Long Term Plan Template
Whitfield St James' CE (VC) Primary School
Science overview

Main theme			History			Geography			History		
2022-2023– KS1	Driver project		 **Childhood**			 **Bright Lights, Big City**			 **School Days**		
	English pack genres		Autobiographies	Non-chronological reports	Riddles	Information posters	Directions	Narratives	List poems	Diaries	Letters
	Book study		Wilfrid Gordon McDonald Partridge			Topsy and Tim Visit London			Whiffy Wilson: The Wolf who wouldn't go to school		
	Subject-	Geog	Our Wonderful World			Covered in main project			Geography revision and retrieval practice		
		Science	Everyday Materials	Human senses		Seasonal changes			Plant parts	Animal parts	
			Y1 Distinguish between an object and the material from which it is made. **Y1** Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. **Y1** Describe the simple physical properties of a variety of everyday materials. **Y1** Compare and group together a variety of everyday materials on the basis of their simple physical properties. Distinguish between an object and the material from which it is made. **Y1** Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. **Y1** Describe the simple physical properties of a	**Y1** Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). **Y1** Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. **Y1** Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.		**Y1** Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. **Y1** Observe changes across the four seasons. **Y1** Observe and describe weather associated with the seasons and how day length varies. **Y1** Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. **Y1** Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them.			**Y1** Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. **Y1** Identify and describe the basic structure of a variety of common flowering plants, including trees. **Y1** Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. **Y1** Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them.	**Y1** Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. **Y1** Identify and name a variety of common animals that are carnivores, herbivores and omnivores. **Y1** Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). **Y1** Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.

			variety of everyday materials. **Y1** Compare and group together a variety of everyday materials on the basis of their simple physical properties.				

Long Term Plan Template
Whitfield St James' CE (VC) Primary School
Science overview

2023-2024 – KS1	Driver project		**Movers and Shakers**				**Coastline**				**Magnificent Monarchs**	
	English pack genres	Biographies	Newspaper reports	Posters	Speeches	Descriptions	Adventure narratives	Non-chronological reports	Persuasive writing	Information leaflets	Kennings poems	Comic strips
	Book study	Rosa Parks				Katie Morag and the New Pier				Queen Victoria's Bathing Machine		
	Subject: Geog	Let's explore the world				Covered in main project				Geography revision and retrieval practice		
	Subject: Science	Human survival		Habitats		Uses of materials		Plant survival		Animal survival		
		Y2 Notice that animals, including humans, have offspring which grow into adults. **Y2** Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). **Y2** Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.		**Y2** Explore and compare the differences between things that are living, dead, and things that have never been alive. **Y2** 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. **Y2** Identify and name a variety of plants and animals in their habitats, including microhabitats. **Y2** 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.		**Y2** Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. **Y2** Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.		**Y2** 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. **Y2** Identify and name a variety of plants and animals in their habitats, including microhabitats. **Y2** Observe and describe how seeds and bulbs grow into mature plants. **Y2** Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.		**Y2** 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. **Y2** Identify and name a variety of plants and animals in their habitats, including microhabitats. **Y2** 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. **Y2** Notice that animals, including humans, have offspring which grow into adults. **Y2** Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). **Y2** Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. **Y2** Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.		

Long Term Plan Template
Whitfield St James' CE (VC) Primary School
Science overview

2022-2023 – KS2	Driver project		**Maafa**					**Frozen Kingdom**				**Britain at War**	
	English pack genres	Newspaper reports	Persuasive letters	Non-chronological reports	Acrostic poems	Non-chronological reports	Haikus	Newspaper reports	Adventure narratives	Persuasive posters	Historical narratives	Nonets	
	Novel study	Freedom				**Y3/4 The Last Bear Y4/5/6** The Wolf Wilder				Goodnight Mister Tom			
	Subject-specific projects: Geog	Our Changing World				Covered in main project				Geography revision and retrieval practice			
	Subject-specific projects: Science	Circulatory system – 5/6 (NC animals including humans) Y6 - Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. Y6 - Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. Y6 - Describe the ways in which nutrients and water are transported within animals, including humans. Digestive system – 3/4 and 4/5 (NC animals including humans) **Y4** Describe the simple functions of the basic parts of the digestive system in humans. Y4 Identify the different types of teeth in humans and their simple functions. Y4 Construct and interpret a variety of food chains, identifying producers, predators and prey. Y4 Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.				Covered in main project Y6 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. Y6 Give reasons for classifying plants and animals based on specific characteristics. Y6 Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.				Light and shadows – 3/4 and 4/5 Y3 Recognise that they need light in order to see things and that dark is the absence of light. Y3 Notice that light is reflected from surfaces. Y3 Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. Y3 Recognise that shadows are formed when the light from a light source is blocked by a solid object. Y3 Find patterns in the way that the size of shadows change. Light theory – 5/6 Y6 - Recognise that light appears to travel in straight lines.	Grouping and classifying – 3/4 Y4 Recognise that living things can be grouped in a variety of ways. Y4 Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. Evolution and inheritance – 5/6 (NC Living things and their habitats also) Y6 - Describe how living things are classified into broad groups according to common observable characteristics and based on similarities

