

**Science Long Term Plan**  
**Lower School - Pathway 1**

Formal pathway	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
CC Topic	Moon Zoom	Coastlines	Rio De Vida	Marvellous Machines	Enchanted Woodlands	Scrumdiddlyumptious
Science Topic	Materials	Forces	Light, shadows and sound	Electricity	Plants and trees	Healthy eating
Overview	<p>Students will learn about everyday materials. They will learn to identify and name everyday materials and explore the properties of these. Students will carry out investigations into the suitability of different everyday materials and sort materials by their properties.</p>	<p>In Autumn 2, students will learn about forces in the context of pushing and pulling. They will investigate friction by exploring the movement of a car on different surfaces. Students will explore magnets and identify materials that are magnetic. They will create their own magnetic game.</p>	<p>During this half term, students will learn about light, shadows and sound. They will learn about different sources of light and how we need light to see. Students will learn that sunlight can be dangerous and will take part in investigations around different materials and light. Students will also learn how sound is made. They will explore low and high sounds and make their own instrument.</p>	<p>Students will learn about electricity and electrical appliances. They will learn how to construct their own simple circuit and learn about what is needed in a circuit for it to work. Students will troubleshoot circuits and work out whether a bulb will light or not in different circuits.</p>	<p>In Summer 1, students will learn to name the basic parts of a plant, including seeds. They will plant their own seeds and observe how they grow over time, learning what a plant needs to grow well. Students will identify, name and describe a variety of different plants as well as evergreen and deciduous trees.</p>	<p>During this half term, students will explore healthy eating. They will learn about the different food groups and the importance of eating a balanced diet. Students will explore the effects different food groups have on their body. Students will plan and make their own healthy meals.</p>

**Science Long Term Plan**  
**Lower School - Pathway 2**

Formal pathway	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
CC Topic	Moon Zoom	Emperors and Empires	Carnivals	Coastline	Predator!	Scrumdiddlyumptious
Science Topic	States of Matter	Materials	Light, shadows and sound	Forces	Teeth	Healthy eating
Overview	<p>Students will learn the difference between solids, liquids and gases, classifying objects and their properties. They will work scientifically to investigate the weight of gas and find out the ideal temperature to melt chocolate. Students will explore in-depth how water changes state, exploring melting, freezing, condensing and evaporating.</p>	<p>In Autumn 2, students will learn about materials. They will compare the suitability of everyday materials for different purposes. They will explore how some materials can change shape and how the recycling process is able to reuse some everyday materials numerous times.</p>	<p>During this half term, students will learn about different sources of light and investigate reflective materials and surfaces. Students will investigate how shadows are formed and how they change when the distance between the object and light source changes. Students will also learn about how vibrations cause sound and how sound travels, as well as how sound changes pitch and loudness. They will investigate how sound changes over distance and through material.</p>	<p>In Spring 2, students will explore different forces including pushes and pulls. They will spend time exploring forces with no contact such as gravity and magnetism. Students will test different objects/ materials to see which are magnetic, including making predictions. They will discover that magnets have two poles and that some repel and some attract. Students will make their own magnetic games.</p>	<p>Students will discuss how we keep our teeth healthy and consider why our teeth are different shapes. They will use their knowledge of an animal's diet to identify which teeth belong to which animal. They will compare the teeth of a carnivore and herbivore and consider why they are different. Students will know the basic parts of the digestive system and their functions.</p>	<p>During this half term, students will be fitness advisors. They will discover how many portions of fruit and vegetables you should eat each day as well as how much sugar. Students will explore the different food groups and the importance of eating a healthy, balanced diet. They will use this knowledge to create their own 'model meal'. Students will also learn about skeletons, bones and joints, and investigate muscle strength.</p>