



# Science Long Term Map

	Extra-Curricular	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
<b>Reception</b>	Autumn walk Winter walk Spring walk Newby Hall forces Chick incubator	Autumn - <u>Can I recognise features of Autumn?</u>  Ourselves <u>Can I talk about myself and parts of my body?</u>		Weather and winter - <u>Can I recognise features of Winter and Spring?</u>  Floating and sinking – <u>Can I understand what is meant by float and sink and can I investigate what materials float and sink.</u>  New life <u>Can I explain the stages of a life cycle?</u>		Growing and healthy living <u>What does a plant need to grow?</u>  Minibeasts <u>Can I identify minibeasts and where you might find them?</u>	
<b>Year 1</b>	doctor/ paramedic visit	Humans – Senses Identify human body parts and say which body part is associated with which sense.  <u>Can you identify your senses and say which body part is linked to which sense?</u>  Seasonal changes and tree study  <u>Can you describe the seasonal changes, including changes to trees that take place in Autumn?</u>		Everyday materials Identify and name everyday materials Describe and group materials on the basis of their properties <u>Can you describe properties of everyday materials</u>  Identify, group and name common animals.  Identify and name animals that are carnivores, omnivores or herbivores  Describe and compare structure of animals  <u>Can you name and group common</u>		Plants Identifying and naming wild and garden plants. Identifying and describing structures of flowering plants including trees.  <u>Can you identify and name some wild and garden plants found around the school grounds?</u>  Seasonal changes and tree study  <u>Can you describe the seasonal changes, including changes to trees that take place in Summer?</u>	



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Year 2			<u>animals and suggest what they might eat?</u>  Seasonal changes and tree study <u>Can you describe the seasonal changes, including changes to trees that take place in Winter and Spring?</u>	
	Harvest assembly Visiting dental hygienist	<u>Taking Care</u> Eating a healthy, balanced diet. Understanding the importance of exercise, hygiene and keeping clean.  <i>How do we care for ourselves?</i>  <u>Our Changing World: Living and Non-living, Habitats and Food Chains</u> Living, dead and things that have never been alive, different habitats (including micro-habitats), food chains  <i>Why do different animals live in certain environments?</i>	<u>Use of Everyday Materials</u> Use of everyday materials Properties of materials Changing the shape of materials  <i>Why are different materials used for different purposes?</i>	<u>Plants in Our Locality</u> Observe and describe how seeds and bulbs grow into mature plants. Describe the conditions a plant needs to grow.  <i>What do plants need to grow and stay healthy?</i>  <u>Humans and Growing Up</u> Human life cycle and their basic needs for survival at different stages of life  <i>What can adults do that babies and children cannot do?</i>
Year 3	Butterfly garden project Tropical World	Forces and magnets  <b>How can we make things move?</b>  How does the type of surface effect how things move? What materials are magnetic?	Plants  <b>What are the different parts and functions of flowering plants?</b>  How is water transported within plants?	Butterflies  <b>How can scientific enquiry skills help me find out about butterflies?</b>  What is the life-cycle of a butterfly?



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Year 4		<p>How do magnets affect each other?</p> <p>Light and Dark</p> <p><b>Why can't we see in dark?</b></p> <p>How do we see things? Why do 'shiny' things reflect light? How can we change shadows?</p>	<p>What part does the flower play in the life-cycle of a flowering plant?</p> <p>Rocks and Soils</p> <p><b>What rocks and soils are in my local environment?</b></p> <p>Can I identify different rocks in my local environment? Of what is soil made?</p>	<p>Can I observe changes over time and identify patterns?</p> <p>Animals and Humans</p> <p><b>How do our skeletons work?</b></p> <p>What do we need to stay healthy? Why do we have a skeleton How do our muscles help us move?</p>
	<p>Allotment Visit from Rainforest explorer</p>	<p>Rocks</p> <p>Different types of rock, identifying rocks, how is soil made? rocks changing over time, fossils, how fossils are made, <b><u>Can I compare, describe and recognise rocks, soils and fossils?</u></b></p> <p><b><u>States of matter</u></b></p> <p>Electricity How does electricity work? Can you light a bulb? Circuits, switches, conductors and insulators. How are conductors and insulators used? <b><u>Can I identify, construct name a circuit?</u></b></p> <p>Allotment <b><u>How does the allotment envt. change in Autumn?</u></b></p>	<p>Sound</p> <p>How are sounds made? How do sounds travel? How can we make a sound louder or quieter? How can we change the pitch of a plucked note? How do sounds change as we move away from the source? How can we use air to make music? <b><u>Can I identify, recognise and find patterns of different sounds?</u></b></p> <p>Allotment <b><u>How does the allotment envt. change in Winter/Spring?</u></b></p>	<p>Animals including humans Where does the food go inside our bodies? What sort of teeth do we have? Why do we have different types of teeth? How can we look after our teeth? What do animals eat? What do animals teeth tell us? How is food broken down? Food chains (prey, predators and producers) <b><u>Can I describe the digestive system, identify different types of teeth and construct a food chain?</u></b></p> <p>Allotment <b><u>How does the allotment envt. change in Summer?</u></b></p>



