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		***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.***		
		3 - 4 Year olds will:	**<u>Understanding of the World</u>** ● Use all their senses in hands on exploration of natural materials ● Explore collections of materials with similar and/or different properties ● Talk about what they see, using a wide vocabulary ● Plant seeds and care for growing plants ● Understand the key features of the life cycle of a plant and an animal ● Begin to understand the need to respect and care for the natural environment and all living things ● Explore and talk about different forces they can feel ● Talk about the differences between materials and changes they notice	**<u>Plants</u>** ● Observe plants in and around school. ● Name plants in and around school. ● Talk about how plants grow and change. ● Talk about why plants grow and change. ● Talk about caring for plants. **<u>Animals including humans</u>** ● Observe animals. ● Name animals. ● Talk about caring for animals. **<u>Living things and their habitats</u>** ● Talk about habitats in and around the school. ● Talk about objects found in and around school. ● Talk about animals found in and around the school. ● Talk about how to take care of our environment. **<u>Everyday materials</u>** ● Talk about objects they have found in and around school. ● Talk about what objects are made from. **<u>Seasonal changes</u>** ● Talk about the weather and how it changes.	● Talk about their scientific observations and ideas. ● Ask simple questions. ● Talk about what they have observed. ● Answering questions using their own ideas.
		Reception children will:	**<u>Understanding of the World</u>** ● Explore the natural world around them ● Describe what they see, hear and feel whilst outside ● Understand the effect of changing seasons on the natural world around them	**<u>Seasonal changes</u>** ● Talk about the weather. ● Name types of weather. ● Talk about changes in the weather. ● Talk about patterns in the weather. **<u>Animals including humans</u>** ● Look at similarities and differences between animals. ● Talk about changes in animals. **<u>Living things and their habitats</u>** ● Look at similarities and differences between habitats. ● Look at similarities and differences between environments. **<u>Plants</u>** ● Look at how plants grow and change over time. ● Look at similarities and differences between plants. **<u>Everyday materials</u>** ● Look at similarities and differences between objects/materials and how they change. ● Identify what objects are made from, including plastic, wood, paper and metal. ● Talk about properties of materials and what they could be used for.	● Observe similarities and differences. ● Observe patterns. ● Observe changes over time. ● Ask simple questions.
		ELG	**<u>The Natural World</u>** - Children at the expected level of development will: ● Explore the natural world around them, making observations and drawing pictures of animals and plants	*See above*	*See above*

			● Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class ● Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.		
KS1	Year 1		**<u>Plants</u>** ● Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. ● Identify and describe the basic structure of a variety of common flowering plants, including trees. **<u>Animals including humans</u>** ● Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. ● Identify and name a variety of common animals that are carnivores, herbivores and omnivores. ● Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). ● Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. **<u>Everyday materials</u>** ● Distinguish between an object and the material from which it is made. ● Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. ● Describe the simple physical properties of a variety of everyday materials. ● Compare and group together a variety of everyday materials on the basis of their simple physical properties. **<u>Seasonal changes</u>** ● Observe changes across the four seasons. ● Observe and describe weather associated with the seasons and how day length varies.	● Asking simple questions and recognising that they can be answered in different ways. ● Observing closely, using simple equipment. ● Performing simple tests. ● Identifying and classifying. ● Using their observations and ideas to suggest answers to questions. ● Gathering and recording data to help in answering questions.
	Year 2		**<u>Living things and their habitats</u>** ● Explore and compare the differences between things that are living, dead, and things that have never been alive. ● 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 ● Identify and name a variety of plants and animals in their habitats, including microhabitats. ● 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. **<u>Plants</u>** ● Observe and describe how seeds and bulbs grow into mature plants. ● Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. **<u>Animals including humans</u>** ● Notice that animals, including humans, have offspring which grow into adults. ● Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). ● Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. **<u>Uses of everyday materials</u>** ● Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. ● Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	
KS2	Year 3		**<u>Plants</u>** ● Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. ● 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. ● Investigate the way in which water is transported within plants. ● Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. **<u>Animals including humans</u>** ● 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. ● Identify that humans and some other animals have skeletons and muscles for support, protection and movement. **<u>Rocks</u>** ● Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. ● Describe in simple terms how fossils are formed when things that have lived are trapped within rock. ● Recognise that soils are made from rocks and organic matter. **<u>Light</u>** ● Recognise that they need light in order to see things and that dark is the absence of light. ● Notice that light is reflected from surfaces.	● Asking relevant questions and using different types of scientific enquiries to answer them. ● Setting up simple practical enquiries, comparative and fair tests. ● Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers. ● Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. ● Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. ● Reporting on findings from enquiries, including oral and written explanations,

		• Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. • Recognise that shadows are formed when the light from a light source is blocked by an opaque object. • Find patterns in the way that the size of shadows change. **Forces and magnets** • Compare how things move on different surfaces. • Notice that some forces need contact between two objects, but magnetic forces can act at a distance. • Observe how magnets attract or repel each other and attract some materials and not others. • Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials. • Describe magnets as having two poles. • Predict whether two magnets will attract or repel each other, depending on which poles are facing.	displays or presentations of results and conclusions. • Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. • Identifying differences, similarities or changes related to simple scientific ideas and processes. • Using straightforward scientific evidence to answer questions or to support their findings.
	Year 4	**Living things and their habitats** • Recognise that living things can be grouped in a variety of ways. • Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. • Recognise that environments can change and that this can sometimes pose dangers to living things. **Animals including humans** • Describe the simple functions of the basic parts of the digestive system in humans. • Identify the different types of teeth in humans and their simple functions. • Construct and interpret a variety of food chains, identifying producers, predators and prey. **States of matter** • Compare and group materials together, according to whether they are solids, liquids or gases. • 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). • Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. **Sound** • 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. **Electricity** • Identify common appliances that run on electricity. • Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. • Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery. • Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. • Recognise some common conductors and insulators, and associate metals with being good conductors.	
	Year 5	**Living things and their habitats** • Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. • Describe the life process of reproduction in some plants and animals. **Animals, including humans** • Describe the changes as humans develop to old age. **Properties and changes of materials** • Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. • Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution . • Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. • Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. • Demonstrate that dissolving, mixing and changes of state are reversible changes. • 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. **Earth and Space** • Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. • Describe the movement of the Moon relative to the Earth. • Describe the Sun, Earth and Moon as approximately spherical bodies. • Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. **Forces**	• Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. • 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. • Using test results to make predictions to set up further comparative and fair tests. • 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. • Identifying scientific evidence that has been used to support or refute ideas or arguments.

		● 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.	
	Year 6	**Animals including humans** ● Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. ● Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. ● Describe the ways in which nutrients and water are transported within animals, including humans. **Evolution and Inheritance** ● Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. ● Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. ● Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. **Light** ● Recognise that light appears to travel in straight lines. ● Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye. ● Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. ● Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. **Electricity** ● 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.	

