

SCIENCE

CURRICULUM MAP

Inspiring curiosity • Developing knowledge • Shaping the future

OUR GOLDEN THREADS



PHYSICS

Understanding how the universe works through energy, forces, motion, light and sound.



BIOLOGY

Exploring living things, their structure, processes, evolution and how they interact with their environment.



CHEMISTRY

Investigating the properties of materials, how they change and the reactions that shape our world.



EARTH SCIENCE

Understanding Earth and beyond, including the planet, atmosphere, space and the systems that sustain life.



LEADERSHIP



ORGANISATION



RESILIENCE



INITIATIVE



COMMUNICATION



KINDNESS

Year 1 Science Medium Term plans

<u>Year 1</u>	<u>Amazing Animals and Me</u> <u>Animals including humans</u>	<u>Material Detectives</u> <u>Everyday materials</u>	<u>Growing and Growing</u> <u>Plants</u>	<u>A Year of Weather</u> <u>Seasonal Changes</u>
Prior learning	• Can identify familiar animals. • Knows that animals and humans have different features. • Can name some body parts. • Uses their senses to explore the world around them.	• Explores a range of everyday objects using their senses. • Notices that objects are made from different materials. • Talks about how objects feel and look. • Sorts objects by simple similarities and differences.	• Recognises common plants, flowers and trees. • Knows that plants grow and change over time. • Talks about what plants need to grow. • Observes changes in the natural world.	• Notices changes in the weather and seasons. • Observes changes in plants and animals throughout the year. • Talks about what they see in the natural world. • Uses simple observations to describe changes over time.
Year 1	Topic: Animals Including Humans Enquiry Question How are animals and humans similar and different?	Topic: Everyday Materials Enquiry Question Which materials are best for different jobs?	Topic: Plants Enquiry Question What do plants need to grow and stay healthy?	Topic: Seasonal Changes Enquiry Question How does the world around us change throughout the year?
Explore 1	WALT: identify and name a variety of common animals. Children: • Explore different types of animals. • Sort animals into groups. • Identify fish, amphibians, reptiles, birds and mammals. • Discuss similarities and differences. Skills: • Observes closely. • Identifies and classifies.	WALT: identify and name a variety of everyday materials. Children: • Explore a range of everyday objects. • Identify what materials objects are made from. • Sort objects by material. • Discuss similarities and differences. Skills: • Observes closely. • Identifies and names materials.	WALT: identify and name a variety of common wild and garden plants. Children: • Explore plants found in the school grounds and local area. • Identify common wild plants and garden plants. • Sort plants into groups. • Discuss similarities and differences. Skills: • Observes closely.	WALT: identify and describe the four seasons. Children: • Explore photographs and videos of the four seasons. • Identify the names of the seasons. • Discuss seasonal changes. • Sort pictures into seasonal groups. Skills: • Observes closely. • Identifies and classifies.

	• Uses scientific vocabulary. Vocabulary: animal, fish, amphibian, reptile, bird, mammal	• Sorts and groups objects. Vocabulary: material, wood, plastic, glass, metal, water, rock	• Identifies and names plants. • Sorts and groups. Vocabulary: plant, wild plant, garden plant, flower, tree	• Uses scientific vocabulary. Vocabulary: season, spring, summer, autumn, winter
Explore 2	WALT: identify herbivores, carnivores and omnivores. Children: • Explore what different animals eat. • Sort animals by diet. • Compare feeding habits. • Explain why animals belong to different groups. Skills: • Identifies and classifies. • Compares and groups. • Uses observations. Vocabulary: herbivore, carnivore, omnivore, food	WALT: distinguish between an object and the material from which it is made. Children: • Investigate a range of objects. • Identify the object and the material separately. • Sort objects and materials. • Explain the difference between an object and a material. Skills: • Identifies and classifies. • Compares objects and materials. • Uses scientific vocabulary. Vocabulary: object, material, wood, plastic, metal, glass	WALT: identify and name common deciduous and evergreen trees. Children: • Explore different trees. • Identify deciduous and evergreen trees. • Compare leaves and features. • Sort trees into groups. Skills: • Identifies and classifies. • Compares features. • Uses observations. Vocabulary: tree, deciduous, evergreen, leaf, branch	WALT: observe and describe weather associated with the seasons. Children: • Observe daily weather. • Compare seasonal weather patterns. • Record simple weather data. • Discuss how weather changes throughout the year. Skills: • Makes observations. • Records simple data. • Identifies patterns. Vocabulary: weather, sunny, cloudy, rainy, windy, snowy, foggy
Investigate 1	WALT: describe and compare the features of animals. Children: • Observe animal pictures and models. • Compare body coverings and features. • Identify similarities and differences. • Record observations.	WALT: describe the simple physical properties of everyday materials. Children: • Explore materials using their senses. • Describe how materials feel and look. • Compare materials. • Record observations.	WALT: identify and describe the basic parts of a flowering plant. Children: • Examine flowering plants. • Identify roots, stem, leaves and flowers. • Label plant diagrams.	WALT: observe changes in plants and animals across the seasons. Children: • Explore seasonal photographs of plants and animals. • Observe changes in the school environment.

