

## Shine Bright in Science

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Rec and Nursery</b>	<p>In EYFS 'Knowledge and Understanding' (Science) is to be taught all the time, alongside other areas of the curriculum such as 'Speaking' and developing 'Understanding'. We do not have a termly breakdown with what is taught each term for Science because exploring and inquiring is to be ongoing. For example, if a child wanted to hear the story of Gruffalo, they'd maybe go on to think about making a Gruffalo crumble, what would we do to make the changes to ingredients, what would happen if, how, why and take scientific inquiry from there, or perhaps looking for changes in trees in the 'deep dark woods' and doing the same etc. This child led approach will encourage the inquisitive nature of our children and build upon their own interests and questions.</p> <p>Additional opportunities are provided in Science, such as Science themed days for children, focus weeks, driven by the children's interests, educational visits linked to the science curriculum, such as Whitehouse Farm, school visitors and through extra curricular clubs. We endeavour to ensure that the Science curriculum we provide will give children the confidence and motivation to continue to further develop their skills into the next stage of their education and life experiences.</p>					
<b>Year 1</b>	<b>What is happening outside?</b> <b>(Autumn/Winter)</b> <ul style="list-style-type: none"> <li>Observe changes across seasons.</li> <li>Observe and describe weather and day length.</li> </ul> <span style="color: green;">(GG15 Advocates for Change)</span>	<b>How do I build a human?</b> (animals including humans) <ul style="list-style-type: none"> <li>Learn names and locations of main body parts including simple functions.</li> </ul>	<b>Animals including humans (Ext unit)</b>	<b>Materials</b> <ul style="list-style-type: none"> <li>Identify and name everyday materials</li> <li>Describe properties and group them.</li> </ul> <b>British Science Week</b>	<b>Materials (Ex Unit)</b>	<b>What's growing outside?</b> <ul style="list-style-type: none"> <li>Identify and name wild and garden plants</li> <li>What is inside a flower?</li> <li>What is inside a tree?</li> <li>What lives in the garden?</li> </ul> <span style="color: green;">(GG15 Advocates for Change)</span>
Throughout the year (one afternoon each half term) * Observe changes across seasons. *Observe and describe weather and day length.						
<b>Year 2</b>	<b>Does everything live in a house?</b> (living things and their habitats) <ul style="list-style-type: none"> <li>Compare living, dead and things that have never been alive.</li> <li>Identify habitats and how they provide basic needs for different animals.</li> <li>Describe simple food chains.</li> <li>Identify plants and animals in their micro/habitats.</li> </ul> <span style="color: green;">(GG15 Advocates for Change)</span>	<b>What job is each material best for?</b> <ul style="list-style-type: none"> <li>Identify and compare the suitability of everyday materials for particular uses.</li> <li>Find out how the shapes of solid objects can be changed.</li> </ul>	<b>How do Humans grow up?</b> (Humans grow and stay healthy) <ul style="list-style-type: none"> <li>Notice that animals, including humans, have offspring which grow into adults.</li> <li>Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</li> </ul> <span style="color: green;">(GG3 Advocates for Change)</span>	Animals including humans (Ext Unit)  <b>British Science Week</b>	<b>How can we help plants grow best?</b> <ul style="list-style-type: none"> <li>Observe and describe how seeds grow.</li> <li>Find out and describe what plants need to grow healthy.</li> </ul>	Plants (Ext Unit)