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 *Key Driver Focus*	Topic Theme	Communication and Language Book Focus	Nursery Rhyme/ Familiar Song	Literacy Reading, Comprehension and Phonics	Literacy Writing	Managing Feelings and Behaviour	PSED (PSHE and Jigsaw)	Maths	Understanding of the World (Science/RE/History/Geography) People, Culture and Communities	Understanding of the World Past and Present	Understanding of the World The Natural World	Expressive Arts and Design	Physical Development (Gross and Fine Motor)	Computing/T Early Technology (Purple Mash)	Events / British Values
Autumn 1 *Emotional Awareness*	Marvellous Me	What I Like About Me Rhyming stories and rhyming activities.	Head Shoulders knees and toes If your happy and you know it	Phonics: letter of the week with concrete objects and pictures. General Sound discrimination Altogether Rhyme time **National Poetry Day** **Roald Dahl Day**	Rhyme/ Poetry Fine motor control activities Gross Motor control activities Dough Disco	Developing confidence and settling in. Expressing preferences and interests.	Being Me in my World	Number of the Week Reciting - recognition 1 to 1 counting SSM Shapes within the environment	My family. - What makes me special.	Who is in my family? **Black History: Things that make us unique**	<u>Seasonal Changes:</u> Autumn <u>Animals including Humans:</u> Body Stem: Music from water	**Drawing** Still life drawing Create fruit faces	Running, jumping and climbing Gross/fine motor skills Draw lines and circles	Operating simple technology. <u>Mechanisms</u> Computing in role plays-tills,stopwatches, on /off	Stay and Play sessions <u>Hook:</u> Baby Photos <u>Exit:</u> Art work (faces) to Foundation 2 children **Harvest Festival**
Autumn 2 *Knowledge of the World*	Colour and Light	Brown Bear, Brown Bear, What can you see?	Twinkle Twinkle Little Star Firework poetry-whizz, pop,bang 5 little men in a flying saucer	Phonics: letter of the week with concrete objects and pictures. General Sound discrimination Altogether Rhyme time	Rhyme/ Poetry Fine motor control activities Gross Motor control activities Dough Disco	Tolerating delay. Taking Turns and sharing. Play in a g0roup, extending and elaborating ideas. Tidying up.	Celebrating Differences **Anti Bullying Week** **Children in Need** **Parliament Week** **Road Safety Week**	Number of the Week Matching numeral and objects SSM Shape pictures	What events have I experienced? (Christmas, birthdays etc.) Recognise special times/parties	Favourite Celebration Remembrance Day	<u>Seasonal Changes:</u> Winter Light and Dark Rainbows-colours Stem: Fizzing rainbows	**Painting** Colour mixing Explore different marks - Use different paint techniques	Running, jumping, sliding, slithering, crawling. Catch a large ball Scissor safety	Interacting with technology. <u>Mechanisms</u> Battery Toys (torches/ lights)	Christmas Sing along for parents. Breakfast with Santa Chatter Packs workshop with Parents <u>Hook:</u> Binoculars and pictures of animals around the environment <u>Exit:</u> Art work and “I see….” presentation to governors.
Spring 1 *Knowledge of the World*	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 **World Book Day**	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 **Chinese New Year** **Fairtrade Fortnight**	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 **Safer Internet Day**	Entry - Fire Engine/ Ambulance Visit Exit - Showcase Boats

Spring 2 *Knowledge of the World*	Bears	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 with concrete objects and pictures. Sound talking – oral segmenting and blending. Altogether Rhyme time **World Book Day**	Narrative Mark making and giving meaning to marks Trace and practice writing names. Dough Disco	Emotions. Demonstrates friendly behaviour. Forms good relationships.	Healthy Me **Comic Relief**	Number of the Week Number conversation SSM Repeating patterns **STEM Week**	Teddys that are special to us and others. **Easter**	**Women's History Month**	Seasonal Changes: Spring Habitats Where do bears live? Structures Stem: Igloo House **STEM Week**	**Collage** Pattern Teddy Bears	Moving in different ways, hopping, jumping, slithering Use of scissors Copy some letters.	Awareness of Technology- recordable toys	Hook: Favourite teddy bear show and tell Exit: 11 before 11: Teddy Bears Picnic
Summer 1 *Independ-ence*	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 with concrete objects and pictures. Sound talking – oral segmenting and blending. Altogether Rhyme time	Narrative Identify phonemes and write graphemes in the environment Dough Disco	Emotions. Demonstrates friendly behaviour. Forms good relationships.	Relationships **Mental Health Awareness Week**	Number of the Week Comparison more/less SSM Language of size **National Numeracy Day**	**EID**	**VE Day**	Seasonal Changes: Summer Everyday materials	**Digital Media** **Arts Week**	Skipping and hopping. Effect of activity on bodies Use of scissors. Forming some recognisable letters. Structures Stem: Nut and bolt structures	Using Technology- Ipads/interactive floor	Hook: Trip to Play Avenue Exit: Songs/dance to parents
Summer 2 *Enterprise*	In the Garden	Olivers 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 with concrete objects and pictures. Sound talking – oral segmenting and blending. Altogether Rhyme time	Narrative Instructions Make marks for a purpose Write own name . Label items with key sounds. write simple cvc words Dough Disco	Transition into Reception- exploring emotions.	Changing Me **Refugee Week**	Number of the Week Number problems SSM Capacity Length	Special times with family/ friends **Bastille Day**	What special times can I remember? **Post 1066 Study Day**	Seasonal Changes: Summer Animals including Humans Plants Outdoor/Indoor environment What can I see? map work Stem: Sprout seed in a jar	**Printing** Using objects, body ,vegetables and natural resources. **Make Music Day**	Skipping and hopping. Dresses and undresses. Forming some recognisable letters. **Soccer Aid** **Sports Day**	Selecting and using technology independently	Hook: Mystery sunflower seeds Exit: Showcase their sunflower and talke home to plant in the garden