	Skills: • Observes closely. • Compares. • Records findings. Vocabulary: fur, feathers, scales, wings, fins, beak, tail	Skills: • Makes observations. • Compares materials. • Records findings. Vocabulary: hard, soft, rough, smooth, shiny, dull	• Discuss the job of each part. Skills: • Observes closely. • Identifies features. • Records findings. Vocabulary: root, stem, leaf, flower, petal	• Discuss how plants and animals respond to seasonal changes. • Record observations. Skills: • Observes changes over time. • Compares and describes changes. • Records findings. Vocabulary: change, growth, leaves, blossom, migration, hibernation
Investigate 2	WALT: identify and label the basic parts of the human body. Children: • Identify body parts. • Label diagrams. • Compare human bodies. • Discuss what different body parts do. Skills: • Identifies features. • Labels accurately. • Uses observations. Vocabulary: head, neck, arms, elbows, legs, knees, hands, feet	WALT: compare and group materials according to their properties. Children: • Sort materials into groups. • Discuss reasons for classifications. • Compare different materials. • Identify patterns. Skills: • Identifies and classifies. • Compares and groups. • Uses observations to answer questions. Vocabulary: stretchy, stiff, bendy, waterproof, absorbent	WALT: identify and describe the basic parts of a tree. Children: • Explore trees around the school grounds. • Identify trunks, branches and leaves. • Compare trees. • Record observations. Skills: • Observes closely. • Compares features. • Records findings. Vocabulary: trunk, branch, bark, leaf, tree	WALT: investigate how day length changes throughout the year. Children: • Compare daylight hours in different seasons. • Observe sunrise and sunset times. • Discuss how longer and shorter days affect daily life. • Record findings using simple charts. Skills: • Observes patterns. • Records data. • Uses observations to answer questions. Vocabulary: daylight, sunrise, sunset, day, night, light, dark

Investigate 3	WALT: identify the five senses and the body parts associated with them. Children: • Take part in sensory activities. • Explore sight, hearing, smell, taste and touch. • Match senses to body parts. • Record observations. Skills: • Observes. • Uses simple equipment. • Answers questions from observations. Vocabulary: sight, hearing, smell, taste, touch, eyes, ears, nose, tongue, skin	WALT: investigate which materials are suitable for different purposes. Children: • Explore objects used for different jobs. • Discuss why particular materials have been chosen. • Carry out simple suitability tests. • Record results. Skills: • Conducts simple tests. • Makes observations. • Uses evidence to answer questions. Vocabulary: suitable, unsuitable, property, waterproof, absorbent	WALT: observe plants over time and ask simple scientific questions. Children: • Plant seeds or bulbs. • Observe growth over time. • Record observations using drawings and simple labels. Skills: • Observes changes over time. • Asks simple questions. • Records observations. Vocabulary: seed, bulb, grow, healthy, water	WALT: carry out a simple seasonal enquiry. Children: • Observe weather over a period of time. • Collect simple weather data. • Compare findings. • Identify patterns and changes. Skills: • Makes observations. • Gathers and records data. • Identifies patterns. Vocabulary: observe, measure, record, compare, pattern
Reflect 1	WALT: use scientific knowledge to compare animals and humans. Children: • Revisit key learning. • Sort and classify animals. • Complete simple comparison activities. • Answer the enquiry question. Skills: • Identifies and classifies. • Communicates findings. • Uses scientific vocabulary.	WALT: use scientific knowledge to explain why materials are used for different purposes. Children: • Revisit key materials and properties. • Complete sorting and matching activities. • Discuss findings from investigations. • Answer the enquiry question. Skills: • Identifies and classifies. • Uses evidence. • Communicates findings.	WALT: use scientific knowledge to identify, compare and classify common plants and trees. Children: Revisit plant and tree vocabulary. Sort common plants into wild plants and garden plants. Identify deciduous and evergreen trees using photographs or leaves. Label the basic parts of a flowering plant and a tree. Answer the enquiry question. Skills:	WALT: use scientific knowledge to explain seasonal changes. Children: • Revisit learning from the unit. • Compare the four seasons. • Discuss changes in weather, plants and animals. • Answer the enquiry question. Skills: • Uses observations to answer questions. • Communicates findings. • Uses scientific vocabulary.

