

## Curriculum Expectations in Wider Curriculum

### Science

Impact: As a result of teaching Science at St Michael's, we expect to see the following outcomes

<i>Skills</i>	KS1	LKS2	UKS2
<b>Vocabulary</b>			
<b>Scientific inquiry and scientific method:</b>	<p>Year 1&amp;2</p> <ul style="list-style-type: none"> <li>• Ask simple questions</li> <li>• Observe closely</li> <li>• Perform simple tests</li> <li>• Identify and classify</li> <li>• Suggest answers to questions</li> <li>• Gather and record data</li> </ul>	<p>Years 3&amp;4</p> <ul style="list-style-type: none"> <li>• Ask questions and use enquiries to answer them</li> <li>• Set up simple practical enquiries and fair tests</li> <li>• Observe carefully and systematically, taking accurate measurements</li> <li>• Collect, record, sort and present data</li> <li>• Record and report on findings in various ways</li> <li>• Use results to draw conclusions, make predictions, suggest improvements and ask further questions</li> <li>• Identify differences, similarities and changes</li> <li>• Use scientific evidence</li> </ul>	<p>Year 5&amp;6</p> <ul style="list-style-type: none"> <li>• Plan different types of enquiry to answer questions</li> <li>• Take accurate measurements and repeat them if needed</li> <li>• Record increasingly complex data in various ways</li> <li>• Use results to make predictions and suggest further tests</li> <li>• Present findings orally and in writing</li> <li>• Identify scientific evidence for or against an idea</li> </ul>
<b>Critical thinking &amp; Problem Solving:</b>	<p>Year 1</p> <ul style="list-style-type: none"> <li>• Identify and name common plants and describe their parts</li> <li>• Identify and name common animals, and describe and compare their structures</li> <li>• Identify, name, draw and label parts of the human body; associate body parts with senses</li> <li>• Distinguish between objects and materials</li> <li>• Identify and name everyday materials</li> <li>• Describe simple properties of everyday materials</li> <li>• Compare and classify materials</li> <li>• Observe seasonal changes in weather and day length</li> </ul> <p>Year 2</p> <ul style="list-style-type: none"> <li>• Differentiate between living dead and non-living</li> <li>• Identify living things in their habitats; know they are suited to their habitat and are interdependent</li> <li>• Describe feeding relationships using simple food chains</li> <li>• Observe seeds and bulbs growing</li> </ul>	<p>Year 3</p> <ul style="list-style-type: none"> <li>• Study flowering plants: plant parts, requirements for life/growth, how water is transported, and role of flowers in life cycle</li> <li>• Identify that animals, including humans, need the right balance of nutrition</li> <li>• Identify why humans and some other animals have skeletons and muscles</li> <li>• Classify rock types</li> <li>• Describe fossilisation in simple terms</li> <li>• Recognise that soils are made from rocks and organic matter</li> <li>• Know that you need light to see and that darkness is the absence of light</li> <li>• Notice that light is reflected from surfaces</li> <li>• Know that it is dangerous to look at the Sun</li> <li>• Know shadows are formed when light is blocked</li> <li>• Find patterns in changes of shadow size</li> <li>• Compare how things move on different surfaces</li> <li>• Know some forces act only on contact, but magnetism acts at a distance</li> </ul>	<p>Year 5</p> <ul style="list-style-type: none"> <li>• Explain life cycle differences in a mammal, amphibian, insect and bird</li> <li>• Describe reproduction in some plants and animals</li> <li>• Describe changes as humans develop and age</li> <li>• Classify materials according to various properties</li> <li>• Know that some materials dissolve in water to form a solution</li> <li>• Separate mixtures of materials</li> <li>• Give reasons for particular uses of everyday materials</li> <li>• Explore reversible changes and changes that are difficult to reverse</li> <li>• Describe the movement of Earth and other planets relative to the Sun and of the Moon relative to Earth</li> <li>• Use Earth's rotation to explain day and night</li> <li>• Explore the effects of gravity and friction (including air and water resistance)</li> <li>• Know that some mechanisms magnify forces</li> </ul> <p>Year 6</p> <ul style="list-style-type: none"> <li>• Explore biological classification in more detail</li> </ul>

	<ul style="list-style-type: none"> <li>• Understand plants need water, light and warmth</li> <li>• Know all animals have offspring that grow into adults</li> <li>• Understand animals need water, food and air</li> <li>• Describe the importance for humans of exercise, balanced diet and hygiene</li> <li>• Identify and compare uses of materials</li> <li>• Explore changing the shape of solid objects</li> </ul>	<ul style="list-style-type: none"> <li>• Observe magnetic attraction and repulsion</li> <li>• Sort materials into magnetic and nonmagnetic</li> <li>• Describe magnets as having two poles and predict whether two</li> </ul> <p>Year 4</p> <ul style="list-style-type: none"> <li>• Classify living things</li> <li>• Recognise that changing environments can pose dangers to living things</li> <li>• Describe simple functions in the human digestive system</li> <li>• Identify different types of human teeth and their functions</li> <li>• Construct and interpret food chains</li> <li>• Identify and compare solids, liquids and gases</li> <li>• Explore changes of state; relate to changes of temperature</li> <li>• Identify the part played by evaporation and condensation in the water cycle</li> <li>• Explore and identify how sound is made through vibration, and how to change pitch and volume of sounds</li> <li>• Know that we hear sounds when vibrations travel through a medium to the ear, and that sounds get fainter with distance</li> <li>• Identify appliances that run on electricity</li> <li>• Construct a simple series electrical circuit</li> <li>• Identify whether or not a lamp will light</li> <li>• Recognise that a switch opens and closes a circuit</li> <li>• Recognise common conductors and insulators; associate metals with being good conductors</li> </ul>	<ul style="list-style-type: none"> <li>• Identify main parts of the human circulatory system</li> <li>• Explore the impact of diet, exercise, drugs and lifestyle on health</li> <li>• Describe how nutrients are transported in humans and other animals</li> <li>• Know living things have changed over time</li> <li>• Know offspring are similar but not identical to parents</li> <li>• Identify how living things adapt and how this may lead to evolution</li> <li>• Explore how light behaves (travelling in straight lines, reflection, refraction, shadow formation)</li> <li>• Associate brightness of lamp or volume of buzzer with number and voltage of cells</li> <li>• Compare and give reasons for variations in how circuit components function</li> <li>• Draw circuit diagrams using recognised symbols</li> </ul>
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