

## Science: Whole school overview



### CYCLE A (2020-21)

	Topic1 (8wks)	Topic 2 (7wks)	Topic 3 (8wks)	Topic 4 (8wks)	Topic 5 (8wks)
Nursery					
Reception					
Year 1	<b>Animals, including Humans (Y1)</b> Name common animals Name carnivores, herbivores, omnivores <i>Linked Scientist: Amy Veder,</i>	<b>Everyday materials (Y1)</b> Identify and name a variety of everyday materials. Describe their simple physical properties and use these to compare and group materials. <i>Linked Scientist: John Boyd Dunlop, Charles Macintosh,</i>	<b>Animals, including Humans (Y2)</b> Animals have offspring that grow into adults. Basic needs of animals for survival. <i>Linked Scientist: David Attenborough</i>	<b>Uses of every day materials (Y2)</b> Uses of materials Changing shape of materials <i>Linked Scientist: Ruth R. Benerito, Leo Baekeland, Charles Goodyear.</i>	<b>Animals, including Humans (Y2)</b> Importance of exercise, food hygiene. <i>Linked Scientist: Louis Pasteur; Adelle Davis</i>
Year 2					
Year 3	<b>Forces and Magnets</b> Magnetic poles, magnetic materials, movement on different surfaces <i>Linked Scientists: William Gilbert</i>	<b>Electricity</b> Common appliances, electrical circuits, conductors & insulators <i>Linked Scientist: Benjamin Franklin and Thomas Edison</i>	<b>Sound</b> Vibrations, pitch and volume <i>Linked Scientist: Alexander Graham Bell</i>	<b>Plants</b> Life cycle of a flowering plant, plant parts, what plants need <i>Linked Scientist: George Washington Carver; Rachel Carson</i>	<b>Living things and their habitats.</b> Grouping and classifying, changes to environments <i>Linked Scientist: Carl Linnaeus, Octavia Hill</i>
Year 4					
Year 5	<b>Animals including humans</b> Changes as humans develop from birth to old age <i>Linked Scientist: Leonard Hayflick</i>	<b>Forces</b> Gravity, water resistance, air resistance and friction <i>Linked Scientist: Isaac Newton and Galileo Galilei</i>	<b>Light</b> Understand and use the fact that light travels in straight lines to explain sight and shadows <i>Linked Scientist: Benjamin Franklin and Percy Shaw</i>	<b>Living things and their habitats</b> Compare and classify microorganisms, plants and animals giving reasons based on characteristics <i>Linked Scientist: Libbie Hyman</i>	<b>Electricity</b> Reasons for variations in how components in a circuit function; circuit diagrams <i>Linked Scientist: Steve Jobs, Edith Clarke</i>
Year 6					

CYCLE B (2021-22)					
	Topic1 (8wks)	Topic 2 (7wks)	Topic 3 (8wks)	Topic 4 (8wks)	Topic 5 (8wks)
Nursery	Explore the natural world around them, making observations and drawing pictures of animals and plants; Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class;				
Reception	Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.				
Year 1	<b>Plants (Y1)</b> Identify and name common plants and describe their basic structure. <i>Linked Scientist: Janaki Ammal, Margaret Mee,</i>	<b>Animals, including Humans (Y1)</b> Body parts and their associated senses <i>Linked Scientist: Linda Buck,</i>  *Observing the weather and <b>seasonal change</b> in a journal (Autumn)	<b>Plants (Y2)</b> Seed/bulb grow into plants. What plants need to grow and be healthy. <i>Linked Scientist: Barbara McClintock, Sir Joseph Banks</i>  *Observing the weather and <b>seasonal change</b> in a journal (Winter)	<b>Living things and their habitats (Y2)</b> Name plants and animals in their habitat and identify how habitats meet their needs <i>Linked Scientist: Rachel Carson, Wangari Maathai, Chris Packham.</i>  *Observing the weather and <b>seasonal change</b> in a journal (Spring)	<b>Seasonal Changes (Y1)</b> *Observing the weather and <b>seasonal change</b> in a journal ( <b>Summer</b> )  Describe changes over the four seasons including weather and day length. <i>Linked Scientist: Inez Chung (Climate change), John Dalton</i>
Year 2					
Year 3	<b>Rocks</b> Types of rock, soil and fossils <i>Linked Scientist: William Smith, Mary Anning</i>	<b>Animals including Humans</b> Skeleton, Muscles and Nutrition <i>Linked Scientist: Marie Curie</i>	<b>Light</b> Light and dark, reflection and shadows <i>Linked Scientist: Sir Isaac Newton</i>	<b>Animals including Humans</b> Teeth, Digestion and Food Chains <i>Linked Scientist: Washington Sheffield</i>	<b>States of Matter</b> Solids, liquids and gas, changing state and water cycle <i>Linked Scientist: Fahrenheit and Celsius</i>
Year 4					
Year 5	<b>Properties and changes of materials</b> Reversible and irreversible changes; separating mixtures and solutions: explaining uses of materials through comparative and fair tests. <i>Linked Scientist: Spencer Silver; Jane Marcket</i>	<b>Evolution and Inheritance</b> Changes over time, offspring and adaptations <i>Linked Scientist: Mary Leakey and Charles Darwin</i>	<b>Animals including Humans</b> Circulatory system, exercise, diet and nutrition <i>Linked Scientist: Marie Maynard Daly, William Harvey</i>	<b>Earth and Space</b> Movement of earth and planets relative to sun; movement of moon relative to Earth; Earth's rotation to explain day and night. <i>Linked Scientist: Katherine Johnson, Margaret Hamilton and Brian Cox</i>	<b>Living things and their habitats</b> Life cycles and reproduction <i>Linked Scientist: Jane Goodall and Maria Merian</i>
Year 6					

<b>Experiential learning EYFS</b>	<ul style="list-style-type: none"> <li>• Animal Magic workshop</li> <li>• Visit from a dentist</li> <li>• Visit from a baby</li> <li>• Aquarium in the classroom</li> <li>• Butterflies</li> <li>• Seasonal walks to observe and experience how the seasons are changing around us</li> <li>• Plants workshop and growing plants in the classroom/outdoor classrooms</li> <li>• Food/Healthy living workshop</li> <li>• Farm experience</li> </ul>		
<b>Experiential learning Cycle A</b>	<u><b>Key Stage 1</b></u> <b>Materials:</b> Bury Transport Museum	<u><b>Lower Key Stage 2</b></u> <b>Electricity:</b> Balestra Steam Engines Workshop	<u><b>Upper Key Stage 2</b></u> <b>Light:</b> Balestra Light Workshop
<b>Experiential learning Cycle B</b>	<u><b>Seasonal changes:</b></u> Observing the weather and <b>seasonal change</b> in a journal across the year. Using a weather station  <u><b>Living things and their habitats:</b></u> Site visit with Tameside country wardens.	<u><b>Rocks and soil</b></u> Tameside Cultural Services fieldtrip	<u><b>Evolution and Inheritance:</b></u> Rainforest Roadshow  <u><b>Earth and space:</b></u> Workshop visit from Star Chaser  <u><b>Properties of materials:</b></u> Chemistry with Cabbage workshop