	Vocabulary: animal, human, compare, classify, similar, different	Vocabulary: material, property, suitable, compare, classify	Identifies and classifies. Communicates findings. Uses scientific vocabulary accurately. Vocabulary: plant, wild plant, garden plant, tree, deciduous, evergreen, root, stem, leaf, flower, trunk, branch, bark	Vocabulary: season, weather, daylight, change, compare
Assessment	Enquiry Question: How are animals and humans similar and different? Children will demonstrate understanding by: • Naming animal groups. • Classifying animals by diet. • Identifying animal features. • Naming body parts. • Identifying the five senses.	Enquiry Question: Which materials are best for different jobs? Children will demonstrate understanding by: • Naming everyday materials. • Distinguishing between objects and materials. • Describing material properties. • Grouping materials by their properties. • Explaining suitability for different uses.	Enquiry Question: What do plants need to grow and stay healthy? Children will demonstrate understanding by: • Naming common plants and trees. • Identifying deciduous and evergreen trees. • Labelling parts of plants. • Observing growth over time. • Using scientific vocabulary accurately.	Enquiry Question: How does the world around us change throughout the year? Children will demonstrate understanding by: • Naming the four seasons. • Describing seasonal weather. • Identifying changes in plants and animals. • Recognising changes in day length. • Using observations to explain seasonal changes.
End Point	Children identify, classify and compare a variety of animals and recognise the basic parts of the human body and five senses. Children can identify common animals, classify them into groups and explain how humans use their senses to explore the world.	Children identify, describe and compare everyday materials and explain why different materials are used for different purposes. Children can identify common materials, describe their simple properties and explain why some materials are better suited to particular purposes than others.	Children identify common plants and trees, label the basic parts of plants and trees and observe how plants grow over time. Children can identify common wild and garden plants, distinguish between deciduous and evergreen trees and describe the basic structure of flowering plants and trees.	Children identify the four seasons and explain how weather, plants, animals and daylight change throughout the year. By the end of this unit, children will understand that the world changes throughout the year. They will be able to identify the four seasons and describe changes in weather, plants, animals and daylight.

