



St Augustine's Long Term Plan Science Intent



EYFS Curriculum Topics						
	Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
EYFS	<u>What's your superpower?</u>	<u>Castles, Knights and dragons</u>	<u>Zoom to the moon</u>	<u>Dinosaurs Rock</u>	<u>The wheels on the bus go round and round</u>	<u>Hullaballoo at the zoo</u>
EYFS Statements related to Science	Understanding the World. The Natural World. To know how to explore the natural world around them.	Communication and Language To know and learn new vocabulary.	Communication and Language To know how to ask questions to find out more and check understanding. Understanding the World. The Natural World. To Know how to describe what they see, hear and feel whilst outside. To know how to recognise some environments that are different to the one in which they live. To Know and understand the effect of changing seasons on the	Communication and Language Speaking To Know how to use sentences that are well formed. (However, they may still have some difficulties with grammar. For example, saying 'sheeps' instead of 'sheep' or 'goed' instead of 'went') To know how to describe events in some detail. To know how to use talk to help work out problems and organise thinking and activities, explain how things work	ELG: Listening, Attention and Understanding. To know how to make comments about what they have heard and ask questions to clarify their understanding;	ELG: Personal, Social and Emotional Development Managing self To know how to manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices ELG: Understanding the world. The Natural World To know about and explore the natural world around them, making observations and drawing pictures of animals and plants.



St Augustine's Long Term Plan Science Intent

			natural world around them.	and why they might happen. To know how to use new vocabulary in different contexts.		ELG: Understanding the world. To know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. ELG: Understanding the world. To understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.
EYFS Statements related to Science	Reception Communication and Language Learn new vocabulary. Ask questions to find out more and to check what has been said to them. Articulate their ideas and thoughts in well-formed sentences. Describe events in some detail.					



St Augustine's Long Term Plan Science Intent

Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen.

Use new vocabulary in different contexts.

Personal, Social and Emotional Development

Know and talk about the different factors that support their overall health and wellbeing:

Regular physical activity

Healthy eating

Tooth brushing

Sensible amounts of 'screen time'

Having a good sleep routine

Being a safe pedestrian

Understanding the World

Explore the natural world around them.

Describe what they see, hear and feel while they are outside.

Recognise some environments that are different to the one in which they live.

Understand the effect of changing seasons on the natural world around them.

ELG

Communication and Language

Listening, Attention and Understanding

Make comments about what they have heard and ask questions to clarify their understanding.

Personal, Social and Emotional Development

Managing self

Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.

The Natural World

Explore the natural world around them, making observations and drawing pictures of animals and plants.

Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.

Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.



St Augustine's Long Term Plan Science Intent

	<p>Plants</p> <ul style="list-style-type: none">• Use all their senses in hands-on exploration of natural materials.• Explore collections of materials with similar and/or different properties. • Plant seeds and care for growing plants.• Understand the key features of the life cycle of a plant and an animal.• Begin to understand the need to respect and care for the natural environment and all living things. <p>Living things and their habitats</p> <ul style="list-style-type: none">• Draw information from a simple map. • Explore the natural world around them. • Describe what they see, hear and feel whilst outside.• Recognise some environments that are different to the one in which they live. <p>Animals including humans</p> <ul style="list-style-type: none">• Talk about members of their immediate family and community.• Name and describe people who are familiar to them. • Recognise some environments that are different to the one in which they live. <p>Seasonal changes</p> <ul style="list-style-type: none">• Explore the natural world around them. • Describe what they see, hear and feel whilst outside.• Understand the effect of changing seasons on the natural world around them. <p>Earth and space</p> <ul style="list-style-type: none">• Explore the natural world around them. • Describe what they see, hear and feel whilst outside. <p>Materials</p> <ul style="list-style-type: none">• Explore the natural world around them.• Describe what they see, hear and feel whilst outside. <p>Sound</p> <ul style="list-style-type: none">• Describe what they see, hear and feel whilst outside. <p>Light</p> <ul style="list-style-type: none">• Describe what they see, hear and feel whilst outside. <p>Forces</p> <ul style="list-style-type: none">• Explore the natural world around them.• Describe what they see, hear and feel whilst outside.
Working scientifically skills	<ul style="list-style-type: none">• show curiosity and ask questions • make observations using their senses and simple equipment • make direct comparisons • use equipment to measure • record their observations by drawing, taking photographs, using sorting rings or boxes and, in Reception, on simple tick sheets • use their observations to help them to answer their questions • talk about what they are doing and have found out • identify, sort and group.



St Augustine's Long Term Plan Science Intent

Knowledge in red is aimed at year 1, Knowledge in green is aimed at year 2, Knowledge in black is aimed at both year 1 & 2
Working Scientifically / Skills differentiated for Y1 & 2

Key stage 1 Year 1/2 Cycle A	Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
Topic	Chemistry Everyday Materials (Y1)	Chemistry Everyday Materials -Investigating the properties of everyday materials. (Y1)	Biology Seasonal Changes (Y1) Home / UK	Biology Animals including humans (Y1)	Biology Plants (Y1)	Biology Seasonal changes (Y1) Hot and cold regions Summer
National Curriculum	<ul style="list-style-type: none">• Know and distinguish between an object and the material from which it is made.• Know, identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock.	<ul style="list-style-type: none">• Know and describe the simple physical properties of a variety of everyday materials.• Know, compare and group together a variety of everyday materials on the basis of their simple physical properties.	<ul style="list-style-type: none">• Know and observe the changes over the four seasons.• Know and observe the weather associated with the seasons and how day length varies.	<ul style="list-style-type: none">• Know, identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.• Know, identify and name a variety of common animals that are carnivores, herbivores and omnivores.• Know, describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).	<ul style="list-style-type: none">• Know, identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.• Know, identify and describe the basic structure of a variety of common flowering plants, including trees.	<ul style="list-style-type: none">• Know and name the seasons.• Know the type of weather in each season.



