



Aims

- For all children to have access to the science curriculum regardless of race, gender, disability and religious beliefs.
- For children to develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
- For children to develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them.
- For children to be equipped with the scientific knowledge required to understand the uses and implications of science, today and in the future.
- To encourage a love of learning and exploring and to develop children's knowledge and skills in science.
- To link subjects and skills to other curriculum areas where appropriate.

To achieve these aims

- Lessons are carefully planned to build on children's prior knowledge.
- The planning includes both illustrative and investigational science and different sorts of scientific investigation. Skills are embedded into
- lessons to ensure these skills are developed throughout children's time in school. New vocabulary and more challenging concepts are introduced through direct teaching. This is developed through the years as children progress through the school.
- Teachers demonstrate how to use scientific equipment and the various skills needed in order to embed scientific understanding.
- We have a spiral curriculum and cover the same topics in all year groups at the same time to ensure progression and to enable successful sharing of learning. (see progression map) We build upon the knowledge and skill development of previous years. As the children's knowledge and understanding increases, and they become more proficient in selecting, using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence.
- Medium term plans are drawn up to build up the children's conceptual understanding over time. Teachers create engaging lessons and use effective resources to aid understanding of conceptual knowledge. They use precise questioning to test conceptual knowledge and skills and assess pupils regularly to inform the next steps in their learning and to identify gaps.
- Our curriculum includes illustrative science, where children explore key ideas

through practical tasks and probing questions, and investigational science. It also includes teaching and application of key skills.

- Investigations progress from modelled to intermediate and through to children planning and carrying out independent investigations.
- Planning boards are used in key stages one and two to support planning investigations.
- Children are offered a wide range of extra-curricular activities, visits, trips and visitors to complement and broaden the curriculum.

What does science look like in EYFS?

Children in Reception learn through play and exploration. The learning links to the "Understanding the World" strand of the EYFS curriculum. Children start to make sense of the world around them. They explore their environment and enjoy playing with water, sand, dough and other tactile materials. They learn about floating and sinking, about how things look, how they change and how they feel. They learn to look after the natural world and they look for plants and animals around school and in the forest school area. They also enjoy a range of visits linked to learning e.g. Rays Farm.

I use my senses and look closely at things

I notice similarities and differences

I ask questions

Working scientifically in EYFS

I can use equipment with care

I have my own ideas and I can test them

I can draw pictures of things I find out about

I can talk about plant, animals and other found objects

The main focus of science teaching in Key Stage 1 is to enable pupils to experience and observe phenomena, looking more closely at the world around them. They should use scientific investigations to help to find answers to their questions and use simple scientific language to explain what they have found out.



I draw simple conclusions and make predictions based on what I already know

I use more complex scientific language

I make careful observations

I suggest improvements and ask further questions

Working scientifically in Years 3 and 4

I use different equipment to measure accurately in standard units

I ask my own questions and use different ways to answer them

I set up my own simple tests

I explain what I have found out both orally and in writing

Working scientifically in
Years 5 and 6

I use relevant
scientific language and
illustrations

I ask different
kinds of questions

I can set up fair
tests when
necessary

I report and present
findings orally and in
writing, including
displays and
presentations

I use results to
make predictions
and set up more
tests

I use different scientific
equipment to measure with
precision. I take repeat
readings when appropriate

classification, keys,
tables, scatter, bar
and line graphs

I decide how to record
data and results. I can
use scientific diagrams,
labels,