



Science at Chilham

Intent

At Chilham St Mary's, our intent is to spark and nurture every child's natural curiosity about the world through a rich, engaging, and inclusive Science curriculum. Our Science teaching encourages children to explore, question, and discover with confidence and wonder.

We aim to provide a broad and balanced Science education that not only builds strong foundations in biology, chemistry, and physics, but also fosters a lifelong love of learning. Through hands-on, practical experiences and outdoor exploration in our beautiful rural surroundings, children are encouraged to observe, investigate, and reflect on the natural world around them. These outdoor learning opportunities are a vital part of our curriculum, helping children to connect scientific concepts with real-life experiences in meaningful and memorable ways.

We want our children to be inspired by science and to develop a lifelong love and engagement in scientific concepts and learning. To support this, we introduce a diverse range of scientists and scientific role models, helping children to see that science is for everyone, regardless of background.

Ultimately, we want our children to leave Chilham with a deep appreciation of the natural world, a strong foundation in scientific thinking, and the confidence to make positive contributions to their communities and the wider world.

By the end of EYFS, children will:

Explore the natural world around them, making observations and drawing pictures of animals and plants.

Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.

Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

By the end of Key Stage 1, children will:

Have developed the basic fundamentals of biology by exploring animals, humans, and changes within environments.

Begin to use simple scientific vocabulary linked to their learning.

Use different types of scientific enquiry to answer a range of questions.

Ask questions, discuss their findings, and present ideas in a variety of ways.

By the end of Key Stage 2, children will:

Have a secure and broad understanding of key ideas in biology, physics, and chemistry.

Be able to link scientific ideas to the world around them and understand, through research, how scientific ideas develop over time.

Use secondary sources of information and purposeful, practical enquiry to draw conclusions and solve problems.

Present their findings confidently using appropriate scientific vocabulary, observations, and diagrams.

Implementation

At Chilham, we strive to meet the needs of every child through adaptive teaching and the use of supportive resources. These may include:

Word banks

Focus vocabulary

Pre-teaching content

Group work

First-hand experiences

Chunking new knowledge

Modelled examples

Movement breaks

Well-prepared resources

Teachers promote enjoyment and foster interest in the scientific disciplines of biology, chemistry, and physics. These concepts are taught in a spiral approach, allowing knowledge and understanding to build progressively across the primary phase.

Children are taught to approach investigations with relevant conceptual and procedural understanding. They learn how to:

Plan an investigation

Make observations over time

Seek patterns

Identify, classify, and group

Carry out comparative and fair testing

Research using secondary sources

Analyse and present findings

In order to support children in their ability to know more and remember more, there are regular opportunities to revisit prior learning. Strategies include the use of concept cartoons to spark discussion and highlight misconceptions, knowledge mind maps to capture understanding at the beginning and end of a unit, and knowledge organisers to provide accessible reference material.

Staff receive regular CPD and opportunities for professional dialogue to ensure confidence and consistency in the delivery of Science. Educational visits, visitors, and workshops are used to enrich and enhance learning experiences along with an annual Science week.

Teachers use assessment for learning strategies in lessons to identify and address misconceptions promptly. Quizzes, both formative and summative, are used to assess knowledge and understanding. End-of-unit quizzes inform teacher assessment, which is recorded termly on SONAR.

Through careful modelling, clear explanations, and the use of assessment tools, teachers ensure that all pupils are supported to access the curriculum and achieve their learning intentions.

Impact

The impact of our Science curriculum is that children make strong progress over time, across all key stages, relative to their individual starting points and progression of skills. By the time they leave Chilham, pupils are expected to meet at least age-related expectations in Science, with many exceeding these.

Our pupils develop curiosity, resilience, and independence as learners. They are enthusiastic about Science, confident in using scientific vocabulary, and able to apply their knowledge in practical and meaningful ways. They understand that Science has shaped the world we live in, and that it is vital to our collective future.

The effectiveness of our Science curriculum is evidenced in:

Pupil voice – children can talk with confidence about their learning and its relevance.

Pupil outcomes – high-quality work demonstrating secure knowledge and skills.

Assessment data – showing sustained progress across the school.

Learning behaviours – children demonstrating curiosity, critical thinking, and perseverance.

We want to empower our children to believe they have the capability to make a difference in the world through Science, carrying forward both knowledge and inspiration into their future education and lives.