

Cycle A	EYFS	Year 1 & 2	Year 3 & 4	Year 5 & 6	
Scientific knowledge and conceptual understanding NC					
Autumn 1	Express Yourself N/A	Telling Tales Plants Identify common plants (Yr. 1) Describe structure of plants (Yr. 1) Observe seeds and bulbs (Yr. 2) Describe how plants need water, light, heat (Yr. 2)	Branch Grow Growing Living Alive Dead Healthy Weed Seedling Seed Bulb Weed Germinate Germination Reproduce Survival Nutrition	Incredible Inventions Famous scientists Investigations based on the work of famous scientists Focus on a famous scientist each week Investigate inventions that changed human history Look at ground break discoveries. Recreate certain scientific experiments Ensure focus on one black inventor that has created something we cannot live without like Garret Morgan (the gas mask and red stop light)	Planet Earth Living Things and their Habitats Life cycles (Yr.5) Process of reproduction in plants and animals (Yr. 5) -Classification based on characteristics and give reasons (Yr. 6) Detailed labelling of plants Written report into how plants reproduce Study of various animal life cycles Create classification key
Working Scientifically NC Y1-Y6					
		Plants <ul style="list-style-type: none"> Asking simple questions and recognising that they can be answered in different ways (KS1) observing closely, using simple equipment (KS1) identifying and classifying (KS1) using their observations and ideas to suggest answers to questions (KS1) 	Famous scientists <ul style="list-style-type: none"> reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions (LKS2) asking relevant questions and using different types of scientific enquiries to answer them (LKS2) setting up simple practical enquiries, comparative and fair test (LKS2) using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions (LKS2) making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers (LKS2) recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables (LKS2) using straightforward scientific evidence to answer questions or to support their findings (LKS2) 	Living Things and their Habitats <ul style="list-style-type: none"> taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate (UKS2) recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs (UKS2) 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 (UKS2) identifying scientific evidence that has been used to support or refute ideas or arguments (UKS2) 	
Scientific knowledge and conceptual understanding NC					
Autumn 2	Whizz, Bang, Colour Light Exploring light sources Shadows COEL: Engage in open-ended activity: <i>Playing & Exploring</i> Mixing Mixing and changing colours ELG- Understanding the word: Understanding some important processes and changes in the natural world around them, including the seasons and changing states of matter.	Arctic Explorers Everyday Materials Describing physical properties (Yr. 1) Focus on describing the physical properties of each material and their uses. Investigate materials for cold weather Animals, including humans - identify, name and describe variety of common animals including mammals (Yr.1) - basic needs of animals, including humans (Yr. 2) Name animals by their description and vice versa Construct a how to care for an animal guide Organise visits from a Vet of Dog Trusts (the latter will bring a dog into school and talk about how to care for it)	Materials Natural Man-made Property Hard, firm, smooth, see-through Manufactured Magnetic Names of animals survival water food Air	Rock n’ Roll Rocks and Soils Compare rocks based on physical properties (Yr. 3) Describe how fossils are formed (Yr. 3) Recognise soils are made from rocks and organic matter. (Yr. 3) Use different colour jelly to form layers on top of an object to show how fossils are formed. Plaster of Paris fossil excavation Compare different soil types Generate a table that compare different rocks	absorb water marble chalk granite sandstone slate sandy soil clay soil chalky soil peat rock stone pebble boulder soil fossil grains crystals hard/ soft texture
Working Scientifically NC Y1-Y6					
		Everyday Materials <ul style="list-style-type: none"> asking simple questions and recognising that they can be answered in different ways (KS1) observing closely, using simple equipment (KS1) performing simple tests (KS1) gathering and recording data to help in answering questions (KS1) Animals, including humans <ul style="list-style-type: none"> identifying and classifying (KS1) using their observations and ideas to suggest answers to questions (KS1) 	Rocks and Soils <ul style="list-style-type: none"> using straightforward scientific evidence to answer questions or to support their findings (LKS2) recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables (LKS2) reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions (LKS2) 	Electricity <ul style="list-style-type: none"> planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary (UKS2) taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate (UKS2) recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs (UKS2) using test results to make predictions to set up further comparative and fair tests (UKS2) 	
Scientific knowledge and conceptual understanding NC					
Spring 1	Passport to the world N/A	Fire Fire Uses of everyday Materials Identify and compare suitability of materials (Yr. 2) Look at materials for housing construction, which is the most suitable Introduce the concept of variables	Waterproof Durable Magnetic Brittle Shiny Hard Smooth Squashy Flammable	Extreme Earth States of Matter (Including the water cycle) Compare and groups materials together – solids liquids or gases (Yr. 4) Observe changes in state when materials are heated or cooled (Yr. 4) Evaporation and condensation in the water cycle (Yr. 4) Create the water cycle in a bag to show evaporation and condensation Detailed models of the water cycle Melting chocolate, wax, ice etc. Create steam by boiling water and then re-condensing it again use a cold surface	water vapour heated/ heating cooled/ cooling temperature degrees Celsius melt freeze solidify melting point molten boil solid liquid gas air oxygen powder grain/ granular crystals ice/ water/ steam Condensation Evaporation
Working Scientifically NC Y1-Y6					
		DIVERSITY ADDITION – how animals/people have evolve in different countries			

