



Caldecote Primary School

Science Policy

January 2022

1. Introduction

This policy reflects the approach to teaching and learning at Caldecote Primary School in relation to Science. Our school's policy for Science is based on the Primary National Curriculum 2014 Framework and provides guidance on planning, teaching and assessment.

2. Aims

Science at Caldecote aims to teach pupils skills and knowledge they need to question and understand concepts and phenomena that occur in the world around them, for now and in the future and equips them with the motivation to seek explanations.

The aims of Science are to enable pupils to:

- Ask and answer scientific questions
- Plan and carry out a range of scientific investigations, using equipment including ICT
- Acquire excellent scientific knowledge and understanding through Biology, Chemistry and Physics building upon their prior learning
- Evaluate evidence and present information in a clear and concise manner using scientific vocabulary

3. Curriculum

The teaching of Science at Caldecote Primary School is in line with the Primary National Curriculum 2014 and is divided into year groups. It is sequenced so that new knowledge and skills build on what is was taught previously within and across year groups. Each unit is centred on a 'Big Idea' which is directly linked to National Curriculum knowledge. This is to ensure pupils learn central concepts that allow pupils to make links across the curriculum.

In each year group, pupils are also taught to use practical scientific methods and skills which are progressive.

4. School Organisation and planning

Although Science is taught as a discrete subject, it is enhanced by exploiting links with the class topic. Each class has two topics per year that have Science as its key driver and we use the Cornerstones and Reach curriculums for further support.

Caldecote's Science curriculum is planned to ensure pupils build on and extend prior learning. They are given opportunities to develop their skills and knowledge in each unit. Progression is built into our Science curriculum to ensure that pupils are increasingly challenged as they move up through the school curriculum.

5. Teaching

Caldecote uses a variety of teaching and learning styles in Science lessons. Our principal aim is to develop the pupils' knowledge, skills and understanding. We do this through a mixture of whole-class teaching and individual/group activities. Teachers encourage pupils to ask as well as answer scientific questions. They have the opportunity to use a variety of secondary sources of information, where it will enhance learning, as well as gaining first hand experiences through experiments, visiting speakers, workshops and trips.

Our science teaching is structured around the following:

- **At the start of a unit:** pre-assessment activities
- **Every lesson:** retrieval practice
- **During the unit:** a rich task
- **At the end of the unit:** a big question

Our rich task is resourced through TAPS (Teacher Assessment in Primary Science). This is to ensure we have a valid, reliable and manageable system science assessment which assesses pupils' disciplinary knowledge and will have a positive impact on children's learning.

A big question at the end of the unit opens up scope for pupils to respond individually and link previously taught content and other capital they may have. This builds up a picture of the pupil's learning journey over their time at school and therefore provides a deeper insight into the substantive knowledge.

We recognise that - in all classes - pupils have a wide range of scientific abilities and so we provide suitable learning opportunities for all pupils with consideration to the age and needs of the pupils.

6. Assessment, Record Keeping and Reporting

Teachers use formative assessment throughout lessons and units of work, reacting and intervening based on the needs of the pupils. Questioning techniques and scaffolding of tasks are used skilfully to ensure pupils succeed

At each half-term, teachers assess their pupils against the objectives laid out in the National Curriculum for the particular unit they have taught. For each unit, they record whether a child is working towards, working at or exceeding the expected standard in their knowledge, understanding and skills. These assessments are used to inform a summary science assessment which is recorded termly on Target Tracker (TT) and progress within the subject is reported to parents in the termly and end of year reports.

7. Resources

A wide variety of Science resources are available in school. These include pupils' reference books, web based resources and science materials and equipment. A range of pictorial resources such as posters, pictures, concept cartoons and photographs are also available.

As well as Cornerstones and Reach curriculums to further support teacher subject knowledge, supporting documents created by the Science Leader provide information about each unit for each year group. These documents include ideas for activities, examples of enquiry types, key learning and common misconceptions.

The majority of Science materials and equipment are kept in the science storage units in the corridor. Pupils should only remove or replace resources with adult supervision. An inventory of all available equipment is available in school.

The Science Leader is responsible for maintaining science resources, monitoring their use and organising the storage area. Resources are replaced and purchased following the general school ordering procedures. The current lists of resources are examined each year before requisitions are made. Staff are also asked to inform the Leader if any resources are damaged or need replacing.

Some resources for science lessons may sometimes be requested. Parents are usually very willing to respond to appeals for such resources.

8. Inclusion and Equal Opportunities

All teaching and non-teaching staff at Caldecote Primary School are responsible for ensuring that all pupils, irrespective of gender, ability, ethnic origin and social circumstances, have access to the whole curriculum which includes Science. We aim to give every pupil the opportunity to experience success and achieve as highly as possible. We celebrate cultural diversity and make learning relevant through linking content to the context of our school and children.

9. Foundation Stage

Science is taught through the strand of 'Understand the World'. Pupils are encouraged to be creative and use their natural inquisitiveness in order to make sense of their world. Their learning is supported through offering opportunities for them to use a range of tools safely, encounter creatures, people, plants and objects in their natural environments and work with a range of materials when undertaking practical experiments. Whilst some aspects of Science are taught discreetly, others are taught through continuous provision.

10. Differentiation and challenge

We aim to provide learning opportunities that are matched to the needs of pupils so that they achieve as highly as they can according to their individual ability. We work to ensure that all pupils have the opportunity to gain scientific knowledge and that expectations do not limit pupils' achievements, supporting where there is a need and extending pupils who need further challenging through appropriate differentiation.

11. Health and safety

We enable all pupils to have access to the full range of activities involved in learning science. Where pupils are to participate in activities, we carry out a risk assessment

prior to the activity to ensure that the activity is safe and appropriate for all pupils. The school also have a log in to CLEAPSS for further advice.

12. Evaluation

Evaluation of our science curriculum is carried out to enhance the teaching and learning of Science within our school. It is the responsibility of all staff, both teaching and non-teaching, to monitor and evaluate the curriculum provision made for Science within the school in order that pupils make the greatest possible progress.

Evaluation may take place by means of a number of methods including:

- The assessment of pupils' work and their achievements
- The analysis of teachers' planning as seen in long and short term plans
- Discussion amongst staff
- Classroom observation
- Pupil voice
- Work scrutiny
- Learning walks
- External inspection and advice

12. School Governor Role in Science

There is a link governor allocated for the oversight of science. Key documents/actions plans are shared when updated and regular meetings are held.

13. Policy Review

The Policy statement will be reviewed in line with the rolling programme of Policy reviews.

Headteacher:

Date:

Chair of Governors:

Date:

