



# The Grange Primary School

## Science Overview

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# Science Overview

The units for Science are taught in the specific year group as identified by the national curriculum below. Working scientifically is taught through the units of Science and covers the five types of enquiry. STEM activities are used to support the teaching and learning of Science.

Key Stage	Year Group	National Curriculum	
		Unit	Working Scientifically
EYFS	FS1 and FS2	<p><i>In the Foundation Stage, children have the opportunity to explore and investigate objects, materials and living things. Children are encouraged to explain why things occur and talk about changes. They explore forces using magnets, floating and sinking, push and pulls, melting and classifying living things. The environment gives the children the opportunity to extend their learning and curiosity through investigation stations, including those involving sand, water and bugs.</i></p>	
	3 - 4 Year olds will:	<p><b>Understanding of the World</b></p> <ul style="list-style-type: none"> <li>Use all their senses in hands on exploration of natural materials</li> <li>Explore collections of materials with similar and/or different properties</li> <li>Talk about what they see, using a wide vocabulary</li> <li>Plant seeds and care for growing plants</li> <li>Understand the key features of the life cycle of a plant and an animal</li> <li>Begin to understand the need to respect and care for the natural environment and all living things</li> <li>Explore and talk about different forces they can feel</li> <li>Talk about the differences between materials and changes they notice</li> </ul>	<p><b>Plants</b></p> <ul style="list-style-type: none"> <li>Observe plants in and around school.</li> <li>Name plants in and around school.</li> <li>Talk about how plants grow and change.</li> <li>Talk about why plants grow and change.</li> <li>Talk about caring for plants.</li> </ul> <p><b>Animals including humans</b></p> <ul style="list-style-type: none"> <li>Observe animals.</li> <li>Name animals.</li> <li>Talk about caring for animals.</li> </ul> <p><b>Living things and their habitats</b></p> <ul style="list-style-type: none"> <li>Talk about habitats in and around the school.</li> <li>Talk about objects found in and around school.</li> <li>Talk about animals found in and around the school.</li> <li>Talk about how to take care of our environment.</li> </ul> <p><b>Everyday materials</b></p> <ul style="list-style-type: none"> <li>Talk about objects they have found in and around school.</li> <li>Talk about what objects are made from.</li> </ul> <p><b>Seasonal changes</b></p> <ul style="list-style-type: none"> <li>Talk about the weather and how it changes.</li> </ul>
	Reception children will:	<p><b>Understanding of the World</b></p> <ul style="list-style-type: none"> <li>Explore the natural world around them</li> <li>Describe what they see, hear and feel whilst outside</li> <li>Understand the effect of changing seasons on the natural world around them</li> </ul>	<p><b>Seasonal changes</b></p> <ul style="list-style-type: none"> <li>Talk about the weather.</li> <li>Name types of weather.</li> <li>Talk about changes in the weather.</li> <li>Talk about patterns in the weather.</li> </ul> <p><b>Animals including humans</b></p> <ul style="list-style-type: none"> <li>Look at similarities and differences between animals.</li> <li>Talk about changes in animals.</li> </ul> <p><b>Living things and their habitats</b></p> <ul style="list-style-type: none"> <li>Look at similarities and differences between habitats.</li> <li>Look at similarities and differences between environments.</li> </ul> <p><b>Plants</b></p> <ul style="list-style-type: none"> <li>Look at how plants grow and change over time.</li> <li>Look at similarities and differences between plants.</li> </ul> <p><b>Everyday materials</b></p> <ul style="list-style-type: none"> <li>Look at similarities and differences between objects/materials and how they change.</li> <li>Identify what objects are made from, including plastic, wood, paper and metal.</li> <li>Talk about properties of materials and what they could be used for.</li> </ul>

		ELG	<p><b>The Natural World</b> - Children at the expected level of development will:</p> <ul style="list-style-type: none"> <li>• Explore the natural world around them, making observations and drawing pictures of animals and plants</li> <li>• 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</li> <li>• Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.</li> </ul>	See above	See above
KS1	Year 1		<p><b>Plants</b></p> <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> <p><b>Animals including humans</b></p> <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> <p><b>Everyday materials</b></p> <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> <p><b>Seasonal changes</b></p> <ul style="list-style-type: none"> <li>• Observe changes across the four seasons.</li> <li>• Observe and describe weather associated with the seasons and how day length varies.</li> </ul>		<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>
	Year 2		<p><b>Living things and their habitats</b></p> <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> <p><b>Plants</b></p> <ul style="list-style-type: none"> <li>• Observe and describe how seeds and bulbs grow into mature plants.</li> <li>• Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</li> </ul> <p><b>Animals including humans</b></p> <ul style="list-style-type: none"> <li>• Notice that animals, including humans, have offspring which grow into adults.</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> <p><b>Uses of everyday materials</b></p> <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>		
KS2	Year 3		<p><b>Plants</b></p> <ul style="list-style-type: none"> <li>• Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, 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> <p><b>Animals including humans</b></p> <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> <li>• Identify that humans and some other animals have skeletons and muscles for support, protection and movement.</li> </ul> <p><b>Rocks</b></p> <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>• 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> </ul>

	<p><b>Light</b></p> <ul style="list-style-type: none"> <li>Recognise that they need light in order to see things and that dark is the absence of light.</li> <li>Notice that light is reflected from surfaces.</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> <p><b>Forces and magnets</b></p> <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>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>
Year 4	<p><b>Living things and their habitats</b></p> <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> <p><b>Animals including humans</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> <p><b>States of matter</b></p> <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> <p><b>Sound</b></p> <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> <p><b>Electricity</b></p> <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>	
Year 5	<p><b>Living things and their habitats</b></p> <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> <p><b>Animals, including humans</b></p> <ul style="list-style-type: none"> <li>Describe the changes as humans develop to old age.</li> </ul> <p><b>Properties and changes of materials</b></p> <ul style="list-style-type: none"> <li>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.</li> <li>Know 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>Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.</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> <p><b>Earth and Space</b></p> <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> </ul>	<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>

	<ul style="list-style-type: none"> <li>Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.</li> </ul> <p><b>Forces</b></p> <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>Identifying scientific evidence that has been used to support or refute ideas or arguments.</li> </ul>
Year 6	<p><b>Animals including humans</b></p> <ul style="list-style-type: none"> <li>Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.</li> <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> <p><b>Evolution and Inheritance</b></p> <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.</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> <p><b>Light</b></p> <ul style="list-style-type: none"> <li>Recognise 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.</li> </ul> <p><b>Electricity</b></p> <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>	

Notes:

For Science vocabulary to be taught per unit, per year group, please see pages

Please refer to ASE PLAN matrices for further support and guidance, see appendix,

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## Foundation Stage 1 Long Term Plan



Term <i>Key Driver Focus</i>	Topic Theme	Communication and Language Book Focus	Nursery Rhyme/ Familiar Song	Literacy		Managing Feelings and Behaviour	PSED (PSHE and Jigsaw)	Maths	Understanding of the World (Science/RE/History/Geography)			Expressive Arts and Design	Physical Development (Gross and Fine Motor)	Computing/T Early Technology (Purple Mash)	Events / British Values
				Reading, Comprehension and Phonics	Writing				People, Culture and Communities	Past and Present	The Natural World				
<b>Autumn 1</b> <i>Emotional Awareness</i>	Marvellous Me	What I Like About Me  Rhyming stories and rhyming activities.	Head, Shoulders, Knees and Toes  If You're Happy and You Know It	Phonics: Letter of the Week  Sounds  Rhyme Time	Rhyme/ Poetry  Fine Motor Control  Gross Motor Control  Dough Disco	Confidence  Preferences and Interests	Being Me In My World  <b>World Mental Health Day</b>	Number of the Week  Counting  SSM  Shape	My Family and What Makes Me Special	Who Is In My Family?  <b>Black History Month</b>	<u>Seasonal Changes</u> Autumn  <u>Animals Including Humans</u> Body  STEM - Water Music	Drawing  Artist of the Half Term	Running, Jumping and Climbing  Draw Lines and Circles	2Paint	Stay and Play  Entry - Baby Photos  Exit - Sharing Work  <b>Harvest Festival</b>
<b>Autumn 2</b> <i>Knowledge of the World</i>	Colour and Light	Brown Bear, Brown Bear, What Can You See?	Twinkle, Twinkle, Little Star  Firework Poetry  5 Little Men In a Flying Saucer	Phonics: Letter of the Week  Sounds  Rhyme Time	Rhyme/ Poetry  Fine Motor Control  Gross Motor Control  Dough Disco	Tolerating Delay  Turn-taking and Sharing  Tidying up	Celebrating Differences  <b>Anti-Bullying Week</b>	Number of the Week  Matching Numerals and Objects  SSM  Shape	My Events	Favourite Celebration  <b>Remembrance Day</b>	<u>Seasonal Changes</u> Winter  Light and Dark  STEM - Fizzing Rainbows	Painting  Artist of the Half Term	Running, Jumping, Sliding, Slithering, Crawling and Catching  Scissor Safety	2Go	Christmas Sing Along  Breakfast with Santa  Entry - Binoculars  Exit - Governors  <b>Christmas</b>
<b>Spring 1</b> <i>Knowledge of the World</i>	People Who Help Us	When I Grow Up: Firefighter  When I Grow Up: Doctor  Busy People: Police Officer  Busy People: Vet	The Wheels On the Bus  Row, Row, Row Your Boat  <b>World Book Day</b>	Phonics: Letter of the Week  Rhyme Time  Name Recognition  Instrumental Sounds	Non-Fiction  Mark-making  Tracing Name  Dough Disco	Emotions  Turn-taking and Sharing  Tolerating Delay	Dreams and Goals	Number of the Week  Representing Numbers  SSM  Positional Language	Occupations and Ways of Life  <b>Chinese New Year</b>  <b>Fairtrade Fortnight</b>	Exploring past and present emergency vehicles.	<u>Seasonal Changes</u> Spring  Floating and Sinking  STEM - Apple Boat	Sculpture  Artist of the Half Term	Running Around Obstacles and Standing on One Leg  Scissors  Copy Letters	2Design  <b>Safer Internet Day</b>	Entry - Fire Engine/ Ambulance Visit  Exit - Showcase Boats
<b>Spring 2</b> <i>Knowledge of the World</i>	Bears	We're Going On a Bear Hunt  Peace at Last, Brown Bear	The Bear Went Over the Mountain  Teddy Bear, Teddy Bear	Phonics: Letter of the Week  Oral Segmenting and Blending  Rhyme Time	Narrative  Mark-making  Tracing and Writing Name  Dough Disco	Emotions  Friendly Behaviour  Good Relationship	Healthy Me	Number of the Week  Number Conversation  SSM  Patterns  <b>STEM Week</b>	Special Teddy Bears	<b>Women's History Month</b>	<u>Seasonal Changes</u> Spring  <u>Living Things and Their Habitats</u> Bears  STEM - Igloo House	Collage  Artist of the Half Term	Moving In Different Ways, Hopping, Jumping and Slithering  Scissors  Copy Letters	2Create a Story	Entry - Teddy Bear Show and Tell  Exit - 11 Before 11: Teddy Bears Picnic  <b>Easter</b>



<b>Summer 1</b> <i>Independence</i>	Once Upon a Time	Goldilocks and the Three Bears  The Three Little Pigs  Little Red Riding Hood	This Little Piggy  The Grand Old Duke of York  There Was a Princess Long Ago	Phonics: Letter of the Week  Oral Segmenting and Blending  Rhyme Time	Narrative  Phonemes and Graphemes  Dough Disco	Emotions  Friendly Behaviour  Good Relationship	Relationship  <b>Mental Health Awareness Week</b>	Number of the Week  Compare - More or Less  SSM  <b>National Numeracy Day</b>	<b>EID</b>  <b>World Day for Cultural Diversity</b>	Exploring Past Teddy Bears and Our Past Toys	<u>Seasonal Changes</u> Summer  <u>Everyday Materials</u>  STEM - Nut and Bolt Structure	Digital Media  Artist of the Half Term  <b>World Art Day</b>	Skipping and Hopping  Effect of Activity on Bodies  Scissors  Write Letters	2Beat	Entry - Trip to Play Avenue  Exit - Parents
<b>Summer 2</b> <i>Enterprise</i>	In the Garden	Oliver's Vegetables  The Enormous Turnip  Titch and the Sunflower  Minibeast Calypso	Incy, Wincy Spider  Going In the Garden to Eat Worms  Round and Round the Garden  Little Miss Muffet	Phonics: Letter of the Week  Oral Segmenting and Blending  Rhyme Time	Narrative  Instructions  Write Name and CVC Words  Label Items With Sounds  Dough Disco	Emotions  FS2 Transition  <b>Refugee Week</b>	Changing Me	Number of the Week  Number Problems  SSM  Measure (Capacity and Length)	Remembering Special Times With Family and Friends	What Special Times Can I Remember  <b>Post 1066 Study Day</b>	<u>Seasonal Changes</u> Summer  <u>Animals Including Humans</u>  <u>Plants</u>  Map work  STEM - Seeds In a Jar	Printing  Artist of the Half Term  <b>Make Music Day</b>	Skipping and Hopping  Dressing and Undressing  Write Letters	2Count	Entry - Mystery Sunflower Seeds  Exit - Sunflower Showcase

The characteristics of effective learning run through all areas of learning as well as opportunities for children's interests to be explored further. Purple Mash units will be explored throughout the year in line with the children's interests. This is an overview of the expected learning to be taught during the academic year of 2021-2022, however this is subject to change leading from the children's interests and following the EYFS curriculum.



