Frogwell Primary School

SCIENCE CURRICULUM PROGRESSION

EYFS Early Learning Goal	LG: The Natural World Children at the expected level of development will: • 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.		
Outcome **based on the 3 Key Questions**	**Term 1**	**Term 2**	**Term 3**
	Seasons – Autumn **Humans**	**Seasons – Winter**	**Materials – How to keep warm**
	I know leaves fall off the trees. I know the weather starts to get colder in Autumn. I can wear a raincoat and a warm jumper.	I know it gets darker and colder.	I can name fabric, glass, metal, wood, plastic and rock (in my environment)
	I can name head, chest, stomach, neck, arm, leg, foot, hand.	I must wear warm clothes.	I can use words to describe different materials such as hard, soft, rough, smooth, strong and bendy.
	I can use my eyes to see, my ears to hear and my skin to touch.	I know it might snow.	
	Term 4	**Term 5**	**Term 6**
	Seasons - Spring	**Animals**	**Seasons – Summer** **Plants**
	I know that some baby animals are born	I can name some farm animals, pets and wild animals.	I know the weather is warm
	I know that plants begin to grow	I can name parts of an animal; body, head, beak, wings, claws, tail, legs, fins.	I know how to be safe in the sun.
	I know that the weather gets warmer	I can sort birds, fish and land animals (mammals).	I know some insects that are around in the summer.



YEAR 1 – Science Curriculum Progression

	Term 1	Term 2	Term 3
	Humans **Seasons- autumn**	**Seasons – Winter**	**Materials**
Prior learning	Seasons, humans (body parts)	Seasons	Name materials, know some properties
National Curriculum Links	• identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. • identify and name a variety of common animals that are carnivores, herbivores and omnivores. • describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). • identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	• observe changes across the four seasons. • observe and describe weather associated with the seasons and how day length varies. -	• observe changes across the four seasons. • observe and describe weather associated with the seasons and how day length varies. • distinguish between an object and the material from which it is made. • identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. • describe the simple physical properties of a variety of everyday materials. • compare and group together a variety of everyday materials on the basis of their simple physical properties.
Outcome (based on 4 questions)	I can name body parts including, throat, neck, wrist, elbow and ankle.	I know that in Autumn the leaves fall from the trees and animals may hibernate.	I can identify and name four materials found in the classroom.
	I can say how to keep my body healthy; healthy food, water, exercise, sleep and brush my teeth.	I know that in the Winter some trees lose leaves and the weather is cold.	I can group materials based on their properties; hard or soft, shiny or dull, man-made or natural
	I can name my 5 senses: seeing, hearing, smelling, tasting, touching.	I can name the months of the year and link to the seasons.	I can name some materials that can change shape; twist, bend, squash or stretch.
	I can name some food for a healthy lunchbox	I can say which season I prefer and why.	I can select materials to build a strong bridge.

	Term 4	Term 5	Term 6
	Seasons- spring	**Animals**	**Plants** **Seasons – Summer**
Prior learning	Term 1 and 2- seasons	EYFS- animals	EYFS- plants
National Curriculum Links	• 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.	• 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 wild and garden plants, including deciduous and evergreen trees. • identify and describe the basic structure of a variety of common flowering plants, including trees.
Outcome (based on 4 questions)	I can name changes across the 4 seasons.	I can name and group animals; fish, birds and mammals.	I can name and label the different parts of a plant; roots, stem, leaf and flower.
	I can say how the weather changes through the year.	I can group animals; herbivores, carnivores, omnivores.	I know that plants need sunlight, water and soil to grow.
	I can describe how the length of day changes through the year.	I know what animals need to live; water, food, shelter.	I can name some wild and garden flowers; bluebell, snowdrop, daffodil, primrose, daisy, buttercup. I can name some deciduous and evergreen trees; oak, sycamore, pine and horse chestnut.
		I can ask questions to identify an animal.	I can say where I would like to plant a seed and explain why.
YEAR 1 Progression in Science skills			
Questioning and Predicting	Ask simple questions. Make simple predictions.		
Planning and carrying out investigations	Recognise that questions can be answered in different ways. Perform simple tests.		

