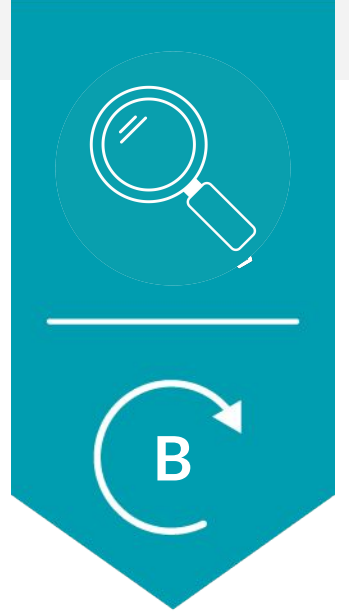


Curriculum overview for parents and carers

Science

A summary of key Science learning for EYFS to Year 5/6.



Autumn	Living things and their habitats		
	Animal adventures Investigating the habitats of animals by exploring where different creatures live and how their environments meet their needs. The children observe and compare animals and their habitats, sort living things based on similarities and differences and develop their understanding of the natural world through outdoor learning, songs and creative activities.		
Spring	Materials		
	I am a scientist Examining changes and processes in the natural world by asking questions and carrying out simple enquiries. The children explore how pushes and pulls affect movement, compare objects that float and sink and observe how materials change in different conditions through practical investigations with ice and chocolate.		
Summer	Plants	Across the year	Forces, Earth and space
	Our beautiful planet Exploring the outdoor environment and identifying plants using the senses to observe and describe natural objects. The children learn about the parts of flowering plants through role-play, investigate what plants need to grow by planting seeds and explore simple ways to care for the natural world.		Changing seasons Observing seasonal changes throughout the year by exploring how weather affects plants, animals and daily life. The children create a weather chart, investigate how animals prepare for winter, discover life cycles in spring and experiment with sand and water in summer through a range of practical activities.

Year 1/2 Cycle B			
Autumn 1	Animals, including humans	Autumn 2	Materials
	Sensitive bodies Investigating the human body and the five senses by exploring how people experience and interact with the world around them. Pupils develop their scientific enquiry skills by making observations, identifying patterns and using data to answer questions.		Everyday materials Discovering the difference between objects and materials by exploring and classifying items in the world around them. Pupils develop their scientific enquiry skills by planning tests, making observations, recording data and using evidence to sort materials according to their properties.
Spring 1	Animals, including humans	Spring 2	Materials
	Comparing animals Classifying animals by exploring their characteristics, physical features and diets. Pupils compare local and global animals, collect and present data about pets and develop their understanding of classification through practical investigations and role-play inspired by the work of Jane Goodall.		Uses of everyday materials Investigating how the properties of materials make them suitable for different uses. Pupils compare materials, explore how bending, stretching and other actions can change the shape of solid objects and use data from their enquiries to answer questions.
Summer 1	Living things and their habitats	Summer 2	Making connections
	Microhabitats Developing scientific enquiry skills by exploring how scientists investigate and answer questions about the world. Pupils learn about microhabitats and the needs of minibeasts, carry out surveys and investigations in the school grounds and discover the work of a botanist through identifying flowering plants.		Fairytale science Investigating scientific ideas through familiar fairytales and practical enquiry. Pupils compare animal features and speed, test the properties of materials, explore temperature and the sense of touch and develop their skills in recording and presenting results using block graphs.

Year 3/4 Cycle B			
Autumn 1	Forces, Earth and space	Autumn 2	Materials
	Forces and magnets Investigating how vehicles move across different surfaces and how friction affects motion. Pupils develop their scientific enquiry skills by planning investigations, writing methods and recording data, while learning about contact and non-contact forces and the properties and uses of magnets.		States of matter Investigating solids, liquids and gases by exploring the properties of different states of matter and how materials change state. Pupils use everyday examples to understand melting, freezing, evaporation and condensation and apply their knowledge to the water cycle.
Spring 1	Energy	Spring 2	Animals, including humans
	Sound and vibrations Discovering how sound is made and travels by exploring the relationship between vibrations and hearing. Pupils investigate how sound moves through different materials, learn how animals such as dolphins and whales communicate, explore ways to protect hearing and experiment with pitch and volume by creating their own musical instruments.		Classification and changing habitats Classifying living things by exploring different ways organisms can be grouped and evaluating the effectiveness of classification keys. Pupils investigate how habitats change over time and consider the positive and negative impact humans can have on the environment.
Summer 1	Plants	Summer 2	Making connections
	Plant reproduction Identifying the functions of different plant parts and recognising their role in growth and reproduction. Pupils investigate factors that affect plant growth, discover how water is transported through plants and compare different seeds and methods of seed dispersal through practical enquiry and modelling activities.		How does wind force affect seed dispersal? Exploring how wind speed and seed shape affect the distance seeds travel. Pupils carry out practical enquiries, measure and analyse results, and use their findings to explain different methods of dispersal. They also explore biomimicry, considering how adaptations in nature have inspired human designs and inventions.

Year 5/6 Cycle B			
Autumn 1	Living things and their habitats	Autumn 2	Forces, Earth and space
	Life cycles and reproduction Comparing animal and plant life cycles by investigating reproduction, growth and survival. Pupils explore sexual and asexual reproduction in plants, grow cuttings and plot root growth, compare life cycles across animal groups and analyse secondary data to understand how predators and climate change can affect amphibians.		Unbalanced forces Exploring gravity, air resistance and water resistance and the effects of balanced and unbalanced forces. Pupils demonstrate key concepts through practical activities, plan and carry out investigations and test ideas using models.
Spring 1	Living things and their habitats	Spring 2	Energy
	Classifying big and small Identifying how vertebrates, invertebrates, plants and micro-organisms are grouped according to shared characteristics. Pupils learn about Carl Linnaeus and the development of scientific classification systems and apply their understanding by using and creating classification keys to identify organisms.		Circuits, batteries and switches Understanding electrical circuits by learning how to represent them using conventional circuit diagrams and models. Pupils investigate current, resistance and voltage, compare the effects of different batteries on bulb brightness and apply their knowledge of circuits and switches to design and create practical electrical devices.
Summer 1	Living things and their habitats	Summer 2	Animals, including humans
	Evolution and inheritance Recognising how characteristics can be inherited or influenced by the environment. Pupils learn how Darwin and Wallace used observations to develop theories of evolution, model natural selection using Darwin's finches and examine how fossil evidence supports the idea that species change over time.		Human timeline Investigating human growth and development by exploring the stages of the human life cycle and the changes that occur over time. Pupils consider how data can be used to monitor growth, learn about the physical changes associated with puberty and compare gestation periods across different mammals using graphs and data analysis.
			Making connections How does light affect the direction of plant growth? Investigating how plants respond to their environment by exploring phototropism and the effect of light on growth. Pupils plan and carry out comparative tests, gathering and analysing observational data and evaluating the reliability of their results. They extend their understanding by considering the evolutionary advantages of plants growing towards light.