Long Term Plan Template
Whitfield St James' CE (VC) Primary School
Science overview

				Electrical circuits and conductors – 3/4 and 4/5 Y4 - Identify common appliances that run on electricity. Y4 Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. Y4 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. Y4 Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Y4 Recognise some common conductors and insulators, and associate metals with being good conductors. Y4 Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. Electrical circuits and components – 5/6 **Y6** - Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. **Y6** - 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. **Y6** - Use recognised symbols when representing a simple circuit in a diagram	Y6 - 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. Y6 - 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. Y6 Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. Y6 Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. Y6 Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future	and differences, including micro-organisms, plants and animals. Y6 - Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. Y6 Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents Y6 Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.

Year 2023-2024												
	Driver project		**Through the Ages**				**Rock, Relics and Rumbles**				**Emperors and Empires**		
	English pack genres	Narratives	Instructions	Cinquains	Chronological reports	Non-chronological reports	Shape poems	Newspaper reports	Diaries	Biographies	Letters	Myths	Poems

Long Term Plan Template
Whitfield St James' CE (VC) Primary School
Science overview

	Novel study		Stig of the Dump	The Firework-Maker's Daughter	Roman Tales: The Goose Guards	
	Subject-specific projects	Geog	One Planet, Our World	Covered in main project	Geography revision and retrieval practice	
		Science	Skeletal and muscular systems – 3/4 (NC animals including humans) Y3 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. Y3 Identify that humans and some other animals have skeletons and muscles for support, protection and movement. Human reproduction and ageing – 5/6 and 4/5 (NC – living things and their habitats and animals including humans) Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. Y5 Describe the life process of reproduction in some plants and animals. Y5 Describe the changes as humans develop to old age. Y5 Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.	Covered in main project (all year groups) Y3 Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. Y3 Describe in simple terms how fossils are formed when things that have lived are trapped within rock. Y3 Recognise that soils are made from rocks and organic matter Forces and magnets – 3/4 Y3 Compare how things move on different surfaces. Y3 Notice that some forces need contact between two objects, but magnetic forces can act at a distance. Y3 Observe how magnets attract or repel each other and attract some materials and not others. Y3 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. Y3 Describe magnets as having two poles. Y3 Predict whether two magnets will attract or repel each other, depending on which poles are facing. Forces and mechanism – 5/6 and 4/5 Y5 Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. Y5 Identify the effects of air resistance, water resistance and friction, that act between moving surfaces. Y5 Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	Plant nutrition and reproduction – everyone Y3 Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. Y3 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. Y3 Investigate the way in which water is transported within plants. Y3 Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	Light and Shadows – 3/4 Y3 Recognise that they need light in order to see things and that dark is the absence of light. Y3 Notice that light is reflected from surfaces. Y3 Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. Y3 Recognise that shadows are formed when the light from a light source is blocked by a solid object. Y3 Find patterns in the way that the size of shadows change. Light theory – 4/5 and 5/6 Y6 Recognise that light appears to travel in straight lines. Y6 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. Y6 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. Y6 Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.

Long Term Plan Template
Whitfield St James' CE (VC) Primary School
Science overview

						Y6 Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. Y6 Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future

2024-2025 – KS2	Driver project		 **Invasion**				 **Misty Mountain, Winding River**				 **Ancient Civilisations**		
	English pack genres		Anglo-Saxon poems	Playscripts	Norse myths	Non-chronological reports	Diaries	Leaflets	Explanations	Narrative poems	Free verse poems	Instructions	Stories from other cultures
	Novel study		The Saga of Erik the Viking				King of the Cloud Forests				Secrets of a Sun King		
	Subject-specific projects	Geog	Interconnected World				Covered in main project				Geography revision and retrieval practice		
		Science	Digestive system 3/4 (NC animals including humans) **Y4** Describe the simple functions of the basic parts of the digestive system in humans. **Y4** Identify the different types of teeth in humans and their simple functions. **Y4** Construct and interpret a variety of food chains, identifying producers, predators and prey. **Y4** Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.		Sound – 3/4 **Y4** Identify how sounds are made, associating some of them with something vibrating. **Y4** Recognise that vibrations from sounds travel through a medium to the ear. **Y4** Find patterns between the pitch of a sound and features of the object that produced it. **Y4** Find patterns between the volume of a sound and the strength of the		Covered in main project (everyone) **Y4** Recognise that environments can change and that this can sometimes pose dangers to living things. **Y4** Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.				Electrical circuits and conductors – 3/4 **Y4** Identify common appliances that run on electricity. **Y4** Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. **Y4** 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. **Y4** Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. **Y4** Recognise some common conductors and insulators, and associate metals with being good conductors. **Y4** Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.	
							States of Matter – Y3/4 **Y4** Use straightforward scientific evidence to answer questions or to support their findings. **Y4** Compare and group materials together, according to whether they are	Grouping and classifying – 3/4 **Y4** Use straight forward scientific evidence to answer questions or to support their findings. **Y4** Recognise that living things can be grouped in a variety of ways. **Y4** Explore and use classification keys to help group, identify and			Electrical circuits and components – 5/6 and 4/5		

