

St. Georges C of E Primary Overview of Science

	BIOLOGY	CHEMISTRY	PHYSICS
Years 1 & 2	Animals Including Humans Living Things and their Habitats Plants	Everyday Materials	Seasonal Change <i>(Additional focus - Forces - pushes and pulls)</i>
Years 3 & 4	Animals Including Humans Living Things and their Habitats Plants	Rocks State of Matter	Light Sound Electricity Forces & Magnets
Years 5 & 6	Living Things and their Habitats Animals Including Humans Evolution and Inheritance	Properties and Changes of Materials	Earth and Space Forces Light Electricity

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 1 & 2 Cycle A	<p>(TOPIC T1 - All About Me)</p> <p>Animals Including Humans</p> <ul style="list-style-type: none"> - Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. - Find out about and describe the basic needs of humans for survival (water, food and air) <p>Scientific Enquiry</p> <ul style="list-style-type: none"> - Gathering and recording data to help in answer questions - Use their observations and ideas to suggest answers to questions 	<p>(TOPIC T2 - London's Burning)</p> <p>Everyday Materials / (Forces)</p> <ul style="list-style-type: none"> - Identify and compare the suitability of a variety and everyday material, including wood, metal, plastic, glass, brick, rock, paper, and cardboard for particular uses. - Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. - Understand the terms pushing and pulling and recognise these are forces. <p>Scientific Enquiry</p> <ul style="list-style-type: none"> - Observing closely using simple equipment. - Performing simple tests (e.g. Burning Tudor houses / suitable materials for houses) - Use observations and ideas to suggest answers to questions 	<p>(TOPIC T3&4 - Wild Africa)</p> <p>Animals / Living Things and their Habitats</p> <ul style="list-style-type: none"> - Identify and name a variety of common animals. - Recognise animals, which are carnivores, herbivores and omnivores. - 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 animals and plants. - Notice that animals have offspring, which grow into adults. <p>Find out about the basic needs of animals for survival.</p> <ul style="list-style-type: none"> - Identify and name a variety of plants and animals in their habitats, including micro-habitats - Describe how animals obtain food from plants and other animals, using the idea of a simple food change, and identify and identify and name different sources of food. - Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) <p>Scientific Enquiry</p> <ul style="list-style-type: none"> - Observing closely using simple equipment. (e.g. Investigating habitats) - Identifying and classifying 		<p>(TOPIC T5&6 - Sailing the Seven Seas)</p> <p>Seasonal Change</p> <ul style="list-style-type: none"> - Observe changes across the four seasons. - Observe and describe the weather associated with the seasons and how day length varies. <p>Scientific Enquiry</p> <ul style="list-style-type: none"> - Asking simple questions and recognising they can be answered in different ways. - Gathering and recording data to help in answering questions. - Perform simple tests. (e.g. floating and sinking investigation) 	

<p>Year 1 & 2 Cycle B</p>	<p>(TOPIC T1 - All About Me) Animals Including Humans</p> <ul style="list-style-type: none"> - Notice that humans have offspring that grow into adults - Describe and compare ourselves - Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. <p>Scientific Enquiry</p> <ul style="list-style-type: none"> - Gathering and recording data to help in answer questions - Use their observations and ideas to suggest answers to questions 	<p>(TOPIC T2 - Dinosaur Detectives) Living Things and their Habitats / Animals</p> <ul style="list-style-type: none"> - Explore and compare differences between things that are living, dead, and things that have never been alive. - Notice that animals have offspring which grow into adults (Dinosaur life cycles) - Identify and name animals that are carnivores, herbivores, and omnivores. (Dinosaur focus) <p>Scientific Enquiry:</p> <ul style="list-style-type: none"> - Identifying and classifying - Performing simple tests - Use their observations and ideas to suggest answers to questions (Dinosaur egg hatching experiment) 	<p>(TOPIC T3&4 - Incredible Journeys) Everyday Materials</p> <ul style="list-style-type: none"> - Distinguish between an object and the material from which it is made. - Identify and name a variety of everyday materials, including wood, plastic, glass, metal and rock. - Describe simple physical properties of a variety of everyday materials. - Compare and group together everyday materials on the basis of their simple physical properties. <p>Scientific Enquiry:</p> <ul style="list-style-type: none"> - Asking simple questions and recognising that they can be answered in different ways - Gathering and recording data to help in answering questions 	<p>(TOPIC T5&6 - Marvellous Medievals) Plants</p> <ul style="list-style-type: none"> - Identify and name a variety of common plants including deciduous and evergreen trees. - Identify and describe basic structure of a variety of common flowering plants, including trees. - 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. <p>Scientific Enquiry:</p> <ul style="list-style-type: none"> - Using their observations and ideas to suggest answers to questions (plant investigations) - Identifying and classifying
