

Science at Eversley

"The important thing is to never stop questioning."

Albert Einstein



Science

Science has been designated a core subject of the national curriculum. As such, a science education forms an important entitlement for all young people. As pupils learn science, they also learn about its uses and significance to society and their own lives. This will highlight the significant contribution science has made in the past. Science education also provides the foundation for a range of diverse and valuable careers that are crucial for economic, environmental and social development. Ofsted 2021

At Eversley Primary School, we aim to stimulate a child's curiosity in finding out why things happen in the way they do. Science teaches methods of enquiry and investigation to stimulate creative thought. Our aim is for all children to leave Eversley being able to ask scientific questions and begin to appreciate the way science will affect their future on a personal, national, and global level.

During Foundation Stage at Eversley

Understanding the world involves guiding children to make sense of their physical world and their community through opportunities to explore, question, observe and find out about the world around them. They develop scientific knowledge through daily play based activities including: exploring the natural world around them, making observations and drawing pictures of animals and plants, learning similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and understanding important processes and changes in the natural world around them, including the seasons and changing states of matter.

Our discrete science curriculum in the foundation stage is taught through the main area of 'Understanding of the world' and the strands 'Technology', 'The World' and 'People and Communities'.

During Key Stage 1 at Eversley

In KS1, the curriculum provides pupils with hands on, engaging lessons, covering both knowledge objectives and developing a range of working scientifically skills.

At the beginning of each module, there are clear learning objectives of what children will know by the end and which skills they will have developed.

Every lesson has a learning objective and success criteria. Children are taught to use the following practical scientific methods, processes and skills:

- asking simple questions and recognising that they can be answered in different ways
- observing closely, using simple equipment
- performing simple tests
- identifying and classifying
- using their observations and ideas to suggest answers to questions
- gathering and recording data to help in answering questions

During Key Stage 2 at Eversley

During key stage 2, the curriculum provides opportunities to broaden pupils' scientific view of the world around them. Children explore, talk about, test and develop ideas about everyday phenomena and the relationships between living things and familiar environments, and develop their ideas about functions, relationships and interactions.

At upper key stage 2, children encounter more abstract ideas and begin to recognise how these ideas help them to understand and predict how the world operates. They also begin to recognise that scientific ideas change and develop over time.

At the beginning of each module in a year, there are clear learning objectives of what children will know by the end and which skills they will have developed.

Every lesson has a learning objective and success criteria. Children are taught to use the following practical scientific methods, processes and skills:

- asking relevant questions and using different types of scientific enquiries to answer them
- setting up simple practical enquiries, comparative and fair tests
- making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables

		<ul style="list-style-type: none"> • reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • identifying differences, similarities or changes related to simple scientific ideas and processes • using straightforward scientific evidence to answer questions or to support their findings.
<p>Planning</p> <ul style="list-style-type: none"> • The school's science curriculum map shows the units to be covered each term. • There is a medium term plan for each unit of work. • Plans are annotated and adapted to show how will be scaffolded for less able pupils including those with SEND and how those new to English will access the content. • The most able children are planned for so that they can deepen knowledge and skills. 	<p>Teaching</p> <ul style="list-style-type: none"> • Flexible groupings are used during lessons e.g. ability and mixed ability groups, paired work, guided and independent work and whole class work. • Opportunities to develop core literacy skills are exploited throughout lessons as well as the learning of new subject specific vocabulary • A range of resources are used to enhance learning such as pictures, watching videos and reading information texts. • Relevant subject specific vocabulary is explicitly taught, evident in the classroom and used in discussion and reasoning. • Children are taught science every week and have a Science book to record work. 	
<p>Marking and feedback</p> <p>Work should be marked according to the school marking policy by using</p> <ul style="list-style-type: none"> • Peer and self-assessment • Oral feedback • Written feedback 	<p>Resourcing and display</p> <p>Display:</p> <ul style="list-style-type: none"> • Display is kept up to date with subject specific vocabulary and concepts that are being taught in Science. Enquiry type posters are referred to. <p>Resources:</p> <ul style="list-style-type: none"> • Resources are stored in subject boxes, the training room and the classroom. • Teachers are encouraged to add any new resources and display materials that they have created to the subject box. 	
<p>Assessment</p> <p>Formative:</p> <ul style="list-style-type: none"> • AFL is used within each lesson to establish next steps for pupils. • Mini 'quizzes' take place regularly to ensure content is being learnt <p>Summative:</p> <ul style="list-style-type: none"> • Completed termly against year group objectives <p>EYFS:</p> <ul style="list-style-type: none"> • Teachers and key workers make observations regarding the pupils' development in this subject. 	<p>Monitoring</p> <p>Monitoring is undertaken by subject leader and SMT during the school year. This will include:</p> <ul style="list-style-type: none"> • learning walks during Science lessons • scrutiny of Science books • discussions with pupils about what they have learnt 	