Gawber Primary School Science
CHEMISTRY

	FS2	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Science Knowledge End Points:	**Understanding the World – Materials:** • Children know about similarities and differences in relation to materials. • Distinguish between an object & the material which it is made. • Identify & name a variety of everyday materials, including wood, plastic, glass, metal, water and rock.	**Materials** • Describe simple properties of a variety of everyday materials. • Compare and group together a variety of everyday materials on the basis of their simple physical properties. • Test materials to find which material is best for making an umbrella • Understand some objects are made by multiple materials	**Uses of everyday materials** • 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.	**Rocks** • Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties • Describe in simple terms how fossils and formed when things that have lived are trapped within rock • Recognise that soils are made from rocks and organic matter.	**States of Matter** • 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	• Understand the materials and changes in state involved in volcanoes (earth's crust, magma etc)	**Properties and changes of materials** • 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

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	• Investigate melting of ice and chocolate • Test materials to make a boat that floats				condensation in the water cycle and associate the rate of evaporation with temperature.		• 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 Scientists Study:			Charles Macintosh John McAdam	Mary Anning	Anders Celsius		Spencer Silver Ruth Benerito Stephanie Kwolek
Key Vocabulary:	Materials, wood, metal, glass, rock, plastic, hard, soft, stretchy, smooth, rough, float, sink	Object, material, Wood, plastic, glass, metal, water and rock. Property, hard, soft, stretchy, stiff, shiny, dull, rough, smooth, bendy, not bendy, waterproof, not waterproof, strong and weak.	Suitable, unsuitable, wood, plastic, glass, metal, water, rock, brick, paper and cardboard. Squashing, bending, twisting, stretching and Properties.	Rocks, appearance, physical properties, hardness, porous, grains, crystals, metamorphic, igneous, sedimentary. Fossils, fossilisation. Soil, organic matter	Solids, liquids, gases, particles, molecules, Changing state, heated, cooled, melting, solidifying, temperature, Degrees Celsius Evaporation, condensation, water cycle,		Hardness, solubility, transparency, electrical conductivity, thermal conductivity, response to magnets solids, liquids, gases Dissolve, solution, substance, Separated, filtering, sieving, evaporating, Properties, products, suitable, unsuitable Changes of state, reversible changes, irreversible changes. Chemical reaction, burning, acid, polymers.

Science Knowledge End Points: **Black = Normal NC Positioning** **Blue = NC requirement but moved** **Red = Extra learning**