The characteristics of effective learning run through all areas of learning as well as opportunities for children's interests to be explored further. This is an overview of the expected learning to be taught during the academic year of 2022-2023, 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	Communication 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/Early Technology (Purple Mash)	Events / British Values
			Reading, Comprehension and Phonics	Writing Jane Considine				People, Culture and Communities	Past and Present	The Natural World						
Autumn 1 Emotional Awareness	*New Beginnings*	Funny Bones Sometimes I Feel Sunny We're Going on a Bear Hunt	Sounds Write: Initial Code Identify phonemes and write graphemes in the environment. **National Poetry Day** **Roald Dahl Day**	Make marks for a purpose Write own name. Label items with key sounds Dough Disco *Grammar: Capital letters*	All about me Belonging to a class and school Class routines and rules	Being Me in my World	Getting to know you Just Like Me!	Home and School environment	How have I changed since I was a baby? **Black History Month:** Marcus Rashford	Seasonal Changes: Autumn Animals including Humans: Body Parts Everyday Materials STEM: Wellington Boots	**Painting** Naming colours Portraits Singing simple songs from memory	Me!	Use space safely and recognise directions and travel with control in a variety of ways. Able to manage basic hygiene and personal needs. Shows preference for a dominant hand	Awareness (Block 1)	2 Paint a Picture Operate simple Technology.	Entry: Bones mystery Exit: Perform body songs **Harvest Festival**
Autumn 2 Knowledge of the World	Lighting up the Sky	Aliens Loves Underpants Whatever Next Room on the Broom How to Catch a Star	Sounds Write: Initial Code Blend and read simple words	Narrative Segment and write key words independently Write a simple caption. Dough Disco *Grammar: capitals, full stops and finger spaces.*	Relationships.	Celebrating Differences **Anti Bullying Week** **Children in Need** **Parliament Week** **Road Safety Week**	It's Me 123! Light and Dark	Church Visit How are celebrations celebrated in different cultures? Christmas, Diwali Fire Safety	**Bonfire Night** Remembrance Day Favourite Celebration	Seasonal Changes: Winter Light and Dark Forces and Magnets	Printing Colour mixing Patterns Performing Arts: Christmas Production	My Stories	Experiments with ways of moving and jumps off things successfully Understand what being healthy is Begins to form recognisable letters.	Gymnastics	2Go Interacting with technology. **Mechanisms** Battery Toys (torches/ lights) Programming :Beebots STEM: Balloon Rocket (mechanisms	Entry: Alien footprints Breakfast with Santa Christmas Concert Visit to the Post Office Exit: STEM (Balloon Rockets) **Christmas**
Spring 1 *Knowledge of the World*	Around the World	Non-Fiction Texts Rumble in the Jungle Penguins	Sounds Write: Initial Code Blend and read a simple sentence. Understanding of non-fiction	Segment and write words. Write a simple sentence. -I can see…. *Grammar – nouns, adjectives, capitals, full stops and finger spaces.*	Turntaking and Sharing	Dreams and Goals	Alive in 5! Growing 6, 7, 8	**World Religion Day** **Chinese New Year** **Fair Trade Fortnight**	Why do we wear different clothes during the year?	Seasonal Changes Spring Animals Including Humans Food Chains Plants STEM - Fruit and Vegetable Planting	Collage Different dinosaurs	Everyone	Travel with control, to show awareness of speed and level and to use apparatus safely. Shows understanding for the need for safety when using tools.	Parachute	**Safer Internet Day** Mechanisms Split Pin Animals	Entry: Exploring ice Exit: Share our fact files with nursery

Spring 2 *Knowledge of the World*	Dinosaurs Stomp	Digging up Dinosaurs Dinosaur Roar Dinosaurs in Underpants Handa's Surprise	Sounds Write: Initial Code Blend and read for meaning **World Book Day**	Write an extended sentence. *Grammar: nouns, adjectives, capitals, full stops and finger spaces.*	Behaviour- Right and Wrong	Healthy Me **Comic Relief**	Building 9, 10 Consolidation **STEM Week**	**Easter**	**Women's History Month**	<u>Materials:</u> Volcanoes and Fossils	Sculpture Mask making Paper mache dinosaur	Our World	Recognise sounds and match them to movement Use pencil effectively writing letters formed pre cursive.	Awareness (Block 2)	2Create a Story Awareness of Technology Structures STEM: Water Slide	<u>Entry:</u> Dinosaur egg in the environment Dinosaur Workshop <u>Exit:</u> Presenting our work to Year 1. **Easter**
Summer 1 *Independence*	On the Farm	The Little Red Hen Farmer Duck Rosie's Walk How To Make a Chocolate Mug Cake	Sounds Write: Initial Code Read and understand sentences. Decode regular words and common irregular words. Enjoys an increasing range of texts	Instructions Recount Write a narrative (5 sentence stories) *Grammar: capitals, full stops and finger spaces*	Fair and Unfair	Relationships **Mental Health Awareness Week**	On the move Superhero to 20 and beyond **National Numeracy Day**	My Friends **EID** **World Day for Cultural Diversity**	How a farm has changed?	Harvest Mapwork <u>Animals Including Humans</u> <u>Plants</u> Similarities and Differences	Digital Media Cooking Bread **Arts Week**	Big Bear Funk	Use a range of small games equipment safely and with control To talk about safety and manage own risks Use a pencil to form letters correctly Understand a healthy diet	Agility, Balance and Coordination	2Beat Using Technology Cooking and Nutrition/ Healthy eating Stem: Newspaper Hat	<u>Entry:</u> Trip to the Farm (11 Before 11 experience) <u>Exit Point:</u> Sharing our work with parents and governors
Summer 2 *Enterprise*	Creepy Crawlies	The Very Hungry Caterpillar The Very Busy Spider I Wanna Iguana	Sounds Write: Initial Code Create a shared understanding about what they have read.	Write for a range of purposes. *Grammar: capitals, full stops and finger spaces*	Emotions: Feelings towards Y1 (excited and scared)	Changing Me **Refugee Week**	First,then,now Find my pattern	**Bastille Day**	What are our favourite celebrations each year? **Post 1066 Study** Old and New Museum	<u>Seasonal Changes</u> Summer Animals Including Humans Living Things and their Habitats STEM - Bird Feeder	Drawing Patterns Cooking/ Enterprise Using fresh produce	Reflect and Rewind **Make Music Day**	Develop coordination:steering, bouncing or kicking a ball Preparation for sports day. Importance of good health and physical exercise.	Sending and Receiving Athletics Teamwork Skills **Soccer Aid** **Sports Day**	2Count Selecting and using technology Cooking and nutrition Selling fruit and vegetables	<u>Entry:</u> Caterpillars <u>Exit:</u> Releasing Butterflies Cooking/ Enterprise Using fresh produce (growing/ packaging) **Transition**

The characteristics of effective learning run through all areas of learning as well as opportunities for children's interests to be explored further. Early Technology will be explored throughout the year in line with the children's interests.

