

East Preston Infant School

Science Progression Overview



Intent:

We believe that Science is an important part of a child's development and transition into adulthood. We aim for the children to become inquisitive, confident, scientific young people who can apply enquiry skills in a range of contexts to help them develop an understanding of the world that they live in.

Implementation:

Our pupils develop their early science skills and develop their natural curiosity by exploring objects, asking and answering questions through practical investigations, using a range of resources. Children are taught to predict what they think will happen; to observe and to discuss what they have seen; to solve and check answers to problems, record their findings and draw conclusions. They are then encouraged to apply what they have learnt through first hand experiences to other situations. Our commitment to learning outside the classroom means that the rich environments of Forest and Beach School, alongside our school grounds, enable children to gain first hand understanding of science in the real world. Half termly units build upon prior learning and enable consolidation and deepening of key concepts so that children can apply their knowledge and skills more widely.

Intended Impact:

- Our children will perceive science as exciting, engaging and valuable, so that they can develop the skills to ask questions and think systematically.
- They will become confident scientists who have the ability to investigate the world around them and are curious about natural phenomena.
- They will make connections and apply scientific knowledge both across science lessons and the wider curriculum.
- They will continue to deepen their respect, care and appreciation for the natural world and all its diverse environments.

Science: Understanding the World

Year Group	Working Scientifically	Animals Including Humans	Living things and their Habitats	Everyday Materials	Plants	Seasonal Changes
Reception Emerging ELG	Use all their senses in hands-on exploration of natural materials Talk about what they see, using a wide vocabulary Explore the natural world around them Describe what they see, hear and feel whilst outside Explore the natural world around them, making observations	Understand the key features of the life cycle of an animal	Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class	Explore and talk about different forces they can feel Talk about the differences between materials and changes they notice Explore collections of materials with similar and/or different properties Understand some important processes and changes in the natural world around them, including changing states of matter	Plant seeds and care for growing plants Understand the key features of the life cycle of a plant Begin to understand the need to respect and care for the natural environment and all living things	Understand the effect of changing seasons on the natural world around them Understand some changes in the natural world around them, including the seasons

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	and drawing pictures of animals and plants					
Reception Key Vocabulary:	light, flower, plant, stick, leaf, grow, living, animal, cow, sheep, pig; hot, cold, rain, snow, season, spring, summer, autumn, winter, shadow, pattern, change; sink, float, push, pull, force, water, rock, wood, material, melting, cooking					
Year 1	Begin to ask simple questions and recognise that they can be answered in different ways Begin to observe closely, using simple equipment Begin to perform simple tests Begin to identify and classify Begin to use my observations and ideas to suggest answers to questions Begin to gather and recording data to help in answering questions.	To identify and name a variety of common animals including fish, amphibians, reptiles, mammals and birds To identify and name a variety of common animals that are carnivores, herbivores and omnivores To describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) To identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense		To distinguish between an object and the material from which it is made To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock To describe the simple physical properties of a variety of everyday materials To compare and group together a variety of everyday materials on the basis of their simple physical properties	To identify and name a variety of common wild and garden plants, including deciduous and evergreen trees To identify and describe the basic structure of a variety of common flowering plants (including trees)	To observe and describe changes across the four seasons To observe and describe weather associated with the seasons and how day length varies
Year 1 Key Vocabulary:	observe, compare, record, temperature; petal, root, bulb, seed, trunk, branches, stem, stalk, fruit, deciduous, evergreen; head, neck, arm, elbow, leg, knee, face, ears, eyes, hair, mouth, teeth, senses, touch, taste, smell, sight; hard/soft, stretchy/stiff, shiny/dull, rough/smooth, bendy, brick, paper, fabrics, elastic, foil, wood, plastic, glass, metal, rock, object, material, waterproof, length, vary, properties, absorbent, opaque/transparent; fish, birds, mammals, wing, claw, feathers, fur, scales, carnivores, herbivores, omnivores, amphibians, reptiles, habitat; seasons, weather, winter, spring, summer, autumn, changes					

Year Two	To ask simple questions and recognise that they can be answered in different ways	To notice that animals, including humans, have offspring which grow in to adults	To explore and compare the differences between things that are living, dead, and things that have never been alive	To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses	To observe and describe how seeds and bulbs grow into mature plants	
	To observe closely, using simple equipment	To find out about and describe the basic needs of animals, including humans, for survival (water, food, air)	To 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	To find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching	To find out and describe how plants need water, light and a suitable temperature to grow and stay healthy	
	To perform simple tests	To describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene	To identify and name a variety of plants and animals in their habitats, including micro-habitats			
	To identify and classify					
	To use my observations and ideas to suggest answers to questions					
	I can gather and recording data to help in answering questions					
Year Two Key Vocabulary:	question, happen, test, record, measure, check, perhaps, observe, compare, equipment, data, classify, identify ground, heat, habitat/ micro-habitat, living/ dead/ alive, food chain/ producer/ predator, survival, bulbs/ germination/ growth/ plants/ seeds/ temperature, nutrition/ protein/ carbohydrate/ exercise young, body, offspring/ baby/ toddler/ child/ teenager/ adult/ life cycle, hygiene/ germs state, rock, strong, object, surface, heat, snow, absorbent, transparent, opaque, flexible					
National Curriculum						
<p>The National Curriculum for Science aims to ensure that all pupils:</p> <ul style="list-style-type: none">• Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics• Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them• Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future						
Assessment:						
Teachers view children’s scientific explorations regularly and make on-going assessments against the learning intention.						