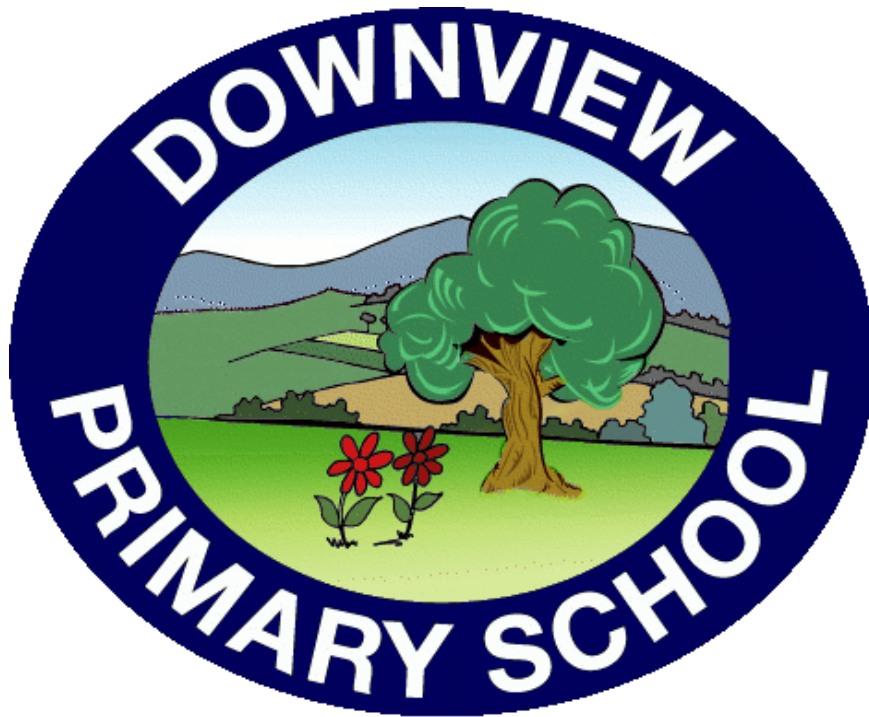


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Science Policy

September 2026

Downview School: Science Policy

Curriculum Statement Intent

The 2014 national curriculum for science aims to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific skills required to understand the uses and implications of science, today and for the future.

At Downview Primary, science is fully inclusive to every child. Our aims are to: fulfil the requirements of the National Curriculum for science, provide a broad and balanced curriculum and ensure the progressive development of knowledge and skills.

The teaching of science aims to give all children a secure understanding of the world around them whilst developing core scientific knowledge and investigative skills. Through building up a body of key foundational knowledge and concepts, children are encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. This will support all children to understand the uses and implications of science, today and for the future.

Implementation

To ensure high standards of teaching and learning in science, we implement a curriculum that is progressive throughout the whole school.

Teachers create a positive attitude to science learning within their classrooms and reinforce an expectation that all pupils are capable of achieving high standards in science. Our whole school approach to the teaching and learning of science involves the following;

- Science will be taught in planned and arranged topic blocks by the class teacher involving high quality resources with numerous opportunities, both inside and outside, to experiment and investigate.
- Through our planning, we involve problem solving opportunities that allow children to apply their knowledge, and find out answers for themselves. Children are encouraged to ask their own questions and be given opportunities to use their scientific skills and research to discover the answers. This curiosity is celebrated within the classroom and home learning about the world of science is championed. Teachers use precise questioning in class to test conceptual knowledge and skills, and assess pupils regularly to identify those children with gaps in learning, so that all pupils keep up.

- We build upon the knowledge and skill development of the previous years referencing relevant prior learning in the knowledge organisers for each topic. As the children's knowledge and understanding increases, and they become more proficient in selecting, using scientific equipment, collating and interpreting results and knowing the importance of fair testing.
- Children learn to think and study scientifically with these skills being developed throughout the children's scientific journey. New topic-based vocabulary and challenging concepts are introduced through direct teaching and this new vocabulary is displayed throughout the topic.
- Events, such as British Science Week provides a broader provision encouraging the acquisition and application of knowledge and skills. These are purposeful, linking with the knowledge being taught in class and where appropriate involve the wider community.
- Trips and works such as the year 1 reptile visit and the year 5 planetarium day provide contextual learning opportunities and reinforces class-based learning.

