



BIRCH COPSE PRIMARY SCHOOL
SCIENCE POLICY

This policy should be read in conjunction with the School's Teaching and Learning Policy, Curriculum Policy and Assessment Policy statement.

INTENT

Learning is at the very heart of what we do at Birch Copse and our curriculum is a crucial aspect of this. We provide an **outstanding curriculum**, which is **challenging, progressive and inspiring**, allowing our children to achieve their full potential by maximising their learning so that they know more, remember more and understand more. Our Science curriculum aims to be engaging and linked to real world experiences to encourage children to develop an understanding and enquiring mind. Our vision is to inspire enquiring minds for the future.

We aim:

To build a foundation of key scientific knowledge and concepts, as well as develop skills in scientific enquiry.

We aim to provide a broad, scientific curriculum that develops scientific vocabulary and empowers children to ask scientific questions; this will enable children to make careful observations and decisions based on justifiable reasons. We ensure all learning is accessible for all children regardless of their ability or background.

To explore the work of different scientists and engineers and understand its importance and how they have influenced life today.

For each unit of work studied, children will learn about the contributions of significant scientists from a range of cultures, past and present. This helps to make it clear to the children that science is forever progressing and that humans' understanding of and impact on the world is continually changing, as a result of scientific research.

It is also good for children to find out that many scientists did not simply form a theory out of the blue; many scientists spent years questioning, testing, observing and changing their initial theories, demonstrating much perseverance and resilience, before their theories could be proved and shared with the world. Hopefully, this will inspire our primary school scientists.

To encourage children to develop an enthusiastic attitude to and love of science, experiencing the awe and wonder of the world we live in.

Science is important in everyday life. It is integral to all aspects of life and, with this in mind, we endeavour to ensure that children develop an enthusiastic attitude towards and love of the subject that will, not only prepare them for their continued science education at secondary school, but, stay with them for life. The teaching and learning of science should be linked to real world experience to encourage children to develop an understanding and enquiring mind and to enable them to experience the awe and wonder of the world we live in.

IMPLEMENTATION

The knowledge and skills that children will learn and develop within each unit of work are mapped throughout the school to ensure progression.

Organisation

The teaching and learning of science at Birch Copse Primary School aims to promote science as a core subject which is taught on a weekly basis across the foundation stage and Key Stages 1 and 2. This equates to approximately two sessions a week. It is seen as a practical subject that needs to be taught in a practical way (where appropriate) to stimulate curiosity, discussion and investigation.

Planning

The subject leader provides teachers with the following documentation to guide their planning:

- Scheme of work
- Curriculum overview
- Progression grid
- Knowledge organisers/ learning parameters

The units of work covered in Science are mapped out in the school's Curriculum Overview and refined in detailed Medium Term plans. This ensures statutory content and skills are covered. Some units of work are revisited in later years, such as 'Electricity' for example. This allows us to consolidate previous learning and to ensure that more layers of knowledge and skills are then added.

Comprehensive Knowledge Organisers have been developed for each unit of work, which are used to ensure the learning content is progressive. They include specific scientific vocabulary, details of key knowledge to be learned and examples of investigations that can be undertaken at school and at home.

Pupils' experiences

In teaching science there are a number of key skills and attributes that we will develop. The children are taught to work scientifically, which involves:

- Developing an understanding of science through enquiry and investigation;
- Observing, measuring and undertaking a variety of tests;
- Developing curiosity and asking scientific questions;
- Reading and using scientific vocabulary;
- Testing and developing ideas;
- Making decisions and reaching their own conclusions;
- Analysing functions, and relationships and interactions;
- Answering science questions using different types of scientific enquiry; and,
- An enjoyment and fascination of science.

Ultimately, we want children to enjoy learning all areas of science.

Links within Science and to other subjects

Where there is a natural link within Science or between Science and another subject, both within and between year groups, this should be part of the teacher's planning for that unit of work. The school's curriculum links document highlights where these links are. They help the children to make connections between and contextualise their learning.

When relevant, scientific teaching will be linked to theme topics but this never dilutes the quality of the science learned. For example, when Year 5 are covering their 'Survival' topic, they will investigate which materials will be best for their temporary shelters. Children are also encouraged to conduct research using a variety of sources. Maths links are made through science by improving data handling skills as well as being able to develop the recording of scientific experiments. In addition, children use IT whenever appropriate in science lessons. This includes the use of computers, tablets and cameras. Trips and visits from experts are also arranged to support and enhance learning.

Resources

We keep a wide range of science resources in The Wise Owl Room. For some units of work, resources are stored by the appropriate year groups. Science subject leaders are responsible for purchasing, organising and replenishing resources. There is an inventory of all resources which is available to teaching staff.