Year 1
Long Term Plan

Term *Key driver focus*	Topic theme	English *Class Story Jane Considine*	Maths	Science	Art	Computing	Design Technology, Cooking and Enterprise	Geography	History	Music	PE	PSHE (Jigsaw)	RE	Events See additional events calendar
Autumn 1 *Knowledge of the World*	Toys	Toys from the Past Non-Fiction report writing **Roald Dahl Day** **National Poetry Day**	Place Value (within 10) Addition and subtraction (within 10) Geometry	STEM- Presenting a Weather Report Seasonal Changes Everyday Materials	Collage	1.1 Online Safety 1.7 Coding	STEM- Design a weather report	HUMAN AND PHYSICAL GEOGRAPHY Seasons	Toys - Changes within living memory **Black History Month** **Rosa Parks**	Social theme: How can we make friends when we sing together? Musical spotlight: Introducing beat Louis Armstrong	Gymnastics	Being me in my world	Believing (Christianity) What do people believe about God?	Entry - Loan box from the museum Exit - Make a toy **Harvest Festival**
Autumn 2 *Knowledge of the World and Enterprise and Emotional Awareness*	It's on Fire	*Toby and the Great Fire of London* *Poetry - Firework Poem* *The Storm Whale - Narrative*	Place Value (within 10) Addition and subtraction (within 10) Geometry	Seasonal Changes	Painting	1.2 Grouping and Sorting 1.4 Lego Builders	Mechanisms - Fire Engines	HUMAN AND PHYSICAL GEOGRAPHY Seasons	Events beyond living memory that are significant nationally or globally - Great Fire of London **Guy Fawkes Remembrance Day**	Social theme: How does music tell the stories about the past? Musical spotlight: Adding rhythm and pitch	Dance - Seasons	Celebrating Difference **Anti-Bullying Week** **Children in Need** **Parliament Week** **Road Safety Week**	Living (Christianity)	Entry - GFOL workshop Exit - Firefighter Visit **Christmas**
Spring 1 *Enterprise and Emotional Awareness*	Into the Woods	*Selection of Picture books* *Bear and The Piano- Narrative*	Place Value (within 20) Addition and Subtraction (within 20)	Seasonal Changes Plants	Drawing	1.6 Animated Stories **Safer Internet Day**		GEOGRAPHICAL SKILLS AND FIELDWORK **Fairtrade Fortnight**	Local Study - Sheffield family and their home at Normanby hall	Social theme: How does music make the world a better place? Musical spotlight: Introducing tempo and dynamics	ABC	Dreams and Goals	Believing (*Islam*) **World Religion Day**	Entry - Woodland Walk Normanby Hall Park
Spring 2 *Enterprise and Emotional Awareness*		*Selection of Picture books* *The Queens Hat - Narrative* **World Book Day**	Place Value (within 50) Length and Height Mass and Volume **STEM Week**	**STEM Week** STEM- Design a giant Panda Enclosure	Digital Media	1.3 Pictograms 1.9 Technology Out Of School	**STEM Week**	LOCATIONAL KNOWLEDGE Countries, capitals and seas of UK	**Women's History Month** **Queen Elizabeth**	Social theme: How does music help us to understand our neighbours? Musical spotlight: Combining pulse, rhythm and pitch	Hockey	Healthy Me **Comic Relief**	Living (*Islam*)	Exit Point - STEM- Design a giant Panda Enclosure **Easter**
Summer 1 *Independence*	Animals	*Wombat goes Walkabout - Narrative*	Multiplication and Division Fractions Geometry- Position and Direction **National Numeracy Day**	STEM- Zen Garden Seasonal Changes Animals including Humans	Sculpture **Art Week**	1.5 Maze Explorers	Entry - Kite Making **STEM** Foil Eiffel Tower (Structures)	PLACE KNOWLEDGE Australia	A study to extend knowledge beyond 1066 - Victorians	Social theme: What songs can we sing to help us through the day? Musical spotlight: Having fun with improvisation	Speed, Agility and Quickness	Relationships **Mental Health Awareness Week**	Places of Worship Church Visit	Entry - Kite Making
Summer 2 *Independence*		*Seasons - Information Text*	Place Value (within 100) Measurement- Money Time	Seasonal Changes Animals including Human	Printing	1.8 Spreadsheets		GEOGRAPHICAL SKILLS AND FIELDWORK **National Fieldwork Week**	**Post 1066 Study -** Victorians	Social theme: How does music teach us about looking after our planet? Musical spotlight: Explore sound and create a story **Make Music Day**	Sending and Receiving Athletics **Soccer Aid** **Sports Day**	Changing Me **Refugee Week**		Exit - Foil Eiffel Tower (Structures) **Transition**

Year 2
Long Term Plan

Term *Key driver focus*	Topic theme	English *Jane Considine*	Maths	Science	Art	Computing	Design Technology, Cooking and Enterprise	Geography		History	Music	PE	PSHE (Jigsaw)	RE	Events See additional events calendar
Autumn 1 *Knowledge of the World*	Guess who?	Florence and the drummer boy Recount (A nurse) Stardust - Narrative **Roald Dahl Day** **National Poetry Day**	Place Value	Living things and their habitats STEM - Guess who	Collage	2.1 Coding 2.2 Online safety		Locational knowledge - Continents and oceans		**SIgnificant individuals** **Black History Month - Mary Seacole**	Social theme: How does music help us to make friends? Musical spotlight: Exploring simple patterns	Gymnastics	Being Me in My World	Believing - Islam	Entry - Loan box Exit - Florence nightingale workshop **Harvest Festival**
Autumn 2 *Knowledge of the World*	In the dark	The Owl who was afraid of the dark - Narrative Owl babies The Christmasaurus	Addition and Subtraction Shape	Living things and their habitats	DIgital Media	2.6 Creating pictures	Christmas cards - levers and sliders	Physical features - North and South pole and the equator		**Guy Fawkes** **Remembrance Day**	Social theme: How does music teach us about the past? Musical spotlight: Focus on dynamics and tempo	Dance - Under the sea	Celebrating Differences **Anti-Bullying Week** **Children in Need** **Road Safety Week**	Living - Islam	Entry - Owl pellets Exit - STEM Build a nest **Christmas**
Spring 1 *Enterprise and Emotional Awareness*	In the Garden	If I was in charge of the world - Poetry The gigantic turnip	Money Multiplication and Division	Animals including humans	Painting	2.3 Spreadsheets **Safer Internet Day**	STEM - enterprise - Baking Biscuits	Human and physical features **Fairtrade Fortnight**		Post 1066 study	Social theme: How does music make the world a better place? Musical spotlight: Exploring feelings through music	Attack and defend	Dreams and Goals	Believing - Christianity **World religion day**	Entry - Gardening (flower boxes)
Spring 2 *Enterprise and Emotional Awareness*		Plants - Non Chron The great kapok tree **World Book Day**	Length and Height Mass, Capacity and Temperature **STEM Week**	**Plants** STEM - Cress head	Sculpture	2.5 Effective searching	Cooking and nutrition : Healthy pizzas **STEM Week**	Place knowledge - comparison		**Women's History Month- Grace Darling**	Social theme: How does music teach us about our neighbourhood? Musical spotlight: Inventing a musical story	**Trolley Hockey**	Healthy Me **Comic Relief**	Living - Christianity	Exit - Healthy Pizzas **Easter**
Summer 1 *Independence*	Let's be detectives	Little red reading hood - Tale with a twist The tin forest	Statistics Factions **National Numeracy Day**	Properties of Materials	Drawing	2.7 Making Music	STEM - Paper helicopters	Mapwork		Global significance Travel through time	Social theme: How does music make us happy? Musical spotlight: Music that makes you dance	Football	Relationships **Mental Health Awareness Week**	Thankfulness	Entry - Making aeroplanes
Summer 2 *Independence*		The Day the Crayons Quit - Persuasive letter Somebody swallowed Stanley	Position and Direction Time	STEM - A butterflies life stages	Printing	2.4 Presenting ideas		Field work **National Fieldwork Week**		Local History	Social theme: How does music teach us about looking after our planet? Musical spotlight: Exploring improvisation **Make Music Day**	Striking and fielding **Soccer Aid** **Sports Day**	Changing Me **Refugee Week**		Exit - Present to Y1 Trip to the deep **Transition**

