The Orchard Primary School: SCIENCE KNOWLEDGE ORGANISER

Topic: Properties and changes of materials

Year 5 **Term 1**

What should I already know about

KS1: Identify and compare the suitability of a variety of everyday materials.

Year 4:
Compare and group materials together, according to whether they are solids, liquids and gases.

Observe that some materials are affected by cooling/heating.

What is evaporation and condensation in the 'water cycle'.

Identify the part played by evaporation and condensation in the water cycle.

Key questions

EQ1 *– Can we compare and group together everyday materials on the basis of their properties?*

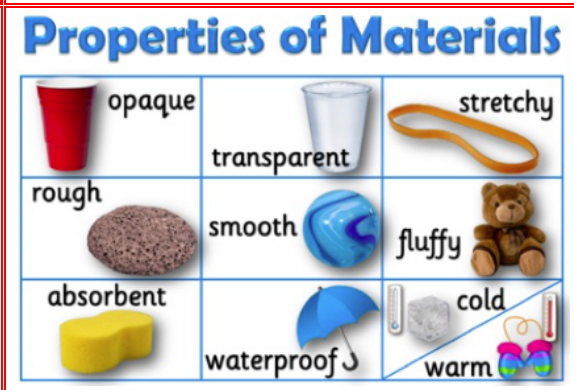
EQ2 *– What materials are soluble and insoluble and how can we recover a substance from a solution?*

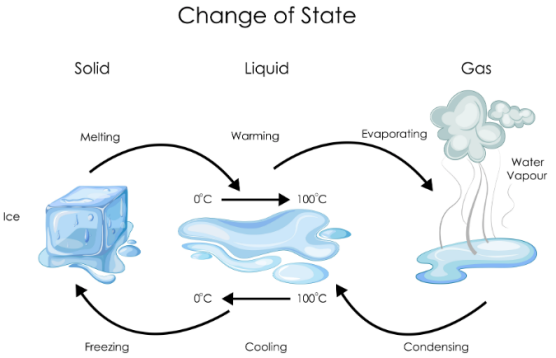
EQ3 *– How can mixtures be separated?*

EQ4 *– Which changes of state are reversible and irreversible?*

EQ5 *– How do I conduct a scientific investigation, fair test and present my findings?*

Maps / Diagrams / Images





Vocabulary

Properties	The features or characteristics of materials. For example, how they look, feel, or behave (e.g. flexible, hard, transparent).
Materials	These are the substances that things are made from such as wood, metal, or plastic.
Solution	When a substance has completely dissolved in a liquid, this is called a solution.
Solute	This is a material that can be dissolved in a liquid. For example, salt and sugar are solutes.
Soluble, insoluble	Soluble means a substance that can be dissolved in a liquid. For example, salt is soluble in water. If something is insoluble, it cannot be dissolved in a liquid.
Mixture	A combination of two or more substances where each keeps its own properties and does not dissolve, like sand and water.
Filter, sieve	*These are tools and processes* used to separate different substances like using a sieve to strain pasta.
Dissolving	*The process where a solid is mixed with a liquid and seems to disappear, like when you stir sugar into tea.*
Evaporate	*When a liquid turn into a gas, usually when it is heated, like puddles evaporating in the sun.*
Solids, liquids, gases	*These are different states of matter which have different properties.*
Reversible/irreversible	*Reversible describes a change of matter that can be undone like freezing water to form ice and melting it back to form water. Irreversible changes cannot be undone, such as burning wood.*

What will I know by the end of this unit Knowledge and facts	Physical properties, how to separate mixtures, filter, sieve, magnet, chromtography, collander, particles, solids, liquids, gases, Reversible/ irreversible changes, Investigation, measure, observe, science enquiry

The Orchard Primary School: SCIENCE KNOWLEDGE ORGANISER