Recorded Work

Scientific work is recorded in a variety of ways appropriate to the age of the children and their individual needs in each key stage. This can include teacher observations, photographs, drawings, tables, graphs, written accounts and formal write ups. It is expected that all recorded science work is to be presented to a high standard but not to the detriment of science investigations or the teaching and learning aspect of the lesson. The balance of practical activity and length of recording tasks is carefully planned to maintain a scientific emphasis.

IMPACT

Assessment, Record Keeping

Pupil work is assessed by various means, including: teacher observations of practical scientific tasks / investigations, discussions with class teacher and work completed in books / on paper. Peer assessment is also used regularly throughout Birch Copse and children self-assess at the end of every lesson. Teachers follow the school's marking policy, where each piece of work is recognised, in addition to providing verbal feedback to pupils. Following each science lesson, teachers also complete a marking and feedback form, a working document which aims to inform future lesson planning.

Children's attainment in Science will be assessed at the end of each unit of work as either working above, at or below Age Related Expectations. These results will be inputted into the Curriculum Tracking spreadsheet and at the end of each academic year, will be collated to provide an overall attainment grade for each child. This will be reported to parents.

Monitoring and improving

To ensure that outcomes for children in Science are high and standards of teaching and learning across the school are high, the subject leaders will conduct a detailed annual cycle of monitoring and improving. The monitoring activities include planning sampling, work sampling, pupil interviews, lesson observations and data analysis and culminates in a written report for Governors highlighting key strengths and areas for improvement. This report feeds into the Subject Leader Development Plan for the following year. For more detail, see the Subject Leadership Policy.

The Science subject leaders will keep evidence of children's work (above, at and below) in a moderation file which will be reviewed each year. This will be used to benchmark and moderate children's attainment in Science at Birch Copse.

Equal Opportunities

At Birch Copse Primary school, every child will be given equal opportunity to follow the Science Curriculum irrespective of:

- whether or not they are disabled
- whatever their ethnicity, culture, national origin or national status
- whatever their gender and gender identity
- whatever their religious or non-religious affiliation or faith background
- whatever their sexual identity
- whatever their economic or social background.

Inclusion

At Birch Copse Primary school, we recognise the fact that we have children of differing ability in all our classes, and so we provide suitable learning opportunities for all children by matching the challenge of the task to their ability. We generally achieve this through careful differentiation of task as outlined earlier. However, children with Special Educational Needs or Disabilities may need additional differentiation or support and that will be provided to ensure they have access to the Science curriculum. Those identified as High Potential Learners in Science will be given opportunities to develop their skills.

Spiritual, Moral, Social and Cultural Development

At Birch Copse Primary school, we recognise that social, moral, spiritual and cultural development (SMSC) is central to the education of all pupils and permeates the whole curriculum and ethos of the school.

Social

Social development in Science is enhanced by pupils:

- being encouraged to show respect for other people's ideas.
- developing social skills through group and practical work.
- considering the safety of others during practical work.
- considering the effects of Science on their lives.
- considering the health issues linked to smoking, poor diet and lack of exercise.

Moral

Moral development in Science occurs when pupils are encouraged to have an open mind to the ideas of others and to draw conclusions based on evidence rather than personal views.

Spiritual

Spiritual development in Science is enhanced through the consideration of subjects such as:

- the beauty of nature (*Covered in many units, including Seasonal Changes (Y1), Animals incl. Humans (Y1-6), Living Things and Their Habitats (Y4 & Y5) etc*)
- the awe of the scale of living things from the smallest microorganisms to the largest tree (*Covered in all the biological science units Y1-Y6*)
- the complexity of living things (*Covered in all the biological science units Y1-Y6*)
- the wonder of the extent of geological time (*Covered by Rocks & Fossils (Y3) and Evolution (Y6)*)
- the structure of the solar system (*Earth and Space (Y5)*)

Sometimes science and spiritual ideas do cause conflict, for example when it comes to the theory of evolution covered in Year 6, but in a modern society it is important to understand why these conflicts arise so we can respect the views of others and move forward.

Cultural

Cultural development in Science involves pupils:

- making links with discoveries in the past and work being carried out for our future
- realising that science is a link between past eras and the modern world
- understanding that science is continually developing and that new discoveries are being made all the time, by men and women across the world in different countries and cultures.

Role of the Science Subject Leaders

The role of the subject leaders at Birch Copse is defined in detail in our Subject Leadership Policy. We designate the Subject Leader's role under three broad headings:

Intent	Implementation	Impact
• Curriculum oversight ○ Policy ○ Curriculum documentation • Subject Development plan • Resources management	• Subject knowledge and pedagogy ○ Own ○ CPD for staff • Overseeing assessment ○ Subject moderation file • Promoting the subject	• Monitoring • Evaluating ○ Subject analysis

Responsible officer

Science Subject Leaders – Emma Lyon and Jessie Platt

Date of last review: September 2025

Date of next review: September 2026