



# Marlborough St Mary's subject 'at a glance' overview

## At a Glance Science Topics and SRE Links

Subject Science Subject Leader Jenny Swankie

### Reception

	Autumn 1	Autumn 2	Spring 3	Spring 4	Summer 5	Summer 6
EYFS	Continuous Provision					
Themes						

Your science topics are: Varied focus for continuous provision.

Early Learning Goals	Understanding the World		
<b>Objectives</b>	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
<b>Focus in Reception</b>	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.	Understand the effect of changing seasons on the natural world around them.
<b>Examples of Vocabulary to Model</b>	<p>Model and encourage children to use vocabulary such as: natural, plant, animal, leaves, seeds, conkers, acorns, twigs, bark, shells, feathers, pebbles, stones, same, different, pattern</p> <p>Expose children to supplementary vocabulary such as: living, dead, similar</p> <p>Model and encourage children to use vocabulary such as: plant, leaf, stem, branch, root, bark, flower, petal, seed, berry, fruit, vegetable, bulb, plant, hole, dig, water, weed, grow, shoot, die, dead, soil, names of plants they grow</p> <p>Expose children to supplementary vocabulary such as: seedling, healthy, unhealthy, strong, sturdy, wilting, decay, mould, life cycle</p>	<p>Model and encourage children to use vocabulary such as: names of animals, live, on land, in water, jungle, desert, North Pole, South Pole, sea, hot, cold, wet, dry, snow, ice</p> <p>Expose children to supplementary vocabulary such as: environment, polar regions, ocean, camouflage</p> <p>Model and encourage children to use vocabulary such as: plant, tree, bush, flower, vegetable, herb, weed, animal, names of plants and animals they see, name of a contrasting environment e.g. beach, forest</p> <p>Expose children to supplementary vocabulary such as: environment</p>	<p>Model and encourage children to use vocabulary such as: spring, summer, autumn, winter, seasons, sunny, cloudy, hot, warm, cold, shower, raining, storm, thunder, lightning, hail, sleet, snow, icy, frost, puddles, windy, rainbow, animals, young, plants, flowers</p> <p>Expose children to supplementary vocabulary such as: hibernate, migrate, snowflake</p> <p>Model and encourage children to use vocabulary such as: ice, water, frozen, icicle, snow, melt, wet, cold, slippery, smooth, big, bigger, biggest, smaller, smaller, smallest, change, change back</p> <p>Expose children to supplementary vocabulary such as: solid, liquid, gas</p>

<b>Working Scientifically</b>	<p>In the EYFS, the characteristics of effective learning from the Statutory Framework for the Early Years Foundation Stage are the foundations on which the working scientifically skills build in Key Stage 1.</p> <p>While children are playing and exploring, teachers should be modelling, encouraging and supporting them to do the following:</p> <ul style="list-style-type: none"> <li>• show curiosity and ask questions</li> <li>• make observations using their senses and simple equipment</li> <li>• make direct comparisons</li> <li>• record their observations by drawing, taking photographs, using sorting rings or boxes and, in Reception, on simple tick sheets</li> <li>• use their observations to help them to answer their questions</li> <li>• talk about what they have done and found out</li> <li>• identify, sort and group.</li> </ul>
<b>Key Vocabulary</b>	look closely, observe, watch, touch, feel, smell, listen, same, different, compare, ask questions, record, sort, group



# Marlborough St Mary's subject 'at a glance' overview

## Year 1

	Autumn 1	Autumn 2	Spring 3	Spring 4	Summer 5	Summer 6
<b>Year 1</b>	<b>Continuous Provision</b>					
<b>Themes</b>	Seasons begin- look for clues etc. Materials- sort, classify, group and describe. Link to Box topic.	Seasonal changes Humans and sense. Winter catchers made.	Plant bulbs outside area. Humans- Senses and touch. Body parts. Birds- songs, bird watching linked to RSPBB.	Seasons and plants Animals that hibernate.	Plants Plant own beans, sunflowers etc Materials linked to Pirates- ships, waterproof, swords, treasure etc.	Animals linked to topic- sealife, fish linked to Tiddler. whales linked to Dear Greenpeace, <i>Jigsaw Term 6 Changes in Me</i>

Your science topics are: Varied focus for links to topic and continuous provision.

Programme of Study	Plants	Animals, including Humans	Everyday Materials	Seasonal Changes
<b>Objectives</b>	<ul style="list-style-type: none"> <li>identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</li> <li>identify and describe the basic structure of a variety of common flowering plants, including trees</li> </ul>	<ul style="list-style-type: none"> <li>identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</li> <li>identify and name a variety of common animals that are carnivores, herbivores and omnivores</li> <li>describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)</li> <li>identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense</li> </ul>	<ul style="list-style-type: none"> <li>distinguish between an object and the material from which it is made</li> <li>identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</li> <li>describe the simple physical properties of a variety of everyday materials</li> <li>compare and group together a variety of everyday materials on the basis of their simple physical properties</li> </ul>	<ul style="list-style-type: none"> <li>observe changes across the 4 seasons</li> <li>observe and describe weather associated with the seasons and how day length varies</li> </ul> <p style="background-color: yellow;">Occurs over the year to link directly with each season</p>
<b>Key Vocabulary</b>	Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud Names of trees in the local area Names of garden and wild flowering plants in the local area	head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves, names of animals experienced first-hand from each vertebrate group, parts of the body including those within the school's RSE policy, senses, touch, see, smell, taste, hear, fingers, skin, eyes, nose, ear, tongue	Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see-through, not see-through	weather, sunny, rainy, raining, shower, windy, snowy, cloudy, hot, warm, cold, storm, thunder, lightning, hail, sleet, snow, icy, frost, puddles, rainbow, seasons, winter, summer, spring, autumn, Sun, sunrise, sunset, day length
<b>Working Scientifically Year 1 and 2</b> <b>Focus of LOs</b> <b>Refer to Progression Document</b>	<ul style="list-style-type: none"> <li>asking simple questions and recognising that they can be answered in different ways</li> <li>observing closely, using simple equipment</li> <li>performing simple tests</li> <li>identifying and classifying</li> <li>using their observations and ideas to suggest answers to questions</li> <li>gathering and recording data to help in answering questions</li> </ul>			
<b>Key Vocabulary</b>	observe, changes, patterns, grouping, sorting, compare, same, different, identify (name), measure, data, record results, drawing, picture, table, tally chart, present, pictogram, block chart, Venn diagram, ask questions, test, investigate, explore, equipment, resources, magnifying glass, hand lens, ruler, tape measure, metre stick, pipette, syringe, spoon, teaspoon, answer questions, interpret results, scientific enquiry, pattern seeking, comparative testing, observing over time, classifying, researching using secondary sources			



