**St Mary’s C of E Primary School, Writhlington**

‘Inspiring Learning Together’

**Scheme of Work + Knowlegde Organiser**

**The Learning Journey:**

Can I compare and group everyday materials?

* Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity and response to magnets

What substances dissolve in liquid?

* Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution

Can I demonstrate that I understand the difference between a solid a liquid and a gas?

* Use knowledge of solid, liquids and gases to decide how mixtures might be separated, including filtering, sieving and evaporating

Can I give uses for everyday materials?

* Give reasons based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.

Can I show some reversible changes?

* Demonstrate that dissolving, mixing and changes of state are reversible changes.

Can I demonstrate my understanding of irreversible changes?

* Explain that some changes result in the formation of new materials, and that this kind of change I not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.

**Wider Curriculum** (Cooking, trips, outdoor):

**National Curriculum:**

Pupils should be taught to:

* compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets
* know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution
* use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating
* give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic
* demonstrate that dissolving, mixing and changes of state are reversible changes
* explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda

**Key Vocabulary:**

Conductor – A material or device which allows heat or electricity to carry through

Dissolve – When something solid mixes with a liquid and becomes part of the liquid

Evaporation – The process of turning from liquid to vapour

Flexible – Capable of bending easily without breaking

Gas – An air-like fluid substance which expands freely to fill any space available

Insulator – A substance which does not readily allow the passage of heat or sound

Irreversible – Cannot be reversed back to its original state

Liquid – A substance that flows freely but can be measured by volume e.g. water or oil

Magnetic – Capabale of being magnetised or attracted by a magnet

Material – The matter from which a thing is or can be made from

Opaque – Not able to be seen through, not transparent

Reversible – Able to be reversed back to its original state

Solid – Firm and stable in shape, not a liquid or fluid

Soluble – Able to be dissolved, especially in water

Thermal – Relating to heat

Transparent – Allows light to pass through so that objects behind can be seen

**Picture or illustration:** 

Science – Properties and changes of materials