Properties and changing materials/States of matter

Properties and changing materials					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Distinguish between an object and the material from which it is made.					
Identify and name a variety of everyday materials, including wood, plastic, glass, water and rock. Vocabulary- Metal, glass, plastic, paper, foil, rock, water, wood, fabric					
Describe the simple physical properties of a variety of everyday materials. Vocabulary- Hard, soft, dull, shiny, strong, bendy, smooth, rough Compare and group together a variety of everyday materials on the basis of their physical properties.	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses Vocabulary- Card, metal, clay, concrete, plastic, fabric, rock, fur, rubber, feathers, wood, glass, wool, leather, cotton, brick, carpet. sharp, shiny, hard, slimy, liquid, smooth, opaque, solid, rough, transparent, runny, waterproof, soft, dull.		Compare and group materials together, according to whether they are solids, liquids or gases Vocabulary- States of matter - Solid, liquid and gas Examples of gases (at room temperature and pressure) – Oxygen, hydrogen, helium, carbon dioxide, methane Examples of liquids (at room temperature and pressure) – Water, milk, juice, petrol, oil Examples of solids (at room temperature and pressure) –Wood, rocks, metal, plastic, glass, wool, leather, etc	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 Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic Vocabulary- Thermal conductivity – thermal conductor, thermal insulator Electrical conductivity – electrical conductor, electrical insulator	
	Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. Vocabulary- Flexible, rigid, bendy				
			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) Vocabulary- Examples of gases (at room temperature and pressure) – Oxygen, hydrogen, helium, carbon dioxide, methane Examples of liquids (at room temperature and pressure) – Water, milk, juice, petrol, oil Examples of solids (at room temperature and pressure) –Wood, rocks, metal, plastic, glass, wool, leather, etc	Understand that some materials 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 Vocabulary- Dissolving – Solvent, solution, solute, soluble, insoluble, solid, liquid, particles, suspensions, reversible, irreversible	

			Processes – heating, cooling, melting, condensation, evaporation, solidifying, freezing, steam		
			Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. Vocabulary- Water cycle-Water vapour, condensation, precipitation, evaporation, collection, transpiration, particles		
				Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating Vocabulary- Separating materials – Sieve, filter, evaporate, condense, magnetic	