# Marlborough St Mary's subject 'at a glance' overview

## Year 2

	Autumn 1	Autumn 2	Spring 3	Spring 4	Summer 5	Summer 6
<b>Science Topics</b>	<i>Living Things and their habitats – link to animals of the Antarctic</i>		<i>Materials – linked to Castles – materials to build a castle, suit of armour</i>	<i>Animals – link to tails topic Jigsaw Term 6 Changes in Me some elements taught within this topic</i>	<i>Plants Jigsaw Term 6 Changes in Me</i>	
<b>Programme of Study</b>	Living Things and their Habitats		Use of Everyday Materials	Animals, including Humans	Plants	
<b>Objectives</b>	<ul style="list-style-type: none"> <li>explore and compare the differences between things that are living, dead, and things that have never been alive</li> <li>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</li> <li>identify and name a variety of plants and animals in their habitats, including microhabitats</li> <li>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</li> </ul>		<ul style="list-style-type: none"> <li>identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</li> <li>find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching</li> </ul>	<ul style="list-style-type: none"> <li>notice that animals, including humans, have offspring which grow into adults <a href="#">SRE link</a></li> <li>find out about and describe the basic needs of animals, including humans, for survival (water, food and air)</li> <li>describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene</li> </ul>	<ul style="list-style-type: none"> <li>observe and describe how seeds and bulbs grow into mature plants find out and describe how plants need water, light and a suitable temperature to grow and stay healthy</li> </ul>	
<b>Key Vocabulary</b>	living, dead, never been alive, suited, suitable, basic needs, food, food chain, shelter, move, feed, water, air, survive, survival, names of local habitats (e.g. pond, woodland etc.), names of micro-habitats (e.g. under logs, in bushes etc.), conditions, light, dark, shady, sunny, wet, damp, dry, hot, cold, names of living things in the habitats and microhabitats studied		Names of materials – wood, metal, plastic, glass, brick, rock, paper, cardboard Properties of materials – as for Year 1 plus opaque, transparent and translucent, reflective, nonreflective, flexible, rigid Shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching	offspring, reproduction, growth, baby, toddler, child, teenager, adult, old person, names of animals and their babies (e.g. chick/hen, kitten/cat, caterpillar/butterfly), survive, survival, water food, air, exercise, heartbeat, breathing, hygiene, germs, disease, food types (e.g. meat, fish, vegetables, bread, rice, pasta, dairy)	light, shade, Sun, warm, cool, water, space, grow, healthy, bulb, germinate, shoot, seedling	
<b>Working Scientifically Year 1 and 2 Focus of LOs Refer to Progression Document</b>	<ul style="list-style-type: none"> <li>asking simple questions and recognising that they can be answered in different ways</li> <li>observing closely, using simple equipment</li> <li>performing simple tests</li> <li>identifying and classifying</li> <li>using their observations and ideas to suggest answers to questions</li> <li>gathering and recording data to help in answering questions</li> </ul>					
<b>Key Vocabulary</b>	observe, changes, patterns, grouping, sorting, compare, same, different, identify (name), measure, data, record results, drawing, picture, table, tally chart, present, pictogram, block chart, Venn diagram, ask questions, test, investigate, explore, equipment, resources, magnifying glass, hand lens, ruler, tape measure, metre stick, pipette, syringe, spoon, teaspoon, answer questions, interpret results, scientific enquiry, pattern seeking, comparative testing, observing over time, classifying, researching using secondary sources					



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## Year 3

	Autumn 1	Autumn 2	Spring 3	Spring 4	Summer 5	Summer 6
<b>Science Topics</b>	<i>Rocks</i>	<i>Forces and Magnets</i>	<i>Animals including Humans</i>	<i>Healthy Eating</i>	<i>Plants</i>	<i>Light - but next year we could swap this to Healthy Eating Term 4, but keep skeletons in Term 3 <b>Jigsaw Term 6 Changes in Me</b></i>
<b>Programme of Study</b>	Rocks	Forces and Magnets	Animals, Including Humans	Animals, Including Humans	Plants	Light
<b>Objectives</b>	<ul style="list-style-type: none"> <li>compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</li> <li>describe in simple terms how fossils are formed when things that have lived are trapped within rock</li> <li>recognise that soils are made from rocks and organic matter.</li> </ul>	<ul style="list-style-type: none"> <li>compare how things move on different surfaces</li> <li>notice that some forces need contact between two objects, but magnetic forces can act at a distance</li> <li>observe how magnets attract or repel each other and attract some materials and not others</li> <li>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</li> <li>describe magnets as having two poles</li> <li>predict whether two magnets will attract or repel each other, depending on which poles are facing.</li> </ul>	<ul style="list-style-type: none"> <li>identify that humans and some animals have skeletons and muscles for support, protection and movement.</li> </ul>	<ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers</li> <li>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</li> <li>investigate the way in which water is transported within plants</li> <li>explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</li> </ul>	<ul style="list-style-type: none"> <li>notice that light is reflected from surfaces</li> <li>find patterns that determine the size of shadows.</li> <li>recognise that light from the sun can be dangerous and that there are ways to protect their eyes</li> <li>recognise that shadows are formed when the light from a light source is blocked by an opaque object</li> <li>find patterns in the way that the size of shadows change</li> </ul>
<b>Key Vocabulary</b>	rock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, absorb water, fossil, bone, flesh, minerals, marble, chalk, granite, sandstone, slate, soil, types of soil (e.g. peaty, sandy, chalk, clay)	Force, push, pull, twist, contact force, non-contact force, magnetic force, magnet, strength, bar magnet, ring magnet, button magnet, horseshoe magnet, attract, repel, magnetic material, metal, iron, steel, poles, north pole, south pole	skeleton, bones, muscles, joints, support, protect, move, skull, ribs, spine	nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water	photosynthesis, pollen, insect/wind pollination, male, female, seed formation, seed dispersal (wind dispersal, animal dispersal, water dispersal), air, nutrients, minerals, soil, absorb, transport	light, light source, Sun, sunlight, dangerous, shadow, opaque, transparent
<b>Working Scientifically Year 3 and 4 Focus of LOs Refer to Progression Document</b>	<ul style="list-style-type: none"> <li>asking relevant questions and using different types of scientific enquiries to answer them</li> <li>setting up simple practical enquiries, comparative and fair tests</li> <li>making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</li> <li>gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</li> <li>recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</li> <li>reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</li> <li>using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</li> <li>identifying differences, similarities or changes related to simple scientific ideas and processes</li> <li>using straightforward scientific evidence to answer questions or to support their findings</li> </ul>					
<b>Key Vocabulary</b>	practical work, fair testing, relationships, accurate, thermometer, data logger, stopwatch, timer, estimate, data, diagram, identification key, chart, bar chart, prediction, similarity, difference, evidence, information, findings, criteria, values, properties, characteristics, conclusion, explanation, reason, evaluate, improve					



