SCIENCE POLICY

REVIEWED BY CO-ORDINATOR SUMMER 2021

Mr D Colling 2021

Calshot Primary School Science Policy

The new National Curriculum 2014 states why we teach science in schools:

'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.'

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 in Science.

Our lessons will follow the British values of Democracy, Rule of Law, Respect for Others and Individual Liberty.

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, at Calshot Primary School 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. Through the framework of the National Curriculum 2016, science aims 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. At Calshot Primary School 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.

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 co-ordinator.
- End of KS2 test carried out during SATs week and results fed back to parents and next school.
- Details fed back to staff annually of children's attainment by co-ordinator showing children working at, below or above expected level

Children's progress is continually monitored and tracked throughout their time at Calshot Primary School.

The marking of Science work should be constructive and children given praise and rewards for good work. The marker should use scientific vocabulary and include regular 'next step' comments as stated in the policy.

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 colour as new facts are learned.

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.
During 2021-22 coverage of the National Curriculum will be scrutinised checking that learning objectives cover the Programmes of Study. Staff meetings will be allocated for this to happen.

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.

SEN Provision :

The school aims to provide access for pupils with SEN to a balanced and broadly based curriculum where required through:
Differentiated tasks
Differentiated activities
Differentiated expectations
Differentiation of support

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.

Approved by the 'Achievement and Curriculum Committee' on 23rd September 2021


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