



Science Policy

April 2016

Introduction

This policy outlines the teaching, organisation and management of science taught at Cherry Tree Primary School. The school's policy for science is based on the new primary curriculum which is statutory from September 2014. The implementation of this policy is the responsibility of all teaching staff.

Teaching Science

At Cherry Tree we believe that the best science teaching fosters and develops pupils' curiosity in the subject whilst also helping them to fulfil their potential. For our pupils to achieve well in science, they need to acquire the necessary scientific knowledge and also be able to enjoy the experience of engaging and purposeful scientific enquiry in order to help them to answer scientific questions about the world around them.

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.'

Aims

Through high-quality science teaching, we aim to help our pupils understand how major scientific ideas have played a vital role in society. Moreover, we aim to prepare our pupils for life in an increasingly scientific and technological world.

We aim to do this by:

- Delivering high quality, interesting and engaging science lessons;
- Using scientific contexts to develop and consolidate cross curricular skills in English, Maths and Computing;
- Teaching science in a global and historical context; including the contributions significant scientists from a range of cultures;
- Developing and extending pupils' scientific knowledge and understanding;
- Developing pupils' ability to work scientifically and involve pupils in planning, carrying out and evaluating investigations;
- Developing pupils' scientific vocabulary and ability to articulate scientific concepts clearly and precisely;
- Ensuring that all pupils are appropriately challenged to make good progress in science.

Cherry Tree Primary School

Teaching and Learning

At Cherry Tree, teachers plan and deliver high-quality and engaging science lessons incorporating a range of teaching and learning styles. At Cherry Tree 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.

Planning

Science in the Early Years Foundation Stage is planned using the Early Years Curriculum 'Understanding of the World'.

- Key Stage 1 and 2 teachers plan science lessons using the new National Curriculum (2014).
- All science lessons have focussed learning objectives, clear differentiation and success criteria to ensure that pupils make at least good progress.
- 'Working scientifically' is embedded throughout the areas of learning in key stage 1 and 2; this focuses on the key aspects of scientific enquiry which enable pupils to investigate and answer scientific questions.
- Areas of learning within key stage 1 and 2 ensure that statutory requirements are being covered through the specific disciplines of biology, chemistry and physics (teachers may also refer to the non-statutory guidance which provide additional support).
- Please refer to the long term plan for details of the specific areas of learning covered in each year group over the year.

Assessment

- At present key stage 1 and 2 use the Rising Stars assessment scheme for summative assessment. The scheme includes unit tests at the start of each topic, end of each topic and end of year tests.
- For formative assessment, teachers use effective Assessment for Learning (AfL) strategies to inform their planning and teaching including:
 - The Working Scientifically Assessment tasks for each year group topic (as suggested by Herts for Learning).
 - The 'Age related expectation for scientific knowledge' (A.R.E) statements for each year group topic (as suggested by Herts for Learning) to assess where their children are in line with A.R.E.
 - A 'best fit' assessment is entered on SIMS at the end of the year using the HfL Assessment Criteria as a guide.

Cherry Tree Primary School

- 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.
- Teachers provide quality feedback to pupils (verbal or written) which clearly identifies how they might need to improve in order to move their learning on.
- At present, class teachers provide an annual teacher assessment result and pupils' progress is tracked against the National Curriculum levels for Key Stage 1 and 2. Again, this may need to be reviewed once the new science curriculum is established.

Monitoring

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

Health and safety

- Teachers must plan safe activities for science and complete a risk assessment if necessary.
- Teachers and teaching assistants need to be aware of health and safety procedures when using equipment/food in science lessons.
- Pupils must be aware of the need for personal safety and the safety of others during science lessons.

Resources

- Science resources are stored in the large cupboard and in some of the trays in the technology room of the new building.
- An inventory of resources is kept on the server and is updated when new resources are ordered.
- The subject leader must be informed of any changes regarding science resources i.e. missing or broken resources and/or when new or replacement resources are required.

Inclusion

At Cherry Tree 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.

Review - April 2018