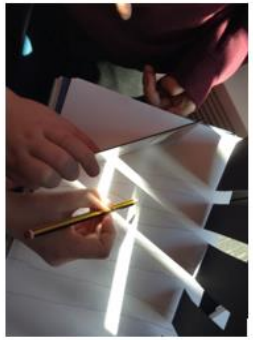
Crooksbarn Science Progression Map





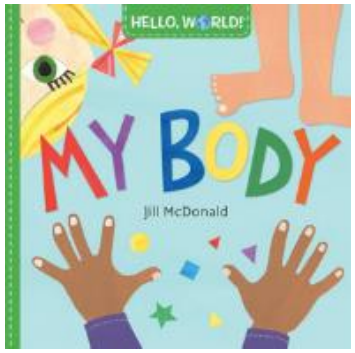
Curriculum Intent

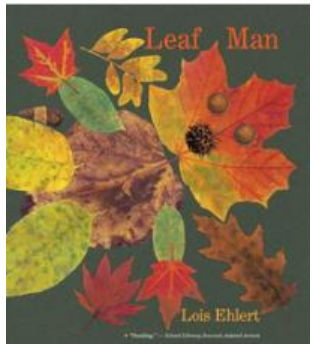
- To give pupils the knowledge they need to live healthy and fulfilled lives as well as creating citizens who make positive contributions to the future of our planet and society.
- To inspire the next generation of scientific leaders and enable all students to make informed decisions and contribute to creating a sustainable future for our planet.
- To provide a balanced and broad curriculum which embeds the skills and knowledge they need to become methodical, analytical, and inquisitive scientists.
- To allow children in Early Years to develop a curiosity of the world around them.
- To provide students lots of opportunity for practical, firsthand experiences and the knowledge to make sense of the world around them.
- To build their conceptual understanding of science (substantive knowledge).
- To develop key skills pupils will need to work as scientists and to use science enquiry to develop their understanding (disciplinary knowledge).
- To give staff the opportunity and expertise to be confident and enthusiastic about their delivery of science.
- To assess knowledge attained effectively through regular retrieval tasks and end of unit quizzes.

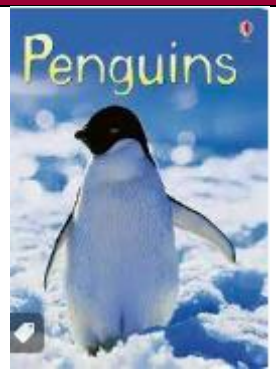
Progression of Knowledge and Skills

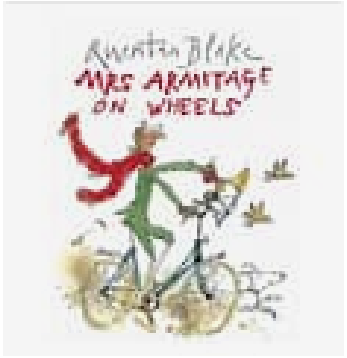
EYFS in Provision

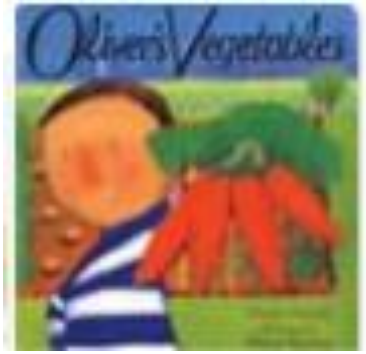
Texts to support learning











Development Matters Guidance & Early Learning Goal

EYFS Statutory Educational Programme:
Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children's personal experiences increases their knowledge and sense of the world around them – from visiting parks, libraries, and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes, and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children's vocabulary will support later reading comprehension.

EYFS – Understanding the World – 'The Natural World'	
3 – 4-Year-olds **(Development Matters)**	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. Explore how things work. 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.
Reception **(Development Matters)**	Explore the natural world around them. Describe what they see, hear, and feel whilst outside. Recognise some environments that are different from the one in which they live. Understand the effect of changing seasons on the natural world around them.
ELG	Explore the natural world around them, making observations and drawing pictures of animals and plants. 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.

Implementation – Understanding the world taught in themes below as well as being continuously accessible in provision.

Non - Negotiables	
'The Natural World' (Science)	• Minimum of 1 Reception class/ AM/PM and 30 hours entry per half term in 'Understanding the World' Floor Book. • Map UK displayed in classrooms – World map and map of local area on KS1 yard. • Non-fiction books accessible for children in reading areas linked to previous learning e.g. lifecycles. • Display Whole School Science Enquiry Types – Observing, Pattern Seeking, Researching, Classifying • Oral hygiene - children in Nursery and Reception brush their teeth every day within the setting.

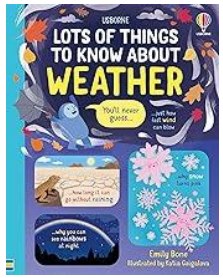
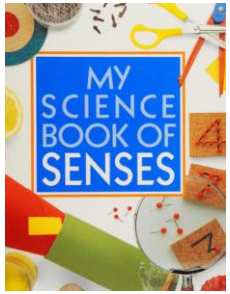
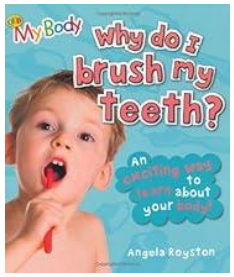
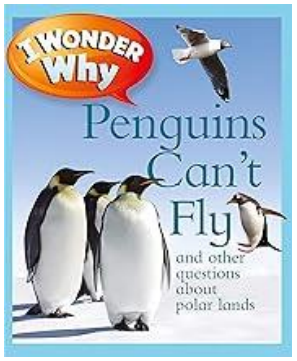
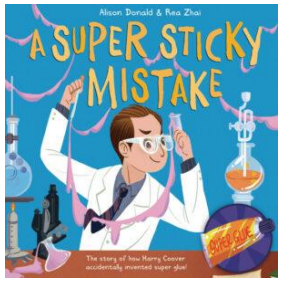
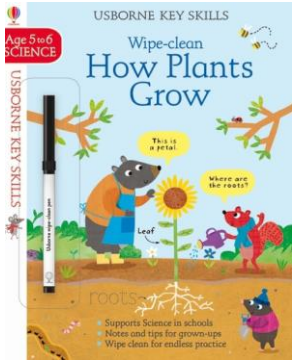
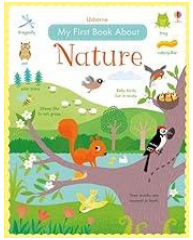
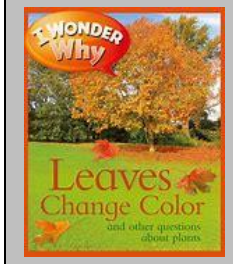
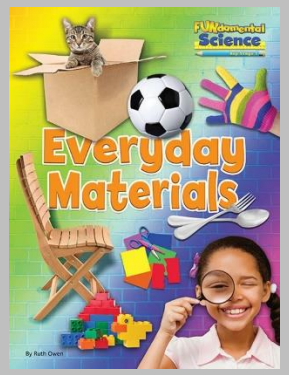
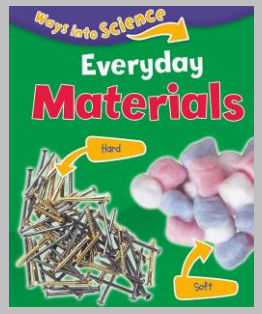
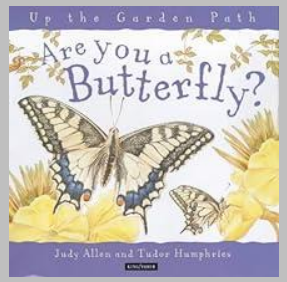
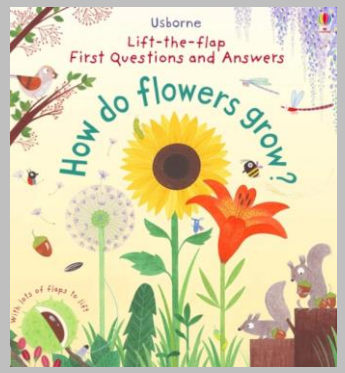
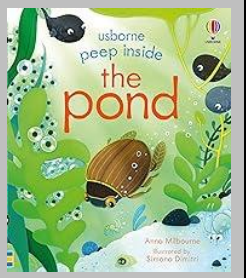
Implementation	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery	**Marvellous Me** Explore different objects and materials using the senses. (Animals, inc. humans / Materials) Classify 	**My Special Days**	**What happens in Winter?** Identifying the seasons (Seasonal Change) Identifying and sorting the clothes we wear in different weather. (Seasonal Change)	**We're Going on a Bear Hunt** Collecting and sorting objects from outdoors (Materials) Exploring patterns in our environment – rubbings, leaves, bricks (Materials) Exploring and caring for minibeasts. (Animals, inc. humans)	**How Does Your Garden Grow?** Lifecycle of a butterfly (Animals, inc. humans) Planting seeds (Plants)  Observing Over Time	**On the Move**
Reception	**Where do I belong?** Healthy Food Choices Parts of the Human Body (Animals, inc. humans)  Research	**Let's Celebrate** Visit to 'Forest School' - spotting signs of Autumn, changes in the environment. (Seasonal Change)  Pattern Seeking	**Polar Regions** Melting freezing ice (States of Matter)  Observing Over Time Comparing North Pole with our own country. (Living things and habitats)	**If You Go Down to the Woods Today** Observing changes in the local environment (Seasonal Change) Earth Day – Litter pick in local environments. (Living things and habitats) Observational drawings of plants (Plants)	**Old Macdonald Had a Farm** Lifecycle of a chick/tadpole/butterfly (Animals, inc. humans) Planting vegetables – Bean diary (Plants) Baby Animals Labelling parts of a farm animal. (Animals, inc. humans)	**Journeys** Sorting materials – metal, wood, plastic (Materials) Boats – Floating and sinking. (Forces) Comparing woodland & beach environment (Living things and habitats)  Classify

Impact – What does an EYFS scientist need to understand?

