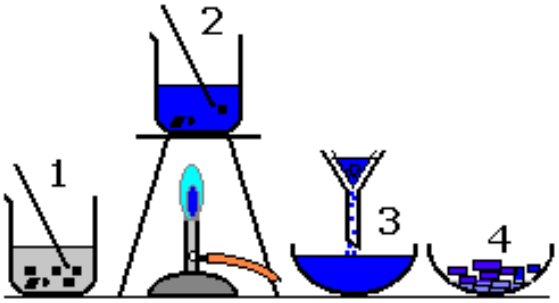
Sacred Heart Primary School
Curriculum Theme Plan

PROPERTIES AND CHANGES OF MATERIALS
YEAR 5



Rationale: The children will build on earlier work about materials and their properties. They will engage in a series of investigations to separate mixtures and solutions, make predictions and draw conclusions. They will use a range of scientific equipment.

Pre-unit task /Attention Grabber: Children to scavenge for as many different materials they can find in and around school and then group them in different ways.

Learning Objectives: To compare and group together everyday materials on the basis of their properties
I can investigate thermal conductors and insulators
I can investigate which electrical conductors make a bulb shine brightest
To know that some materials will dissolve in liquid to form a solution by investigating dissolving.
To describe how to recover a substance from a solution by separating different mixtures.
To use different processes to separate mixtures of materials.
To observe and explain irreversible chemical changes.

Overview:

Lesson 1: Properties of Materials – classifying materials by their properties
Lesson 2: Keeping Cool – investigating thermal insulators
Lesson 3: Brighter Bulbs – investigating electrical conductors
Lesson 4: Dissolving and solutions – investigating dissolving
Lesson 5: Separating Mixtures – investigating methods of separating
Lesson 6: Irreversible changes

SMSVC Links

Cross Curricular Links

,Maths
History

Resources

- Different materials
- Magnets

- Thermometers
- Stopwatches
- Batteries
- Bulbs
- Wires
- Connectors
- Funnels
- filter paper
- Sieve
- thermos flask
- White (distilled) vinegar
- Bicarbonate of soda;

Opportunities for enrichment:

SODC recycling talk

Thames water talk/video (link to Geog unit)

Impact/Assessment

Most Children will: Follow instructions to test a material's properties. Explain the uses of thermal and electrical conductors and insulators. Order materials according to their electrical conductivity. Explain and investigate dissolving. Explain the processes used to separate mixtures. Explain irreversible changes. Identify the variables in an investigation. Make observations and draw conclusions.

Less Able Children will: Describe the properties of materials. Identify thermal and electrical conductors and insulators. Identify materials that are soluble or insoluble in water. Follow instructions to separate mixtures. Identify irreversible changes. Predict what will happen in an investigation. Make observations

More Able Children will: Devise their own ways to test a material's properties. Explain the uses of a material according to its properties. Explain why materials have dissolved in certain conditions. Select and explain the most suitable processes to separate different mixtures. Identify the new materials made in irreversible changes. Identify dependent, independent and controlled variables. Set up reliable and accurate investigations. Make and explain predictions. Make and record accurate observations. Use scientific language to explain their findings. Use their results to make generalisations and further predictions.