			<u>Uses of everyday Materials</u> <ul style="list-style-type: none"> identifying and classifying (KS1) using their observations and ideas to suggest answers to questions (KS1) observing closely, using simple equipment (KS1) performing simple tests (KS1) 	<u>States of Matter (Including the water cycle)</u> <ul style="list-style-type: none"> reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions (LKS2) setting up simple practical enquiries, comparative and fair test (LKS2) making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers (LKS2) 	<u>Animals Including Humans</u> <ul style="list-style-type: none"> planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary (UKS2) taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate (UKS2) recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs (UKS2) using test results to make predictions to set up further comparative and fair tests (UKS2) 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 (UKS2) <u>Evolution and Inheritance</u> <ul style="list-style-type: none"> 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 (UKS2) identifying scientific evidence that has been used to support or refute ideas or arguments (UKS2)
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Scientific knowledge and conceptual understanding NC								
Spring 2	Favourite Stories <u>Exploring the outdoors, change, growth</u> Making potions, looking at cause and effect. (F2) <u>Exploring and observing growth and the changes that occur during spring in the natural world. Measuring plants and drawing observational pictures of natural objects.</u>		Where we live <u>Seasonal Changes</u> Observe changes across all four seasons (Yr. 1) Observe weather associated with seasons (Yr. 1) Create rain catches to record rainfall over a certain length of time. Keep a weather diary (added to monthly) Set up a weather station (hardware permitting)	Spring Summer Autumn Winter Types of weather Observe	Tomb Raiders <u>Animals including humans</u> Nutrition (Yr. 3) Skeletons and muscles (Yr. 3) Use x-rays to view bones Use skeleton model for detailed viewing Organise a visit from a nutritionist Create a balanced meal and discuss what this means Look at the adverse effects of poor nutrition	skeletons – support, protection skulls – brain ribs – heart, lungs joint muscles- movement, pull, contract relax vitamins minerals fat protein Carbohydrates Fibre	South America <u>Animals Including Humans:</u> <u>SRE Focus</u> Changes as humans get old (Yr. 5)	Vocab on PSHE documentation
	Working Scientifically NC Y1-Y6							
	ELG- Understanding the world: Exploring the natural world around them, making observations and drawing pictures of animals and plants. ELG- Understanding the world: Understands some important processes and changes in the natural world around them, including the seasons and changing states of matter.		<u>Seasonal Changes</u> <ul style="list-style-type: none"> observing closely, using simple equipment (KS1) performing simple tests (KS1) using their observations and ideas to suggest answers to questions (KS1) 		<u>Animals including humans</u> <ul style="list-style-type: none"> using straightforward scientific evidence to answer questions or to support their findings (LKS2) 	<u>Animals Including Humans:</u> <u>SRE Focus</u> <ul style="list-style-type: none"> identifying scientific evidence that has been used to support or refute ideas or arguments (UKS2) 		

