



St Leo's and Southmead
Catholic Nursery and Primary
School

Year
Five

Science Knowledge Organiser

Autumn
Term

Properties & Changes in Materials

Amazing Activities
Experiment to demon-
strate irreversible
changes
Design a product based
on its properties

Key Concepts

Comparing & Grouping materials - that materials can be grouped by their properties (is it hard or soft?) or by more than one of their properties (is it hard and magnetic?)

Recognise the properties of materials we can compare eg. hard & soft, transparent & opaque

Know that some materials will dissolve in liquid to form a solution whereas some liquids form a mixture (no dissolving has taken place)

Mixtures can be separated by sieving and/or filtering

Solutions can be separated through evaporation

What a reversible change is, that it is a change that does not last forever e.g. water turning to ice

What an irreversible change is, that it lasts forever and usually involves heating, e.g. flour, butter and egg mixture being baked to form a cake is an irreversible change

Key Vocabulary

Vocabulary	Definition
Soluble	Can be dissolved like sugar and coffee granules
Insoluble	cannot be dissolved like stones
Transparent	You can see through it like glass
Opaque	You cannot see through it, like cement, wood
Electrical Conductor	Let's electricity pass easily through it, like copper wire
Electrical Insulator	Does not let electricity flow through it, like wood or plastic
Thermal conductor	Let's heat pass through it easily, like a metal kettle
Thermal insulator	does not let heat pass through it easily, like a wooden handle
Magnetic	is attracted to a magnet like a steel spoon (Remember not all metals are magnetic)
Dissolved	To be incorporated into a liquid so that it forms a solution
Evaporation	When a liquid is turned into a gas to an increase in temperature

Skills

Using test results to make predictions to set up comparative & fair tests.

Planning different types of enquiries to answer questions, recognising & controlling variables

Recording data & Reporting & presenting findings



Sugar dissolves in the water making a sugar solution. You cannot see the sugar but it is still there in tiny particles.



The water evaporates. This means that it becomes water vapour. The process will be quicker if the water is heated.



Once all the water has evaporated, the sugar is left at the bottom of the beaker. This is because sugar cannot evaporate.

Curriculum Links

- Maths—measurement, Speaking & listening.