

# CALSHOT PRIMARY SCHOOL

## Science Policy



'At Calshot we aim to provide the highest quality of learning and care for ALL children in a safe and enjoyable environment, nurturing personal values, in partnership with parents, carers and the wider community. We expect everyone in our school to strive to achieve their full potential.'

|                     |                           |
|---------------------|---------------------------|
| Policy Lead         | Science Lead              |
| Sub Committee       | Achievement & Curriculum  |
| Date of Last Review | 18 <sup>th</sup> May 2026 |
| Next Review Date    | Summer 2029               |

**'A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics...Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena.'**

### **Aims and Objectives**

We live in an increasingly scientific and technological age where children need to acquire the knowledge, skills and attitudes to prepare them for life in the 21st century. We believe that the teaching of science develops in children an interest and curiosity about the world in which they live, and fosters in them a respect for the environment. We believe that a broad and balanced science education is the entitlement of all children, regardless of ethnic origin, gender, class, aptitude or disability. Through the framework of the National Curriculum 2016, we aim to:

- Equip children to use themselves as starting points for learning about science, and to build on their enthusiasm and natural sense of wonder about the world.
- Develop through practical work the skills of observation, prediction, investigation, interpretation, communication, questioning and hypothesizing, and increased use of precise measurement skills and ICT.
- Encourage and enable pupils to offer their own suggestions, and to be creative in their approach to science, and to gain enjoyment from their scientific work.
- Enable children to develop their skills of co-operation through working with others, and to encourage where possible, ways for children to explore science in forms which are relevant and meaningful to them.
- Teach scientific enquiry through contexts taken from the National Curriculum for science.
- Encourage children to collect relevant evidence and to question outcome and to persevere.
- Encourage children to treat the living and non-living environment with respect and sensitivity.
- Stress the need for personal and group safety by the correct usage and storage of resources.
- To enable children to appreciate that we do not always know the answers and results when carrying out scientific enquiry.

### **Teaching and Learning**

At Calshot Primary School, teachers plan and deliver high-quality and engaging science lessons incorporating a range of teaching and learning styles. Science teaching involves adapting and extending the curriculum to match all children's needs. We use Plymouth Science as a scheme that engages pupils, excites them and focuses on practical and investigative Science skills. Teachers will provide opportunities for pupils to:

- Learn about science, where possible, through first-hand practical experiences;
- Develop their research skills through the appropriate use of secondary sources;
- Work collaboratively in pairs, groups and/or individually;
- Plan and carry out investigations with an increasing systematic approach as they progress through the school;
- Develop their questioning, predicting, observing, measuring and interpreting skills;

- Record their work in a variety of ways e.g. writing, diagrams, graphs, tables;
- Read and spell scientific vocabulary appropriate for their age.
- Be motivated and inspired by engaging and interactive science displays which include key vocabulary and relevant questions.
- Learn about science using the outdoor learning environment.

### **The Early Years Foundation Stage**

In Early Years Science is taught as an integral part of the topic work and specifically through the strand of 'Understanding the World'. Science teaching and learning is also linked to the other strands of The EYFS framework for learning. Children learn about the world around them by finding out and exploring, asking questions, showing curiosity about objects, events and people and using their senses to explore their surroundings. Children's understanding of science is first developed through finding out about everyday occurrences and natural phenomena such as what we look like, plants and seasons.

We support children to develop a solid understanding of things occurring around them in their day-to-day lives. Children are encouraged to be creative and inquisitive as they participate in activities. Children are encouraged to use their natural curiosity, while taking part in exploratory play in specific scientific areas as well as areas that link across the EYFS framework.

### **Key Stage One**

During KS1, children observe, explore and ask questions about living things, materials and the world around them. They begin to work together to collect evidence to help them answer questions, find patterns, classify and group objects, research using a variety of sources and carry out fair testing.

Children use reference materials to find out more about scientific ideas. They share their ideas and communicate them using scientific language, drawings, charts and tables. Science lessons in KS1 are taught weekly and where appropriate can be linked to other curriculum areas. Children often use the outdoor area in their science learning.

### **Key Stage Two**

Children are encouraged to extend their scientific questioning skills to further develop their understanding about the world around them. They carry out a range of scientific enquiries including: observations over time; pattern seeking; identifying, grouping and classifying, comparative testing and researching using other sources (including computing resources). Children in KS2 learn to plan science investigations and develop their understanding of what constitutes a fair test and a control. Science is taught weekly.