Year 3
Long Term Plan

Term *Key Driver Focus*	Topic Theme	English *Class Story Focus*	Maths	Science	Art	Computing	Design Technology, Cooking and Enterprise	Languages (French)	Geography	History	Music (Charanga)	PE	PSHE (Jigsaw)	RE	Events (See Additional Events Calendar)
Autumn 1 *Knowledge of the World*	Scavengers and Settlers	Stone Age Boy Class story: Stig of the Dump **Roald Dahl Day** **National Poetry Day**	Place Value Addition and Subtraction Times tables	Light	Painting	3.1 Coding 3.2 Online Safety	Structures STEM - Stone Age Huts (M, DT & S)	<u>Core vocabulary</u> Phonetics and pronunciation Salutations Days of the week Months of the year	Local Knowledge	Pre-history Stone age to the Iron Age **Black History Month** Johnathan Lee Iverson	Developing notation skills (recorders) Joseph Bologne (Black History)	Dance - Jungle	Being Me in My World	God (Believing) - Hinduism	Entry- Stoneage workshop Exit- Share work **Harvest Festival**
Autumn 2 *Emotional Awareness*	The Secret of Black Rock	The Secret of Black Rock by Joe Todd-Stanton - Narrative Class story: Poppy Field by Michael Morpurgo	Multiplication and Division Times tables	Forces and Magnets STEM - Magnet maze (M, DT & S)	Collage	3.4 Typing		<u>Early Language</u> Teaching I Am Learning French <u>Core Vocabulary</u> Christmas	Local Knowledge	Local Study - Iron Age to Steelworks **Guy Fawkes** **Remembrance Day**	Enjoying improvisation Pyotr Tchaikovsky	Gymnastics	Celebrating differences **Anti-Bullying Week** **Children in Need** **Road Safety Week**	God (Believing) - Islam Christmas	Entry - Local walk / visit the library Exit -Share with peers **Christmas Trip to Mosque**
Spring 1 *Knowledge of the World*	Active Planet	Earthquakes Poetry Class story: The Pebble In My Pocket	Multiplication and Division Measurement - length and perimeter	Rocks	Printing	3.5 Email 3.9 Presenting **Safer Internet Day**		<u>Early Language</u> Teaching Shapes <u>Core Vocabulary</u> French cultural lesson 1	Human and Physical Geography **Fairtrade Fortnight**	The achievements of the earliest civilisations - Shang Dynasty	Composing using your imagination Anna Meredith	Attack and Defend	Dreams and Goals	God (Believing) - Christianity **World Religion Day**	Entry - Creating volcanoes
Spring 2 *Knowledge of the World*		Street Beneath My Feet Class story: Life In A Bucket Of Soil **World Book Day**	Fractions Measurement - mass and capacity **STEM Week**	Soils **STEM Week**	Sculpture	3.6 Branching	**STEM Week**	<u>Early Language Teaching</u> Fruits	Place Knowledge (link to human and physical geography)	**Women's History Month**	Sharing musical experiences Antonio Vivaldi	OAA	Healthy Me **Comic Relief**	Easter	Exit - Poetry performance **Easter**
Summer 1 *Enterprise and Independence*	Let's Plant It	Star In The Jar by Sam Hay - Narrative Class story: Plants Can't Sit Still	Fractions Measurement - money and time **National Numeracy Day**	Plants	Drawing **Art Week**	3.3 Spreadsheets 3.8 Graphing	Cooking & Nutrition, Enterprise and seasonality (savoury food)	<u>Early Language Teaching</u> Musical Instruments	Geographical skills and fieldwork		Learning more about musical styles Jean Sibelius	Tag Rugby	Changing Me **Mental Health Awareness Week**	Additional unit	Entry - Botanical Gardens visit (11 before 11) **Year 3 Pedestrian Skills**
Summer 2 *Enterprise and Independence*		Skeletons and Muscles by Ben Hoare - Non-Fiction Class story: The Story of Frog Belly Rat Bone - Timothy B. Ering	Geometry - shape Statistics	Animals including humans	Digital Media	3.7 Simulations		<u>Early Language Teaching</u> Little Red Riding Hood **Bastille Day**	**National Fieldwork Week**	**Post 1066 Study**	Recognising different sounds Ludwig van Beethoven **Make Music Day**	Rounders Athletics (Sports Day Practice) **Soccer Aid Sports Day**	Relationships **Refugee Week**		Exit - share with parents **Transition**

