

"Science and everyday life cannot and should not be separated." – Rosalind Franklin

"There is no such thing as a stupid question" - Carl Sagan

#### **Curriculum Intent**

The Science Curriculum at FHC has been designed to provide students with a deep understanding of scientific knowledge and give them the foundations they need to recognise the importance of Science in day to day life. As our children progress through their school life, they will be increasingly made to provide insight into working scientifically and develop their curiosity about natural phenomena. The children will be given the chances to apply their knowledge using equipment, building arguments and explaining concepts.

	Purpose of Study
Understanding the world we live in	We want our Science curriculum to give our children a greater understanding of the world we live in, providing a foundation for understanding the world through the precise disciplines of biology, chemistry and physics. Science is vital to the world's future prosperity, thus all pupils should be taught essential aspect of knowledge, methods, processes and uses of Science. Scientific enquiries will be used to give our children the opportunity to answer scientific questions about the world around them and develop an understanding of the nature, processes and methods of Science. Our curriculum commences closer to home with pupils exploring their environment and making links about the natural world. As pupils move through school, they will look at more complex focuses.
Linked to my life	We strive for our Science curriculum to excite our children about the world around them and provoke questions asking why and how. Science has already changes our lives immeasurably and will continue to do so in our children's lives. Therefore all of our pupils will be taught essential aspects of the knowledge, methods, processes, uses and implications of Science, today and for the future.
Practical Skills	Through our curriculum, we want children to experience a range of practical experiments and investigations to bring our science focuses to life. Using a wide range of equipment, all children will get the chance to complete full scientific enquiries following correct procedures, including predictions, evaluations and conclusions.
Knowledge	The Science progression document at FHC sets out the progression of skills from EYFS to Year 6 and through this the children will build their knowledge through the specific disciplines of Science: biology, chemistry and physics. While progress is important, it is also imperative that our pupils develop an understanding of each block of learning in order to progress to the next stage. Children will use their mathematical knowledge within their understanding of Science, through collecting, presenting and analysing data.

### Science Curriculum FHC



#### Assessment and recording for long term knowledge retention:

Entry task: Start of learning assessments created for each block of learning, before knowledge organiser is entered into books. Exit task: End of learning assessments created for each block of learning.

Recording for revisiting:

After meeting with SIA, the following focuses have been brought to attention:

- Make sure learning is being revisited throughout Science inputs. How will we check if children understand their learning in days/weeks and months to come? Leader to arrange staff meeting to speak with teaching staff surrounding Science scheme, where recap slides should be created for each lesson to recap throughout the year.
- Some children were able to answer all Start of Learning assessment questions correctly. Leader to arrange staff meeting to speak with teachers to discuss checking each S.O.L assessment looking for those children. Making sure planning is appropriate, to save children learning about things they already have sound understanding of. This planning must be well-thought through and could also include more independent research using secondary resources to help further their own knowledge.
- Use of worksheets within books. No clear progression through KS2. Year 3 evidenced lots of written work within the pages, not onto sheets. This regressed up into Year 4. Leader to arrange a staff meeting to discuss expectations within Science.

