

Our Science Intent

At King's Road Primary school, our intention is for all children to become confident scientists, actively participating in learning through a hands-on investigative approach to science from EYFS to Y6. We aim to provide a learning environment that supports pupils to feel confident to take risks, ask questions and encourage their natural curiosity of the world around them. A high-quality science education provides the foundations for understanding the world around us. We want all our children to be naturally curious about the world around them, to develop a sense of wonder about the natural world as well as to learn and understand about the changes that are happening to our world globally and locally. Our curriculum has been developed to ensure full coverage of the National Curriculum enabling children to acquire the science specific skills and knowledge.

The aims of science are to enable children to:

- Ask and answer scientific questions.
- Plan and carry out scientific investigations using equipment, including computers correctly.
- Know and understand the life processes of living things.
- Know and understand the physical processes of materials, electricity, light, sound and natural forces.
- Know the nature of the solar system, including earth.
- Evaluate evidence and present their conclusions clearly and accurately, drawing upon skills developed in other curriculum areas including Maths, English and Computing.
- Understand science in everyday life and the impact of science on our world – begin to appreciate how science will affect their future on a personal, national and global level.
- To understand what a scientist is and how science relates to the real world.
- To discover and find answers to real life questions.
- To develop an understanding of the uses and implications of science today and for the future.
- To develop and build on their knowledge and understanding of science concepts as they move through the key stages from EYFS to Year 6.
- To develop science skills and show progression in the skills as they move through the key stages.
- To learn, understand and use scientific vocabulary appropriately, using visual aids to support understanding.

Throughout KS1 and KS2, working scientifically skills and scientific enquiry skills are progressively taught together so that children do not just follow instructions but instead develop the capability to independently investigate the world.

Working Scientifically (The "What" & "How"): This defines the overall framework for scientific investigations, encompassing the skills, attitudes, and methods needed to answer questions. It involves choosing appropriate methods, such as pattern seeking, observing over time, classifying, or fair testing. It's about thinking and acting like a scientist.

Working Scientifically Skills

Asking questions

Asking questions that can be answered using scientific enquiry.



Making predictions

Use your prior knowledge to suggest what may happen.



Setting up tests

Choose equipment and a method to carry out a test.



Observing and measuring

Use your senses and measuring equipment to observe and measure results from an enquiry.



Recording data

Using tables, drawing and other ways to present findings.

Scientific Enquiry Skills (The "Tools"): These are the specific, teachable, and measurable actions applied during an investigation. Examples include asking questions, making predictions, choosing equipment, taking accurate measurements, recording data, and interpreting results.



Science in the Early Years Foundation Stage (EYFS) is embedded within the 'Understanding the World', one of the four specific areas of learning, focusing on hands-on exploration, curiosity, and observation rather than formal lessons. It looks like children investigating nature, testing materials, asking questions, using their senses to explore, talking about what they see/feel, and asking questions to understand "how" and "why" things work. Through play and hands-on activities, children learn to predict, test, and observe results. Science in EYFS is about fostering a natural curiosity and building foundational knowledge through inquiry-based learning in both indoor and outdoor settings.

Science is taught weekly in KS1 and KS2 utilising the outdoor environment, trips and visitors at every appropriate opportunity so that pupils can connect their science learning with the world around them. We have long term and medium-term plans in science. The long-term plan maps the science topics studied in each term to ensure coverage. Our medium-term plans give details of the key scientific knowledge and vocabulary included in each unit of work for each term. These plans are reviewed annually. At the start of each topic teachers find out what our children already know, what they want to know and lessons are planned to build on this learning. For example, topics such as 'plants' are introduced in EYFS, taught in Key Stage one and studied again in further detail in Key Stage 2. This allows children to reinforce their knowledge and build on and extend existing knowledge. We assess children's understanding at the end of a science unit, addressing misconceptions as they arise.

Key scientific language and vocabulary is displayed in class, modelled, taught and reinforced throughout lessons enabling our children to be familiar with and use vocabulary accurately. Teachers are also encouraged to plan trips and educational visits to enhance our children's learning experience.

While gaining scientific knowledge is crucial, our science lessons equally build on life essential skills such as problem solving, thinking critically and working collaboratively, perseverance and open mindedness.

The world needs scientists. The children who we can inspire into studying science now are the ones who will be called upon to solve the problems of the future.