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<p>Year 3 & 4 Cycle A</p>	<p>(TOPIC T1 & 2-Ancient Egyptians) Animals Including Humans</p> <ul style="list-style-type: none"> - Describe the simple functions of the basic parts of the digestive system in humans -Identify diff types of teeth and functions in humans -Construct and interpret a variety of food chains -Identify that animals, including humans, need the right types and amounts of nutrition and that cannot make own food -Identify that humans and some other animals have skeletons and muscles for support, protection and movement. <p>Scientific Enquiry:</p> <ul style="list-style-type: none"> -Asking relevant questions and using different types of scientific enquiries to answer them - Making systematic and careful observations - Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions - Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables - Identifying differences, similarities or changes related to simple scientific ideas and processes - Using straightforward scientific evidence to answer questions or to support their findings. 	<p>(TOPIC T3 & 4- WW2) Light / Sound</p> <ul style="list-style-type: none"> -Recognise need light to see things and dark is the absence of light -Notice that light is reflected from surfaces -recognise light from the sun can be dangerous -Recognise shadows formed when light blocked by opaque object -Find patterns in the way size of shadows change -Identify how sounds are made -Recognise vibrations from sounds travel through a medium to the ear -Find patterns between pitch of a sound and features of the object that produced it -Recognise sound gets fainter as distance from sound source increases. <p>Scientific Enquiry:</p> <ul style="list-style-type: none"> - Asking relevant questions and using different types of scientific enquiries to answer them - Setting up simple practical enquiries, comparative and fair tests 	<p>(TOPIC T5&6- What a Wonderful World) Plants / Living Things and their Habitats</p> <ul style="list-style-type: none"> -Recognise that living things can be grouped in a variety of ways -Explore and use classification keys to help group, identify and name a variety of living things -Recognise that environments can change and this can sometimes pose dangers -Identify and describe functions of diff parts of flowering plants -Explore requirements of plants for life and growth -Investigate way in which water is transported within plants -Explore part that flowers play in life cycle of flowering plants, including pollination, seed formation and seed dispersal. <p>Scientific Enquiry:</p> <ul style="list-style-type: none"> - Identifying differences, similarities or changes related to simple scientific ideas and processes - Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
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<p>Year 3 & 4 Cycle B</p>	<p>(TOPIC T1&2- Asia) Forces & Magnets</p> <ul style="list-style-type: none"> - Compare how things move on different surfaces -Notice that some forces need contact between 2 objects, but magnetic forces can act at distance -Observe how magnets attract or repel each other and attract some materials and not others -Compare and group together a variety of everyday materials on basis of whether are attracted to a magnet, and identify some magnetic materials -Describe magnets as having two poles -Predict whether two magnets will attract or repel, depending on which poles are facing. <p>Scientific Enquiry:</p> <ul style="list-style-type: none"> - Setting up simple practical enquiries, comparative and fair tests - Asking relevant questions and using different types of scientific enquiries to answer them - Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables - Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions 	<p>(TOPIC T3&4- Robots) Electricity</p> <ul style="list-style-type: none"> - Identify common appliances that run on electricity - Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers - 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 - Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit - Recognise some common conductors and insulators, and associate metals with being good conductors. <p>Scientific Enquiry:</p> <ul style="list-style-type: none"> - Asking relevant questions and using different types of scientific enquiries to answer them - Setting up simple practical enquires, comparative and fair tests. - Recording findings using simple scientific language drawings, labelled diagrams, keys, bar charts, and tables - Reporting on findings from enquires, including oral and written explanations, displays or presentations of results and conclusions. - Using straightforward science evidence to answer questions or support their findings. 	<p>(TOPIC T5&6- Stone Age to Iron Age) Rocks / State of Matter</p> <ul style="list-style-type: none"> - Compare and group together different kinds of rocks on basis of appearance and physical properties -Describe in simple terms how fossils are formed -Recognise that soils are made from rocks --Compare and group materials together -Observe that some materials change state when heated or cooled -Identify the part played by evaporation and condensation in the water cycle. <p>Scientific Enquiry:</p> <ul style="list-style-type: none"> - Identifying differences, similarities or changes related to simple scientific ideas and processes - Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers - Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