Scientific knowledge and conceptual understanding NC									
Summer 1	Let's Play <u>Magnetic and non-magnetic</u> <u>Investigating different materials</u> Dinosaurs, looking at how the world has changed since prehistoric times. ELG- Understanding the world: Understands some important processes and changes in the natural world around them, including the seasons and changing states of matter. ELG- Understanding the world: Know some similarities and differences between the natural world around them and contrasting environments, drawing on their own experiences and what has been read in class. COEL-Engage in open-ended activity: <i>Playing & Exploring</i>	Magnet Magnetic Non-Magnetic Metal	Inside Out <u>Plants</u> Identify common plants (Yr. 1) Describe structure of plants (Yr. 1) Observe seeds and bulbs (Yr. 2) Describe how plants need water, light, heat (Yr. 2) Dissect a plant and label Go on a plant hunt Cut bulbs up and investigate Set seeds and observe Create a plant survival guide. Grow beans in bags Use edible playground (create a class veg patch and give roles to pupils to look after plants)	Branch Grow Growing Living Alive Dead Healthy Weed Seedling Seed Bulb Weed Germinate Germination Reproduce Survival Nutrition Male Female Features Variation Origin	Nottingham <u>Plants</u> Functions of each part (Yr.3) Requirements for life (Yr. 3) Water transportation (Yr. 3) Life cycle (Yr. 3) Use edible playground (create a class veg patch and give roles to pupils to look after plants) Plant dissection Look at how water is transported in a plant (Carnation/celery experiment with food colouring) Growing conditions experiment <u>Forces and magnets</u> Compare moving on surfaces (Yr. 3) Forces need contact (Yr. 3) Magnets (repel and attract) (Yr. 3) Investigate magnetism (Yr. 3) Two poles of a magnet (Yr. 3) Predict if magnets will attract or repel (Yr. 3) Friction experiments – testing different surfaces. Investigate how magnetic and non-magnetic items Pull testing to test the magnetism of a magnet Create your own magnets by rubbing a magnet on the end of a needle (or something equivalent). Range of experiments that explore different forces in action	force push pull open Surface attract repel magnetic poles north south metal iron Steel Magnetism	Structure Function Nutrients Fertiliser Pollination Seed formation Seed dispersal Life-cycle Transportation	Journeys <u>Light</u> Light travels in straight lines (Yr. 6) Objects are seen because they reflect or give out light (Yr. 6) We see because light travels from sources to eyes (Yr.6) Shadows (Yr. 6) Create a periscope Study refraction Investigate how shadows change over the course of day, week, month (length of shadows in summer vs winter etc.) Written report of how the human eye works (pupil research)	periscope rainbow filters
	Summer 2	Down at the bottom of the garden <u>Minibeast hunts</u> Naming and Classification (sorting by number of legs, wings) COEL-Find ways to solve problems / find new ways to do things / test their ideas: <i>Creating & Thinking</i> Exploring nature garden using magnifying glasses and binoculars to see what you can spot <u>Life cycles</u> investigating the butterfly	Cocoon Chrysalis Egg Change Metamorphosis	Caribbean <u>Animals, including humans</u> - Identify, name and describe common animals including, mammals (Yr. 1) Look at animals that are indigenous to the Caribbean, look at their habitats. Possible visit from a company like ZooLab. Bring a selection of exotic animals into to school. DIVERSITY ADDITION - Look at animals that are indigenous to the Caribbean, look at their habitats.					
Working Scientifically NC Y1-Y6									

DIVERSITY ADDITION - Butterflies – what butterflies are indigenous to particular countries? Why? What is it about that habitat?

ELG- Understanding the world: Understands some important processes and changes in the natural world around them, including the seasons and changing states of matter.

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

Plants

- identifying and classifying (KS1)
- using their observations and ideas to suggest answers to questions (KS1)

DIVERSITY ADDITION - Investigate George Washington Carver – he was a botanist who focus on soil and how things grow.

