# Science Curriculum Statement

## Our Vision for Science

At Laira Green Primary School, we provide a high-quality, carefully sequenced science curriculum that equips children with the knowledge, skills and understanding they need to become confident, curious and independent learners. We aim to develop a lifelong interest in science, helping children appreciate how scientific discoveries have transformed human lives and understand the vital role science plays in shaping our future. Through engaging, practical and challenging experiences, we nurture children's natural curiosity and encourage them to question, explore and make sense of the world around them.

We use White Rose Hub Science to support the planning and delivery of our curriculum. This provides a clear, progressive approach to teaching scientific knowledge and skills, ensuring that learning builds systematically on prior understanding and prepares children for future learning. Our curriculum aligns with the National Curriculum for Science, covering all required areas of scientific knowledge and understanding alongside the disciplinary knowledge needed to work scientifically.

As a White Rose Hub Science Champion School, we are proud to be part of a wider community working together to celebrate excellent teaching practice, share successes, exchange ideas and contribute to the development of resources and support for schools across the UK and around the world. We value the opportunity to learn from others, share our experiences and help shape a high-quality science education for our children.

We want children to use science to explain what they observe and experience in everyday life. They learn to think critically, make predictions, identify patterns, consider cause and effect, and use evidence to support their conclusions. We encourage them to embrace challenges, learn from mistakes and understand that scientific knowledge develops through questioning, investigation and the evaluation of evidence.

## Curriculum Organisation and Progression

Science is taught weekly at Laira Green Primary School. Learning is organised into multiple units across the academic year for each year group, with regular opportunities to revisit previous learning through retrieval activities and flashbacks. These help strengthen understanding, address misconceptions and support the long-term retention of essential scientific knowledge.

Our curriculum is carefully sequenced so that knowledge and skills are revisited, extended and applied in increasingly complex contexts as children progress through the school. This enables them to make connections between different areas of science, develop a secure understanding of key concepts and build the disciplinary knowledge needed to investigate questions and evaluate evidence.

## Early Years Foundation Stage

In Preschool and Reception, science is introduced through a thematic, play-based approach that encourages children to explore, investigate and make sense of the world around them. Learning supports the EYFS areas of *Understanding the World, Communication and Language,* and *Personal, Social and Emotional Development*. Children are encouraged to ask questions, make observations, explore materials, notice changes and talk about their discoveries, laying the foundations for the National Curriculum in Year 1.

In Preschool, children develop their curiosity through themes such as *I Am Special, Autumn Adventures, Wriggly World, Farmyard Fun, Little Gardeners, Healthy Eaters* and *Shadows, Stars, and Sleepy Paws*. These experiences introduce them to their bodies and senses, seasonal changes, living things, animal habitats, plant growth, light and dark, and healthy choices. Through outdoor

exploration, stories, role play and practical activities, children begin to recognise similarities and differences and learn to care for themselves and the natural world.

Throughout Reception, these foundations are built upon through engaging themes and first-hand experiences. During *Marvellous Me*, children explore their features, learn about their bodies and discover what makes them unique. In *Underwater Explorers*, they investigate sea creatures, gather information and ask questions, including when meeting a visiting marine biologist. During *Ahoy M' Hearties,* children explore floating and sinking as they make boats from different materials, developing early testing skills. In *Dinosaur Detectives*, they use books, models and other sources to discover how we know dinosaurs existed. During *African Adventure*, children compare and classify animals, exploring their characteristics and habitats. Finally, in *Let's Get Growing*, children plant seeds, care for plants and observe butterflies developing from larvae into fully grown butterflies, strengthening their understanding of growth and change over time.

Across Preschool and Reception, children encounter early forms of scientific enquiry through observation, exploration, questioning, comparison and simple testing. These experiences support the relevant Development Matters guidance and prepare children for the Early Learning Goals, particularly *The Natural World*.

**Teaching and Learning in Science**

Our science lessons combine explicit teaching with practical experiences, discussion, observation and exploration. Teachers introduce new concepts through clear explanations, demonstrations, visual resources and real-life examples that help children connect scientific ideas to their own experiences. A range of equipment and materials is used in classrooms, around the school grounds and within the local area to make learning purposeful and accessible.

Children have opportunities to work independently and collaboratively, developing resilience, communication and problem-solving skills. They learn to listen to different viewpoints, compare findings and explain their reasoning. Links with mathematics enable them to measure accurately, calculate, present data and interpret results, helping them understand how mathematical thinking supports scientific investigation.

**Scientific Enquiry and Working Scientifically**

Scientific enquiry is central to our curriculum. Children learn to explore questions, gather and interpret evidence, draw conclusions and communicate their findings. The National Curriculum's *Working Scientifically* requirements are embedded throughout our teaching, helping children understand how scientific knowledge is established, tested and refined.

As children progress, they experience a range of enquiry approaches:

- **Research:** Children use secondary sources, such as books, websites, videos and expert knowledge, to investigate questions and develop their understanding.
- **Observation over time:** Children observe, measure and record changes over time, identifying patterns and discussing their findings.
- **Pattern seeking:** Children collect and analyse data to identify relationships, similarities, differences and trends, using their findings to suggest possible explanations.
- **Identifying, grouping and classifying:** Children use observable similarities and differences to group and classify objects, materials and living things according to scientific criteria.
- **Comparative and fair testing:** Children compare objects, materials or conditions, changing one variable while keeping others constant where appropriate, to investigate relationships and draw conclusions.

**Science Beyond the Classroom**

We recognise that children's curiosity extends beyond the classroom. Visits to the local area, trips to museums and visits from experts provide opportunities to encounter science in different contexts, explore new ideas and ask questions of people with specialist knowledge.

Our school grounds are also a valuable resource for investigating living things, habitats, materials, forces and weather. These experiences help children connect classroom learning with the world around them and develop an appreciation of the relevance of science in everyday life.

**At Laira Green Primary School, our children will:**

- Develop curiosity, enthusiasm and a lasting interest in science and future scientific learning.
- Retain and apply scientific knowledge, making connections between concepts and real-life contexts.
- Think critically, ask meaningful questions and use evidence to develop explanations.
- Communicate scientific ideas clearly using accurate, subject-specific vocabulary.
- Apply mathematical skills to measure, organise and interpret data.
- Plan and carry out investigations safely, selecting appropriate equipment and methods.
- Evaluate findings, draw evidence-based conclusions and recognise that scientific ideas can be refined.
- Develop perseverance, independence and the ability to work collaboratively.
- Leave primary school with a secure foundation for further scientific learning and an appreciation of science's importance in understanding and improving the world.