



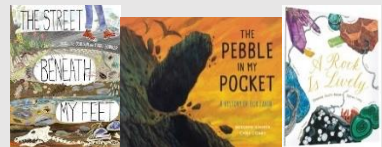








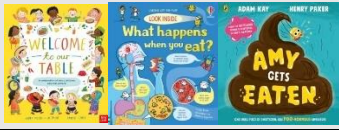










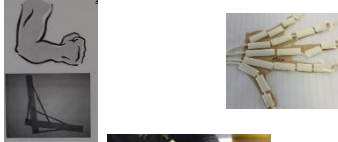




















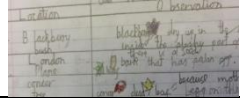


Year A (2023/24)			
Year 2/3	Core knowledge	Additional knowledge (ways of achieving this discretely alongside lessons)	Scientific enquiry (working scientifically skills)
term 1	<p>Rocks</p> <ul style="list-style-type: none"> -compare and group together different kinds of rocks on the basis of their appearance and simple physical properties - recognise that soils are made from rocks and organic matter 	<ul style="list-style-type: none"> - fossils are formed when things that have lived are trapped within rock <p>(through stories and learning about rocks, explain how fossils are also formed)</p>	<p> pattern seeking: Is there a pattern to where we find volcanoes on planet earth. Gather and record results</p> <p> Research and secondary sources: What is the best type of rock for our Veranda? Present and interpret results</p> <p> Identifying, classifying and grouping: How could we organise these rocks into different categories? </p>
	<p>Key scientist and Science capital opportunities:</p> <ul style="list-style-type: none"> -compare rocks from our local area to rocks in other areas <p>Oxford Natural History Museum mineral collection (online) https://oumnh.ox.ac.uk/collections-online#/item/oum-catalogue-8231 James Hutton (geologist)</p>		<p>Linked texts:</p> 
term 2	<p>Forces and magnets</p> <ul style="list-style-type: none"> -compare how things move on different surfaces -notice that some forces need contact between two objects, but magnetic forces can act at a distance -observe how magnets attract or repel each other and attract some materials and not others 	<ul style="list-style-type: none"> -describe magnets as having two poles -predict whether two magnets will attract or repel each other, depending on which poles are facing. <p>(could have magnetic exploring station in provision)</p>	<p> Research and secondary sources: How have our ideas about forces changed over time? Present results</p> <p> Comparative testing and fair testing: How does the mass of an object affect how much force is needed to make it move? Which surface is best to stop you slipping? Observe and measure Conclude</p> <p> Pattern seeking: Do you travel quicker down the slide with your feet up or down? Gather and record results</p>
	<p>Key scientist and Science capital opportunities:</p> <ul style="list-style-type: none"> -trip to the park to test out different forces <p>Isaac Newton</p>		<p>Linked texts:</p> 
term 3	<p>Recap & consolidate</p> <p>(Consolidate any gaps or misconceptions which have appeared in Y1-3. This will change each year.)</p>		
term 4	<p>Animals including humans</p> <ul style="list-style-type: none"> -identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat 	<ul style="list-style-type: none"> -identify that humans and some other animals have skeletons and muscles for support, protection and movement. <p>(bring this in through PE lessons as well)</p>	<p> Research and secondary sources: what is the nutritional value in our packed lunches? Are school lunches more nutritious than children's packed lunch? Ask questions</p> 

			 <p>Pattern seeking: Can you do more star jumps after eating fruit? Present results</p>
	<p>Key scientist and Science capital opportunities: -visit to a restaurant to make/ discuss healthy eating</p> <p>Marion Nestle (nutritionist, biologist and public health advocate) Jamie Oliver (healthy school initiative)</p>		<p>Linked texts:</p> 
term 5	<p>Light</p> <p>-recognise that they need light in order to see things and that dark is the absence of light -notice that light is reflected from surfaces -recognise that light from the sun can be dangerous and that there are ways to protect their eyes</p> 	<p>-recognise that shadows are formed when the light from a light source is blocked by an opaque object (through stories broach the idea of how shadows are made)</p>	 <p>Pattern seeking: changes over time: When is the classroom darkest? Observe and measure</p>
			 <p>Comparative/ fair testing</p>  <p>which materials are the most reflective? (may need a data logger) Gather and record results</p>
			 <p>Research and secondary sources: what will happen if you do not protect your eyes from the sun? Ask questions</p>
			<p>Key scientist and Science capital opportunities: - Optometrist to visit to discuss sun damage to eyes</p> <p>Thomas Edison Ibn al-Haytham Conducted important experiments on light and how eyes work (optics)</p>
term 6	<p>Plants</p> <p>-identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers -explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant -investigate the way in which water is transported within plants</p>	<p>-explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>	 <p>Identifying, classifying and grouping: How many ways can you group these plants? Present results</p>
			 <p>Comparative testing and fair testing How does the length of the carnation stem affect how long it takes for the food colouring to dye the petals? Conclude and evaluate</p>
			 <p>Pattern seeking: Do smaller plants need less water? Gather and record results</p>
			 <p>Changes over time: What will happen if we put food colour in the flowers water? Observe and measure</p> 
			<p>Key scientist and Science capital opportunities: - Trip to Science Oxford (consolidate Y2&3 units) - Gardener visit</p> <p>Ahmed Mumin Warfa - Botanist George Washington Carver- botanist and inventor who researched alternative crops to cotton</p>

Year B (2024/25)			
Year 2/3	Core knowledge	Additional knowledge (ways of achieving this discretely alongside lessons)	Scientific enquiry (working scientifically skills)
term 1	<p>Animals including humans</p> <p>-identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p>  	<p>-identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat</p>	<p> pattern seeking: How does the skull circumference of a girl compare with that of a boy? Gather and record results</p> <p> Changes over time: How does our skeleton change over time? (from birth to death) Observe and measure</p> <p> Identifying, classifying and grouping: How do the skeletons of different animals compare? Can you sort different bones into groups?</p> 
	<p>Key scientist and Science capital opportunities:</p> <p>Alexander Flemming (physician)</p>		<p>Linked texts:</p> 
	<p>Key scientist and Science capital opportunities:</p> <p>Albert Einstein (theoretical physicist)</p>		<p>Linked texts:</p> 
term 2	<p>Light</p> <p>-recognise that they need light in order to see things and that dark is the absence of light</p> <p>-recognise that shadows are formed when the light from a light source is blocked by an opaque object</p> <p>-find patterns in the way that the size of shadows change</p>	<p>-recognise that they need light in order to see things and that dark is the absence of light</p> <p>-notice that light is reflected from surfaces</p> <p>-recognise that light from the sun can be dangerous and that there are ways to protect their eyes</p>	<p> Pattern seeking: How can you change the length of a shadow? Observe and measure</p> <p> Comparative/ fair testing How does the distance between the shadow puppet and the screen affect the size of the shadow? Gather and record results</p> 
	<p>Key scientist and Science capital opportunities:</p> <p>Albert Einstein (theoretical physicist)</p>		<p>Linked texts:</p> 
	<p>Key scientist and Science capital opportunities:</p> <p>Georg Simon Ohm Michael Faraday- invented the electric motor and worked on magnetism and creation of electromagnets</p>		<p>Linked texts:</p> 
term 3	<p>Forces and magnets</p> <p>-observe how magnets attract or repel each other and attract some materials and not others</p> <p>-compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials</p> <p>-describe magnets as having two poles</p> <p>-predict whether two magnets will attract or repel each other, depending on which poles are facing.</p>	<p>-compare how things move on different surfaces</p> <p>-notice that some forces need contact between two objects, but magnetic forces can act at a distance</p>	<p> Comparative/ fair testing Which magnet is strongest? conclusions</p> <p> Identifying, classifying and grouping: Which materials are magnetic? Present results</p> <p> Pattern seeking: Does the size and shape of a magnet affect how strong it is? Gather and record results</p>
<p>Key scientist and Science capital opportunities:</p> <p>Georg Simon Ohm Michael Faraday- invented the electric motor and worked on magnetism and creation of electromagnets</p>		<p>Linked texts:</p> 	
term 4	<p>Recap & consolidate (Consolidate any gaps or misconceptions which have appeared in Y1-3. This will change each year.)</p>		

term 5	<p>Rocks</p> <p>-describe in simple terms how fossils are formed when things that have lived are trapped within rock</p> 	<p>-compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</p> <p>- recognise that soils are made from rocks and organic matter</p>	 <p>Identifying, classifying and grouping: Can you use the identification key to find out the name of each of the fossils in your collection?</p>
	<p>Key scientist and Science capital opportunities:</p> <ul style="list-style-type: none"> - Visit to The national history Museum Oxford (relate to animals including humans as well) <p>Mary Anning- discovered fossils</p>	<p>Linked texts:</p> 	 <p>Research and secondary sources: Who was Mary Anning and what did she discover? Present results</p>
term 6	<p>Plants</p> <p>-identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</p> <p>-explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>  <p>Roots under a microscope</p>	<p>-explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant</p> <p>-investigate the way in which water is transported within plants</p>	 <p>How do different plants disperse their seeds? Present results</p> 
	<p>Key scientist and Science capital opportunities:</p> <ul style="list-style-type: none"> - Beekeeper visit (discuss pollination) <p>Jeff Ollerton (researched effects of pollinators)</p>	<p>Pattern seeking: Do plants with bigger leaves grow taller? Observe and measure</p>	 <p>Changes over time: How do flowers in a vase change over time? Observe and measure</p>
	<p>Linked texts:</p> 