Animals, including humans

- asking simple questions and recognising that they can be answered in different ways (KS1)
- observing closely, using simple equipment (KS1)
- performing simple tests (KS1)

Plants

- making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers (LKS2)

Forces and magnets

- reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions (LKS2)
- asking relevant questions and using different types of scientific enquiries to answer them (LKS2)
- making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers (LKS2)
- recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables (LKS2)
- using straightforward scientific evidence to answer questions or to support their findings (LKS2)

Light

- 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 (UKS2)
- identifying scientific evidence that has been used to support or refute ideas or arguments (UKS2)

Cycle B	EYFS	Year 1 & 2	Year 3 & 4	Year 5 & 6					
Autumn 1	Scientific knowledge and conceptual understanding NC								
	<p>Out and about N/A</p>	<p>Are we there yet? <u>Everyday Materials</u></p> <ul style="list-style-type: none"> Identify a material (Yr. 1) Describing physical properties (Yr. 1) Comparing and grouping (Yr. 1) <p>Identify and compare a range of materials. Describe the properties of each material Investigate various materials that could be used as a space suit, moon lander, rocket etc.</p>	<p>Materials Natural Man-made Property Hard, firm, smooth, see-through Manufactured Magnetic waterproof absorbent</p>	<p>Our Wonderful World <u>Living things and their habitats</u></p> <ul style="list-style-type: none"> Grouping living things (Yr. 4) Classification keys (Yr. 4) Change in environments, dangers to living things (Yr.4) <p>Create different classification keys. Focus on events where wildlife has been put in danger i.e. Australian wildfires Look at deforestation and the effects on the wildlife</p>	<p>Keys Environment Condition</p>	<p>Space <u>Earth and Space</u></p> <ul style="list-style-type: none"> Describe movement of earth and other planets (Yr. 5) Describe movement of sun and moon (Yr. 5) Spherical bodies (Yr. 5) Earths rotation to describe day and night (Yr.5) <p>DIVERSITY ADDITION - Study of Mary Jackson, Dorothy Vaughn, Katherine Johnson and how they influenced the space race.</p> <p>Study heliocentric and geocentric models Draw solar system Create a planet fact file Make model planets and arrange in the previous learnt models Scale drawings of the planets on the playground Study of black scientists involved in the Space race</p>	<p>revolve geocentric model heliocentric model shadow clocks sundials astronomical clocks</p> <p>Spherical Sphere Names of planets Celestial body 'dwarf' planet orbit</p>		
	Working Scientifically NC Y1-Y6								
	<p><u>Everyday materials</u></p> <ul style="list-style-type: none"> Asking simple questions and recognising that they can be answered in different ways (KS1) Observing closely, using simple equipment (KS1) Performing simple tests (KS1) using their observations and ideas to suggest answers to questions (KS1) <p>Investigate various materials that could be used as a space suit, moon lander, rocket etc. Best way to repair a astronauts glove.</p>	<p><u>Living things and their habitats</u></p> <ul style="list-style-type: none"> Asking relevant questions and using different types of scientific enquiries to answer them (LKS2) Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions (LKS2) Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and table (LKS2) <p>Create different classification keys. Investigate local area</p>	<p><u>Earth and Space</u></p> <ul style="list-style-type: none"> identifying scientific evidence that has been used to support or refute ideas or arguments (UKS2) <p>Comparing old ideas against new ideas (flat vs. Spherical)</p>						
Autumn 2	Scientific knowledge and conceptual understanding NC								
	<p>Toy Story <u>Circuits</u> Making robots Scrap modelling from disused electrical items Create simple working circuit</p> <p>ELG- Understanding the world: Understands some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p> <p>ELG- Understanding the world: Know some similarities and differences between the natural world around them and contrasting environments, drawing on their own experiences and what has been read in class.</p> <p>COEL-Engage in open-ended activity: <i>Playing & Exploring</i></p>	<p>Motor Battery Connect Power</p>	<p>The Workshop <u>Everyday materials</u></p> <ul style="list-style-type: none"> Distinguish between an object and a material (Yr. 1) <p>Establish what materials certain objects are made from and record findings Look at photos/or physical parts of objects to establish their material Look at a material and suggest the most appropriate use.