## Foundation Stage 2 Long Term Plan



Term Key Driver Focus	Topic Theme	Communica- tion and Language (Book Focus)	Literacy		Managing Feelings and Behaviour	PSED (PSHE and Jigsaw)	Maths (White Rose Maths)	Understanding of the World (Science, Design and Technology, RE, History and Geography)			Expressive Arts and Design	Music (Charanga)	Physical Development  (Gross and Fine Motor)	P.E.	Computing/E arly Technology (Purple Mash)	Events / British Values
			Reading, Comprehension and Phonics	Writing				People, Culture and Communities	Past and Present	The Natural World						
<b>Autumn 1</b> <i>Emotional Awareness</i>	<i>New Beginnings</i>	Funny Bones  Sometimes I Feel Sunny	<b>Sounds Write: Initial Code</b>  Identify phonemes and write graphemes	Poetry  Mark Making  Write own name.  Label items with key sounds.  Dough Disco	All about me  Belonging to a class and school  Class routines and rules	Being Me in my World  <b>World Mental Health Day</b>	Getting to know you  Just Like Me!	<b>Special times for me and others</b>  Home and school environment	How have I changed since I was a baby?  Black History: Johnathan Lee Iverson	<u>Seasonal Changes:</u> Autumn  <u>Animals including Humans:</u> Body Parts  <u>Everyday Materials</u> STEM: Wellington Boots	<b>Painting</b>  Naming colours  Portraits  Artist of the Half Term	Me!  Composer of the Term:	Use space safely  Manage basic hygiene and personal needs  Shows preference for a dominant hand	Awareness (Block 1)	2 Paint a Picture  Operate simple Technology.	<u>Entry:</u> Bones mystery  <u>Exit:</u> Perform body songs  <b>Harvest Festival</b>
<b>Autumn 2</b> <i>Knowledge of the World</i>	Light Up the Sky	Aliens Loves Underpants  Whatever Next  Room on the Broom	<b>Sounds Write: Initial Code</b>  Blend and read simple words	Narrative  Segment and write key words  Write a simple caption  Dough Disco.	Relationship s.  <b>Anti Bullying Week</b>	Celebrating Differences	It's Me 123!  Light and Dark	Our Special Places Church Visit  How are celebrations celebrated in different cultures? Christmas, Diwali  Fire Safety	Guy Fawkes  Remembranc e Day  Favourite Celebration	<u>Seasonal Changes:</u> Winter  Light and Dark  Forces and Magnets	Painting  Colour Mixing  Artist of the Half Term	Everyone!  Composer of the Term	Moving and Jumping Off Objects  Being Healthy  Write Letters	Awareness (Block 2)	2Go  <u>Coding</u> Beebots	Entry - Alien Footprints  Breakfast with Santa  Christmas Concert  Visit P.O.  Exit - STEM
<b>Spring 1</b> <i>Knowledge of the World</i>	Dinosaur Stomp	Dinosaur Roar!  Dinosaurs Love Underpants	Sounds Write - Initial Code  Read Simple Sentences  <b>World Book Day</b>	Narrative  Write Simple Sentences (I can see...)  Nouns, Adjectives, Capital Letters, Full Stops and Finger Spaces	Turn Taking and Sharing	Dreams and Goals	Alive in 5!  Growing 6, 7, 8	<b>Our Specials Things</b>  Chinese New Year  World Religion Day  Fair Trade Fortnight	Why do we wear different clothes during the year?	<u>Seasonal Changes</u> Spring  <u>Animals Including Humans</u> Food Chains  <u>Plants</u> STEM - Fruit and Vegetable Planting	Collage  Artist of the Half Term	Our World  Composer of the Term	Controlled Travel  Awareness  Apparatus and Tool Safety	Gymnastics	2Design  <b>Safer Internet Day</b>	Entry - Dinosaur Egg  Dinosaur Workshop

<b>Spring 2</b> <i>Knowledge of the World</i>		Digging Up Dinosaurs  Non-Fiction Texts	Sounds Write - Initial Code  Read for Meaning	Non-Chron Fact Files  Write Extended Sentences	Right and Wrong Behaviour	Healthy Me	Building 9, 10  Consolidate	Treating Everyone the Same  <b>Easter</b>	Women's History Month	<u>Materials:</u> Volcanoes and Fossils	Sculpture  Artist of the Half Term	Our World  Composer of the Term	Sounds and Movement  Use a Pencil Write Letters	Parachute  2Create a Story  Awareness of Technology	Exit - Sharing Work	
<b>Summer 1</b> <i>Independence</i>	On the Farm	The Little Red Hen  Farmer Duck	Sounds Write - Initial Code  Read and Understand Sentences  Decode Regular and Irregular Words	Instructions  5 Sentence Story  Story Telling Language	Fair and Unfair	Relationships  <b>Mental Health Awareness Week</b>	On the Move  Superhero to 20 and Beyond  <b>National Numeracy Day</b>	My Friends  <b>EID</b>  <b>World Day for Cultural Diversity</b>	How a farm has changed?	Harvest  Mapwork  <u>Animals Including Humans</u>  <u>Plants</u>  Similarities and Differences	Digital Media  Artist of the Half Term  <b>World Art Day</b>	Big Bear Funk  Composer of the Term	Use Small Games Equipment  Safety and Risks  Use a Pencil to Write Letters Correctly  Understand a Healthy Diet	Balance , Coordination and Agility  Sports Day Practice	2Beat	Entry - Trip to Hall Park Farm  Exit - Parents and Governors
<b>Summer 2</b> <i>Enterprise</i>	Creepy Crawlies	The Very Hungry Caterpillar  The Very Busy Spider	Sounds Write - Initial Code  Share Understanding	Recount  Write For a Range of Purposes  Recap Grammar	Emotions  Year 1 Transition	Changing Me  <b>Refugee Week</b>	First, then, now  Find my pattern	First, Then, Now  Find My Pattern	What are our favourite celebrations each year?  <b>Post 1066 Study Day</b>	<u>Seasonal Changes</u> Summer  Animals Including Humans  Living Things and their Habitats  STEM - Bird Feeder	Printing  Artist of the Half Term	Big Bear Funk  Composer of the Term  <b>Make Music Day</b>	Coordination  Steering, Bouncing and Kicking a Ball  Importance of Good Health and Physical Exercise	Sending and Receiving  Teamwork Skills  <b>Sports Day</b>	2Count	Entry - Caterpillars  Exit - Releasing Butterflies

The characteristics of effective learning run through all areas of learning as well as opportunities for children's interests to be explored further. Purple Mash units will be explored throughout the year in line with the children's interests. This is an overview of the expected learning to be taught during the academic year of 2021-2022, however this is subject to change leading from the children's interests and following the EYFS curriculum.



## Year 1 Long Term Plan



Term <i>Key Driver Focus</i>	Topic Theme	English <i>Class Story Focus</i>	Maths	Science	Art	Computing	Design Technology, Cooking and Enterprise	Geography	History	Music (Charanga)	PE	PSHE (Jigsaw)	RE	Events (See Additional Events Calendar)
<b>Autumn 1</b> <i>Knowledge of the World</i>	Toys	Instructions  <i>Paddington</i>	Place Value  Addition and Subtraction  Counting	Seasonal Changes  Everyday Materials  STEM - Presenting a weather report	Collage  Artist of the Half Term	1.1 Online Safety 1.3 Pictograms 1.4 Lego Builders 1.7 Coding	STEM - Design a weather report	Fieldwork - Seasonal Changes	Toys  <b>Black History Month</b> - Rosa Parks	Hey You!  Composer of the term - Louis Armstrong	Gymnastics	Being Me in My World  <b>World Mental Health Day</b>	God - What do people believe about God? (Christianity) Believing	Entry - Make a toy craft  Exit - Use the toys they have made  Harvest festival
<b>Autumn 2</b> <i>Knowledge of the World</i>	It's On Fire	Recount (Diary Entry)  <i>Toby and the Great Fire</i>	Addition and Subtraction  Geometry  Place Value  Counting	Seasonal Changes	Painting  Artist of the Half Term	1.2 Grouping and Sorting	Mechanisms - Fire engine	Physical, Human and Mapwork - UK (including London)	Great Fire of London  <b>Guy Fawkes Remembrance Day</b>	In the Groove	Dance (Seasons)	Celebrating Differences  <b>Anti-Bullying Week</b>	Community - How do people express their religion and beliefs? (Christianity) Living	Entry - GFOL workshop  Exit - Fire fighter visit  Christmas
<b>Spring 1</b> <i>Enterprise and Emotional Awareness</i>	Into the Woods	Poetry (List)  <i>The Gruffalo</i>  <b>World Book Day</b>	Consolidation  Addition and Subtraction  Place Value  Counting	Seasonal Changes  Plants  Animals, Including Humans  STEM - Design a treehouse (animals)	Drawing  Artist of the Half Term	1.6 Animated Stories  <b>Safer Internet Day</b>	STEM - Human Movement Video  <b>Science Week</b>	Physical, Human, Fieldwork and Mapwork - Broughton Woods and Ashby  <b>Fairtrade Fortnight</b>	Local Study - Ashby  <b>Women's History Month</b>	Round and Round  Composer the term - Buddy Holly	Hockey	Dreams and Goals	God - What do people believe about God? (Islam) Believing  <b>World Religion Day</b>	Entry - Broughton Woods Visit  Exit - Purple Mash noticeboard/blog (Digital Sharing)
<b>Spring 2</b> <i>Enterprise and Emotional Awareness</i>		Traditional Tales  <i>Little Red Riding Hood</i>	Measurement  Consolidation  Counting	STEM - Design a treehouse (animals)	Digital Media  Artist of the Half Term	1.9 Technology Out of School					ABC	Healthy Me	Community - How do people express their religion and beliefs? (Islam) Living	Easter Activity
<b>Summer 1</b> <i>Independence</i>	Pirates - Land Ahoy!	Non-Chronological Report  Persuasion (Enterprise)  <i>The Lighthouse Keeper's Lunch</i>	Consolidation  Multiplication and Division  Fractions  Geometry  Counting  <b>National Numeracy Day</b>	Seasonal Changes  STEM - Hermit Crab Shell	Sculpture  Artist of the Half Term  <b>World Art Day</b>	1.5 Maze Explorers  1.8 Spreadsheets	Structures and Enterprise - Kite making  STEM - Seasons storyboard	Physical and Human - UK (including seas)  Fieldwork and Mapwork - UK and Cleethorpes	<b>Post 1066 study</b>	Your Imagination  Composer of the term - Dolly Parton  <b>Make Music Day</b>	Athletics including Sports Day Practise	Relationships  <b>Mental Health Awareness Week</b>	Places of Worship Community	Entry - Kite making and Cleethorpes visit  Exit - Governors/ Parents  <i>Church Visit</i>
<b>Summer 2</b> <i>Independence</i>		Narrative (There and Back Again)  <i>Captain Flynn and the Pirate Dinosaurs</i>	Place Value  Measurement  Counting		Printing  Artist of the Half Term						Sending and Receiving  <b>Sports Day</b>	Changing Me  <b>Refugee Week</b>		



## Year 2 Long Term Plan



Term <i>Key Driver Focus</i>	Topic Theme	English <i>Class Story Focus</i>	Maths	Science	Art	Computing	Design Technology, Cooking and Enterprise	Geography	History	Music (Charanga)	PE	PSHE (Jigsaw)	RE	Events (See Additional Events Calendar)
<b>Autumn 1</b> <i>Knowledge of the World</i>	Guess who?	Sulwe - LUPITA NYONG'O Imani's Moon - JANAY BROWN-WOOD Recount (diary entry) Florence Nightingale Diary of a Killer Cat - class novel	Place Value  Addition and Subtraction  Times Tables	Living things and their habitats  STEM - Wormeries	Collage  Artist of the Half Term Faith Ringgold - story quilt	2.2 Online Safety  2.5 Effective Searching	DT Cooking and nutrition - Where does our food come from? (Farm to fork)	Mapwork Continents and Oceans  Microhabitats	Significant individuals  Black History Month - Mary Seacole	Charanga: Hands, Feet, Heart  Composer of the Term: Louis Armstrong (Black History month link)	Gymnastics	Being Me in My World.	<b>Being Human:</b> How does faith and belief affect the way people live their lives? (Islam) <b>Believing</b>	Entry - Florence Nightingale workshop bandages/first aid for kids  Exit - Medal award ceremony
<b>Autumn 2</b> <i>Knowledge of the World</i>	In The Dark	Non-chronological report <i>The Owl who was afraid of the dark</i> <i>The clue is in the poo</i> <i>A Turtle's View of the Ocean Blue</i>	Money  Multiplication and Division  Times Tables	Living Things and their Habitats  Build a nest DT STEM	Digital media  Georges Seurat Pointillism Poppy pictures	2.6 Creating Pictures	Exit - Build a nest DT STEM	Mapwork Aerial photographs  Create own maps with a simple key	Guy Fawkes  Remembrance Day	Charanga: I Wanna Play in the Band	Dance - Under the sea	Celebrating Difference	<b>Life Journey:</b> How do people mark important events in life? (Islam) <b>Living</b>	Entry - Owl pellets  Exit - Build a nest STEM
<b>Spring 1</b> <i>Enterprise and Emotional Awareness</i>	Scented Garden	Traditional tales - happily ever after - Jack and the Beanstalk Jack and the Baked beanstalk <i>Class novel : Inside the Villians by Clotilde Perrin</i>	Multiplication and Division  Statistics  Times tables	Animals including humans	Painting  Artist of the Half Term: Georgia O'Keeffe	2.3 Spreadsheets	DT Mechanisms - Make a moveable card with levers and sliders	Local study - Human and physical features	Women's History Month - Grace Darling	Charanga: Zoo time	Trolley Hockey	Dreams and Goals	<b>Being Human:</b> How does faith and belief affect the way people live their lives? (Christianity)  <b>Believing</b>	Entry - STEM - Grow a plant in a jar
<b>Spring 2</b> <i>Independence</i>		Instructions - growing plants The street beneath my feet - Geog link Poetry - simile poems	Properties of Shape  Fractions Times tables	Plants  STEM - Grow a plant in a jar	Sculpture - Barbara Hepworth  Artist of the Half Term	2.1 Coding				Charanga: Zoo time  Composer of the Term: Buddy Holly	Attack and Defend	Healthy Me DT link Healthy sandwiches	<b>Life Journey:</b> How do people mark important events in life? (Christianity) <b>Living</b>	
<b>Summer 1</b> <i>Enterprise and Emotional Awareness</i>	Let's be detectives	Narrative (there and back again)  The Tunnel Anthony Browne	Length and Height Position and Direction Consolidation and problem solving Times tables STEM: Build a balance scale	Uses of everyday materials	Drawing  Artist of the Half Term Banksy	2.4 Presenting Ideas	DT STEM Making aeroplanes  STEM: Build a balance scale	Mapwork and fieldwork Local Study - Human geography Comparison to non-European country	Travel through time  HISTORY- Post 1066	Charanga: Friendship Song	Athletics including Sports Day Practise	Relationships	<b>Additional unit- Thankfulness</b>	Entry - Trip to the Deep  Exit - STEM - Enterprise - Making biscuits
<b>Summer 2</b> <i>Independence</i>		Persuasion - <i>Somebody swallowed Stanley P4C</i> <i>The Day the Crayons Quit</i>	Time  Mass, capacity, temperature Times Tables STEM Enterprise - Making biscuits		Printing  Artist of the Half Term -DavidHockney and Andy Warhol	2.7 Making music	Exit - DT STEM - Enterprise - Making biscuits	Local Study - Human geography Comparison to non-European country		Charanga: Friendship Song Composer of the Term: Dolly Parton	Sports Day  Cricket  Football	Changing Me		



