



Science Curriculum Progression of Skills and Knowledge



At Westfields Infant School, we want children to develop the knowledge, skills and competencies to access the next stage in their learning. In addition to this, we actively encourage and motivate the children to develop positive attitudes, skills and habits so that they are well equipped for the future. Our intent in science is to provide a stimulating and supportive environment that ignites a lifelong passion for inquiry, exploration and understanding of the world in which they live. We aim to develop positive attitudes towards science, providing the children with the skills and confidence so they are well equipped for the future.

Science is vital to the world's future prosperity and has changed our lives by developing new technologies and understanding of our world. Our curriculum incorporates real-world applications of scientific concepts, helping children understand the relevance of science in their daily lives and the broader global context.

Science learning helps children to become analytical problem solvers, developing the power of rational explanation and a sense of excitement and curiosity about natural phenomena. Through experimentation and problem-solving, children will develop resilience and perseverance in the face of scientific challenges.

We encourage collaboration and communication developing children's ability to work effectively as part of a team. Through group investigations and discussions, children learn to articulate their ideas, listen to others and collectively construct knowledge, develop understanding and improve scientific skills.

At Westfields Infant School, our science curriculum has been developed based on the [Statutory Framework for the Early Years Foundation Stage](#) where the foundation of scientific knowledge and skills are evident in 'Understanding the World' and the [National Curriculum for Science](#).

Early Learning Goals – The Natural World

- 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.

The National Curriculum for Science – Years 1 and 2

The National Curriculum for Science aims to ensure that all pupils:

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

SKILLS	Progression of Skills		
	Reception	Year 1	Year 2
Working Scientifically	<ul style="list-style-type: none"> • Show curiosity and ask questions. • Make observations of what can be seen. • Make simple comparisons from their observations. • Use simple equipment to measure. 	<ul style="list-style-type: none"> • Begin to use simple scientific words to ask and answer a simple question. • Make observations using senses and make direct comparisons. 	<ul style="list-style-type: none"> • Ask simple questions and recognise that they can be answered in different ways. • Make close observations when using simple equipment.

	<ul style="list-style-type: none"> Identify, sort and group practically. Talk about what they are doing and have found out. 	<ul style="list-style-type: none"> With support, perform simple tests using simple scientific equipment accurately. Identify and sort items into groups using the correct, given vocabulary. Use observations to suggest answers to questions. Gather data to help in answering questions using a given format. 	<ul style="list-style-type: none"> Design simple tests using a wider range of equipment. Identify, classify and record accurately using their own criteria and the correct vocabulary. Use observations and ideas to suggest answers to questions, giving scientific reasons for their thinking. Design a format and gather and record data to help in answering questions.
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KNOWLEDGE	Progression of Knowledge		
	Reception	Year 1	Year 2
Living Things and their Habitats	<ul style="list-style-type: none"> Identify animals that live in a woodland habitat. Identify some features of animals that live in a woodland habitat and how that makes them suitable to survive there. 	<ul style="list-style-type: none"> Know animals and plants live in a variety of different places called habitats. Know and understand how animals and plants adapt to survive in different habitats. Know and understand there is variation in all living things. 	<ul style="list-style-type: none"> 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 micro-habitats. 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.
Plants	<ul style="list-style-type: none"> Develop an understanding of growth, decay and changes over time in plants. Show care and concern for living things and the environment, growing and caring for plants. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Observe and describe how seeds and bulbs germinate into new plants and then grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.
Animals including humans	<ul style="list-style-type: none"> Identify features of woodland animals, particularly their “class animal”. Show care and concern for living things and the environment, caring for eggs/ ducklings. Begin to understand that there are other animals that live beyond our immediate woodland habitat e.g. bears, sea creatures. 	<ul style="list-style-type: none"> 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). 	<ul style="list-style-type: none"> Notice that animals, including humans, have offspring which grow into adults. Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.

		<ul style="list-style-type: none"> Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. 	
Everyday Materials and Uses of Everyday Materials	<ul style="list-style-type: none"> Begin to name some materials e.g. wood, plastic, metal. Identify some simple properties e.g. floats/ sinks. 	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 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.
Seasonal Changes	<ul style="list-style-type: none"> Explore how the outside changes with each season, looking at plants, trees, weather. Use everyday language to describe what they can see. Learn the name of each season. 	<ul style="list-style-type: none"> Observe changes across the four seasons in plants/ animals. Use the vocabulary evergreen/ deciduous to describe the changes that occur. Observe and describe weather associated with the seasons and how day length varies. 	<ul style="list-style-type: none"> Name the 4 seasons and features of the plants/ animals of each season. Use the vocabulary of migration and hibernation when describing the seasons, in addition to deciduous/ evergreen.