

Year 1 Science Progression Map

	Autumn 1	
Unit	Materials	
Prior Learning	EYFS –Talk about key features of the natural environment, beginning to identify different materials and their properties e.g. wood / hard (UW)	
Unit Aim	To help pupils recognise everyday objects and the materials they are made from, explore and describe their simple physical properties, and begin to compare and group materials based on these properties.	
Knowledge	<u>Essential Knowledge</u>	<u>Working Scientifically</u>
	• 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	• Observing materials carefully, identifying the material they are made from and grouping them accordingly. • Recording their observations about a variety of materials and listing their properties. • Observing materials: identifying the object name and the material from which it is made. • Asking questions about materials in order to group them according to their properties. • Predicting if all shiny materials are made from metal and recording results
Vocabulary	Bendy, dull, glass, metal, plastic, rough, rubber, smooth, stiff, wood, compare, describe, investigate, material, observe, properties, suitable, waterproof, shiny, object.	
Future Learning	• Children will look at the suitability of a variety of everyday materials. • Children will study rocks in more detail, looking at the properties of different types of rock. • Children will study 'States of matter' where they will look at a variety of solids, liquids and gases. • Children will study 'Properties and changes of materials' where they will explore deeper into states of matter and reversible and irreversible changes.	
KS1 End Point	To know how and why humans, animals and plants all grow healthily. To investigate different materials in the world around us.	

	Autumn 2	
Unit	Investigating Materials	
Prior Learning	EYFS – Explore the properties of different materials: □ Talk about materials chosen and begin to say why (UW)	
Unit Aim	To develop pupils' understanding of everyday materials by beginning to test and decide which materials are most suitable for different uses.	
Knowledge	<u>Essential Knowledge</u>	<u>Working Scientifically</u>
	• 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. • Test everyday materials to distinguish which is most suitable.	• Observing closely, using simple equipment. • Recording their observations about a variety of materials, listing their properties. • Performing simple tests • Asking questions about materials in order to group them according to their properties. • Predicting if all hard materials are waterproof.
Vocabulary	bendy, dull, glass, metal, plastic, rough, rubber, smooth, stiff, wood, compare, describe, investigate, material, observe, properties, suitable, waterproof, shiny, object, prediction, fair test, method, results, conclusion.	
Future Learning	• Use more precise scientific vocabulary (e.g. transparent, soluble, magnetic, conductive) • Plan and carry out fair tests to compare material properties • Investigate properties such as strength, hardness, absorbency, and insulation • Learn about states of matter (solids, liquids, gases) • Observe and explain changes such as melting, freezing, and evaporation • Understand reversible and irreversible changes (e.g. dissolving vs burning) • Explain why materials are chosen for specific uses based on their properties • Explore mixing and separating materials (e.g. filtering, sieving, evaporating) • Record results using tables, charts, and simple scientific diagrams • Draw conclusions from investigations using evidence	
KS1 End Point	To know how and why humans, animals and plants all grow healthily. To investigate different materials in the world around us.	

	Spring 1
Unit	Senses

Prior Learning	EYFS - Describe what they see, hear and feel whilst outside: □ Begin to develop an understanding of water when frozen, melted and heated by the sun □ Begin to develop an understanding of light (including colour and shadow) and heat (UW)	
Unit Aim	To develop pupils' understanding of the human body by identifying and naming basic body parts, linking them to the five senses, and using their senses to explore and understand the world around them.	
Knowledge	<u>Essential Knowledge</u>	<u>Working Scientifically</u>
	- Identify, name, draw and label basic body parts of the human body. - Identify which body part is associated to each sense. - Use senses to identify food, smells or objects. - Recognise how senses help everyday life.	- Asking simple questions and recognising that they can be answered in a variety of ways. - Observing closely to see how the eyes pupil can change size. - Identifying which foods belong to which taste. - Using their observations and ideas to suggest answers to questions.
Vocabulary	body, senses, see, smell, hear, touch, taste, vibration, tongue, sweet, salty, sour, umami, bitter, nostrils, nose, ear, ear drum, ear canal, eye, pupil, skin, nerves, taste buds, tongue, limbs, organs, bones.	
Future Learning	- Identify and describe the functions of different parts of the body in more detail (e.g. how the eye and ear work) - Understand how signals travel through the body using the brain and nervous system (basic introduction) - Recognise that senses can change or be affected (e.g. light/dark affecting sight, loud sounds affecting hearing) - Explore how humans adapt when a sense is limited (e.g. using touch or hearing more) - Use scientific enquiry to investigate senses (e.g. testing reaction times, identifying smells or sounds) - Collect and record data from investigations using tables, charts, and graphs - Begin to understand how lifestyle choices can affect the body and senses (e.g. protecting ears from loud noise, eye care) - Link learning to animals, comparing how different animals use their senses to survive	
KS1 End Point	To know how and why humans, animals and plants all grow healthily. To investigate different materials in the world around us.	