Taking and recording observations, measurements and results	Observe closely. Use simple equipment.
Explaining results and drawing conclusions	Talk about what they have found out.



YEAR 2 – Science Curriculum Progression

	Term 1	Term 2	Term 3
	Humans- Growing up	**Plants- Light and Dark**	**Materials**
Prior learning	Year 1- humans (basic body parts)	EYFS and Year 1- labelling and growing a plant	EYFS and Year 1- exploring materials
National Curriculum Links	• 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).	• find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	• 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.
Outcome (based on 4 questions)	I can compare offspring to their adult form and explore how humans change as they grow.	I can name the parts of a tree	I can identify and name four materials found in the classroom.
	I can explain the life cycle of a human	I can name the parts of a flowering plant	I can group materials based on their properties and consider whether they are natural or human-made.
	I can describe the life cycle of an amphibian	I can name different plants	I can name four materials that can change shape; twist, bend, squash or stretch.
	I can compare life cycles of different animals	I can describe that plants need light, suitable temperature and water to grow	I can identify the most suitable material to build a bridge with and explain why.

YEAR 2 – Science Curriculum Progression 2026/27

	Term 4	Term 5	Term 6
	Living things and their habitats	**Animal's needs for survival**	**Bulbs, plants and seeds**
Prior learning	EYFS and Year 1- living things, humans and animal units	EYFS and Year 1- animal groups	EYFS and Year 1- plant parts and growing Term 2- what a plant needs to grow
National Curriculum Links	• 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.	• 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.	• observe and describe how seeds and bulbs grow into mature plants. • find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.
Outcome (based on 4 questions)	I know the difference between things that are living, things that are dead and things that have never been alive.	I know that animals need air, water, food and shelter to survive.	I know the difference between a bulb and a seed
	I can match a range of animals to their habitats and explain why these habitats are suitable.	I can classify animals into 5 groups according to their characteristics (considering vertebrates and invertebrates).	I can describe what plants need to stay healthy
	I can describe a simple food chain (producer, primary consumer, secondary consumer).	I know that animals can be grouped into herbivores, carnivores or omnivores and know that food is the source of the energy needed to grow and live.	I can describe how plants change over time
	I can explain why if I were an animal, which habitat I would choose to live in	I can suggest questions to identify an animal.	I can describe how seeds and bulbs grow into mature plants

YEAR 2 Progression in Science skills	
Questioning and Predicting	Use observations and ideas to suggest answers to questions.
Planning and carrying out investigations	Carry out pre-planned investigations with support.
Taking and recording observations, measurements and results	Gather and record data to help answer questions – with support.
Explaining results and drawing conclusions	Start to use simple scientific language in context. Identify and classify objects as part of an investigation.

YEAR 3 – Science Curriculum Progression

	Term 1	Term 2	Term 3
	Rocks, soils and fossils	**Skeletons, nutrition and diet**	**Forces and Magnets**
Prior learning	KS1- animals and plants	KS1- humans and animals needs for survival	
National Curriculum Links	mpare and group together different kinds rocks on the basis of their appearance and mple physical properties scribe in simple terms how fossils are med when things that have lived are pped within rock cognise that soils are made from rocks and ganic matter.	ntify that animals, including humans, need the ht types and amount of nutrition and that they nnot make their own food; they get nutrition m what they eat ntify that humans and some other animals ve skeletons and muscles for support, otection and movement.	mpare how things move on different surfaces tice that some forces need contact between o objects, but magnetic forces can act at a tance serve how magnets attract or repel each her and attract some materials and not others mpare and group together a variety of eryday materials on the basis of whether they attracted to a magnet, and identify some gnetic materials scribe magnets as having two poles edict whether two magnets will attract or el each other, depending on which poles are ing.
Outcome (based on 4 questions)	I know that soil is formed from organic matter and small rocks	I know that a skeleton protects the body and helps it move	I know that magnets are the only force that works without touch
	I can group rocks by texture and appearance	I can label five key parts of the human skeleton (femur, skull, ribcage, pelvis spine)	I can describe the two poles of a magnet as North and South
	I can explain what fossils are	I can name the five main food groups.	I can explain how magnets can attract and repel each other
	I can explain how fossils are formed	I can explain how muscles work in pairs to move our bodies.	I can investigate the magnetic properties of everyday items

