PROPERTIES AND CHANGES OF MATERIALS

SCIENCE

CHEMISTRY

Year 6

National curriculum objective
➢ 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 (topic words must be spelt correctly throughout topic)

bicarbonate of soda	burning	change of state	conductivity
dissolve	electrical	evaporating	evidence
fair testing	filtering	gasses	irreversible
litmus	liquids	magnetic	magnetism
materials	melting	molecule	prediction
properties	residue	reversible	sanitation
separation	sieving	solids	solvent
solubility	solution	substance	sustainability
temperature	thermal	transparency	universal indicator

Substantive – Subject Knowledge Bigger Picture – Support words

thermal	
solution	

Question Driven outcomes for knowledge:	Child	Teacher
How can we compare and group together everyday materials based on their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets?		
Which materials will dissolve in liquid to form a solution?		
How can we recover a substance from a solution?		
How can we use our knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating?		
How can we scientifically give reasons, based on evidence and fair testing, for the uses of everyday materials, including metals, wood and plastic?		
How can we demonstrate that dissolving, mixing and changes of state are reversible changes?		
How can we explain that some changes result in the formation of new materials?		