Brede Primary School

SCIENCE CURRICULUM

Science

Intent Statement:

Our Science curriculum aims to incorporate our Brede Golden Threads (Responsible, Inquisitive, confident, inspired, respectful) whilst delivering a diverse and progressive curriculum. We aim to support each pupil to develop a responsibility for their learning, foster a sense of excitement and curiosity about nature and an understanding of how the scientific community contributes to our society. We want our pupils to develop an intricate knowledge of Biology, Chemistry and Physics, but also adopt a broad range of skills in working scientifically and beyond. The scheme of work is inclusive and meaningful and aims to encourage critical thinking. We wish to empower pupils to question the 'hows and whys' of the world around them and consider how to be respectful when undertaking investigations.

To enable pupils to understand these philosophies, we have clearly outlined the **Age Related Statutory Coverage outlined by the National Curriculum** and combined these with the Kapow Primary Working Scientifically Enquiry Cycle (see diagram below) to inspire our Science curriculum. This cycle promotes pupils to Question, Plan & Predict, Observe, test & Measure, Record and Conclude & Analyse. Out Curriculum ensures pupils experience both substantive and disciplinary knowledge in clear, aspirational steps. Additionally, we have outlined the **Scientific concepts** that pupils will explore throughout each topic that are necessary to gain scientific confidence.

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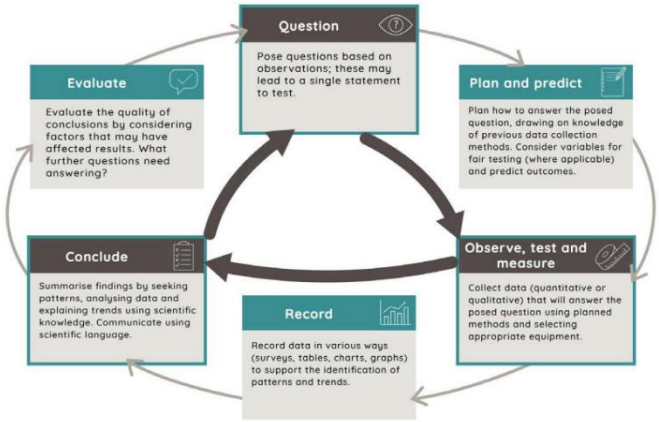

National Curriculum Aims:

The national curriculum for science aims to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future

Age related Statutory Coverage:

Biology				Chemistry			Physics
	EYFS	Key Stage One Learning		Key Stage Two Learning			
	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

Animals, including humans	ELG- The Natural World: 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.	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.	Notice that animals, including humans, have offspring which grow into adults. Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. Identify that humans and some other animals have skeletons and muscles for support, protection and movement.	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.	Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. Describe the ways in which nutrients and water are transported within animals, including humans.
Living things and their habitats	ELG- The Natural World: 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.		Explore and compare the differences between things that are living, dead, and things that have never been alive. Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. Identify and name a variety of plants and animals in their habitats, including microhabitats. Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.		Recognise that living things can be grouped in a variety of ways. Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. Recognise that environments can change and that this can sometimes pose dangers to living things.	Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. Describe the life process of reproduction in some plants and animals.	Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. Give reasons for classifying plants and animals based on specific characteristics.
Plants	ELG- The Natural World: Explore the natural world around them, making	Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.	Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need	Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.			

	observations and drawing pictures of animals and plants.	Identify and describe the basic structure of a variety of common flowering plants, including trees. 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.	water, light and a suitable temperature to grow and stay healthy.	Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant. Investigate the way in which water is transported within plants. Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.			
Rocks:				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.			
Everyday materials		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.	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 everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. Demonstrate that dissolving, mixing and changes of state are reversible changes. Explain that some changes result in the formation of	

						new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.	
Evolution and Inheritance							Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.
States of matter	ELG- The Natural World: Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.				Compare and group materials together, according to whether they are solids, liquids or gases. Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C). Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.		
Seasonal Changes	ELG- The Natural World: Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.	Seasonal Changes: Observe changes across the four seasons. Observe and describe weather associated with the seasons and how day length varies. Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Identify and name a variety of common animals that are carnivores, herbivores and omnivores.					