Impact - 'The Natural World' – UTW / 'Managing Self' - PSED (Science) End of EYFS Skills Map		
What an EYFS scientist needs to understand?	**What do they need to know?**	**How can they show they are scientists?**
The importance of healthy food choices;	That some foods can be good/bad for us when eaten in excess/moderation. Vocabulary – vegetables, fruit That healthy food choices will allow our bodies to grow strong and give us protection against illness.	Talk about healthy food choices they have made. Identify vegetables and fruit. Classify foods into healthy / unhealthy.
Ways to take care of plants and animals.	How to plant a seed and what it needs to grow. The small changes we can make in our daily routine – litter picking, recycling, turning off lights,	Planting seeds and beans. Watering and nurturing them over time. Exploring the minibeast hotel. Drawing the steps to plant a bean. Bean diary. Earth Day – practise small changes identified and talk about their impact e.g. litter picking to protect animals from getting stuck inside.
That there are key words/vocabulary associated with biology/physics	Know simple vocabulary to label parts of a human/animals. Explore forces/changing states/materials	Label / talk about the parts of a human/animal. Express their predictions about what could happen in a simple experiment exploring forces/changing states/materials.

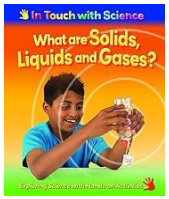
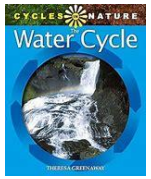
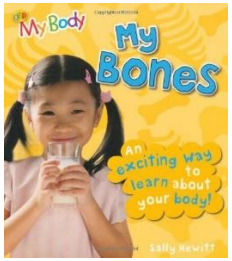
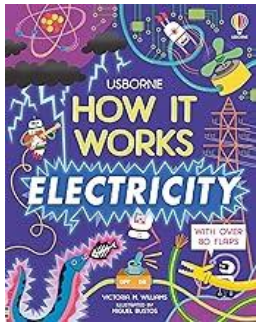
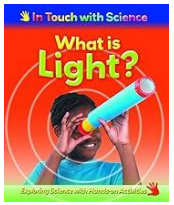
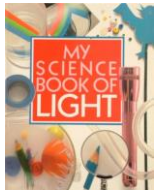
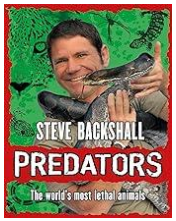
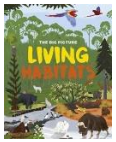
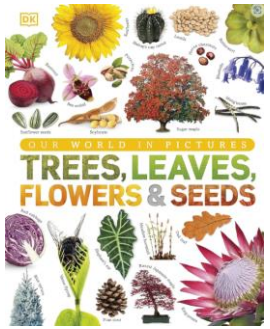
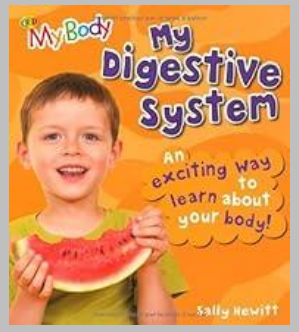
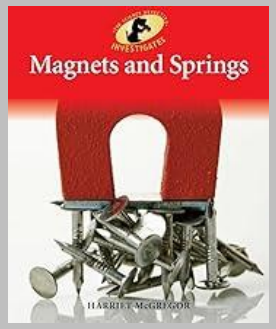
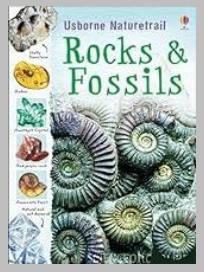
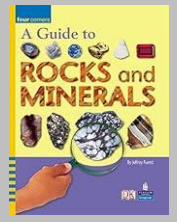
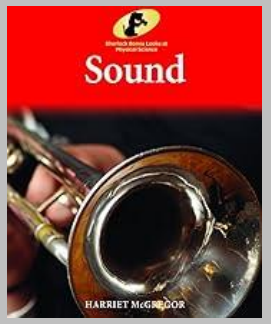
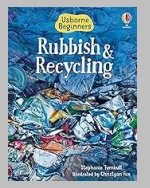
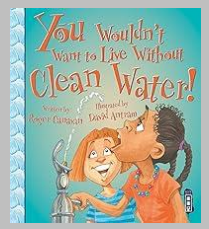
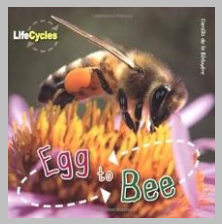
Begin to understand that solids and liquids can change state.	Know and understand vocabulary to classify a 'solid' and a 'liquid'. That some solids can become a liquid and that this can also be reversed.	Classify some objects as a solid / liquid. Be able to make a simple prediction.
That there are four seasons in the UK and that they occur in a cycle.	Know and name the seasons – 'Spring', 'Summer, 'Autumn', 'Winter' and the characteristics of each UK season.	Name and comment on signs of each season e.g. leaves falling in Autumn, snow in Winter, etc.
That objects can be made from different materials.	The names for different materials	Sorting materials into different groups

Science Overview KS1 (Year 1 & 2)

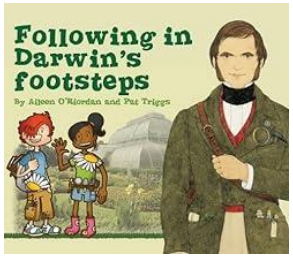
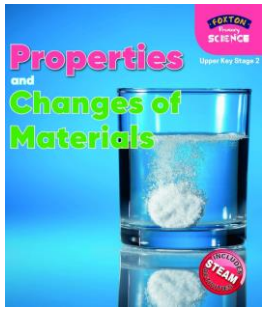
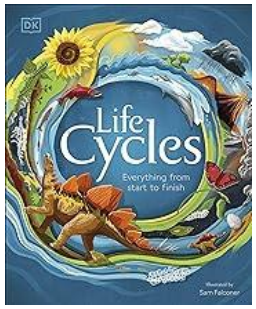
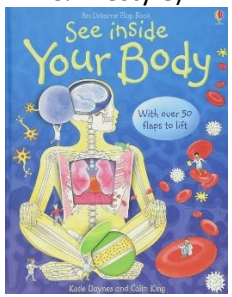
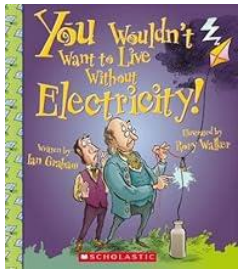
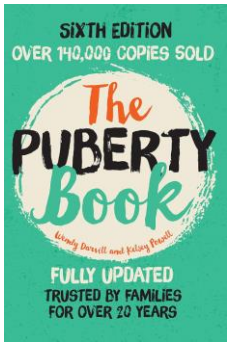
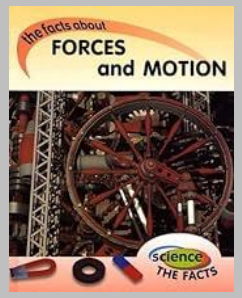
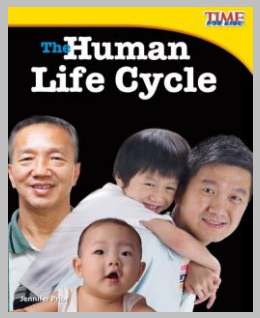
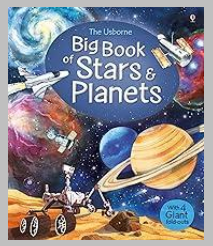
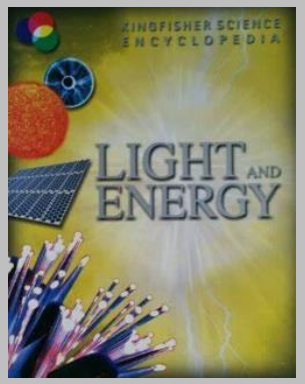
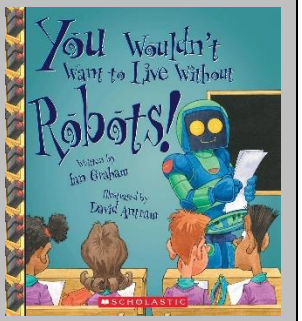
Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1 & 2 Rotation A 	Animals, including humans. (Human body & Senses) 	Animals, including humans. (Health & Hygiene) 	Animals, including humans. (Common Animals) 	Uses of Everyday Materials (Choosing Materials) 	Plants (How plants grow) 	Living Things & their habitats (Habitats) 
Year 1 & 2 Rotation B 	Plants (Trees) 	Everyday Materials (Material Properties) 	Uses of everyday Materials (Change) 	Animals, including humans. (Animal Offspring) 	Plants (Flowering plants) 	Living Things & their habitats / Animals, including humans) (Food chains) 

