Science scheme of work (from September 2025)

Christian values underpinning learning: *Together we love and respect. We are creative, we are determined, we are confident, we are kind.*

Intent

The National Curriculum (2014) forms the basis for all subject teaching ensuring continuity and progression in an age-related curriculum. In addition, teachers make sure the content is relevant and stimulating by delivering through themes and topics.
Our science curriculum has been developed to recognise the importance of science in every aspect of daily life, and to give the teaching and learning of Science the prominence it requires. Our intent is to enable children to become enquiry-based learners by developing:

- The ability to think independently and raise questions about working scientifically and the knowledge and skills that it brings.
- The confidence and competence in the full range of practical skills, taking the initiative in, for example, planning and carrying out scientific investigations.
- Excellent scientific knowledge and understanding which is demonstrated in written and verbal explanations, solving challenging problems and reporting scientific findings.
- High levels of originality, imagination, or innovation in the application of skills.
- The ability to undertake practical work in a variety of contexts, including fieldwork.
- A passion for science and its application in past, present and future technologies.
- The natural curiosity of the child, encouraging respect for living organisms and the physical environment and provide opportunities for critical evaluation of evidence.

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Implementation

We ensure that all teachers and have excellent subject knowledge and leadership supports the development of this for all members of staff. Subject matter is presented clearly, teachers carefully check learning and identify misconceptions, providing direct feedback and create a positive attitude to science learning within their classrooms.

- Working Scientifically skills (disciplinary knowledge) are embedded into lessons to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching.

- Involving problem solving opportunities that allow children to find out for themselves. Children are encouraged to ask their own questions and be given opportunities to use their scientific skills and research to discover the answers.
- Children should have access to key scientific language and meanings to understand and readily apply these to their written, mathematical, and verbal communication of their skills.

- They will use a range of resources to develop their knowledge and understanding that is integral to their learning and develop their understanding of working scientifically.
- Teaching and learning should plan for practical investigative opportunities within science lessons.

- Children will reflect on previous learning and cross curricular links will be made wherever possible.
- Children will be able to build on prior knowledge and link ideas together, enabling them to question and support them in making sense of the world around them.

- Pupils will SEND needs will be always considered. They may have an additional adult to support them, scribes, work in pairs, differentiated activities etc. It is very important all children are given equal access to the history curriculum.

- As a core subject Science will be taught for a minimum of 1 hour a week or the equivalent of at least 40 hours a year.

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Class	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
EYFS Oak	Healthy Living Our bodies Seasons - Autumn	British animals Seasons - Autumn	Structures Materials – building homes Seasons - Winter	Changing state – eggs Life cycles Mixing and separating Seasons - Spring	Minibeasts Magnifiers Seasons - Summer	Wheels Floating & sinking
Year 1 Poplar	Seasonal Changes Plants Everyday Materials	Seasonal Changes Science Adventures	Seasonal Changes Everyday Materials	Seasonal Changes Animals including humans	Seasonal Changes Plants	Seasonal Changes Animals including humans
Year 2 Ash	Everyday Materials	Everyday Materials	Animals including Humans	Living things and their habitats	Plants	Science Adventures
Year 3 Beech	Rocks	Sound	Forces and Magnets	Science Adventures	Plants	Animals including humans
Year 4 Willow	Animals including Humans	Living things and their habitats	States of Matter	Science Adventures (Tarmac)	Electricity	Light
Year 5/6 Maple 2025-2026	Light Earth and Space	Forces Earth and Space	Evolution and Inheritance	Animals including humans	Animals including humans	Electricity
Year 5/6 Maple 2024-2025	Forces and Movement	Properties and changes of materials	Properties and changes of materials	Electricity Water Cycle	Living things and their habitats	Living things and their habitats

Each Unit will be delivered using the Plan Assessment Unit Plans to support

Science Adventures is an opportunity to explore, enrich and deepen the understanding of topics studied so far. Children will explore skills in more depth to support their use across the rest of the academic year. This topic also gives the opportunity to explore and research famous scientists.

