



Science Long Term Plan



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	<p><i>Ourselves</i></p> <p>Name parts of the body Explore their senses Cooking using their senses Make observations about parts of the body</p>	<p><i>Once Upon a Time</i></p> <p>Begin to name different materials Explore floating and sinking Explore changes of state with materials Ask and answer questions about in familiar contexts about light and dark</p>	<p><i>Amazing Animals</i></p> <p>To sort things into living and non-living To compare animals talking about similarities and differences To know how to care for animals To ask and answer scientific questions To make observations Select materials to create different habitats</p>	<p><i>Superhuman</i></p> <p>Life cycles- Living Eggs experience and observing changes over time Compare life cycles Looking at different occupations e.g., firefighter, police officer, doctor, dentist, optician, local businesses, staff in shops, local businesses</p>	<p><i>Grow</i></p> <p>Life cycles- plants/ butterflies Planting and growing from a seed and a bulb Observe, comment and record results of growing Look at farming, which animals live on a farm and what grows there Understand the job of a farmer</p>	<p><i>Let's Move</i></p> <p>Explore and talk about different forces To sort things by magnetic/non-magnetic Begin to understand how magnets work</p>
Year 1	<p><i>Seasonal Change</i></p> <p>Reflecting on their own experiences, children learn about the four seasons and the weather associated with each. Pupils explore how seasonal changes affect trees, daylight hours and our choices about outfits.</p>		<p><i>Everyday Materials</i></p> <p>Identifying the difference between objects and materials, children explore their surroundings to find examples of each.</p>	<p><i>Animals, including humans</i></p> <p>Studying both local and global animals, children recognise common characteristics and physical features. They use this information to make comparisons and classify animals.</p>	<p><i>Animals, including humans</i></p> <p>Familiarising themselves with the basic parts of the human body, children investigate their senses through stimulating experiences that highlight how we interact with the world around us.</p>	<p><i>Plants</i></p> <p>Identifying the key features of a plant, children describe important structures and make comparisons between different plants. Pupils record the growth of a plant over time and begin to reflect on factors that will affect its development.</p>

<p>Year 2</p>	<p><i>Living things and their habitats</i></p> <p>Considering the life processes that all living things have in common, pupils classify objects into alive, was once alive or has never been alive. Pupils explore global habitats, naming plants and animals that can be found there. They learn how a range of different living things depend on each other for food or shelter.</p>		<p><i>Uses of everyday materials</i></p> <p>Building on their knowledge of everyday materials and their properties, pupils recognise that materials are suited to specific purposes and explore how actions such as stretching and bending affect the shape of solid objects.</p>	<p><i>Plants</i></p> <p>Using their prior knowledge of important plant structures, children explain what factors are needed for successful growth and compare how those needs vary across different plants. They grow plants from seeds and bulbs to ascertain the needs for initial development.</p>	<p><i>Animals, including humans</i></p> <p>Studying the life cycles of various animals, children learn what animals need to survive and how they change over time.</p>
<p>Year 3</p>	<p><i>Animals, including humans</i></p> <p>Studying the human skeleton, children identify key bones and compare them to other animals explaining the role within the body. Pupils explore how changes in muscles result in movement. They study how energy is used by the body, what constitutes a balanced diet in humans.</p>	<p><i>Rocks</i></p> <p>Studying rocks and their properties, children learn how to classify rocks and identify how they were formed. They learn about fossil formation and use models to explore how fossils tell us about the past. Pupils also explore soil formation, separate soil using a sedimentation jar and test soil drainage.</p>	<p><i>Forces and Magnets</i></p> <p>Investigating the movement of vehicles on different surfaces, children learn about the impact of friction and compare uses and drawbacks. They investigate contact and non-contact forces. Pupils explore the properties of different magnets and use this to understand their uses.</p>	<p><i>Plants</i></p> <p>Building on their prior knowledge of plant structures, children describe the functions of named parts and use evidence to explain their significance in plant development. Pupils investigate further factors that may affect the growth of plants. They explore how seeds vary as well as learning about the different ways seeds disperse.</p>	<p><i>Light</i></p> <p>Identifying examples of light sources, children learn that light is needed to see and how its absence causes darkness. Children investigate reflection and shadow formation, including how different factors change the shadows observed.</p>
<p>Year 4</p>	<p><i>Sound</i></p> <p>Exploring different ways of producing sounds, children learn about the relationship between vibrations and what they hear. They develop their understanding of how sound travels between objects Pupils explore how pitch and volume can be altered and make their own musical instruments to demonstrate these principles.</p>	<p><i>Electricity</i></p> <p>Exploring appliances that use electricity in their setting, children learn how to work with electricity safely and build circuits. Pupils investigate electrical conductors and insulators and explore the relationship between the number of bulbs and bulb brightness.</p>	<p><i>States of Matter</i></p> <p>Investigating the properties of solids, liquids and gases, children learn about the different states of matter. They explore changes of state using relatable examples and use this to explain changes to water through the water cycle. Pupils investigate the relationship between temperature and rate of evaporation.</p>	<p><i>Animals, including humans</i></p> <p>Using models, children describe the function of key organs in the digestive system. Pupils identify the types of human teeth to create their own model and investigate factors that impact our dental health. They compare human teeth to other animals' and consider this in the light of prior knowledge about predators, prey and food chains.</p>	<p><i>Living things and their habitats</i></p> <p>Identifying different ways living things can be grouped, children make classification keys to explore which grouping methods are most effective. Pupils study ways that habitats may change over time and understand that humans can have both positive and negative effects on their surroundings.</p>