Earth and Space						Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. Describe the movement of the Moon relative to the Earth. Describe the Sun, Earth and Moon as approximately spherical bodies. Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.	
Light				Recognise that they need light in order to see things and that dark is the absence of light. Notice that light is reflected from surfaces. Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. Recognise that shadows are formed when the light from a light source is blocked by an opaque object. Find patterns in the way that the size of shadows change.			Recognise that light appears to travel in straight lines. Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye. Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.
Sound					Sound: Identify how sounds are made, associating some of them with something vibrating. Recognise that vibrations from sounds travel through a medium to the ear. Find patterns between the pitch of a sound and features of the object that produced it. Find patterns between the volume of a sound and the strength of the vibrations that produced it. Recognise that sounds get fainter as the distance from the sound source increases.		
				Compare how things move on different surfaces.		Explain that unsupported objects fall towards the Earth because of the force of	

Forces				Notice that some forces need contact between two objects, but magnetic forces can act at a distance. Observe how magnets attract or repel each other and attract some materials and not others. Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials. Describe magnets as having two poles. Predict whether two magnets will attract or repel each other, depending on which poles are facing.		gravity acting between the Earth and the falling object. Identify the effects of air resistance, water resistance and friction, that act between moving surfaces. Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	
Electricity					Identify common appliances that run on electricity. Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors.		Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. Use recognised symbols when representing a simple circuit in a diagram.
Age related Non-Statutory Coverage:							
Scientists and Inventors		Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles,	Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and	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. Identify that humans and some other animals have skeletons and muscles for support, protection and movement. Compare and group together different kinds of rocks on the	Recognise that environments can change and that this can sometimes pose dangers to living things. Identify the different types of teeth in humans and their simple functions. Compare and group materials together, according to whether they are solids, liquids or gases.	Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. 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.	Give reasons for classifying plants and animals based on specific characteristics. Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. Recognise that living things have changed over time and that fossils

		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. 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. Observe and describe weather associated with the seasons and how day length varies.	name different sources of food. Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. 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 about people who have developed new materials.	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; Notice that light is reflected from surfaces. Observe how magnets attract or repel each other and attract some materials and not others.	Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C). Recognise that vibrations from sounds travel through a medium to the ear. Identify common appliances that run on electricity. Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.	Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. Find out about the work of naturalists and animal behaviourists. Describe how scientific ideas have changed over time.	provide information about living things that inhabited the Earth millions of years ago. Use recognised symbols when representing a simple circuit in a diagram.

Scientific concepts and working scientifically		
EYFS		
To recognise the power of explanation.	**To understand how science can be used to explain what is occurring.**	**To develop a sense of excitement and curiosity through Scientific enquiry.**
Begin to describe processes in common language, but they should also be familiar with, and use, some technical terminology.	*To complete this by applying their mathematical knowledge to their understanding of science.*	*Competence in scientific enquiry by asking questions, and practicing skills in observing, collecting, analysing, evaluating and communicating information.*
Working Scientifically- Question Plan & Predict Observe, test & Measure Record Conclude & Analyse	ELG: Listening, Attention and Understanding. • Listen attentively and respond to what they hear with relevant questions, comments and actions during whole class discussions and small group interactions • Make comments about what they have heard and ask questions to clarify their understanding; • To draw simple observations. ELG: Speaking. • Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.	

	• Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate.

KS1		
To recognise the power of rational explanation.	**To understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.**	**To develop a sense of excitement and curiosity about natural phenomena through Scientific enquiry.**
Using the above to describe associated processes and key characteristics in common language, but they should also be familiar with, and use some technical terminology accurately.	*To complete this by applying their mathematical knowledge to their understanding of science, including collecting, presenting and analysing data.*	*Competence in scientific enquiry by asking questions, and the application of skills in observing, collecting, analysing, evaluating and communicating information.*
Question	• Exploring the world around them and raising their own simple questions. • Recognising there are different types of enquiry (ways to answer a question). • Responding to suggestions of how to answer their questions.	
Plan & Predict	• Beginning to recognise whether a test is fair and alter planning accordingly. • Ordering a simple method. • With support, deciding if suggested observations are suitable. • Suggesting what might happen, often justifying with personal experience.	
Observe, test & Measure	• Using their senses to describe, in simple terms, what they notice or what has changed. • Using non-standard units to measure and compare. • Beginning to use standard units to measure and compare • Beginning to use simple measuring equipment to make approximate measurements. • Reading simple numbered scales.	
Record	• Drawing and labelling simple diagrams. • Using a prepared table to record results including; numbers, simple observations and tally frequency. • Grouping based on visible characteristics. • Organising questions to create a simple classification key.	
Conclude & Analyse	• Representing data using pictograms and block charts. • Using their results to answer simple questions. • Beginning to recognise when results or observations do not match their predictions. • Beginning to recognise whether a test is fair or not.	

