

## LKS2 Science Medium Term Planning- Cycle B

Year group KS1	Aspect	Main Enquiry Question	Learning Challenges	Knowledge	Working Scientifically
Autumn 1	Physics Light	<i>How far can you throw your shadow?</i>	<p><b>LC1-</b> What is the dark and why is Orion afraid of it?</p> <p><b>LC2-</b> what is reflection and how much do we know about it? How can you design and make a periscope to show how light reflects?</p> <p><b>LC3-</b> How can you explain the relationship between the Earth, Sun and the Moon (in terms of lighting up the moon)</p> <p><b>LC4-</b> How can you set up an experiment to show how shiny things respond in the dark?</p> <p><b>LC5-</b> Why does your shadow change shape and how many interesting creatures can you create using shadows?</p> <p><b>LC6-</b> Reflection: Put together a photo story of what they have learnt about light and dark, to include shadows.</p>	<ul style="list-style-type: none"> <li>- Know what dark is (the absence of light).</li> <li>- Know that light is needed in order to see.</li> <li>- Know the danger of direct sunlight and describe how to keep protected.</li> <li>- Explore shadow size and explain the changes.</li> </ul>	<ul style="list-style-type: none"> <li>- Asking relevant questions and using different types of scientific enquiries to answer them.</li> <li>- Setting up simple practical enquiries, comparative and fair tests.</li> <li>- Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.</li> <li>- Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.</li> </ul>
Autumn 2	Physics Sound	<i>Why is the sound made by Little Mix enjoyed by so many?</i>	<p><b>LC1-</b> What caused that 'racket' and how do our ears work?</p> <p><b>LC2-</b> What do we mean by the pitch and volume of the sound?</p> <p><b>LC3-</b> Does sound have the same intensity the further away you go from the source?</p> <p><b>LC4-</b> What do we know about the way telephones work and how have they changed over time?</p> <p><b>LC5-</b> Reflection: Who wants to be a millionaire?</p>	<ul style="list-style-type: none"> <li>- Know how sound is made, associating some of them with vibrating.</li> <li>- Know how sound travels from a source to our ears.</li> <li>- Know the correlation between pitch and the object producing a sound.</li> <li>- Know the correlation between the volume of sound and the strength of the vibrations that produced it.</li> </ul>	<ul style="list-style-type: none"> <li>- Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</li> <li>- Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</li> <li>- Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</li> </ul>
Spring	Biology <i>Animals including humans</i>	<i>What happens to the food we eat?</i>	<p><b>LC1-</b> Why does chocolate taste so much better than paper?</p> <p><b>LC2-</b> What is the digestive system and why is it so important?</p> <p><b>LC3-</b> What role do the different organs play in helping you to digest food?</p> <p><b>LC4-</b> Why would eating books not be healthy for Henry?</p> <p><b>LC5-</b> What are the teeth in your mouth called and what role do they have in breaking down the food you eat?</p>	<ul style="list-style-type: none"> <li>- Identify and name the parts of the human digestive system.</li> <li>- Know the functions of the organs in the human digestive system.</li> <li>- Identify and know the different types of teeth in humans.</li> <li>- Know the functions of different human teeth,</li> </ul>	<ul style="list-style-type: none"> <li>- Identifying differences, similarities or changes related to simple scientific ideas and processes.</li> <li>- Using straightforward scientific evidence to answer questions or to support their findings.</li> </ul>

			<p><b>LC6-</b> Why are shark's teeth different to our teeth?  <b>LC7-</b> How do plants and animals depend on each other?  <b>LC8-</b> Reflection: Make a presentation of your model to others in the class?</p>	<p>- Use food chains to identify producers, predators and prey.</p>	
<b>Summer</b>	<b>Biology</b>  <i>Plants and animals</i>	<i>Which wild animals and plants thrive in our local environment?</i>	<p><b>LC1-</b> Why do plants have stems/trunk; flowers; leaves and roots?  <b>LC2-</b> What is pollination and how is it important to plants?  <b>LC3-</b> How is water transported within plants?  <b>LC4-</b> Which wild flowers and trees will we find within a km of our school?  <b>LC5-</b> How can we group the animals and plants that we find in different local environments?  <b>LC6-</b> Which birds can we see out of our classroom window and how can we encourage more birds to visit our school?  <b>LC7-</b> Which animals are currently in danger of being extinct?  <b>LC8-</b> Reflection: Why should we be proud of our local environment?</p>	<p>- Know the function of different parts of flowering plants and trees.  - Know how water is transported within plants.  - Know the plant life cycle, especially the importance of flowers.  - Use classification keys to group, identify and name living things.  - Know how changes to an environment could endanger living things.  - Create classification keys to group, identify and name living things.</p>	

<b>GDS Opportunities</b>	<ul style="list-style-type: none"> <li>• Can they plan and carry out an investigation by controlling variables fairly and accurately?</li> <li>• Can they use test results to make further predictions and set up further comparative tests?</li> <li>• Can they record more complex data and results using scientific diagrams, classification keys, tables, bar charts, line graphs and models?</li> <li>• Can they report findings from investigations through written explanations and conclusions?</li> <li>• Can they use a graph or diagram to answer scientific questions?</li> <li>• Can they give reasons for how they have classified animals and plants, using their characteristics and how they are suited to their environment?</li> <li>• Can they explore the work of pioneers in classification? (e.g. Carl Linnaeus)</li> <li>• Can they name and group a variety of living things based on feeding patterns? (producer, consumer, predator, prey, herbivore, carnivore, omnivore)</li> <li>• Can they explain why sound gets fainter or louder according to the distance?</li> <li>• Can they explain how pitch and volume can be changed in a variety of ways?</li> <li>• Can they work out which materials give the best insulation for sound?</li> <li>• Can they explain why lights need to be bright or dimmer according to need?</li> <li>• Can they explain the difference between transparent, translucent and opaque?</li> <li>• Can they explain why lights need to be bright or dimmer according to need?</li> <li>• Can they make a bulb go on and off?</li> </ul>
--------------------------	--

- Can they say what happens to the electricity when more batteries are added?
- Can they explain why their shadow changes when the light source is moved closer or further from the object?