Year 4
Long Term Plan

Term *Key Driver Focus*	Topic Theme	English *Class Story Focus*	Maths	Science	Art	Computing	Design Technology, Cooking and Enterprise	Languages (French)	Geography	History	Music (Charanga)	PE	PSHE (Jigsaw)	RE	Events (See Additional Events Calendar)
Autumn 1 *Knowledge of the World*	Land, Sea and Sky	Poetry Adventure Poems *Heard it on the playground*	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	**Black History Month**	Lean on Me Composer of the term: Joseph Bologne	Dance	Being Me in My World **World Mental Health Day**	Community (Hinduism - Living)	Entry - Trip to Barton Water's Edge Exit - Sharing work **Harvest Festival**
Autumn 2 *Knowledge of the World and Enterprise and Emotional Awareness*	Food Glorious Food	Defeating the enemy *George's marvellous medicine* Persuasion (Enterprise)	Measurement:length and perimeter Multiplication and division Times Tables **Maths Week England**	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.	**Guy Fawkes** **Remembrance Day**	Stop! Composer of the term: Pyotr Pchaikovsky	Gymnastics Paralympics	Celebrating Differences **Anti-Bullying Week**	Community (Islam - Living)	Entry - STEM Trip to the Cinema Exit - Governors/ Parents **Christmas**
Spring 1 *Enterprise and Emotional Awareness*	High Voltage!	Non-Chronological Report *Percy Jackson and the lightning thief* **World Book Day**	Multiplication and division Measure: Area Fractions Times tables	Electricity STEM (Lemon Battery) S	Drawing	4.1 Coding **Safer Internet Day**	Electrical Systems (torch)	French culture (Core Vocabulary) Family	Digital Maps **Fairtrade Fortnight**	**Women's History Month**	Mamma Mia Composer of the term: Anna Merideth	Hockey	Dreams and Goals	Community (Christianity - Living) **World Religion Day**	Trip to mosque Entry - Electricity Workshop
Spring 2 *Enterprise and Emotional Awareness*		Instructions	Fractions Decimals	**Science Week** 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 **Sport Relief**	Healthy Me		Exit - Purple Mash noticeboard/blog (Digital Sharing) **Easter**
Summer 1 *Independence*	Rampaging Romans	Recount A day in the life of a Roman child (History) *Roman Invasion*	Decimals Measurement: Money Time Times tables Statistics **National Numeracy Day**	Sound	Sculpture **World Art Day**	4.5 Logo	Mechanisms STEM - Build a catapult (DT & M)	The Romans	Roman Roads Local History (Roman Lincoln) Observe and measure **Earth Day**	Romans	Glockenspiel stage 2 Composer of the term: Johann Sebastian Bach	Swimming	Relationships **Mental Health Awareness Week**	Pilgrimage **World Day for Cultural Diversity**	Entry - Trip to Roman Lincoln
Summer 2 *Independence*		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 **Bastille Day**	Compass and grid reference (4 and 6 point)	The Legacy of the Romans **Post 1066 Study Day**	Composer of the term: Beethoven **Make Music Day**	Swimming **Sports Day**	Changing Me **Refugee Week**		Exit - Present to school in assembly

Year 5
Long Term Plan

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

Year 6
Long Term Plan

Term *Key driver focus*	Topic theme	English *Class Story* *Jane Considine*	Maths	Science	Art	Computing	Design Technology, Cooking and Enterprise	French (Languages)	Geography	History	Music	PE	PSHE (Jigsaw)	RE	Events See additional events calendar
Autumn 1 *Knowledge of the World*	I'm an Animal Get Me Out of Here	**Roald Dahl Day** **National Poetry Day** Poetry- Evolution Non-chronological Report: The Origin of Species The Black Peppered Moth	Number Place Value Number Addition, subtraction, multiplication,division	Living things and their habitats Evolution and Inheritance	Painting	6.2 Online Safety 6.4 Blogging	Evaluate- Memes	Phonetics and pronunciation Regular Verbs	Geographical Skills and Fieldwork	**Black History Month -** slave trade	Social theme: How does music bring us together? Musical spotlight: Developing melodic phrase Richard Wagner	Gymnastics	Being Me in My World	Hinduism - living	**Harvest Festival** Entry Point- Science Investigation Trip- Yorkshire Wildlife Park Trip Exit Point- Share work
Autumn 2 *Knowledge of the World*	Our World	Narrative (Horror) A Monster Calls	Number Fractions Geometry Position and Direction Coordinates	Animals including Humans	Drawing (shadows) Digital media: Antarctic Memes (animals)	6.7 Quizzing		At School French Cultural	Locational Knowledge	**Guy Fawkes** **Remembrance Day**	Social theme: How does music connect us with our past? Musical spotlight: Understanding structure and form Grazyna Bacewicz	Dance - Castles	**Anti-Bullying Week** **Children in Need** **Parliament Week** **Road Safety Week** Celebrating Difference	Islam - living	Entry Point - Make Dream Catchers Exit Point - Christmas Carols
Spring 1 *Knowledge of the World and Emotional Awareness*	*WW2*	Recount Letters from the lighthouse	Number: Decimals Number: Percentages Number: Algebra Measurements: Converting Units	Light STEM: Periscope	Collage- lighthouse	**Safer Internet Day** 6.5 Text Adventures 6.6 Networks		The Weekend	**Fairtrade Fortnight** Human and Physical Geography	Holocaust	Social theme: How does music improve our world? Musical spotlight: Gaining confidence through performance Composer:Mason Bates	Netball	Dreams and Goals	**World Religion Day** Christianity - living	Entry Point - Holocaust Workshop
Spring 2 *Enterprise*		**World Book Day** Narrative The Journey	**STEM Week** Measurements: Number: Ratio Statistics	**STEM Week** Electricity		6.9 Spreadsheets	**STEM Week** Design a car	The Planets		**Women's History Month**	Social theme: How does music teach us about our community? Musical spotlight: Exploring notation further J.S Bach	Hockey	**Comic Relief** Healthy Me		**Easter** Exit Point- Car race
Summer 1 *Knowledge of the world*	*Horrible Histories*	Narrative Ghost Story Thornhill	**National Numeracy Day** Geometry: Properties of shape Consolidation for SATS		**Art Week** Screen printing	6.8 Binary Code		The Vikings	Place knowledge	Ancient Maya Anglo-Saxons and Vikings Local Study	Social theme: How does music shape our way of life? Musical spotlight: Using chords and structure Composer: Ravi Shankar	Paralympics	**Mental Health Awareness Week** Relationships	Additional Unit - Forgiveness	Entry Point - Local Walk to a Graveyard
Summer 2 *Independence*		Newspaper report Goldilocks	Investigations and preparations for KS3		Sculpture (Emotions)	6.1 Coding		**Bastille Day** Healthy Lifestyles	**National Fieldwork Week** Local Walk	**Post 1066 Study -** Windrush	**Make Music Day** Social theme: How does music connect us with the environment? Musical spotlight: Respecting each other through composition Georges Bizet	**Soccer Aid Sports Day** Cricket Athletics	**Refugee Week** Changing Me Bikeability		Exit Point - Transition and Leavers Assembly