### **Investigations and roles**

Within lessons children will have the opportunity to work as a team to carry out investigations. The children will work in mixed ability groups, pairs or individually and each child will at some point during the year have the opportunity to carry out one of the following roles:

- Be in charge of a group
- Report back predictions to the class or findings

- Be responsible for collecting resources
- Measure and record findings

The recording of investigations can take many forms and children should be encouraged to try as many as possible from written, photographic evidence, tables, notes, charts, pictures and diagrams.

During investigations children will be taught how to

1. Ask questions and decide how to find the answers.
2. Consider how they can answer their questions.
3. What evidence needs to be collected and what equipment is required to carry out the investigation.
4. Make it a fair test by altering one factor and observing the effect.

### **Assessment and Record Keeping**

Assessment for learning is continuous throughout the planning, teaching and learning cycle. However children are more formally assessed in KS1 and KS2 using a variety of methods:-

- In EYFS teachers assess science against the 'Development Matters' statements in the 'Understanding of the world' area of the Early Years Curriculum. The statements go from birth through to the Early Learning Goals at the end of Reception.
- Observing children at work, individually, in pairs, in a group, and in classes.
- Questioning, talking and listening to children.
- Considering work/materials / investigations produced by children together with discussion about this with them.
- End of unit assessment tests or assessments carried out using assessment sheets in the scheme which will then all be given to the Science Lead.
- End of KS2 test carried out during SATs week and results fed back to parents and next school.

Children's progress is continually monitored and tracked throughout their time at Calshot Primary School and all test results are given to the Science Lead at the end of the year along with a teacher assessment grading.

The marking of Science work should link to the knowledge objective and working scientifically skill being taught. Marking should be positive and constructive.

Children are encouraged to evaluate their own work by looking back on their results and comparing them to their predictions.

In Key Stage 1 the children will class share their knowledge of each unit at the start and this can be recorded on a large sheet of paper and displayed in class. As the topic progresses the children or teacher can add words to it in a different color as new facts are learned.

### **Roles and Responsibilities**

Science Leader - To have an impact on raising standards of attainment for Science across the whole school. To do this they will:

- Adapt and use the Programme of Study for Science, using Plymouth scheme and STEM resources, across the whole school to meet the needs of our children.
- To monitor the whole schools and individual needs.
- To be able to assess individual professional development opportunities and needs.
- To monitor and maintain high quality resources.
- To maintain an overview of current trends and developments within the subject.
- To ensure, together with the Head Teacher an effective programme of moderation and assessments.
- To ensure a regular and effective programme of analysis of short-term planning is in place

### **Monitoring**

Planning and work book scrutiny as well as pupil questionnaires are carried out regularly by the science subject leader in conjunction with the assessment coordinator and feedback is given to teachers at an appropriate time.

Coverage of the National Curriculum will be scrutinised checking that learning objectives cover the Programmes of Study in one of the Science book scrutinies.

### **Equal Opportunities**

At Calshot Primary School we are committed to providing all children with an equal entitlement to scientific activities and opportunities regardless of race, gender, culture or class.

### **SEND Provision**

Lessons are appropriately differentiated to meet the varying needs of all children; ensuring that children of all abilities and backgrounds have an equal opportunity to make good progress and enjoy science. Children who achieved an assessment of 'greater depth' in their prior attainment are tracked as a more able children and should be identified on all planning.

### **Inclusion**

At Calshot Primary School teachers ensure that they adopt an inclusive approach to their science planning and teaching; ensuring that pupils of all abilities and backgrounds have an equal opportunity to make good progress and enjoy science.

### **Health and Safety**

The pupils are taught health and safety practices during lessons.

The scheme of work and the National Curriculum includes references to health and safety issues for teachers.

### **Mental Health & Wellbeing**

We are taught to nurture our bodies, minds, each other and our environment. By providing opportunities for learning outdoors, we aim to connect children and staff with their natural environment. We embrace the benefits this brings for mental health and physical and emotional wellbeing.

We promote pupils' self-control and ability to self-regulate and recommend strategies for doing so. This will enable them to become confident in their ability to achieve well and persevere even when they encounter setbacks or when their goals are distant, and to respond calmly and rationally to setbacks and challenges. This integrated, whole-school approach to the teaching and promotion of health and wellbeing has the potential to positively impact on behaviour and attainment.