St Augustine's Long Term Plan Science Intent



				<ul style="list-style-type: none">• Know, identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.		
Core Knowledge (Y1) (Y2)	Know the name of the material and object is made from. Know about the properties of everyday materials.	Know the name of the materials an object is made from. Know about the properties of everyday materials.	Name the seasons and know about the type of weather in each season. Know the names of the four seasons.	Know how to classify a range of animals by amphibian, reptile, mammal, fish and birds. Know and classify animals by what they eat (carnivore, herbivore and omnivore) Know how to sort by living and non-living things.	Know and name a variety of wild and common garden plants. Know which trees are deciduous and evergreen. Know and name the petals, stems, leaves and root of a plants. Know and name the roots, trunk, branches, and leaves of a tree.	Know and name the seasons and know the type of weather in each season.
Wider Knowledge	Know the names of materials.	Know that the same object can be made from different	Know that each season is	Know that carnivores eat meat.	Know where to find plants in the local environment.	Know that seasons are at different times in different countries.



St Augustine's Long Term Plan Science Intent

	<p>Know the difference between the name of an object and what it is made of. Know the properties of some materials. Know that materials are selected for purposes based on the properties.</p>	<p>materials e.g. wooden spoons, plastic spoons and metal spoons. Know the properties of metal, paper, wood and plastic. Know that the properties of materials make some materials more suitable than others for the job.</p>	<p>approximately 3 months long. Know that spring is March, April, May. Know that summer is June, July, August. Know that autumn is September, October, November. Know that winter is December, January, February. Know that the clocks go forward in spring and back in autumn. Know that days are shorter in winter. Know that days are longer in summer.</p>	<p>Know that herbivores eat plants. Know that omnivores eat meat and plants.</p>	<p>Know that different plants like different conditions to grow in the locality e.g. sunlight or shade. Know that different plants grow at different times of the year.</p>	<p>Know that the different weather is associated with different seasons in different countries. Know that the differences in some countries between seasons are more contrasting. Know that some countries have different names for their seasons. Know that not all countries have 4 seasons. Know how people protect themselves in extreme conditions.</p>
<p>Working scientifically</p> <p>Skills</p>	<p>(Y1) Ask questions, set up a test, know if a test has been successful, say what has been learned, explain to someone what has been learned from an investigation, draw conclusions from the questions being asked, use measures to help find out more about the investigations undertaken.</p> <p>(Y2) Ask questions. Use equipment to make observations. Know how to set up a fair test. Draw conclusions from fair tests and explain what has been found out. Classify or group things according to a given criteria. Use measures to find out more about the investigation taken.</p>					



St Augustine's Long Term Plan Science Intent



Diversity Links	Seasons – Know about the climate in other countries around the world. Plants and animals – To know about different plants and animals in various other countries around the world and compare this to our country where we live.				
Vocabulary	Experiment, materials, water, rock, glass, metal, iron, copper, hard, soft, bendy, absorbent, water proof, shiny, dull, rough, smooth, aluminium.	Spring, summer, autumn, winter, hot, cold, rain, snow, cloud, weather, fog, ice, extremes, sun, mist	Parts of the body including those linked to PSHE. Carnivore, herbivore, mammal, reptile, bird, omnivore.	Plant, grow, seed, Root, stem, leaf, branch, trunk, flower, light, water, soil, food, crops, weed.	Monsoons, draught, dry seasons, wet seasons, ice, frozen tornadoes, foods, extreme weather conditions.



St Augustine's Long Term Plan Science Intent

Knowledge in red is aimed at year 1, Knowledge in green is aimed at year 2, Knowledge in black is aimed at both year 1 & 2
Working Scientifically / Skills differentiated for Year 1 & 2

Key stage 1 Year 1/2 Cycle B	Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
Topic	Chemistry Uses of everyday materials (Y2)	Biology Living things and their habitats (Y2)	Biology Living things and their habitats (Y2)	Biology Animals including humans (Y2)	Biology Animals including humans (Y2)	Biology Plants (Y2)
National Curriculum	<ul style="list-style-type: none">• Know, identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.• Know and find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	<ul style="list-style-type: none">• Know, explore and compare the differences between things that are living, dead, and things that have never been alive.• Know and 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.	<ul style="list-style-type: none">• Know, identify and name a variety of plants and animals in their habitats, including microhabitats.• Know and 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.	<ul style="list-style-type: none">• Know and notice that animals, including humans, have offspring which grow into adults.• Know and find out about and describe the basic needs of animals, including humans, for survival (water, food and air).	<ul style="list-style-type: none">• Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene	<ul style="list-style-type: none">• Know, observe and describe how seeds and bulbs grow into mature plants.• Know, find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.



St Augustine's Long Term Plan Science Intent

Core Knowledge Y2 Y1	Know why a materials might or might not be used for a specific job. Know how materials can be changed by squishing, bending, twisting and stretching.	Know and classify things by living, dead and never lived. Know how a specific habitat provides the basic needs of the things living there Match living things to their habitat.	Know and name some of the different sources of food for animals. Know about and explain a simple food chain.	Know the basic stages in a life cycle. Know why, exercise, a balanced diet and good hygiene are important for humans.	Know the basic stages in a life cycle. Know why, exercise, a balanced diet and good hygiene are important for	Know how seeds, plants and bulbs grow. Know what plants need to grow and stay healthy (water, light and suitable temperature)
Wider Knowledge	Know that properties determine the suitability for purpose. Know that materials can be changed. Know that some materials are easier to change than others. Know that some changes are permanent. Know some ways to change a material e.g. bending, folding, and squashing.	Know that some objects used to be alive. Know that animals can be grouped. Know that animals choose their homes based on preferences e.g. bats like the dark. Know that a habitat is the name of where animals live.	Know that a food chain starts with a producer which is always a plant. Know that smaller animals can be sources of food for larger animals. Know that human can be part of the food chain. Know that food chains are a transfer of energy.	Know that mammals give birth to live young and other groups lay eggs. Know that animals reproduce. Know that animals including humans, have animals that look like them. Know that babies will grow into adults.	Know what makes a balanced diet. Know the main food groups. Know what good hygiene is. Know that frequency of hygiene is important. Know the impact of exercise has on the body. Know some ways to exercise safely.	Know which plants grow from seeds and which plants grow from bulbs. Know the impact of not having the correct conditions for life. Know that different plants prefer different conditions to thrive e.g. light and shade.