Seasonal Change – Studied throughout the year in Key Stage 1

Science Overview LKS2 (Year 3 & 4)

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3 & 4 Rotation A	States of Matter  	Animals, including humans. (Nutrition, Skeleton & Muscles) 	Electricity 	Light  	Living things and their habitats.  	Plants (Life & Growth) 
Year 3 & 4 Rotation B	Animals, including humans. (Digestion & Teeth) 	Forces & Magnets 	Rocks  	Sound 	Living things and their habitats (Environments Change)  	Plants (Lifecycle of a flowering plant) 

Science Overview UKS2 (Year 5 & 6)

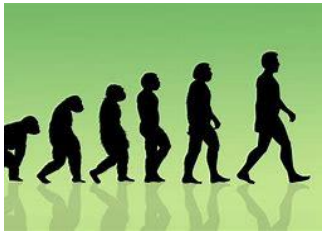
Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 5 & 6 Rotation A	Evolution & Inheritance 	Properties & Change of Materials 	Living things & their habitats (Lifecycles) 	Animals, including humans. (Circulatory System & Lifestyle) 	Electricity 	Puberty / KS3 Ready Investigations 
Year 5 & 6 Rotation B	Forces 	Animals, including humans. (Birth to Old Age) 	Living things and their habitats 	Earth & Space  	Light 	Puberty / KS3 Ready Investigations 

Science Progression –Substantive Knowledge

Biology

Animals, including humans.

Evolution & Inheritance



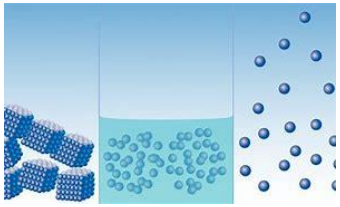
Living things & their habitats

Plants

Chemistry

Everyday Materials

States of Matter



Rocks

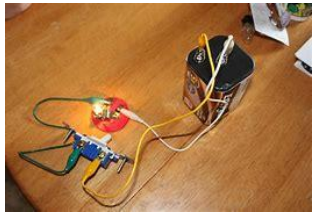
Properties of Materials

Physics

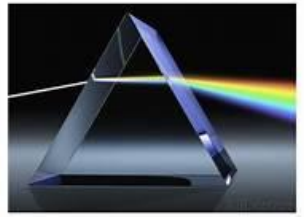
Forces & Magnets

Earth & Space

Electricity



Light & Sound



Animals, including Humans (Biology)

Year 1 & 2 Rotation A Autumn 1	Year 1 & 2 Rotation A Autumn 2	Year 1 & 2 Rotation A Spring 1	Year 1 & 2 Rotation B Spring 2	Year 3 & 4 Rotation A Autumn 2	Year 3 & 4 Rotation B Autumn 1	Year 5 & 6 Rotation A Spring 2	Year 5 & 6 Rotation B Autumn 2
National Curriculum- Year 1 Objectives: To identify, name the basic parts of the human body and say which part of the body is associated with each sense - *See, touch, taste, hear, smell - eyes, hands/ fingers (skin), tongue, ear, nose. Although we often use our fingers and hands to feel objects, the children should understand that we can feel with many parts of our body.* To label the basic parts of the human body and say which part of the body is associated with each sense - *See, touch, taste, hear, smell - eyes, hands/ fingers (skin), tongue, ear, nose.*	National Curriculum- Year 2 Objectives: To find out about and describe the basic needs of animals, including humans, for survival (water, food and air). The basic needs of feeding, drinking, and breathing that must be satisfied in order to survive. To describe the importance for humans of exercise. To describe the importance for humans of eating the right amounts of different types of food. Can name foods in each section of the Eatwell Guide (examples – meat, fish, vegetables, bread, rice, pasta) To describe the importance for humans of hygiene. Good hygiene is also important in preventing infections and illnesses.	National Curriculum- Year 1 Objectives: To identify and name a variety of common animals including fish, amphibians, reptiles, birds, and mammals. To describe the structure of a variety of common animals (fish, amphibians, reptiles, birds, and mammals, including pets) Head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves To compare the structure of a variety of common animals (fish, amphibians, reptiles, birds, and mammals, including pets).	National Curriculum- Year 2 Objectives: To notice that animals, including humans, have offspring which grow into adults - (examples - chick/hen, baby/child/adult, caterpillar/butterfly). The young of some animals do not look like their parents e.g. tadpoles.	National Curriculum- Year 3 Objectives: To identify that animals, including humans, need the right types and amount of nutrition. To identify that animals, including humans, can not make their own food; they get nutrition from what they eat. To identify that humans and some other animals have skeletons for support, protection, and movement. To identify that humans and some other animals have muscles for support, protection, and movement.	National Curriculum- Year 4 Objectives: To describe the simple functions of the basic parts of the digestive system in humans. To identify the different types of teeth in humans. To identify the simple functions of teeth in humans. To construct and interpret a variety of food chains, identifying producers, predators, and prey.	National Curriculum- Year 6 Objectives: To identify and name the main parts of the human circulatory system. To describe the functions of the heart, blood vessels and blood. To recognise the impact of diet and exercise on the way their bodies function. Link to PHSE To recognise the impact of drugs and lifestyle on the way their bodies function. Link to PHSE To describe the ways in which nutrients are transported within animals, including humans. To describe the ways in which water is transported within animals, including humans.	National Curriculum- Year 5 Objectives: To describe the changes as humans develop into old age *(Childhood, Puberty, Young Adult / Middle Age, Old Age)* *Links to PHSE*

Opportunities for retrieval of prior knowledge

Evolution & Inheritance (Biology)

Year 5 & 6 Rotation A Autumn 1					
National Curriculum- Year 6 Objectives: To recognise that living things have changed over time. To recognise that fossils provide information about living things that inhabited the Earth millions of years ago. To recognise that living things produce offspring of the same kind. To recognise that normally offspring vary and are not identical to their parents. To identify how animals are adapted to suit their environment in different ways. To identify how plants are adapted to suit their environment in different ways. To identify that adaptation may lead to evolution.					

Opportunities for retrieval of prior knowledge.

Living Things and their Habitats (Biology)

Year 1 & 2 Rotation A Summer 2	Year 1 & 2 Rotation B Summer 2	Year 3 & 4 Rotation A Summer 1	Year 3 & 4 Rotation B Summer 1	Year 5 & 6 Rotation A Spring 1	Year 5 & 6 Rotation B Spring 1
National Curriculum- Year 2 Objectives: To explore and compare the differences between things that are living, dead, and things that have never been alive. To identify that most living things live in habitats to which they are suited. To describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other - *The habitat provides the basic needs of the animals and plants – shelter, food, and water.* To identify and name a variety of plants and animals in their habitats, including micro-habitats - *Local habitats e.g. Tinkers Yard, Norton Duck Pond, Norton Sports Complex - Nature Walk - Names of micro-habitats e.g. under logs, in bushes etc.*	National Curriculum- Year 2 Objectives: To describe how animals obtain their food from plants and other animals. To use the idea of a simple food chain, and identify and name different sources of food	National Curriculum- Year 4 Objectives: To recognise that living things can be grouped in a variety of ways. To explore and use classification keys to help identify and name a variety of living things in their local and wider environment. To explore and use classification keys to help group a variety of living things in their local and wider environment.	National Curriculum- Year 4 Objectives: To recognise that environments can change and that this can sometimes pose dangers to living things.	National Curriculum- Year 5 Objectives: To describe the differences in the life cycles of a mammal, an amphibian, an insect, and a bird To describe the life process of reproduction in some plants. To describe the life process of reproduction in some animals.	National Curriculum- Year 5 Objectives: To describe how living things are classified into broad groups according to common observable characteristics, including micro-organisms, plants, and animals. To describe how living things are classified into broad groups based on similarities and differences, including micro-organisms, plants, and animals. To give reasons for classifying animals based on specific characteristics. To give reasons for classifying plants based on specific characteristics.

Opportunities for retrieval of prior knowledge.

