

Science: Whole school overview



| CYCLE A (2020-21) | | | | | |
|-------------------|--|--|---|---|---|
| | 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; Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. | | | | |
| Reception | | | | | |
| Year 1 | Animals, including Humans (Y1) Name common animals Name carnivores, herbivores, omnivores Describe the structure of common animals <i>Linked Scientist: Amy Veder,</i> | Everyday materials (Y1) 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> | Animals, including Humans (Y2) Animals have offspring that grow into adults. Basic needs of animals for survival. <i>Linked Scientist: David Attenborough</i> | Uses of every day materials (Y2) Uses of materials Changing shape of materials <i>Linked Scientist: Ruth R. Benerito, Leo Baekeland, Charles Goodyear.</i> | Animals, including Humans (Y2) Importance of exercise, food hygiene. <i>Linked Scientist: Louis Pasteur; Adelle Davis</i> |
| Year 2 | | | | | |
| Year 3 | Forces and Magnets Magnetic poles, magnetic materials, movement on different surfaces <i>Linked Scientists: William Gilbert</i> | Electricity Common appliances, electrical circuits, conductors & insulators <i>Linked Scientist: Benjamin Franklin and Thomas Edison</i> | Sound Vibrations, pitch and volume <i>Linked Scientist: Alexander Graham Bell</i> | Plants Life cycle of a flowering plant, plant parts, what plants need <i>Linked Scientist: George Washington Carver; Rachel Carson</i> | Living things and their habitats. Grouping and classifying, changes to environments <i>Linked Scientist: Carl Linnaeus, Octavia Hill</i> |
| Year 4 | | | | | |
| Year 5 | Animals including humans Changes as humans develop from birth to old age <i>Linked Scientist: Leonard Hayflick</i> | Forces Gravity, water resistance, air resistance and friction <i>Linked Scientist: Isaac Newton and Galileo Galilei</i> | Light 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> | Living things and their habitats Compare and classify microorganisms, plants and animals giving reasons based on characteristics <i>Linked Scientist: Libbie Hyman</i> | Electricity 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; Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. | | | | |
| Reception | | | | | |
| Year 1 | Plants (Y1) Identify and name common plants and describe their basic structure. <i>Linked Scientist: Janaki Ammal, Margaret Mee,</i> | Animals, including Humans (Y1) Body parts and their associated senses <i>Linked Scientist: Linda Buck,</i> | Plants (Y2) Seed/bulb grow into plants. What plants need to grow and be healthy. <i>Linked Scientist: Barbara McClintock, Sir Joseph Banks</i> | Living things and their habitats (Y2) Name plants and animals in their habitat and identify how habitats meet their needs <i>Linked Scientist: Rachel Carson, Wangari Maatha, Chris Packham.</i> | Seasonal Changes (Y1) *Observing the weather and seasonal change in a journal (Summer) Describe changes over the four seasons including weather and day length. <i>Linked Scientist: Inez Chung (Climate change), John Dalton</i> |
| Year 2 | | *Observing the weather and seasonal change in a journal (Autumn) | *Observing the weather and seasonal change in a journal (Winter) | *Observing the weather and seasonal change in a journal (Spring) | |
| Year 3 | Rocks Types of rock, soil and fossils <i>Linked Scientist: William Smith, Mary Anning</i> | Animals including Humans Skeleton, Muscles and Nutrition <i>Linked Scientist: Marie Curie</i> | Light Light and dark, reflection and shadows <i>Linked Scientist: Sir Isaac Newton</i> | Animals including Humans Teeth, Digestion and Food Chains <i>Linked Scientist: Washington Sheffield</i> | States of Matter Solids, liquids and gas, changing state and water cycle <i>Linked Scientist: Fahrenheit and Celsius</i> |
| Year 4 | | | | | |
| Year 5 | Properties and changes of materials Reversible and irreversible changes; separating mixtures and solutions: explaining uses of materials through comparative and fair tests. <i>Linked Scientist: Spencer Silver; Jane Marcet</i> | Evolution and Inheritance Changes over time, offspring and adaptations <i>Linked Scientist: Mary Leakey and Charles Darwin</i> | Animals including Humans Circulatory system, exercise, diet and nutrition <i>Linked Scientist: Marie Maynard Daly, William Harvey</i> | Earth and Space 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> | Living things and their habitats Life cycles and reproduction <i>Linked Scientist: Jane Goodall and Maria Merian</i> |
| Year 6 | | | | | |

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