

Science Curriculum Map

This curriculum map outlines the objectives studied by each class across the year. The progression map then outlines the progression in skills.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	WHO AM I?	POLAR ADVENTURES	TREASURE ISLAND	CELEBRATIONS	PLANTS	HOLIDAYS
Year 2	MATERIALS MONSTER	HEALTHY ME	MOVE IT	MINI WORLDS	YOUNG GARDENERS	LITTLE MASTERCHEF'S
Year 3	FOOD AND OUR BODIES	WE ARE ASTRONAUTS!	OPPOSITES ATTRACT	EARTH ROCKS	MIRROR, MIRROR	HOW DOES YOUR GARDEN GROW?
Year 4	POWER IT UP!	BRILLIANT BUBBLES	WHAT'S THAT SOUND?	LOOKING AT STATES	LIVING THINGS	TEETH AND EATING
Year 5	MATERIAL WORLD	CIRCLE OF LIFE	LET'S GET MOVING	BRILLIANT SCIENTISTS	OUT OF THIS WORLD	GROWING UP & GROWING OLD
Year 6	LET IT SHINE	ELECTRIFYING!	WE'RE EVOLVING	CLASSIFYING CRITTERS	STAYING ALIVE	WE ARE DINOSAUR HUNTERS



KS1 & KS2 Progression in Science

	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6
Working scientifically	<ul style="list-style-type: none"> • Ask simple questions and recognise that they can be answered in different ways (Year 1 focus). (Working Scientifically) • Use simple equipment to observe closely (Year 1 focus). (Working Scientifically) • Perform simple tests (Year 1 focus). (Working Scientifically) • Identify and classify (Year 1 focus). (Working Scientifically) • Use his/her observations and ideas to suggest answers to questions (Year 1 focus). (Working Scientifically) • Gather and record data to help in answering questions (Year 1 focus). (Working Scientifically) 	<ul style="list-style-type: none"> • Ask simple questions and recognise that they can be answered in different ways including use of scientific language from the national curriculum (Year 2 focus). (Working Scientifically) • Use simple equipment to observe closely including changes over time (Year 2 focus). (Working Scientifically) • Perform simple comparative tests (Year 2 focus). (Working Scientifically) • Identify, group and classify (Year 2 focus). (Working Scientifically) • Use his/her observations and ideas to suggest answers to questions noticing similarities, differences and patterns (Year 2 focus). (Working Scientifically) 	<ul style="list-style-type: none"> • Ask relevant questions and use different types of scientific enquiries to answer them (Year 3 focus). (Working Scientifically) • Set up simple practical enquiries, comparative and fair tests (Year 3 focus). (Working Scientifically) • Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers (Year 3 focus). (Working Scientifically) • Gather, record, classify and present data in a variety of ways to help in answering questions (Year 3 focus). (Working Scientifically) • Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables (Year 3 focus). (Working Scientifically) • Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions (Year 3 focus). (Working Scientifically) • Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions (Year 3 focus). (Working Scientifically) • Identify differences, similarities or changes related to simple scientific ideas and processes (Year 3 focus). (Working Scientifically) • Use straightforward scientific 	<ul style="list-style-type: none"> • Ask relevant questions and use different types of scientific enquiries to answer them (Year 4 focus). (Working Scientifically) • Set up simple practical enquiries, comparative and fair tests (Year 4 focus). (Working Scientifically) • Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers (Year 4 focus). (Working Scientifically) • Gather, record, classify and present data in a variety of ways to help in answering questions (Year 4 focus). (Working Scientifically) • Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables (Year 4 focus). (Working Scientifically) • Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions (Year 4 focus). (Working Scientifically) • Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions (Year 4 focus). (Working Scientifically) • Identify differences, similarities or changes related to simple scientific ideas and processes (Year 4 focus). (Working Scientifically) • Use straightforward scientific evidence to answer questions or 	<ul style="list-style-type: none"> • Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary (Year 5 focus). (Working Scientifically) • Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate (Year 5 focus). (Working Scientifically) • Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs (Year 5 focus). (Working Scientifically) • Use test results to make predictions to set up further comparative and fair tests (Year 5 focus). (Working Scientifically) • Report and present 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 (Year 5 focus). (Working Scientifically) • Identify scientific evidence that has been used to support or refute ideas or arguments (Year 5 focus). (Working Scientifically) 	<ul style="list-style-type: none"> • Plan different types of scientific enquiries to answer their own or others' questions, including recognising and controlling variables where necessary (Year 6 focus). (Working Scientifically) • Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate (Year 6 focus). (Working Scientifically) • Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs (Year 6 focus). (Working Scientifically) • Use test results to make predictions to set up further comparative and fair tests (Year 6 focus). (Working Scientifically) • Report and present 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 (Year 6 focus). (Working Scientifically) • Identify scientific evidence that has been used to support or refute ideas or arguments (Year 6 focus). (Working Scientifically) • Describe and evaluate their own and other people's scientific ideas related to topics in the national curriculum (including ideas that have changed over time), using evidence from a range of sources. (Working Scientifically) • Group and classify things and