	<u>Spring 2</u>
Unit	Animals including Humans
Prior Learning	EYFS - Explore, name and talk about different use / function of body parts Sequence growth from baby to adult. Talk about key changes Explore a range of different pets and learn names of babies: □ Talk about key features □ Categorise – size /

	number of legs / mobility / Explore woodland animals □ Explore arctic animals, name and identify key features: Categorise by habitat / mobility / babies / sleeping habits (NW)	
Unit Aim	To develop pupils' understanding of animals, including humans, by enabling them to identify, name and compare a variety of animals and their structures, explore different diets, and understand how pets can be cared for responsibly.	
Knowledge	<u>Essential Knowledge</u>	<u>Working Scientifically</u>
	- I can identify and name a variety of animals including fish, amphibians, reptiles, birds and mammals. - I can identify and name a variety of common animals that are carnivores, herbivores and omnivores. - I can describe and compare the structure of a variety of common animals. - I can identify a variety of pets and how to take care of them.	- Ask simple questions about animals and their characteristics - Use simple observations to describe similarities and differences between animals - Record observations through drawing, labelling, and simple tables - Use everyday language and simple scientific vocabulary to describe animals and their bodies - Carry out simple tests or enquiries (e.g. sorting animals into groups based on features) - Communicate findings using spoken language, drawings, and labels
Vocabulary	fish, reptiles, mammals, birds, amphibians, pets, herbivore, omnivore, carnivore, leg, arm, head, ear, nose, back, wings, beak, scales, feathers, gills, fur, hair, diet.	
Future Learning	- Classify living things using more detailed scientific classification systems - Identify and describe vertebrate and invertebrate groups in greater depth - Understand life processes common to all living things (MRS GREN) - Explore animal life cycles, including reproduction and growth in humans and animals - Compare different animal skeletons and understand the function of bones and muscles - Investigate human body systems (e.g. digestive, circulatory, respiratory systems) - Understand the role of nutrition and balanced diets in human health - Explore adaptations of animals to their environments - Study food chains and food webs, including predator and prey relationships - Use scientific enquiry skills to plan, carry out and evaluate investigations about living things	
KS1 End Point	To know how and why humans, animals and plants all grow healthily. To investigate different materials in the world around us.	

	<u>Summer 1</u>
Unit	Plants
Prior Learning	EYFS - Observe natural features carefully and begin to make observational drawings: □ Plants Explore growth of different vegetables and identify key ingredients to grow – soil, sunlight, water: Grow own vegetables □ Visit school allotment
Unit Aim	To develop pupils' understanding of plants by enabling them to identify and name a variety of wild and garden plants, describe their basic structure and functions, and make simple predictions based on observations of how plants grow and change.

Knowledge	Essential Knowledge	Working Scientifically
	- I can identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. - I can identify and describe the basic structure of a variety of common flowering plants, including trees. - I can make simple predictions based on observations about fruit and vegetables. - I can describe the parts of a plant and explain its job.	- Observe closely using simple equipment (e.g. magnifying glasses) - Ask simple questions about plants based on observations - Identify and classify plants using simple features (e.g. leaf shape, evergreen/deciduous) - Carry out simple tests or observations (e.g. comparing fruits and vegetables) - Make predictions based on observations and simple patterns. - Record observations through drawings, labels, tables, or sorting activities - Use simple scientific vocabulary to describe what is seen and found.
Vocabulary	plants, living, grow, tree, flower, leaf, stem, root, seed, fruit, vegetable, wild plant, garden plant, deciduous, evergreen, water, sunlight, air, soil, observe, describe, compare, sort, structure	
Future Learning	- Identify and describe the function of different parts of flowering plants (e.g. roots, stem, leaves, flowers) in more detail - Investigate how water is transported within plants - Understand the role of flowers in reproduction, including pollination and seed formation - Explore plant life cycles and how plants reproduce - Compare how plants adapt to different environments and habitats - Carry out investigations into plant growth (e.g. what affects growth such as light, water, and soil type) - Record results using tables, diagrams, and graphs - Use scientific enquiry skills to plan and carry out fair tests about plants - Learn how plants are classified into different groups based on characteristics - Explore the importance of plants for humans and ecosystems (e.g. food chains, oxygen production)	
KS1 End Point	To know how and why humans, animals and plants all grow healthily. To investigate different materials in the world around us.	

	Summer 2	
Unit	Plants and Animals in our Local Area	
Prior Learning	EYFS - Observe natural features carefully and begin to make observational drawings: □ Plants Explore growth of different vegetables and identify key ingredients to grow – soil, sunlight, water: Grow own vegetables □ Visit school allotment Observe and know the lifecycle of a butterfly	
Unit Aim	This unit aims to develop children's understanding of local animals and plants by identifying and classifying them, exploring how some animals are adapted to being nocturnal, gathering simple data from their environment, and learning how to care for pets responsibly.	
Knowledge	Essential Knowledge	Working Scientifically

	• Identify common and nocturnal animals and their offspring. • Gather and record data with support about the animals and plants which I have found on the school field/local area. • Identify how an animal has adapted to being nocturnal. • Identify animals linked to my local area. • Understand how to look after a variety of pets responsibly.	• Observe closely using simple equipment (e.g. magnifiers) • Ask simple questions about plants and animals • Identify and classify animals (e.g. nocturnal/diurnal, local/non-local) • Use observations to suggest answers to questions • Gather and record data to help answer questions (e.g. tally charts, pictograms) • Record findings using drawings, labels, and simple tables.
Vocabulary	fish, amphibian, reptile, bird, mammal, plant, trees, eyes, nose, mouth, teeth, paws, fin, wings, tail, skin, scales, fur, feathers, herbivore, carnivore, omnivore, nocturnal, offspring, living, not living, never living	
Future Learning	• Classify living things using more detailed grouping systems • Explore different habitats and how animals and plants depend on each other • Construct and understand simple food chains • Study life cycles of animals (including humans) and plants • Understand how animals and plants are adapted to their environments • Recognise how environments can change and the impact on living things • Learn about human impact on habitats and the environment • Use more systematic and accurate methods to gather, record, and present data • Begin to use scientific vocabulary to explain ideas and findings	
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