YEAR 3 – Science Curriculum Progression 2026/27

	Term 4	Term 5	Term 6
	Light	**Plants**	**Plants (scientific enquiry)**
Prior learning	KS1- light and dark during plant unit	KS1- plants (what they need to grow and how they grow)	KS1- plants (what they need to grow and how they grow) Term 5
National Curriculum Links	• 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.	• identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers • explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant • investigate the way in which water is transported within plants • explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	• ask relevant questions and use different types of scientific enquiries to answer them • set up simple practical enquiries, comparative and fair testS. • make systematic and careful observations and, where appropriate, take accurate measurements using standard units, and use a range of equipment, including thermometers and data loggers • gather, record, classify and present data in a variety of ways to help in answering questions • record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • identify differences, similarities or changes related to simple scientific ideas and processes • use straightforward scientific evidence to answer questions or to support their findings.

Outcome (based on 4 questions)	I know that shadows are formed when light cannot pass through an opaque object	I know the life cycle of a plant	I know how to set up a fair comparative test
	I can identify light sources and non light sources	I can explain what the parts of a flowering plant are used for	I can compare results to draw simple conclusions
	I can test if a material is reflective	I can explain what a plant needs to grow and reproduce	I can use an investigation to show how water travels through the xylem
	I can investigate how to change the size and shape of a shadow	I can explain the process of pollination	I can ask questions and plan ways to answer them
YEAR 3 Progression in Science skills			
Questioning and Predicting	ask relevant questions and use different types of scientific enquiries to answer them identify differences, similarities or changes related to simple scientific ideas and processes		
Planning and carrying out investigations	set up simple practical enquiries, comparative and fair tests		
Taking and recording observations, measurements and results	gather, record, classify and present data in a variety of ways to help in answering questions record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables make systematic and careful observations and, where appropriate, take accurate measurements using standard units, and use a range of equipment, including thermometers and data loggers		
Explaining results and drawing conclusions	report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions identify differences, similarities or changes related to simple scientific ideas and processes use straightforward scientific evidence to answer questions or to support their findings.		

YEAR 4 – Science Curriculum Progression

	Term 1	Term 2	Term 3
	Group and classify living things	**Sound**	**States of Matter**
Prior learning	KS1- grouping animals into basic categories	KS1- what are different body parts for (ears are for hearing)	
National Curriculum Links	• I can recognise that living things can be grouped in a variety of ways. • I can explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. • I can recognise that environments can change and this sometimes poses a danger to living things.	• I can identify how sounds are made, associating some of them with something vibrating. • I can recognise that vibrations from sound travel through a medium to the ear. • I can find patterns between the pitch of a sound and features of the object that produced it. • I can find patterns between the volume of a sound and the strength of vibrations that produced it. • I can recognise that sounds get fainter as the distance from the sound source increases.	• I can compare and group materials together according to whether they are solids, liquids or gases. • I can observe that some materials change state when they are heated or cooled: I can measure or research the temperature which this happens in degrees celsius. • I can identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.
Outcome (based on 4 questions)	I know that all living things have life processes and live in habitats that provide what they need to survive.	I know that sound is made by vibrations and can travel through different materials.	I know how particles behave in solids, liquids and gases, and how this affects their properties.
	I can identify and classify living things into groups such as vertebrates, invertebrates, plants and animals using their characteristics.	I can investigate how to change the pitch and volume of a sound by changing vibrations.	I can investigate how heating and cooling cause changes in state, such as melting, freezing, evaporation, and condensation.
	I can describe different habitats and explain how living things are suited to their environment.	I can design and test a simple instrument to produce sound.	I can model and explain the water cycle, showing how changes in temperature cause water to move between different states.
	I can use simple food chains to show how living things depend on each other for food and energy.	I can explain how different materials affect the sound an instrument makes.	I can explain how changing temperature affects particles and causes materials to change state.