Plants (Biology)

Year 1 & 2 Rotation A Summer 1	Year 1 & 2 Rotation B Autumn 1	Year 1 & 2 Rotation B Summer 1	Year 3 & 4 Rotation A Summer 2	Year 3 & 4 Rotation B Summer 2	
National Curriculum- Year 2 Objectives: To observe and describe some of the main changes in seeds and bulbs as they grow into mature plants - *Observe Germination, Seedling, Mature Plant, Flower, Seeds, Bulbs* To find out and describe how plants need water, light, and a suitable temperature to grow. To find out and describe how plants need water, light, and a suitable temperature to stay healthy.	National Curriculum- Year 1 Objectives: To identify and name some deciduous trees - *Names of trees in the local area – Oak, Horse chestnut, Sycamore, Birch* To identify and name some evergreen trees - *Names of trees in the local area Holly, Pine, Yew – Monkey Puzzle Tree on Crooksbarn Estate* To identify and describe the basic structure of trees - *Leaf, root, trunk, branch, bark, bud*	National Curriculum- Year 1 Objectives: To identify and name a variety of wild plants - *Names of wild flowering plants in the local area – dandelion, daisy, buttercup, nettles, ivy, clover, brambles* To identify and name a variety of garden plants - *Names of garden flowering plants in the local area – fuchsia, pansy, sunflower, rose, lavender* To identify and describe the basic structure of flowering plants - *Leaf, petal, root, stem, stalk, berry*	National Curriculum- Year 3 Objectives: To identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves, and flowers. To explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow). To explore the requirements of plants for life and growth vary from plant to plant. To investigate the way in which water is transported within plants.	National Curriculum- Year 3 Objectives: To identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves, and flowers. To explore the part that flowers play in the life cycle of flowering plants. To explore pollination in the life cycle of flowering plants. To explore seed formation in the life cycle of flowering plants. To explore seed dispersal in the life cycle of flowering plants.	

Opportunities for retrieval of prior knowledge.

Materials, States of Matter & Rocks (Chemistry)

Year 1 & 2 Rotation A Spring 1	Year 1 & 2 Rotation B Autumn 2	Year 1 & 2 Rotation B Spring 1	Year 3 & 4 Rotation A Autumn 1	Year 3 & 4 Rotation B Spring 1	Year 5 & 6 Rotation A Autumn 2
National Curriculum- Year 2 Objectives: To identify a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper, and cardboard. *Names of materials – wood, metal, plastic, glass, brick, rock, paper, cardboard* To compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper, and cardboard for particular uses.	National Curriculum- Year 1 Objectives: To distinguish between an object and the material from which it is made. To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. To describe the simple physical properties of a variety of everyday materials. To compare a variety of everyday materials on the basis of their simple physical properties. To group together a variety of everyday materials on the basis of their simple physical properties.	National Curriculum- Year 2 Objectives: To identify a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper, and cardboard. *Names of materials – wood, metal, plastic, glass, brick, rock, paper, cardboard* To find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting, and stretching.	National Curriculum- Year 4 Objectives: To compare and group materials together, according to whether they are solids, liquids, or gases. To observe that some materials change state when they are heated. To observe that some materials change state when they are cooled. To measure or research the temperature at which this happens in degrees Celsius (°C). To identify the part played by evaporation in the water cycle. *Link to Geography* To associate the rate of evaporation with temperature. *Link to Geography* To identify the part played by condensation in the water cycle. *Link to Geography*	National Curriculum- Year 3 Objectives: To compare and group together different kinds of rocks on the basis of their appearance. To compare and group together different kinds of rocks on the basis on some simple physical properties. To describe in simple terms how fossils are formed when things that have lived are trapped within rock. To recognise that soils are made from rocks and organic matter.	National Curriculum- Year 5 Objectives: To compare and group together everyday materials on the basis of their properties, including their hardness, solubility and transparency, conductivity (electrical and thermal), response to magnets. To know that some materials will dissolve in liquid to form a solution. To describe how to recover a substance from a solution. To use knowledge of solids, liquids, and gases to decide how mixtures might be separated through filtering and sieving. To use knowledge of solids, liquids, and gases to decide how mixtures might be separated through evaporating. To give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood, and plastic. To demonstrate that dissolving, mixing and changes of state are reversible changes. To explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible. To explain that some changes result in the formation of new materials, including changes associated with burning. To explain that some changes result in the formation of new materials, including the action of acid on bicarbonate of soda.

Opportunities for retrieval of prior knowledge.

Seasonal Change, Earth & Space (Physics)

Year 1 & 2 Rotation A Throughout	Year 1 & 2 Rotation B Throughout	Year 5 & 6 Rotation B Spring 2				
National Curriculum- Year 1 Objectives: To observe changes across the four seasons. *Name the four seasons (Spring, summer, Autumn, Winter). Some examples are: numbers of minibeasts found outside; seed and plant growth; leaves on trees; and type of clothes worn by people.*	National Curriculum- Year 1 Objectives: To observe and describe weather associated with the seasons. *Can describe weather in different seasons over a year -usually colder in winter - Weather (sunny, rainy, windy, snowy etc.)* To observe and describe how day length varies. - *Can describe days as being longer (in time) in the summer and shorter in the winter*	National Curriculum- Year 5 Objectives: To describe the movement of the Earth, and other planets, relative to the Sun in the solar system. To describe the movement of the Moon relative to the Earth. To describe the Sun, Earth, and Moon as approximately spherical bodies. To use the idea of the Earth's rotation to explain day and night. To use the idea of the Earth's rotation to explain the apparent movement of the sun across the sky.				

Opportunities for retrieval of prior knowledge.

Forces & Magnets (Physics)

Year 3 & 4 Rotation B Autumn 2	Year 5 & 6 Rotation B Autumn 1				
National Curriculum- Year 3 Objectives: To compare how things move on different surfaces. To notice that some forces need contact between two objects. To notice that magnetic forces can act at a distance. To observe how magnets attract or repel each other. To observe how magnets attract some materials and not others. To compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet. To identify some magnetic materials. To describe magnets as having two poles. To predict whether two magnets will attract or repel each other, depending on which poles are facing.	National Curriculum- Year 5 Objectives: To explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. To identify the effects of air resistance, that act between moving surfaces. To identify the effects of water resistance, that act between moving surfaces. To identify the effects of friction, that act between moving surfaces. To recognise that some mechanisms, including levers, pulleys, and gears, allow a smaller force to have a greater effect.				

Opportunities for retrieval of prior knowledge.

Electricity (Physics)

Year 3 & 4 Rotation A Spring 1	Year 5 & 6 Rotation A Summer 1				
National Curriculum- Year 4 Objectives: To identify common appliances that run on electricity. To construct a simple series electrical circuit. To identify and name basic parts of an electric circuit, including cells, wires, bulbs, switches, and buzzers. To 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. To recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. To recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. To recognise some common conductors and insulators. To associate metals with being good conductors.	National Curriculum- Year 6 Objectives: To associate the brightness of a lamp with the number and voltage of cells used in the circuit. To associate the volume of a buzzer with the number and voltage of cells used in the circuit. To compare and give reasons for variations in how components function, including the brightness of bulbs. To compare and give reasons for variations in how components function, including the loudness of buzzers. To compare and give reasons for variations in how components function, including the on/off position of switches. To use recognised symbols when representing a simple circuit in a diagram.				

Opportunities for retrieval of prior knowledge.

Light & Sound (Physics)

Year 3 & 4 Rotation A Spring 2	Year 3 & 4 Rotation B Spring 2	Year 5 & 6 Rotation B Summer 1				
National Curriculum- Year 3 Objectives: To recognise that they need light in order to see things. To recognise that dark is the absence of light. To notice that light is reflected from surfaces. To recognise that light from the sun can be dangerous. To recognise that there are ways to protect their eyes from the sun. To recognise that shadows are formed when the light from a light source is blocked by a solid object. To find patterns in the way that the size of shadows changes.	National Curriculum- Year 4 Objectives: To identify how sounds are made, associating some of them with something vibrating. To recognise that vibrations from sounds travel through a medium to the ear. To find patterns between the pitch of a sound and features of the object that produced it. To find patterns between the volume of a sound and the strength of the vibrations that produced it. To recognise that sounds get fainter as the distance from the sound source increases.	National Curriculum- Year 6 Objectives: To recognise that light appears to travel in straight lines. To 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. To explain that we see things because light travels from light sources to our eyes. To explain that we see things because light travels from light sources to objects and then to our eyes. To use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.				

Opportunities for retrieval of prior knowledge.

Working Scientifically Skills Progression (Disciplinary Knowledge)

	Year 1 & 2	Year 3 & 4	Year 5 & 6
Asking Questions 	To ask simple questions and recognise that they can be answered in different ways. To identify and classify.	To ask relevant questions and use different types of scientific enquiry to answer them.	To plan different types of scientific enquiries to answer questions. To identify scientific evidence that has been used to support or refute ideas or arguments.
Making Predictions 		To use results to make predictions for new values.	To use test results to make predictions.
Setting up Tests 	To perform simple tests.	To set up simple practical enquiries, comparative and fair tests.	To plan different types of scientific enquiries, including recognising and controlling variables where necessary. To use test results to set up further comparative and fair tests.
Observing & Measuring 	To observe closely, using simple equipment.	To make systematic and careful observations. To take accurate measurements using standard units. To use a range of equipment, including thermometers and data loggers.	To take measurements, using a range of scientific equipment, with increasing accuracy and precision. To take measurements, using a range of scientific equipment, taking repeat readings when appropriate.

