



The Orchards Primary Academy

Where learning has no limits and personal growth is endless...

Our Approach to Science

Intent

The Orchards Primary Academy recognises and values the importance of science and scientific enquiry.

Science at The Orchards aims to develop a fun, practical and engaging high-quality curriculum that inspires the next generation to succeed and excel in science. We do this through fully adhering to the aims of the national curriculum and fostering a healthy curiosity and interest in the sciences.

At the heart of our progressive science curriculum is scientific investigation. Wherever possible we intend to deliver lessons where children learn through varied systematic investigations, leading to them being equipped for life to ask and answer scientific questions about the world around them.

We believe science encompasses the acquisition of knowledge, concepts, skills and positive attitudes. Throughout the programmes of study, the children will acquire and develop the key knowledge that has been identified within each unit and across each year group, as well as the application of scientific skills.

We ensure that the Working Scientifically skills are built-on and developed throughout children's time at the school so that they can apply their knowledge of science when using equipment, conducting experiments and investigation, building arguments and explaining concepts confidently, being familiar with scientific terminology and, most importantly, to continue to ask questions and be curious about their surroundings.

Implementation

The acquisition of key scientific knowledge is an integral part of our science lessons. Linked knowledge organisers enable children to learn and retain the important, useful and powerful vocabulary and knowledge contained within each unit.

The progression of skills for working scientifically are developed through the year groups and scientific enquiry skills are of key importance within lessons.

At The Orchards Primary Academy, teachers create a positive attitude to science learning within their classrooms and reinforce an expectation that all children are capable of achieving high standards in science.

Our whole school approach to the teaching and learning of science involves the following;

- Science will be taught in planned, and arranged, topic blocks by the class teacher using the Plan Bee scheme as a starting point for planning. Our strategy is to enable all children to be catered for through adapted planning suited to their abilities



- We plan for problem solving and real-life opportunities that enable children to find out for themselves. Children are encouraged to ask their own questions and be given opportunities to use their scientific skills and research to discover the answers. This curiosity is celebrated within the classroom. Planning involves teachers creating practical, engaging lessons with opportunities for precise questioning in class to test conceptual knowledge and skills, and assess children regularly to identify those children with gaps in learning.
- Our curriculum is progressive. We build upon the learning and skill development of the previous years, which is tested through our ‘pre-learning-quick quizzes’ where teachers can identify misconceptions that need addressing.
- Working Scientifically skills are embedded into lessons to ensure these skills are being developed throughout the children’s school career, and new vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in keeping with the topics.
- 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 and workshops with experts.
- Through enrichment days, such as ‘science week’, we promote the profile of Science and allow time for the children to freely explore scientific topics.

Impact

The successful approach to the teaching of science at The Orchards Primary Academy results in a fun, engaging, high-quality science education, that provides children with the foundations for understanding the world that they can take with them once they complete their primary education.

Pupil voice is used to further develop the Science curriculum, through questioning of pupils’ views and attitudes towards Science, to assess the children’s enjoyment of science, and to motivate learners.