CAPTAIN WEBB PRIMARY SCHOOL

Science Curriculum – Key Knowledge and Skills

CHEMISTRY

Range 4: Daycare	Range 5: Nursery	Range 6: Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Materials – Substantive								
I know that different objects feel a different way.	I can talk about the materials that I have collected. I know how to talk about similarities and differences between materials.	I know different materials used for building structures.	I know the difference between an object and the material from which it is made. I know a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. I know simple physical properties of a variety of everyday materials. I can compare and group together a variety of everyday materials on the basis of their simple physical properties.	I know which objects are translucent, opaque, and transparent. I know how the shapes of solid objects can be changed. I know the suitability of a variety of everyday materials.			I know the scientific vocabulary to group materials. I know that a solution is when a material dissolves in a liquid. I know how mixtures might be separated through filtering, sieving and evaporating. I know that dissolving, mixing and changes of state are reversible changes. I know that some changes result in the formation of new materials.	
Vocabulary								
Soft, hard	Different	Waterproof, not waterproof, strong, smooth	object, materials, properties, wood, plastic, glass, metal, rock, stiff, shiny, dull, rough, stretchy, opaque, transparent, absorbent, not absorbent	suitable, squashing, bending, twisting, stretching			soluble, insoluble, solute, solvent, conductor, insulator, magnetic, filter, filtrate, evaporate, reversible, irreversible, hardness, solubility, transparency, conductivity (electrical and thermal)	
Scientific enquiry - Disciplinary								
			Which material ill stop Ted from getting wet? (Comparative and fair testing) Is there a pattern in the types of materials that are used to make objects in school? (Pattern seeking)	What material makes the best bridge? (Comparative and fair testing)			Which material would be the most effective to create a blackout curtain? (Identifying, classifying, and grouping) How does a container or salt water change over time? (Observation over time)	

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States of Matter – Substantive								
I know how to explore familiar experiences in nature (i.e. mud and puddles)	I know that chocolate melts when it is heated	I know some important processes and changes in the natural world (i.e. what happens when ice is left outside and in a fridge)				I know the properties of solids, liquids and gases I know that some materials change state when they are heated or cooled I can research and measure the temperature at which changes of state happen in degrees Celsius (°C) I know how the rate of evaporation is effected by temperature.		
Vocabulary								
Mud, puddle, splash	Hot, cold, heat, runny, hard	Melting, solid, liquid, freeze, cook				solid, liquid, gas, state, boiling, evaporation, condensation, thermometer, degrees, Celsius		
Scientific enquiry - Disciplinary								
						Does the type of chocolate affect the time it takes to melt? (Comparative and fair testing)		

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CHEMISTRY

Range 4: Daycare	Range 5: Nursery	Range 6: Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Rocks – Substantive								
					I know how to compare and group together different rocks on the basis of their appearance and simple physical properties. I know that different rocks can be useful to us. I know how fossils are formed (when things that have lived are trapped within rocks) I know that soils are made from rocks and organic matter.			
					Vocabulary			
					fossil, erosion, granite, chalk, sandstone, crystal, weathering, permeable, sedimentary, metamorphic, igneous.			
Scientific enquiry - Disciplinary								
					Can you group these rocks based on their appearance and properties? (Identifying, classifying, and grouping)			