Substantive Knowledge (What children need to remember)	Children will know: • Animals can be grouped into fish, amphibians, reptiles, birds and mammals. • Animals eat different foods. • Animals have different body features. • Humans have basic body parts. • Humans use five senses to explore the world.	Children will know: • Objects are made from materials. • Materials include wood, plastic, glass, metal, water and rock. • Materials have different properties. • Materials can be grouped according to their properties. • Some materials are more suitable for certain purposes than others.	Children will know: • Plants can be wild or garden plants. • Trees can be deciduous or evergreen. • Flowering plants have roots, stems, leaves and flowers. • Trees have trunks, branches and leaves. • Plants grow and change over time.	Children will know: • There are four seasons: spring, summer, autumn and winter. • Weather changes throughout the year. • Plants and animals change across the seasons. • Day length varies throughout the year. • Seasonal changes follow a repeating pattern.
Disciplinary Knowledge (Thinking like a scientist)	Children will: • Observe closely. • Ask simple questions. • Identify and classify. • Compare similarities and differences. • Record findings simply.	Children will: • Observe closely. • Ask simple questions. • Conduct simple tests. • Sort and classify. • Record findings. • Use observations to answer questions.	Children will: • Observe closely. • Identify and classify. • Observe changes over time. • Ask simple questions. • Record observations using drawings and labels. • Use observations to answer questions.	Children will: • Observe closely. • Observe changes over time. • Gather and record simple data. • Identify patterns. • Ask simple questions. • Use observations to answer questions.
Adaptive Teaching	Support • Picture sorting cards. • Vocabulary mats. • Adult-led discussion. • Practical exploration. Challenge • Explain classification choices. • Compare multiple animals. • Use scientific vocabulary independently.	Support • Real objects to handle. • Picture sorting cards. • Vocabulary mats. • Adult modelling and discussion. Challenge • Explain why materials are suitable. • Compare multiple properties. • Use scientific vocabulary independently.	Support • Real plants and photographs. • Labelled diagrams. • Vocabulary mats. • Adult-led observations. Challenge • Compare different plant types. • Explain similarities and differences. • Ask their own scientific questions. • Use scientific vocabulary independently.	Support • Seasonal picture cards. • Weather symbols and charts. • Vocabulary mats. • Adult-led discussions and observations. • Visual timetables of seasonal events. Challenge • Explain why seasonal changes occur. • Compare more than one season independently. • Identify patterns in weather data.

				• Use scientific vocabulary accurately and independently.
Assessment for Learning	Assessment for Learning • Observation of discussions. • Sorting and classification tasks. • Labelling activities. • Questioning. • End-of-unit retrieval activities.	Assessment for Learning • Observation of practical investigations. • Sorting and classification activities. • Questioning. • Discussion of findings. • End-of-unit retrieval tasks.	Assessment for Learning • Observation of practical activities. • Plant identification tasks. • Labelling activities. • Discussion and questioning. • Plant growth journals. • End-of-unit retrieval activities.	Assessment for Learning • Seasonal sorting activities. • Weather diaries. • Discussion and questioning. • Observation records. • Retrieval quizzes. • End-of-unit reflection task.
National Curriculum	Pupils should be taught to: • 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. • Identify, name, draw and label the basic parts of the human body. • Identify which body part is associated with each sense.	Pupils should be taught to: • 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.	Pupils should be taught to: • 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.	Pupils should be taught to: • Observe changes across the four seasons. • Observe and describe weather associated with the seasons. • Observe how day length varies throughout the year.

WORKING SCIENTIFICALLY PROGRESSION

— Developing scientific enquiry skills from curious explorers to confident scientists —



EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
 Explore and Notice - Explore the world around them. - Use their senses to make observations. - Notice changes over time. - Talk about what they have found out. 	 Observe and Identify - Observe closely using simple equipment. - Identify and name what they see. - Ask simple questions. - Record observations in pictures and words. 	 Compare and Classify - Compare and group objects and materials. - Look for similarities and differences. - Use simple tests to help answer questions. - Record results in simple charts and tables. 	 Predict and Investigate - Ask relevant questions. - Make predictions based on prior knowledge. - Plan and carry out simple tests. - Record and present findings using tables and diagrams. 	 Measure and Record - Take accurate measurements using standard units. - Use a range of equipment. - Record results clearly using tables, graphs and diagrams. - Identify patterns and relationships. 	 Plan and Enquire - Plan fair tests and comparative investigations. - Identify variables and control fairly. - Collect and analyse data. - Draw conclusions based on evidence. 	 Analyse and Evaluate - Plan and carry out complex enquiries. - Evaluate methods and make improvements. - Analyse and interpret data confidently. - Draw reasoned conclusions and explain why. 

OUR WORKING SCIENTIFICALLY SKILLS



ASK QUESTIONS

Thinking of questions and deciding what to find out.



MAKE PREDICTIONS

Using what we already know to guess what might happen.



SET UP TESTS

Planning simple tests to find answers fairly.



OBSERVE & MEASURE

Using our senses and equipment to make careful observations.



RECORD DATA

Writing down and showing what we find out.



ANALYSE

Looking for patterns and explaining our results.