	Observe plants and animals in the local environment throughout the year					
<i>Year 3</i>	<b>Is 'The Force' real?</b> <ul style="list-style-type: none"> <li>Explore contact forces.</li> <li>Identify forces that act at a distance (gravity).</li> <li>Magnets.</li> </ul>	<b>How do we see objects?</b> <ul style="list-style-type: none"> <li>Recognise need light to see things.</li> <li>Light can be blocked to form a shadow.</li> </ul> <p>Light from sun is dangerous.</p> <p>(GG3 Advocates for Change)</p>	<b>What's under my feet?</b> <ul style="list-style-type: none"> <li>There are different types of rocks.</li> <li>Know how fossils are made.</li> <li>Rocks have lots of uses.</li> </ul> <p>What is soil made from?</p>	British Science Week	<b>How do animals move and stay healthy?</b> <ul style="list-style-type: none"> <li>Animals need to eat a balanced diet.</li> <li>How do bones and muscles work together?</li> </ul>	<b>Plants</b> <ul style="list-style-type: none"> <li>Identify parts of a plant.</li> <li>Know conditions for plants to grow.</li> <li>How is water transported within a plant.</li> <li>Examine flower structure.</li> <li>Know the plant cycle.</li> </ul> <p>(GG15 Advocates for Change)</p>
<i>Year 4</i>	<b>What's that animal?</b> <ul style="list-style-type: none"> <li>Describe simple functions of the digestive system in humans.</li> <li>Identify different teeth in humans and name their functions.</li> <li>know how to keep teeth healthy</li> <li>Identify and compare teeth of carnivores, herbivores and omnivores.</li> <li>Construct and interpret a variety of food chains</li> <li>Identify animal habitats in the locality</li> </ul>	<b>What do we know about sound?</b> <ul style="list-style-type: none"> <li>Know that sound is vibrations.</li> <li>Sound travels through medium to the ear.</li> <li>Sounds get fainter with distance.</li> <li>Explore factors that affect the pitch of a sound.</li> </ul>	<b>How can we be states of matter scientists?</b> <ul style="list-style-type: none"> <li>Group substances according to their state.</li> <li>Substances can change state.</li> <li>Describe the water cycle.</li> </ul> <p>(GG14 Advocates for Change)</p>	British Science Week	<b>What can we learn from electrical circuits?</b> <ul style="list-style-type: none"> <li>Identify components in a series circuit.</li> <li>Investigate conductors, insulators and switch.</li> </ul> <p>(GG7 Advocates for Change)</p>	<b>How can we classify living things?</b> <ul style="list-style-type: none"> <li>Living things can be grouped.</li> <li>Use classification key.</li> <li>Explore a habitat to name animals and plants.</li> <li>Recognise habitats can change</li> <li>Impact of change.</li> <li>Help our habitat.</li> <li>A positive impact.</li> </ul> <p>(GG13 and 15 Advocates for Change)</p>

Use the local environment throughout the year to identify, study and observe changes of plants and animals in their habitat						
Year 5	<b>How does a parachute work?</b> (forces) <ul style="list-style-type: none"> <li>What is the effect of friction, air resistance and gravity?</li> <li>What is upthrust?</li> <li>What is a machine?</li> </ul> contact/non-contact forces	<b>Does everything in space revolve around us?</b> (Earth and Space) <ul style="list-style-type: none"> <li>Solar system.</li> <li>Day and night.</li> <li>Why does the sun move across the sky?</li> </ul> (GG13 Advocates for Change) Climate Breakdown/Greenhouse effect Solar system	(material properties) <ul style="list-style-type: none"> <li>Describing materials</li> <li>How does a materials property suit it's purpose?</li> <li>Can mixtures be separated?</li> <li>What is a solution?</li> <li>Reversible and irreversible changes.</li> </ul> (GG11 Advocates for Change)	British Science Week	<b>What is 'The circle of life'?</b> (living things and their habitats) <ul style="list-style-type: none"> <li>Compare animal life cycles.</li> <li>Reproduction in plants</li> <li>set up ecosystems for the rest of the year or term.</li> </ul>	<b>How do we change from a baby to an adult?</b> (animals including humans) <ul style="list-style-type: none"> <li>What happens as we get older?</li> <li>Do people grow at the same speed?</li> </ul> Puberty and changes in humans will be taught as part of PSHE
	Year 5 will Observe life cycles of plants and animals in the local environment throughout the year Set up and create real eco systems in their classrooms (wormery, ant farm, locusts, hissing cockroach, giant land snails, fish, frogs/toad, butterflies)					

Year 6	<b>Why do we have blood?</b> (circulatory system and exercise) <ul style="list-style-type: none"> <li>Why do we have blood?</li> <li>How does blood get around our body?</li> <li>What happens when we exercise?</li> <li>What are the effects of diet, drugs and lifestyle?</li> </ul> (GG3 Advocates for Change) (GG14 and 15 Advocates for Change)	<b>Why does this bulb get brighter?</b> <ul style="list-style-type: none"> <li>How can we change the amount of energy flowing around a circuit?</li> <li>Conductors and insulators.</li> <li>What happens to energy as it flows around a circuit?</li> </ul> (GG7 Advocates for Change)	<b>Was Charles Darwin correct?</b> (evolution and inheritance) <ul style="list-style-type: none"> <li>What are fossils?</li> <li>What is inheritance?</li> <li>How do living things adapt to the environment?</li> <li>How do living things change?</li> </ul> (GG13 Advocates for Change) Extinction	British Science week	<b>Can I play with light?</b> <ul style="list-style-type: none"> <li>Light travels in straight lines.</li> <li>What happens when light hits an object.</li> </ul> How do shadows form?	<b>What did Carl Linnaeus create?</b> (living things and habitats) <ul style="list-style-type: none"> <li>How are living things classified?</li> <li>What types of invertebrates are there?</li> <li>Who is Mrs Gren?</li> <li>where can we find microbes?</li> </ul>
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*Respect*

*Perseverance*

*Joy*

*Forgiveness*

*Kindness*

*Love*

*Green* - Advocates of change unit (Global citizens/god's stewards/how can we make a difference)

Black = science units