**Year 3  
Long Term Plan**



<b>Term</b> <i>Key Driver Focus</i>	<b>Topic Theme</b>	<b>English</b> <i>Class Story Focus</i>	<b>Maths</b>	<b>Science</b>	<b>Art</b>	<b>Computing</b>	<b>Design Technology, Cooking and Enterprise</b>	<b>Languages (French)</b>	<b>Geography</b>	<b>History</b>	<b>Music (Charanga)</b>	<b>PE</b>	<b>PSHE (Jigsaw)</b>	<b>RE</b>	<b>Events (See Additional Events Calendar)</b>
<b>Autumn 1</b> <i>Knowledge of the World</i>	Scavengers and Settlers	Narrative - There and back again story <i>Stone Age Boy</i>	Place Value within 1000 Addition and Subtraction Times Tables	Light	Painting	3.1 Coding 3.2 Online Safety	Structures (STEM - Stone Age Huts structure)	Core Vocabulary Phonetics	Map work - continents	Prehistory Stone age to the Iron Age <b>Black History Month</b>	Let Your Spirit Fly Composer of the Month	Dance (Jungle)	Being Me in My World <b>World Mental Health Day</b>	God (Believing) - Hinduism	Entry - Stoneage Workshop / poo Exit - Sharing work <b>Harvest Festival</b>
<b>Autumn 2</b> <i>Emotional Awareness</i>	Living Together	Recount / Diary - A life in the day of... <i>Poppy Field</i>	Statistics Measurement - Mass and Capacity Times Tables STEM - Magnet Maze (measure) <b>Maths Week England</b>	Forces and Magnets STEM - Magnet Maze	Collage	3.4 Typing	Cooking and Nutrition and Enterprise (WW1 savoury recipes - soup and scones) STEM - Magnet Maze (structures)	Early Language Teaching Little Red Riding Hood Core Vocabulary - Christmas	Local study / map work (local walk) Local Study - Identifying Human and Physical features.	Local Study - Iron Age to Steelworks <b>Guy Fawkes Remembrance Day</b>	Glockenspiel stage 1 Composer of the Month	Gymnastics	Celebrating Differences <b>Anti-Bullying Week</b>	God (Believing) - Hinduism/ Islam Christmas	Entry - Local walk / visit the library (11 before 11) Exit - Governors/ Parents <b>Christmas</b>
<b>Spring 1</b> <i>Knowledge of the World</i>	Active Planet	Poetry - Calligram Persuasive Writing <i>Escape from Pompeii</i> <b>World Book Day</b>	Multiplication/ Division Measurement - Money Times tables	Rocks STEM - Making fossils	Printing	3.5 Email 3.9 Presenting <b>Safer Internet Day</b>		Early Language Teaching I Am Learning French Core Vocabulary French Culture	Mapwork / mountain ranges <b>Fairtrade Fortnight</b>	The achievements of the earliest civilisations - Shang Dynasty	Three Little Birds Composer of the Term	Attack and Defend	Dreams and Goals	God (Believing) - Islam/ Christianity <b>World Religion Day</b>	Entry - Volcano / Lava Song Trip to mosque
<b>Spring 2</b> <i>Knowledge of the World</i>		Instructions <i>The Abominables</i>	Measurement - Length and Perimeter Fractions Times tables	Soils <b>Science Week</b>	Sculpture	3.6 Branching		Early Language Teaching Musical instruments	Orienteering Local study - Investigating rock types	Shang Dynasty <b>Women's History Month</b>	Composer of the Term	Tag Rugby OAA <b>Sport Relief</b>	Healthy Me	God (Believing) - Islam/ Christianity	Exit - Purple Mash noticeboard/ blog (Digital Sharing) <b>Easter</b>
<b>Summer 1</b> <i>Enterprise and Independence</i>	Let's Plant It	Non Chronological <i>James and the Giant Peach</i>	Fractions Measurement - Time Times tables <b>National Numeracy Day</b>	Plants	Drawing <b>World Art Day</b>	3.3 Spreadsheets 3.8 Graphing	Cooking and Nutrition - Seasonality	Early Language Teaching Fruits	Local study into industry <b>Earth Day</b>		Bringing us together. Composer of the Month	Athletics	Relationships <b>Mental Health Awareness Week</b>	Additional unit (Big Questions) - What does it mean to live a good life? <b>World Day for Cultural Diversity</b>	Entry - Botanical Gardens visit
<b>Summer 2</b> <i>Enterprise and Independence</i>		Narrative - Happily Ever After	Geometry - Properties of Shape STEM - Human Skeleton (measure) Times Tables	Animals including humans STEM - Human Skeleton	Digital Media	3.7 Simulations		Early Language Teaching Shapes <b>Bastille Day</b>	Local study / plants	<b>Post 1066 Study Day</b>	Composer of the Month <b>Make Music Day</b>	Rounders <b>Sports Day</b>	Changing Me <b>Refugee Week</b>	Additional unit (Big Questions) - What does it mean to live a good life?	Exit - Present to school in assembly



**Year 4  
Long Term Plan**



Term	Topic Theme	English	Maths	Science	Art	Computing	Design Technology, Cooking and Enterprise	Languages (French)	Geography	History	Music (Charanga)	PE	PSHE (Jigsaw)	RE	Events (See Additional Events Calendar)
<i>Key Driver Focus</i>		<i>Class Story Focus</i>													
<b>Autumn 1</b> <i>Knowledge of the World</i>	Land, Sea and Sky	Poetry Adventure Poems  <i>Heard it on the playground</i>	Place Value  Addition and subtraction  Times Tables	Living Things and their Habitats	Painting	4.2 Online Safety  4.7 Effective Searching	STEM Build a bridge to scale (DT and M)	Phonetics and pronunciation (Core Vocabulary)  Habitats	Fieldwork - River Study and the water cycle.  Record/observe	<b>Black History Month</b>	Lean on Me  Composer of the term: Joseph Bologne	Dance	Being Me in My World  <b>World Mental Health Day</b>	Community (Hinduism - Living)	Entry - Trip to Barton Water's Edge  Exit - Sharing work  <b>Harvest Festival</b>
<b>Autumn 2</b> <i>Knowledge of the World and Enterprise and Emotional Awareness</i>	Food Glorious Food	Defeating the enemy  <i>George's marvellous medicine</i>  Persuasion (Enterprise)	Measurement: length and perimeter  Multiplication and division  Times Tables  <b>Maths Week England</b>	Animals including Humans  States of Matter (The Water Cycle)  STEM (Digestion tights) S	Digital Media (Digital Flip book)	4.6 Animation  4.3 Spreadsheets	Cooking and Nutrition	Presenting myself	Human and physical features.	<b>Guy Fawkes Remembrance Day</b>	Stop!  Composer of the term: Pyotr Pchaikovsky	Gymnastics  Paralympics	Celebrating Differences  <b>Anti-Bullying Week</b>	Community (Islam - Living)	Entry - STEM  Trip to the Cinema  Exit - Governors/ Parents  <b>Christmas</b>
<b>Spring 1</b> <i>Enterprise and Emotional Awareness</i>	High Voltage!	Non-Chronological Report  <i>Percy Jackson and the lightning thief</i>  <b>World Book Day</b>	Multiplication and division  Measure: Area  Fractions  Times tables	Electricity  STEM (Lemon Battery) S	Drawing	4.1 Coding  <b>Safer Internet Day</b>	Electrical Systems (torch)	French culture (Core Vocabulary)  Family	Digital Maps  <b>Fairtrade Fortnight</b>	<b>Women's History Month</b>	Mamma Mia  Composer of the term: Anna Merideth	Hockey	Dreams and Goals	Community (Christianity - Living)	Trip to mosque  Entry - Electricity Workshop
<b>Spring 2</b> <i>Enterprise and Emotional Awareness</i>		Instructions	Fractions  Decimals	<b>Science Week</b>  States of Matter	Printing	4.4 Writing for Different Audiences  4.8 Hardware Investigators		The Classroom	Mapwork  Keys and symbols		Composer of the term: Antonio Vivaldi	Netball  <b>Sport Relief</b>	Healthy Me		
<b>Summer 1</b> <i>Independence</i>	Rampaging Romans	Recount A day in the life of a Roman child (History)  <i>Roman Invasion</i>	Decimals  Measurement: Money  Time  Times tables  Statistics  <b>National Numeracy Day</b>	Sound	Sculpture  <b>World Art Day</b>	4.5 Logo	Mechanisms  STEM - Build a catapult (DT & M)	The Romans	Roman Roads  Local History (Roman Lincoln)  Observe and measure  <b>Earth Day</b>	Romans	Glockenspiel stage 2  Composer of the term: Johann Sebastian Bach	Swimming	Relationships  <b>Mental Health Awareness Week</b>	Pilgrimage	Entry - Trip to Roman Lincoln  <b>World Day for Cultural Diversity</b>
<b>Summer 2</b> <i>Independence</i>		In Search of a Goal story	Shape  Position and Direction  Times Tables (Multiplication Tables Check)			Collage	4.8 Hardware Investigators		Goldilocks and the Three Bears  <b>Bastille Day</b>	Compass and grid reference (4 and 6 point)	The Legacy of the Romans  <b>Post 1066 Study Day</b>	Composer of the term: Beethoven  <b>Make Music Day</b>	Swimming  <b>Sports Day</b>	Changing Me  <b>Refugee Week</b>	



## Year 5 Long Term Plan



Term	Topic Theme	English	Maths	Science	Art	Computing	Design Technology, Cooking and Enterprise	Languages (French)	Geography	History	Music (Charanga)	PE	PSHE (Jigsaw)	RE	Events (See Additional Events Calendar)
<b>Autumn 1</b> <i>Key Driver Focus</i>  <i>Knowledge of the World</i>  <i>Enterprise</i>	Earth and Space	Non-Chronological Report  <i>Curiosity</i>	Place value Addition and subtraction Statistics  Times Tables	Earth and Space  Forces - gravity, and levers, pulleys and gears  STEM- Science solar system model	Digital Media (Solar System)  Artist- Nik Ainley	5.2 Online Safety  5.7 Concept Maps  5.8 Word processing (L1,2,3)	Enterprise Mechanical Systems (Mars Rover)	Core Vocabulary-Phonetics and pronunciation  Intermediate language teaching- What is the date	Mapwork- Read Maps  Record  Charts and Graphs	<b>Black History Month</b> <b>George Washington</b>	Young Voices  Composer of the Term Joseph Bologne (Black History)	Swimming	Being Me in My World  <b>World Mental Health Day</b>	Hinduism - believing	Entry - STEM solar system model  Exit - Governors/Parents  <b>Harvest Festival</b>
<b>Autumn 2</b> <i>Key Driver Focus</i>  <i>Knowledge of the World</i>	The Great, The Bold and The Brave	Defeating the Enemy  Greek Myth	Multiplication and division Perimeter and area  <b>Maths Week England</b>  STEM- Parachutes area and perimeter	Forces - air resistance, friction, water resistance  STEM- Parachutes- air resistance	Drawing (Greek Vase)  Sculpture  Artist- Leonardo Da Vinci	5.4 Databases  5.8 Word processing	Structures  STEM- Design/Make a catapult/Boat	Intermediate Language Teaching- At the Cafe  Intermediate Language Teaching- Do you have a pet?	Mapwork- Grid references	Ancient Greeks  <b>Guy Fawkes Remembrance Day</b>	Young Voices  Composer of the Term Pyotr Tchaikovsky	Swimming	Celebrating Differences  <b>Anti-Bullying Week</b>	Islam - believing	Entry - Greek Vase  Exit - Young Voices  <b>Christmas</b>
<b>Spring 1</b> <i>Key Driver Focus</i>  <i>Emotional Awareness</i>  <i>Knowledge of the World</i>	Metamorphosis	Poetry Persuasive  <b>World Book Day</b>	Multiplication and division Fractions Decimals and percentages Times tables	Properties and changes in materials  Animals including Humans	Painting Artist-George Seurat	5.8 Word processing  <b>Safer Internet Day</b>		Intermediate language teaching- My Home	Keys and Symbols  <b>Fairtrade Fortnight</b>	Anglo-Saxon and Scots  Local Study	Living on a Prayer  Composer of the term Anna Meredith	Trolley Hockey	Dreams and Goals	Christianity - believing  <b>World Religion Day</b>	Entry - Make potions
<b>Spring 2</b> <i>Key Driver Focus</i>  <i>Emotional Awareness</i>  <i>Knowledge of the World</i>		Instructions	Fractions Decimals and percentages Times tables STEM- Cooking and Nutrition Measurement	Living things and their habitats  <b>Science Week</b>		5.8 Word processing	STEM-Cooking and Nutrition Bread	Core Vocabulary- French Cultural	Global features  Europe, North and South America - environmental regions	<b>Women's History Month</b>	Make You Feel My Love  Composer of the term Antonio Vivaldi	Football  <b>Sport Relief</b>	Healthy Me	Christianity - believing	Exit - Google Slides  <b>Easter</b>
<b>Summer 1</b> <i>Key Driver Focus</i>  <i>Independence</i>	What a Wonderful World	Recount Newspaper Report- Natural Disaster	Decimals Properties of shape  Times tables <b>National Numeracy Day</b>		Printing  Artist of the half term- Roy Lichtenstein <b>World Art Day</b>	5.5 Game Creator	Mechanical Systems  STEM- Wind turbine	Intermediate language teaching- Clothes	Use a compass  Impact of climate on humans and vice versa  <b>Earth Day</b>		The Fresh Prince of Bel-Air  Composer of the term Johann Sebastian Bach	Athletics  Athletics (Sports Day Practise)	Relationships  <b>Mental Health Awareness Week</b>	<b>Additional unit-</b> Big Questions- Why do we celebrate?  <b>World Day for Cultural Diversity</b>	Entry Point- Tornado in a bottle  Exit Point- Share with another class
<b>Summer 2</b> <i>Key Driver Focus</i>  <i>Independence</i>			Position and direction Converting units Volume Times Tables					Weather  <b>Bastille Day</b>	Observe and measure  Draw maps/Plans Use images	<b>Post 1066 Study Day</b>	Blown Away Recorder Book 1 Composer of the term Ludwig van Beethoven <b>Make Music Day</b>	Rounders  OAA  <b>Sports Day</b>	Changing Me  <b>Refugee Week</b>	<b>Additional unit-</b> Big Questions- Why do we celebrate?	