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Area	EYFS	Year 1	Year 2	Year 3	Year 4	Y5/6
Substantive Knowledge	**BIOLOGY** **Plants** Grow different plants **Animals** Name and describe animals that live in different habitats. Describe different habitats **Humans** Describe people who are familiar to them Learn about how to take care of themselves	**BIOLOGY** **Plants** 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. **Animals including humans** Identify and name a variety of common animals including fish, amphibians, reptiles, birds, and mammals.	**BIOLOGY** **Plants** 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. **Animals including humans** 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	**BIOLOGY** **Plants** Observe and describe the function of parts of flowering plants, requirements of growth, transportation of water and the life cycle of plants. Describe water transportation in plants, life cycles and seed dispersal. **Animals and humans** Investigate growth, basic needs, exercise, food and hygiene. Identify the roles of skeletons and muscles. **CHEMISTRY** **Materials** Compare and group rocks and soils	**BIOLOGY** **Living things and Habitats** Investigate different ways of grouping living things Recognise that habitats and environments change and that this can pose a danger to a species Use classification keys. **Animals and humans** Investigate the basic parts of the digestive system in humans. Investigate different types of teeth. Construct and interpret food chains	**BIOLOGY** **Animals and humans** • Describe how water and nutrients are transported within the human body. • Investigate the human circulatory system. • Recognise the effect of diet, exercise and drugs. • Describe and explain changes as humans develop to old age. **Living things and Habitats** • Look at the life cycle of mammals, amphibians, insects and birds. • Look at classification of plants, animals and micro-organisms.

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	Living things and their habitats Explore the plants in the surrounding natural environment Explore the animals in the surrounding natural environment Explore plants and animals in a contrasting natural environment **CHEMISTRY** **Materials** Explore a range of materials, including	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. **CHEMISTRY** **Materials** Distinguish between an object	of exercise, eating the right amounts of different types of food, and hygiene. **Living things and Habitats** 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 micro-habitats	Describe how fossils are formed. **PHYSICS** **Light** Investigate light sources and shadows **Forces and Magnets** Compare movement on different surfaces. Look at contact and distant forces, attraction and repulsion, comparing and grouping materials. Investigate magnetism including poles, attraction and repulsion	**CHEMISTRY** **Materials** Compare and group materials by their properties solid, liquid and gas. Investigate the changes in state of matter of a material when heated or cooled. Investigate evaporation and condensation in the water cycle. **PHYSICS** **Sound** Investigate sounds including vibrations, pitch and volume. **Electricity** Construct series electrical circuits naming parts.	• Look at reproduction in plants and animals. **Evolution and inheritance** • Recognise that fossils provide information about living things that inhabited the Earth millions of years ago • Investigate how plants and animals, are adapted to suit their environment in different ways and that adaptation may lead to evolution. • Recognise that plants and animals resemble their parents in many features **CHEMISTRY** **Materials** • Compare and group everyday materials on the

	natural materials Make objects from different materials, including natural materials Observe, measure and record how materials change when heated and cooled Compare how materials change over time and in different conditions **PHYSICS**	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.	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 **CHEMISTRY** **Materials** 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.			basis of their properties. • Look at solubility and recovering dissolved substances. • Separate mixtures. • Examine changes to materials from reversible and irreversible changes. **PHYSICS** **Light** • Explain how light appears to travel in straight lines and how this affects seeing and shadows. • Explain that light travels from a source to the eyes. **Electricity** • Investigate insulators and conductors. • Record symbols for circuit diagrams

	Seasonal Changes Play and explore outside in all seasons and in different weather Observe living things throughout the year **Sound** Listen to sounds outside and identify the source Make sounds **Light** Explore shadows Explore rainbows	**PHYSICS** **Seasonal Changes** Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies.				• Look at series and parallel circuits, the effect of the voltage in cells and the resistance and conductivity of materials. **Forces and magnets** • Look at the effect of gravity and drag forces such as air and water resistance and friction. • Look at transference of forces in gears, pulleys, levers and springs. **Earth and space** • Investigate how the solar system has developed. • Look at the movement of the Earth, Moon and other planets in relation to the sun.