Recording Data 	To gather and record data to help answer questions.	To record findings using simple scientific language. To record findings using simple drawings and labelled diagrams. To record findings using simple keys, bar charts, and tables.	To record data and results of increasing complexity using scientific diagrams and labels. To record data and results of increasing complexity using classification keys. To recording data and results of increasing complexity using tables, bar, scatter, and line graphs.
Interpreting and Communicating Results 	To use their observations and ideas to suggest answers to questions.	To gather, record, classify and present data in a variety of ways to help in answering questions. To report on findings from enquiries, including oral and written explanations and displays. To report on findings from enquiries, including presentations of results and conclusions. To use results to draw simple conclusions. To use straightforward scientific evidence to answer questions or to support their findings.	To report and present findings from enquiries, including conclusions, in oral and written forms such as displays and other presentations. To report and present findings from enquiries, including causal relationships, in oral and written forms such as displays and other presentations.
Evaluating 		To use results to make predictions for new values. To use results to suggest improvements and raise further questions. To identifying differences, similarities or changes related to simple scientific ideas and processes.	To report and present findings from enquiries, including explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.

Practical Work: Supporting Scientific Enquiry

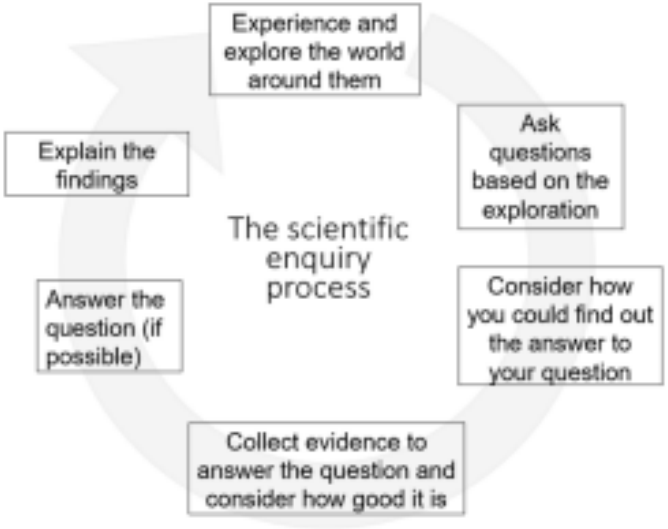
"Practical work forms an important part of a science education." Research review of the factors that influence the quality of science education, Ofsted, April 2021

Practical work is important for children to:

- build their conceptual understanding (substantive knowledge)
- develop the science skills they need to work as scientists and illustrate how scientific enquiry develops the body of scientific understanding (disciplinary knowledge)

Engaging in scientific enquiry not only provides the opportunity for children to learn about the scientific enquiry process (see opposite) but, as Ofsted's review states, also helps them to "learn how scientific knowledge becomes established through scientific enquiry."

However, not all practical work will be scientific enquiry, and it is important that we are clear about when they are engaged in scientific enquiry and when they are not. The key point to consider when determining whether practical work is scientific enquiry or not is whether there is a question that will be answered by gathering data. If so, it is probably scientific enquiry. If not, it is just practical work.



The National Curriculum identifies five types of scientific enquiry that children should engage in through the year.

Practical Work: Supporting Scientific Enquiry - Years 1-6 | PSEC (primary-science.co.uk)

EYFS and Key Stage 1 – Science Enquiry

5 Science Enquiry Types

Comparative and Fair Testing

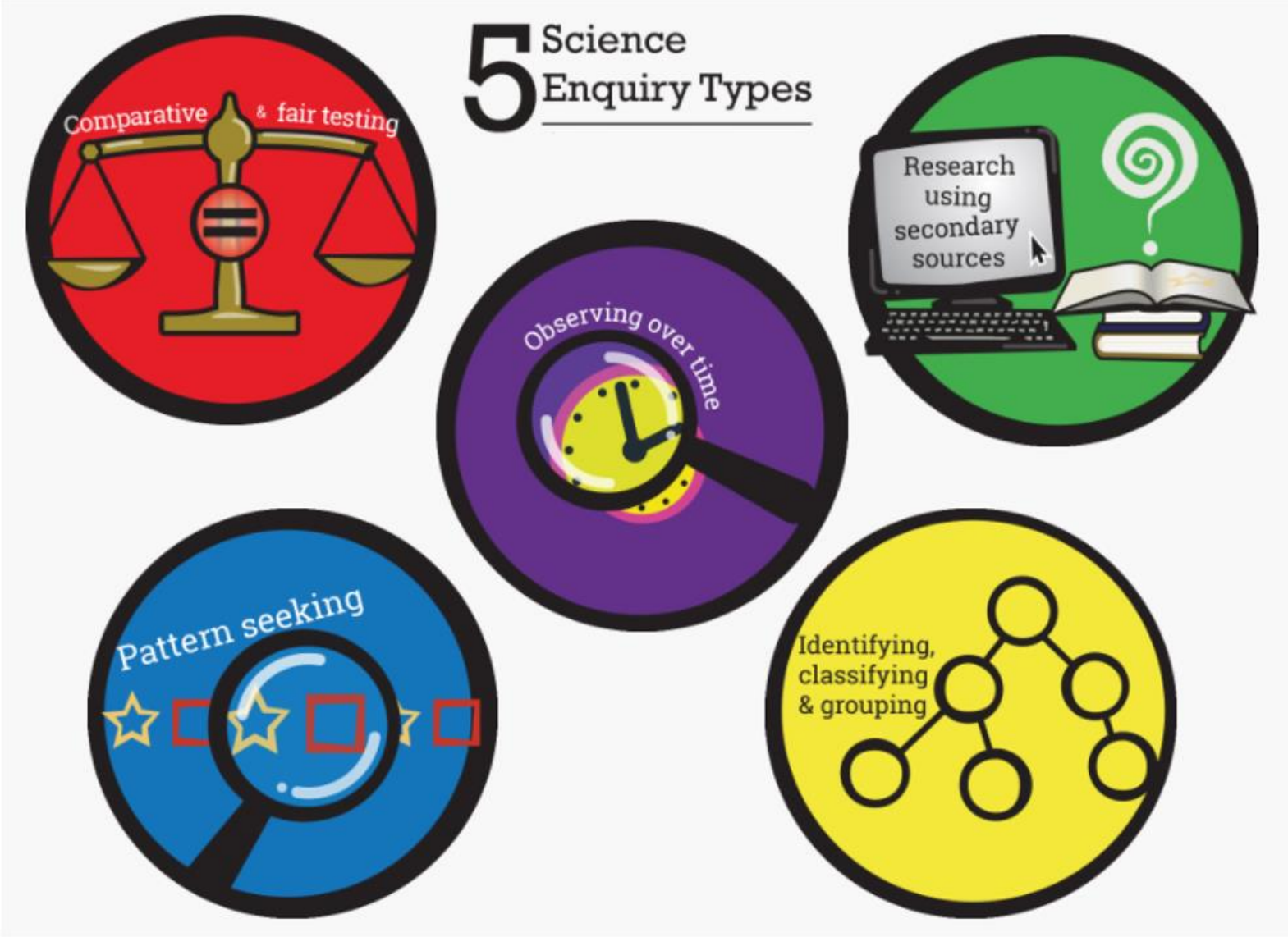
Researching using secondary sources

Pattern seeking

Observing over time

Identifying, classifying, and grouping

Key Stage 2 – Science Enquiry



Animals, including humans (Biology)

Year 1 & 2 Rotation A Autumn 1	Year 1 & 2 Rotation A Autumn 2	Year 1 & 2 Rotation A Spring 1	Year 1 & 2 Rotation B Spring 2	Year 3 & 4 Rotation A Autumn 2	Year 3 & 4 Rotation B Autumn 1	Year 5 & 6 Rotation A Spring 2	Year 5 & 6 Rotation B Autumn 2
Do people with long arms have long legs? (Pattern) Does the tallest person have the biggest hands? (Pattern) I can identify different smells/ tastes? (Comparative)	Can you sort these food items based on…? (Classify)	How can we sort these animals? (Classify) What do animals eat? (Research)	Can you sort these animals (Classify) How do caterpillars grow? (Observe) How do chicks grow? (Observe) Can you match animals to their young (Research)	Can you sort food based on nutrition? (Classify) Do all animals have skeletons? (Classify) Children generate questions for investigations: Do 'healthy' drinks have less sugar? (Pattern) Does brown bread have more fibre? (Pattern) Do people with long arms throw further? (Pattern) Can people with short legs jump higher? (Pattern) Can people with longer legs run faster? (Pattern) Which types of food contain which nutrients? (Research)	Can you identify different types of teeth (linking to simple functions)? (Classify) Can you recognise what eats plants and what eats animals by looking at their teeth? (Classify) What are the different parts of the digestive system (Children present what they've learned in different ways: create a model, write a song, write a story, create a PPT, etc.)? (Research) Can you construct a food chain to show what do different animals eat within a specific environment e.g. coral, polar, African grasslands? (Research)	Do pulse rates change before, during and after exercise? (Observe) Do older people have lower pulse rates? (Pattern) Do boys have higher pulse rates? (Pattern) Do different activities affect heart rate? (Comparative) What do you know about the circulatory system? (Research)	What questions do we have about…? (Research)

