Science Topic Overview: **Changes of Materials**

Previous linked learning

Year 1 and 2
- Naming and sorting objects based on their materials and their properties

Year 4
- compare and group materials together, according to whether they are solids, liquids or gases
- observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)
- identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature

I think I already know…

I would like to find out…

Key Vocabulary

solid, liquid, gas, evaporation, condensation, particle, temperature, freezing, heating, waterproof, absorbent, opaque, transparent, properties, compare

conductivity (electrical and thermal)

solubility

solution

dissolve

filter

evaporate

sieve

reversible/irreversible

burning

acid

By the end of this unit you will be able to….

- Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, response to magnets (recap of previous learning) and conductivity, (electrical and thermal)
- Name materials that will dissolve in liquid to form a solution, and describe how to recover a substance from a solution demonstrate that dissolving, mixing and changes of state are reversible changes
- use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating
- Explain that some changes result in the formation of new materials and ask 'What changes are irreversible?' by looking at changes associated with burning and the action of acid on bicarbonate of soda
- Give reasons for the particular uses of everyday materials, including metals, wood and plastic