Lower KS2

To recognise the power of rational explanation.	To understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.	To develop a sense of excitement and curiosity about natural phenomena through Scientific enquiry.
Using the above to describe associated processes and key characteristics in common language, but they should also be familiar with, and use, technical terminology accurately and precisely.	*To complete this by applying their mathematical knowledge to their understanding of science, including collecting, presenting and analysing data.*	*Competence in scientific enquiry by asking questions, and the application of skills in observing, collecting, analysing, evaluating and communicating information.*
Question	• To raise further questions during the enquiry process. • Consider what makes a testable question. • Begin to recognise that there are different types of enquiry and that they are suitable for different questions. • Begin to make suggestions about how different questions could be answered.	
Plan & Predict	• Planning a simple method, verbally and in writing. • Beginning to write a simple method in numbered steps. • Selecting and beginning to decide what simple equipment might be used to aid observations and measurements. • Select from options which variables will be changed, measured and controlled. • Making predictions about what they think will happen by using scientific knowledge and/or personal experience.	
Observe, test & Measure	• Use senses to describe, in more detail and with simple scientific vocabulary, what they notice or what has changed. • Using standard units to measure and compare. • Using measuring equipment with increasing accuracy. • Reading scales with unmarked intervals between numbers.	
Record	• Beginning to draw more scientific diagrams by using some standard symbols, drawing in 2D to produce simple line diagram and labelling with more scientific vocabulary. • Using a prepared table to record results including more detailed observations. • Using tables with more than two columns. • Beginning to design simple results tables..	
Conclude & Analyse	• Representing data using bar chart and drawing bars with greater accuracy. • Writing a conclusion to summarise findings using simple scientific vocabulary. • Beginning to suggest how one variable may have affected another. • Identifying data that does not fit a pattern (anomalous data). • Recognising when results or observations do not match their predictions. • Beginning to identify steps in the method that need changing and suggest improvements. • Beginning to identify new questions that would further the enquiry.	

Upper KS2

To recognise the power of rational explanation.	To understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.	To develop a sense of excitement and curiosity about natural phenomena through Scientific enquiry.
Using the above to describe associated processes and key characteristics in common language, but they should also be familiar with, and use, technical terminology accurately and precisely.	*To complete this by applying their mathematical knowledge to their understanding of science, including collecting, presenting and analysing data.*	*Competence in scientific enquiry by asking questions, and the application of skills in observing, collecting, analysing, evaluating and communicating information.*
Question	• Raising questions throughout the enquiry process. • Identifying testable questions. • Selecting the most appropriate enquiry method to answer questions and give justification.	
Plan & Predict	• Suggesting which variables will be changed, measured and controlled. • Making and explaining decisions about what observations to make and how long to make them for. • Writing a method including detail about how to ensure control variables are kept the same • Writing a method that considers reliability by planning repeated readings. • Suggesting the most appropriate equipment to make observations and measurements and justifying their choices. • Making increasingly scientific predictions by using previous scientific knowledge, language and evidence to inform their predictions.	
Observe, test & Measure	• Using their senses to describe, in detail and with a broader range of scientific vocabulary, what they notice or what has changed. • Using standard units to measure and compare with increasing precision (decimals). • Reading a wider variety of scales with unmarked intervals between numbers.	
Record	• Drawing scientific diagrams by using a wider range of standard symbols, drawing with increasing accuracy and labelling with a broader range of scientific vocabulary. • Annotating diagrams to explain concepts and convey opinions. • Using tables with columns that allow for repeat readings. • Designing results tables with increasing independence with consideration of headings to tables, including units and variables where applicable. • Calculating the mean average • Representing data by using line graphs and scatter graphs, plotting points with greater accuracy.	
Conclude & Analyse	• Writing a conclusion to summarise findings using increasingly complex scientific vocabulary. • Suggesting with increasing independence how one variable may have affected another. • Quoting relevant data as evidence of relationships. Identifying anomalies in repeat data and excluding results where appropriate. • Comparing individual, class and/or model data to the prediction and recognising when they do not match. • Using identified patterns to predict new values or trends. • Identifying steps in the method that need changing and suggesting improvements. • Identifying which variables were difficult to control and suggesting how to better control them. Commenting on the degree of trust by also reflecting on, accuracy (human error with equipment), reliability (repeating results) and sources of information (e.g. websites, books). • Posing new questions in response to the data that would extend the enquiry. • Deciding what data to collect to further test direct relationships.	