Evolution & Inheritance (Biology)

Year 5 & 6 Rotation A Autumn 1					
Can you classify a species of animals / plants? (Classify) Can you use different pieces of equipment, e.g. chopsticks, toothpicks, cutlery, to look for patterns linking the suitability of bird beaks for the available food e.g. rice, grapes, raisins? (Pattern)					

Living Things and their Habitats (Biology)

Year 1 & 2 Rotation A Summer 2	Year 1 & 2 Rotation B Summer 2	Year 3 & 4 Rotation A Summer 1	Year 3 & 4 Rotation B Summer 1	Year 5 & 6 Rotation A Spring 1	Year 5 & 6 Rotation B Spring 1
Is it alive or dead or never been alive? (Classify) Can you sort objects found in our environment? (Classify) Can you sort the minibeasts (Classify) Can you sort these plants? (Classify) Which animals can you find? (Observe) Which plants can you find? (Observe) Are there more daisies on the field or in the meadow? (Pattern) Where can we find more butterflies? (Pattern)	How can we sort these animals based on what they eat? (Classify) Which animals can we find? (Observe over time)	Based on the children's own criteria: Sort plants and animals that live in our local environment (Classify) Can you sort animals and plants by using a branching databases/dichotomous key? (Classify) Which living things are in our local environment at different times of the year? (Observe) Do animals with …. have ….? (Pattern) Do plants with …. have ….? (Pattern) What plants and animals live in wider environments e.g. polar, desert, jungle, etc? (Research)	What impact do global environmental issues have on living things? (Research)	Which animal has the longest lifecycle? (Classify) What grows first (roots/stem/ leaf/flower)? (Observe) How do bulbs grow? (Observe) Can we harvest bulbs? (Observe) How do strawberry/spider plants change through the year? (Observe) Children generate questions such as: Do larger mammals have longer gestation periods? (Pattern) Do smaller animals lay more eggs? (Pattern) How do gardeners asexually reproduce plants? (Research)	Can you use the Carl Linnaeus' system to classify animals? (Classify) Can you classify plants into flowering, mosses, ferns and conifers, based on specific characteristics (Classify) Can you create a branching database/dichotomous key to classify a set of living things? (Classify) Whate are the characteristics of a vertebrate/invertebrate group? (Research) What are the characteristics of flowering plants, mosses, ferns and conifers? (Research) What is the difference between bacteria, virus, and fungi? (Research) Are micro-organisms helpful or harmful? (Research)

Plants (Biology)

Year 1 & 2 Rotation A Summer 1	Year 1 & 2 Rotation B Autumn 1	Year 1 & 2 Rotation B Summer 1	Year 3 & 4 Rotation A Summer 2	Year 3 & 4 Rotation B Summer 2	
Can you much the seed/bulb to the flower? (Classify) How tall will this plant grow? (Observe) What will this seed grow into? (Observe) Do big seeds grow quicker? Taller? (Pattern) Where should I plant this seed (sun/shade)? (Research) How much should I water my plant? (Research)	How can we sort these leaves? (Classify) Do bigger plants have bigger leaves? (Pattern Seeking)	How can you sort the flowers? (Classify) Which flowers grow in the local environment? (Observe) Which plants have the biggest flowers? (Pattern)	How is water transported in plants? (Observe) How do flowers change over time? (Observe) What affects how plants grow e.g. more/less light/water, change in temperature, nutrients? (Pattern Seeking) What are the main functions of a plant? (Research)	Based on children's own criteria: How could we sort flowers (Classify) How do plants disperse their seeds? (Research) How are different plants pollenated? (Research)	

Materials, States of Matter & Rocks (Chemistry)

Year 1 & 2 Rotation A Spring 1	Year 1 & 2 Rotation B Autumn 2	Year 1 & 2 Rotation B Spring 1	Year 3 & 4 Rotation A Autumn 1	Year 3 & 4 Rotation B Spring 1	Year 5 & 6 Rotation A Autumn 2
How can you sort the different materials (Classify) Which material would you use to make a …? (Comparative)	What is this object made from? (Classify) Can you sort these materials based on their properties? (Classify) Which material is best for…? (Comparative)	Can you sort the materials which can be bent, twisted, stretched etc? (Classify) How can you change this material? (Classify)	Based on the children's own criteria: Can you sort solids / liquids (Classify) What happens when ice melts? (Observe) What happens when frozen liquids melt? (Observe) What affects the melting rate of chocolate (size of pieces, temperature of water, type of chocolate)? (Comparative) What affects the rate an 'ice pole' melts? (Comparative) What affects the rate of evaporation? (Comparative) What is the melting point of metals? (Research) What is the water cycle? (Children present what they've learned in different ways: create a model, write a song, write a story, create a PPT, etc.) (Research)	Based on the children's own criteria How can we sort these flowers? (Classify) How are soils similar / different? (Classify) How do soils separate into different layers in water? (Observe) Which is the hardest rock? (Comparative) Which rock is most absorbent? (Comparative) How quickly water runs through different types of soil? (Comparative) How are fossils formed? (Research)	Based on the children's own criteria: Sort materials samples of wood, metal, plastic, etc? (Classify) What happens when solids are added to liquids (classify materials based on the outcomes)? (Classify) What happens to metals in different liquids (Rusting)? (Observe) Which materials keep things warm/cold? (Comparative) Which material would be good for a bag for different purposes? (Comparative) Which material dissolves the quickest? (Comparative)

Seasonal Change, Earth & Space (Physics)

Year 1 & 2 Rotation A Throughout	Year 1 & 2 Rotation B Throughout	Year 5 & 6 Rotation B Spring 2				
Can you sort these objects (Classify) Do all trees lose their leaves in the Autumn? (Observe) Do trees have more leaves in Winter or Summer? (Pattern)	What is the weather like in...? (Observe) What clothes do we wear in...? (Observe) What time does it get dark? (Observe) Does it rain more in spring? (Pattern seeking)	Do shadows change over the course of a day? (Observe) What questions do we have about Earth and Space? (Research)				

Forces & Magnets (Physics)

Year 3 & 4 Rotation B Autumn 2	Year 5 & 6 Rotation B Autumn 1				
Based on the children's own criteria: How can we sort materials (leading towards metal/non-metal and magnetic/not magnetic)? (Classify) How can we sort toys (leading to what makes them move e.g. push/pull)? (Classify) How do objects move on different surfaces e.g. cars, spinning tops, wind-up/clockwork toys? (Comparative) How strong are magnets? (Comparative) How are magnets used in everyday life? (Research)	Which shoes are best for running? (Comparative) Which boat moves quicker across the water? (Comparative) What shape makes the best parachute? (Comparative) What are Heath Robinson and Rube Goldberg machines? (Research)				

Electricity (Physics)

Year 3 & 4 Rotation A Spring 1	Year 5 & 6 Rotation A Summer 1				
Based on the children's own criteria: Can you sort household appliances and/or toys (leading to electrical/not electrical, batteries/mains)? (Classify) Can you sort materials into insulators and conductors? (Classify)	What is the effect of adding more bulbs, cells, buzzers, motors to a circuit? (Comparative)				

Light & Sound (Physics)

Year 3 & 4 Rotation A Spring 2	Year 3 & 4 Rotation B Spring 2	Year 5 & 6 Rotation B Summer 1				
Can you sort the light sources (leading to man-made/natural)? (Classify) Can you sort materials (leading to reflective/non-reflective, transparent/translucent/opaque)? (Classify) Which material is most reflective? (Comparative) Which material is most transparent? (Comparative) How do you create different sizes and shapes of shadows? (Comparative)	Based on the children's own criteria: How can we sort musical instruments? (Classify) Which is the loudest musical instrument? (Comparative) Does volume change as distance away from a source increases? (Comparative) How do string telephones work? (Comparative) How does pitch change? (Using milk bottles, straw pipes, rulers, elastic band guitars) (Comparative)	Can you investigate the shape of shadows and link this to light travelling in straight lines? (Comparative)				

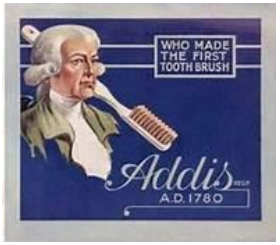
Science Progression – Vocabulary

Year Group	Year 1 and 2	Year 3 and 4	Year 5 and 6
Animals, including Humans.	Head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves. Names of animals experienced first-hand from each vertebrate group. Parts of the body including those linked to PSHE teaching (see joint document produced by the ASE and PSHE Association) Senses – touch, see, smell, taste, hear, fingers (skin), eyes, nose, ear, and tongue. Offspring, reproduction, growth, child, young/old stages (examples - chick/hen, baby/child/adult, caterpillar/butterfly), exercise, heartbeat, breathing, hygiene, germs, disease, food types (examples – meat, fish, vegetables, bread, rice, pasta) N.B. The children need to be able to name and identify a range of animals in each group e.g. name specific birds and fish. They do not need to use the terms mammal, reptiles etc. or know the key characteristics of each, although they will probably be able to identify birds and fish, based on their characteristics. The children also do not need to use the words carnivore, herbivore, and omnivore. If they do, ensure that they understand that carnivores eat other animals, not just meat. Although we often use our fingers and hands to feel objects, the children should understand that we can feel with many parts of our body.	Nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, joints, support, protect, move, skull, ribs, spine Digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, nutrients, large intestine, rectum, anus, teeth, incisor, canine, molar, premolars, herbivore, carnivore, omnivore, producer, predator, prey, food chain	Puberty – the vocabulary to describe sexual characteristics. Heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles, cycle, circulatory system, diet, exercise, drugs, lifestyle

