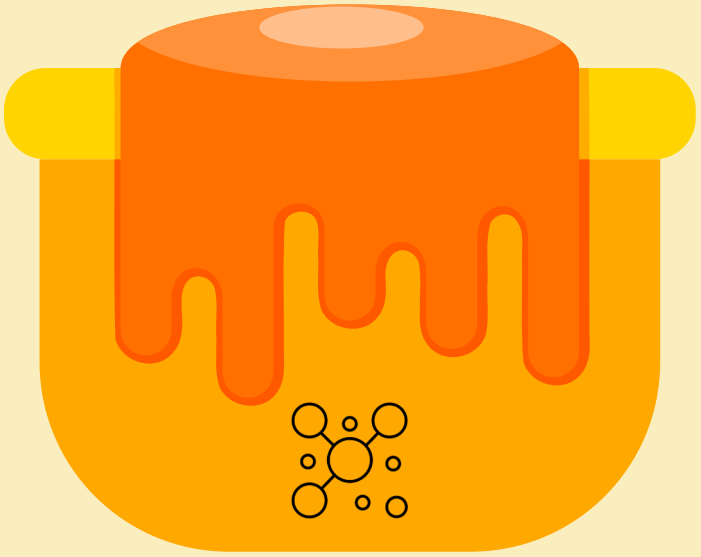
Science

Science is a vibrant subject at Purbrook Infant School about which we are incredibly passionate. Children have lots of questions about the world around us and we aim to provide them with the necessary core scientific knowledge and investigative skills to answer their questions about those processes. At Purbrook Infants, we believe that science stimulates and excites pupils' curiosity about the world around them. Whenever possible, the children apply their knowledge to a wider context and make meaningful links with other curriculum areas. They learn to work as scientists, planning and undertaking practical investigations. Our curriculum provides a rich variety of topics that cover all the core scientific skills and contexts that the children can relate to their everyday lives. Children are given the opportunity to generate their own scientific lines of enquiry and explore using a variety of investigative skills: becoming more familiar with each of the elements of the scientific method as they progress through the school. These include skills such as developing their own lines of enquiry, making predictions, observing changes over time, drawing conclusions from their observations, collecting results in a variety of ways, analysing results and evaluating their own method and the reliability of their results.



Scientific enquiry skills are embedded in each topic the children study and these topics are revisited and developed throughout their time at school. At Purbrook Infants we understand the importance of working scientifically and that children learn best through their own experiences (eg. Through observations and experiments) and through asking questions, we therefore ensure that working scientifically is at the core of our science lessons. In addition, we recognise the importance of building upon prior knowledge and therefore as a school we carefully plan our lessons from our own skills progression to ensure children are making progress throughout their time at Purbrook Infant School.

In Early Years, children are encouraged to use their senses to explore the world around them, they are taught to be inquisitive by asking questions and making comments on things they have observed. Children are taught how to plan, predict, make links, and notice patterns in their experiences. Teachers motivate children to discuss similarities and differences in their own environment as well as how environments might vary. At Purbrook Infants children are invigorated to think of their own ideas and to develop problem solving skills. We support children through our questioning to review their learning and to adapt their strategies in order to reach their goals.

In KS1, children use different types of enquiry to answer their questions in order to develop their understanding of scientific ideas. They use simple scientific language to talk about what they have found out and communicate their ideas in a variety of ways. Most of their learning is done through the use of practical, first hand experiences. Children develop a respect for the materials and equipment they handle with regard to their own, and other children's safety. They carry out simple, comparative and fair tests. They use a range of methods to communicate their scientific information and present

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it in a scientific manner, through diagrams, graphs and charts. They draw simple conclusions using taught scientific vocabulary.

At Purbrook Infants staff show a love of science in their classrooms, this positive attitude instils high expectations and reinforces that all children are capable of achieving high standards. We promote children's independence and for all children to take responsibility and ownership of their own learning.

· Planning for science is a process in which all teachers are involved, teachers plan engaging, and high-quality lessons with a range of resources to aid understanding of conceptual knowledge. Teachers use precise questioning in class to test conceptual knowledge and skills, and assess children regularly to identify those children with gaps in learning, so that all children make progress.

· At Purbrook Infants we follow our DARE values throughout the school and closely follow the science knowledge page profiles and skills progression. In Early Years children are taught during their Discovery Sessions (child initiated learning) and children in KS1 have weekly science lessons. Additional opportunities are provided in science such as through Forest School sessions, visitors and educational visits linked to the science curriculum.

· Children are taught through the 'Key Ideas' and Working Scientifically skills are embedded into lessons to ensure these skills are being developed throughout the children's school career. New vocabulary and challenging concepts are introduced through direct teaching which is developed throughout KS1.

· Teachers demonstrate how to use scientific equipment, and the various Working Scientifically skills in order to embed scientific understanding. Teachers find opportunities to develop children's understanding of their surroundings by accessing outdoor learning.

The impact and measure of this is to ensure children not only acquire the appropriate age related knowledge linked to the science curriculum, but also skills which equip them to progress from their starting points, and retain knowledge that is pertinent to Science with a real life context.

All children will have:

· A wider variety of skills linked to both scientific knowledge and understanding, and scientific enquiry/investigative skills.

· A richer vocabulary which will enable them to articulate their understanding of taught concepts.

· High aspirations and a sense of awe and wonder at the natural world.