**Year 6  
Long Term Plan**



<b>Term</b> <i>Key Driver Focus</i>	<b>Topic Theme</b>	<b>English</b> <i>Class Story Focus</i>	<b>Maths</b>	<b>Science</b>	<b>Art</b>	<b>Computing</b>	<b>Design Technology, Cooking and Enterprise</b>	<b>Languages (French)</b>	<b>Geography</b>	<b>History</b>	<b>Music (Charanga)</b>	<b>PE</b>	<b>PSHE (Jigsaw)</b>	<b>RE</b>	<b>Events (See Additional Events Calendar)</b>
<b>Autumn 1</b> <i>Emotional awareness</i>	Savage Saxons vs Vicious Vikings	Instructions  <i>How to Train Your Dragon</i>	Number: Place Value  Number: Addition, subtraction, multiplication and division	Explorify activities	Drawing (Roman Soldier)	6.2 Online Safety  6.1 Coding		Core vocabulary: Phonetics and pronunciation lesson 4  Progressive Language Teaching The Planets	Map work/ Field work skills	Vikings vs Saxons  <b>Black History Month</b>	Happy	Gymnastics	Being Me in My World  <b>World Mental Health Day</b>	Life journey (Living Hinduism)	Entry - Build a viking boat  Exit - Viking boat launch  <b>Harvest Festival</b>
<b>Autumn 2</b> <i>Emotional awareness</i>	'I'm an animal, get me out of here!'	Non Chronological Report  <i>The One and Only Ivan</i>	Number: Fractions  Geometry: Position and direction	Living Things and their habitats  Animals including Humans  Evolution and inheritance  STEM- Antarctic Memes (Animals) (Science and DT)	Painting (application to Christmas card)  Digital media	6.7 Quizzing  6.4 Blogging	STEM- Antarctic memes	Progressive Language Teaching At School  Core Vocabulary French cultural lesson 4	Map work/ Field work skills	<b>Guy Fawkes</b>  <b>Remembrance Day</b>	You've Got a Friend	Dance (Castles)	Celebrating Differences  <b>Anti-Bullying Week</b>	Life journey (Living Islam)	Entry -Visit Yorkshire Wildlife Park  Exit - Sharing with Y5 on a blog  <b>Christmas</b>
<b>Spring 1</b> <i>Knowledge of the world</i>	Mysterious Mayans	Narrative There and Back Again  The Rainplayer David Wisniewski <b>World Book Day</b>	Number: Decimals  Number: Percentages  Number: Algebra  Measurement: Converting units	<b>Science Week</b>	Collage and sculpture- Mayan God	6.5 Text adventures  <b>Safer Internet Day</b>		Progressive Language Teaching The Weekend	Map work/ Field work skills Human geography: <b>Fairtrade Fortnight</b>	Ancient Maya	A New Year Carol	Hockey	Dreams and Goals	Life journey (Living Christianity)	Entry- Mayan workshop  World Book Day  <b>Easter</b>
<b>Spring 2</b> <i>Knowledge of the world</i>		Recount (newspaper)  Based on The Wrong Trousers (inventions)  Class choice story	Measurement: Perimeter, area, volume  Number: Ratio  Statistics	Light  STEM- Periscope light travels (Science and Maths)	Collage and sculpture- Mayan God	6.3 and 6.9 Spreadsheets	STEM- Periscope	Progressive Language Teaching Me in the World	Map work/ Field work skills	Ancient Maya  <b>Women's History Month</b>	A New Year Carol	Netball  <b>Sport Relief</b>	Healthy Me	Life journey (Living Christianity)	Exit -Mayan food tasting and showcasing work to parents
<b>Summer 1</b> <i>Enterprise</i>	Full Power	Narrative The Hobbit J.R.R Tolkein  In search of a goal	<b>National Numeracy Day</b>  Geometry: Properties of shapes  Consolidation for SATs	Electricity	Printing  <b>World Art Day</b>	6.6 Networks	Electrical systems  Mechanical systems	Progressive Language Teaching Healthy Lifestyles	Map work/ Field work skills  Human geography: Renewable and non-renewable energy  <b>Earth Day</b>		Music and Me	Athletics  Athletics (Sports Day Practise)	Relationships  <b>Mental Health Awareness Week</b>	Forgiveness  <b>World Day for Cultural Diversity</b>	Entry - Investigating electricity (practical)  Sports Day
<b>Summer 2</b> <i>Independence</i>		Poetry The Highwayman hook. Compare structure to other poems. Learn a Poem  Persuasion (debate based on the Highwayman)	Investigations and preparations for KS3	Electricity			6.8 Binary Code	Electrical systems  Mechanical systems	Progressive Language Teaching Regular verbs  Complete the Transition to KS3 checklist  <b>Bastille Day</b>	Map work/ Field work skills	<b>Post 1066 Study Day</b>	Music and Me  <b>Make Music Day</b>	Cricket  <b>Sports Day</b>	Changing Me  <b>Refugee Week</b>	Forgiveness  Transition  Exit- governors to judge motorised vehicles

# GAP Analysis

Covid Year 2019 to 2020	Missed learning (Assessment sheet)	Missed learning (Classtrack objectives)	2020-2021 (In Year 2)	2021-2022 (In Year 3)
Y1	<p><b>Plants</b> Name and identify a range of plants including deciduous and evergreen. Classify plants as deciduous or evergreen.</p> <p><b>Seasonal Changes</b> Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies.</p>	<p><b>Plants</b> I can identify and describe the structure of common flowering plants. I can identify and describe the structure of common trees. I can identify a variety of common wild and garden plants. (Including deciduous and evergreen trees) I can name a variety of common wild and garden plants. (Including deciduous and evergreen trees)</p> <p><b>Seasonal Changes</b> I can observe changes across 4 seasons. I can observe how the weather associated with the seasons changes and how the day length varies. I can describe how the weather associated with the seasons changes and how the day length varies.</p>	<p><b>Plants (Y2 Plants)</b> I can identify and describe the structure of common flowering plants. I can identify and describe the structure of common trees. I can identify a variety of common wild and garden plants. (Including deciduous and evergreen trees) I can name a variety of common wild and garden plants. (Including deciduous and evergreen trees)</p>	<p><b>Seasonal Changes (Y3 Light)</b> I can observe changes across 4 seasons. I can observe how the weather associated with the seasons changes and how the day length varies. I can describe how the weather associated with the seasons changes and how the day length varies.</p>

Covid Year 2019 to 2020	Missed learning (Assessment sheets)	Missed learning (Classtrack objectives)	2020-2021 (In Year 4)	2021-2022 (In Year 5)	2022-2023 (In Year 6)
Y3	<p><b>Animals including humans</b> Explore how animals get the right amount of nutrition through their food. Recognise skeletons and muscles are for support, protection and movement. Identify and name some bones within the skeleton. Compare different skeletons. Begin to give reasons why different animals have different skeletal structures.</p> <p><b>Plants</b> Label different parts of a plant/tree and their purpose. Explain requirements for a plant to survive and how this can vary between plants. Describe the role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. Explore differences between plants and the environments they require.</p> <p><b>Forces and Magnets</b> Compare how things move on different surfaces. Describe how some forces need contact between two objects (friction, air resistance) but magnetic forces can act at distance.</p> <p><b>Rocks</b> Recognise that soils are made from rocks and organise matter. Relate simple physical properties of rocks to their formation.</p>	<p><b>Animals including humans</b> I can identify that animals and humans need the right type of nutrition. I can identify that animals and humans cannot make their own food and get nutrition from what they eat. I can identify that humans have skeletons and muscles for support, protection and movement. I can identify that some animals have skeletons and muscles for support, protection and movement.</p> <p><b>Plants</b> I can identify the functions of different parts of flowering plants such as roots, stem, trunk, leaves and flowers. I can describe the functions of different parts of flowering plants such as roots, stem, trunk, leaves and flowers. I can explore the requirements of plants for life and growth. (Including air, light, water, nutrients from the soil and room to grow) I can explore the requirements of plants for life and growth vary from plant to plant. (Including air, light, water, nutrients from the soil and room to grow) I can investigate the way in which water is transported within plants. I can explore the part that flowers play in the life cycle of flowering plants. (Including pollination, seed formation and seed dispersal)</p> <p><b>Forces and Magnets</b> I can compare how things move on different surfaces. I can see that some forces need contact between two objects. I can see that magnetic forces can act at a distance. I can observe how magnets attract or repel each other. I can observe how magnets can attract some materials and not others. I can describe magnets as having two poles. I can predict whether two magnets will attract or repel each other depending on which poles are facing. I can compare a variety of everyday materials on the basis of whether they are attracted to a magnet. I can group a variety of everyday materials on the basis of whether they are attracted to a magnet.</p> <p><b>Rocks</b> I can compare rocks on the basis of their appearance and simple physical properties. I can group rocks on the basis of their appearance and simple physical properties. I can describe how fossils are formed when things that have lived are trapped within rock. I can recognise that soils are made from rocks and organic matter.</p>	<p><b>Animals including humans (Y4 Animals including humans)</b> I can identify that animals and humans need the right type of nutrition. I can identify that animals and humans cannot make their own food and get nutrition from what they eat. I can identify that humans have skeletons and muscles for support, protection and movement. I can identify that some animals have skeletons and muscles for support, protection and movement.</p> <p><b>Plants (Y4 Living things and their habitats)</b> I can explore the requirements of plants for life and growth. (Including air, light, water, nutrients from the soil and room to grow) I can explore the requirements of plants for life and growth vary from plant to plant. (Including air, light, water, nutrients from the soil and room to grow)</p>	<p><b>Plants (Y5 Living things and their habitats)</b> I can identify the functions of different parts of flowering plants such as roots, stem, trunk, leaves and flowers. I can describe the functions of different parts of flowering plants such as roots, stem, trunk, leaves and flowers. I can investigate the way in which water is transported within plants. I can explore the part that flowers play in the life cycle of flowering plants. (Including pollination, seed formation and seed dispersal)</p> <p><b>Forces and Magnets (Y5 Forces)</b> I can compare how things move on different surfaces. I can see that some forces need contact between two objects. I can see that magnetic forces can act at a distance. I can observe how magnets attract or repel each other. I can observe how magnets can attract some materials and not others. I can describe magnets as having two poles. I can predict whether two magnets will attract or repel each other depending on which poles are facing. I can compare a variety of everyday materials on the basis of whether they are attracted to a magnet. I can group a variety of everyday materials on the basis of whether they are attracted to a magnet.</p>	<p><b>Rocks (Y6 Evolution and inheritance)</b> I can compare rocks on the basis of their appearance and simple physical properties. I can group rocks on the basis of their appearance and simple physical properties. I can describe how fossils are formed when things that have lived are trapped within rock. I can recognise that soils are made from rocks and organic matter.</p>

Covid Year 2019 to 2020	Missed learning (Assessment sheet)	Missed learning (Classtrack objectives)	2020-2021 (In Year 5)
Y4	<p><b>Sound</b> Identify how sounds are made, associating some of them with something vibrating. Recognise that vibrations from sounds travel through a medium to the ear. Find patterns between the pitch of a sound and features of the object that produced it. Find patterns between the volume of a sound and the strength of the vibrations that produced it. Recognise that sounds get fainter as the distance from the sound source increases.</p> <p><b>States of Matter</b> Group materials in a variety of ways according to their properties; including if they are a solid, liquid or gas. Observe how materials change state as they are heated or cooled. Associate the rate of evaporation with temperature.</p>	<p><b>Sound</b> I can identify how sounds are made and associate some of them with something vibrating. I can recognise that vibrations from sounds travel through a medium to the ear. I can find patterns between the pitch of a sound and features of the object that produced it. I can find patterns between the volume of a sound and the strength of the vibrations that produced it. I can recognise that sounds get fainter as the distance from the sound source increases.</p> <p><b>States of Matter</b> I can compare materials according to whether they are solids, liquids and gases. I can group materials according to whether they are solids, liquids and gases. I can observe that some materials change state when heated or cooled. I can observe that some materials change state when heated or cooled by researching or measuring the temperature at which this happens. I can associate the rate of evaporation with temperature.</p>	<p><b>Sound (Stand alone)</b> Identify how sounds are made, associating some of them with something vibrating. Recognise that vibrations from sounds travel through a medium to the ear. Find patterns between the pitch of a sound and features of the object that produced it. Find patterns between the volume of a sound and the strength of the vibrations that produced it. Recognise that sounds get fainter as the distance from the sound source increases.</p> <p><b>States of Matter (Y5 Properties and changes of materials)</b> Group materials in a variety of ways according to their properties; including if they are a solid, liquid or gas. Observe how materials change state as they are heated or cooled. Associate the rate of evaporation with temperature.</p>

Covid Year 2019 to 2020	Missed learning (Assessment sheet)	Missed learning (Classtrack objectives)	2020-2021 (In Year 6)
Y5	<p><b>Forces</b> Identify the effects of water resistance that act between moving surfaces.</p> <p><b>Living things and their habitats</b> Describe life cycles of mammals, amphibians, insects and birds and how they vary. Describe the process of reproduction in some plants and animals.</p> <p><b>Animals including humans</b> Describe changes in humans as they develop to old age.</p>	<p><b>Forces</b> I can identify the effects of water resistance that act between moving surfaces. Autumn 1</p> <p><b>Living things and their habitats</b> I can describe the differences in the life cycles of a mammal, amphibian, insect and a bird. I can describe the life process of reproduction in plants. I can describe the life process of reproduction in animals.</p> <p><b>Animals including humans</b> I can describe changes as humans develop to old age.</p>	<p><b>Forces (Stand alone)</b> I can identify the effects of water resistance that act between moving surfaces.</p> <p><b>Living things and their habitats (Y6 Evolution and Inheritance)</b> I can describe the differences in the life cycles of a mammal, amphibian, insect and a bird. I can describe the life process of reproduction in plants. I can describe the life process of reproduction in animals.</p> <p><b>Animals including humans (Stand alone)</b> I can describe changes as humans develop to old age.</p>

# The Core Principles



# The Five Types of Enquiry

	<u>Observing over time</u>	<u>Pattern seeking</u>	<u>Identifying, classifying and grouping</u>	<u>Comparative and fair testing</u>	<u>Researching using secondary sources (Could be linked with knowledge base and conclusions)</u>
Year 1	<b>SEASONAL CHANGES</b> Compare how length of day varies within the different seasons	<b>ANIMALS INCLUDING HUMANS</b> Identify and name body parts	<b>ANIMALS INCLUDING HUMANS</b> Identify the five senses and the body parts associated. Identify and name animals including fish, amphibians, mammals, reptiles and birds. Classifying animals into carnivores, herbivores and omnivores.  <b>PLANTS</b> Identify and describe the structure of a variety of common flowering plants and trees.  Name and identify a range of plants including deciduous and evergreen.  <b>EVERYDAY MATERIALS</b> Compare and group materials based on properties	<b>EVERYDAY MATERIALS</b> Give reasons for why or why not a material may be suitable for a particular purpose.	<b>ANIMALS INCLUDING HUMANS</b> Compare the structure of a variety of different animals.  <b>EVERYDAY MATERIALS</b> Give reasons for why or why not a material may be suitable for a particular purpose.
Year 2	<b>PLANTS</b> Observe and describe how seeds and bulbs grown into mature plants.  <b>SEASONAL CHANGES</b> <b>Year 1 Content</b> Compare how length of day varies within the different seasons.	<b>LIVING THINGS AND THEIR HABITATS</b> Identify that most living things live in habitats to which they are suited.  <b>ANIMALS, INCLUDING HUMANS</b> Notice that animals, including humans, have offspring which grow into adults	<b>LIVING THINGS AND THEIR HABITATS</b> Compare differences between living things, non-living things and things that have been alive.  <b>LIVING THINGS AND THEIR HABITATS</b> Identify and name a variety of plants and animals in their habitats, including microhabitats  <b>USE OF EVERYDAY MATERIALS</b> Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	<b>LIVING THINGS AND THEIR HABITATS</b> Compare differences between living things, non-living things and things that have been alive.  <b>USE OF EVERYDAY MATERIALS</b> Identify and compare the suitability of a variety of everyday materials.  Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	<b>PLANTS</b> Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy  <b>LIVING THINGS AND THEIR HABITATS</b> Describe how animals obtain their food from plants and other animals.  <b>ANIMALS, INCLUDING HUMANS</b> Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)  <b>ANIMALS, INCLUDING HUMANS</b> Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.
Year 3	<b>Plants</b> Plant growth  <b>Light</b> Shadows formed over time	<b>Plants</b> Plant growth Explore differences between plants and the environments they may require  <b>Light</b> Shadows formed at parts of the day Light can be reflected	<b>Rocks</b> Identify rocks (Marble, slate, granite) Group rocks according to their appearance Classify rocks (Igneous, metamorphic and sedimentary)  <b>Forces and Magnets</b> Identify magnetic materials  <b>Animals including Humans</b> Name some bones within the skeleton Grouping animals according to their skeleton	<b>Rocks</b> Properties of rocks (hardness, permeable)  <b>Light</b> Shadow formation throughout times of the day  <b>Forces and Magnets</b> Predict if two magnets will repel Compare how things will move on different surfaces	<b>Rocks</b> How fossils are formed  <b>Plants</b> Describe the role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.  <b>Light</b> Light in order to see  <b>Forces and Magnets</b> Describe how some forces need contact between two objects
Year 4	<b>States of Matter</b> Observe how materials change state as they are heated or cooled.	<b>Sound</b> Find patterns between the pitch of a sound and features of the object that produced it.	<b>Living Things and Their Habitats</b> Group living things in a variety of ways.	<b>States of Matter</b> Identify the part played by evaporation and condensation in the water cycle.	<b>Living Things and Their Habitats</b>

