

Science Knowledge organiser: Materials - Could you be the next CSI investigator? Spring 1 Year 5

Scientific enquiry:

- Plan different types of scientific enquiries to answer questions about materials.
- Use a range of scientific equipment to complete experiments with fair tests.
- Record data and results using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
- Use test results to make predictions to set up further comparative and fair tests.
- Report and present findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results, in oral and written as displays and other presentations.
- Identify scientific evidence that has been used to support or refute ideas or arguments.

Vocabulary:

- **Reversible change** - is a physical change that can be undone. A final substance can be converted back to the original substance without creating any new material.
- **Irreversible change** - A change is called irreversible if it cannot be changed back again. In an irreversible change, new materials are always formed.
- **Material** - the matter from which a thing is or can be made.
- **Dissolving** - become or cause to become incorporated into a liquid so as to form a solution.
- **Filtering** - pass (a liquid, gas, light, or sound) through a device to remove unwanted material.
- **Evaporation** - is the process by which water changes from a liquid to a gas or vapour.
- **Solution** - a means of solving a problem or dealing with a difficult situation.

Facts:

- Different materials have different properties. These properties are either solid, liquid or gas.
- Some materials dissolve in liquid to form a solution.
- Mixtures can be separated by filtering, sieving and evaporating.
- Dissolving, mixing and changes of state are reversible changes.
- Some changes result in the formation of new materials.
- Burning and the action of acid on bicarbonate of soda are usually irreversible changes.
- By dissolving salt in water you make a solution. You can separate the salt from the water again by boiling the solution.

Images:

Figure 1 - Irreversible Change

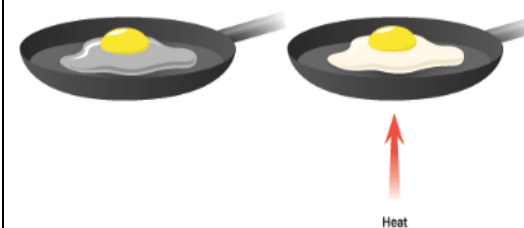


Figure 2 - Reversible Change

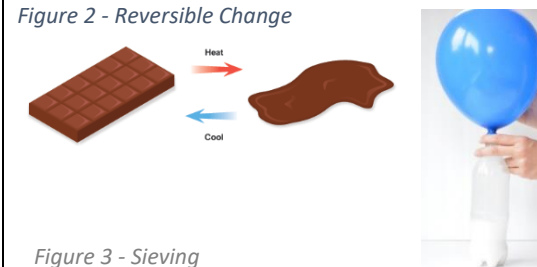


Figure 3 - Sieving