Evolution & Inheritance			Offspring, sexual reproduction, vary, characteristics, suited, adapted, environment, inherited, species, fossils
Living Things and their Habitats	Living, dead, never been alive, suited, suitable, basic needs, food, food chain, shelter, move, feed Names of local habitats e.g. pond, woodland etc. Names of micro-habitats e.g. under logs, in bushes etc.	Classification, classification keys, environment, habitat, human impact, positive, negative, migrate, hibernate	Life cycle, reproduce, sexual, sperm, fertilises, egg, live young, metamorphosis, asexual, plantlets, runners, bulbs, cuttings. Vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, insects, spiders, snails, worms, flowering, non-flowering
Plants	Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud Names of trees in the local area Names of garden and wild flowering plants in the local area Light, shade, sun, warm, cool, water, grow, healthy	Photosynthesis, pollen, insect/wind pollination, seed formation, seed dispersal (wind dispersal, animal dispersal, water dispersal)	
Materials, States of Matter, Rocks	Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, 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. Opaque, transparent, and translucent, reflective, nonreflective, flexible, rigid Shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching. Names of materials – wood, metal, plastic, glass, brick, rock, paper, cardboard	Solid, liquid, gas, state change, melting, freezing, melting point, boiling point, evaporation, temperature, water cycle. Rock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, absorb water, soil, fossil, marble, chalk, granite, sandstone, slate, soil, peat, sandy/chalk/clay soil	Thermal/electrical insulator/conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible/non-reversible change, burning, rusting, new material
Seasonal Change, Earth & Space	Weather (sunny, rainy, windy, snowy etc.) Seasons (winter, summer, spring, autumn) Sun, sunrise, sunset, day length		Earth, Sun, Moon, (Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune), spherical, solar system, rotates, star, orbit, planets

Electricity		Electricity, electrical appliance/device, mains, plug, electrical circuit, complete circuit, component, cell, battery, positive, negative, connect/connections, loose connection, short circuit, crocodile clip, bulb, switch, buzzer, motor, conductor, insulator, metal, non-metal, symbol. N.B. Children in Year 4 do not need to use standard symbols for electrical components, as this is taught in Year 6.	Circuit, complete circuit, circuit diagram, circuit symbol, cell, battery, bulb, buzzer, motor, switch, voltage N.B. Children do not need to understand what voltage is but will use volts and voltage to describe different batteries. The words “cells” and “batteries” are now used interchangeably.
Forces		Force, push, pull, twist, contact force, non-contact force, magnetic force, magnet, strength, bar magnet, ring magnet, button magnet, horseshoe magnet, attract, repel, magnetic material, metal, iron, steel, poles, north pole, south pole	Force, gravity, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears
Light & Sound		Light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous. Sound, source, vibrate, vibration, travel, pitch (high, low), volume, faint, loud, insulation	As for Year 3/4 - Light, plus straight lines, light rays

Scientists Across the Curriculum - KS1 (Year 1 & 2)

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1 & 2 Rotation A	**Animals, including humans. (Human body & Senses)**	**Animals, including humans. (Health & Hygiene)**	**Animals, including humans. (Common Animals)**	**Uses of Everyday Materials (Choosing Materials)**	**Plants (How plants grow)**	**Living Things & their habitats (Habitats)**
 Dr Angie Burnett Plant Biologist	 Robert Winston Professor of Human Science	 Florence Nightingale Pioneer of modern nursing in Great Britain	 Steve Backshall Naturalist & Explorer	 William Addis Toothbrush Inventor	 Marie Clark Taylor Botanist	 Prem Singh Gill Polar Scientist
Year 1 & 2 Rotation B	**Plants (Trees)**	**Everyday Materials (Material Properties)**	**Uses of everyday Materials (Change)**	**Animals, including humans. (Animal Offspring)**	**Plants (Flowering plants)**	**Living Things & their habitats / Animals, including humans.**
 Holly Green Meteorologist	 Emma Williams Botanist	 Charles Macintosh Raincoat and waterproof materials	 Dr Pearl Agyakwa Materials scientist	 Chris Packham-Animal Conservationist & Naturalist	 Beatrix Potter Author & Botanist	 Dawood Qureshi Marine Biologist

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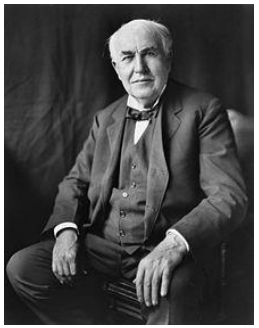
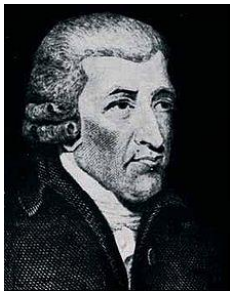
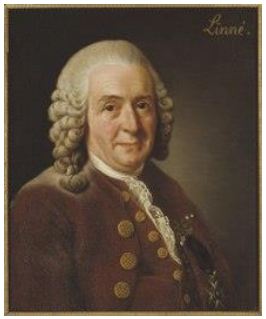
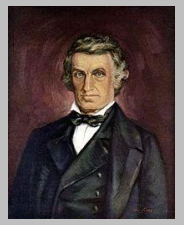
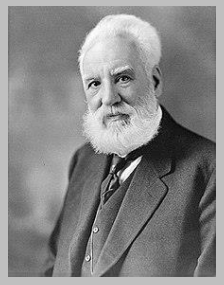
Scientists across the Curriculum | PSEC (primary-science.co.uk)

Scientists Across the Curriculum - LKS2 (Year 3 & 4)

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3 & 4 Rotation A	**States of Matter**  Anders Celsius Astronomer invented the degrees Celsius temperature scale	**Animals, including humans. (Nutrition, Skeleton & Muscles)**  Marie Curie Physicist - invented the first mobile x-ray.	**Electricity**  Thomas Edison Inventor including the light bulb	**Light**  John Walker Friction match inventor from Stockton.	**Living things and their habitats.**  Dr Jane Goodall Primatologist	**Plants (Life & Growth)**  Carl Linnaeus Biologist
Year 3 & 4 Rotation B	**Animals, including humans. (Digestion & Teeth)**  William Beaumont Surgeon / Research on human digestion	**Forces & Magnets**  Sir Isaac Newton Developed the theory of gravity.	**Rocks**  Mary Anning Fossil Collector	**Sound**  Alexander Graham Bell Scientist - Invented the telephone.	**Living things and their habitats (Environments Change)**  Dr Juliette Jackson Coastal Researcher	**Plants (Lifecycle of a flowering plant)**  Dr Kelsey Byers Evolutionary Biologist

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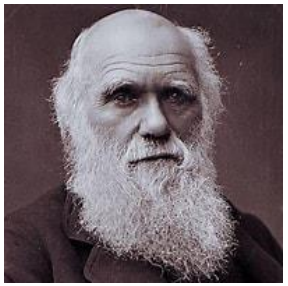
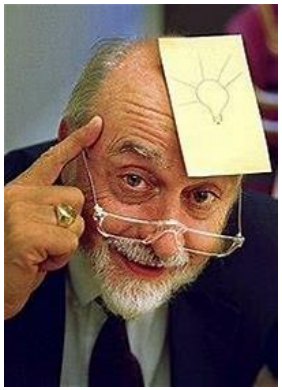
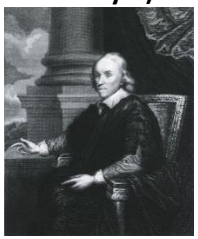
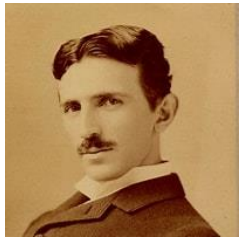
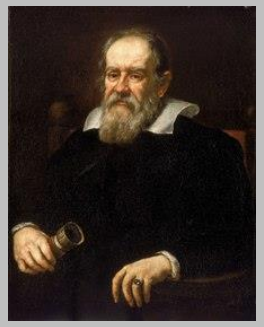
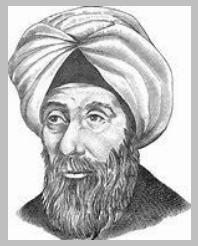
Scientists Across the Curriculum - UKS2 (Year 5 & 6)