### Science Curriculum FHC



			Summary of	Progression			
FS1	FS2	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			Working So	cientifically			
<ul> <li>Encourage</li> </ul>	<ul> <li>Ask questions</li> </ul>	<ul> <li>Ask simple</li> </ul>	Ask simple	Ask relevant	Ask relevant	<ul> <li>Work as part of</li> </ul>	•Plan more
children to ask	to find out more,	questions linked to	questions and	scientific	questions and use	a team to plan	sophisticated
questions	and to check	the science work	recognise that	questions and	different types of	enquiries to	scientific enquiries
<ul> <li>Talk about what</li> </ul>	they understand	we are doing.	they can be	suggest a scientific	scientific enquiries	answer questions,	to answer
they see using a	what has been	<ul> <li>Observe changes</li> </ul>	answered in	way of answering	to answer them.	including	questions,
wide vocabulary	said to them	and patterns	different ways.	them. • Setup,	<ul> <li>Set up simple</li> </ul>	recognising and	including
<ul> <li>Observe and</li> </ul>	<ul> <li>Talk about</li> </ul>	closely and	Observe changes	with guidance,	practical	controlling	recognising and
explore the	what they see	describe what I see.	and patterns	simple practical	enquiries,	variables.	controlling
environment	using a wide	<ul> <li>Perform simple</li> </ul>	closely, using	enquiries,	comparative and	• Take	variables.
<ul> <li>Explore how</li> </ul>	vocabulary.	tests, using	given measuring	comparative and	fair tests	measurements,	<ul> <li>Justify my</li> </ul>
things work.	<ul> <li>Children to</li> </ul>	familiar, everyday	equipment.	fair tests.	independently.	using a range of	choices of data
	answer who,	equipment.	<ul> <li>Perform simple</li> </ul>	<ul> <li>Make careful</li> </ul>	<ul> <li>Make systematic</li> </ul>	equipment, with	collection method
Open ended	where and when	<ul> <li>Set up a simple</li> </ul>	tests without	observations and	and careful	precision, taking	and number of
questions for	questions first	comparative test	support.	take accurate	observations and	repeat readings	observations and
adults to ask:	before answering	(e.g. growing plants	<ul> <li>Identify and</li> </ul>	measurements	take accurate	when appropriate.	measurements.
<ul><li>What can you</li></ul>	'why' and 'I	in different	classify.	using standard	measurements	<ul> <li>Record data and</li> </ul>	<ul> <li>Choose the most</li> </ul>
see? •What	wonder/how do	conditions).	• Use my	units.	using standard	results using	appropriate
can you hear?	you know'	<ul> <li>Gather and</li> </ul>	observations and	<ul> <li>Gather, record,</li> </ul>	units, and use a	scientific diagrams	method to record
<ul><li>What can you</li></ul>	questions.	record information	ideas to suggest	classify and	range of	and labels,	data and results of
smell?	<ul> <li>Describe what</li> </ul>	to help answer	answers to	present data in a	equipment,	classification keys,	increasing
•I wonder?	they see, hear	questions	questions.	variety of ways to	including	tables, bar and	complexity.
<ul><li>What would</li></ul>	and feel whilst	(including using	<ul> <li>Gather and</li> </ul>	help answer	thermometers	line graphs.	<ul><li>Identify</li></ul>
happen if? •Why	outside. •	photographs and	record accurate	questions.	and data loggers.	<ul> <li>Use test results</li> </ul>	scientific evidence
did that happen?	Explore the	drawings).	data to help in	<ul> <li>Record findings</li> </ul>	<ul> <li>Report on</li> </ul>	to make	that has been
	natural world		answering	using simple	findings, including	predictions to set	used to support or
	around them		questions (incl.	scientific	oral and written	up further	refute ideas or
	<ul> <li>Connect one</li> </ul>		numerical data,	language,	explanations,	comparative and	arguments.
	idea or action to		where	drawings, labelled	displays or	fair tests.	
	another		appropriate).	diagrams, keys,	presentations of	<ul> <li>Report and</li> </ul>	
				bar charts and	results and	present findings,	
				tables.	conclusions.	including	
				<ul> <li>Use results to</li> </ul>	<ul> <li>Use results to</li> </ul>	conclusions,	
				draw simple	suggest	causal	