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<p>Year 5 & 6 Cycle A</p>	<p>(TOPIC T1&2 - World War 1) Forces</p> <ul style="list-style-type: none"> - Explain unsupported objects fall towards Earth because of gravity. -Identify effects of air resistance and friction. -Recognise that some mechanisms, including levers, pulleys and gears allow a smaller force to have a greater effect. <p>Scientific Enquiry:</p> <ul style="list-style-type: none"> - Planning diff types of scientific enquiries to answer Qs. -Taking measurements. -Recording data and results of increasing complexity. -Using test results to make predictions. -Reporting and presenting findings. --Identify scientific evidence that has been used to support or refute ideas. 	<p>(TOPIC T3&4 - Why Do I Look Like This) Evolution and Inheritance</p> <ul style="list-style-type: none"> -Describe how living things classified into groups according to common observable characteristics and based on similarities and diffs, including micro- organisms, plants and animals. - Give reasons for classifying plants and animals based on specific characteristics. - Recognise living things changed over time and that fossils provide info about living things that inhabited Earth millions of years ago. - Recognise living things produce offspring of same kind, but normally offspring vary and not identical to parents. - Identify how animals and plants adapt to suit environment in diff ways and adaptation may lead to evolution. <p>Scientific Enquiry:</p> <ul style="list-style-type: none"> - Planning diff types of scientific enquiries to answer Qs. -Taking measurements. -Recording data and results of increasing complexity. -Using test results to make predictions. -Reporting and presenting findings. --Identify scientific evidence that has been used to support or refute ideas. 	<p>(TOPIC T5&6 - Lifecycles) Living Things and their Habitats / Animals Including Humans</p> <ul style="list-style-type: none"> - Describe differences in life cycles of a mammal, amphibian, an insect and a bird - Describe life process of reproduction in plants and animals. - Describe changes as humans develop to old age - Identify and name main parts of human circulatory system, and describe functions of the heart, blood vessels and blood - Recognise impact of diet, exercise, drugs and lifestyle on way their bodies function - Describe ways in which nutrients and water are transported within animals, including humans. <p>Scientific Enquiry:</p> <ul style="list-style-type: none"> - Planning diff types of scientific enquiries to answer Qs. -Taking measurements. -Recording data and results of increasing complexity. -Using test results to make predictions. -Reporting and presenting findings. --Identify scientific evidence that has been used to support or refute ideas.
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<p>Year 5 & 6 Cycle B</p>	<p>(TOPIC T1 &2 - Not Just Burnt Cakes) Properties and Changes of Materials</p> <ul style="list-style-type: none"> - Compare and group everyday materials on the basis of their properties. -Know some materials dissolve in liquid forming a solution. Use knowledge of solids, liquids and gases to describe how mixtures might be separated. -Give reasons, based on tests, for the particular uses of everyday materials. -Demo dissolving, mixing and changes of state are reversible changes. -Explain some changes lead to formation of new materials - usually irreversible <p>Scientific Enquiry:</p> <ul style="list-style-type: none"> - Planning diff types of scientific enquiries to answer Qs. -Taking measurements. -Recording data and results of increasing complexity. -Using test results to make predictions. -Reporting and presenting findings. --Identify scientific evidence that has been used to support or refute ideas. 	<p>(TOPIC T3 - Space the Final Frontier) Earth and Space</p> <ul style="list-style-type: none"> - Describe the movement of the Earth, and other planets, relative to the Sun in the solar system - Describe the movement of the Moon relative to the Earth - Describe the Sun, Earth and Moon as approximately spherical bodies - Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. <p>Scientific Enquiry:</p> <ul style="list-style-type: none"> - Planning diff types of scientific enquiries to answer Qs. -Taking measurements. -Recording data and results of increasing complexity. -Using test results to make predictions. -Reporting and presenting findings. --Identify scientific evidence that has been used to support or refute ideas. 	<p>(TOPIC T4&5 - Survival) Light</p> <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 objects that cast them. <p>Scientific Enquiry:</p> <ul style="list-style-type: none"> - Planning diff types of scientific enquiries to answer Qs. -Taking measurements. -Recording data and results of increasing complexity. -Using test results to make predictions. -Reporting and presenting findings. --Identify scientific evidence that has been used to support or refute ideas. 	<p>(TOPIC T6 - Who Let the Gods' Out) Electricity</p> <ul style="list-style-type: none"> -Associate 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. <p>Scientific Enquiry:</p> <ul style="list-style-type: none"> - Planning diff types of scientific enquiries to answer Qs. -Taking measurements. -Recording data and results of increasing complexity. -Using test results to make predictions. -Reporting and presenting findings. --Identify scientific evidence that has been used to support or refute ideas.
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