

Sunning Hill Primary School



Science Policy

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Reviewed by: Governing Body

Our school values - Building a Bright Future Together

At Sunning Hill Primary, we instil **self-belief** and promote **independence** that allows children to become **aspirational** and committed, **life-long learners**. Our journey together provides our children with opportunities to learn and grow and encourages them to be **curious** about the world. Our children are encouraged to take **responsibility** for themselves, show **resilience** and be **proud** of who they are so they flourish within society. All achievements are celebrated to reward success, inspire ambition and nurture self-esteem. Our Sunning Hill family work together to ensure our children are **happy, kind, charitable** and **respectful**. All children are given equal opportunities to reach their full potential. We provide a supportive, secure environment where children feel safe to take **risks and learn from their mistakes**. These foundations provide a strong base for building a bright future together ensuring **equality** for all.

At Sunning Hill we follow the National Curriculum and the Early Years Foundation Stage Framework. Our school values and motto are reflected through the curriculum which promotes learning and personal growth. These values are interwoven into school life to ensure our children leave Sunning Hill as well rounded British citizens who can make a contribution to their own community and the wider world. We plan and deliver a tailored, engaging and challenging curriculum. Children's cultural capital is broadened through a range of trips, visitors, events, extracurricular clubs and first hand experiences.

Curriculum Intent for Science

A high-quality Science education provides the foundations for understanding the world. Science has changed our lives and is vital to the world's future prosperity. During their time at Sunning Hill, all pupils are taught essential aspects of the knowledge, methods, processes and uses of Science. Through building up a body of key foundational knowledge and concepts, pupils are encouraged to develop a sense of excitement and curiosity about natural phenomena. We plan and deliver an engaging and challenging Science curriculum where learning is pupil-led and knowledge and skills are transferrable to the real world. The use of outdoor learning is promoted to enhance pupils' first-hand experience of Science in addition to our Science trips. This is particularly pertinent for our children as it ensures they leave Sunning Hill as well rounded individuals who can make a contribution to not only their own community but the wider world.

At Sunning Hill Primary School, we follow the statutory programme of study and attainment targets for Science at KS1 & KS2. We use the 'White Rose Science' scheme of work across KS1 and KS2 and have adapted this to ensure it meets the needs of all our pupils. For the Early Years Foundation Stage, we use the 'Development Matters' non-statutory guidance, 'Understanding the World'. We encourage children to understand how Science can be used to explain what is occurring around them, predict how things will behave and analyse causes of phenomena they observe or measure. From a young age children are familiarised with the role scientists play in society. They are encouraged to use these role models to inspire them to take risks and be confident and open when trying new things.

Curriculum Implementation for Science

The intent of our curriculum is implemented through careful planning, teaching, assessment and feedback. We structure our Science curriculum so that it provides breadth and depth and also allows all children to succeed both within the classroom and beyond. The following are the ways we ensure that the curriculum is taught in line with our aims;