YEAR 4 – Science Curriculum Progression 2026/27

	Term 4	Term 5	Term 6
	Electricity	**Habitats and Food Chains**	**Teeth and Digestion**
Prior learning		EYFS- food chains Year 3- living things unit	EYFS and Year 3- the human body
National Curriculum Links	• I can identify common appliances that run on electricity. • I can construct a simple series electrical circuit identifying and naming its basic parts including cells, wires, bulbs, switches and buzzers. • I can 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. • I can recognise that a switch opens and closes a circuit and associate with this whether or not a lamp lights in a smile series circuit. • I can recognise some common conductors and insulators, and associate metals with being good conductors.	• I can explain what a habitat is and describe how it provides the conditions living things need to survive. • I can describe how habitats change throughout the year, including seasonal changes. • I can explain how humans can have a positive or negative impact on habitats. • I can explain how changes to habitats can affect the living things within them. • I can construct and interpret food chains. • I can identify producers, predators and prey within a food chain. • I can explain how living things depend on one another within a habitat. • I can use observations and research to investigate plants and animals in different habitats. • I can ask relevant questions and use appropriate scientific enquiry to investigate habitats and living things. • I can use appropriate scientific vocabulary to communicate my ideas and findings.	• I can identify the different types of teeth in humans and their simple functions. • I can describe the simple functions of the basic parts of the digestive system in humans.
Outcome (based on 4 questions)	I know that electricity can flow through a circuit to power electrical devices.	I can describe what a habitat is and explain how it provides the conditions living things need to survive.	I know that humans have different types of teeth and a digestive system that helps the body get nutrients from food.
	I can identify and name the main parts of a simple electrical circuit.	I can explain how habitats support different living things and describe how changes to environments can affect them.	I can identify different types of teeth and describe their functions.

	I can investigate which materials are conductors and which are insulators.	I can construct and interpret food chains, identifying producers, predators and prey.	I can describe the main stages of the digestive system.
	I can explain why a complete circuit is needed for electricity to flow.	I can explain how living things depend on one another within a habitat and why habitats and food chains are important for survival.	I can explain why different teeth are needed to help with digestion.
YEAR 4 Progression in Science skills			
Questioning and Predicting	I can make sensible predictions. I can use straightforward scientific evidence to answer questions and support findings. I can suggest possible further questions.		
Planning and carrying out investigations	I can identify differences, similarities, or changes related to simple scientific ideas or processes. I can set up a fair test.		
Taking and recording observations, measurements and results	I can make systematic and careful observations. I can record findings using simple scientific language- demonstrate through drawings, labelled diagrams, keys, bar charts, and tables.		
Explaining results and drawing conclusions	I can classify and present data in a variety of ways to help in answering questions. I can report back on findings verbally and through written explanations, displays, presentations, etc. I can form sensible conclusions from findings.		

YEAR 5 – Science Curriculum Progression 2026/27

	Term 1	Term 2	Term 3
	Forces	**Space**	**Properties of Materials**
Prior learning	Year 3 – magnets and friction	KS1 children learnt about the seasons and how this affects the northern hemisphere. Y3 – Light	KS1 children learnt about the properties of different materials Year 3 forces and magnets. Year 4 children learnt about electrical circuits and materials that conduct electricity.
National Curriculum Links	• Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. • Identify the effects of air resistance, water resistance and friction, that act between moving surfaces • Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect	• 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 • Use models to describe and explain phenomena (e.g., night & day, orbits)	• compare and group together everyday materials based on their properties (including hardness, solubility, transparency, conductivity — thermal and electrical — and response to magnets) • give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials • plan and carry out fair tests, take accurate measurements and record results, use evidence to justify conclusions, evaluate methods and identify improvement
Outcome (based on 4 questions)	I can explain why objects fall towards the Earth, and why they speed up as they fall	I know what the solar system is made up of and how are the planets arranged	I can sort materials based on different properties including magnetism, transparency, hardness and flexibility
	I can describe how air resistance, water resistance and friction effects how things move	I can explain how the earth's movement result in the change from night to day and the change in seasons	I can explain how materials conduct or insulate heat
	I can change the effects of friction to make movement easier or harder	I know the phases of the moon	I can explain how materials conduct or insulate electricity
	I can explore how levers, pulleys and gears help us move or lift things using less force	I can hypothesize how things would be different if the world spun faster than it does	I can explore how the materials of an object make it useful for specific purposes