St Augustine's Long Term Plan Science Intent

Working scientifically	<p>(Y1) Ask questions, set up a test, know if a test has been successful, say what has been learned, explain to someone what has been learned from an investigation, draw conclusions from the questions being asked, use measures to help find out more about the investigations undertaken.</p> <p>(Y2) Ask questions. Use equipment to make observations. Know how to set up a fair test. Draw conclusions from fair tests and explain what has been found out. Classify or group things according to a given criteria. Use measures to find out more about the investigation taken.</p>					
Diversity Links	<p>Animals including humans – To know about women in Zoology when studying animals e.g. Jane Goodall, Terri Irwin, make this explicit to children about females in Science.</p> <p>Plants – Consider how plants are grown in various countries around the world and how this benefits that country.</p>					
Vocabulary	Experiment Materials, water, rock, glass, metal, iron, copper, hard, soft, bendy, absorbent, water proof, shiny, dull, rough, smooth, aluminium, waterproof, squash, bend, twist, stretch, fabric, rubber.	Food chains, habitat, dead, alive, plants, mammals, reptiles, amphibians, carnivores, herbivore, grouped, classify. Living, dead, never been alive, suited, suitable, basic needs, food, food chain, shelter, move, feed Names of local habitats e.g. pond, woodland etc. Names of micro-habitats e.g. under logs, in bushes etc.		Live young. Egg, baby, toddler, child, infant, birth, death, parent, healthy, diet, off-spring, exercise, protein, Carbohydrate, fats, nutrition, dairy, hygiene, fruits and vegetables.		Plants, thrive, conditions, light, dark, water, shade, food, temperature, seed, bulb, grow.



St Augustine's Long Term Plan Science Intent



Knowledge in red is aimed at year 3, Knowledge in green is aimed at year 4, Knowledge in black is aimed at both year 3 & 4
Working Scientifically / Skills differentiated for Year 3 & 4

LKS2 Year 3/4 Cycle A	Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
Topic	Biology Plants (Y3)	Physics Light (Y3)	Chemistry Rocks (Y3)	Biology Animals including humans Y3 (2)	Biology Animals including humans Y3 (2)	Physics Forces and Magnets (Y3)
National Curriculum	<ul style="list-style-type: none">• Know, identify and describe the functions of different parts of flowering plants: roots; stem/trunk; leaves; and flowers.• Know and 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.• Know and investigate the way in which water is transported within plants.• Know and explore the part that flowers play in the life cycle	<ul style="list-style-type: none">• Know and recognise that they need light in order to see things, and that dark is the absence of light.• Know and notice that light is reflected from surfaces.• Know and recognise that light from the sun can be dangerous and that there are ways to protect their eyes.• Know and recognise that shadows are formed when the light from a light source is blocked by an opaque object.• Know and find patterns in the way	<ul style="list-style-type: none">• Know, compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.• Know and describe in simple terms how fossils are formed when things that have lived are trapped within rock.• Know and recognise that soils are made from rocks and organic matter.	<ul style="list-style-type: none">• Know and 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.	<ul style="list-style-type: none">• Know and identify that humans and some other animals have skeletons and muscles for support, protection and movement.	<ul style="list-style-type: none">• Know and compare how things move on different surfaces.• Know and notice that some forces need contact between two objects, but magnetic forces can act at a distance.• Know and observe how magnets attract or repel each other and attract some materials and not others.• Know and compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify



St Augustine's Long Term Plan Science Intent



	of flowering plants, including pollination, seed formation and seed dispersal.	that the size of shadows change.				some magnetic materials. <ul style="list-style-type: none">• Know and describe magnets as having two poles.• Know and predict whether two magnets will attract or repel each other, depending on which poles are facing.
Core knowledge Y3 Y4	Know the functions of different parts of flowering plants and trees. Know how water is transported within plants, know the plants life cycle especially the importance of flowers.	Know that dark is the absence of light. Know that light is needed in order to see and is reflected from a surface. Know and demonstrate how a shadow is formed and explain how a shadow changes shape. Know about the danger of direct sunlight and describe how to keep protected.	Know how soil is made and how fossils are formed.	Know about the importance of a nutritious balanced diet. Know how nutrients, water and oxygen are transported within animals and humans. Know about the skeletal and muscular system of a human.	Know about the importance of a nutritious balanced diet. Know how nutrients, water and oxygen are transported within animals and humans. Know about the skeletal and muscular system of a human.	Know about and describe how objects move on different surfaces. Know how a simple pulley works and can be used to lift an object. Know how some forces require contract and some do not giving examples. Know about and explain how magnets attract and repel. Predict whether magnets attract or repel and give a reason.



