Curriculum Overview 2021-2022

Be the best you can be

Science - Curriculum Overview 2021-2022

	Autumn 1 (7 Weeks)	Autumn 2 (7 Weeks)	Spring 1 (7 Weeks)	Spring 2 (6 Weeks)	Summer 1 (5 Weeks)	Summer 2 (7 Weeks)
Year 6	Light	Electricity	Animals, including Humans	Evolution and Inheritance	Living Things and their Habitats	
Year 5	Forces	Earth and Space	Properties and Changes of Materials	Living Things and their Habitats	Animals, including Humans	
Year 4	Sound	States of Matter	Electricity	Animals, including Humans	Living Things and their Habitats	
Year 3	Forces and Magnets	Light	Rocks	Animals, including Humans	Plants	
Year 2	Uses of Every	day Materials	Animals, including Humans	Plants	Living Things and their Habitats	
Year 1	Everyday Materials (Please note: the topic 'Seasonal Changes' should be taught across Year 1)		Animals, including Humans		Pla	nts
Reception	Foundational Learning Reception (Autumn 1)	Foundational Learning Reception (Autumn 2)	Foundational Learning Reception (Spring 1)	Foundational Learning Reception (Spring 2)	Foundational Learning Reception (Summer 1)	Foundational Learning Reception (Summer 2)
Nursery	Foundational Learning Nursery (Autumn 1)	Foundational Learning Nursery (Autumn 2)	Foundational Learning Nursery (Spring 1)	Foundational Learning Nursery (Spring 2)	Foundational Learning Nursery (Summer 1)	Foundational Learning Nursery (Summer 2)
Two Year Olds	Lea	ational rning Is (Autumn)	Lea	ational rning ds (Spring)	Lear	ational rning s (Summer)

EYFS - Science Curriculum Overview

Period of Study	Two Year Olds (Aspect of Study)	Nursery (Aspect of Study)	Reception (Aspect of Study)
Autumn 1 (7 Weeks)	Foundational Learning	Foundational Learning Nursery (Autumn 1)	Foundational Learning Reception (Autumn 1)
Autumn 2 (7 Weeks)	2 Year Olds (Autumn)	Foundational Learning Nursery (Autumn 2)	Foundational Learning Reception (Autumn 2)
Spring 1 (7 Weeks)	Foundational Learning	Foundational Learning Nursery (Spring 1)	Foundational Learning Reception (Spring 1)
Spring 2 (6 Weeks)	2 Year Olds (Spring)	Foundational Learning Nursery (Spring 2)	Foundational Learning Reception (Spring 2)
Summer 1 (5 Weeks)	Foundational Learning	Foundational Learning Nursery (Summer 1)	Foundational Learning Reception (Summer 1)
Summer 2 (7 Weeks)	2 Year Olds (Summer)	Foundational Learning Nursery (Summer 2)	Foundational Learning Reception (Summer 2)

Year 1 - Science Curriculum Overview

Period of Study	Aspect of Study	Programme of Study Statutory Statements	Programme of Study Statutory Statements (Working Scientifically)	Disciplinary Foci
Autumn 1 (7 Weeks)	Everyday Materials	distinguish between an object and the material from which it is made identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock describe the simple physical properties of a variety of everyday materials compare and group together a variety of everyday materials on the basis of their simple physical properties.	'Working scientifically' specifies the understanding of the nature, processes and methods of science for each year group. It should not be taught as a separate strand. These opportunities for working scientifically should be provided across years 1 and 2 so that the expectations in the programme of study can be met by the end of year 2. During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: * asking simple questions and recognising that they can be	Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * Apparatus and Techniques
Autumn 2 (7 Weeks)	Walshab		answered in different ways * observing closely, using simple equipment * performing simple tests * identifying and classifying	
Spring 1 (7 Weeks)		identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals identify and name a variety of common animals that are carnivores, herbivores and omnivore describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)	using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions.	Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * Data/Data Analysis
Spring 2 (6 Weeks)	Animals, including Humans	* identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense		
Summer 1 (5 Weeks)	Plants	identify and name a variety of common wild and garden plants, including deciduous and evergreen trees identify and describe the basic structure of a variety of common flowering plants, including trees.	t you can be	Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * How science uses evidence to develop explanations
Summer 2 (7 Weeks)				