	Term 4	Term 5	Term 6
	Reversible and irreversible changes	**Animals including humans**	**Reproduction – mammals and plants**
Prior learning	Year 5, Term 1 -materials based on their properties.	Year 3 -animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food. Skeletons and muscles for support, protection and movement. Year 4- living things can be grouped in a variety of ways, and used classification keys	KS1 children learnt about life processes and habitats. Year 4 classify living things into groups such as vertebrates, invertebrates, plants and animals using their characteristics, describe habitats and explain how living things are suited to their environment
National Curriculum Links	• use knowledge of solids, liquids and gases to decide how mixtures might be separated (including through filtering, sieving, dissolving and evaporating) • demonstrate that dissolving, mixing and changes of state are reversible changes • explain that some changes result in the formation of new materials, and that these changes are not usually reversible • work scientifically and use evidence to explain results.	• describe the changes as humans develop to old age • observe, describe, and understand the stages of human development, including	• 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 animal • observe life-cycle changes in a variety of living things (plants and animals) • find out about different types of reproduction, including: sexual and asexual reproduction in plants, sexual reproduction in animals • carry out scientific enquiries such as: growing plants from different parts of the parent plant (seeds, stems, bulbs) • observing changes in animals over time.
Outcome (based on 4 questions)	I can describe the difference between solids, liquids and gases	I know how humans change as they grow	I know how different plants reproduce
	I can separate materials in different ways	I can explain what happens to our bodies during puberty	I can explain how flowers, pollinators and seeds help in reproduction
	I can explain how materials change and how these changes can be reversed	I can identify how our lifestyle affects how we grow and develop	I can explain how mammals reproduce and grow
	I can explain how reversable and irreversible properties ensure a product achieves its purpose (e.g. reusable cool pack, spill cleaning product)	I can consider if everyone experience the human life cycle in the same way	I know how life cycles of different living things similar and I can explain how they are different

YEAR 5 Progression in Science skills			
Questioning and Predicting	Make predictions about how friction and air resistance will affect movement. Apply scientific knowledge and language to explain these ideas. Predict the outcome of an investigation using scientific knowledge.	Question and hypothesis what graphs, timelines and evidence can show us about human development. Apply scientific knowledge and language to explain these ideas. Predict the outcome of an investigation using scientific knowledge.	Make predictions applying theoretical scientific knowledge and language. Ask questions about gestation and offspring. Make predictions applying theoretical knowledge linked to the role of insects in pollination
Planning and carrying out investigations	Set up comparative and fair tests to explore changes, considering the independent variables, dependent variables (what is measured) and controlled variables to ensure a fair test.	Set up a fair, comparative test based on the question: 'do taller people have bigger hands?' to investigate correlations between different types of human development. Consider the independent variables, dependent variables and controlled variables.	Set up a fair, comparative test based on the question: do plants create more seeds when they are in contact with insects? Consider the independent variables, dependent variables and controlled variables. Use models to question, investigate and hypothesis on correlation between gestational period and number of offspring.
Taking and recording observations, measurements and results	Record results accurately using tables.	Record results accurately using tables and scatter graphs.	Record results accurately using tables. Using research, plot data accurately in a graph
Explaining results and drawing conclusions	Use evidence and scientific language to explain how friction and air resistance affects movement Identify when models or explanations have limitations	Use evidence and scientific language to explain correlations. Identify limitations in the experiment and suggest improvements or further possible investigations.	Use evidence and scientific language to explain correlations. Identify limitations in the experiment and suggest improvements or further possible investigations.

YEAR 6 – Science Curriculum Progression

	Term 1	Term 2	Term 3
	Living things and their habitats	**Electricity**	**Light**
Prior learning	Year 4- what a living thing is, begin to classify	Year 4- building a circuit	Year 3- exploring the way that light behaves, including light sources, reflection and shadows
National Curriculum Links	• 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.	• 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	• 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.
Outcome (based on 4 questions)	I know what a living thing is and that they can be classified based in lots of different criteria	I know recognised symbols to represent a circuit	I know light travels in the straight line
	I can give reasons for classifying animals based on identifying the characteristics of mammals, birds, insects, reptiles, amphibians, fish, arachnids, annelids, crustaceans, echinoderms and molluscs	I can build a simple circuit to help me to answer questions about what happens when they try different components	I can explain how objects are seen
	I can describe how living things are classified into broad groups according to common observable characteristic and based on similarities and differences by grouping organisms found in the local habitat.	What makes a circuit complete or incomplete?	I can explain why shadows have the same shape as the objects that cast them
		I can compare different circuits and give reasons for variations	I can draw a diagram to show how light reflects

