

Question-based Learning Project	Intent To know...	'Sticky Knowledge' Interesting Facts EYFS & National Curriculum		Cultural Capital + Memorable Experiences	Vocabulary
Nursery Why do you love me so much? (on-going) How does this building stay up? How many pebbles on the beach?	- materials change when heated or cooled - buildings can be built from a variety of materials - there are different types of boats & that they move in different ways	<i>* One of the biggest birthday cakes was as heavy as an elephant</i> <i>* The Shard is the tallest building in England. It is 95 storeys high</i> <i>* Boats can have sails, oars or engines to make them move</i>	3-4 years: Understanding the World - talk about the differences between materials and changes they notice - talk about what they see using a wide vocabulary - show interest in different occupations - explore how things work - explore how things work - explore & talk about different forces	- every child to bake a cake when it is their birthday - Look at different buildings on a walk - Beach day in nursery with a range of boats in the paddling pool	- cook, bake, hot, oven, change - excavators, crane, mixers, bulldozer, push, pull, tip, lift - sails, engines, oars, propellers, force, wind
Reception Who Lives in a Land Far, Far Away? Are we there yet?	- materials have different properties - some objects/materials can float or sink	<i>* Materials can be natural or man-made</i> <i>* The shape of an object can make it float or sink</i>	Reception: Understanding the World - explore the natural world around them ELG – The Natural World - understand some important processes and changes in the natural world around them, including the changing states of matter	- Fairy Tale Day - Crich Tramway Museum visit	- magnetic, waterproof - material, rough, smooth, bumpy, shiny, dull - properties - natural, man-made - sustainability - re-cycling - pollution - environment

Incidental topic based cooking opportunities	- how to care for our environment - make cakes, porridge, biscuits, melt chocolate etc by heating & cooling	<i>* Pollution – some forms can be seen and some are invisible</i>	<u>ELG – The Natural World</u> - understand some important processes and changes in the natural world around them, including the changing states of matter	- Baking in Reception Unit kitchen	- melting, freezing, mixing
Year 1 What can you see in Space?	- names of common materials and their properties	<i>* Saturn could float in water because it is mostly made of gas</i> <i>* Metal expands when heated</i>	♣ distinguish between an object and the material from which it is made ♣ identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock ♣ describe the simple physical properties of a variety of everyday materials ♣ compare and group together a variety of everyday materials on the basis of their simple physical properties	- Alien Crash landing site - visit to National Space Centre	- wood, plastic, metal, paper, rock, glass, twist, bed, stretch, fold - property
Year 2 From Kilburn to Kenya.. where would you prefer to live?	- the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses	<i>* Plastic is made from oil</i> <i>* Glass is made from sand</i>	♣ identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses	- Local area walk + investigation - Local residents in to talk about local area	- material, property - suitability - strong/weak - fragile - waterproof - flexible - man-made, natural - transparent

How did we travel from then to now?	- how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching	<i>* A force needs applying to make materials change shape</i> <i>* When an object permanently changes shape without breaking it is called plasticity</i>	♣ find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching	- visit to Newark Air Museum - Paper aeroplane competition	- push, pull, force, apply - rigid - flexible - squash, bend - stretch - twist - concertina - plasticity
Why should we protect our planet?	- what decomposition means - what coastal erosion is	<i>* Only 9% plastic is re-cycled</i> <i>* In the future there will be more plastic in the ocean than fish</i>	“	- Beach Day	- decompose, decay, properties, natural, man-made, disintegrate, rust, erosion