Key vocabulary

EYFS	KS1		Lower KS2		Upper KS2	
acorns	object	exercise	rock	decay	sieve	light rays
autumn	material	vitamins	metamorphic	digestion	filter	distort
conkers	hard	portion	rock	enamel	evaporate	absorb
fox	soft	balanced	igneous rock	plaque	polymers	transmit
harvest	stretchy	carbohydrate	permeable	stomach	dissolve	spectrum
hedgehog	stiff	proteins	decay	intestine	distilling	variance
pine cones	bendy	fats	durable	omnivore	separate	obstruct
pumpkins	rough	sugars	absorb	oesophagus	solution	refraction
hibernate	humidity	Solid	proximity	solid	chemical change	reflection
leaves	cloudy	absorbent	ultraviolet	liquid	physical change	variation
woodland	pouring	waterproof	concave	gas	particle	offspring
squirrel	droplet	man-made	convex	melting	substance	ancestor
wild	crystal	suitable	reflect	freezing	reversible	natural selection
animal	blizzard	properties	transparent	evaporation /	irreversible	fossilisation
season	shiver	forces	translucent	condensation	formation	decompose
spider	clear	material	opaque	transpiration /	reaction	sediment
beak	land	push/pull/	protect	precipitation	universe	inherit
bird	air	twist/bend/squash/stretch	absence	eardrum	orbit	adaptation
egg	sea	suitable	reflect	sound waves	solar system	traits
feathers	push	habitat	enter	decibel	axis	evolve
plant-eater	pull	shelter	signal	frequency	spherical	species
meat-eater	surface	continents	brain	muffle	revolve / rotate	static electricity
mammal	height	classification	detect	vibration	gravitational pull	charge
camouflage	carnivore	offspring	iron	vocal chords	solar / lunar eclipse	electron
reptile	omnivore	organism	attract	pitch	air resistance	insulator
scaly	herbivore	germinate	repel	food chain/web	water resistance	conductor
air	identify	require	magnetic	consumer	up thrust	short circuit
calf	predator	dormant	needle	producer	friction	fuse
cow	construct	shade	pendulum	prey	newton	electromagnet
eat	responsibility	condition	force	predator	mass	symbol
farm	grouping	moist	Poles	environment	lever / pulley	voltage
food	non-living	produce	Gravity	ecosystem	fulcrum	classify
grow	living	photosynthesis	vascular	interdependent	gestation	identify
lamb	warmth	protect	phloem	electricity	sexual	conditions
plant	evergreen	planet	spore	electron	asexual	microorganism
seed	deciduous	environment	sucrose	battery	pollination	kingdom
sheep	bud	habitat	starch	motor	lifecycle	vertebrate
shop	leaf	impact	fertilisation	bulb	offspring	invertebrate
sunlight	branch	conserve	transpiration	circuit	naturalist	vascular
warmth	root	difference	respiration	switch	fertilisation	non-vascular
water	stem	role	bone	insulator / conductor	puberty	circulation
beach	bloom	changes	x-ray	habitat	reproduce	blood vessels

gills ocean starfish tail crab rock pool fin sea fish seashore	blossom bright vegetation new-born flower swelter rays grouping identify	suitable micro-habitat food-chain classification offspring organism microhabitat shoreline shells	tendon cartilage ligament reflex joint hollow	ecology bacteria reintroduce emission pesticide woodland	adolescence hormone chromosome dormant development stages	pulse BPM respiration plasma blood cells platelets digestion