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Open ended		conclusions and	improvements to	relationships and	
questions for		make predictions	enquiries and to	degree of trust, in	
adults to ask:		for new values.	raise questions.	oral and written	
<ul><li>What can you</li></ul>		• Use	<ul> <li>Identify</li> </ul>	forms.	
see?		straightforward	differences,		
What can you		scientific evidence	similarities or		
hear?		to answer	changes related to		
•What can you		questions or to	simple scientific		
smell?		support my	ideas and		
•I wonder?		findings.	processes.		
What would			processes.		
happen if?					
•Why did that					
happen?					
парреп:					
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Living Things (Animals, Humans and Plants)								
Plants and	Plants and	<ul> <li>Identify and</li> </ul>	<ul> <li>Notice that</li> </ul>	<ul> <li>Identify that all</li> </ul>	<ul> <li>Recognise that</li> </ul>	<ul><li>Describe the</li></ul>	<ul> <li>Give reasons for</li> </ul>	
Animals	Animals	name a variety of	animals, including	animals need the	living things can	differences in the	classifying plants	
<ul> <li>Plant seeds and</li> </ul>	<ul> <li>Describes what</li> </ul>	plants and animals,	humans, have	right types and	be grouped in a	life cycles of	and animals based	
care for growing	they see, hear	identify their parts	offspring which	amount of	variety of ways,	plants, mammals,	on specific	
plants	and feel outside	and describe their	grow into adults.	nutrition.	using classification	amphibians,	characteristics.	
<ul> <li>Understand key</li> </ul>	<ul> <li>Explore the</li> </ul>	basic structure.	<ul> <li>Find out about</li> </ul>	<ul> <li>Understand that</li> </ul>	keys to help	insects and birds	<ul> <li>Describe how</li> </ul>	
features of a life	natural world	<ul> <li>Know and classify</li> </ul>	and describe the	they cannot make	identify and name	and understand	living things are	
cycle of a plant	around them	animals by what	basic needs of	their own food.	living things in	their reproductive	classified into	
and an animal >	<ul> <li>Develop an</li> </ul>	they eat (carnivore,	animals, including	<ul> <li>Identify that</li> </ul>	their local and	processes.	broad groups	
one life cycle	understanding of	herbivore and	humans, for	humans and some	wider	<ul> <li>Raise questions</li> </ul>	according to	
simple e.g. chick	growth, decay	omnivore).	survival (water,	other animals	environment.	about the	common	
Begin to	and changes over	<ul><li>Identify, name,</li></ul>	food and air).	have skeletons	<ul> <li>Recognise that</li> </ul>	environment and	observable	
understand the	time > life cycles	draw and label the	<ul> <li>Describe the</li> </ul>	and muscles for	environments can	study the work of	characteristics and	
need to respect	(caterpillar).	basic parts of the	importance for	support,	change and that	naturalists and	based on	
and care for the		human body and	humans of	protection and	this can	animals	similarities and	
natural		say which part of	exercise, eating	movement.	sometimes pose	behaviourists.	differences,	
environment and		the body is	the right amounts	<ul> <li>Identify and</li> </ul>	dangers to living	<ul><li>Describe the</li></ul>	including micro-	
all living things.		associated with	of different types	describe the	things.	changes as	organisms, plants	
		each sense.	of food, and	functions of	<ul> <li>Describe the</li> </ul>	humans develop	and animals.	
		<ul> <li>Identify and</li> </ul>	hygiene.	different parts of	simple functions	to old age.	<ul> <li>Identify the</li> </ul>	
		name a variety of	<ul> <li>Explore and</li> </ul>	flowering plants,	of the basic parts		main parts of the	
		common plants	compare the	including the	of the digestive		human circulatory	
		(wild and garden),	differences	roots, stem/trunk,	system in humans.		system, and	
		including deciduous	between things	leaves and	<ul> <li>Describe the</li> </ul>		describe the	
		and evergreen	that are living or	flowers.	simple functions		functions of the	
		trees.	dead.	<ul> <li>Explore the</li> </ul>	of the basic parts		heart, blood	
		<ul> <li>Identify and</li> </ul>	<ul> <li>Understand</li> </ul>	requirements of	of the digestive		vessels and blood.	
		describe the basic	habitats and how	plants for life and	system and teeth		<ul> <li>Learn how to</li> </ul>	
		structure of a	they provide basic	growth (air, light,	in humans.		keep their bodies	
		variety of common	needs of plants,	water, nutrients	<ul> <li>Construct and</li> </ul>		healthy and how	
		flowering plants,	animals and	from soil and	interpret a variety		their bodies might	
		including trees.	humans (including	room to grow)	of food chains,		be damaged	
			food chains).	and how they vary	identifying		(lifestyle choices	
			<ul> <li>Understand</li> </ul>	in different plants.	producers,		including diet,	
			lifecycles of					