YEAR 6 Progression in Science skills			
Questioning and Predicting	I can find out about the significance of the work of scientists such as Carl Linnaeus, a pioneer of classification.	Ask relevant scientific questions about how electrical circuits work Make predictions about what will happen when components in a circuit are changed Suggest outcomes when variables such as the number of cells or bulbs are altered	Ask relevant scientific questions about how light travels and how it behaves when it reflects or refracts Make predictions about what will happen when light hits different materials or surfaces
Planning and carrying out investigations	I can use classification systems and keys to identify some animals and plants in the immediate environment.	Plan a fair test to investigate electrical circuits (e.g. brightness of bulbs, effect of switches) Identify variables to change, measure, and control	Plan a fair test to investigate aspects of light (e.g. reflection, shadows, refraction) Identify variables to change, measure, and control Choose appropriate equipment
Taking and recording observations, measurements and results	I can make systematic and careful observations.	Explain results using correct scientific vocabulary (e.g. circuit, current, resistance, conductor) Use evidence from investigations to answer the original question Draw conclusions that link cause and effect Identify any unexpected results or faults in circuits	Take accurate measurements using appropriate units (cm, degrees) Record results clearly using tables, diagrams, and labelled drawings Use results to identify patterns or relationships Present data in a clear and organised way
Explaining results and drawing conclusions		Explain results using correct scientific vocabulary (e.g. circuit, current, resistance, conductor) Use evidence from investigations to answer the original question Draw conclusions that link cause and effect Identify any unexpected results or faults in circuits	Explain results using scientific vocabulary (e.g. reflection, refraction, angle of incidence) Use results to answer the original question Draw conclusions that are supported by evidence

YEAR 6 – Science Curriculum Progression

	Term 4	Term 5	Term 6
	Variation and Adaptations	**The Circulatory System**	**Diet, drugs and lifestyle**
Prior learning	(Y4) Recognise that environments can change and that this can sometimes pose dangers to living things (Y5) Describe the life process of reproduction in some plants and animals.	(Y3 and Y4)- the skeleton, main organs	(Y4)- animals inc humans
National Curriculum Links	• Recognise that living things have changed over time and that the fossil record provides information about living things that inhabited the Earth millions of years ago. • Recognise that living things produce offspring of the same kind, but normally 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. •	• 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.	• 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”
Outcome (based on 4 questions)	I know that some characteristics are inherited and some are influenced by the environment	I know the function of the heart, blood vessels and blood.	How does a balanced diet help the body grow, stay healthy, and have enough energy?
	I can describe how an adaptation helps an organism survive	I can explain the impact diet and exercise has on the circulatory system	What effects can drugs, alcohol, and smoking have on the body and brain?
	I can explain why certain features are useful in particular environments	I can describe the circulatory system	How do lifestyle choices such as exercise, sleep, and screen time affect physical and mental health?
			How can people make informed decisions to maintain a healthy lifestyle now and in the future?