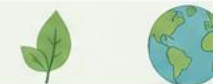


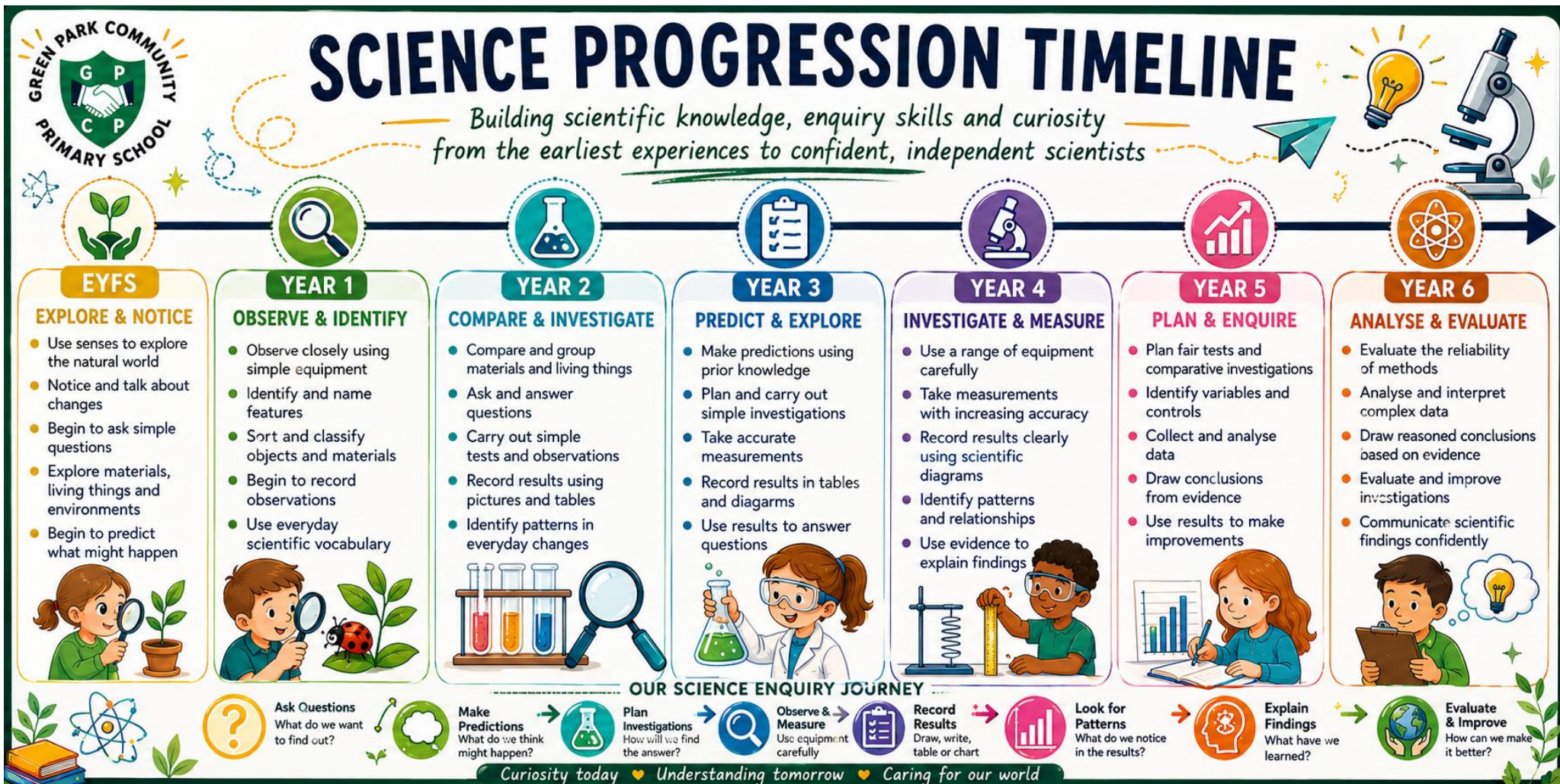
EVALUATE

Deciding what worked well and how we can improve.