Science POLICY

- The Science curriculum is delivered as a discrete subject and cross-curricular links are made where appropriate to embed learning. There is a consistent approach across all year groups.
- There is a clear balance of knowledge and skills. Knowledge and skills are mapped out to ensure progression between year groups. This promotes a Science curriculum that is progressive and allows children to build upon previous learning.
- Units of work are planned and delivered sequentially so that learning can be built upon which enables knowledge to be embedded.
- Expert teacher subject knowledge is developed through in-house training and external training where appropriate.
- Speaking and listening is promoted and woven in through the subject. It is a core skill that allows children to develop their ability to communicate effectively. We feel this is particularly pertinent for the children in our school, especially after the missed time during the coronavirus pandemic.
- The Science curriculum is adapted to meet the needs of all learners and prepare them for the next stage in their education.
- Subject specific vocabulary is selected and taught explicitly using the national curriculum. This is progressive across year groups and is clearly displayed in classrooms so the children can refer to it. This helps the children to articulate their knowledge and understanding.
- We promote curiosity and critical thinking by giving children lots of opportunities to ask questions about their learning. They use some of these questions to further their learning by doing their own research.
- 'Show me what you know' activity allows children to demonstrate what they have learnt and what they remember.
- Knowledge organisers are used to map out key information for each unit of work. Children make regular reference to these and they are sent home for children to refer to when completing homework tasks.
- Working walls show the building of knowledge and skills over the course of a unit. This includes key vocabulary, diagrams, graphs/tables of results, children's work and famous scientists.
- Big books are used throughout school to show learning children have done as a class or in groups in order to capture and promote the practical elements of Science.
- Collaboration is promoted at all levels of school life. In lessons children have the opportunity to work in groups or pairs.
- Practical learning experiences are consistently provided, and heavily involve discussion to develop the children's speaking, listening, reasoning and explaining skills. The importance of effective communication is emphasised, as is the importance of both working independently and as part of a team.
- Practical activities involve appropriate aspects of the working scientifically objectives including; observing, measuring, describing, investigating, co-operating, making and testing hypotheses, experimenting, explaining, looking for patterns and relationships and drawing of conclusions.
- All children are made aware of Health and Safety issues when undertaking work in Science. They are encouraged to show respect for living things and the physical environment.
- The use of the outdoors through access to Sandon Street is promoted in Science planning and teaching to further enhance the children's learning and development.

Science POLICY

- Feedback is both written and verbal. The purpose of any feedback given is to move a child forward with their learning. (see Feedback policy)
- Expert teacher subject knowledge is developed through CPD and coaching. The school has a carefully planned induction programme to support ECTs and new staff.

Our children are encouraged to:

- Develop their knowledge and understanding of scientific ideas and enable them to understand themselves and their environments.
- Work scientifically to develop skills that can be applied in further Science study as well as across the curriculum in subjects such as Numeracy and PSHRE.
- Familiarise themselves with the role scientists play in society by looking at different types of known or famous Scientists and reflecting on how they themselves could use the skills learned in lessons to develop a career.
- Enhance their interest and curiosity in Science, together with the appropriate scientific skills to further their learning.
- Lay the foundation for a progressively deepening knowledge and understanding of scientific concepts and facts that will be useful to the children as adults.
- Develop the children's ability to apply Science to the rest of the curriculum and to find solutions to real life problems.

Curriculum Impact for Science

Through the clear and aspirational intent and structured and rigorous implementation of the Science curriculum, we aim to provide all our children with a broad and balanced depth of knowledge and skills in Science. The impact of this is measured in the following ways;

- Monitoring of the subject through, planning, learning walks, lesson observations, book scrutiny and pupil discussions to measure the impact of Science in all year groups. Areas of strengths are celebrated and areas for development are acted upon.
- Teacher subject knowledge is reviewed through lesson observations, drop-ins, pupil questionnaires and book reviews. This information is used to plan staff meetings and external training opportunities.
- Marking and scaffolding learning by the teacher (verbal as well as written).
- Setting clear outcomes for individual lessons and blocks of learning, ensuring the children understand what is expected and how to make progress against specific criteria.
- Quality first teaching corrects misconceptions within lessons and children are targeted with additional support to diminish differences including the use of effective support strategies to allow scientific talent to shine.
- Regular assessment for learning opportunities allow children to reflect on previous learning in this subject and consolidate before moving on to new challenges.
- The understanding of subject specific vocabulary is assessed in Science to inform teacher assessments and plan next steps through end of unit tasks. This is assessed, along with the understanding of key knowledge and skills in each topic, in the 'Show me what you know' task at the end of each unit.
- Regular Science events showcasing children's learning to parents and the community.
- Knowledge organisers are used to support the consolidation of key knowledge that the children will need to know by the end of the unit of work.

Science POLICY

Our school aims to support all families and the wider community. Any queries or concerns regarding individual policies will be considered on an individual basis.