

Knowledge Organiser Science Year 5 Autumn

Mixtures and separation



St Elizabeth's Catholic Primary School
"Love one another as I have loved you"

Prior knowledge



Year 1 and 2

- ❑ Properties and uses of everyday materials.

Year 3

- ❑ Some materials are magnetic.
- ❑ There are different types of rocks.

Year 4

- ❑ Temperature and heating and cooling.
- ❑ States of matter and changes of state.
- ❑ Evaporation and condensation in the water cycle and the factors that affect evaporation.
- ❑ Knowledge of some common conductors and insulators and that metals are good conductors.

Scientific skills developed in this topic



- ❑ **Researching:** To research using a range of secondary resources.
Gathering answers to open-ended questions from a variety of sources.
- ❑ **Recording (diagrams):** To draw and annotate a diagram to explain a concept.
Labelling with a broader range of scientific vocabulary.
Annotating diagrams to explain concepts and convey opinions.
- ❑ **Posing questions:** To identify testable questions and how to answer them.
Selecting the most appropriate enquiry method to answer questions and give justification.
- ❑ **Observing (qualitative data):** To make observations about solutions.
Using their senses to describe, in detail and with a broader range of scientific vocabulary, what they notice or what has changed.
- ❑ **Planning:** To plan a fair test with consideration of variables and measurements.
Suggesting which variables will be changed, measured and controlled.
Making and explaining decisions about what observations to make and how long for.

Knowledge and skills covered in this topic



- ❑ Children will describe mixtures.
- ❑ Children will explain the process of sieving.
- ❑ Children will explain the process of filtering.
- ❑ Children will describe solutions and how they can be identified.
- ❑ Children will identify which factors affect the time taken to dissolve.
- ❑ Children will describe the process of evaporation.

Key words



- Control variable:** A variable that needs to be kept the same.
- Crystallizing:** A dissolved solid reforming as a solid.
- Dissolve:** When a substance mixes with a liquid to make a solution.
- Evaporation method:** A technique used to separate a dissolved substance from a solution.
- Evaporation:** When a heated liquid turns into a gas or a solid and a gas.
- Filtering:** A technique used to separate mixtures of liquids and solids.
- Insoluble:** When a substance will not dissolve.
- Mixture:** Two or more substances that are mixed together and remain present.
- Particle:** The tiny building blocks that make up everything around us.
- Sieve:** A piece of equipment with holes used for separating.
- Sieving:** A technique used to separate a mixture with different sized solids.
- Soluble:** When a substance will dissolve.
- Solute:** The material that dissolves.
- Solution:** A mixture made up of one or more substances dissolved in a liquid.
- Solvent:** Usually (liquid) that does the dissolving.
- Variable:** Something that can change and cause an effect.

