



Science

Science is all about exploring and understanding the world around us. We ask questions, make observations and do experiments to find answers.

A scientist is a person who studies the world around us, including things living and non-living

Our [Science Curriculum](#) aims to excite and stimulate pupils' curiosity about phenomena and events in the world around them. A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed and continues to change our lives; Science is vital to the world's future success. We intend learning in science to be through investigations of the physical, chemical and biological aspects of their lives that rely mainly on first hand experiences, leading to them being equipped to answer scientific questions about the world around them. Our science curriculum is designed to provide children with progressive learning experiences, which continue to consolidate and extend the foundation skills introduced in EYFS. We aim to implement a high-quality science education, which as well as securing pupils core subject knowledge and concepts, will also develop a sense of excitement and curiosity about natural phenomena.

Hollin Primary School
Science Curriculum Overview

<u>Year group and topic</u>	Biology			Chemistry	Physics		
	<u>Plants</u>	<u>Animals including humans</u>	<u>Living thing and their habitats</u>	<u>Materials</u>	<u>Light and sound</u>	<u>Electricity</u>	<u>Forces and magnets</u>
Nursery and Reception	<p>Explore the natural world around them</p> <p>Grow plants</p> <p>Seasons and daily weather classification</p> <p>Plant experiment</p> <p>Naming parts of a flower</p> <p>Explore the plants in the surrounding natural environment</p>	<p>Be able to identify different parts of their body.</p> <p>Have some understanding of healthy food and the need for variety in their diets.</p> <p>Be able to show care and concern for living things.</p> <p>Know the effects exercise has on their bodies.</p> <p>Have some understanding of growth and change in animals & humans</p> <p>Can talk about things they have observed including animals</p> <p>Compare adult animals to their babies</p> <p>Learn about their senses</p> <p>themselves</p>	<p>Comments and questions about the place they live or the natural world.</p> <p>Shows care and concern for living things and the environment.</p> <p>Can talk about things they have observed such as plants and animals (woodland, jungle, safari, farm, mini-beasts)</p> <p>Notices features of objects in their environment.</p> <p>Comments and asks questions about their familiar world.</p> <p>Life cycles- butterflies and ducks</p>	<p>Be able to ask questions about the place they live.</p> <p>Talk about why things happen and how things work.</p> <p>Discuss the things they have observed such as natural and found objects.</p> <p>Manipulates materials to achieve a planned effect.</p> <p>Combine and mix ingredients</p> <p>Change materials by heating and cooling, including cooking</p> <p>Explore a range of materials, including natural materials</p> <p>Make objects from different materials, including natural materials</p> <p>Compare how materials change over time and in different conditions</p>	<p>Develop an understanding of change.</p> <p>Observe and explain why certain things may occur (e.g leaves falling off trees, weather changes).</p> <p>Look closely at similarities, differences, patterns and change.</p> <p>Comments and questions about the place they live or the natural world.</p> <p>Listen to sounds (environmental, instrumental and animal sounds.)</p> <p>Make sounds (body percussion and with the musical instruments)</p> <p>Explore shadows</p>	<p>May have some understanding that objects need electricity to work.</p> <p>May understand that a switch will turn something on or off.</p> <p>Use battery-powered devices-</p>	<p>Explore the natural world around them</p> <p>Explore how things work (Pull and push toys)</p> <p>Explore magnetic objects/materials.</p> <p>Explore how the wind can move objects</p> <p>Explore how objects move in water for example, sink and float experiments and the flow table in the outdoor area.</p> <p>Scientific enquiry on shaking liquids.</p>

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Year 1	Identify, describe and name plants	Identify, describe and compare common animals including; carnivores, herbivores and omnivores Body parts - senses		Everyday materials	Seasonal changes		
Year 2	How plants grow – seeds and bulbs	Basic needs Offspring Keeping healthy	Living and Non Living Habitats Food chain	Use, classifying, grouping, changing mixing & making	Seasonal changes		

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Year 3	Functions <i>Plants</i> Y5 reproduction	<i>overview on nutrition</i>		Rocks and fossils <i>Rock cycle</i>	Light and sight Light and dark		Magnets and their effects <i>Magnetism</i>
Year 4		Skeletons and movement <i>Human anatomy</i> Digestion, teeth & food chains <i>Ecosystems</i> Y3 Nutrition	Grouping and classification Changes in environment Ecosystem	Solids, liquids and gasses <i>State of Matter</i>	How sound is made, travels and can be changed <i>Sound</i>	Making and controlling (Y6) electrical circuits <i>Electrical circuits</i>	