</p>	<p>Materials Natural Man-made Property Hard, firm, smooth, see-through Manufactured Magnetic</p>	<p>The Tudors <u>Light</u></p> <ul style="list-style-type: none"> Need light to see, dark is absence of light (Yr. 3) Light is reflected (Yr. 3) Light from sun is dangerous (Yr. 3) Shadows (Yr. 3) Patterns in shadows (size) (Yr. 3) <p>Draw around an object on the playground and watch how the shadow changes through the course of the day. Make kaleidoscopes. Safety posters Dark boxes Make sundials feely bags</p>	<p>Shadow Transparent translucent Opaque Direction Travels Source Reflect Reflection</p>	<p>WW2 <u>Forces</u></p> <ul style="list-style-type: none"> Air resistance and water resistance (Yr. 5) Mechanisms, including levers and pulleys and gears (Yr. 5) Effect of gravity (Yr. 5) <p>Parachute experiment Making a boat to investigate buoyancy and water resistance Floating and sinking experiments</p>	<p>moving surfaces levers pulleys Gears</p> <p>fall gravity force air resistance water resistance Friction mechanisms</p>	
	Working Scientifically NC Y1-Y6								
	<p><u>Everyday materials</u></p> <ul style="list-style-type: none"> asking simple questions and recognising that they can be answered in different ways (KS1) observing closely, using simple equipment (KS1) performing simple tests (KS1) identifying and classifying (KS1) using their observations and ideas to suggest answers to questions (KS1) gathering and recording data to help in answering questions (KS1) 	<p><u>Light</u></p> <ul style="list-style-type: none"> reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions (LKS2) asking relevant questions and using different types of scientific enquiries to answer them (LKS2) setting up simple practical enquiries, comparative and fair test (LKS2) using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions (LKS2) making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers (LKS2) recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables (LKS2) using straightforward scientific evidence to answer questions or to support their findings (LKS2) <p>Sun investigations Reflectivity investigations</p>	<p><u>Forces</u></p> <ul style="list-style-type: none"> 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 (UKS2) recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs (UKS2) taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate (UKS2) 						
Spring 1	Scientific knowledge and conceptual understanding NC								
	<p>Paws and claws <u>Habitats</u> What animals need, similarities and differences Vets role play</p> <p>DIVERSITY ADDITION - Habitats – looking at habitats outside of the UK</p> <p>COEL- Make links and notice patterns in their experience: <i>Creating & Thinking Critically</i></p> <p>ELG- Understanding the world: Understands some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p>	<p>Needs Similarities Difference Compare</p>	<p>Dangerous Dinosaurs <u>Animals, including humans</u> identify and name variety of carnivores, herbivores and omnivores (Yr. 1) Venn diagram of different dinosaurs and what they eat</p> <p><u>Living things and their habitats</u> -- How animals obtain food – simple food chains. (Yr. 2)</p> <p>DIVERSITY ADDITION - Dinosaurs that are found on different continents of the world – are they herbivores, carnivores etc. What does that tell you about that environment etc.</p> <p>Investigate food chains of different types of animals in different habitats and locations Look at the different diets that animals consume Use 'bait' and night cameras to take photos of animals that could be dwelling in our school environment</p>	<p>Herbivore Carnivore Omnivore Diet</p> <p>Prey Predator</p>	<p>Africa <u>Animals including humans</u> Digestive system (Yr. 4) Teeth in humans (Yr. 4) Food chains (Yr. 4) Make big teeth models Use digestive system tunic Make differing food chains The journey of food Visit from a dentist</p>	<p>Food groups Starches Cereals Incisor Molar Canine Diet decay</p>	<p>Consumer Producer Organism</p> <p>oesophagus transports stomach acid enzymes small intestine large intestine</p>	<p>Magic and Mystery <u>Properties and Changes in Materials</u> Compare and Group objects (Yr. 5) Dissolving to form solution (Yr. 5) Separating mixtures (Yr. 5) Uses of everyday materials based on tests (Yr.5) Reversible and irreversible changes (Yr. 5) Alien soup experiment - separating a mixture using sieving and filtering Burnt toast, cooked egg experiment Getting salt from a solution Make mixtures Testing materials that will rust and ones that will not (focus on hypothesizing)</p>	<p>Mixing Chemical Rusting Residue</p> <p>Solubility Response Dissolve Solution Solute Separate Separating Filtering Sieving Reversible change Irreversible change</p>