Cornerstones

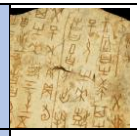
Curriculum maestro

Long Term Plan Template
Whitfield St James' CE (VC) Primary School
Science overview

			Circulatory system – 4/5 and 5/6 (NC animals including humans) **Y6** Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. **Y6** Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. **Y6** Describe the ways in which nutrients and water are transported within animals, including humans.	vibrations that produced it. Y4 Recognise that sounds get fainter as the distance from the sound source increases. Light and space – 4/5 and 5/6 Y5 Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. Y5 Describe the movement of the Moon relative to the Earth. Y5 Describe the Sun, Earth and Moon as approximately spherical bodies. Y5 Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.	solids, liquids or gases. Y4 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). Properties and changes of materials 5/6 4/5 Y5 Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. Y5 Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. Y5 Demonstrate that dissolving, mixing and changes of state are reversible changes. Y5 Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated	name a variety of living things in their local and wider environment. Evolution and inheritance – 4/5 and 5/6 Y6 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. Y6 Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. Y6 Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents Y6 Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.	Y6 Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. Y6 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. Y6 Use recognised symbols when representing a simple circuit in a diagram

Long Term Plan Template
Whitfield St James' CE (VC) Primary School
Science overview

					with burning and the action of acid on bicarbonate of soda. Y5 Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.		

2025-2026 – KS2	Driver project		**Dynamic Dynasties**				**Sow, Grow and Farm**				**Groundbreaking Greeks**		
	English pack genres	Narrative poems	Biographies	Stories from other cultures		Non-chronological reports	Diaries	Leaflets	Balanced arguments	Greek myths	Balanced arguments	Playscripts	Odes
	Novel study	Bronze and Sunflower				The Secret Garden				Who Let the Gods Out?			
Subject-specific projects	Geog	Investigating our World				Covered in main project				Geography revision and retrieval practice			
	Science	Forces and magnets – 3/4 and 4/5 Y3 Compare how things move on different surfaces. Y3 Notice that some forces need contact between two objects, but magnetic forces can act at a distance. Y3 Observe how magnets attract or repel each other and attract some materials and not others. Y3 Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and	Sound – 3/4 Identify how sounds are made, associating some of them with something vibrating. Y4 Recognise that vibrations from sounds travel through a medium to the ear. Y4 Find patterns between the pitch of a sound and features of the object that produced it. Y4 Find patterns between the volume			Skeletal and muscular systems 3/4 and 4/5 Y3 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. Y3 Identify that humans and some other animals have skeletons and muscles for support, protection and movement. Human reproduction and ageing – 5/6 (Living things and their habitats and animals including humans NC)				States of matter 3/4 and 4/5 Y4 Use straightforward scientific evidence to answer questions or to support their findings. Y4 Compare and group materials together, according to whether they are solids, liquids or gases. Y4 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). Properties and changes of materials 5/6 Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.		

Long Term Plan Template
Whitfield St James' CE (VC) Primary School
Science overview

			identify some magnetic materials. Y3 Describe magnets as having two poles. Y3 Predict whether two magnets will attract or repel each other, depending on which poles are facing. Forces and Mechanisms – Y5/6 Y5 Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. Y5 Identify the effects of air resistance, water resistance and friction, that act between moving surfaces. Y5 Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	of a sound and the strength of the vibrations that produced it. Y4 Recognise that sounds get fainter as the distance from the sound source increases. Light and space – 4/5 and 5/6 Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. Y5 Describe the movement of the Moon relative to the Earth. Y5 Describe the Sun, Earth and Moon as approximately spherical bodies. Y5 Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.	Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. Y5 Describe the life process of reproduction in some plants and animals. Y5 Describe the changes as humans develop to old age. Y5 Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.	Y5 Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. Y5 Demonstrate that dissolving, mixing and changes of state are reversible changes. Y5 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. Y5 Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.