Cedars Primary School

Science Policy 2025

Science

At Cedars Primary School, teaching and learning is based upon a language rich thematic curriculum where pupils are exposed to a range of experiences to enhance their knowledge, understanding and long term memory.

As a result, pupils at Cedars are confident, aspirational, articulate learners who are ready for the next stage of education.

Intent:

At Cedars Primary School, science should be fully inclusive to every child. Our aims are to fulfil the requirements of the National Curriculum for science; providing a broad, balanced and differentiated curriculum; ensuring the progressive development of knowledge, skills and vocabulary linked to the areas of biology, chemistry and physics, enabling all of our children to develop a love of science. Furthermore, we aim to inspire in pupils a curiosity and fascination about the natural and man-made world and a respect for the environment that will remain with them for the rest of their lives. This include the lesson they complete in the classroom but also the other experiences they are offered, such as educational visits, residential and enrichment days.

The aims of teaching science in our school are 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.
- Equip children with the language to be able to discuss their learning and confidently explain their scientific understanding in small groups;
- Develop through practical work the skills of observation, fair testing, prediction, investigation, interpretation, communication, questioning and hypothesizing, and increased use of precise measurement skills;
- Effectively use ICT equipment to support research and present work;
- Encourage and enable pupils to offer their own suggestions, and to be creative in their approach to science, devising their own investigations and taking lines of enquiry in a way that interests them;
- 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 the five scientific enquiry strands through contexts taken from the National Curriculum for science - Observation over time, pattern seeking, identifying, classifying and grouping, comparative and fair testing, research using secondary sources;

- Science has strong links to British Values, cultural capital, reading fluency, safety online and SMSC;
- To work scientifically using the required working scientifically skills for their Key Stage;
- Encourage children to collect relevant evidence and to question outcome and to build resilience to persevere as it is likely they will need to repeat results or will encounter unexpected results that do not support their hypothesis;
- 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 critically question the world around them
- To enable children to appreciate that we do not always know the answers when carrying out scientific enquiry as the world around them is continually changing and developing.

Special Educational Needs Disability (SEND) / Pupil Premium / Greater Depth, EYFS

All children will have Quality First Teaching. Any children with identified SEND or in receipt of pupil premium funding may have work additional to and different from their peers in order to access the curriculum dependent upon their needs. As well as this, our school offers a demanding and varied curriculum, providing children with a range of opportunities in order for them to reach their full potential and consistently achieve highly from their starting points.

Implementation:

The Science subject leader is responsible for the curriculum design, delivery and impact in this subject. This includes regular network meetings meetings to review and quality assure the subject areas to ensure that it is being implemented well and coverage and breadth and balance is appropriate. Reports to Governors are sent to meetings and Governors have been appointed to observe and assist in the development of the subject. To ensure high standards of teaching and learning in science, we implement a curriculum that is progressive throughout the whole school.

Science is taught in discrete lessons for at least 1 hour in Key Stages One and Two. We ensure that teachers have the same expectations during Science lessons that they would have when teaching English or Mathematics and that any mathematical task (such as measuring or drawing graphs) is pitched at an age-appropriate level to ensure sufficient challenge. It is vital that any mathematical or English barriers should not impede a child's scientific learning, thus meaning dialogic learning is a central part to our science teaching.

The science curriculum at Cedars Primary School is based upon the 2014 Primary National Curriculum in England, which provides a broad framework and outlines the knowledge and skills taught in each Key Stage. Teachers plan lessons for their class using the White Rose Scheme of Work and they will modify it to suit the learners in their class. When teaching science, teachers should follow the children's interests to ensure their learning is engaging,

broad and balanced. Before planning a unit of work, teachers should assess children's prior knowledge and understanding to ensure work is pitched at the correct level. Teachers should be aware of prior learning in previous year groups and future learning to ensure progression in concept development. A variety of teaching approaches are used based on the teacher's judgement. Teaching key subject specific vocabulary is a key part of our science curriculum. The vocabulary children will need for that unit is identified in each lesson and is on the Knowledge organiser and this builds upon the vocabulary they have learnt in earlier years. The key vocabulary will be identified on the children's half-termly knowledge organisers.

Science assessment is based on teacher's assessment of children. This is then reported on the school's assessment document and the percentage of children working at, above and below the expected standard are identified. At the end of Key Stage 1 and Key Stage 2 the results are submitted. At the end of a unit, teachers will identify if a child is working at the expected standard for that objective. This is then passed on to the next class teacher as a record of the child's progress throughout the year. During staff meetings, science books are scrutinised to ensure correct content is covered and there is parity of provision between the same year group classes.

Science provides excellent opportunities to enhance the learning of more able pupils through planning lines of enquiry, asking opened ended problems, analysing results and drawing conclusions based on scientific findings.

CPD will be offered to staff where needed, this may be a course to attend, an online CPD programme to take part in or the subject leader delivering training to the rest of the staff.

Impact:

Within science, we strive to create a supportive and collaborative ethos for learning by providing opportunities for children to question and investigate, to discover answers for themselves and take their learning in a direction they are interested in.

Our science curriculum is high quality, well thought out and is planned to demonstrate progression. We focus on progression of knowledge and skills and discreet vocabulary progression also form part of the units of work.

We welcome parental involvement in their child's science learning and set homework tasks to be completed by adult and child together.

We measure the impact of our curriculum through the following methods:

- Assessing children's understanding of topic linked vocabulary before and after the unit is taught;
- Weekly quizzes at the start of each lesson to reinforce previous learning (sticky knowledge);
- Marking of written work in books
- Summative assessment of pupil discussions about their learning;
- Images and videos of the children's practical learning;

- Interviewing the pupils about their learning (pupil voice);
- Moderation staff meetings where pupil's books are scrutinised and there is the opportunity for a dialogue between teachers to understand their class's work;
- Formal reporting of children meeting the ELG goal in Understanding of the World.
- External moderation of children's work at the end of Key Stage 2
- Formal reporting of standards at the end of each Key Stage 1
- Annual reporting of standards across the curriculum to parents and Governors.

The science subject leader will continually monitor the impact science teacher is having on the children's learning through book scrutiny to ensure the progress of knowledge and skills is being taught. They will also ensure the knowledge taught is retained by the children and continually revisited and that the learners are able to apply the skills they have been taught to a variety of different settings, showing independence with their learning.

Review Approval Body:

Date Approved:

Next Review Date: (2 Years)

Subject Leader: Shameela Lorgat

January 2025