plants, animals and humans.
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      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      Observe and water is transported within animals, including humans.      Explore the part that flowers play in the life-cycle of flowering plants.      Scientists and lnventors      Scientists and lnventors      Explore the work of scientists, such as Carl Linnaeus, a pioneer of classification.
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  • Explore the part that flowers play in the life-cycle of flowering plants.  • Explore the part that flowers play in the life-cycle of flowering plants.  • Explore the part that flowers play in the life-cycle of flowering plants.  • Explore the work of scientists, such as Carl Linnaeus, a pioneer of classification.
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• Find out and describe how plants need water, light and a suitable temperature to grow and stay  • Find out and describe how flowering plants.  in the life-cycle of flowering plants.  • Explore the work of scientists, such as Carl Linnaeus, a pioneer of classification.
describe how plants need water, light and a suitable temperature to grow and stay  describe how plants.  flowering plants.  Scientists and liventors  flowering plants.  • Explore the work of scientists, such as Carl Linnaeus, a pioneer of classification.
plants need water, light and a suitable temperature to grow and stay  plants need water, light and a scientists and lnventors  Scientists and lnventors pioneer of classification.
light and a suitable Inventors temperature to grow and stay  Scientists and Inventors Inventors Explore the part  as Carl Linnaeus, a pioneer of classification.
suitable temperature to grow and stay  suitable temperature to explore the part  temperature to some stay  temperature to explore the part  temperature to classification.
temperature to grow and stay  • Explore the part
grow and stay • Explore the part
healthy. that flowers play
in the life-cycle of
flowering plants.



			Mat	erials			
Use all their	Observe and	<b>Everyday Materials</b>	Use of Everyday	Rocks	States of Matter	Properties and	Cross-curricular
senses in hands in exploration of natural materials.  • Explore collection of materials with similar and/or different properties.  • Talk about what they see using a wide vocabulary.  • Talk about differences between materials and changes they notice.	interact with natural processes such as ice melting • Explore different materials. • Look closely at similarities, differences, patterns and change in materials.	Distinguish between an object and the material from which it is made.     Identify, name and compare a variety of everyday materials and describe their properties.     Compare and group a variety of everyday materials on the basis of their simple properties.	Materials  • Identify and compare the suitability of a variety of everyday materials for different purposes.  • Find out how the shapes of solid objects made from some materials can be changed (by squashing, bending, twisting and stretching).	Compare and group together different kinds of rocks, based on 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.	• Explore a variety of everyday materials and develop simple descriptions of the 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 the temperatures at which this happens in degrees Celsius (°C). • Identify the part played by evaporation and condensation in the water cycle and explore the link between evaporation and temperature.	Changes of Materials  Understand comparative and fair tests. Compare and group together everyday materials on the basis of their properties. Know that some materials will dissolve in liquid. Decide how mixtures might be separated and understand the difference between reversible and irreversible changes. Demonstrate that dissolving, mixing and changes of state are reversible changes. Explain that some changes result in the formation of new materials and this	from our Craft Curriculum.  • Select from and use a wider range of materials or components including construction materials, textiles and ingredients according to their functional properties and aesthetic qualities.



			change is usually irreversible.	