			evidence to answer questions or to support his/her findings (Year 3 focus). (Working Scientifically)	to support his/her findings (Year 4 focus). (Working Scientifically)		recognise patterns. (Working Scientifically) <ul style="list-style-type: none"> Find things out using a wide range of secondary sources of information. (Working Scientifically) Use appropriate scientific language and ideas from the national curriculum to explain, evaluate and communicate his/her methods and findings. (Working Scientifically)
Animals including humans	<ul style="list-style-type: none"> Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. (Animals, including humans) Group animals according to what they eat. (Animals, including humans) Identify and name a variety of common animals that are carnivores, herbivores and omnivores. (Animals, including humans) Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). (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. (Animals, including humans) 	<ul style="list-style-type: none"> Gather and record data to help in answering questions including from secondary sources of information (Year 2 focus). (Working Scientifically) Understand that animals, including humans, have offspring which grow into adults. (Animals, including humans) Describe the basic needs of animals, including humans, for survival (water, food and air). (Animals, including humans) Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. (Animals, including humans) 	<ul style="list-style-type: none"> 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. (Animals, including humans) Identify that humans and some other animals have skeletons and muscles for support, protection and movement. (Animals, including humans) 	<ul style="list-style-type: none"> Describe the simple functions of the basic parts of the digestive system in humans. (Animals, including humans) Identify the different types of teeth in humans and their simple functions. (Animals, including humans) Construct and interpret a variety of food chains, identifying producers, predators and prey. (Animals, including humans) 	<ul style="list-style-type: none"> Describe the changes as humans develop to old age. (Animals, including humans) 	<ul style="list-style-type: none"> Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. (Animals, including humans) Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. (Animals, including humans) Describe the ways in which nutrients and water are transported within animals, including humans. (Animals, including humans)
Living Things and their habitats		<ul style="list-style-type: none"> Explore and compare the differences between things that are living, dead, and things that have never been alive. (Living things and their habitats) Identify that most living things live in habitats to which they are suited and describe how 		<ul style="list-style-type: none"> Recognise that living things can be grouped in a variety of ways. (Living things and their habitats) Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. (Living things and 	<ul style="list-style-type: none"> Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. (Living things and their habitats) Describe the life process of reproduction in some plants and animals. (Living things and their habitats) 	<ul style="list-style-type: none"> 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. (Living things and their habitats)

		<p>different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. (Living things and their habitats)</p> <ul style="list-style-type: none"> Identify and name a variety of plants and animals in their habitats, including micro-habitats. (Living things and their habitats) 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. (Living things and their habitats) 		<p>their habitats)</p> <ul style="list-style-type: none"> Recognise that environments can change and that this can sometimes pose dangers and have an impact on living things. (Living things and their habitats) 		<ul style="list-style-type: none"> Give reasons for classifying plants and animals based on specific characteristics. (Living things and their habitats)
Forces and Magnets			<ul style="list-style-type: none"> Compare how things move on different surfaces. (Forces and magnets) Notice that some forces need contact between two objects, but magnetic forces can act at a distance. (Forces and magnets) Observe how magnets attract or repel each other and attract some materials and not others. (Forces and magnets) 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. (Forces and magnets) Describe magnets as having two poles. (Forces and magnets) Predict whether two magnets will attract or repel each other, depending on which poles are facing. (Forces and magnets) 		<ul style="list-style-type: none"> Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. (Forces and magnets) Identify the effects of air resistance, water resistance and friction, that act between moving surfaces. (Forces and magnets) Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. (Forces and magnets) 	
Plants	<ul style="list-style-type: none"> Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. (Plants) Identify and describe the basic structure of a variety of common flowering plants, 	<ul style="list-style-type: none"> Observe and describe how seeds and bulbs grow into mature plants. (Plants) Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. (Plants) 	<ul style="list-style-type: none"> Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. (Plants) Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, 			