YEAR 6 Progression in Science skills			
Questioning and Predicting	Ask relevant scientific questions about variation between living things Make predictions about how different adaptations help organisms survive in their environments	Ask relevant scientific questions about the circulatory system and heart rate Make predictions about how exercise affects pulse rate	Predict how exercise affects heart rate Ask questions about how different lifestyles impact health Predict which foods contain the most sugar or fat
Planning and carrying out investigations	Plan a simple enquiry to explore variation or adaptations (e.g. comparing features of animals or plants) Decide what to observe, compare, or classify Choose appropriate sources of evidence (e.g. observation, photographs, secondary sources)	Plan a simple investigation to explore changes in heart rate Identify variables to change, measure, and control (e.g. type of exercise, time)	Investigate recovery time after exercise Compare pulse rates before and after activity Test nutritional information from food packaging
Taking and recording observations, measurements and results	Make careful observations of similarities and differences between organisms Record findings using tables, labelled diagrams, charts, or classification keys Use photographs or drawings to support observations	Measure pulse rate before and after exercise accurately Record results in tables or charts	Measure pulse rate over time Record exercise data in tables Create graphs showing lifestyle investigation results
Explaining results and drawing conclusions	Explain findings using scientific vocabulary (e.g. adaptation, variation, inherited, environment) Link adaptations to how they help organisms survive Use evidence to support conclusions Recognise that variation exists within a species	Explain results using scientific vocabulary (e.g. heart, pulse, blood vessels, oxygen) Use evidence from results to answer the investigation question Draw conclusions about how exercise affects the circulatory system	Explain trends between exercise and heart rate Conclude which lifestyle choices support health Evaluate evidence about effects of smoking or alcohol

CNRB 1– Science Curriculum Progression

Understanding the World	LG: The Natural World Children at the expected level of development will: • 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.		
Outcome **based on the 3 Key Questions**	**Term 1**	**Term 2**	**Term 3**
	Ready, Steady Explore *Exploring*	**On the Move** *Forces and Movement*	**Splish, splash, weather** *Water and weather*
	I can explore how things work	I can explore how things move	I can explore water and ice
	I can explore cause and effect	I can explore pushing and pulling	I can notice changes in the world around me
	I can explore natural materials and notice their differences	I can explore how forces can make things happen	I can explore different materials and what happens when I use them
Outcomes **based on the 3 Key Questions**	**Term 4**	**Term 5**	**Term 6**
	Little Wild Things *Living Things*	**Wonderful Things** *Materials and change*	**Our Big Adventure** *Natural World*
	I can explore living things in my environment	I can explore different materials and their properties	I can explore the natural world around me
	I can notice similarities and differences between living things	I can explore how materials changes	I can notice changes in the environment
	I can help to care for living things	I can explore what happens when materials are mixed, heated, cooled or changed	I can help to care for my environment

CNRB 2 – Science Curriculum Progression

	Term 1	Term 3	Term 5
	Animals including humans Food and nutrition Skeletons and muscles	**Plants** Life Cycle Water transportation	**Rocks** Properties Groupings
Prior learning	Living things	Natural world	
Outcome (based on 4 questions)	I know that a skeleton protects the body and helps it move.	I know the life cycle of a plant.	I know how rocks are made.
	I can label five key parts of the human skeleton (femur, skull, ribcage, pelvis spine)	I can explain what each part of the plant is used for.	I can sort and compare rocks using 1 property.
	I can name the five food groups.	I can name the conditions for life of a plant.	I can explain what a fossil is.
	I can explain that joints and muscles help the body to move.	I can explain how plants are reproduced.	I can explain how fossils are made.
Primary Steps	**PS3** Names and labels the main external parts of the body. **Y1** Identifies, names, and labels the main parts of the body. Draws a human with the main body features. **Y2** Classifies food using a guide, as: carbohydrates, fruit, vegetables, protein, and fats. Recognises that all animals and humans need food, air, warmth and water to survive. Gives suggestions to what helps keep humans healthy/helps them grow, e.g. the right food, exercise. Identifies how each food group contributes to health. Explains simply why humans need a varied diet.	**PS3** Sequence a simple life cycle of a plant. List items they need to successfully grow flowers from seeds. Looks at and describes plants in more detail, e.g. using a magnifying glass. Identifies similarities and differences. Collects evidence to show the types of vegetation found in their locality, e.g. by taking photographs. **Y1** Describe plants in simple terms. Classifies plants as living things. Names and labels the main parts of a flower. Talk about the features of a plant. Lists what plants need to survive, e.g. nutrition. Demonstrates familiarity with a range of terms relating to plant life, e.g. leaves, roots, fruit, and petals.	**PS3** Looks at examples of rock formations and comments on the shapes/colours they see Takes part in an adult led experiment to test different rocks to find different properties Identifies rocks of different types, e.g. by using a picture guide to find the photo of the rock which is the same as the one in front of them Observes and comments on a variety of fossils, e.g. embedded in Amber Observes and comments on the effect of natural elements, e.g. wind, water, etc Gives a simple explanation why something happened Gives a simple explanation why something will happen