	Light and Sound								
Cross-curricular				Recognise the	Identify how		<ul> <li>Recognise that</li> </ul>		
from our Craft				need light in order	sounds are made,		light appears to		
Curriculum.				to see things, and	associating some		travel in straight		
				that darkness is	of them with		lines.		
• To show skill in				the absence of	something		<ul> <li>Explain that</li> </ul>		
making toys work				light.	vibrating and		objects are seen		
by pressing parts				<ul> <li>Notice that light</li> </ul>	these vibrations		because they give		
of lifting flaps to				is reflected from	travel through a		out or reflect light		
achieve effects				surfaces.	medium to the		into the eye and		
such as sound,				<ul> <li>Recognise that</li> </ul>	ear.		explain why		
movement or new				light from the sun	<ul> <li>Understand how</li> </ul>		shadows have the		
images.				can be dangerous	pitch and volume		same shape as the		
				and that there are	of a sound can be		objects that cast		
				ways to protect	changed.		them.		
				their eyes. Notice	<ul> <li>Recognise that</li> </ul>		• Work		
				that light is	sounds get fainter		scientifically by		
				reflected from	as the distance		investigating a		
				surfaces.	from the sound		range of		
				<ul> <li>Recognise that</li> </ul>	source increases.		phenomena		
				shadows are			involving light		
				formed when the			(including		
				light from a light			rainbows, colours		
				source is blocked			on soap bubbles		
				by an opaque			and coloured		
				object.			filters).		
				<ul> <li>Find patterns in</li> </ul>					
				the way that the					
				size of shadows					
				change.					
				<u> </u>					

### Science Curriculum FHC



	Forces							
• Explore and talk			<ul> <li>Compare how</li> </ul>		<ul> <li>Explain that</li> </ul>	Cross-curricular		
about the			things move on		unsupported	from our Craft		
difference forces			different surfaces.		objects fall	Curriculum.		
they can feel.			<ul> <li>Notice that</li> </ul>		towards the Earth			
			some forces need		because of the	<ul> <li>Understand and</li> </ul>		
			contact between		force of gravity	use mechanical		
			two objects, but		acting upon the	systems in their		
			magnetic forces		object	products (for		
			can act at a		<ul> <li>Identify and</li> </ul>	example, gears,		
			distance.		explore the effects	pulleys, cams,		
			<ul> <li>Observe and</li> </ul>		of air resistance,	levers and		
			predict how		water resistance	linkages) with an		
			magnets have		and friction.	understanding of		
			poles that attract		<ul> <li>Recognise that</li> </ul>	the effects forces		
			or repel each		some	have, in context.		
			other and attract		mechanisms,			
			some materials		including levers,			
			and not others.		pulleys and gears,			
			<ul> <li>Compare and</li> </ul>		allow a smaller			
			group together a		force to have a			
			variety of		greater effect.			
			everyday		<ul> <li>Explore the work</li> </ul>			
			materials on the		of how Galileo			
			basis of whether		Galilei and Isaac			
			they are attracted		Newton helped			
			to a magnet.		develop the			
					theory of			
					gravitation.			



Earth and Space								
	• Observe changes across the 4 seasons. • Observe and describe weather associated with the season and how day length varies.	Earth an	d Space		<ul> <li>Describe and understand our solar system.</li> <li>Describe the movement of the Earth and other planets relative to the sun.</li> <li>Describe the movement of the Moon relative to the Earth.</li> <li>Describe the sun, Earth and moon as approximately spherical bodies.</li> <li>Use the idea of</li> </ul>	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		
					the Earth's rotation to explain day and night.	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.		