St Augustine's Long Term Plan Science Intent



Wider Knowledge	<p>Know what a plant needs to thrive.</p> <p>Know the different parts of a plant: roots, stem, leaves and flower.</p> <p>Know the functions of the roots, leaves, stem and flower.</p> <p>Know how water is transported in a plant.</p> <p>Know what pollination is.</p> <p>Know how seeds are formed.</p> <p>Know that there are different varieties of plant.</p> <p>Know that plants are grown for different purposes and that some are poisonous.</p>	<p>Know how the eye detects light.</p> <p>Know a number of sources of light e.g. sun, candles, electrical light.</p> <p>Know which objects are not sources of light, but reflect light e.g. mirrors.</p> <p>Know that light travels in a straight line.</p> <p>Know that light can be reflected from surfaces and they can change the direction of light.</p> <p>Know that certain materials reflect light.</p> <p>Know that light from the sun can be dangerous and can damage our sight.</p>	<p>Know that rock is a naturally occurring material.</p> <p>Know there are different types of rock e.g. sandstone, limestone, slate etc. which have different properties.</p> <p>Know that rocks can be hard or soft. They have different sizes of grain or crystal. They may absorb water.</p> <p>Know that rocks can be different shapes and sizes (stones, pebbles, boulders).</p> <p>Know that soils are made up of pieces of ground down rock which may be mixed with plant and animal material</p>	<p>Know the 5 food groups (revision of KSI knowledge) and the proportions of each to create a healthy balanced diet.</p> <p>Know the nutritional properties of carbohydrates, fruit and vegetables, proteins and dairy foods.</p> <p>Know the importance of limiting fats and sugars intake.</p>	<p>Know that humans and some other animals have skeletons and some muscles for support, protection and movement.</p> <p>Know that not all animals have an internal skeleton.</p> <p>Know that a skeleton is needed for support, protection and movement.</p> <p>Know how muscles work.</p>	<p>Know magnets have two poles.</p> <p>Use knowledge off magnet poles to predict whether two magnets will attract or repel each other, depending on which poles are facing.</p>



St Augustine's Long Term Plan Science Intent

		<p>Know the different ways to protect our eyes e.g. quality sunglasses and not looking directly at the sun.</p> <p>Know that light can pass through some materials and that other materials can limit the amount of light that passes through.</p> <p>Know that the properties of a material can impact on the effectiveness of their use e.g. reflective materials are used for road safety wear.</p> <p>Know the meaning of vocabulary including opaque, translucent and transparent.</p> <p>Know that shadows are formed when light from a source is blocked from an object.</p> <p>Know that the closer a light sources is to the</p>	<p>(organic matter).</p> <p>Know the type of rock, size of rock pieces and the amount of organic matter affect the property of the soil.</p> <p>Know some rocks contain fossils.</p> <p>Know fossils were formed millions of years ago. When plants and animals died, they fell to the seabed. They became covered and squashed by other material.</p> <p>Know over time the dissolving animal and plant matter is replaced by minerals from the water.</p>			
--	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--



St Augustine's Long Term Plan Science Intent

		object the denser the shadow. Know that shadows can change the shape and density and how this happens. Know the earth spins as it moves around the sun and this causes day and night and the absence of light in the night.				
Skills Scientific enquiry	<p>(Y3)</p> <p>Ask questions.</p> <p>Observe.</p> <p>Use research.</p> <p>Carry out tests to investigate a question.</p> <p>Set up a fair test with different variables.</p> <p>Explain to a partner why a test is fair.</p> <p>Measure carefully to add to scientific learning.</p> <p>Use equipment with more than one scales.</p> <p>Gather and record information using a chart, a matrix or a tally chart.</p> <p>Group information according to common factors.</p> <p>Use bar charts and other statistical tables to record findings.</p> <p>Know how to use a key to help understand information presented in a chart.</p> <p>Be confident to stand in front of others and explain what has been found out.</p> <p>Present findings using written explanations and include diagrams where needed.</p> <p>Make sense of findings and draw conclusions which help them to understand more about scientific information.</p> <p>Amend predictions according to findings.</p> <p>Be prepared to change ideas as a result of what has been found out during a scientific enquiry.</p> <p>(Y4)</p> <p>Ask questions.</p> <p>Use research to find out.</p>					



St Augustine's Long Term Plan Science Intent

	<p>Carry out tests to see. Set up a fair test. Explain to others why a test that has been set up is a fair one. Measure carefully. Gather and record information using a chart, matrix or tally chart. Group information according to common factors. Use bar charts and other statistical tables. Present findings using written explanations and diagrams. Write up findings using a planning, doing and evaluating process. Make sense of findings and draw conclusions. When making predictions there are plausible reasons as to why they have done so. Able to amend predictions according to findings. Prepared to change ideas as a result of what has been found out during a scientific enquiry.</p>				
Diversity Links	<p>Plants – In plants, look at George Washington Carver – A black botanist who developed a method for soil depletion. Forces and magnets – Look at different female physicists in this field e.g. Katherine Johnson. Forces – In forces also look at Stephen Hawking and what he did for Science. Rocks and soils – Look at Kusala Rajendran – an Asian female Scientist who studies earthquakes and their patterns.</p>				
Vocabulary	Pollination, root, stem, leaves, flower, transported, disperse, seed, nutrient, formation, lifecycle, function, requirements, thrive.	Light, dark, shadow, black, transparent, translucent, opaque, reflect, reflection, reflective, surface, protective, light source, travel, straight line, direction, distance, time, silhouette.	Fossil, soil, organic matter, topsoil, subsoil, base rock, cast fossils, trace fossils, permeable and impermeable. Hard, soft, slate, granite, chalk, marble, sandstone properties.	Herbivores, carnivores and omnivores. Nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, fruit and vegetables, Skeleton, bones, muscles, joints, support, protect, move, skull, ribs, spine.	Push, pull, gravity, magnetic friction. Force, 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



St Augustine's Long Term Plan Science Intent

Knowledge in red is aimed at year 3, Knowledge in green is aimed at year 4, Knowledge in black is aimed at both year 3 & 4
Working Scientifically / Skills differentiated for Year 3 and 4

