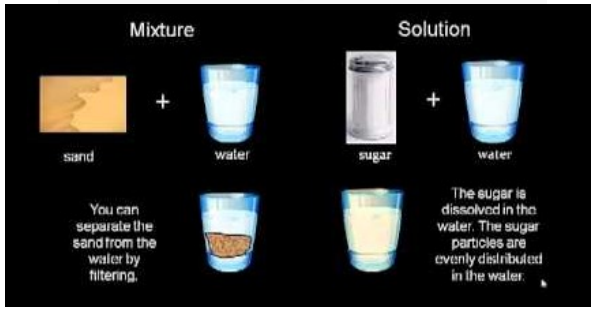
Science Knowledge Organiser — Properties and changes of materials (Term 1) — Year 5

Our learning

In our science lessons this term, we are learning about properties and changes of materials. This is part of the **chemistry** aspect of science. Through our learning we will be considering the **cause and effect** of certain processes on different materials. We will learning that some changes of state can be reversed whilst others cannot and that some material have different conductive qualities. We will also be looking at what happens when we mix materials together.



Information

There are three 'states' a material can exist in. A solid, a liquid or a gas.

Some changes between states are reversible but others are not.

Some materials will dissolve in a liquid to form a solution and some materials are insoluble.

To separate the solid from the solution it will need to be heated.

Dissolving is not a material disappearing although it can look like that.

Filtering, sieving and evaporation can be used to separate mixtures.

Burning is an irreversible change which means you cannot change the material back once it is burnt.

Some materials conduct heat, for example aluminium.

Some materials conduct electricity, for example copper.

Some materials are magnetic, for example iron.

As a scientist I will...

- Use relevant scientific vocabulary and images to share and justify my ideas.
- Communicate my conclusions on a hypothesis

Hypothesis– a possible explanation made on the basis of limited evidence as a starting point for further investigation.

Vocabulary

Soluble– something that will dissolve into liquid.
Conductive-allowing electricity or heat to travel through them.
Thermal– heat
Magnetic-An object which is capable of producing a magnetic field.
Dissolve– when a substance seems to disappear into a liquid.
Solution– where one substance dissolves into another.
Mixture-when two or more substances are combined, but each substance keeps its physical properties.
Substance-Substance is the material of which something is made. Substances are physical things that can be seen, touched, or measured.
Evaporation-the process by which a liquid turns into a gas
Reversible change-when materials can be changed back to how they were before the reaction took place
Irreversible change-if it cannot be changed back again.
Fair test-A fair test is a controlled investigation carried out to answer a scientific question.