	Electi	icity	
		Identify	Associate the
		common	brightness of a
		appliances that	lamp or the
		run on electricity.	volume of a
		• Draw, construct	buzzer with the
		and use simple	number and
		circuits, naming its	voltage of cells
		basic parts.	used in the circuit.
		Identify whether	<ul> <li>Compare and</li> </ul>
		or not a lamp will	give reasons for
		light in a simple	variations in how
		circuit.	components
		Recognise that a	function.
		switch opens and	<ul> <li>Construct and</li> </ul>
		closes a circuit.	adapt simple
		Recognise some	series circuits and
		common	answer question
		conductors and	about the
		insulators, and	changes.
		associate metals	<ul> <li>Represent a</li> </ul>
		with being good	circuit in a
		conductors.	diagram using
		Cross-curricular	recognised
		from our Craft	symbols.
		Curriculum.	
		Understand and	
		use electrical	
		systems in their	
		products (for	
		example series	
		circuits	
		incorporating	
		switches, bulbs,	



		buzzers and	
		motors.	

## **Progression of Vocabulary**

Year 1					
Unit	Vocabulary				
Living Things (Animals, Humans and Plants)	plants, wild, garden, deciduous, blossom, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud, evergreen, structure, flowering, trees, vegetables, leaves, flowers, blossom, petals, animals, fish, amphibians, reptiles, birds, mammals, carnivores, herbivores, omnivores, compare, label, human body, sense, classification, structure, features, head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves, senses, touch, see, smell, taste, hear				
Earth and Space (Seasonal Changes)	Earth, sun, moon, planet, space, star. Weather (sunny, rainy, windy, snowy etc.) Seasons (Winter, Summer, Spring, Autumn), sun, sunrise, sunset, day length				
Materials	object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card, rubber, wool, clay, properties, compare, group, physical, hard, soft, stretchy, stiff, shiny, dull, rough, smooth, bendy, waterproof, opaque transparent, absorbent				



Year 2					
Unit	Vocabulary				
Living Things (Animals, Humans and Plants)	living, dead, never been alive, suited, suitable, basic needs, food chain, shelter, move, feed, animals, observe, local habitats, micro-habitats, plants, light, shade, sun, warm, cool, water, grow, healthy, temperature, seed, bulb, root, petal, stem, offspring, reproduction, growth, child, young/old stages, exercise, heartbeat, breathing, hygiene, germs, disease, food types, opaque, transparent and translucent, reflective, non-reflective, flexible, rigid, shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching, identify, compare, suitability, wood, metal, plastic, glass, brick, rock, paper, cardboard, shapes, objects, solid, squashing, bending, twisting, stretching				
Materials (Use of everyday Materials)	identify, compare, suitability, wood, metal, plastic, glass, brick, rock, paper, cardboard, shapes, objects, solid, squashing, bending, twisting, stretching				



Year 3					
Unit	Vocabulary				
Living Things (Animals, Humans and Plants)	nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, support, protect, move, skull, ribs, spine, muscles, joints, human, food, animals, photosynthesis, pollen, insect/wind pollination, seed formation, seed dispersal, wind dispersal, animal dispersal, water dispersal, roots, stem/trunk, leaves, flowers, plants, growth, air, light, water, nutrients, soil, transported, life cycle, nutrition, stigma, anther, filament, style				
Materials (Rocks)	compare, group, rocks, pebble, grain, layers, locality, physical, properties, soils, peat, sandy/chalk/clay soil, hard, soft, marble, chalk, granite, slate, sandstone, texture, absorb water, fossil, formed, appearance, organic, matter, durable, texture, magma, fossilization, decompose				
Forces and Magnets	force, push, pull, twist, contact force, non-contact force, magnetic force, magnet, strength, bar magnet, ring magnet, button magnet, horseshoe magnet, attract, repel, magnetic material, metal, iron, steel, poles, north pole, south pole, compare, surfaces, friction				
Light and Sound	light, light source, dark, reflect, pattern, artificial, natural, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous				



