissolve into a liquid?

- Dissolving occurs when the particles of certain solids mix with the particles of certain liquids.
- Not all solids will dissolve, and not all liquids will allow solids to dissolve.
- Materials that will dissolve are known as soluble.
- Materials that won't dissolve are insoluble.