		Find patterns between the volume of a sound and the strength of the vibrations that produced it.	Use classification keys to group living things systematically. <b>States of Matter</b> Group materials in a variety of ways according to their properties; including if they are solid, liquid or gas. <b>Sound</b> Identify how sounds are made, associating some of them with something vibrating. <b>Animals Including Humans</b> Use scientific terms for some major organs and body systems. Construct and interpret a variety of food chains, identifying producers, predators and prey. Name teeth and describe their function. <b>Electricity</b> Identify appliances that run on electricity. Name the parts of a simple series circuit. Identify if a lamp with light on not, based on whether the lamp is part of a complete circuit.	Associate the rate of evaporation with temperature. <b>Sound</b> Recognise that sounds get fainter as the distance from the sound source increases. <b>Electricity</b> Construct a simple series circuit	Recognise changing environments and how this impacts on the living things in the environment. Explain ways in which an animal is suited to its environment. <b>Sound</b> Recognise that vibrations from sounds travel through a medium to the ear <b>Animals Including Humans</b> Describe function of the digestive system. Describe the function of teeth. <b>Electricity</b> Explain the role of the switch. Recognise some common conductors (associating this with metals) and insulators.
Year 5		<b>PROPERTIES AND CHANGES OF MATERIALS</b> Know that some materials dissolve to form a solution and describe how to recover the substance from this solution.  Demonstrate dissolving, mixing and changes of state are reversible.	<b>LIVING THINGS AND THEIR HABITATS</b> Describe life cycles of mammals, amphibians, insects and birds and how they vary.  Describe the process of reproduction in some plants and animals. <b>ANIMALS INCLUDING HUMANS</b> Describe changes in humans as they develop to old age. <b>EARTH AND SPACE</b>  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 <b>PROPERTIES AND CHANGES OF MATERIALS</b> Sort changes based on whether they are reversible or not.	<b>FORCES</b> Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object  Identify the effects of air resistance, water resistance and friction, that act between moving surfaces  Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. <b>PROPERTIES AND CHANGES OF MATERIALS</b> Compare materials based on hardness, solubility, conductivity, transparency insulation and response to magnets Describe methods to separate mixtures (filtration, sieving and distillation).	<b>EARTH AND SPACE</b> Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. <b>PROPERTIES AND CHANGES OF MATERIALS</b> Explain some changes result in new materials, which is usually irreversible.  Give reasons, based on evidence, for particular uses of materials.
Year 6	<b>Light</b> Observe the shape of a shadow over time.	<b>Electricity</b> 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.	<b>Living things and their habitats</b> Describe and give reasons for how living things are classified according to observable characteristics.	<b>Chemistry</b> Apply knowledge of materials to investigate properties through light and electricity. For example materials that conduct/insulate electricity, materials that make good shadows and materials that reflect/refract light.	<b>Evolution and inheritance</b> Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago  Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.  <b>Light</b>

					<p>Recognise that light appears to travel in straight lines</p> <p>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</p> <p>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</p>
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# Investigations and Experiments

Prior to investigations and experiments, some acquisition of knowledge may need to be done to acquire some scientific understanding in order to enable an investigation/experiment e.g. Reversible or irreversible changes. States of matter. You may start by proving a hypothesis before testing one. This is a guideline and not something to rigorously follow each lesson. It may be that in one lesson, the focus may be on the predicting skills or method and in another lesson, there may be more of a focus on the conclusion. It is assumed that all science investigations/experiments will have a recording element to them and that over the course of the year children will have had the opportunity to write down all aspects listed below. It is expected that children will then have the opportunity to write down the whole experiment for at least one investigation/experiment in each year group at least once a year.

	Hypothesis (derived from a statement) and examples	Definition and examples
<b>Investigation</b>	Prove I think that chocolate melts at body temperature.	A scientific experiment procedure used to <b>prove</b> a hypothesis. You are just proving that chocolate melts at body temperature, which is 37 degrees. There does not need to be a fair test because you are just proving that it melts regardless of the quantity. There does not need to be a prediction because you are stating that it just melts.
<b>Experiment</b>	Test I think that different chocolate melts at different temperatures.	A scientific procedure used to <b>test</b> a hypothesis. This will involve a fair test because you need to change the independent variable to test your hypothesis.
<b>Sub-heading</b>	<b>In each section</b>	<b>National Curriculum Expectation for Working Scientifically</b>
<b>Statement</b>	An investigation/experiment should be derived from a statement or observation given from a child or provided by the teacher. This is a statement and as such cannot be investigated or experimented with. It should link to the world around them and should always be in a context familiar to the children. This can be done through images, videos, written or equipment set up.  I went to the shop and bought a chocolate bar. I noticed that when I put it in my pocket, it had melted. <b>Why?</b> I went to the shop again and bought three chocolate bars. I noticed that, when I put them on the kitchen side only one chocolate bar melted. I did not put it in my pocket this time. <b>Why?</b>	Pupils in EYFS should be given opportunities to understand the world involving guiding children to make sense of their physical world and their community through opportunities to explore, observe and find out about people, places, technology and the environment. Each area of learning and development must be implemented through planned, purposeful play and through a mix of adult-led and child-initiated activity. Playing and exploring - children investigate and experience things, and 'have a go'  Pupils in years 1 and 2 should explore the world around them and raise their own questions. (Non-statutory)  Pupils in years 3 and 4 should be given a range of scientific experiences to enable them to raise their own questions about the world around them. (Non-statutory)  Pupils in years 5 and 6 should use their science experiences to: explore ideas and raise different kinds of questions; select and plan the most appropriate type of scientific enquiry to use to answer scientific questions; recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why. (Non-statutory)
<b>Hypothesis</b>	A hypothesis is a statement that can be <b>tested/proved</b> and usually begins with, 'I think ...' It is usually derived from refining a statement (through discussion and teacher led questioning/images) This can be anything the children say. It is their own thoughts.  I think that the chocolate melted because it was in your pocket. The warmth from your body helped the chocolate to melt. This must mean that chocolate melts at body temperature. I think that one chocolate bar melted because it was thicker than the other one. I think that one chocolate bar melted because the one on the bottom was nearer a heat source. I think that one chocolate bar melted because it was a different type of chocolate bar. Eg Boost, Double Decker or a Milky Way. I think that one chocolate bar melted because it was a different type of chocolate. EG Milk, dark and white. You would then go on to test or prove <b>one</b> of the hypothesis not all of them. Choose a child's to test/prove.	Year 1- Asking simple questions and recognising that they can be answered in different ways.  Year 2- Asking simple questions and recognising that they can be answered in different ways.  Year 3- Asking relevant questions and using different types of scientific enquiries to answer them. Suggest improvements and raise further questions.  Year 4- Asking relevant questions and using different types of scientific enquiries to answer them. Suggest improvements and raise further questions.  Year 5- Planning different types of scientific enquiries to answer questions.



		Year 6- Planning different types of scientific enquiries to answer questions.
<b>Aim</b>	<p>This explains what the aim of the experiment is. This could be derived from the children or the teacher. What is the aim of our experiment? What are we trying to find out?</p> <p>We are trying to find out if chocolate melts at body temperature.</p> <p>We are trying to find out if different types of chocolate melt at different temperatures.</p>	<p>Year 3- They should start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions; recognise when a simple fair test is necessary and help to decide how to set it up. (Non Statutory)</p> <p>Year 4- They should start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions; recognise when a simple fair test is necessary and help to decide how to set it up. (Non Statutory)</p> <p>Year 5- Planning different types of scientific enquiries to answer questions.</p> <p>Year 6- Planning different types of scientific enquiries to answer questions.</p>
<b>Prediction</b>	<p>This is an explanation of the hypothesis. It extends the hypothesis with reason. Children to draw on their own scientific knowledge about the world around them. This is to be developed further though teacher questioning. Only for an experiment.</p> <p>I predict that the dark chocolate will melt first because it is to do with the colour of the chocolate.</p> <p>I predict that the white chocolate will melt first because it has milk in it.</p> <p>I predict that the milk chocolate will melt first because it is smoother/creamier.</p>	<p>Year 3- Make predictions for new values.</p> <p>Year 4- Make predictions for new values.</p> <p>Year 5- Using test results to make predictions to set up further comparative and fair tests.</p> <p>Year 6- Using test results to make predictions to set up further comparative and fair tests.</p>
<b>Equipment List</b>	<p>Children to use bullet points to create a list of equipment needed. This can be differentiated through how much equipment is provided, chosen or requested.</p> <ul style="list-style-type: none"> <li>• Types of chocolate</li> <li>• Bowls</li> <li>• Heat source</li> <li>• Thermometer</li> </ul>	<p>Year 1- Using simple equipment.</p> <p>Year 2- Using simple equipment.</p>
<b>Fair Testing</b>	<p>Fair testing is only needed for an experiment because you are testing a hypothesis.</p> <p>Independent Variable is what you are changing Changing the type of chocolate</p> <p>Dependent Variable is the variable being measured Time taken for the chocolate to melt</p> <p>Control Variable is what is kept the same. Same size bowls Same amount of chocolate Same equipment</p>	<p>Year 3- Setting up simple practical enquiries, comparative and fair tests.</p> <p>Year 4- Setting up simple practical enquiries, comparative and fair tests.</p> <p>Year 5- Recognising and controlling variables where necessary.</p> <p>Year 6- Recognising and controlling variables where necessary.</p>
<b>Method (This is what I did)</b>	<p>Children should write down the method that they plan to use or have used. This could be differentiated so they could sequence pictures, which are taken as they were carrying out their investigation or it could be sequencing a set of instructions. Children should apply the instructional writing methods at the level that they would be expected to apply within English lessons.</p>	<p>Year 1- Performing simple tests.</p> <p>Year 2- Performing simple tests.</p> <p>Year 3- Setting up simple practical enquiries.</p> <p>Year 4- Setting up simple practical enquiries.</p>
<b>Diagram</b>	<p>Children to draw and label a diagram to show their investigation/experiment. This could be differentiated by giving children an image of the experiment/investigation and children have to label.</p>	<p>Year 3- Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</p> <p>Year 4- Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</p>
<b>Results</b>	<p>Children should record their results in an age appropriate table.</p>	<p>Year 1- Gathering and recording data to help in answering questions.</p> <p>Year 2- Gathering and recording data to help in answering questions.</p> <p>Year 3- Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.</p>

		<p>Year 4- Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.</p> <p>Year 5- Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <p>Year 6- Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</p>
<p><b>Observation</b></p>	<p>Children should say/draw/write what they have seen and what they can see happening. This is an opportunity to reinforce <b>key scientific vocabulary</b>. Melting rather than shrinking or getting smaller. This is an opportunity to start taking appropriate measurements to support what is happening. The chocolate (solid) is turning into a liquid. It is melting. Using a thermometer and using standard units of measurement. The white chocolate (solid) is turning into a liquid. It is melting. Using a thermometer and using standard units of measurement.</p>	<p>EYFS- They make observations of animals and plants and explain why some things occur, and talk about changes.</p> <p>Year 1- Observing closely.</p> <p>Year 2- Observing closely.</p> <p>Year 3- Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.</p> <p>Year 4- Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.</p>
<p><b>Conclusion (What I found out linking to scientific understanding)</b></p>	<p>Conclusion should be linked to the hypothesis. My hypothesis was correct/incorrect because I thought that. My hypothesis was correct because I thought that chocolate melted at body temperature. My hypothesis was correct because I thought that different types of chocolate melted at different temperature. Children can also write why they thought what they did. I thought this because. I thought this because a chocolate has melted in my hand before. I thought this because dark chocolate is a different colour and dark colours make you hotter. Your conclusion should be then linked to your results/observations about what you found out. I have found out that. I have found out that chocolate melts at 37 degrees. I have found out that different chocolate melts at different temperatures because the dark chocolate melted first, the milk chocolate melted second and finally the white chocolate melted. <b>It should be linked to scientific facts required from prior knowledge or wider scientific knowledge and include suitable scientific vocabulary.</b> Your natural body temperature is 37 degrees, which is the temperature that the chocolate melted at. The dark chocolate melted first because it has cocoa butter in it. Cocoa butter has a lower melting point compared with other ingredients. The heat caused the particles to move quicker so therefore it changes from a solid to a liquid.</p>	<p>Year 1- Using their observations and ideas to suggest answers to questions.</p> <p>Year 2- Using their observations and ideas to suggest answers to questions.</p> <p>Year 3- Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Using results to draw simple conclusions. Using straightforward scientific evidence to answer questions or to support their findings.</p> <p>Year 4- Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Using results to draw simple conclusions. Using straightforward scientific evidence to answer questions or to support their findings.</p> <p>Year 5- Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. Identifying scientific evidence that has been used to support or refute ideas or arguments.</p> <p>Year 6- Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. Identifying scientific evidence that has been used to support or refute ideas or arguments.</p>
<p><b>Evaluation</b></p>	<p>This is an evaluation of the experiment or investigation. How the experiment went linking to every aspect carried out. It draws upon the conclusion in more depth. The experiment went well because.</p>	<p>Year 5- Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in</p>

The investigation went well because we proved our hypothesis.  
 The investigation did not go well because we did not record the temperature correctly.  
 The experiment went well because we tested our hypothesis and we were correct.  
 The experiment did not go well because we did not start heating up the chocolate on time so it was not a fair test.  
 Children should draw upon their knowledge of their investigation/experiment.  
 The investigation showed that chocolate melts at body temperature.  
 The experiment showed that the chocolate melted at different times. This showed that they melt at different temperatures.  
 Children should question the validity of the results.  
 Some people may have a different body temperature so therefore the chocolate may not always melt in some people's pockets at the same rate.  
 However, we only used organic chocolate. It could be different for different brands of chocolate due to their being different ingredients included.  
 Children could research this further drawing upon secondary sources as evidence.  
 Normal body temperature varies by person, age, activity and time of day. Some studies show that the normal body temperature can vary from 36.1 to 37 degrees.  
 Green and Black's chocolate contains 70% cocoa whereas Tesco's home brand chocolate contains 26% cocoa. Therefore, we would need to carry out an experiment to test different branded chocolate.

results, in oral and written forms such as displays and other presentations. Identifying scientific evidence that has been used to support or refute ideas or arguments.

Year 6- Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. Identifying scientific evidence that has been used to support or refute ideas or arguments.

