

# Stocks Lane Primary School Science Policy



November 2025  
Review date: November 2028

## **Aims and Vision**

At Stocks Lane, Science is taught by giving our children the chance to test, make mistakes and improve. This requires children to apply the characteristics of learning, which underpin all of our teaching and learning. Our Science teaching builds knowledge and develops children's understanding of the world through first hand experiences and exploration. We want to inspire and challenge our pupils to become independent thinkers, who use their knowledge of Science to develop their understanding of the constant changing world they live in.

Science makes an increasing contribution to all aspects of life. Children are naturally fascinated by everything in the world around them and Science makes a valuable contribution to their understanding.

Children learn by playing with things in their world. They pick up clues about what they see, touch, smell, taste and hear in order to make sense of it all. Eventually they come to conclusions which they match up with all the experiences they have had.

Teachers and parents/carers can help children to take a second, careful look at the world. By talking together, children can be encouraged to explore and observe so that they can group objects and events and look for similarities and differences. They will need to measure and record the things they have found out in ways that make sense to them so that later they can talk to other people about what they have discovered. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

## **Teaching and Learning**

The National Curriculum for science aims to ensure that all pupils:

- Develop lively, enquiring minds and the ability to question.
- Learn scientific skills and knowledge.
- Build on their natural curiosity and enable them to understand and care for the world in which they live.
- Are provided with an environment where they can work in an investigative way and can communicate their findings in a variety of ways.
- Can use equipment safely and sensibly.
- Develop the potential scientific links with all other areas of the curriculum.
- Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
- 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.
- Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

At Stocks Lane we base our teaching around the National Curriculum Programmes of Study. These set out a clear, full and statutory requirement for all children. It determines the content of what will be taught, and sets attainment targets for learning. The programmes of study set out what should be taught at Key Stage 1 and 2. The Foundation Stage programmes of study for Understanding the World are set out in the EYFS development matters document.

### **Early Years Foundation Stage**

Children enter our Reception classes in the September after their fourth birthday. The EYFS in Reception sets out the learning objectives for the seven areas of learning:

- Physical Development
- Expressive Arts and Design
- Personal, Social and Emotional Development
- Literacy
- Understanding the World
- Communication and Language.
- Mathematics

The Foundation Stage deliver science content through the 'Understanding of the World' strand of the EYFS curriculum. This involves guiding children to make sense of their physical world and their community through opportunities to explore, observe and find out about people, places, technology and the environment. They are assessed according to the Development Matters curriculum.

### **Key Stage 1**

At Stocks Lane Primary School Science is taught as a discrete lesson and as part of cross-curricular themes when appropriate. Science has links with other areas of the curriculum including Geography, English, Numeracy, Art and Design Technology.

The programmes of study describe a sequence of knowledge and concepts. While it is important that pupils make progress, it is also vitally important that they develop secure understanding of each key block of knowledge and concepts in order to progress to the next stage.

Pupils should be able to describe associated processes and key characteristics in common language, but they should also be familiar with, and use, technical terminology accurately and precisely. They should build up an extended specialist vocabulary. They should also apply their mathematical knowledge to their understanding of science, including collecting, presenting and analysing data.

The social and economic implications of science are important but, generally, they are taught most appropriately within the wider school curriculum: teachers will wish to use different contexts to maximise their pupils' engagement with and motivation to study science.

### **Key stage One Programmes of Study**

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

### **Lower Key Stage 2**

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. They should do this through exploring, talking about, testing and developing ideas about everyday phenomena and the relationships between living things and familiar environments, and by beginning to develop their ideas about functions, relationships and interactions. They should ask their own questions about what they observe and make some decisions about which types of scientific enquiry are likely to be the best ways of answering them, including observing changes over time, noticing patterns, grouping and classifying things, carrying out simple comparative and fair tests and finding things out using secondary sources of information. They should draw simple conclusions and use some scientific language, first, to talk about and, later, to write about what they have found out.

### **Lower Key Stage 2 programmes of study**

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.

## **Upper Key Stage Two**

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. They should do this through exploring and talking about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically. At upper key stage 2, they should encounter more abstract ideas and begin to recognise how these ideas help them to understand and predict how the world operates. They should also begin to recognise that scientific ideas change and develop over time. They should select the most appropriate ways to answer science questions using different types of scientific enquiry, including observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests and finding things out using a wide range of secondary sources of information. Pupils should draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings.

## **Upper Key Stage two programmes of study**

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 a 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

## Overview of units

Year 1	Working Scientifically	Plants	Animals including humans	Everyday materials	Seasonal Changes	
Year 2		All living things and their habitats	Plants	Animals including humans	Use of everyday materials	
Year 3	Working Scientifically	Plants	Animals including humans	Rocks	Light	Forces and magnets
Year 4		All living things	Animals including humans	States of matter	Sound	Electricity
Year 5	Working Scientifically	All living things	Animals including humans	Properties and changes of materials	Earth and Space	Forces
Year 6		All living things	Animals including humans	Evolution and inheritance	Light	Electricity

**See the national curriculum document for the full programme of study that the school will follow;**

### Recording

Children's recording will take many forms according to the nature of the activity:

- Verbal
- Pictorial
- Diagrammatic
- Graphical
- Written
- Symbolic
- I.C.T.
- Photographic

Science is a hands on experience and all the children are given the opportunity to use their senses. Children are encouraged to:

- Observe, discover and experiment
- Develop scientific language
- Question and report
- Sort and classify
- Look for similarities and differences

## **Assessment**

Assessment in Science is based upon scientific knowledge and understanding, rather than achievement in English or Mathematics. In the Foundation Stage we assess children's knowledge and understanding according to the EYFS Learning and Development Stages through observations. In KS1 and KS2 we use a range of assessment materials to ensure that children are making appropriate progress, including assessment tasks. Pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

Our teachers record achievement of children working beyond expected levels monitoring planning and provision for the most able children in our school. All staff strive to ensure that our children reach their full potential in Science and that they understand and enjoy their experiences. Children with special educational needs will be monitored by our SEN Co-ordinator ensuring that these children follow the National Curriculum Programmes of Study through work schemes that promote the child's development and self-esteem.

Assessment should:

- Be formative and summative
- Be used to inform the teacher for future planning
- Promote continuity and progression
- Form the basis for reporting to parents
- Be based on observation, participation and written outcomes

## **The Role of the Science Co-ordinator:**

- To review changes to the National Curriculum requirements and advise on their implementation.
- Attend relevant CPD courses for Science as appropriate in line with the School Development plan.
- Arrange staff meetings to discuss the scientific aspects of the themes contained in the school's current scheme of work and how these might be presented in the classroom.
- Carry out an annual audit of the school's Science resources, and operate an efficient storage system for these resources to ensure that our children can learn effectively in and through Science.
- Liaise with the school's SENCO regarding the progress of individual and groups of children.
- Collate 'End of topic Assessments' and 'End of Key stage Assessments' and set new priorities for development of Science in subsequent years.
- Monitor the learning and teaching in Science and provide support for staff when necessary.
- Take a lead role in organizing Science Events in school in line with LA and national initiatives.
- Endeavour to involve parents/ carers in their children's learning in and through science.

This policy was written by the Science Co-ordinator following discussions with the teaching and support staff at Stocks Lane Primary School.

Policy Updated November 2025

The policy will be reviewed again in November 2028.

Signed.....

Date.....