	Forces Explore how to change how things work Explore how the wind can move objects Explore how objects move in water **Earth and Space** Learn about the Earth, Sun, Moon, planets and stars Learn about space travel					• Explain day and night

St Blaise Church of England Primary School

Exploring and achieving as we grow together

Working Scientifically (Disciplinary Knowledge)

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5/6
Working scientifically	Know about similarities, differences, patterns and changes in relation to places, objects, materials and living things. Make observations of animals and plants and explain why some things occur. Talk about features of their own environment and how environments may vary.	Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Perform simple tests. Identify and classify. Use observations and ideas to suggest answers to questions. Gather and record data to help in answering questions.	Ask simple questions and recognise that they can be answered in different ways. Observe closely, using simple equipment. Perform simple tests. Identify and classify. Use observations and ideas to suggest answers to questions. Gather and record data to help in answering questions.	Ask relevant questions and use different types of scientific enquiries to answer them. Set up simple practical enquiries, comparative and fair tests. Make systematic and careful observations and where appropriate take accurate measurements using standard units, using a range of equipment including thermometers and data loggers. Gather, record, classify and present data in a variety of ways to help in answering questions. Record findings using simple scientific language, drawings,	Ask relevant questions and use different types of scientific enquiries to answer them. Set up simple practical enquiries, comparative and fair tests. Make systematic and careful observations and where appropriate take accurate measurements using standard units, using a range of equipment including thermometers and data loggers. Gather, record, classify and present data in a variety of	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Take measurements, using a range of scientific equipment, with increasing accuracy and precision taking repeat readings when appropriate. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of degree of trust results, in oral and written forms such as displays and other presentations. Present findings in written form, displays and other styles of presentations.

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	Ask simple questions recording answers in different ways. Observe closely, using simple equipment.			labelled diagrams, bar charts and tables. Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Use results to draw simple conclusions make predictions for new values, suggest improvements and raise further questions. Identify differences, similarities or changes related to simple, scientific ideas and processes. Use straightforward, scientific evidence to answer questions or to support their findings.	ways to help in answering questions. Record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables. Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Use results to draw simple conclusions make predictions for new values, suggest improvements and raise further questions. Identify differences, similarities or changes related to simple, scientific ideas and processes.	Use test results to make predictions to set up further comparative and fair tests. Identify scientific evidence that has been used to support or refute ideas or arguments.

					Use straightforward, scientific evidence to answer questions or to support their findings.		
Working Scientifically Vocabulary Each year group should know previous year groups as well as being introduced to the new vocabulary of their year.	EYFS Questions Answers	Year 1 Questions Answers Equipment Gather Measure Record Results Sort Group Test Explore Compare Describe Similarities Differences Timers Rulers Tape measures Metre stick	Year 2 Pictogram Tally chart Block diagram Venn diagram Order Link Stop watch	Year 3 Questions Types of scientific enquiry Changes Comparative tests Fair tests Careful Accurate Observations Present Data Evidence Keys Bar chart Results Conclusion Thermometer Data logger Magnifying glass Microscope Prediction	Year 4 Increase Decrease Appearance	Year 5 Opinion Fact Variables Independent variable Dependent variable Controlled variable Accuracy Precision Degree of trust Scatter graph Line graph Causal relationship	Year 6 Opinion Fact Support Refute Variables Independent variable Dependent variable Controlled variable Accuracy Precision Degree of trust Classification of keys

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		Beaker Pipette Syringe		Supported Not supported			

Scientific Knowledge (Substantive Knowledge)

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5/6
PLANTS	Investigate the different plants which grow in the local environment Investigate where and how our food grows Understand that some plants do not grow in our country Grow different plants	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.	Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants needs water, light and a suitable temperature to grow and stay healthy.	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.		

