Year 5 Autumn
Knowledge Organiser

Science – Year 5
Properties and Materials

(Previous knowledge – refer to Year 2 – Animals Including Humans)

Vocabulary		
Tier 1	Tier 2	Tier 3
materials	irreversible	solution
evaporation	reversible	conductor
magnetic	dissolve	solution
transparent	filtering	soluble

don't know

I know this word

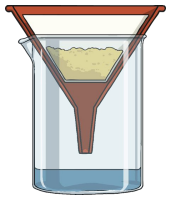
I can use it in a sentence

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

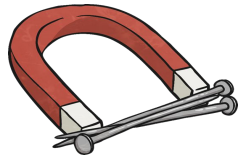
Some methods to separate materials that have been mixed are:

Evaporation

Sieving



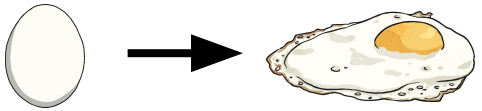
Filtration



Magnetic attraction

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

For example, frying an egg.



Scientific Enquiry Skills

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 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.