# Marlborough St Mary's subject 'at a glance' overview

## Year 4

	Autumn 1	Autumn 2	Spring 3	Spring 4	Summer 5	Summer 6
<b>Science Topics</b>	<i>Sound</i>	<i>Electricity</i>	<i>Animals including humans</i>	<i>STEM project To recap sound/electricity</i>	<i>All living things.</i>	<i>States of Matter Jigsaw Term 6 Changes in Me</i>
<b>Programme of Study</b>	Sound	Electricity	Animals, Including Humans		All Living Things	States of Matter
<b>Objectives</b>	<ul style="list-style-type: none"> <li>identify how sounds are made, associating some of them with something vibrating</li> <li>recognise that vibrations from sounds travel through a medium to the ear</li> <li>find patterns between the pitch of a sound and features of the object that produced it</li> <li>find patterns between the volume of a sound and the strength of the vibrations that produced it</li> <li>recognise that sounds get fainter as the distance from the sound source increases</li> </ul>	<ul style="list-style-type: none"> <li>identify common appliances that run on electricity</li> <li>construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers</li> <li>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</li> <li>recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit</li> <li>recognise some common conductors and insulators, and associate metals with being good conductors.</li> </ul> <p><b>N.B. Children in Year 4 do not need to use standard symbols for electrical components, as this is taught in Year 6.</b></p>	<ul style="list-style-type: none"> <li>describe the simple functions of the basic parts of the digestive system in humans</li> <li>identify the different types of teeth in humans and their simple functions</li> <li>construct and interpret a variety of food chains, identifying producers, predators and prey.</li> </ul>	<i>Focus of objectives to be recapped</i>	<ul style="list-style-type: none"> <li>recognise that living things can be grouped in a variety of ways</li> <li>explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment</li> <li>recognise that environments can change and that this can sometimes pose dangers to living things.</li> </ul>	<ul style="list-style-type: none"> <li>compare and group materials together, according to whether they are solids, liquids or gases</li> <li>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)</li> <li>identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</li> </ul>
<b>Key Vocabulary</b>	Sound, source, vibrate, vibration, travel, pitch (high, low), volume, faint, loud, insulation	Electricity, electrical appliance/device, mains, plug, electrical circuit, complete circuit, component, cell, battery, positive, negative, connect/connections, loose connection, short circuit, crocodile clip, bulb, switch, buzzer, motor, conductor, insulator, metal, non-metal, symbol	Digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, nutrients, large intestine, rectum, anus, teeth, incisor, canine, molar, premolars, herbivore, carnivore, omnivore, producer, predator, prey, food chain	<i>Refer to electricity and light topic vocabulary</i>	Classification, classification keys, environment, habitat, human impact, positive, negative, migrate, hibernate	solid, liquid, gas, heating, cooling, state change, melting, freezing, melting point, boiling, boiling point, evaporation, condensation, temperature, water cycle
<b>Working Scientifically Year 3 and 4 Focus of LOs Refer to Progression Document</b>	<ul style="list-style-type: none"> <li>asking relevant questions and using different types of scientific enquiries to answer them</li> <li>setting up simple practical enquiries, comparative and fair tests</li> <li>making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers</li> <li>gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</li> <li>recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</li> <li>reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</li> <li>using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</li> <li>identifying differences, similarities or changes related to simple scientific ideas and processes</li> </ul> <p style="text-align: center;">using straightforward scientific evidence to answer questions or to support their findings</p>					
<b>Key Vocabulary</b>	practical work, fair testing, relationships, accurate, thermometer, data logger, stopwatch, timer, estimate, data, diagram, identification key, chart, bar chart, prediction, similarity, difference, evidence, information, findings, criteria, values, properties, characteristics, conclusion, explanation, reason, evaluate, improve					