	Describes the importance of exercise, a balanced diet, and hygiene for humans. **Y3** Recognises that animals including humans have to get nutrition from what they eat Recognises that animals including humans need a certain amount of different types of nutrition Explores what benefit each food groups have to the human body Plans a balanced day's food for a person Predicts what happens when animals/humans do not get the right nutrition Identifies that skeletons are made of bones Identifies that joints and muscles help us move Recognises that muscles are attached to bone Knows skeletons are used to protect vital organs/parts of our bodies Knows skeletons support bodies Names/labels parts of human skeletons and describes the organs which are protected, e.g. skill, ribs, pelvis, spine	Lists what a seed needs to grow. Suggests why/why not a seed grew/grew well based on observations. Uses a magnifying glass to aid observation of a plant. Ask questions about what they have observed. Describes what they can see under a magnifying glass. Use reference/picture books to help name seeds/plants. Discusses how the seeds are dispersed. States that a shoot grows up. States that roots grow. States that flowers make seeds. **Y2** Identifies that plants need light, water, warmth, and nutrients. Identifies that plants reproduce. Records their observations, e.g. drawings, photographs or notes. Aware of the term germination. Labels parts of vegetables as root, leaf and stem. Explores how some plants reproduce, e.g. by planting and growing potatoes. Explains the role of different parts of a plant simply, e.g. roots of an anchor plant. Observe the roots of a plant closely, e.g. hyacinth roots in a glass jar. Helps plan experiments to show how well seeds grow under different conditions, e.g. differences in light/water/temperature. Predicts what might happen with each variable. Records data using observations. Records data using simple measurements. Explain their ideas simply using their results or observations. Suggest what a plant needs to help it grow based on observations, e.g. a plant with yellow leaves may need some more sunlight. Describes the basic needs of plants for survival and the impact of changing these and the main	**Y1** Sorts different kinds of rocks into groups based on properties; Handles and observes different types of rocks, e.g. chalk/granite Uses simple terms to describe the look of different rocks Describes the feel of different rocks Uses a magnifying glass Suggests a reason why rocks have eroded Describes a fossil in simple terms Talks about where we can find fossils Watches a video of a fossil being excavated Suggests that a fossil shows the remains of a plant or animal Matches examples of fossils to photographs of the possible plant/animal Begins to understand that the formation of fossils happens over a long period of time Observes and comments on a variety of fossils, e.g. embedded in Amber Suggests what information we can learn about animals from fossilised footprints or teeth Recognises that fossils give us clues about life long ago Creates own animal/plant fossil and explains what it might show about living things Talks about what different rocks have in common Classifies a range of different rocks using their own criteria **Y2** Lists different ways we use different types of rocks Explains why and how we use rocks in different ways

		changes as seeds and bulbs grow into mature plants. **Y3** Labels a flowering plant, giving an explanation of the functions of the root, stem, etc. Investigates how plants transport water, e.g. using dye and white flowers Uses observations to draw simple conclusions Closely observes different plants noting where the seeds are found Explains simply why seeds need to be dispersed Predicts how different conditions may affect seed growth Recognises that the flower of a plant is important in its life cycle Labels parts of a flowering plant Finds the seeds in different flowers/plants Understands the terms "pollen" and "pollination"	Recognises that lava is melted rock which flows down the volcano Suggests what might happen to a building in their locality over time in respect of erosion Uses information given to name common fossils Makes comparisons between fossils **Y3** Identifies how materials made from rocks are used in their locality Gives reasons why types of rocks are used for specific purposes based on their investigations Understands that layers of rocks are squeezed together Recognises that sedimentary rock is the top layer of the Earth's surface Sorts rocks into groups using given criteria Makes careful observations Uses magnifying glass/microscope to find out if rocks contain grains/crystals Understands that fossil formation takes a long period of time Recognises that fossils are found under layers of rock Recognises that the remains of a living thing is covered in layers of sediment Describes how fossils are formed. Describes simply how sedimentary rock is formed, e.g. by sequencing information Identifies that there are many layers of different rocks