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Year 5	Reproduction in plants <i>Reproductive cycles</i> Recap		Animals Lifecycles <i>Reproductive cycles</i> Y6 Classification	Changing Materials <i>Separating mixtures</i> <i>Physical & Chemical changes</i>			Forces that oppose motion <i>Forces</i> Earth and Space <i>Space</i>
Year 6		The body <i>Diet & Lifestyle</i> Y5 changes as humans develop	Evolution and inheritance <i>Humans & animals over time</i> Classification	Particles (Y5 Recap) Particles in physical and chemical changes	How light behaves and how we see <i>Light</i>		

Hollin Primary School
Science Curriculum Map 2023-24

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery	<p>Communication and Language Understand 'why' questions, like: "Why do you think the caterpillar got so fat?"</p> <p>Physical Development Make healthy choices about food, drink, activity and tooth brushing.</p> <p>Understanding the World Use all their senses in hands-on exploration of natural materials. Explore collections of materials with similar and/or different properties. Talk about what they see, using a wide vocabulary. Begin to make sense of their own life-story and family's history. Explore how things work. • Plant seeds and care for growing plants. Understand the key features of the life cycle of a plant and an animal. Begin to understand the need to respect and care for the natural environment and all living things. Explore and talk about different forces they can feel. Talk about the differences between materials and changes they notice.</p>					
Reception ELG	<p>Communication and Language: Make comments about what they have heard and ask questions to clarify their understanding.</p> <p>Personal, Social and Emotional Development: Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.</p> <p>Understanding the World Explore the natural world around them, making observations and drawing pictures of animals and plants. Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p>					

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Year 1	Animals including humans Body parts - senses	Animals including humans Identify, describe and compare common animals including; carnivores, herbivores and omnivores	Animals including humans Identify, describe and compare common animals including; carnivores, herbivores and omnivores	Materials – everyday materials	Plants – identify, describe and name plants Animals including humans – mini beasts	Animals including humans Identify, describe and compare common animals including; carnivores, herbivores and omnivores
	Year 1 to look at the seasons and weather throughout the year					
Year 2	Living things and their habitat – living, dead or never alive Animals, including humans offspring – Oz animals	Animals, including humans offspring – UK animals basic needs	Living things and their habitat – basic needs Food chains Habitats	Materials – changing	Materials – mixing and making <i>linked to maths (length & height; mass, capacity & temp)</i>	Plants – How do plants grow? Animals including humans (human lifestyle)

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3	Animals including humans Aspects of Nutrition <i>(overview)</i>	Light and Sound Light & Shadows	Materials Rocks & soils	Forces and magnets Forces- pushes/pulls, friction, magnets, gravity,	Plants - Plant parts & their functions Seed dispersal, life cycles Animals including humans Aspects of nutrition <i>(overview)</i>	Animals including humans Aspects of nutrition <i>(focus week)</i>
Year 4	Living things and their habitats Grouping and classification Changes in environment Ecosystem	Materials Solids, liquids and gasses <i>State of Matter</i>	Materials water cycle	Animals including humans Skeletons and movement <i>Human anatomy</i> Y3 Nutrition Digestion, teeth & food chains	Light and Sound How sound is made, travels and can be changed <i>Sound</i>	Electricity Making and controlling (Y6) electrical circuits <i>Electrical circuits</i>

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 5	<p>Plants Reproduction in plants (recap)</p> <p>Animals including humans & Living things and their habitat Human lifecycles Animal lifecycles Reproductive cycles Classification (recap)</p>		<p>Changing materials Changing materials Separating mixtures Physical and chemical changes</p>	<p>Forces and magnets Forces that oppose motion Forces</p>		<p>Forces and magnets Earth and space</p>
Year 6	<p>Living things and their habitat Adaptation, Evolution & Inheritance Y5 changes as humans develop</p>	<p>Materials Y5 Particles in physical and chemical changes Working Scientifically</p>	<p>Animals, Including Humans, Substances Harmful to the Body Y5 changes as humans develop (in RHE)</p>		<p>Animals, Including Humans, Substances Harmful to the Body (in RHE)</p>	<p>Light and sound Light</p>