LKS2 Year 3/4 Cycle B	Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
Topic	Physics Electricity (Y4)	Physics Sound (Y4)	Chemistry States of matter (Y4)	Biology Animals including humans (Y4)	Biology Animals including humans (Y4)	Biology Living things and their habitats (Y4)
National Curriculum	<ul style="list-style-type: none">• Know and identify common appliances that run on electricity.• Know about and construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.• Know and 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.• Know and recognise that a switch opens and closes a circuit and associate this with	<ul style="list-style-type: none">• Know and identify how sounds are made, associating some of them with something vibrating.• Know and recognise that vibrations from sounds travel through a medium to the ear.• Know and find patterns between the pitch of a sound and features of the object that produced it.• Know and find patterns between the volume of a sound and the strength of the vibrations that produced it.• Know and recognise that	<ul style="list-style-type: none">• Know, compare and group materials together, according to whether they are solids, liquids or gases.• Know and 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).• Know and identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	<ul style="list-style-type: none">• Know and describe the simple functions of the basic parts of the digestive system in humans.• Know and identify the different types of teeth in humans and their simple functions.	<ul style="list-style-type: none">• Know about, construct and interpret a variety of food chains, identifying producers, predators and prey.	<ul style="list-style-type: none">• Know, recognise that living things can be grouped in a variety of ways.• Know about, explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.• Know and recognise that environments can change and that this can sometimes pose dangers to living things.



St Augustine's Long Term Plan Science Intent



	whether or not a lamp lights in a simple series circuit. • Know and recognise some common conductors and insulators, and associate metals with being good conductors.	sounds get fainter as the distance from the sound source increases.				
Core Knowledge Y4 Y3	Identify and name appliances that require electricity to function. Construct a series circuit. Identify and name the components in a series circuit (including cells, wires, bulbs, switches and buzzers) Predict and test whether a lamp will last with a circuit. Know the function of a switch. Know the difference between a conductor and an insulator giving examples of each	Know how sound is made, associating some of them with vibrating. Know how sound travels from a source to our ears. Know the correlation between pitch and an object producing a sound. Know the correlation between the volume of the sound and the strength of the vibrations that produced it. Know what happens to a sound as it travels away from the source.	Know the temperature of which materials change state. Know about and explore how some materials can change state. Know the part played by evaporation and condensation in the water cycle. Know how to group materials based on their state of matter (solid, liquid or gas)	Identify and name the parts of the human digestive system. Know the functions of the human organs in the digestive system. Identify and know the different types of the human teeth. Know the functions of the different types of human teeth. Use and construct food chains to identify, producers, predators and prey (building on from KSI)	Identify and name the parts of the human digestive system. Know the functions of the human organs in the digestive system. Identify and know the different types of the human teeth. Know the functions of the different types of human teeth. Use and construct food chains to identify, producers, predators and prey (building on from KSI)	Use classification keys to group, identify and name living things. Know how changes to an environment could endanger living things.



St Augustine's Long Term Plan Science Intent

Wider Knowledge	<p>Know that circuits must be complete to work.</p> <p>Know that electricity stores power.</p> <p>Know some common appliances that run on electricity.</p> <p>Know some of the components in a circuit.</p> <p>Know the function of a switch.</p> <p>Know how to draw a circuit diagram.</p> <p>Know that some materials are conductors.</p> <p>Know if a bulb will light or not based on a circuit diagram.</p> <p>Know where electricity comes from.</p> <p>Know that electricity can be dangerous.</p>	<p>Know that sounds are made by vibrations.</p> <p>Know that the vibration makes the air around the object vibrate and air vibrations enter your ear. You hear the vibrations as sounds.</p> <p>Know that sound travels from an object through a medium (usually air), travel into the ear canal and processed by the brain.</p> <p>Know that sound waves can travel through solids (such as metal, stone and wood and gases such as air.</p> <p>Know that a pitch of a sound is how high or low the sound is.</p> <p>Know a high sound has a high pitch and a low sound has a low pitch.</p> <p>Know that the volume of a sound is how quiet or loud the sound is.</p>	<p>Know which materials are solids, liquids or gases,</p> <p>Know that some materials change when heated or cooled.</p> <p>Know that water moves in a cycle due to the changes in temperature causing the water to change from one state to another.</p>	<p>Know how to care for and keep teeth healthy.</p> <p>Use knowledge of an animal's diet to identify which type of teeth they have.</p> <p>Know what can happen to your body if the digestive system isn't working properly.</p>	<p>Know that humans have a responsibility to care about their impact on the food chain.</p> <p>Living things can be classified as producers, predators and prey according to their place in the food chain.</p>	<p>Know the 7 characteristics of a living thing.</p> <p>Know which living things they would expect to find in their locality and which they would not find.</p> <p>Know what a branching data base is and how to use one.</p>
-----------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------



St Augustine's Long Term Plan Science Intent

		<p>Know that certain materials can present insulation against sound.</p> <p>Know which materials are most effective at insulating sound.</p> <p>Know that insulating sound is important to protect your hearing e.g. loud working environments and rock concerts.</p> <p>Know how hearing can be damaged by sound.</p> <p>Know that individuals who have hearing impairment can be supported through technology.</p> <p>Know how sound can be amplified.</p> <p>Know how instruments can be designed to create different sounds and how a musician can play an instrument and make adaptations to change, the sound, pitch and tone.</p>				
--	--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--



St Augustine's Long Term Plan Science Intent



Skills	(Y3) Ask questions. Observe. Use research. Carry out tests to investigate a question. Set up a fair test with different variables. Explain to a partner why a test is fair. Measure carefully to add to scientific learning. Use equipment with more than one scales. Gather and record information using a chart, a matrix or a tally chart. Group information according to common factors. Use bar charts and other statistical tables to record findings. Know how to use a key to help understand information presented in a chart. Be confident to stand in front of others and explain what has been found out. Present findings using written explanations and include diagrams where needed. Make sense of findings and draw conclusions which help them to understand more about scientific information. Amend predictions according to findings. Be prepared to change ideas as a result of what has been found out during a scientific enquiry.
Scientific enquiry	(Y4) Ask questions. Use research to find out. Carry out tests to see. Set up a fair test. Explain to others why a test that has been set up is a fair one. Measure carefully. Gather and record information using a chart, matrix or tally chart. Group information according to common factors. Use bar charts and other statistical tables. Present findings using written explanations and diagrams. Write up findings using a planning, doing and evaluating process. Make sense of findings and draw conclusions. When making predictions there are plausible reasons as to why they have done so. Able to amend predictions according to findings. Prepared to change ideas as a result of what has been found out during a scientific enquiry.