Curiosity today • Understanding tomorrow • Shaping the future







WORKING SCIENTIFICALLY PROGRESSION

— Developing scientific enquiry skills from early explorers to confident scientists —



	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
ASKING QUESTIONS	Ask simple questions about what they notice.	Ask simple questions about what they observe.	Ask questions about what they want to find out.	Ask relevant questions to find out more.	Ask scientific questions about how and why things happen.	Ask questions that can be investigated scientifically.	Formulate scientific questions and define problems clearly.
MAKING PREDICTIONS	Begin to make guesses about what might happen.	Make simple predictions based on what they already know.	Make predictions using simple scientific knowledge.	Make predictions and give reasons for them.	Use scientific knowledge to make predictions.	Make predictions using evidence and scientific understanding.	Use a range of evidence to make predictions and justify them.
PLANNING INVESTIGATIONS	Explore and find out about things.	With support, decide how to find out about something.	Decide how to find out and what to observe.	Plan simple investigations to answer questions.	Plan investigations with more than one step.	Plan fair tests identifying variables to change and measure.	Plan and refine investigations ensuring they are fair and valid.
OBSERVING & MEASURING	Use their senses to make observations.	Observe closely using simple equipment.	Make careful observations and simple measurements.	Take accurate measurements using a range of equipment.	Take a range of measurements using standard units.	Take precise measurements using appropriate equipment.	Take precise and repeatable measurements with accuracy.
RECORDING DATA	Talk about what they have found.	Record observations in pictures, words or simple charts.	Record data in simple tables and charts.	Record results in tables, charts and simple diagrams.	Record results clearly using tables, charts, diagrams and graphs.	Choose the most appropriate way to record data.	Record data systematically using a range of methods.
ANALYSING DATA	Talk about what happened.	Say what they found out.	Look at results and say what they show.	Look for patterns in results.	Identify patterns and relationships.	Compare and analyse results.	Analyse results identifying trends and relationships.
CONCLUSION & EVALUATION	Begin to understand what they found out.	Say what they found out and how they found it out.	Say what they found out and if it was what they thought.	Draw simple conclusions.	Draw conclusions using results and evidence.	Draw conclusions explaining whether they were right.	Evaluate methods and suggest improvements for the future.

OUR SCIENCE GOLDEN THREADS



WORKING SCIENTIFICALLY
Asking questions, investigating and evaluating to discover answers.



SCIENTIFIC KNOWLEDGE
Building knowledge and understanding of key scientific concepts.



UNDERSTANDING THE WORLD
Exploring the natural world and how science helps us make sense of it.



SUSTAINABILITY & RESPONSIBILITY
Making choices that help protect our planet and living things.



CURIOSITY & RESILIENCE
Being curious, persevering and learning from our experiences.



Curiosity today • Understanding tomorrow • Shaping the future



SCIENTIFIC ENQUIRY TYPES

Different types of enquiry help scientists answer questions about the world around us.



ENQUIRY TYPE	OBSERVING OVER TIME	COMPARATIVE TESTING	FAIR TESTING	IDENTIFYING & CLASSIFYING	PATTERN SEEKING	RESEARCH USING SECONDARY SOURCES
WHAT DOES IT INVOLVE?	 Observing changes that happen over a period of time.	 Comparing two or more things to see what is the same or different.	 Changing one thing at a time to see what effect it has.	 Sorting, grouping and naming things based on their features.	 Looking for patterns and relationships in data or observations.	 Finding out information from books, websites and other sources.
EXAMPLE	 Observing how a seed grows into a plant.	 Comparing which material is best for an umbrella.	 Testing which surface makes a toy car travel the furthest.	 Classifying animals as mammals, birds or reptiles.	 Recording daily weather and looking for patterns over a week.	 Finding out about planets using books or the internet.
PROGRESSION THROUGH THE YEARS	• EYFS – Notice changes in the natural world. • Y1 – Observe changes in plants and animals. • Y2 – Observe changes in materials over time. • Y3 – Observe seasonal changes. • Y4 – Observe patterns in sound or light. • Y5 – Observe changes in environments. • Y6 – Observe changes in the body or habitats.	• EYFS – Compare amounts and objects. • Y1 – Compare materials and animals. • Y2 – Compare how materials change. • Y3 – Compare the effects of forces. • Y4 – Compare the brightness of bulbs. • Y5 – Compare life cycles. • Y6 – Compare the effects of exercise.	• EYFS – Explore and talk about what they notice. • Y1 – Test simple ideas. • Y2 – Test which material is the strongest. • Y3 – Test how magnets work best. • Y4 – Test circuits and sound. • Y5 – Test materials and forces. • Y6 – Test how exercise affects heart rate.	• EYFS – Identify and name objects and materials. • Y1 – Identify animals and plants. • Y2 – Classify materials and living things. • Y3 – Classify rocks and plants. • Y4 – Classify living things in groups. • Y5 – Use keys to classify living things. • Y6 – Classify using scientific keys.	• EYFS – Notice patterns in the world. • Y1 – Notice patterns in weather and seasons. • Y2 – Look for patterns in data. • Y3 – Identify patterns in results. • Y4 – Look for patterns in sound and light. • Y5 – Identify patterns in habitats. • Y6 – Look for trends in data and results.	• EYFS – Listen to stories and talk about facts. • Y1 – Find simple information. • Y2 – Use books to find facts. • Y3 – Research using simple sources. • Y4 – Use sources to answer questions. • Y5 – Use multiple sources to research. • Y6 – Research and use evidence.