X- New learning link to NC	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Statement	X	X	X	X	X	X	X
Hypothesis		X	X	X	X	X	X
Aim				X	X	X	X
Prediction				X	X	X	X
Equipment List		X	X				
Fair Testing				X	X	X	X
Method		X	X	X	X		
Diagram				X	X		
Results		X	X	X	X	X	X
Observations	X	X	X	X	X		
Conclusion		X	X	X	X	X	X
Evaluation						X	X

# Science and Geography

Key Stage	Year Group	Science	Geography	Lesson Ideas
Early Years	Nursery	<p><u>3 and 4 year old will:</u></p> <ul style="list-style-type: none"> <li>Use all their senses in hands on exploration of natural materials (KUW)</li> <li>Talk about what they see, using a wide vocabulary (KUW)</li> <li>Plant seeds and care for growing plants (KUW)</li> <li>Begin to understand the need to respect and care for the natural environment and all living things (KUW)</li> </ul>	<p><u>3 and 4 year old will:</u></p> <ul style="list-style-type: none"> <li>Know that there are different countries in the world and talk about the differences they have experienced or seen in photos (KUW)</li> </ul>	<ul style="list-style-type: none"> <li>Scavenger hunt following a trail.</li> <li>Observe their environment including plants/animals.</li> <li>Looking after plants in their environment.</li> <li>Minibeast hunt.</li> <li>Comparing animals from different countries/habitats/environments and make comments</li> <li>Fairtrade</li> <li>Growing potatoes. Where does our food come from?</li> <li>Grouping and classifying plants/minibeasts in the environment.</li> <li>Comparing environments linking with seasons.</li> <li>Stories from other cultures.</li> <li>Daily weather</li> <li>Farm visit - access farm map, draw map, draw animals seen</li> <li>Harvest festival</li> </ul>
	Foundation	<p><u>Reception children will:</u></p> <ul style="list-style-type: none"> <li>Explore the natural world around them (KUW)</li> <li>Describe what they see, hear and feel whilst outside (KUW)</li> <li>Understand the effect of changing seasons on the natural world around them (KUW)</li> </ul> <p><b>ELG: The Natural World</b></p> <ul style="list-style-type: none"> <li>Explore the natural world around them, making observations and drawing pictures of animals and plants</li> <li>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</li> <li>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.</li> </ul>	<p><u>Reception children will:</u></p> <ul style="list-style-type: none"> <li>Draw information from a simple map (KUW)</li> <li>Recognise some similarities and differences between life in this country and life in other countries (KUW)</li> <li>Recognise some environments that are different to the one in which they live (KUW)</li> <li>Understand the effect of changing seasons on the natural world around them (KUW)</li> </ul> <p><b>ELG: People, Culture and Communities</b></p> <ul style="list-style-type: none"> <li>Describe their immediate environment using knowledge from observation, discussion, stories, non-fiction texts and maps;</li> <li>Explain some similarities and differences between life in this country and life in other countries, drawing on knowledge from stories, non-fiction texts and – when appropriate – maps.</li> </ul>	
1	Year 1	<p><u>Plants</u></p> <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> <p><u>Seasonal changes</u></p> <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><u>Animals, including humans</u></p> <ul style="list-style-type: none"> <li>Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each</li> </ul>	<ul style="list-style-type: none"> <li>Use basic geographical vocabulary to describe and compare key physical features.</li> <li>Use simple compass direction (NESW) and locational and directional language to describe the location of features and routes on maps.</li> <li>Use aerial photographs and plan perspectives to recognise landmarks and basic human and physical features; devise a simple map; and use and construct basic symbols in a key.</li> <li>Use simple fieldwork and observational skills to study the geography of their school and its grounds and the key human and physical features of its surrounding environment.</li> <li>Identify seasonal and daily weather patterns in the United Kingdom.</li> </ul>	<ul style="list-style-type: none"> <li>Use compass directions to locate features (trees) on the school grounds.</li> <li>Daily weather</li> <li>Locate types of trees around the school grounds and devise a simple map.</li> <li>Identify the materials within the physical features identified</li> <li>Walk the school grounds and use senses to identify physical features (rain, grass, leaves, soil, vegetation, seasons) and human features (school building, sheds, planters, playground equipment) and identify the materials from which they are made.</li> <li>Seaside visit - Cleethorpes (seaside animals)</li> <li>Tally chart of observations in environment - trees, plants</li> <li>Treasure hunt of things in the environment objects plotted on a map</li> </ul>

		<p>sense.</p> <p><u>Everyday Materials</u></p> <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> </ul>		
	Year 2	<p><u>Living things and their habitats</u></p> <ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>Identify the location of hot and cold areas of the world in relation to the Equator and the North and South Poles.</li> <li>Name and locate the world's seven continents and five oceans.</li> <li>Use atlases, world maps and globes to identify the UK and its countries as well as the countries, continents and oceans studied at this stage.</li> <li>Use simple compass direction (NESW) and locational and directional language to describe the location of features and routes on maps.</li> <li>devise a simple map; and use and construct basic symbols in a key.</li> <li>Use simple fieldwork and observational skills to study the geography of their school and its grounds and the key human and physical features of its surrounding environment.</li> </ul>	<ul style="list-style-type: none"> <li>Walk the school grounds and identify any habitats and microhabitats.</li> <li>Identifying places which are hot and cold and how animals are suited.</li> <li>Use atlases and identify animals in their habitats linking to oceans, continents and countries.</li> <li>Use compass directions to locate features (habitats) on the school grounds.</li> <li>Use ordnance survey map with grid references to locate features.</li> <li>Locate types of habitat around the school grounds and devise a simple map.</li> <li>Create a tally/table of animals in local habitats</li> <li>Fairtrade</li> </ul>
2	Year 3	<p><u>Rocks</u></p> <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> <p><u>Light</u></p> <ul style="list-style-type: none"> <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> <p><u>Force</u></p> <ul style="list-style-type: none"> <li>describe magnets as having 2 poles</li> </ul>	<ul style="list-style-type: none"> <li>Physical geography including: volcanoes.</li> <li>Use the eight points of a compass, four and six-figure grid references, symbols and keys.</li> <li>Use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies.</li> <li>Geographical terms to describe and compare: Physical: earth crust, mantle, active, dormant, extinct, core, crust, vent, conduit, eruption, crater, ash, lava and magnitude. Human: manufacturing, mining, service industry, recreation, town, rural, urban</li> </ul>	<ul style="list-style-type: none"> <li>Create sourdough volcanoes.</li> <li>Local rock walk/photograph rocks in different areas use maps and grid references</li> </ul> <p>Collect soil samples</p> <ul style="list-style-type: none"> <li>Wormery(vegetations) physical geography)</li> <li>Plaster of paris fossils (erosion and decay of animals).</li> <li>Observing shadows outside, movement throughout the day referring to compass directions.</li> <li>Using magnets and north and south poles (compass magnet)</li> <li>Fairtrade</li> </ul>
	Year 4	<p><u>Living things and their habitats</u></p> <ul style="list-style-type: none"> <li>recognise that environments can change and that this can sometimes pose dangers to living things</li> </ul> <p><u>States of matter</u></p> <ul style="list-style-type: none"> <li>identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature</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</li> </ul>	<ul style="list-style-type: none"> <li>Physical geography, including rivers and the water cycle.</li> <li>Human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water</li> <li>Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied</li> <li>Use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of Ordnance Survey</li> </ul>	<ul style="list-style-type: none"> <li>Water cycle in a bag</li> <li>Investigation and experiments into how the water cycle works</li> <li>Locality study: River Humber dangers in our locality (flooding, coastal erosion, wildlife, impact on farming, wider world) Watersedge visit</li> <li>Using maps to look at environmental dangers (deforestation, litter)</li> <li>Using maps to track rivers from source to sea</li> <li>Make a weather vane</li> <li>Track rainfall (link localised flooding)</li> <li>Use the compass points and grid</li> </ul>

		degrees Celsius (°C)	<p>maps) to build their knowledge of the United Kingdom and the wider world</p> <ul style="list-style-type: none"> <li>Use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies.</li> <li>Geographical terms to describe and compare: evaporation, condensation, precipitation, transpiration, surface runoff</li> </ul>	<p>references to locate potential dangers to the environment</p> <ul style="list-style-type: none"> <li>Fairtrade - melting chocolate</li> </ul>
	Year 5	<p><u>Earth and space</u></p> <ul style="list-style-type: none"> <li>use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky</li> </ul>	<ul style="list-style-type: none"> <li>Locate the world's countries, using maps to focus on Europe (including the location of Russia) and North and South America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities</li> <li>Identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night).</li> </ul>	<ul style="list-style-type: none"> <li>Time zones when locating different countries.</li> <li>Use photos from the space station and make comparisons</li> <li>Make a sundial</li> <li>Use weather equipment to monitor climate - thematic maps</li> </ul>
	Year 6	<p><u>Evolution and inheritance</u></p> <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>identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution</li> </ul> <p><u>Electricity</u></p>	<p>Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied</p> <ul style="list-style-type: none"> <li>Use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world</li> <li>Geographical terms to describe and compare: energy, renewable/non renewable, fossil fuel, power, fuel, natural resource and fairtrade.</li> </ul>	<ul style="list-style-type: none"> <li>Locate animals Charles Darwin discovered</li> <li>Using six figure grid references and compass points to locate the Galapagos islands</li> <li>Plot Charles Darwin's Journey</li> <li>Identify change in physical features over time (Black Peppered Moth)</li> <li>Non-renewable and renewable energy sources.</li> <li>Loan Wind turbine/EDF wind workshop (Lab Rascals)</li> </ul>

## Target Sheets

<b>Stage 1 Science Targets</b>	<b>SA</b>
<b>Animals including humans</b>	

1	I can identify common animals. (Including fish, amphibians, reptiles, birds and mammals)	
2	I can name common animals. (Including fish, amphibians, reptiles, birds and mammals)	
3	I can identify animals using carnivore, herbivore and omnivore.	
4	I can name animals using carnivore, herbivore and omnivore.	
5	I can describe the structure of different common animals. (Including fish, amphibians, reptiles, birds and mammals)	
6	I can compare the structure of different common animals. (Including fish, amphibians, reptiles, birds and mammals)	
7	I can identify basic parts of the human body.	
8	I can name basic parts of the human body.	
9	I can draw basic parts of the human body.	
10	I can label basic parts of the human body.	
11	I can say which part of the human body is associated with each sense.	
<b>Plants</b>		
12	I can identify and describe the structure of common flowering plants.	
13	I can identify and describe the structure of common trees.	
14	I can identify deciduous and evergreen trees.	
15	I can identify a variety of common wild and garden plants.	
16	I can name a variety of common wild and garden plants.	
<b>Everyday materials</b>		
17	I can identify everyday materials. (Including wood, plastic, glass, metal, water and rock)	
18	I can name everyday materials. (Including wood, plastic, glass, metal, water and rock)	
19	I can identify objects and the material it is made from.	
20	I can describe properties of everyday materials.	
21	I can compare everyday materials based on their properties.	
22	I can group together everyday materials based on their properties.	
<b>Seasonal changes</b>		
23	I can observe changes across 4 seasons.	

24	I can observe how the weather associated with the seasons changes and how the day length varies.	
25	I can describe how the weather associated with the seasons changes and how the day length varies.	
<b>Working scientifically</b>		
26	I can ask simple questions.	
27	I can recognise that questions can be answered in many ways.	
28	I can observe closely.	
29	I can use simple equipment.	
30	I can perform simple tests.	
31	I can identify.	
32	I can classify.	
33	I can use observations to suggest answers to questions.	
34	I can use ideas to suggest answers to questions.	
35	I can gather data to help in answering questions.	
36	I can record data to help in answering questions.	

<b>Stage 2 Science Targets</b>	<b>SA</b>
<b>Living things and their habitats</b>	



1	I can identify a variety of plants and animals in their habitats.	
2	I can name a variety of plants and animals in their habitats.	
3	I can explore the differences between things that are living, dead and things that have never been alive.	
4	I can compare the differences between things that are living, dead and things that have never been alive.	
5	I can identify that most living things live in habitats to which they are suited.	
6	I can describe how habitats provide for the basic needs of different kinds of animals.	
7	I can describe how habitats provide for the basic needs of different kinds of plants.	
8	I can describe how plants and animals depend on each other in a habitat.	
9	I can use food chains to describe how animals get their food from plants and other animals.	
10	I can describe how animals get their food and identify and name sources of food.	
<b>Plants</b>		
11	I can observe how seeds and bulbs grow into mature plants.	
12	I can describe how seeds and bulbs grow into mature plants.	
13	I can find out what plants need to grow and stay healthy.	
14	I can describe what plants need to grow and stay healthy.	
<b>Animals including humans</b>		
15	I know that animals and humans have offspring which grow into adults.	
16	I can find out what humans need to survive. (water, food and air)	
17	I can describe what animals need to survive. (water, food and air)	
18	I can describe the importance of exercise, eating the right amounts of food and hygiene for humans.	
<b>Uses of everyday materials</b>		
19	I can identify the suitability of everyday materials for particular uses.	
20	I can compare the suitability of everyday materials for particular uses.	
21	I can find out about how the shapes of solid objects made from some materials can be changed.	
<b>Working scientifically</b>		
22	I can ask simple questions.	

23	I can recognise that questions can be answered in many ways.	
24	I can observe closely.	
25	I can use simple equipment.	
26	I can perform simple tests.	
27	I can identify.	
28	I can classify.	
29	I can use observations to suggest answers to questions.	
30	I can use ideas to suggest answers to questions.	
31	I can gather data to help in answering questions.	
32	I can record data to help in answering questions.	

Stage 3 Science Targets		SA
<b>Plants</b>		
1	I can identify the functions of parts of flowering plants such as roots, stem, trunk, leaves and flowers.	

2	I can describe the functions of parts of flowering plants such as roots, stem, trunk, leaves and flowers.	
3	I can explore what a plant needs to live and grow.	
4	I can explore what a plant needs to live and grow and how this changes from plant to plant.	
5	I can investigate the way in which water is transported within plants.	
6	I can explore the part that flowers play in the life cycle of flowering plants.	
<b>Animals including humans</b>		
7	I can identify that animals and humans need the right type of nutrition.	
8	I can identify that animals and humans cannot make their own food and get nutrition from what they eat.	
9	I can identify that humans have skeletons and muscles for support, protection and movement.	
10	I can identify that some animals have skeletons and muscles for support, protection and movement.	
<b>Rocks</b>		
11	I can compare rocks on their appearance and simple properties.	
12	I can group rocks on their appearance and simple properties.	
13	I can describe how fossils are formed.	
14	I can recognise that soils are made from rocks and organic matter.	
<b>Light</b>		
15	I can recognise that I need light in order to see things and that dark is the absence of light.	
16	I can see that light is reflected from surfaces.	
17	I can recognise that light from the sun can be dangerous and that there are ways to protect the eyes.	
18	I can recognise that shadows are formed when the light from a light source is blocked by an opaque object.	
19	I can find patterns in the way that the size of shadows change.	
<b>Forces and magnets</b>		
20	I can compare how things move on different surfaces.	
21	I can see that some forces need contact between two objects.	
22	I can see that magnetic forces can act at a distance.	
23	I can observe how magnets attract or repel each other.	

24	I can observe how magnets can attract some materials and not others.	
25	I can describe magnets as having two poles.	
26	I can predict whether two magnets will attract or repel each other.	
27	I can compare magnetic and non magnetic everyday materials.	
28	I can group magnetic and non magnetic everyday materials.	
<b>Working scientifically</b>		
29	I can ask questions.	
30	I can use different scientific enquiries.	
31	I can set up simple practical enquiries.	
32	I can set up simple comparative tests.	
33	I can set up simple fair tests.	
34	I can make observations.	
35	I can take measurements using equipment.	
36	I can gather data to help answer questions.	
37	I can record data to help answer questions.	
38	I can classify data to help answer questions.	
39	I can present data to help answer questions.	
40	I can record findings using scientific language.	
41	I can record findings using drawings.	
42	I can record findings using labelled diagrams.	
43	I can record findings using keys.	
44	I can record findings using bar charts.	
45	I can record findings using tables.	
46	I can report on findings from enquiries.	
47	I can use results to make conclusions.	
48	I can use results to make predictions.	