Year 2 - Science Curriculum Overview

Period of Study	Aspect of Study	Programme of Study Statutory Statements	Programme of Study Statutory Statements (Working Scientifically)	Disciplinary Foci
Autumn 1 (7 Weeks)	Uses of Everyday	identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	'Working scientifically specifies the understanding of the nature, processes and methods of science for each year group. It should not be taught as a separate strand. These opportunities for working scientifically should be provided across years 1 and 2 so that the expectations in the programme of study can be met by the end of year 2. During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: * asking simple questions and recognising that they can be	Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * Apparatus and Techniques
Autumn 2 (7 Weeks)	- Materials		asking simple questions and recognising that they can be answered in different ways * observing closely, using simple equipment * performing simple tests * identifying and classifying	
Spring 1 (7 Weeks)	Animals, including Humans	* notice that animals, including humans, have offspring which grow into adults * find out about and describe the basic needs of animals, including humans, for survival (water, food and air) * describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions.	Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * Data/Data Analysis
Spring 2 (6 Weeks)	Plants	observe and describe how seeds and bulbs grow into mature plants find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.		Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * Data/Data Analysis
Summer 1 (5 Weeks)	Living Things and their Habitats	explore and compare the differences between things that are living, dead, and things that have never been alive identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other identify and name a variety of plants and animals in their habitats, including microhabitats describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.	t you can be	Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * How science uses evidence to develop explanations
Summer 2 (7 Weeks)				

Year 3 - Science Curriculum Overview

Period of Study	Aspect of Study	Programme of Study Statutory Statements	Programme of Study Statutory Statements (Working Scientifically)	Disciplinary Foci	
Autumn 1 (7 Weeks)	Forces and Magnets	compare how things move on different surfaces notice that some forces need contact between two objects, but magnetic forces can act at a distance observe how magnets attract or repel each other and attract some materials and not others compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials describe magnets as having two poles predict whether two magnets will attract or repel each other, depending on which poles are facing.	'Working scientifically' specifies the understanding of the nature, processes and methods of science for each year group. It should not be taught as a separate strand. These opportunities for working scientifically should be provided across years 3 and 4 so that the expectations in the programme of study can be met by the end of year 4. During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: * asking relevant questions and using different types of scientific enquiries to answer them * setting up simple practical enquiries, comparative and fair tests * making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers * gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	working scientificanty specifies the understanding of the nature, processes and methods of science for each year group. It should not be taught as a separate strand. These opportunities for working scientifically should be provided across years 3 and 4 so that the expectations in the programme of study can be met by the end of year 4. During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: * asking relevant questions and using different types of scientific enquiries to answer them	Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * Data/Data Analysis
Autumn 2 (7 Weeks)	Light	recognise that they need light in order to see things and that dark is the absence of light notice that light is reflected from surfaces recognise that light from the sun can be dangerous and that there are ways to protect their eyes recognise that shadows are formed when the light from a light source is blocked by an opaque object find patterns in the way that the size of shadows change.		Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * Apparatus and Techniques	
Spring 1 (7 Weeks)	Rocks	compare and group together different kinds of rocks on the basis of their appearance and simple physical properties describe in simple terms how fossils are formed when things that have lived are trapped within rock recognise that soils are made from rocks and organic matter.	recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions * using results to draw simple conclusions, make predictions	Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * How science uses evidence to develop explanations	
Spring 2 (6 Weeks)	Animals, including Humans	identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat identify that humans and some other animals have skeletons and muscles for support, protection and movement.	for new values, suggest improvements and raise further questions * identifying differences, similarities or changes related to simple scientific ideas and processes * using straightforward scientific evidence to answer questions or to support their findings.	Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * Data/Data Analysis	
Summer 1 (5 Weeks)	Plants	identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant investigate the way in which water is transported within plants explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.		Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * How science sues evidence to develop explanations	
Summer 2 (7 Weeks)					