WHY IT MATTERS

Scientists use these enquiry types every day to explore, discover and understand the world. By practising them, we become curious, confident and capable scientists!



Be curious



Ask questions



Test ideas



Find patterns



Share findings



Understand our world

Remember:

Good scientists use more than one type of enquiry!



Curiosity today • Understanding tomorrow • Shaping the future





SCIENCE VOCABULARY PROGRESSION

Building scientific language step by step



THEME	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
LIVING THINGS	- animal - plant - grow - life - healthy	- mammal - bird - fish - reptile - offspring - body	- survive - baby - adult - food - senses - exercise	- skeleton - muscles - nutrition - herbivore - carnivore - omnivore	- teeth - digestion - food chain - producer - consumer - habitat	- life cycle - reproduction - metamorphosis - puberty - organ - function	- circulatory system - vascular - inheritance - evolution - adaptation - species
PHYSICAL PROCESSES	- push - pull - move - fast - slow	- light - dark - sound - loud - quiet	- change - float - sink - heat - cold	- force - magnet - attract - repel - friction	- vibration - volume - pitch - electricity - circuit	- gravity - air resistance - water resistance - mechanism - mechanical	- current - resistance - voltage - component - symbol
MATERIALS	- material - hard - soft - rough - smooth	- wood - plastic - metal - glass - waterproof	- object - material - squash - bend - twist	- opaque - transparent - absorbent - magnetic - non-magnetic	- solid - liquid - gas - melting - freezing	- dissolve - solution - mixture - separate - thermal conductor	- irreversible - reversible - conductor - insulator - property
EARTH & SPACE	- weather - sun - rain - wind - season	- spring - summer - autumn - winter - day - night	- hot - cold - cloudy - storm - rainbow	- sun - moon - star - planet - weather	- planet - orbit - rotation - shadow - eclipse	- solar system - Earth - Moon - Sun - orbit	- galaxy - universe - axis - time zone - latitude/longitude
WORKING SCIENTIFICALLY	- observe - notice - look - talk - question	- observe - identify - compare - sort - record	- compare - test - predict - measure - results	- investigate - record - evidence - pattern - conclusion	- measure - data - table - graph - explain	- fair test - variable - accuracy - conclusion - evaluate	- reliability - valid - hypothesis - analyse - evaluate

OUR SCIENCE GOLDEN THREADS



WORKING SCIENTIFICALLY

Asking questions, investigating, observing, measuring, recording and evaluating.



SCIENTIFIC KNOWLEDGE

Building knowledge and understanding of key scientific concepts.



UNDERSTANDING THE WORLD

Exploring the world around us and how science helps us make sense of it.



SUSTAINABILITY & RESPONSIBILITY

Making choices that help protect our planet and living things.



CURIOSITY & RESILIENCE

Being curious, persevering and learning from our experiences.