Hedgehogs- Reception					
CYCLE A/B (2023/2025)					
Term 1 and 2		**Term 3 and 4**		**Term 5 and 6**	
A variety of Scientific concepts are taught throughout each of the following topics:					
Marvellous Me	**Exploring Autumn**	**Animal Safari**	**Long Ago**	**Ready, Steady, Grow**	**On the Beach**

Rabbits- Year 1 and 2					
CYCLE A (2023/2024)					
Term 1 and 2		**Term 3 and 4**		**Term 5 and 6**	
Seasonal changes	Forces and Magnets	Living things in their habitats	Using our senses	Materials – Shaping Up	Plant detectives
CYCLE B (2024-2025)					
Term 1 and 2		**Term 3 and 4**		**Term 5 and 6**	
Everyday Materials	Science and inventors	Materials	Animals including humans	Plants	Plant detectives

Foxes- Year 3 and 4					
CYCLE A (2023-2024)					
Term 1 and 2		**Term 3 and 4**		**Term 5 and 6**	
States of mater	Forces	Animals including humans	Living things in their habitats	Sound	Scientists and Inventors
CYCLE B (2024-2025)					
Term 1 and 2		**Term 3 and 4**		**Term 5 and 6**	
Electricity	Light	Animals including humans	Plants	Rocks	Scientists and Inventors

Owls- Year 5 and 6					
CYCLE A (2023-2024)					
Term 1 and 2		**Term 3 and 4**		**Term 5 and 6**	
Forces	Properties and changes of materials	Marvellous mixtures	Animals including humans	Scientists and inventors	Evolution and inheritance
CYCLE B (2024-2025)					
Term 1 and 2		**Term 3 and 4**			
Electricity	Space	Living things in their habitats	Living things in their habitats	Animals including humans	Light

CYCLE A

<table>
<tr><td>Year group/ Topic</td><td colspan="4">Foxes (Year 3 & 4) Animals Including Humans (Year 3 Unit)</td></tr>
<tr><td>Unit Sequence</td><td colspan="4">In previous years, pupils would have described and compared the structure of a variety of common animals. They will have explored the basic parts of the human body linking it to the senses and be able to explain that humans have offspring that grow into adults. Pupils will be confident describe the basic needs of animals, including humans, for survival and the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.

This unit focuses on nutrition and the role of the skeletons in animals.</td></tr>
<tr><td>Substantive Knowledge:</td><td colspan="2">• To talk about what animals and humans need to stay healthy, showing an understanding of the food groups and the nutrients humans need for a healthy diet and why we need them.
• To explain that animals including humans need the correct types and amount of nutrition and they cannot make their own food.
• To consider why different animals require a different balance of nutrients and can talk confidently about what the information on food labels tells us.
• To confidently describe the features and advantages and disadvantages of different types of skeletons, discussing how they support movement.
• To name the main parts of the human skeleton.
• To give a simple explanation of how muscles work.
• I can explain some functions of skeletons and muscles in animals and humans.</td><td>Working Scientifically-

Question
Plan & Predict
Observe, test & Measure
Record
Conclude & Analyse</td><td>• To discuss what animals need to stay healthy and consider what makes a testable question.
• To help decide how to set up a test about the human body that is fair, including making decisions about what measurements to take.
• To group and classify foods into food groups and identify the nutrients that different foods provide.
• To group and classify animal skeletons and can use scientific vocabulary to talk about animal skeletons.
• To present data from food labels in a table to help in answering questions.
• To draw simple conclusions from their results.
• To show their understanding of a process by using scientific language and a labelled diagram.</td></tr>
<tr><td>Vocabulary</td><td>bone
x-ray
skeleton</td><td colspan="2">cartilage
tendon
ligament</td><td>reflex
joint
hollow</td></tr>
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