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## Year 5

	Autumn 1	Autumn 2	Spring 3	Spring 4	Summer 5	Summer 6
<b>Science Topics</b>	<i>Properties of Materials Materials linked to Viking Objects - properties linked to function</i>	<i>Earth and Space</i>	<i>Changes to Materials (including separating materials)</i>	<i>Life Cycles – linked to mammals, amphibians, insects and birds found in the rainforest</i>	<i>Forces – link to Mayan tools and weapons – moving stones, catapults etc...</i>	<i>Life Cycle – Human look more closely at the stages of development – link back to general mammal life cycle <b>Jigsaw Term 6 Changes in Me</b></i>
<b>Programme of Study</b>	Properties and Changes to Materials	Earth and Space	Properties and Changes to Materials	All Living Things	Forces	Animals, including Humans
<b>Objectives</b>	<ul style="list-style-type: none"> <li>compare and group together everyday materials based on evidence from comparative and fair tests, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets</li> <li>give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</li> </ul>	<ul style="list-style-type: none"> <li>describe the movement of the Earth, and other planets, relative to the Sun in the solar system</li> <li>describe the movement of the Moon relative to the Earth</li> <li>describe the Sun, Earth and Moon as approximately spherical bodies</li> <li>use the idea of the Earth's rotation to explain day and night, including the apparent movement of the Sun.</li> </ul>	<ul style="list-style-type: none"> <li>understand that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</li> <li>use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</li> <li>demonstrate that dissolving, mixing and changes of state are reversible changes</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</li> <li>describe the life process of reproduction in some plants and animals.</li> </ul>	<ul style="list-style-type: none"> <li>explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object</li> <li>identify the effects of air resistance, water resistance and friction, that act between moving surfaces</li> <li>recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect</li> </ul>	<ul style="list-style-type: none"> <li>describe the changes as humans develop from birth to old age. <b>(SRE Link)</b></li> </ul>
<b>Key Vocabulary</b>	Thermal/electrical insulator/conductor, change of state, soluble, insoluble, transparent, opaque, translucent, magnetic, synthetic, natural	Sun, Moon, Earth, planets (Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune), spherical, Solar System, rotate, star, orbit	mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible/non-reversible change, burning, rusting, new material	life cycle, reproduce, sexual, fertilises, egg, metamorphosis, asexual, plantlets, runners, tubers, bulbs, cuttings, seed dispersal	Force, gravity, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears	life cycle, reproduce, sexual, fertilises, egg, pregnancy, puberty – the vocabulary to describe sexual characteristics <b>(SRE Link)</b>
<b>Working Scientifically Year 5 and 6 Focus of LOs Refer to Progression Document</b>	<ul style="list-style-type: none"> <li>planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</li> <li>taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</li> <li>recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</li> <li>using test results to make predictions to set up further comparative and fair tests</li> <li>reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations</li> <li>identifying scientific evidence that has been used to support or refute ideas or arguments</li> </ul>					
<b>Key Vocabulary</b>	variables, independent variable, dependent variable, control variable, evidence, justify, argument (science), causal relationship, accuracy, precision, scatter graphs, bar graphs, line graphs, force meter					