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Year 5				
	Seasonal pond project	<p><u>All living things and their habitats</u> Life cycles of a mammal, amphibian, insect and bird Describe the life process of reproduction in some plants and animals.</p> <p><b>Can I explain the differences in species life cycles?</b></p> <p><u>Forces</u> Gravity, air resistance, water resistance, friction and mechanisms including leavers, pulleys and gears.</p> <p><b>Can I confidently describe the effect a force has on an object?</b></p> <p><b>Pond</b> <i>How does the pond envt. change in Autumn?</i> <i>What variety of creatures do we find in the pond when pond dipping?</i> <i>Why does this vary by season?</i></p>	<p><u>Properties and changes of materials</u> Solids, liquids and gasses, grouping materials, separating materials, reversible changes, properties of materials, dissolving solutions.</p> <p><b>Can I compare and explain the properties of everyday materials?</b></p> <p><b>Pond</b> <i>How does the pond envt. change in Winter/Spring?</i> <i>What variety of creatures do we find in the pond when pond dipping?</i> <i>Why does this vary by season?</i></p>	<p><u>Earth and Space</u> Planets of the solar system, movement of the moon relative to the earth, day and night, movement of the moon and the earth in the solar system.</p> <p>Inspirational Female Scientists-Mae Jameson and Catherine Joneson</p> <p><b>Can I describe the movement of planets and celestial bodies around sun?</b></p> <p><u>Animals including humans (Relationships Education)</u></p> <p>Change through puberty</p> <p><b>Do I understand the changes that will happen to my body through puberty?</b></p> <p><b>Pond</b> <i>How does the pond envt. change in Summer?</i> <i>What variety of creatures do we find in the pond when pond dipping?</i> <i>Why does this vary by season?</i></p>



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Year 6

**The circulatory system** What are the main parts of the human circulatory system? What are the functions of the heart, blood vessels and blood?  
How are nutrients and water transported within animals? What is the impact of diet and exercise on our bodies?  
**Can I explain the features and functions of the circulatory system?**

**Electricity**  
How do I stay safe around electricity? How does a series circuit work and how could somebody replicate my circuit? Can I use circuit symbols to draw a circuit? How does changing the number of cells affect a circuit? Which parts of a circuit can be changed to affect the output?  
**Can you explain how to change the output of a circuit?**

**Evolution and inheritance**  
Can I explain what evolution means and predict how an animal evolved?  
Can I investigate the evolutionary process of the humpback whale? Can I show how animals have evolved to adapt to their environment? Can I show how plants have evolved to adapt to their environment? Can I show that offspring inherit features from their parents?

**Can I give examples of how living things have changed over time?**

**Living Things**  
Can I show that all living things have life processes in common and that they are classified into broad groups?  
Can I show similarities and differences between members of the animal kingdom?  
Can I explain why the duck billed platypus does not 'fit'? Can I use classification keys to identify different animals and plants?  
**Can I describe how and why living things are classified?**

**Light**  
What is light and how does it travel?  
Can I prove that light travels in

**All living things and their habitats – Pond study**  
What are the different micro habitats in a pond eco system?  
Which animals live there? Can I identify and explain food chains and classification keys?  
**Can I describe the micro-climate of the pond?**

**Animals including humans – Relationships Education**  
How do humans develop from gestation to old age? What happens to our bodies during puberty?  
I understand there are strategies I can use to help me with physical changes.  
I know where to go for support and advice if I need it.  
**Can I understand that animals, including humans develop over their lifetime?**



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			straight lines? Can I show how shadows are formed? <u>Can I explain how light behaves?</u>	
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