Year 4 - Science Curriculum Overview

Period of Study	Aspect of Study	Programme of Study Statutory Statements	Programme of Study Statutory Statements (Working Scientifically)	Disciplinary Foci	
Autumn 1 (7 Weeks)	Sound	identify how sounds are made, associating some of them with something vibrating recognise that vibrations from sounds travel through a medium to the ear find patterns between the pitch of a sound and features of the object that produced it find patterns between the volume of a sound and the strength of the vibrations that produced it recognise that sounds get fainter as the distance from the sound source increases.	'Working scientifically' specifies the understanding of the nature, processes and methods of science for each year group. It should not be taught as a separate strand. These opportunities for working scientifically should be provided across years 3 and 4 so that the expectations in the programme of study can be met by the end of year 4. During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: * asking relevant questions and using different types of scientific enquiries to answer them * setting up simple practical enquiries, comparative and fair tests * making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers * gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	working scientifically specifies the understanding of the nature, processes and methods of science for each year group. It should not be taught as a separate strand. These opportunities for working scientifically should be provided across years 3 and 4 so that the expectations in the programme of study can be met by the end of year 4. During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: * asking relevant questions and using different types of scientific enquiries to answer them	* The Methods that scientists use to
Autumn 2 (7 Weeks)	States of Matter	compare and group materials together, according to whether they are solids, liquids or gases observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (*C) identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.		Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * Data/Data Analysis	
Spring 1 (7 Weeks)	Electricity	identify common appliances that run on electricity construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit recognise some common conductors and insulators, and associate metals with being good conductors.	recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions	Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * Apparatus and Techniques	
Spring 2 (6 Weeks)	Animals, including Humans	describe the simple functions of the basic parts of the digestive system in humans identify the different types of teeth in humans and their simple functions construct and interpret a variety of food chains, identifying producers, predators and prey.	 identifying differences, similarities or changes related to simple scientific ideas and processes using straightforward scientific evidence to answer questions or to support their findings. 	Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * Data/Data Analysis	
Summer 1 (5 Weeks)	Living Things and their Habitats	recognise that living things can be grouped in a variety of ways explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment recognise that environments can change and that this can sometimes pose dangers to living things.		Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * How science sues evidence to develop explanations	
Summer 2 (7 Weeks)					

Year 5 - Science Curriculum Overview

Period of Study	Aspect of Study	Programme of Study Statutory Statements	Programme of Study Statutory Statements (Working Scientifically)	Disciplinary Foci
Autumn 1 (7 Weeks)	Forces	explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object identify the effects of air resistance, water resistance and friction, that act between moving surfaces recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	'Working scientifically' specifies the understanding of the nature, processes and methods of science for each year group. It should not be taught as a separate strand. These opportunities for working scientifically should be provided across years 5 and 6 so that the expectations in the programme of study can be met by the end of year 6. During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:	Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * Apparatus and Techniques
Autumn 2 (7 Weeks)	Earth and Space	describe the movement of the Earth, and other planets, relative to the Sun in the solar system describe the movement of the Moon relative to the Earth describe the Sun, Earth and Moon as approximately spherical bodies use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.	planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs using test results to make predictions to set up further comparative and fair tests reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations identifying scientific evidence that has been used to support or refute ideas or arguments	Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * Data/Data analysis * How science uses evidence to develop explanations
Spring 1 (7 Weeks)	Properties and Changes of Materials	compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic demonstrate that dissolving, mixing and changes of state are reversible changes explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.		Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * Apparatus and Techniques
Spring 2 (5 Weeks)	Living Things and their Habitats	describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird describe the life process of reproduction in some plants and animals.	t you can be	Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * How science uses evidence to develop explanations
Summer 1 (6 Weeks)	Animals, including Humans	* describe the changes as humans develop to old age.		Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * Data/Data Analysis
Summer 2 (7 Weeks)				

Year 6 - Science Curriculum Overview

Period of Study	Aspect of Study	Programme of Study Statutory Statements	Programme of Study Statutory Statements (Working Scientifically)	Disciplinary Foci
Autumn 1 (7 Weeks)	Light	* recognise that light appears to travel in straight lines use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes	'Working scientifically' specifies the understanding of the nature, processes and methods of science for each year group. It should not be taught as a separate strand. These opportunities for working scientifically should be provided across years 5 and 6 so that the expectations in the programme of study can be met by the end of year 6. During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:	Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * Apparatus and Techniques
Autumn 2 (7 Weeks)	Electricity	* use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. * associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches * use recognised symbols when representing a simple circuit in a diagram.	planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs	Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * Data/Data Analysis
Spring 1 (7 Weeks)	Animals, including Humans	identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function text of the ways in which nutrients and water are transported within animals, including humans	using test results to make predictions to set up further comparative and fair tests reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations	Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * Data/Data Analysis
Spring 2 (6 Weeks)	Evolution and Inheritance	recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.	* identifying scientific evidence that has been used to support or refute ideas or arguments	Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * How science uses evidence to develop explanations
Summer 1 (5 Weeks)	Living Things and their Habitats	describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro- organisms, plants and animals give reasons for classifying plants and animals based on specific characteristics.		Disciplinary Foci [Please view in conjunction with the disciplinary progression] * The Methods that scientists use to answer questions * How science sues evidence to develop explanations
Summer 2 (7 Weeks)				