49	I can use results to suggest improvements.	
50	I can use results to raise further questions.	
51	I can identify differences, similarities or changes to scientific ideas and processes.	
52	I can use scientific evidence to answer questions or to support their findings.	

<b>Stage 4 Science Targets</b>		<b>SA</b>
<b>Living things and their habitats</b>		
1	I can recognise that living things can be grouped.	

2	I can explore classification keys to help group, identify and name living things in my environment.	
3	I can use classification keys to help group, identify and name living things in my environment.	
4	I can recognise that environments can change and that this can sometimes pose dangers to living things.	
<b>Animals including humans</b>		
5	I can describe functions of parts of the digestive system in humans.	
6	I can identify the different types of teeth in humans and their functions.	
7	I can interpret a variety of food chains and identify producers, predators and prey.	
8	I can construct a variety of food chains and identify producers, predators and prey.	
<b>States of matter</b>		
9	I can compare materials into solids, liquids and gases.	
10	I can group materials into solids, liquids and gases.	
11	I can observe that some materials change state when heated or cooled.	
12	I can observe that some materials change state when heated or cooled by researching or measuring the temperature.	
13	I can identify the part that evaporation plays in the water cycle.	
14	I can identify the part that condensation plays in the water cycle.	
15	I can link the rate of evaporation with temperature.	
<b>Sound</b>		
16	I can identify how sounds are made and link some of them with something vibrating.	
17	I can recognise that vibrations from sounds travel through a medium to the ear.	
18	I can find patterns between the pitch of a sound and features of the object that made it.	
19	I can find patterns between the volume of a sound and the strength of the vibrations that made it.	
20	I can recognise that sounds get fainter as the distance from the sound source increases.	
<b>Electricity</b>		
21	I can identify common appliances that run on electricity.	
22	I can identify and name basic parts of a simple series circuit.	
23	I can construct a simple series circuit using the basic parts.	

24	I can identify if a lamp will or will not light in a simple series circuit.	
25	I can recognise that a switch opens and closes a circuit.	
<b>Working scientifically</b>		
26	I can ask questions.	
27	I can use different scientific enquiries.	
28	I can set up simple practical enquiries.	
29	I can set up simple comparative tests.	
30	I can set up simple fair tests.	
31	I can make observations.	
32	I can take measurements using equipment.	
33	I can gather data to help answer questions.	
34	I can record data to help answer questions.	
35	I can classify data to help answer questions.	
36	I can present data to help answer questions.	
37	I can record findings using scientific language.	
38	I can record findings using drawings.	
39	I can record findings using labelled diagrams.	
40	I can record findings using keys.	
41	I can record findings using bar charts.	
42	I can record findings using tables.	
43	I can report on findings from enquiries.	
44	I can use results to make conclusions.	
45	I can use results to make predictions.	
46	I can use results to suggest improvements.	
47	I can use results to raise further questions.	
48	I can identify differences, similarities or changes to scientific ideas and processes.	

49	I can use scientific evidence to answer questions or to support their findings.	
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Stage 5 Science Targets		SA
Living things and their habitats		
1	I can describe the differences in the life cycles of a mammal, amphibian, insect and a bird.	



2	I can describe the life process of reproduction in plants.	
3	I can describe the life process of reproduction in animals.	
<b>Animals including humans</b>		
4	I can describe changes as humans develop to old age.	
<b>Properties and changes in materials</b>		
5	I can compare everyday materials based on their properties and their response to magnets.	
6	I can group together everyday materials based on their properties and their response to magnets.	
7	I know that some materials will dissolve into a liquid to form a solution.	
8	I can describe how to recover a substance from a solution.	
9	I can use my knowledge of solids, liquids and gases to decide how mixtures might be separated.	
10	I can give reasons, based on comparative and fair tests, for particular uses of everyday materials.	
11	I can demonstrate that dissolving is reversible.	
12	I can demonstrate that mixing is reversible.	
13	I can demonstrate that changes of state are reversible.	
14	I can explain that some changes result in new materials and this is not usually irreversible.	
<b>Earth and space</b>		
15	I can describe the movement of the Earth and other planets relative to the sun in the solar system.	
16	I can describe the movement of the moon relative to the Earth.	
17	I can describe the Sun, Earth and moon as approximately spherical bodies.	
18	I can use the idea of the Earth's rotation to explain day and night and the apparent movement across the sky.	
<b>Forces</b>		
19	I can explain that unsupported objects fall towards the Earth because of the force of gravity.	
20	I can identify the effects of air resistance that act between moving surfaces.	
21	I can identify the effects of water resistance that act between moving surfaces.	
22	I can identify the effects of friction that act between moving surfaces.	
23	I can recognise that some mechanisms allow a smaller force to have a greater effect.	

Working scientifically		
24	I can plan different types of scientific enquiries to answer questions.	
25	I can take measurements using scientific equipment with increasing accuracy and precision.	
26	I can take repeat readings when appropriate.	
27	I can record data and results using scientific diagrams and labels.	
28	I can record data and results using classification keys.	
29	I can record data and results using tables.	
30	I can record data and results using scatter graphs.	
31	I can record data and results using bar and line graphs.	
32	I can use test results to make predictions to set up comparative and fair tests.	
33	I can report and present findings orally from enquiries using displays and other presentations.	
34	I can report and present findings in written form from enquiries using displays and other presentations.	
35	I can identify scientific evidence that has been used to support or to refute ideas.	
36	I can identify scientific evidence that has been used to support or to refute arguments.	

Stage 6 Science Targets	SA
Living things and their habitats	

1	I can describe how living things are classified into groups according to common observable characteristics.	
2	I can describe how living things are classified into groups according to their similarities and differences.	
3	I can give reasons for classifying plants based on specific characteristics.	
4	I can give reasons for classifying animals based on specific characteristics.	
<b>Animals including humans</b>		
5	I can identify and name the main parts of the human circulatory system.	
6	I can describe the functions of the heart, blood vessels and blood.	
7	I can recognise the impact of diet on the way the body functions.	
8	I can recognise the impact of exercise on the way the body functions.	
9	I can recognise the impact of drugs on the way the body functions.	
10	I can recognise the impact of lifestyle on the way the body functions.	
11	I can describe the ways in which nutrients and water are transported within animals.	
<b>Evolution and inheritance</b>		
12	I can recognise that living things have changed over time.	
13	I can recognise that fossils provide information about living things that lived millions of years ago.	
14	I can recognise that living things produce offspring, but they are not identical to their parents.	
15	I can identify how animals are adapted to suit their environment and that adaptation may lead to evolution.	
16	I can identify how plants are adapted to suit their environment and that adaptation may lead to evolution.	
<b>Light</b>		
17	I can recognise that light appears to travel in straight lines.	
18	I can use the idea that light travels in straight lines to explain that objects are seen.	
19	I can explain how we see things.	
20	I can use the idea that light travels in straight lines to explain why shadows have the same shape as objects.	
<b>Electricity</b>		
21	I can link the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used.	
22	I can compare and give reasons for variations in how components function.	

23	I can use recognised symbols when representing a simple circuit in a diagram.	
<b>Working scientifically</b>		
24	I can plan different types of scientific enquiries to answer questions.	
25	I can take measurements using scientific equipment with increasing accuracy and precision.	
26	I can take repeat readings when appropriate.	
27	I can record data and results using scientific diagrams and labels.	
28	I can record data and results using classification keys.	
29	I can record data and results using tables.	
30	I can record data and results using scatter graphs.	
31	I can record data and results using bar and line graphs.	
32	I can use test results to make predictions to set up comparative and fair tests.	
33	I can report and present findings orally from enquiries using displays and other presentations.	
34	I can report and present findings in written form from enquiries using displays and other presentations.	
35	I can identify scientific evidence that has been used to support or to refute ideas.	
36	I can identify scientific evidence that has been used to support or to refute arguments.	

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Animals Including Humans

## Year 6

human circulatory system, heart, blood vessels, blood, deoxygenated, oxygenated, superior vena cava, pulmonary artery, pulmonary veins, inferior vena cava, aorta, atrium, ventricle, valves, iron, oxygen, respiration, breathlessness, tiredness, carbon dioxide, diet, exercise, lifestyle, nutrients, skeletal, muscular, digestive, drugs, health, internal organs, lungs, liver, kidney, brain, skeleton, muscle, digest, digestion, impact, damage, alcohol, substances, alcohol, tobacco, medicine, legal, illegal, paracetamol, ibuprofen, calpol, opiates, smoking, nicotine, binge-drinking, e-cigarette, caffeine, cough syrup, heartbeat, circulate, travel, pulse, transports, acid, enzymes, absorbs, absorption, urine, salivary glands, duodenum, stools, oesophagus, liver, bile, mouth, tongue, stomach, pancreas, bloodstream, rectum, anus, chyme, molecules, carbohydrase, protein, protease, amino acids, fatty acid, glycerol, lipase, muscle layers, mucosa, villi, serosa, villus, bacteria, gas, colon, cecum, sigmoid colon, capillaries, cells, water soluble, filtration, kidneys, ultrafiltrate, urethra, bladder, ureter,

## Year 5

human, development, baby, toddler, child, teenager, adult, puberty, gestation, length, mass, grow, growing, older, younger, puberty, childhood, adulthood, physical growth, reproduction, hypothalamus gland, pituitary gland, hormones, larynx, sweat glands, pubic, facial, scrotum, testes, penis, laryngeal cartilage, male sexual organs, testicles, testosterone, sperm, breasts, menstruate, ovaries, oestrogen, progesterone, periods, uterus, period, fertilised egg, menstrual cycle, emotions, hair growth,

## Year 4

digestive system, food chains, producers, predators, prey, mouth, tongue, teeth, oesophagus, stomach, small and large intestine, carnivores, herbivores, omnivores, digestion, mixes, moistens, saliva, transports, acid, enzymes, absorbs, water, vitamins, compacts, colon, incisors, cutting, slicing, canines, ripping, tearing, molars, chewing, grinding, floss, brush, sun, lettuce, grass, seeds, plants, nuts, squirrels, grasshoppers, ladybird, flies, birds, birds of prey, rabbit, fox, badger, deer, lion, zebra, cheetah, elephant, goat, sheep, horse, polar bear, seal, fish

## Year 3

movement, move, respiration, respire, food, oxygen, energy, breathing, sensitivity, surroundings, reproduction, excretion, waste material, light, nutrition, diet, food, food groups, food chain, meat, dairy, milk, cheese, yogurt, carbohydrates, pasta, bread, rice, potato, fats, sugars, fruits, vegetables, calcium, protein, fibre, minerals, vitamins, energy, saturated fats, unsaturated fats, skeleton, human, animal, dog, lion, owl, shark, tortoise, muscles, support, protection, exercise, growth, repair, contract, relax, biceps, triceps, calf, vertebrate, endoskeleton, invertebrate, exoskeleton, hydrostatic skeleton, pull, tendons, joints, skull, clavicle, scapula, ribcage, heart, lungs, humerus, vertebral column, ulna, pelvis, radius, femur, tibia, fibula, brain

## Year 2

offspring, babies, reproduction, growth, human, animal,

baby, toddler, child, teenager, adult, egg, chick, chicken, caterpillar, pupa, butterfly, spawn, tadpole, frog, lamb, life cycle, sheep, basic needs, survival, changes, food, water, air, exercise, running, playing, dancing, football, healthy, fit, unhealthy, food groups, meat, dairy, milk, cheese, yoghurt, carbohydrates, bread, pasta, potato, fats, sugars, fruits, vegetables, calcium, hygiene, clean, germs, disease, illness

Year 1

amphibians, birds, fish, mammals, reptiles, carnivore, herbivore, omnivore, human, mouse, dog, cow, penguin, chicken, seagull, robin, goldfish, clown fish, tuna, shark, eel, snake, tortoise, lizard, alligator, frog, toad, newt, salamander, elephant, lion, tiger, whale, rhino, wing, beak, tail, fin, paw, whiskers, trunk, tusk, shell, webbed feet, scales, mane, feathers, gill, senses, smell, hearing, touch, taste, sight, head, eye, nose, teeth, elbow, knee, fingers, leg, foot, shoulder, hand, mouth, tongue, ear, toes, hair

Foundation Stage

herbivores, omnivores, carnivores, meat eater, plant eater, minibeast, caterpillar, ladybird, insect, woodlouse, spider, butterfly, farm animal, pig, cow, goat, horse, sheep, head, shoulders, face, eyes, nose, mouth, feet, legs, arms, hair

## Earth and Space

Year 6

(Not explicit in this year group)

Year 5

Earth, space, Sun, Moon, planets, star, solar system, Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto, dwarf planet, movement, rotate, orbit, axis, celestial body, spherical body, sphere, days, nights, light, heat, eclipse, satellite, universe, solar, astronomer, Ptolemy, Alhazen, Copernicus, shadow, clock, sundial, revolves, rotates, time zones, astronomical, East, West, Moon phases, Full Moon, New Moon, Crescent, Gibbous, reflects, waxing, waning, Waxing Half Moon, Waxing Crescent, Waning Crescent, Waning Half Moon, Waning Gibbous, Waxing Gibbous, Blue Moon, Neil Armstrong, months, years, length, seasons, summer, spring, winter, autumn  
(See Forces and Seasonal Changes)

Year 4

(See Sound)

Year 3

(See Light)

Year 2

(Not explicit in this year group)

Year 1

(See Seasonal Changes)

Foundation Stage

spaceman, spaceship, Moon, space, planets, dark, stars, Sun, night, sky, Earth, Saturn, astronaut, alien, rocket

## Electricity

Year 6

voltage, brightness, volume, switches, danger, series, sign, circuit, diagram, switch, bulb, buzzer, motor, symbols, components, parallel, circuits,



(See Sound)

Year 5

(See Materials)

Year 4

light bulb, electric cooker, fridge, freezer, televisions, appliance, electricity, electrical circuit, cell (battery), wire, bulb, buzzer, construct, connect, motor, wires, danger, safety, sign, insulators, wood, rubber, plastic, glass, metal, water, switch, open switch, closed switch, series, common conductors, conventional, current, voltage, loop, copper, iron, nickel, aluminium, lead, steel, cobalt, money, Thoma Edison,

Year 3

(See Light)

Year 2

(See Materials)

Year 1

(See Materials)

Foundation Stage

plug, electric, circuit, battery, wire, light, on, off, switch, danger, ipad, computer, charge, power, phone, tablet, computer, chromebook, laptop, fridge,

## Evolution and Inheritance

Year 6

inheritance, inherit, characteristics, living things, change, fossils, offspring, vary, variation, not identical, variation, evolution, adaptation, mutation, adaptive traits, Charles Darwin, Alfred Wallace, adapt, environment, habitat, extreme conditions, advantageous, disadvantageous, palaeontologist, palaeontology, Mary Anning, inhabited, polar regions, tropical rainforests, mountains, oceans, deserts, coniferous forests, grasslands, heath, natural selection, The Theory of Evolution, Galapagos Finches, evolved, natural selection, fossilisation, sediments, sedimentary rocks, endoskeletons, exoskeletons, calcium, decay, species, Carl Linneaus, selective breeding, cross breeding, *Fragaria Chiloensis*, *Fragaria Virginia*, garden strawberry, poodle, labrador, labradoodle, genetically modified foods (GM), cloning,