Year 4					
Unit	Vocabulary				
Living Things (Animals, Humans and Plants)	classification, classification keys, environment, habitat, human impact, positive, negative, migrate, hibernate, locality, identify, local, dangers, living things, function digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, nutrients, large intestine, rectum, anus, teeth, incisor, canine, molar, premolars, herbivore, carnivore, omnivore, producer, predator, prey, food chain, chewing, crushing, grinding, tearing, biting, ripping, producers, predators, prey, enzymes, hygiene				
Materials (States of Matter)	solid, liquid, gas, state change, melting, freezing, melting point, boiling point, temperature, water cycle, explore, materials, matter, observe, change, heat, cool, measure, Celsius, evaporation, condensation, association, rate, conductor, insulator				
Light and Sound (Sound)	sound, source, vibrate, vibration, travel, pitch (high, low), volume, faint, loud, insulation, travel, medium, features, object, patterns, distance, waves, tone, speed				
Electricity	electricity, electrical appliance/device, mains, plug, electrical circuit, complete circuit, component, cell, battery, positive, negative, connect/connections, loose connection, short circuit, crocodile clip, bulb, switch, buzzer, motor, conductor, insulator, metal, non-metal, symbol, wire, devices, symbols, conventional, precautions, safely, open, close, lamp resistance				



Year 5					
Unit	Vocabulary				
Living Things (Animals, Humans and Plants)	life cycles, mammal, amphibian, insect, bird, reproduction, plants, animals, environment, naturalists, behaviourists, sexual/asexual reproduction, sexual, sperm, fertilises, egg, humans, old age, timeline, growth, puberty, stigma, anther, filament, style, embryo, metamorphosis, live young, runners, bulbs, cuttings				
Materials (Properties and Changes of Materials)	compare, materials, properties, hardness, solubility, transparency, conductivity (electrical and thermal), magnets, dissolve, liquid, solution, substance, solid, gas, separate, filtering, sieving, evaporating, fair, comparative, mixing, reversible, irreversible, changes of state, formation, melting, processes				
Earth and Space	Earth, sun, solar system, planets, movement, spherical body, moon, rotation, Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, dwarf planet, celestial, orbits, axis, hemisphere, diameter, rotates, star				
Forces	gravity, objects, air resistance, water resistance, surfaces, friction, push, pull, force, Earth, mechanisms, lever, pulley, gear, simple machines Newton, Newton meter, Isaac Newton, gravitation, theory, unbalanced				



Year 6					
Unit	Vocabulary				
Living Things (Animals, Humans and Plants)	vertebrates, fish, amphibians, microorganisms, subdivided, invertebrates, reptiles, arthropods, birds, mammals, invertebrates, insects, classification, spiders, snails, worms, Carl Linnaeus, classification, flowering, non-flowering heart, pulse, rate, pumps, function, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles, cycle, circulatory system, diet, exercise, substance, drugs, lifestyle				
Earth and Space (Evolution and Inheritance)	Offspring, sexual reproduction, vary, characteristics, suited, adapted, environment, inherited, species, fossils, evolution, adaptation, inhabited, Earth				
Electricity	circuit, complete circuit, energy, variations, components, circuit diagram, circuit symbol, cell, battery, bulb, buzzer, motor, conductor, insulator, switch, voltage				
Light and Sound (Light)	light, straight lines, dark, light source, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, light rays, objects, reflect, refraction, travels, shadows, periscope, phenomena, rainbow, filter				