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				Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.		
Plants Vocabulary Each year group should know previous year groups as well as being introduced to the new vocabulary of their year.		Names of locally found wild plants Names of garden plants Names of flowering plants Names of trees Leaf/leaves Petal Flower Fruit Blossom Berry Root Bulb Seed Trunk Branch Stem Bark Stalk Vegetable	Dry Crispy Soil Earth Shoot Seedling Wither Limp Die Fully grown Water Light Damp/wet/dry Dark/light Hot/warm Cold/cool Comparatives Grow/growth healthy	Part Role Air Nutrients Soil Fertiliser Transported Life cycle Pollination Seed formation Seed dispersal		

		Names of flowers and vegetables grown.				

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5/6
Animals, including humans	Name a variety of different animals both in our local environment and in different places in the world. Understand that different animals live in different countries and habitats. Know what our sense are and why they are important to us.	Identify and name a variety of common animals including birds, fish, amphibians, reptiles 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 (birds, fish, amphibians, reptiles, mammals and invertebrates, including pets).	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, air) Describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene.	Identify that humans and some animals have skeletons and muscles for support, protection and movement 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.	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.	Describe the changes as humans develop to old age (Y5) Describe the ways in which nutrients and water are transported within 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 human bodies function. (Y6)

	Recognise the people in their family and the changes from babies to toddlers and starting school.	Identify name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.				
Animals including humans vocabulary Each year group should know previous year groups as well as being introduced to the new vocabulary of their year.		names of common animals names of common animals (eat other animals) names of common animals (eat plants) names of common animals (eat plants and animals) wild animals pets body head neck arms elbows legs knees face ears/eyes eyebrows	offspring babies young grow change adults older/younger baby/toddler/child/teenager basic needs water food air breathing survival exercise food types fruit and vegetable bread, rice, potato, pasta milk and dairy foods foods high in fat or sugar meat, fish, egg, beans	nutrition nutrients food types fruit and vegetable bread, rice, potato, pasta milk and dairy foods foods high in fat or sugar meat, fish, egg, beans carbohydrates protein vitamins and mineral fat dietary fibre water balanced diet skeleton muscles support protection movement	digestive system nutrition nutrients mouth teeth canines incisor molar pre-molar saliva tongue rip, tear, chew, grind, cut oesophagus (gullet) stomach small intestine large intestine rectum anus carnivore herbivore omnivore	circulatory system heart blood blood vessels pumps oxygen carbon dioxide lungs nutrients water diet exercise drugs lifestyle

		eyelashes nose hair mouth teeth tongue feet toes fingers nails ankle calf thigh hips waist trunk chest shoulders back hands wrist tail wing claw fin scales feathers fur beak senses hear/hearing	Will be introduced to nutrition and nutrients in year 3 so avoid protein, carbohydrates etc hygiene clean wash healthy medicine drugs	skull ribs spine/vertebra joints sockets bones tendons	producer consumer predator prey food chain	

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		see/seeing touch/touching smell/smelling taste/tasting rough/smooth bright/dim loud/quiet high/low repeating/continuous				

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5/6
Seasonal Changes	Observe changes across the four seasons.	Observe changes across the four seasons Observe and describe weather associated with the seasons and how day length varies				
Seasonal changes vocabulary		season spring summer autumn winter weather hot/warm cool/cold sun/sunny				

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		cloud/cloudy wind/windy rain/rainy snow/snowing hail/hailing sleet frost fog/mist ice/icy rainbow thunder lightning storm light/dark day/night				

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5/6
Living things and their habitats.	Investigate things which live in the local environment and what they need to survive.		Explore and compare the difference 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		Recognise that living things can be grouped in a variety of ways. Recognise that environments are constantly changing and that this can sometimes pose dangers to specific habitats.	Describe the difference in the life cycles of a mammal, amphibian, an insect and a bird. Describe the life process of reproduction in some plants and animals. (Y5)