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 5 & 6 Rotation A	**Evolution & Inheritance**  Charles Darwin Biologist / Theory of Evolution	**Properties & Change of Materials**  Arthur Fry Inventor of Post it Note	**Living things & their habitats (Lifecycles)**  David Attenborough Naturalist & TV Presenter	**Animals, including humans. (Circulatory System & Lifestyle)**  William Harvey Doctor who discovered the function of the heart as a pump	**Electricity**  Nikola Tesla Electrical Engineer	**Puberty / KS3 Ready Investigations**
Year 5 & 6 Rotation B	**Forces**  Danial Azahan Mechanical Engineer	**Animals, including humans. (Birth to Old Age)**  Jack Sharkey Sports Scientist	**Living things and their habitats**  Carl Linnaeus Biologist	**Earth & Space**  Galileo Galilei Astronomer	**Light**  Alhazen Discoveries in optics and knowing light affect our eyes.	**Puberty / KS3 Ready Investigations**

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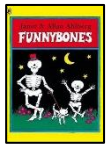
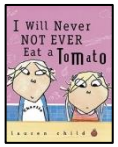
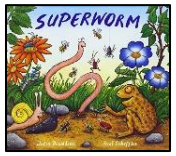
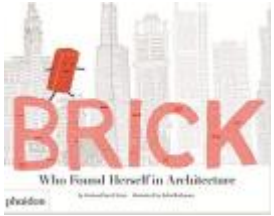
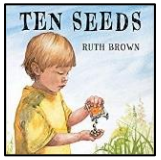
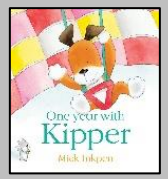
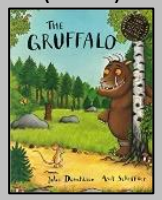
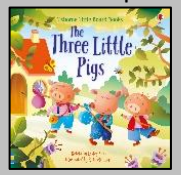
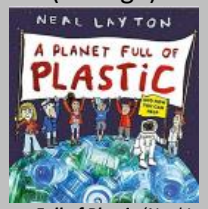
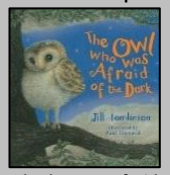
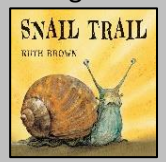
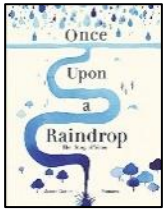
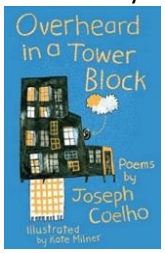
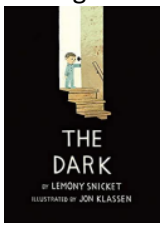
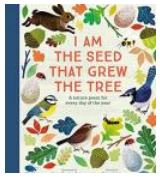
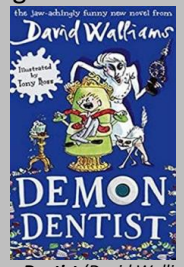
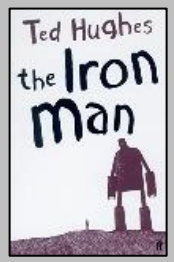
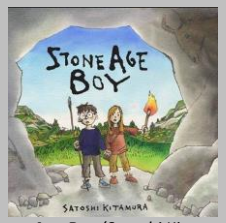
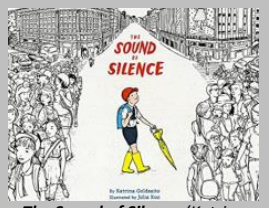
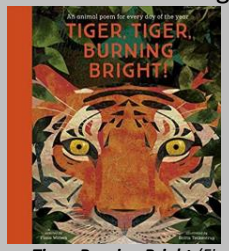
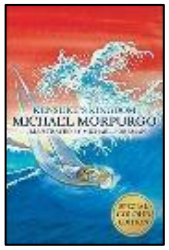
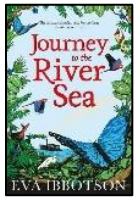
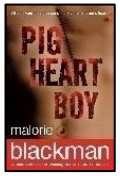
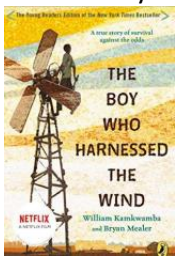
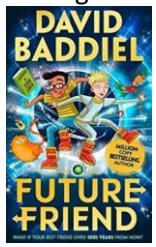
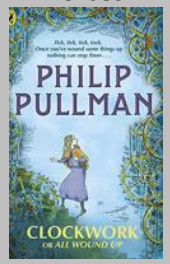
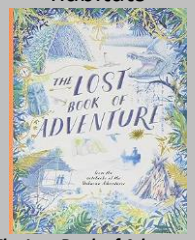
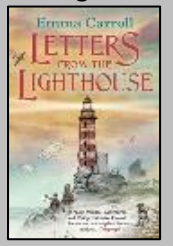
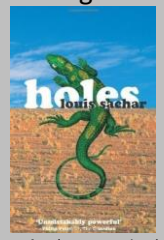
Scientists across the Curriculum | PSEC (primary-science.co.uk)

Literacy in Science

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1 & 2 Rotation A	Animals, including humans. (Human body & Senses)	Animals, including humans. (Health & Hygiene)	Animals, including humans. (Common Animals)	Uses of Everyday Materials (Choosing Materials)	Plants (How plants grow)	Living Things & their habitats (Habitats)
 ***Poems About Seasons*** *(Brian Moses & Ellie Jenkins)*	 ***Funny bones*** *(Janet and Allan Ahlberg)*	 ***I Will Never Not Ever Eat a Tomato*** *(Lauren Child)*	 **Superworm** (Julia Donaldson & Axel Scheffler)	 ***Brick Joshua*** *(David Stein & Julia Rothman)*	 ***Ten Seeds*** *(Ruth Brown)*	 ***After the Storm*** *(Nick Butterworth)*
Year 1 & 2 Rotation B	Plants (Trees)	Everyday Materials (Material Properties)	Uses of everyday Materials (Change)	Animals, including humans. (Animal Offspring)	Plants (Flowering plants)	Living Things & their habitats / Animals, including humans.
 ***One Year with Kipper*** *(Mick Inkpen)*	 ***The Gruffalo*** *(Julia Donaldson)*	 ***Three Little Pigs*** *(Lesley Sims)*	 ***A Planet Full of Plastic*** *(Neal Layton)*	 ***The Owl Who Was Afraid of the Dark*** *(Jill Tomlinson*	 ***The Tiny Seed*** *(Eric Carle)*	 ***Snail Trail*** *(Ruth Brown)*
Year 3 & 4 Rotation A	States of Matter	Animals, including humans. (Nutrition, Skeleton & Muscles)	Electricity	Light	Living things and their habitats.	Plants (Life & Growth)
 ***Once Upon a Raindrop: The Story of Water*** *(James Carter)*	 ***Charlie and the Chocolate Factory*** *(Roald Dahl)*	 ***Overheard in a Tower Block*** *(Joseph Coelho & Kate Milne)*	 ***The Dark*** *(Lemony Snicket & Jon Klassen)*	 ***Charlotte's Web*** *(E.B. White)*	 ***I Am the Seed that Grew the Tree*** *(Fiona Waters & Fran Preston-Gannon)*

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3 & 4 Rotation B	Animals, including humans. (Digestion & Teeth)  ***Demon Dentist*** *(David Walliams & Tony Ross)*	Forces & Magnets  ***The Iron Man*** *(Ted Hughes)*	Rocks  ***Stone Age Boy*** *(Satoshi Kitamura)*	Sound  ***The Sound of Silence*** *(Katrina Goldsaito & Julia Kuo)*	Living things and their habitats (Environments Change)  ***Tiger, Tiger, Burning Bright*** *(Fiona Waters & Britta Teckentrup)*	Plants (Lifecycle of a flowering plant)  ***The Night Flower*** *(Lara Hawthorne)*
Year 5 & 6 Rotation A	Evolution & Inheritance  ***Charles Darwin's on The Origin of Species*** *(Sabina Radeva)*	Properties & Change of Materials  ***Kensuke's Kingdom*** *(Michael Morpurgo)*	Living things & their habitats (Lifecycles)  ***Journey to the River Sea*** *(Eva Ibbotson)*	Animals, including humans. (Circulatory System & Lifestyle)  ***Pig-Heart Boy*** *(Malorie Blackman)*	Electricity  ***The Boy who Harnessed the Wind: Young Readers' Edition (****William Kamkwamba)*	Puberty / KS3 Ready Investigations  ***Future Friend*** *(David Baddiel)*
Year 5 & 6 Rotation B	Forces  ***Clockwork*** *(Philip Pullman)*	Animals, including humans. (Birth to Old Age)  ***Goodnight Mr Tom*** *(Michelle Magorian)*	Living things and their habitats  ***The Lost Book of Adventure*** *(Unknown)*	Earth & Space  ***The Skies Above My Eyes*** *(Charlotte Guillain & Yuval Zommer)*	Light  ***Letters from the Lighthouse*** *(Emma Carroll)*	Puberty / KS3 Ready Investigations  ***Holes*** *(Louis Sachar)*

There is a wide range of both fiction and non-fiction texts in school that pupils may find interesting to read at school or at home.