<p>ELG- Understanding the world: Know some similarities and differences between the natural world around them and contrasting environments, drawing on their own experiences and what has been read in class.</p>	Working Scientifically NC Y1-Y6				
<p>Spring watch Exploring materials</p> <p>Changing materials e.g. melting ice and chocolate Dissolving sugar and salt – where has it gone?</p> <p>Life Cycle – Animals Plants</p> <p>Planting seeds – changes in a plant, where vegetables grow Changes in baby animals to adult animals</p> <p>ELG- Understands some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p> <p>ELG-Know some similarities and differences between the natural world around them and contrasting environments, drawing on their own experiences and what has been read in class.</p>	<p>Changes Melt Heat Compare Solids Liquids Roots Leaves Stem Flower On Under</p>	<p>Animals, including humans</p> <ul style="list-style-type: none"> asking simple questions and recognising that they can be answered in different ways (KS1) observing closely, using simple equipment (KS1) <p>Living things and their habitats</p> <ul style="list-style-type: none"> using their observations and ideas to suggest answers to questions (KS1) gathering and recording data to help in answering questions (KS1) identifying and classifying (KS1) 	<p>Animals including humans</p> <ul style="list-style-type: none"> asking relevant questions and using different types of scientific enquiries to answer them (LKS2) recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables (LKS2) identifying differences, similarities or changes related to simple scientific ideas and processes (LKS2) using straightforward scientific evidence to answer questions or to support their findings (LKS2) 	<p>Properties and Changes in Materials</p> <ul style="list-style-type: none"> planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary (UKS2) taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate (UKS2) recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs (UKS2) using test results to make predictions to set up further comparative and fair tests (UKS2) 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 (UKS2) identifying scientific evidence that has been used to support or refute ideas or arguments (UKS2) 	<p>Greeks <u>Animals Including Humans:</u> <u>SRE Curriculum</u> Changes as humans get old (Yr. 5)</p> <p>Vocab on PSHE documentation</p>

Scientific knowledge and conceptual understanding NC					
<p>Spring 2</p>	<p>Changes Melt Heat Compare Solids Liquids Roots Leaves Stem Flower On Under</p>	<p>Into the woods <u>Living things and their habitats</u> compare living, dead and never alive (Yr. 2) identify why animals/plants suited to a habitat (Yr. 2) identify animals and plants in their habitat including micro-habitats. Look at various objects that are alive, dead and not living. Create a habitat for a specific animal/plant etc. Ants nest Birds nests Bug hotels</p>	<p>Living Not living Dead Micro-habitat habitat</p>	<p>Virtual Reality <u>Electricity</u> Appliances that use electricity (Yr. 4) Series circuits with basic parts (Yr. 4) Complete circuits (will/won't work) Yr. 4) Switches (Yr. 4) Common conductors/insulators (Yr. 4)</p> <p>DIVERSITY ADDITION - Lewis Latimer – He created a durable filament for light bulbs. The light bulb would not have been possible without him</p> <p>Making circuits Identifying mistakes in circuits to make it work Design circuits Investigate materials which conduct electricity and those which do not Make reference to Lewis Latimer – black inventor who worked with Thomas Edison</p>	<p>Circuit Series Cell Bulb Buzzer switch Conduct Conductor Insulate Insulator Dim Brightness</p>