GAP Analysis

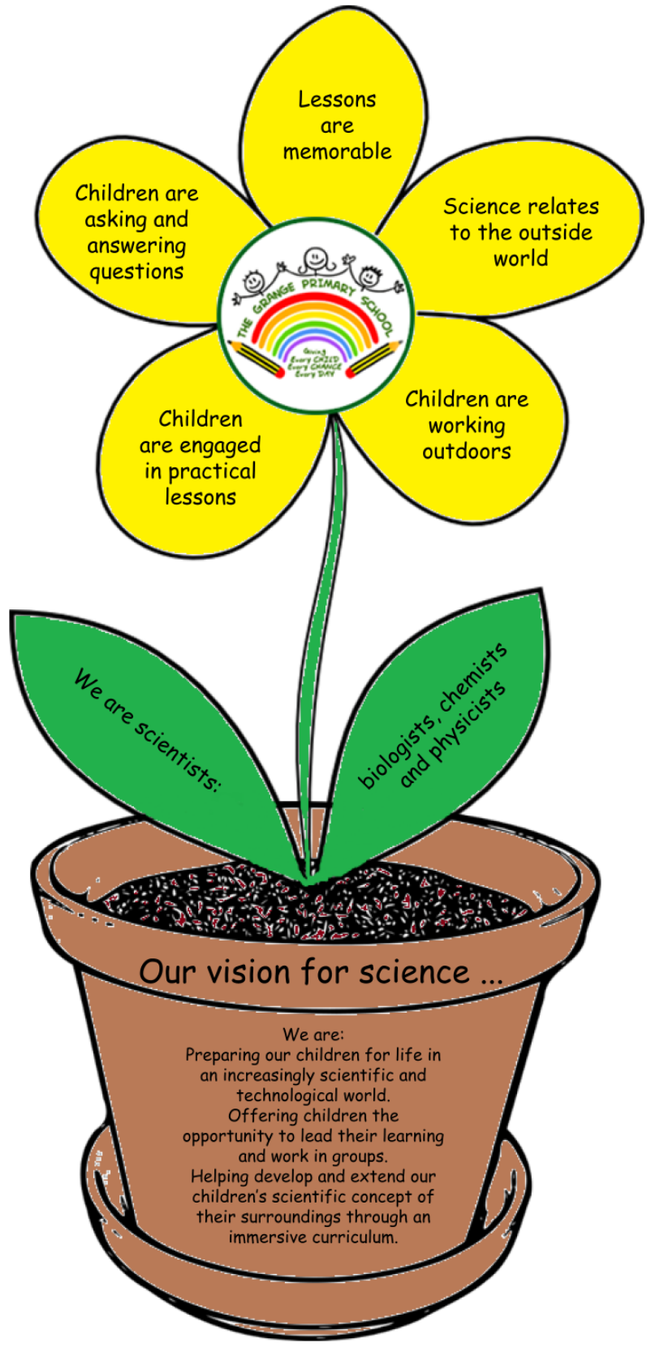
Covid Year 2019 to 2020	Missed learning (Assessment sheet)	Missed learning (Classtrack objectives)	2020-2021 (In Year 2)	2021-2022 (In Year 3)
Y1	<u>Plants</u> Name and identify a range of plants including deciduous and evergreen. Classify plants as deciduous or evergreen. <u>Seasonal Changes</u> Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies.	<u>Plants</u> 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) <u>Seasonal Changes</u> 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.	<u>Plants (Y2 Plants)</u> 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)	<u>Seasonal Changes (Y3 Light)</u> 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.

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	<u>Animals including humans</u> 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. <u>Plants</u> 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. <u>Forces and Magnets</u> 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. <u>Rocks</u> Recognise that soils are made from rocks and organise matter. Relate simple physical properties of rocks to their formation.	<u>Animals including humans</u> 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. <u>Plants</u> 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) <u>Forces and Magnets</u> 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. <u>Rocks</u> 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.	<u>Animals including humans (Y4 Animals including humans)</u> 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. <u>Plants (Y4 Living things and their habitats)</u> 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)	<u>Plants (Y5 Living things and their habitats)</u> 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) <u>Forces and Magnets (Y5 Forces)</u> 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.	<u>Rocks (Y6 Evolution and inheritance)</u> 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.

Covid Year 2019 to 2020	Missed learning (Assessment sheet)	Missed learning (Classtrack objectives)	2020-2021 (In Year 5)
Y4	<u>Sound</u> 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. <u>States of Matter</u> 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.	<u>Sound</u> 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. <u>States of Matter</u> 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.	<u>Sound (Stand alone)</u> 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. <u>States of Matter (Y5 Properties and changes of materials)</u> 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.

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

The Core Principles



The Five Types of Enquiry

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

Year 4	**States of Matter** Observe how materials change state as they are heated or cooled.	**Sound** 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.	**Living Things and Their Habitats** Group living things in a variety of ways. Use classification keys to group living things systematically. **States of Matter** Group materials in a variety of ways according to their properties; including if they are solid, liquid or gas. **Sound** Identify how sounds are made, associating some of them with something vibrating. **Animals Including Humans** 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. **Electricity** 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.	**States of Matter** Identify the part played by evaporation and condensation in the water cycle. Associate the rate of evaporation with temperature. **Sound** Recognise that sounds get fainter as the distance from the sound source increases. **Electricity** Construct a simple series circuit	**Living Things and Their Habitats** 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. **Sound** Recognise that vibrations from sounds travel through a medium to the ear **Animals Including Humans** Describe function of the digestive system. Describe the function of teeth. **Electricity** Explain the role of the switch. Recognise some common conductors (associating this with metals) and insulators.
Year 5		**PROPERTIES AND CHANGES OF MATERIALS** 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.	**LIVING THINGS AND THEIR HABITATS** Describe life cycles of mammals, amphibians, insects and birds and how they vary. Describe the process of reproduction in some plants and animals. **ANIMALS INCLUDING HUMANS** Describe changes in humans as they develop to old age. **EARTH AND SPACE** 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 **PROPERTIES AND CHANGES OF MATERIALS** Sort changes based on whether they are reversible or not.	**FORCES** 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. **PROPERTIES AND CHANGES OF MATERIALS** Compare materials based on hardness, solubility, conductivity, transparency insulation and response to magnets Describe methods to separate mixtures (filtration, sieving and distillation).	**EARTH AND SPACE** Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. **PROPERTIES AND CHANGES OF MATERIALS** Explain some changes result in new materials, which is usually irreversible. Give reasons, based on evidence, for particular uses of materials.
Year 6	**Light** Observe the shape of a shadow over time.	**Electricity** 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	**Living things and their habitats** Describe and give reasons for how living things are classified according to observable characteristics.	**Chemistry** 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.	**Evolution and inheritance** 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.

		Use recognised symbols when representing a simple circuit in a diagram.			**Light** Recognise that light appears to travel in straight lines Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes

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
Investigation	Prove I think that chocolate melts at body temperature.	A scientific experiment procedure used to **prove** 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.
Experiment	Test I think that different chocolate melts at different temperatures.	A scientific procedure used to **test** a hypothesis. This will involve a fair test because you need to change the independent variable to test your hypothesis.
Sub-heading	**In each section**	**National Curriculum Expectation for Working Scientifically**
Statement	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. **Why?** 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. **Why?**	Pupils in Nursery should use all their senses in hands on exploration of natural materials, explore collections of materials with similar and/or different properties, talk about what they see, using a wide vocabulary and explore and talk about different forces they can feel. Pupils in Reception should explore the natural world around them, describe what they see, hear and feel whilst outside and explore the natural world around them, making observations and drawing pictures of animals and plants 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)
Hypothesis	A hypothesis is a statement that can be tested/proved 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 **one** 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.
Aim	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? We are trying to find out if chocolate melts at body temperature. We are trying to find out if different types of chocolate melt at different temperatures.	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) 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) Year 5- Planning different types of scientific enquiries to answer questions. Year 6- Planning different types of scientific enquiries to answer questions.
Prediction	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. I predict that the dark chocolate will melt first because it is to do with the colour of the chocolate. I predict that the white chocolate will melt first because it has milk in it. I predict that the milk chocolate will melt first because it is smoother/creamier.	Year 3- Make predictions for new values. Year 4- Make predictions for new values. Year 5- Using test results to make predictions to set up further comparative and fair tests. Year 6- Using test results to make predictions to set up further comparative and fair tests.
Equipment List	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. • Types of chocolate • Bowls • Heat source • Thermometer	Year 1- Using simple equipment. Year 2- Using simple equipment.
Fair Testing	Fair testing is only needed for an experiment because you are testing a hypothesis. Independent Variable is what you are changing Changing the type of chocolate Dependent Variable is the variable being measured Time taken for the chocolate to melt Control Variable is what is kept the same. Same size bowls Same amount of chocolate Same equipment	Year 3- Setting up simple practical enquiries, comparative and fair tests. Year 4- Setting up simple practical enquiries, comparative and fair tests. Year 5- Recognising and controlling variables where necessary. Year 6- Recognising and controlling variables where necessary.
Method **(This is what I did)**	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.	Year 1- Performing simple tests. Year 2- Performing simple tests. Year 3- Setting up simple practical enquiries. Year 4- Setting up simple practical enquiries.
Diagram	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.	Year 3- Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Year 4- Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.
Results	Children should record their results in an age appropriate table.	Year 1- Gathering and recording data to help in answering questions. Year 2- Gathering and recording data to help in answering questions.

		Year 3- Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Year 4- Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. 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. 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
Observation	Children should say/draw/write what they have seen and what they can see happening. This is an opportunity to reinforce **key scientific vocabulary**. 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.	Nursery- Talk about what they see, using a wide vocabulary. Reception- Describe what they see, hear and feel whilst outside. Explore the natural world around them making observations. Year 1- Observing closely. Year 2- Observing closely. 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. 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.
Conclusion (What I found out linking to scientific understanding)	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. **It should be linked to scientific facts required from prior knowledge or wider scientific knowledge and include suitable scientific vocabulary.** 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.	Year 1- Using their observations and ideas to suggest answers to questions. Year 2- Using their observations and ideas to suggest answers to questions. 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. 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. 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. 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.

Evaluation	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. 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.	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. 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

Vocabulary Contents

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 Virginiania, 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, lampwhite 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, infront, 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
Micro-organisms, plants, animals, invertebrates, insects, spiders, snails, worms, vertebrates, fish, amphibians, reptiles, birds, mammals, Carl Linnaeus, classification, characteristics, taxonomists, systema naturae, domain, kingdom, phylum, class, order, family, genus, species, archaea, bacteria, eukarya, eukaryotes, phyla, backbone, arachnids, annelids, molluscs, crustaceans, echinoderms, anellids, dust mites, funghi, mould, yeast, penicillin, viruses, antibiotics, plaque, cells,
Year 5
life cycle, mammal, amphibian, insect, bird, reproduction, sexual, asexual, reproduction, rainforest, prehistoric, seeds, stem, root, cuttings, tubers, bulbs, hatching, rearing, animal naturalists, animal behaviourists, vegetable, garden, flower, border, oceans, classification, gestation, embryo, warm-blooded, frog, tadpole, eggs, juvenile, adulthood, fertilised, hatchling, metamorphosis, pupa, larva, caterpillars, grubs, maggots, nymph, germination, roots, pollen, photosynthesis, spores, stages, germination, growing, flowering, anchor, pollen, stigma, seed formation, fertilisation, spores, spore production, spore dispersal, fern, offspring, sex cells, fusing, pregnancy, structure, sperm, ovules, stamen, style, ovule, strawberry plants, potatoes, spider plants, daffodils, echidnas, platypus,
Year 4
ferns, mosses, classify, environment, habitat, vertebrates, amphibians, reptiles, mammals, invertebrates, nature, reserve, ecological, deforestation, flowering, non-flowering, population, insect, classification, venn diagram, carroll diagram, classification key, organisms, characteristics, life processes, movement, respiration, sensitivity, growth, reproduction, excretion, nutrition, fur, feathers, legs, beaks, tusks, shells, skeleton, climate change, extinct, danger, oxygen, energy, young, waste, endangered species, pollution, urbanisation, nature reserves, specimen, group, identify,
Year 3
(See Plants and Animals including Humans)
Year 2
space, habitat, micro habitat, natural environment, local environment, polar habitat, moss, lichen, polar bear, arctic fox, snowy owl, seal, penguin, ocean habitat, seaweed, algae, plankton, whale, fish, shark, octopus, shark, dolphin, woodland habitat, oak tree, squirrel, fox, badger, woodpecker, owl, bugs, insects, acorn, rainforest habitat jaguar, tiger, howler monkey, butterfly, banana, urban habitat, dandelion, bees, pigeon, slugs, spiders, worms, fox, hedgehog, desert habitat, acacia tree, camel, gecko, scorpion, coastal habitat, seashore, starfish, crab, pond habitat, waterlily, frog, duck, dragonfly, features, damp, wet, dry, shady, dark, light, hot, warm cold, ice, snow,

living, dead, alive, not alive, air, live processes, movement, breathing, nutrition, food, growth, reproduces, shelter, warmth, protection, water, plants, green plants, sunlight, source of food, food chain, transfer, energy, producer, consumer, predator, prey, dependance, omnivore, herbivore, carnivore, grass, rabbits, fox, acorn, squirrel, fox, daisy, caterpillar, mouse, owl, grass, cow, human, carrots, human, plankton, sardines, seal, grass, zebra, lion,
Year 1
(See Animals including Humans and Plants)
Foundation Stage
living, alive, not alive, air, breathing, food, grow, shelter, house, home, ocean, whale, fish, turtle, shark, octopus, dolphin, seal, jellyfish, woodland, owl, fox, squirrel, rabbit, hedgehog, bird, mice, rats, rainforest, parrot, monkey, gorilla, snake, tiger, desert, camel, scorpion, meerkat, lizard, pond, frog, tadpole, froglet, newt, fish, duck,duckling, jungle, bear, lion,cheetah, elephant, giraffe, zebra, growth,

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
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,
Year 2
(See Materials)
Year 1
(See Materials)
Foundation Stage
soil, rock, stone, rough, chalk, marble, brick, fossil, crystal, hard, soft, pebble, heavy, light, strong, sand, small, sharp, ground, mould, smooth, bumpy, tough,

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,

Sound

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

Working Scientifically

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,