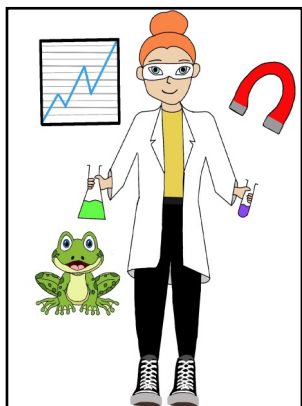




Knowledge Organiser

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Enquiry Question

Can we change materials?

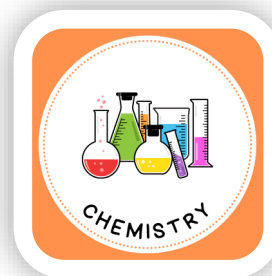
Substantive Knowledge (key facts)

- Materials can be grouped by their properties such as being an electrical conductor, magnetic, transparent or hardness.
- Some materials will dissolve in a liquid and form a solution.
- A solution is a specific type of mixture where one substance is dissolved into another, and each part stays evenly mixed.
- Some materials are insoluble and form a sediment.
- A solvent is a substance that dissolves a solid, liquid, or gaseous solute.
- There are many ways in which materials can be changed, for example through heating, cooling, mixing with other substances.
- Some changes can be reversed, the material can be returned to its previous form.
- Other changes are irreversible. This means that the change cannot be 'undone.'

What should I already know?

- Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.
- Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

Concept

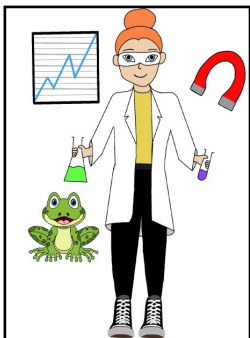


Scientific skills I am practising

- I ask my own questions about the scientific phenomena that I am studying, and select the most appropriate ways to answer these questions, recognising and controlling variables and noticing patterns.
- I can plan and carry out scientific enquiry using a range of scientific equipment and variables in order to answer questions.
- I can use test results to make predictions to set up further comparative and fair tests.
- I ask my own questions about the scientific phenomena that I am studying, and select the most appropriate ways to answer these questions, recognising and controlling variables and noticing patterns.

Sequence of learning

1)	Devise a fair test to measure results.
2)	Group materials according to their properties.
3)	Identify suitable uses for materials depending on their properties.
4)	Investigate the best way to separate a mixture of materials.
5)	Differentiate between a solution and a solvent.
6)	Identify reversible and irreversible changes.



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Key vocabulary	
Tier 2	Tier 3
Materials	Electrical conductor / insulator
Reversible / Irreversible	Thermal conductor / insulator
Magnetic	Substance
Transparent	Solution
Hardness	Solvent
Solid / Liquid / Gas	Dissolve
Properties	Variables / non-variables
Mixture	Fair test
	Insoluble