Working Scientifically NC Y1-Y6					
<p>ELG- Understands some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p> <p>ELG-Know some similarities and differences between the natural world around them and contrasting environments, drawing on their own experiences and what has been read in class.</p>		<p><u>Living things and their habitats</u></p> <ul style="list-style-type: none"> observing closely, using simple equipment (KS1) identifying and classifying (KS1) gathering and recording data to help in answering questions (KS1) 		<p><u>Electricity</u></p> <ul style="list-style-type: none"> making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers (LKS2) recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables (LKS2) using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions (LKS2) reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions (LKS2) 	<p><u>Animals Including Humans:</u></p> <ul style="list-style-type: none"> identifying scientific evidence that has been used to support or refute ideas or arguments (UKS2)

Scientific knowledge and conceptual understanding NC					
<p>Summer 1</p> <p>If you go down to the woods today Plants</p> <p>Planting seeds – where the parts of the plant develop Garden walk to identify certain plants Sunflower growing – who can grow the tallest sunflower? Why ahs it grown taller? Etc.</p> <p>ELG- Understanding the world: Understands some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p> <p>ELG- Understanding the world: Know some similarities and differences between the natural world around them and contrasting environments, drawing on their own experiences and what has been read in class.</p>	<p>Roots Leaves Stem Flower Plant</p>	<p>Roald Dahl <u>Uses of everyday materials</u> Manipulating solids by squashing, squeezing, bending, stretching (Yr. 2) Use various materials and conduct a test to investigate their appropriate use by manipulating them</p> <p>Mini-beast madness <u>Animals including humans</u> notice that animals grow and have offspring (Yr. 2) Describe the importance of exercise, eating healthy and hygiene (Yr. 2) Compare baby animals and the adult form. Look at the stages of growth. Create fitness circuits Create a 'healthy plate' of food.</p>	<p>squash bending twisting Stretch Manipulate</p> <p>Variety Diet Exercise Nutrition Growth</p>	<p>Reproduce Offspring</p> <p>Produce young egg-chick-chicken egg-caterpillar-pupa-butterfly spawn-tadpole-frog lamb-sheep baby-toddler-child-teenager-adult</p> <p>Community Café</p> <p>The Romans <u>Sound</u> Identify how sounds are made (Yr. 4) Vibrations travel through a medium (Yr. 4) Patterns between pitch and sound (Yr. 4) Patterns between volume and sound (Yr. 4) Sounds get fainter as distance increase (Yr. 4) Using tuning forks Coat hanger experiments (differing lengths of string attached to a coat hanger) Sounds in water String and cup telephone Make rice shakers and investigate variables regarding the amount of rice used to effect the sound that is made (louder/quieter etc.)</p>	<p>Vibrate Travel pitch tune high low volume loud quiet fainter muffle vibrations insulation</p> <p>Mystic East N/A</p>

Working Scientifically NC Y1-Y6					
<p>Summer 2</p> <p>Walk the Plank Floating and sinking Making and test own boats (forces) Why do some materials sink and why do some float Water play</p> <p>ELG- Understanding the world: Understands some important processes and changes in the natural world around them, including the seasons and changing states of matter.</p> <p>ELG- Understanding the world: Know some similarities and differences between the natural world around them and contrasting environments, drawing on their own experiences and what has been read in class.</p>	<p>Float Sink Heavier Lighter</p>	<p><u>Uses of everyday materials</u></p> <ul style="list-style-type: none"> observing closely, using simple equipment (KS1) performing simple tests (KS1) using their observations and ideas to suggest answers to questions (KS1) <p><u>Animals including humans</u></p> <ul style="list-style-type: none"> gathering and recording data to help in answering questions (KS1) asking simple questions and recognising that they can be answered in different ways (KS1) 		<p><u>Sound</u></p> <ul style="list-style-type: none"> using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions (LKS2) identifying differences, similarities or changes related to simple scientific ideas and processes (LKS2) using straightforward scientific evidence to answer questions or to support their findings (LKS2) setting up simple practical enquiries, comparative and fair tests (LKS2) making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers (LKS2) reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions (LKS2) 	