Impact

Within science, we strive to create a supportive and collaborative ethos for learning by providing investigative and enquiry-based learning opportunities to help children gain a coherent knowledge and understanding of each unit of work covered throughout the school.

The approach at Downview Primary results in a fun, engaging, high-quality science education that provides children with the foundations and knowledge for understanding the world. Our engagement with the local environment ensures that children learn through varied and first-hand experiences of the world around them. Through various workshops, trips and interactions, children have the understanding that science has changed our lives and that it is vital to the world's future prosperity. Children learn the possibilities for careers in science, from a range of different scientists from various backgrounds, allowing all children to feel they are scientists and capable of achieving. Through a positive caring environment, we provide the opportunity for children to reach their full potential.

Teaching and Learning

'Working scientifically' specifies the understanding of the nature, processes and methods of science for each year group and this is embedded within lessons and focuses on the key features of scientific enquiry, so that pupils learn to use a variety of approaches to answer relevant scientific questions. These types of scientific enquiry include: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources. Pupils are given opportunity to seek answers to questions through collecting, analysing and presenting data. Teachers model how to use

scientific equipment, and the various Working Scientifically skills in order to embed scientific understanding. New vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in-keeping with the topics.

Teachers ask a range of questions, which enable all children to take part, listening carefully to answers and taking learning forward, using open and closed questions and allowing children time to think. Teachers find opportunities to develop children's understanding by accessing outdoor learning. Planning is a process in which all teachers are involved. Planning involves teachers creating engaging lessons, often involving high quality resources to aid understanding of conceptual knowledge. All pupils are taught how to work scientifically across Key Stage 1 and Key Stage 2 using practical scientific methods, processes and skills through the teaching of the programme of study contents four main areas:

- 1) Life Processes: Plants / living things and their habitats / animals including humans / Evolution and inheritance
- 2) Materials / The Earth
- 3) Forces / Light / Sound / Magnetism
- 4) Electricity / Earth & Space / Energy

Children in the Early Year Foundation Stage (EYFS) are taught the science elements of Development Matters: Understanding the World. We adapt and extend the curriculum to match the unique circumstances of our school.

Equal opportunities in science

Science is taught within the guidelines of the school's equal-opportunities policy.

- We ensure that all our children have the opportunity to gain science knowledge and understanding regardless of gender, race, class, physical or intellectual ability.
- Our expectations do not limit pupil achievement and assessment does not involve cultural, social, linguistic or gender bias.
- We aim to teach science in a broad global and historical context, using the widest possible perspective and including the contributions of people of many different backgrounds.
- We highlight cross curricular links with other subjects such as history and geography e.g. forces and the Egyptians, water cycle and geography recognising that science has always been around and is all around us.
- In our teaching, science is closely linked with literacy and mathematics.
- We value science as a vehicle for the development of language skills using key scientific vocabulary, and we encourage our children to talk constructively about their science experiences.
- We recognise the particular importance of first-hand experience for motivating children with learning difficulties.

- We recognise that science may strongly engage our gifted and talented children, and we aim to challenge and extend them.
- We exploit science's special contribution to children's developing creativity; we develop this by asking and encouraging challenging questions and encouraging original thinking. All children have equal access to the Science Curriculum, its teaching and learning, throughout any one year. Pupil performance is being monitored throughout the school to ensure that there is no disparity between groups. Assessment and recording in science Assessment for learning is continuous throughout the planning, teaching and learning cycle.
- Formative assessment is used to guide the progress of individual pupils in Science. It involves identifying each child's progress in each area of the Science curriculum, determining what each child has learnt and what therefore should be the next stage in his/her learning. Teachers in the course of their teaching usually carry out formative assessment informally. Suitable tasks include:
Small group discussions, usually in the context of a practical task.
Specific arrangements for particular pupils.
Individual discussions in which children are encouraged to approve their own work and progress.
- The school science leaders monitor progress through the school by sampling children's work and analysing results from assessment data and canvassing staff and children alike about what teaching and learning science is like for them and where improvements can be made. Children who are not succeeding, and children who demonstrate high ability in science, are identified and supported.

Review

This science policy will be reviewed by the science curriculum leader and the senior management team.