



“Where responsible, respectful, caring and resilient children and adults strive to be the best versions of themselves.”

Responsibility

Respect

Care

Resilience

Science

Intent

Why teach Science in this way?

Science provides children with a way of understanding the world through the disciplines of enquiry, biology, chemistry and physics. Beginning with the Early Years curriculum and continuing through Key Stage 1 and Key Stage 2, children learn the essential knowledge, methods, processes and uses of science in their lives. Above all, we want our young scientists to be curious, excited and inspired by the universe, with the confidence and ability to ask questions about the ever-changing world around them.

At Wherwell we aim for children to:

- Seek answers to questions arising from observation and experimentation
- Use and apply their knowledge of the natural world to ask further questions
- Use learnt methods to suggest ways in which they can gather evidence and offer explanation
- Make links between the strands of science; biology, chemistry and physics
- Carry out investigations that are fair, to ensure results are valid
- Understand that scientific knowledge is gained through scientific enquiry
- Build on common language with specialist vocabulary
- Apply mathematical concepts to scientific enquiry, in particular when gathering data, and know that maths is a key tool to understanding the world
- Realise that scientific knowledge is evolving all the time - everything we know now has been observed, investigated, tested and explained by scientists before

Implementation

So how do children achieve these aims?

Our science curriculum is carefully planned and delivered to provide children with the opportunities they need to be enthusiastic young scientists. From the Early Years - where our youngest children are encouraged and challenged to question and explore the world around them - to Year 6, where children are asked to take abstract ideas and use these to understand and predict how the world works, science is enjoyed and highly valued.

Our science curriculum is inclusive and challenging for all ages and abilities, with clear progression of skills and a strong emphasis on working scientifically. The National Curriculum states that working scientifically involves:

- observing closely
- taking measurements with a variety of equipment

- identifying and classifying
- planning different types of enquiry to answer questions
- recording data (results) in different ways e.g. tables, graphs, keys
- using test results to make predictions and suggest further enquiry
- presenting findings and suggesting conclusions
- identifying scientific evidence that can be used to support or refute ideas

Children are not expected to use these skills in every lesson, as our curriculum will give them the opportunity to work scientifically in all areas within their programme of study for the key stage. Topics and skills are planned and sequenced to maximise learning. Specific topics are taught in each year group, building on from previously taught units and skill coverage. Teachers are free to change the order of topics taught, to make cross-curricular links and suit mixed year classes, as long as all areas are covered within the key stage.

Teachers plan for science lessons to be as practical and child-led as possible, with topics taught as ‘learning journeys’, within which children are given a question to explore and, ultimately, answer – by working scientifically and understanding new facts. A typical learning journey lasts for a term and will involve weekly lessons, often extended, to allow for ‘hands on’ activities. In all year groups, topics are widely supported by excellent texts, both fiction and non-fiction. Children also learn about key scientists who have been influential in the area of study, both current and in the past.

Impact

What will this look like?

Wherwell scientists will have enjoyed the subject throughout their time here and will approach the topics with curiosity and excitement. They will understand the importance of the concepts of science and how this explains the world. Our children identify that science explains how and why the natural world exists; through making predictions and analysing causes. They will be able to make links between scientific knowledge, skills and how these are necessary to solving problems, such as climate change. Wherwell children will use their scientific skills and knowledge to help them understand the uses and implications of science, now and into the future.