## <u>Y1 – 6 Coverage Overview</u>

Year Groups	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Earth and Space	Living Things (Animals, Humans and Plants)	Living Things (Animals, Humans and Plants)	<u>Materials</u>	Living Things (Animals, Humans and Plants)	Living Things (Animals, Humans and Plants)
	Seasonal Changes	Animals (Including Humans)	Animals (Including Humans)	Everyday Materials	Plants	Plants
Year 2	<u>Materials</u>	Living Things (Animals, Humans and Plants)				
	Use of Everyday Materials	Animals (Including humans)	Living things and their habitats	Living things and their habitats	Plants	Plants
					SATS	SATS
Year 3	Living Things (Animals, Humans and Plants)	<u>Materials</u>	Forces and Magnets	Light & Sound	Light & Sound	Living Things (Animals, Humans and Plants)
	Animals (including humans)	Rocks		Light	Light	Plants
Year 4	Living Things (Animals, Humans and Plants)	Living Things (Animals, Humans and Plants)	<u>Electricity</u>	<u>Materials</u>	Light & Sound	<u>Light &amp; Sound</u>
	Living things and their habitats	Animals (Including humans)		States of Matter	Sound	Sound
Year 5	Forces and Magnets	Earth and Space	<u>Materials</u>	<u>Materials</u>	Living Things (Animals, Humans and Plants)	Living Things (Animals, Humans and Plants)
	Forces	Earth and Space	Properties and Changes of Materials	Properties and Changes of Materials	Living things and their habitats	Animals (including humans)
Year 6	<u>Electricity</u>	Living Things (Animals, Humans and Plants)	Light and Sound	Light and Sound	Living Things (Animals, Humans and Plants)	Living Things (Animals, Humans and Plants)
		Evolution and Inheritance	Light	Light	Living things and their habitats	Animals (including humans)



# **EYFS Coverage Overview**

Year Groups	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
FS1	Understanding the World	Understanding the World	Understanding the World	Understanding the World	Understanding the World	Understanding the World
	Exploration of Natural World - animals & their habitats and seasonal changes	Exploration of Natural World - animals & their habitats and seasonal changes	Exploration of Natural World — care, growth and change of living things (plants and animals) Planting and growing Bean experiment Melting ice	Exploration of Natural World – care, growth and change of living things (plants and animals) Planting and growing Bean experiment Melting ice	Exploration of Natural World - materials, equipment and weather	Exploration of Natural World - materials, equipment and weather
FS2	Understanding the World	Understanding the World	Understanding the World	Understanding the World	Understanding the World	Understanding the World
	<ul> <li>To explore the natural world around them and describe what they see hear and feel whilst outside.</li> <li>To understand the effect of changing seasons on the natural world around them. (Autumn)</li> </ul>	To explore the natural world around them and describe what they see hear and feel whilst outside.	●To explore the natural world around them and describe what they see hear and feel whilst outside.  ●To understand the effect of changing seasons in the natural world around them. (Winter)	•To understand the effect of changing seasons on the natural world around them. (Spring) •To look at and understand the life cycle of plants and animals.	•To understand the effect of changing seasons on the natural world around them. (Summer) •To look at and understand the life cycle of plants and animals.	•To look at and understand the life cycle of plants and animals.



## **Focus Scientists**

Year Groups	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	
Year 1	Mike Seidel (Seasonal Changes)	Jane Goodall (Animals including Humans)		Charles Macintosh (Everyday Materials)	Maria Sibylla Merian (Plants)		
Year 2	John McAdam (Uses of everyday materials)	Elizabeth Garrett Anderson (Animals including Humans)		Dawood Qureshi (Living things and their habitats)		Poppy Okotcha (Plants)	
Year 3	Marie Curie (Animals including Humans)	Mary Anning (Rocks)	William Gilbert (Forces and Magnets)	Percy Shaw (Light)		George Washington Carver (Plants)	
Year 4	Gerald Durrell (Living things and their habitats)	Ivan Pavlov (Animals including Humans)	Garett Morgan (Electricity)	Maria Telkes Aristo (States of Matter) (Sour			
Year 5	Sir Isaac Newton (Forces)	Margaret Hamilton (Earth and Space)	Stephanie Kwolek (Properties and Changes of Materials)		Eva Crane (Living things and their habitats)	David Attenborough (Animals including Humans)	
Year 6	Nikola Tesla (Electricity)	Charles Darwin (Evolution and Inheritance)		s Webb <sub>ight)</sub>	Libbie Hyman (Living things and their habitats)	Marie Maynard Daly (Animals including Humans)	