St Augustine's Long Term Plan Science Intent

Diversity Links	States of matter – Look at different physicists in this field – challenge the stereotype of what a scientist looks like. Living things and their habitats – Consider dangers to animals in different countries across the world and link this to the culture of that country. Sound – Make reference to Walter Lincoln Hawkins, a black scientist who made universal service in phones available.				
Vocabulary	Cells, wires, bulbs, switches, buzzers, circuits, conductors, insulators, electricity, current, mains electricity, power stations, power lines, pylons, closed, safety, power grid, circuit.	Sound, vibration, sound waves, volume, pitch, high and low, amplify, insulate, ear drum, ear canal, travel, solids, gases. Hearing loops, subtitles, Hearing aids, hearing impairment.	Degrees Celsius, solid, liquid,, gas, state, solidifying point, boiling point, particles, evaporating, condensing, melting, freezing, temperature, thermometer, ice, rain, clouds, vapour, precipitation, evaporation, water cycle.	Mouth, teeth, incisors, molars, canine, jaw, digestion, digestive system, chew, saliva, nutrition, oesophagus, stomach, small intestine, faeces (poo). Predator, prey, producer, food chain.	Alive, dead, never been alive, movement, growth, reproduction, sensitive, excrete, respire, nutrition, habitat, vertebrate, invertebrate, insect, classify, group, similar, different, variety, key, branching database, feature, environment, question.



St Augustine's Long Term Plan Science Intent

Knowledge in red is aimed at year 5, Knowledge in green is aimed at year 6, Knowledge in black is aimed at both year 5 & 6
Working Scientifically / Skills differentiated Year 5 & 6

Year 5/6 Cycle A	Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
Topic	Biology Living things and their habitats (Y5)	Chemistry Properties and changes of materials (Y5)	Chemistry Properties and changes of materials (Y5)	Physics Forces (Y5)	Physics Earth and space (Y5)	Biology Animal including humans (Y5) RSE
National Curriculum	<ul style="list-style-type: none">• Know and describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.• Know and describe the life process of reproduction in some plants and animals.	<ul style="list-style-type: none">• Know, 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,	<ul style="list-style-type: none">• Know and give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.• know and demonstrate that dissolving, mixing and changes of state are reversible changes.• Know and 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	<ul style="list-style-type: none">• Know and explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.• Know and Identify the effects of air resistance, water resistance and friction that act between moving surfaces.• Know and recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	<ul style="list-style-type: none">• Know and describe the movement of the Earth, and other planets, relative to the Sun in the solar system.• Know and describe the movement of the Moon relative to the Earth.• Know and describe the Sun, Earth and Moon as approximately spherical bodies.• Know and use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky.	<ul style="list-style-type: none">• Know and describe the changes as humans develop to old age.



St Augustine's Long Term Plan Science Intent



		sieving and evaporating.	on bicarbonate of soda.			
Core Knowledge Y6 Y5	Know the life cycle of different living things e.g. mammal, amphibian, insect and bird. Know the difference between different life cycles. Know the process of reproduction in plants. Know the process of reproduction in animals.	Compare and group materials based on their properties (e.g. hardness, solubility and transparency, conductivity) (Electrical and thermal) and response to magnets. Know and explain how a material dissolves to form a solution. Know and show how to recover a substance from a solution. Know and demonstrate how some materials can be separated (e.g. through, filtrating, separating and evaporating) Know and demonstrate that some changes are reversible and some are not. Know how some changes result in the	Compare and group materials based on their properties (e.g. hardness, solubility and transparency, conductivity) (Electrical and thermal) and response to magnets. Know and explain how a material dissolves to form a solution. Know and show how to recover a substance from a solution. Know and demonstrate how some materials can be separated (e.g. through, filtrating, separating and evaporating) Know and demonstrate that some changes are reversible and some are not.	Know what gravity is and its impact on our lives. Know and identify the fact of air and water resistance. Identify and know the effect of friction. Explain how levers pulleys and gears allow a smaller force to have a greater effect.	Know about and explain the movement of the Earth and other planets relative to the Sun. Know about and explain the movement of the Moon relative to the Earth. Know and demonstrate how night and day are created. Describe, the Sun, Earth and Moon (using the term spherical)	Create a timeline to indicate the stages of growth in humans.



St Augustine's Long Term Plan Science Intent

		formation of a new materials and this is usually irreversible.	Know how some changes result in the formation of a new materials and this is usually irreversible.			
Wider Knowledge	Know that plants reproduce. Know that pollen can travel via wind or via insects. Know the reproduction parts of a plant. Know that reproduction produces an offspring. Know a variety of ways in which plants reproduce. Know the three groups pf mammals: placental, marsupials and monotremes and know an example of each group. Know that all living things have a life cycle.	Use knowledge of solids, liquids and gases to decide how mixtures might be separated. Know that mixtures can be separated through, sieving, filtering and evaporating.	Know what a reversible change means. Know what an irreversible change is. Know some examples of reversible and irreversible changes. Know that some materials dissolve in liquid to form solutions.	Know what gravity and resistance are. Know what balanced and unbalanced forces are. Know what a variable is in an investigation (building on lower KS2 knowledge). Know how the position of fulcrum, load and effort impacts on use of a lever. Know the number of pulleys changes the amount of effort required. Know that gear mechanisms allow a smaller force to have a greater effect.	Know the difference between geo and heliocentric solar systems and how views have evolved. Know the impact of earth's movement on shadows.	Know that different animals have different gestation periods. Know that a foetus develops through different stage into a human. Know the key milestones in a baby / child's development. Know and understand the changes in the adolescence body human body during puberty. Know the changes that are gender specific. Know the importance of hygiene and the care for the body to maintain healthy development.