			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 micro-habitats. 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.		Explore and use classification keys to help group, identify and name a variety of things in their local and wider environment.	Give reasons for classifying plants and animals based on specific characteristics. Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and difference, including micro-organisms, plants and animals. (Y6)
Living things and their habitats vocabulary Each year group should know previous year groups as well as being introduced to			living dead never been alive move grow feed have offspring/young/babies name local habitats e.g. a pond		classification keys environment fish amphibians reptiles birds mammals vertebrates invertebrates name some invertebrates	Year 5 life cycle reproduction sexual asexual germination pollination seed formation seed dispersal pollen

the new vocabulary of their year.			e.g. a woodland e.g. a meadow name micro-habitats e.g. under log e.g. on stony path e.g. under bushes damp/wet/dry dark/light hot/warm/cool/cold use comparatives e.g. hotter suited/suitable basic needs depend food food chain shelter		human impact name positive human impact name negative human impact	stamen stigma plantlets e.g. spider plant runners e.g. strawberry plant mammal amphibian insect bird fish reptile eggs live young Year 6 organism micro-organisms fungus mushrooms classification keys environment fish amphibians reptiles birds mammals vertebrates invertebrates name some invertebrates arachnid

						mollusc insect crustacean

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5/6
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 plants and animals, are adapted to suit their environment in different ways and that adaptation may lead to evolution. Recognise that living things produce offspring of the same kind but normally offspring vary and are not identical to their parents. (Y6)
Evolution and Inheritance Vocabulary						Year 6 evolution suited/suitable environment suited

						adapted/adaptation offspring characteristics vary/variation inherit/inheritance fossils

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5/6
Use of everyday materials	Identify and name a variety of everyday materials Investigate why different materials are used for different objects.	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	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.	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.		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

		materials on the basis of their simple physical properties.				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, oxidisation and the action of acid on bicarbonate of soda. (Y5)
Use of everyday materials vocabulary Each year group should know previous		object material wood plastic glass metal water rock	suitable/unsuitable use/useful object material property wood plastic glass	rock stone pebble boulder soil fossils grains crystals	states of matter solid liquid gas air oxygen powder grain/granular	Year 5 hard soft stretchy rigid flexible waterproof

year groups as well as being introduced to the new vocabulary of their year.		brick paper fabrics elastic foil card/cardboard rubber wool clay hard soft stretchy stiff bendy/floppy waterproof absorbent breaks/tears rough smooth shiny dull see through not see through	metal water rock brick paper fabrics elastic foil card/cardboard rubber wool clay hard soft stretchy rigid flexible waterproof absorbent strong/weak rough smooth reflective non reflective transparent opaque translucent shape changed push/pushing pull/pulling	hard/soft texture absorb water let water through marble chalk granite sandstone slate sandy soil clay soil chalky soil peat	crystals change state ice/water/steam water vapour heated/heating cooled/cooling temperature degrees celsius melt freeze solidify melting point molten boil boiling point evaporate/evaporation condense/condensation water cycle precipitation transpiration	absorbent strong/weak rough smooth reflective non reflective transparent opaque translucent

			twist/twisting squash/squashing bend/bending stretch/stretching pinch/pinching poke/poking roll/rolling squeeze/squeezing			

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5/6
Forces and movement	Investigate pushes and pulls and how things move on different surfaces.		Investigate pushes and pulls and 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 how things move on different surfaces. Compare and group together a variety of everyday materials on the basis of whether they are attracted to a		Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. Identify the effect 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. (Y5)

				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.		
Forces and Movement vocabulary Each year group should know previous year groups as well as being introduced to the new vocabulary of their year.				force push/pushing pull/pulling contact force non contact force magnetic force magnet strength bar magnet ring magnet button magnet horseshoe magnet attract repel magnetic material metal iron steel non-magnetic material		Year 5 magnetic force magnet attract fall Earth gravity air resistance water resistance friction moving surfaces mechanisms levers pulleys gears force transfers

				poles north pole south pole		

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5/6
Light and seeing	Investigate light and dark and recognise that dark is the absence of light Investigate different light sources. Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.	Investigate different light sources. Investigate the effect that different materials have on a light source. Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.	Investigate different light sources. Investigate the effect that different materials have on a light source. Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.	Recognise that we need light in order to see and that darkness is the absence of light. 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 source is blocked by an opaque object. Find patterns in the way that the size of shadows change. Notice that light is reflected from surfaces.		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 eyes. Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. 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. (Y6)