Curiosity today • Understanding tomorrow • Shaping the future





SCIENCE NATIONAL CURRICULUM COVERAGE MAP

Building scientific knowledge and skills across the primary years



OUR AIM		EYFS (Understanding the World)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
To ensure all pupils develop the scientific knowledge and working scientifically skills they need to understand the world and make a positive impact on the future.		- Explore the natural world around them. - Know some similarities and differences between living things.	- Identify and name a variety of common animals. - Identify and name common plants. - Identify, name, draw and label basic plant parts.	- 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. - Describe how animals obtain their food. - Describe how plants grow and stay healthy.	- Identify and describe functions of plant parts. - Explore requirements of plants for life and growth. - Describe life cycles of plants and animals. - Describe the importance of nutrition for humans and animals. - Describe the simple functions of the basic parts of the digestive system.	- Recognise that living things can be grouped in a variety of ways. - Explore and use classification keys. - Recognise that environments can change and pose dangers. - Describe the simple functions of the basic parts of the digestive system. - Identify different types of teeth in humans.	- Describe the life process of reproduction in some plants and animals. - Describe the changes as humans develop to old age.	- Describe the circulatory system. - Describe the impact of diet, exercise, drugs and lifestyle. - Describe the ways in which nutrients and water are transported. - Describe how living things are classified. - Understand evolution and inheritance.
NATIONAL CURRICULUM STRANDS								
BIOLOCS (Living things and their habitats)		- Explore how things work. - Use all their senses in hands-on exploration.	- Distinguish between an object and the material from which it is made. - Describe the simple physical properties of everyday materials.	- Identify and compare the suitability of a variety of everyday materials. - Find out how the shapes of solid objects can be changed.	- Compare how things move on different surfaces. - Notice that some forces need contact between 2 objects, but magnetic forces can act at a distance. - Observe how magnets attract or repel. - Describe the effects of friction.	- Identify common appliances that run on electricity. - Construct a simple electrical circuit and identify components. - Recognise that sound is produced by vibrations. - Identify how sounds travel. - Compare and group materials.	- Explain that unsupported objects fall towards the Earth because of gravity. - Identify the effects of air and water resistance. - Describe the movement of the moon relative to the Earth.	- Associate the brightness of a lamp or volume of a buzzer with the number and voltage of cells used in the circuit. - Explain how light travels. - Explain how we see objects.
CHEMISTRY (Materials)		Explore a variety of materials, tools and techniques.	Identify and name a variety of everyday materials.	Describe how the shape of solid objects can be changed by squashing, bending, twisting and stretching.	- Compare and group together different kinds of rocks. - Observe and compare soils. - Describe simple properties of rocks and soils.	- Compare and group materials. - Investigate states of matter. - Observe that some materials change state.	- Compare and group materials based on their properties. - Understand how materials dissolve to form solutions. - Separate mixtures.	- Know that some materials will dissolve in liquid to form a solution. - Use knowledge of solubility to separate mixtures.
EARTH & SPACE (Earth and space)		Talk about the features of their own environment.	- Observe changes across the four seasons. - Observe and describe weather associated with seasons.	- Observe changes across the four seasons. - Observe and describe different types of weather.	Describe the movement of the Earth, and other planets, relative to the Sun.	- Compare and group various rocks based on appearance. - Explore fossils.	- Describe the movement of the Earth and other planets. - Describe the movement of the Moon relative to Earth.	- Describe the movement of the Earth and other planets relative to the Sun. - Describe the Sun, Earth and Moon.
WORKING SCIENTIFICALLY (Throughout all strands)		Explore & notice → Observe & identify → Ask & compare → Investigate & record → Measure & analyse → Plan & evaluate → Evaluate & explain						



COVERAGE STATEMENT

This map shows when key National Curriculum objectives are taught or revisited. Learning is built upon progressively each year to deepen knowledge and strengthen skills.



WORKING SCIENTIFICALLY

Asking questions, investigating, observing, measuring and evaluating.



SCIENTIFIC KNOWLEDGE

Building and connecting key scientific concepts.



UNDERSTANDING THE WORLD

Exploring the natural world and how science helps us.



SUSTAINABILITY & RESPONSIBILITY

Making choices that protect our planet and living things.



CURIOSITY & RESILIENCE

Being curious, persevering and never giving up.



WHY IT MATTERS

A strong science education inspires curiosity, builds understanding and prepares children to be informed, responsible citizens.