Year 5
Autumn 2
Properties and changes of material

Week	NC objectives	REMEMBER (prior knowledge)	KNOW (new knowledge)
1 2 3 4 5 6	• 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	• Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. (Y2 - Uses of everyday materials) • Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. (Y2 - Uses of everyday materials) • Compare and group materials together, according to whether they are solids, liquids or gases. (Y4 - States of matter) • Observe that some materials change state when they are heated or cooled, and measure or research the	To know that materials have different uses depending on their properties and state (liquid, solid, gas). Properties include hardness, transparency, electrical and thermal conductivity and attraction to magnets. • To know some materials will dissolve in a liquid and form a solution while others are insoluble and form sediment. •To know mixtures can be separated by filtering, sieving and evaporation. • To know some changes to materials such as dissolving, mixing and changes of state are reversible To know some changes such as burning wood, rusting and mixing vinegar with bicarbonate of soda result in the

	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	temperature at which this happens in degrees Celsius (°C). (Y4 - States of matter) • Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. (Y4 - States of matter)	formation of new materials, and these are not reversible
Vocabulary	Prior knowledge vocabulary degrees Celsius (°C) solid, liquid, gas, evaporation, condensation, particle, temperature, freezing, heating	New vocabulary hardness, transparency, conductivity (electrical, thermal) solubility, solution dissolve, filter, evaporate, sieve, reversible, irreversible	