				Associate shadows with a light source being blocked by something; find patterns that determine the size of shadows.		
Light and seeing vocabulary Each year group should know previous year groups as well as being introduced to the new vocabulary of their year.				light light source names of light sources e.g. torch dark/darkness reflect reflective mirror shadow block direct/ direction transparent opaque translucent		Year 6 light light source names of light sources e.g. torch dark/darkness reflect reflective mirror shadow block absorb direct/ direction transparent opaque translucent

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5/6
Sound and hearing	Investigate different sounds and how to change the		Investigate different sounds and how to		Identify how sounds are made, associating some	

	volume, sound and pitch.		change the volume, sound and pitch.		of them with something vibrating. Recognise that sounds get fainter as the distance from the sound's source increases 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 vibrations from sound travel through a medium to the ear.	
Sound and hearing vocabulary Each year group should know previous					sound sound source noise vibrate/vibration travel solid/liquid/gas pitch	

year groups as well as being introduced to the new vocabulary of their year.					tune high/low volume loud/quiet fainter muffle strength of vibrations insulation instrument percussion strings brass woodwind tuned instrument	
Electricity	Identify and name common appliances that run on electricity.	Identify and name common appliances that run on electricity.	Identify and name 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.	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.

					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.	Use recognised symbols when representing a simple circuit in a diagram. (Y6)
Electricity vocabulary Each year group should know previous year groups as well as being introduced to the new vocabulary of their year.					electricity appliances/device mains plug electrical circuit complete circuit circuit diagram circuit symbol components cell battery positive/negative connect/connection loose connection short circuit wire crocodile clip bulb	Year 6 electricity appliances/device electrical circuit complete circuit circuit diagram circuit symbol components cell battery positive/negative terminal connect/connection loose connection short circuit wire crocodile clip

					bright/dim switch buzzer motor fast(er)/slow(er) conductor insulator metal/non metal	bulb bright/dim switch buzzer volume motor fast(er)/slow(er) conductor insulator metal/non metal voltage current resistance

Earth's Movement in 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. (Y5)
Earth's movement in space vocabulary Each year group should know previous year groups as well as being introduced to the new vocabulary of their year.						Earth planets Sun solar system Moon celestial body sphere/spherical rotate/rotation spin night and day Mercury Venus Mars Jupiter Saturn Uranus Neptune Pluto 'dwarf' planet orbit revolve geocentric model heliocentric model shadow clocks sundials astronomical clocks

Impact

The impact and measure of this is to ensure children not only acquire the appropriate age-related knowledge linked to the science curriculum, but also skills which equip them to progress from their starting points, and within their everyday lives.

Long term:

- Children will achieve age related expectations in Science at the end of their cohort year.
- Children will retain knowledge that is pertinent to Science with a real-life context.
- Children will be able to question ideas and reflect on knowledge.
- Children will work collaboratively and practically to investigate and experiment.
- Children will be able to explain the process they have taken and be able to reason scientifically.
- Children will gain a wider variety of skills linked to both scientific knowledge and understanding, and scientific enquiry/investigative skills.
- Children will achieve a richer vocabulary which will enable to articulate their understanding of taught concepts.
- Children and teachers will have high aspirations, which will see them through to further study, work and a successful adult life.

Assessment and Monitoring in Science:

The impact of our Science curriculum is measured through the monitoring cycle in school:

- Lesson observations, book monitoring and learning walks
- Pupil voice – to check understanding, understanding of key skills and knowledge, progression, confidence in discussing Science
- Children's work shows a range of topics and evidence of the curriculum coverage for all science topics.
- Children are becoming increasingly independent in science, selecting their own tools and materials, completing pupil lead investigations and choosing their own strategies for recording.
- All children are making progress, including EAL and SEND children.

Monitoring is also used to identify gaps in the curriculum that may need to be addressed across the school, or within individual year groups. Monitoring is an ongoing cycle, which is used productively to provide the best possible Science curriculum for our children.

Role of the co-ordinator:

- Highlight / Celebrate successes
- Collate appropriate evidence over time – this should show that pupils' skills and understanding develop over time
- Monitor the standards in the subject to ensure that outcomes are at expected levels

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- Provide ongoing support to colleagues

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