



# Ashfield Primary School

## Science Policy

### Vision

We want science at Ashfield Primary School to inspire and challenge all children and enable them to learn the content and procedural knowledge that they need to make good progress.

We will do this by making sure that science:

- Is inclusive and equitable
- Is purposeful and practical
- Links to old and new learning
- Challenges our thinking
- Makes links to other subjects
- Creates future scientists

### Principles

The science curriculum:	This will be achieved by:
Is inclusive and equitable	Ensuring that children recognise the relevance of science to their lives, creating enriching experiences to enhance children's learning of science and exposing children to a range of diverse scientists and STEM jobs.
Links to old and new learning	Ensuring that the science curriculum is designed to support the progression of scientific concepts and skills, lesson sequences are carefully planned and children are given the opportunity to apply their understanding of concepts and skills.
Makes links to other subjects	Ensuring that the science curriculum explicitly integrates skills, knowledge and understanding from other subjects.
Is purposeful and practical	Ensuring that all children achieve lesson outcomes through their engagement in a variety of learning experiences, use resources purposefully and increasingly independently and understand safe practice in science.
Challenges children's thinking	Ensuring that children make good progress through a combination of formative and summative assessments, that they receive purposeful feedback to help them to understand their next steps and to give them a clear picture of what they have achieved.
Creates future scientists	Ensuring that we encourage children to be curious about science, develop their independence in asking and answering scientific questions and help them to understand how scientists work by giving them the skills they need to communicate their ideas and explain their thinking.

### What are science lessons like at Ashfield?

In Early Years, children learn scientific knowledge and skills through carefully planned provision.

This is planned with reference to the 'Knowledge and Understanding' strand of the 'Early Learning Goals' – specifically:

Children should:

- Explore the natural world around them using appropriate senses, making observations and drawing pictures of animals and plants.
- Identify and discuss 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

- Discuss why things happen and how things work.

**In Key Stages 1 and 2**, Science is taught weekly and teachers plan lessons according to the needs of the class. PLAN ([www.planassessment.com](http://www.planassessment.com)) learning matrix documents are used to plan all topics. Teachers have access to a variety of science schemes that they can use to build an appropriate block of lessons for their class. The resources are fully mapped against the National Curriculum and there are opportunities to learn about relevant science careers that may inspire children in their future learning. The science curriculum focuses on the statutory curriculum and enhances this by developing and promoting science capital.

Pre-topic assessments inform planning and ensure the principles of 'Assessment for Learning' are incorporated into teaching and learning in science. Children will be able to build on prior knowledge and link ideas together, enabling them to question and become enquiry based learners.

The principal focus of science teaching in key stage 1 is to enable pupils to experience and observe phenomena, looking more closely at the natural and humanly constructed world around them.

**Year 1 programme of study:**

- Plants
- Animals Including Humans
- Everyday Materials
- Seasonal Changes

**Year 2 programme of study:**

- Living Things and Their Habitats
- Plants
- Animals Including Humans
- Uses of Everyday Materials

During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- 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.

The principal focus of science teaching in lower key stage 2 is to enable pupils to broaden their scientific view of the world around them.

**Year 3 programme of study:**

- Plants
- Animals Including Humans
- Rocks
- Light
- Forces and Magnets

**Year 4 programme of study:**

- Living Things and Their Habitats
- Animals Including Humans
- States of Matter
- Sound
- Electricity

During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- 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
- 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.

The principal focus of science teaching in upper key stage 2 is to enable pupils to develop a deeper understanding of a wide range of scientific ideas.

#### **Year 5 programme of study:**

- Living Things and Their Habitats
- Animals Including Humans
- Properties and Changes of Materials
- Earth and Space
- Forces

#### **Year 6 programme of study:**

- Living Things and Their Habitats
- Animals Including Humans
- Evolution and Inheritance
- Light
- Electricity

During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- using test results to make predictions to set up further comparative and fair tests
- reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations
- identifying scientific evidence that has been used to support or refute ideas or arguments.

### **Inclusion**

All learners will be given equal opportunities to access science. They will be supported or challenged through explicit instruction, cognitive and metacognitive strategies, scaffolding, flexible grouping and use technology where appropriate (EEF 'Five-a-day' to improve SEND outcomes) Planning will reflect the varying needs of all the children in the class. Where possible, the diverse society in which we live, with diverse role models, will be reflected in the teaching and learning of this subject.

### **Assessing, recording, monitoring, reviewing**

Assessment for Learning is a continuous part of the planning, teaching and learning cycle. At the beginning of each lesson, children answer and record '4 from before' or similar age appropriate activity in order to build up their subject knowledge and re-visit past topics. In addition to this, teachers assess and record children's progress at the end of each science topic. Assessments are made of both children's key subject knowledge and enquiry based knowledge. Teachers can use the 'SNAP assessment tool' at the end of a topic to further assess learning or as an intervention for any children that have not met the key learning objectives. This information is passed onto the next teacher and entered into a spreadsheet at the end of the academic year. Other methods used when assessing children may include:

- children completing a written test

- teacher or teaching assistant focused verbal questioning to an individual or group
- teacher or teaching assistant observation of an individual or group completing a task
- children completing a mind map or diagram to show their understanding

Lesson observations, work scrutiny and pupil discussions are completed as part of the school's monitoring calendar.

#### **Associated Policies**

SEND

Learning and Teaching

Single Equalities

Assessment

Inclusion

Sex and Relationships

Ratified by the governing body of Ashfield Primary School: 26/3/25

Review date: Spring 2028 (every 3 years)