# Marlborough St Mary's subject 'at a glance' overview

## Year 6

	Autumn 1	Autumn 2	Spring 3	Spring 4	Summer 5	Summer 6
<b>Science Topics</b>	<b>Light</b> – link to blackout, periscopes	<b>Electricity</b> – link to Morse code, brighter search lights	<b>All Living Things</b> – Classifying animals and plants found in mountains, environments studied	<b>Evolution and Inheritance</b> – link to study of earth to link to fossil record, Galapagos Islands (volcanic links) link to Darwin and his observations	<b>Animals, including Humans</b> – circulatory system – organs, heart rate – link to pyramid building, keeping hydrated in hot climate – water and nutrients being transported	<b>Animals, including Humans</b> – Healthy lifestyle <i>Jigsaw Term 6 Changes in Me</i>
<b>Programme of Study</b>	Light	Electricity	All Living Things	Evolution and Inheritance	Animals, including Humans	Animals, including Humans
<b>Objectives</b>	<ul style="list-style-type: none"> <li>understand that light appears to travel in straight lines</li> <li>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</li> <li>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</li> <li>use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them, and to predict the size of shadows when the position of the light source changes.</li> </ul>	<ul style="list-style-type: none"> <li>associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit</li> <li>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</li> <li>use recognised symbols when representing a simple circuit in a diagram.</li> </ul>	<ul style="list-style-type: none"> <li>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</li> <li>give reasons for classifying plants and animals based on specific characteristics.</li> </ul>	<ul style="list-style-type: none"> <li>recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago</li> <li>recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents (<b>SRE Link</b>)</li> <li>identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</li> </ul>	<ul style="list-style-type: none"> <li>identify and name the main parts of the human circulatory system, and explain the functions of the heart, blood vessels and blood</li> <li>describe the ways in which nutrients and water are transported within animals, including humans.</li> </ul>	<ul style="list-style-type: none"> <li>recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function</li> <li>describe the ways in which nutrients and water are transported within animals, including humans.</li> </ul>
<b>Key Vocabulary</b>	light, light source, Sun, sunlight, dangerous, straight lines, light rays, reflect, shadow, opaque	Circuit, complete circuit, circuit diagram, circuit symbol, cell, battery, bulb, buzzer, motor, switch, voltage <b>N.B. Children do not need to understand what voltage is, but will use volts and voltage to describe different batteries. Year 6 need to use circuit symbols to show circuit drawings</b>	vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, warm-blooded, cold-blooded, insects, spiders, snails, worms, flowering, non-flowering, mosses, ferns, conifers	offspring, sexual reproduction, vary, characteristics, suited, adapted, environment, inherited, species, fossils, evolve, evolution	Heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles, cycle, circulatory system,	diet, exercise, drugs, lifestyle
<b>Working Scientifically Year 5 and 6 Focus of LOs Refer to Progression Document</b>	<ul style="list-style-type: none"> <li>planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</li> <li>taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</li> <li>recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</li> <li>using test results to make predictions to set up further comparative and fair tests</li> <li>reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations</li> </ul> identifying scientific evidence that has been used to support or refute ideas or arguments					
<b>Key Vocabulary</b>	variables, independent variable, dependent variable, control variable, evidence, justify, argument (science), causal relationship, accuracy, precision, scatter graphs, bar graphs, line graphs, force meter					