	including trees. (Plants)		<p>and room to grow) and how they vary from plant to plant. (Plants)</p> <ul style="list-style-type: none"> Investigate the way in which water is transported within plants. (Plants) Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. (Plants) 			
States of Matter				<ul style="list-style-type: none"> Compare and group materials together, according to whether they are solids, liquids or gases. (States of matter) 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). (States of matter) Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. (States of matter) 		
Electricity				<ul style="list-style-type: none"> Identify common appliances that run on electricity. (Electricity) Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. (Electricity) 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. (Electricity) Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. (Electricity) Recognise some common conductors and insulators, and associate metals with being good conductors. (Electricity) 		<ul style="list-style-type: none"> Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. (Electricity) 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. (Electricity) Use recognised symbols when representing a simple circuit in a diagram. (Electricity)
Materials	<ul style="list-style-type: none"> Distinguish between an object 	<ul style="list-style-type: none"> Identify and compare the 			<ul style="list-style-type: none"> Compare and group together 	

	<p>and the material from which it is made. (Materials)</p> <ul style="list-style-type: none"> Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. (Materials) Describe the simple physical properties of a variety of everyday materials. (Materials) Compare and group together a variety of everyday materials on the basis of their simple physical properties. (Materials) 	<p>suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. (Materials)</p> <ul style="list-style-type: none"> Describe how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. (Materials) 			<p>everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. (Materials)</p> <ul style="list-style-type: none"> Recognise that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. (Materials) Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. (Materials) Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. (Materials) Demonstrate that dissolving, mixing and changes of state are reversible changes. (Materials) 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. (Materials) 	
Light			<ul style="list-style-type: none"> Recognise that he/she needs light in order to see things and that dark is the absence of light. (Light) Notice that light is reflected from surfaces. (Light) Recognise that light from the sun can be dangerous and that there are ways to protect eyes. (Light) Recognise that shadows are formed when the light from a light source is blocked by a solid object. (Light) 			<ul style="list-style-type: none"> Recognise that light appears to travel in straight lines. (Light) 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. (Light) 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. (Light) Use the idea that light travels in straight lines to explain why

			<ul style="list-style-type: none"> Find patterns in the way that the size of shadows change. (Light) 			shadows have the same shape as the objects that cast them. (Light)
Rocks			<ul style="list-style-type: none"> Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. (Rocks) Describe in simple terms how fossils are formed when things that have lived are trapped within rock. (Rocks) Recognise that soils are made from rocks and organic matter. (Rocks) 			
Evolution and inheritance						<ul style="list-style-type: none"> Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. (Evolution and inheritance) Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. (Evolution and inheritance) Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. (Evolution and inheritance)
Earth and space					<ul style="list-style-type: none"> Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. (Earth and space) Describe the movement of the Moon relative to the Earth. (Earth and space) Describe the Sun, Earth and Moon as approximately spherical bodies. (Earth and space) Use the idea of the Earth's rotation to explain day and night and the apparent movement of 	

					the sun across the sky. (Earth and space)	
Sound				<ul style="list-style-type: none"> • Identify how sounds are made, associating some of them with something vibrating. (Sound) • Recognise that vibrations from sounds travel through a medium to the ear. (Sound) • Find patterns between the pitch of a sound and features of the object that produced it. (Sound) • Find patterns between the volume of a sound and the strength of the vibrations that produced it. (Sound) • Recognise that sounds get fainter as the distance from the sound source increases. (Sound) 		
Seasonal Changes	<ul style="list-style-type: none"> • Observe changes across the four seasons. (Seasonal changes) • Observe and describe weather associated with the seasons and how day length varies. (Seasonal changes) 					