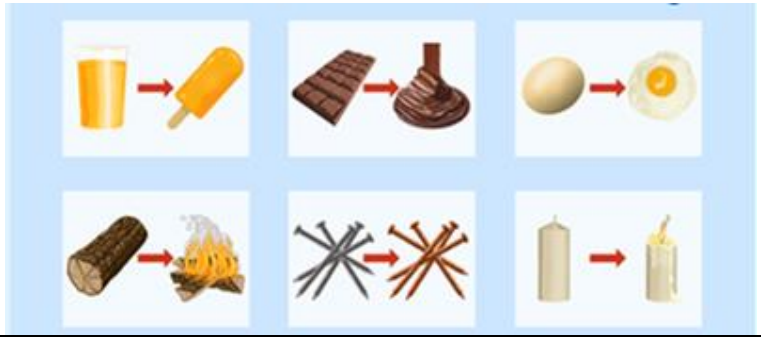
Y5&6 Science: Properties and Changes of Materials



Why are we learning about the Big Science Event?

We are building on previous learning about Everyday Materials in Year 1/2, and States of Matter, including how objects can change state, in Year 3/4.
This new learning is important because materials are all around us. We use them every day, therefore understanding their properties, how they change and which are the best materials for different purposes is vital.
This will help us get ready for future learning particularly in KS3 chemistry, when we will study topics such as chemical reactions, separation techniques, particles and elements, atoms & compounds.

Important questions to answer:

- What is dissolving and how can dissolved substances be recovered?
- How can we use our knowledge of solids, liquids and gases to separate mixtures?
- What are reversible changes and how can we demonstrate that they are reversible?
- What are irreversible changes and how can we demonstrate that they are irreversible?

Experiences we will have:

- Conduct investigations into reversible and irreversible changes

Things we need to know:

- To know that when substances dissolve a solution is formed and that the original substance can be retrieved
- To know that mixtures of solids, liquids and gases can be separated through evaporation, condensation, sieving and filtration
- To know that some changes can be reversed, using these processes
- To know that some changes cannot be reversed and that a new material is formed when this happens

Skills we need to learn:

- I can **explain** the process of dissolving and that it is reversible
- I can **choose** how to separate two materials that have created a mixture
- I can **investigate** reversible changes and **explain** what makes them reversible
- I can **describe** the new material created in irreversible changes and **explain** why the change is irreversible

Subject Specific Vocabulary:

dissolve	evaporate	solubility
substance	reversible	transparency
solution	irreversible	conductivity
mixture	chemical	condensation
filter	physical	filtration
sieve	suspension	reaction