St Augustine's Long Term Plan Science Intent

						Know the physical and mental changes that occur during different life periods. Know the importance of the care for the elderly.
Skills Working scientifically	<p>(Y5)</p> <p>Set up an investigation where it is appropriate. Set up a fair test where needed. Set up an enquiry based investigation. Know that the variables are in a given enquiry and can isolate each one when investigating. Use all measurements as set out in Y5 mathematics, including capacity and mass. Use other scientific instruments as needed. Record data and present them in a range of ways including diagrams, labels, classification keys, tables, scatter graphs, bar charts and line graph's. Make predictions based on information gleaned from investigations. Create new investigations which take account of what has been learned previously. Present information related to scientific enquiries in a range of ways including using IT. Use diagrams, as and when necessary to support writing. Evaluate when explain findings from scientific enquiry. Clear about what has been found out from recent enquiry and relate to this to other enquiries, where appropriate. Able to give an example of something focused on when supporting a scientific theory. Keep an on-going record of new scientific words that they have come across for the first time. Able to relate casual relationships when for example studying life-cycles. Frequently carry out research when investigating a scientific Principe or theory.</p> <p>(Y6)</p> <p>Set up an investigation where it is appropriate. Set up a fair test where needed. Set up an enquiry based investigation. Know that the variables are in a given enquiry and can isolate each one when investigating. Use all measurements as set out in Y6 mathematics, including capacity and mass. Use other scientific instruments as needed.</p>					



St Augustine's Long Term Plan Science Intent

	<p>Record data and present them in a range of ways including diagrams, labels, classification keys, tables, scatter graphs, bar charts and line graph's.</p> <p>Make predictions based on information gleaned from investigations.</p> <p>Create new investigations which take account of what has been learned previously.</p> <p>Present information related to scientific enquiries in a range of ways including using IT.</p> <p>Use diagrams, as and when necessary to support writing.</p> <p>Evaluate when explain findings from scientific enquiry.</p> <p>Clear about what has been found out from recent enquiry and relate to this to other enquiries, where appropriate.</p> <p>Able to give an example of something focused on when supporting a scientific theory.</p> <p>Keep an on-going record of new scientific words that they have come across for the first time.</p> <p>Able to relate casual relationships when for example studying life-cycles.</p> <p>Frequently carry out research when investigating a scientific Principe or theory.</p>				
Diversity Links	<p>Earth and space – Know about people like</p> <p>Mae C Jemison – First black woman in space</p> <p>Katherine Johnson – Her calculations enabled humans to fly to space but her opportunities were limited as a black woman.</p> <p>Neil DeGrasse Tyson – He encouraged space exploration, one of the few African American's in his field.</p> <p>Animals and humans – Explore and think about women in this field e.g. Jane Goodall and Terri Irwin.</p>				
Vocabulary	Anther, filament, stem, oval, ovary, style, stigma, petal, pollen, tube, sexual, asexual, fertilisation, reproduction, offspring, metamorphosis, amphibian, insect, transform, lava, pupae, nymph, egg.	Solubility, conductivity, transparency, thermal, evaporation, dissolve, filtering, melting, separate, reversible reaction, irreversible, liquid, solution, substance, gases, sieving, evaporating.	Earth, gravity, air resistance, friction, balancing, newton's, resistance force, variable, levers, fulcrum, positions, loads, weight, gear mechanisms.	Earth, planet, sun, solar system, moon, sphere and spherical. Rotate, rotation, spin, night and day, orbit, opinion, fact, support refute, orrery, Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto, geocentric and heliocentric models.	Life cycle, gestation, foetus, baby, child, adolescent, adult, old age, growth, comparison, development, mental, physical, hygiene, health.



St Augustine's Long Term Plan Science Intent

Knowledge in red is aimed at year 5, Knowledge in green is aimed at year 6, Knowledge in black is aimed at both year 5 & 6
Working Scientifically / Skills differentiated Year 5 & 6

Year 5/6 Cycle B	Advent 1	Advent 2	Lent 1	Lent 2	Pentecost 1	Pentecost 2
Topic	Physics Electricity (Y6)	Physics Light (Y6)	Biology Living things and their habitats (Y6)	Biology Evolution and inheritance (Y6) (2)	Biology Animals including humans (Y6)	Biology Animals including humans (Y6) (2)
National Curriculum	<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.• 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.	<ul style="list-style-type: none">• 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.• Use the idea that light travels in straight lines to explain why shadows have the same shape as the	<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.• Give reasons for classifying plants and animals based on specific characteristics.	<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.• 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.	<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.	<ul style="list-style-type: none">• Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.• Describe the ways in which nutrients and water are transported within animals, including humans.