Year 5

(See Living Things and Their Habitats and Animals including Humans)

Year 4

(See Living Things and Their Habitats and Animals including Humans)

Year 3

(See Rocks, Living Things and Their Habitats, Plants and Animals including Humans)

Year 2

(See Living Things and Their Habitats, Plants and Animals including Humans)

Year 1

(See Animals including Humans and Plants)

Foundation Stage

Palaeontologist, Paleontology, fossils, bones, living things, identical, nature, humans, animals, grow, time, change, dinosaurs, dead, extinct

## Forces

Year 6

(Not explicit in this year group)

Year 5 (Forces)

Earth, gravity, air, air resistance, water resistance, friction, mechanisms, gears, levers, pulleys, movement, Galileo Galilei, Isaac Newton, gravitation, springs, effect, accelerate, decelerate, stop, change, direction, brake, pivot, push, pull, fulcrum, catapult, distance, descend, upthrust, buoyancy, volume, weight, newtons, mass, matter, strength, kilograms, newton meter, streamlined, materials, carpet, bubblewrap, plastic, cotton wool, wood, paper, cardboard,

Year 4

(Not explicit in this year group)

Year 3 (Forces and Magnets)

fast, slow, stationary, force, friction, open, surface, push, pull, motion, contact, distance, touching, not touching, magnet, magnetic, non-magnetic, magnetic field, poles, north pole, south pole, repel, repulsion, attract, attraction, metal, bar magnet, u-shaped magnet, horseshoe magnet, ring magnet, fridge magnet, compass, magnetic needle, electromagnetic, cylindrical magnet, oval shaped magnet, iron, nickel, cobalt, stainless steel, fabric, wood, glass, plastic, stone, paper, elastic, scissors, paperclip, money, cube, pins, safety pin, wood, sandpaper, carpet, plastic, smooth, shiny, rough, coarse, bumpy/ridges

Year 2

(See Materials)

Year 1

(See Materials)

Foundation Stage

push, pull, magnetic, magnet, non-magnetic, metal, attract, paper clip, wooden block, key, lego, screw, bolt, plastic lid, plastic bottle, pin, toy car

Light

Year 6

light, reflect, travels, reflection, source, object, shadows, mirrors, periscope, rainbow, filters, spectrum, straight, electromagnetic radiation, photons, waves, rays, beams of light, bounce, scattering, incident ray, reflected ray, angle of reflection, perpendicular, reflector, refraction, prism, Isaac Newton, transparent, translucent, opaque, visible,

Year 5

(See Earth and Space)

Year 4

(Not explicit in this year group)

Year 3

light, light source, natural light, Sun, sunlight, star, artificial light, torch, candle, lamp, white light, visible light, dark, absence of light, reflection, reflect, reflective material, see, sight, vision, eye, pupil, retina, ray, mirror, concave, convex, smooth, shiny, flat, rough, uneven, earth, rotation, harmful, rays, UV (ultraviolet) rays, sunglasses, protection, sun safety, sun cream, tanning, sunburn, SPF (Sun Protection Factor), UVA protection, shade, hottest, strongest ray, hat, skin damage, eye damage, shadow, opaque, block, object, translucent, transparent, moon, midday, sunrise, sunset, north, east, south, west, clockwise, left to right, length, change in length, short, long, in front, behind, surfaces,

Year 2

(See Plants)

Year 1

(See Animals including Humans and Seasonal Changes)

Foundation Stage

light, dark, reflection, mirror, smooth, shiny, flat, rough, shadow, sun, moon, torch, candle, lamp

## Living Things and Their Habitats

Year 6

light, reflect, travels, reflection, source, object, shadows, mirrors, periscope, rainbow, filters, spectrum, straight, electromagnetic radiation, photons, waves, rays, beams of light, bounce, scattering, incident ray, reflected ray, angle of reflection, perpendicular, reflector, refraction, prism, Isaac Newton, transparent, translucent, opaque, visible,

Year 5

(See Earth and Space)

Year 4

(Not explicit in this year group)

Year 3

light, light source, natural light, Sun, sunlight, star, artificial light, torch, candle, lamp, white light, visible light, dark, absence of light, reflection, reflect, reflective material, see, sight, vision, eye, pupil, retina, ray, mirror, concave, convex, smooth, shiny, flat, rough, uneven, earth, rotation, harmful, rays, UV (ultraviolet) rays, sunglasses, protection, sun safety, sun cream, tanning, sunburn, SPF (Sun Protection Factor), UVA protection, shade, hottest, strongest ray, hat, skin damage, eye damage, shadow, opaque, block, object, translucent, transparent, moon, midday, sunrise, sunset, north, east, south, west, clockwise, left to right, length, change in length, short, long, in front, behind, surfaces,

Year 2

(See Plants)

Year 1

(See Animals including Humans and Seasonal Changes)

Foundation Stage

light, dark, reflection, mirror, smooth, shiny, flat, rough, shadow, sun, moon, torch, candle, lamp

## Materials

Year 6

(Not explicit in this year group)

### Year 5 (Properties and Changes in Materials)

properties, hardness, solubility, transparency, electrical, conductor, thermal conductor, thermal insulators, dissolve, solution, separate, separating, solids, liquid, gases, evaporating, reversible changes, irreversible, mixing, evaporation, filtering, filtration, sieving, melting, burning, materials, rusting, magnetism, electricity, chemists, Spencer Silver, Ruth Benerit, conductivity, insulation, chemical, solubility, conductivity, substance, metals, wood, plastic, rusting, chemists, glass, brick, rock, paper, cardboard, brick, scissors, paperclips, rubber, copper, iron, nickel, cobalt, aluminium, salt, sugar, coffee, sand, clay, gravy granules, table, radiator, door, clothes, blanket, cushions, candle wax, cake, fried egg, windows, bicarbonate of soda, bath bombs, toast, boiling, condensing, evaporating, changes of state, acid,

### Year 4 (States of Matter)

solid, solidify, iron, ice, melt, freeze, liquid, evaporate, condense, gas, container, changing state, heated, heat, cooled, cool, degrees celsius, thermometer, water cycle, evaporation, condensation, temperature, melting, warm, water vapour, materials, cycle, precipitation, particles, vibration, movement, carbon dioxide, Joseph Priestly, dissolve, oxygen, rate of evaporation, droplets, rain, hail, snow, wind, precipitation, rain, underground water, seas, lakes, rivers, streams, puddles, ponds, clouds, absorbed,

### Year 3

(See Rocks, Light and Forces and Magnets)

### Year 2 (Uses of Everyday Materials)

metal, plastic, glass, brick, rock, paper, cardboard, suitable, unsuitable, purpose, strong, rigid, bendy, hard, soft, furry, transparent, opaque, translucent, absorbent, smooth, shiny, dull, brittle, rough, silky, stretchy, wood, squashing, bending, twisting, stretching, shape, solid, malleable, coins, cars, cans, table, spoons, matches, floor, telegraphy, James Dunlop, rubber, Charles Macintosh, waterproof fabric, John McAdam, macadamisation, scissors, paperclip, money, cube, pins, safety pin,

### Year 1 (Everyday Materials)

wood, table, chair, plastic, bottle, hoop, cup, tray, ball, glass, window, metal, gate, water, tap, rock, stone, brick, house, paper, tree, fabric, clothes, blanket, cushions, scissors, paperclip, money, cube, pins, safety pin, elastic, elastic band, foil, hard, soft, stretchy, stiff, shiny, dull, rough, smooth, bendy, waterproof, absorbent,

### Foundation Stage

magnetic, strong, elastic, twist, rock, glass, soft, freeze, melt, furry, clay, waterproof, wood, wool, smooth, breakable, cardboard, squashy, shiny, hard, rough, metal, fabric, paper, sand, plastic, melt, ice, freeze, liquid, heat, melting, water, solid, brick, sand, water, steam, air, change, changes, dissolve, movement, mixing, separate, separating, gas, cold, frozen,

## Plants

Year 6

(Not explicit in this year group)

Year 5 (Properties and Changes in Materials)

properties, hardness, solubility, transparency, electrical, conductor, thermal conductor, thermal insulators, dissolve, solution, separate, separating, solids, liquid, gases, evaporating, reversible changes, irreversible, mixing, evaporation, filtering, filtration, sieving, melting, burning, materials, rusting, magnetism, electricity, chemists, Spencer Silver, Ruth Benerit, conductivity, insulation, chemical, solubility, conductivity, substance, metals, wood, plastic, rusting, chemists, glass, brick, rock, paper, cardboard, brick, scissors, paperclips, rubber, copper, iron, nickel, cobalt, aluminium, salt, sugar, coffee, sand, clay, gravy granules, table, radiator, door, clothes, blanket, cushions, candle wax, cake, fried egg, windows, bicarbonate of soda, bath bombs, toast, boiling, condensing, evaporating, changes of state, acid,

Year 4 (States of Matter)

solid, solidify, iron, ice, melt, freeze, liquid, evaporate, condense, gas, container, changing state, heated, heat, cooled, cool, degrees celsius, thermometer, water cycle, evaporation, condensation, temperature, melting, warm, water vapour, materials, cycle, precipitation, particles, vibration, movement, carbon dioxide, Joseph Priestly, dissolve, oxygen, rate of evaporation, droplets, rain, hail, snow, wind, precipitation, rain, underground water, seas, lakes, rivers, streams, puddles, ponds, clouds, absorbed,

Year 3

(See Rocks, Light and Forces and Magnets)

Year 2 (Uses of Everyday Materials)

metal, plastic, glass, brick, rock, paper, cardboard, suitable, unsuitable, purpose, strong, rigid, bendy, hard, soft, furry, transparent, opaque, translucent, absorbent, smooth, shiny, dull, brittle, rough, silky, stretchy, wood, squashing, bending, twisting, stretching, shape, solid, malleable, coins, cars, cans, table, spoons, matches, floor, telegraphy, James Dunlop, rubber, Charles Macintosh, waterproof fabric, John McAdam, macadamisation, scissors, paperclip, money, cube, pins, safety pin,

Year 1 (Everyday Materials)

wood, table, chair, plastic, bottle, hoop, cup, tray, ball, glass, window, metal, gate, water, tap, rock, stone, brick, house, paper, tree, fabric, clothes, blanket, cushions, scissors, paperclip, money, cube, pins, safety pin, elastic, elastic band, foil, hard, soft, stretchy, stiff, shiny, dull, rough, smooth, bendy, waterproof, absorbent,

Foundation Stage



magnetic, strong, elastic, twist, rock, glass, soft, freeze, melt, furry, clay, waterproof, wood, wool, smooth, breakable, cardboard, squashy, shiny, hard, rough, metal, fabric, paper, sand, plastic, melt, ice, freeze, liquid, heat, melting, water, solid, brick, sand, water, steam, air, change, changes, dissolve, movement, mixing, separate, separating, gas, cold, frozen,

## Rocks

Year 6
(Not explicit in this year group)
Year 5
(Not explicit in this year group)
Year 4
(Not explicit in this year group)
Year 3
<p>obsidian, chalk, marble, granite, sandstone, quartzite, basalt, limestone, brick, tile, slate, smooth, rough, coarse, soft, hard, coade stone, texture permeable, impermeable, natural rocks, human-made rocks, man-made rocks, igneous rock, sedimentary rock, metamorphic rock, magma, lava, sediment, weathering, density, fossilisation, palaeontology, erosion, acid, erodes, minerals, air, water, organic matter, decay, remains, compost, decomposed, waste, trimmings, manure, fallen leaves, kitchen waste, peat, soil, sediments, topsoil, subsoil, baserock, peat, boulder, fossil, grain, crystals, mould, cast, micro-organisms, properties, mould, cast, pressed, cools, volcanic ash, skeleton, pressure, deposited, grains, crystals,</p>
Year 2
(See Materials)
Year 1
(See Materials)
Foundation Stage
<p>soil, rock, stone, rough, chalk, marble, brick, fossil, crystal, hard, soft, pebble, heavy, light, strong, sand, small, sharp, ground, mould, smooth, bumpy, tough,</p>

## Seasonal Changes

Year 6
(Not explicit in this year group)
Year 5
(Not explicit in this year group)
Year 4
(Not explicit in this year group)
Year 3
(Not explicit in this year group)
Year 2
(Not explicit in this year group)
Year 1
sun, weather, days, nights, length, hours, minutes, rainbow, lightning, thunder, summer, spring, winter, autumn, rain, snow, hail, sleet, fog, hot, warm, cold, day, daytime, night, nighttime, light, dark, blossom, flowering, seasons, thermometer, earth, tilt, spin
Foundation Stage
sun, weather, days, nights, rainbow, lightning, thunder, summer, spring, winter, autumn, rain, snow, hail, sleet, fog, hot, warm, cold, day, daytime, night, nighttime, light, dark,

Year 6
(Not explicit in this year group)
Year 5
(Not explicit in this year group)
Year 4
vibrate, vibration, vibrating, air, medium, ear, hear, sound, volume, pitch, faint, fainter, loud, louder, string, percussion, woodwind, brass, insulate, insulation, insulate, instruments, twang, blow, bang, scrape, shake, pluck, strings, guitar, pan pipes, bongos, drum, drum skin, amplitude, quiet, quieter, solids, liquids, gases, sound waves, particles, ear canal, middle ear bones, hammer, anvil, stirrup, cochlea, electrical signals, hearing nerve, higher, lower, tighter, thinner, shorter, looser, thicker, longer, column of air, trombone, absorbed, phone, radio, walkie talkie, television, sound sources, soundproofing, ear defenders,
Year 3
(Not explicit in this year group)
Year 2
(Not explicit in this year group)
Year 1
(See Animals including Humans)
Foundation Stage
loud, noise, high, quiet, low, shout, yell, whisper, singing, thud, squeaky, bang, creaky, boom, music, echo

Year 6 and Year 5

scientific enquiry, variables, classification key, scatter graphs, line graphs, predictions, comparative, fair test, conclusion, validity, reliability, evaluation, hypothesising, hypothesis, patterns, describe, classify, evaluate, secondary sources, control variables, independent variables, dependent variables, investigation, experiment, observing, controlling variables, accuracy, precision, causal relationships, refute,

Year 4 and Year 3

scientific enquiry, comparative, fair tests, careful, systematic, observations, gather, recording, classifying, present, keys, bar charts, tables, drawings, labelled diagram, predictions, hypothesis, hypothesising, grouping, identifying patterns, secondary sources, variables, dependent, control, independent, investigation, experiment, observing, results, conclusions, measurement, standard, units, differences, similarities, changes, scientific evidence, measuring equipment, thermometer, datalogger, measuring cylinder, beaker, compass, scales, stopwatch, beaker, light sensor, measuring tape, ruler, spring balance, findings, explanations, scientific process,

Year 2 and Year 1

question, answer, observe, observing, equipment, identify, classify, sort, group, record, diagram, chart, map, data, compare, more, less, same, different, bigger, smaller, contrast, biology, physics, chemistry, hypothesising, predicting, results, table, heading, conclusion, investigation, experiment, describe, label, simple test, recognise, beaker, measuring tape, ruler, measuring cylinder, stopwatch, measuring equipment

Foundation Stage

question, answer, observe, observing, equipment, identify, sort, group, compare, more, less, same, different, bigger, predicting, results, investigation, experiment, change, difference, watching, look, looking, find, notice, same as,