<p>Year 5</p>	<p><i>Properties and changes of materials</i></p> <p>Broadening their experience of the properties of materials, children investigate hardness, transparency and conductivity and consider how these properties influence the uses of materials. They explore reversible changes, including dissolving and changes of state. Children compare these to irreversible changes, including rusting, burning and mixing vinegar and bicarbonate of soda.</p>		<p><i>Earth and Space</i></p> <p>Exploring some of the key celestial bodies in our Solar System, children learn their names and compare their movements. Pupils discover the relationship between the Earth's rotation and daylight, making models to represent their knowledge.</p>	<p><i>Forces</i></p> <p>Building on their knowledge of contact forces, children explore gravity, air resistance and water resistance in more depth and consider the effect of these forces being imbalanced.</p>	<p><i>Living things and their habitats</i></p> <p>Studying different animals' life cycles, children learn about the significance of reproduction for a species' survival. Pupils grow plants to compare asexual and sexual reproduction. Pupils compare fertilisation across different animals.</p>	<p><i>Animals, including humans</i></p> <p>Studying human development and changes, children identify key stages and consider what data may help determine if a child is growing normally. They describe how puberty affects girls and boys and produce graphs to record how gestation periods vary across different animals.</p>
<p>Year 6</p>	<p><i>Evolution and Inheritance</i></p> <p>Studying patterns in humans and other species, children learn about characteristics that are inherited from parents and those that are environmental. Through the eyes of Darwin and Wallace, pupils understand how observations lead to theories and explore natural selection.</p>	<p><i>Living things and their habitats</i></p> <p>Children broaden their knowledge of how vertebrates, invertebrates, plants and micro-organisms are grouped using shared characteristics. Pupils use and produce classification keys to sort and identify organisms.</p>	<p><i>Light</i></p> <p>Proving that light travels in a straight line, children use this information to explain observations of reflection and shadows. They explore how our eyes allow us to see and how mirrors can be used in a variety of ways. Pupils investigate factors affecting the size of shadows and the laws of reflection.</p>	<p><i>Electricity</i></p> <p>Using their prior knowledge of electrical circuits, children learn to draw conventional circuit diagrams and use models to explain current and voltage. Pupils investigate the use of switches and fuses and apply their electrical knowledge to design and produce their own electrical device.</p>	<p><i>Animals, including humans</i></p> <p>Studying the human circulatory system, children learn about the role of the heart, blood and blood vessels and use models to demonstrate their function. They explore how lifestyle choices affect our health. Pupils look at the relationship between exercise and heart rate.</p>	<p><i>Scientists and Inventors</i></p> <p>Explore the contributions made by significant scientists.</p>