St Augustine's Long Term Plan Science Intent

		objects that cast them.				
Core Knowledge Y6 Y5	Compare and give reasons for why components work and do not work on a circuit. Draw circuit diagrams using correct symbols. Know how the number and voltage of cells in a circuit links to the brightness of a lamp or the volume of a buzzer.	Know how light travels. Know and demonstrated how we see objects. Know why shadows have the same shape as the object that casts them. Know how simple optical instruments work (e.g. telescope, periscope, mirror)	Classify living things into broad groups according to observable characteristics and based on similarities and differences. Know how living things have been classified. Give reasons for classifying plants and animals in a specific way.	Know how the Earth and living things have changed over time. Know how fossils can be used to find out about the past. Know about reproduction and offspring (recognising that offspring normally vary and are not identical to their parents) Know how animals and plants are adapted to suit their environment. Link adaption over time to evolution. Know about evolution and can explain what it is.	Identify and name the parts of the human circulatory system. Know the function of the heart, blood vessels and blood. Know the impact of diet, exercise, drugs, and lifestyle on health. Know the ways in which nutrients and water are transported in animals including humans.	Identify and name the parts of the human circulatory system. Know the function of the heart, blood vessels and blood. Know the impact of diet, exercise, drugs, and lifestyle on health. Know the ways in which nutrients and water are transported in animals including humans.
Wider Knowledge	Know that voltage effects the functionality of components. Know that switches are used to start and stop the flow of electricity.	Know the parts of the eye and their function in light. Know that light can be bent and refracted. Know that white light is made up of all colours.	Know who Linnaeus was and his classification system. Know that living things are classified into broad groups according to common observable characteristics and	Know some inherited characteristics in living things. Know the role fossils have in the development of evolutionary theory.	Know the components of blood and their functions. Know there are different blood groups. Know the name of the 3 blood vessels.	Know the importance of mental health and well-being on the body and mind. Know that certain drugs can be used for positive effect in the forms of



St Augustine's Long Term Plan Science Intent

	<p>Know the symbols that represent components a circuit.</p> <p>Know why we use symbols rather than drawings.</p> <p>Know that electricians use circuit diagrams in building plans.</p> <p>Know that inventors use circuit diagrams in their planning.</p> <p>Know that if a bulb isn't working and the circuit looks complete that the filament in the bulb maybe damaged causing the circuit to be incomplete.</p> <p>Know how to problem solve if a circuit doesn't work.</p> <p>Know some scientists who investigate electricity such as Thomas Edison and Nicola Tesla.</p>	<p>Know that light travels in straight lines until it hits an object.</p> <p>Know that we see due to light being reflected into the eye.</p>	<p>based on similarities and differences including microorganisms, plants and animals.</p> <p>Know and use a range of higher ordering questioning skills to classify.</p>	<p>Know about the work of Anning, Darwin and Wallace.</p> <p>Know what a cladogram is and how it shows evolutionary relationships.</p>	<p>Know that nutrients and water are transported around the body in the blood by diffusion and osmosis.</p>	<p>medicine for prevention and cure.</p> <p>Know the negative, physical and emotional impact of the misuse of drugs.</p> <p>Know how to deal with peer pressure in relation to drug misuse.</p>
Skills	(Y5)					



St Augustine's Long Term Plan Science Intent

<p>Working scientifically</p>	<p>Set up an investigation where it is appropriate. Set up a fair test where needed. Set up an enquiry based investigation. Know that the variables are in a given enquiry and can isolate each one when investigating. Use all measurements as set out in Y5 mathematics, including capacity and mass. Use other scientific instruments as needed. Record data and present them in a range of ways including diagrams, labels, classification keys, tables, scatter graphs, bar charts and line graph's. Make predictions based on information gleaned from investigations. Create new investigations which take account of what has been learned previously. Present information related to scientific enquiries in a range of ways including using IT. Use diagrams, as and when necessary to support writing. Evaluate when explain findings from scientific enquiry. Clear about what has been found out from recent enquiry and relate to this to other enquiries, where appropriate. Able to give an example of something focused on when supporting a scientific theory. Keep an on-going record of new scientific words that they have come across for the first time. Able to relate casual relationships when for example studying life-cycles. Frequently carry out research when investigating a scientific Principe or theory.</p> <p>(Y6)</p> <p>Set up an investigation where it is appropriate. Set up a fair test where needed. Set up an enquiry based investigation. Know that the variables are in a given enquiry and can isolate each one when investigating. Use all measurements as set out in Y6 mathematics, including capacity and mass. Use other scientific instruments as needed. Record data and present them in a range of ways including diagrams, labels, classification keys, tables, scatter graphs, bar charts and line graph's. Make predictions based on information gleaned from investigations. Create new investigations which take account of what has been learned previously. Present information related to scientific enquiries in a range of ways including using IT. Use diagrams, as and when necessary to support writing. Evaluate when explain findings from scientific enquiry. Clear about what has been found out from recent enquiry and relate to this to other enquiries, where appropriate. Able to give an example of something focused on when supporting a scientific theory. Keep an on-going record of new scientific words that they have come across for the first time.</p>
-------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------



St Augustine's Long Term Plan Science Intent

	<p>Able to relate casual relationships when for example studying life-cycles. Frequently carry out research when investigating a scientific Principle or theory.</p>					
Diversity Links	<p>Electricity – Consider women in Electricity – As well as the likes of Thomas Edison and Nikola Tesla. Evolution – Link to different genetics and DNA across different groups of people. Evolution – Look at people like Rosalind Franklin – A female English scientist who worked with DNA. Animals and humans – Consider Jane Goodhall and other zoologist who are women. Animals and humans – Look at Marie M Daly – The first black women to earn a PHD who worked on the circulatory system.</p>					
Vocabulary	Electric current, alternating current, direct current, battery, cell, bulb, switch, motor, buzzer, circuit, voltage, brightness, voltage, components, symbols, diagrams.	Light source, concave, convex, filters, lens, retina, cornea, iris, pupils, refracts.	Classification, kingdom, phylum, genus, species, order, family, group, subgroup, Linnaeus, opinion, report, refute, similarities, differences, plants, animals, organism, microorganism, taxonomy.	Suited / suitable environment, adaptation, characteristics, vary / variation, inherit / inheritance, natural selection, Anning, Darwin, Wallace, cladogram, evolution, relationships, fossils.	Blood, blood vessels, arteries, veins, capillaries, heart, pumps, oxygen, carbon dioxide, lungs, nutrients, water, circulatory system, pumps,	Exercise, diet, drugs, alcohol, prevention, cure, misuse.