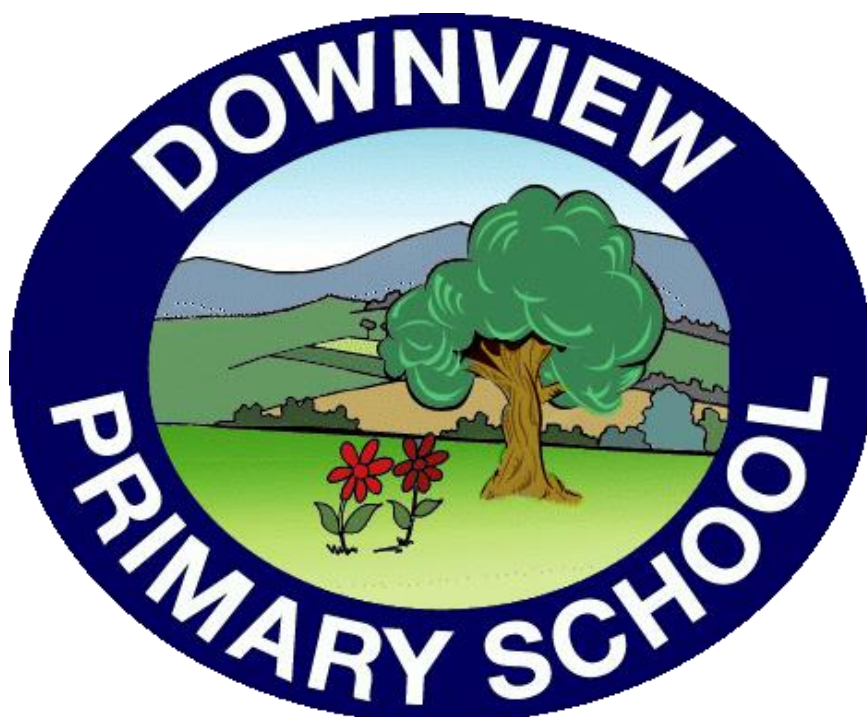


Lead member of staff	Head Teacher
Date of publication	May 2023
Review date	May 2025



Science Policy

May 2023

Science at Downview

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. We understand that it is important for lessons to have a skills-based focus as well as fostering investigation, and that the knowledge can be taught through this.

At Downview, we encourage children to be inquisitive throughout their time at the school and beyond. The Science curriculum fosters a healthy curiosity in children about our planet, the universe and promotes respect for the living and our environment. We believe science encompasses the acquisition of knowledge, concepts, skills and positive attitudes towards problems the world faces. Throughout the programmes of study, the children will acquire and develop the key knowledge that has been identified within each unit and across each year group, as well as the application of scientific skills. We ensure that the 'Working Scientifically' skills are built-on and developed throughout children's time at the school so that they can apply their knowledge of science when using equipment, conducting experiments, building arguments and explaining concepts confidently and continue to ask questions and be curious about their surroundings.

Implementation

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, regular lessons which recap on previous learning and build on it are designed to promote scientific inquiry. This is a strategy to enable the achievement of a greater depth of knowledge. Lesson and topic will often begin with inquiry questions for open discussion.

- 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. Planning involves teachers creating engaging lessons, often involving high-quality resources to aid understanding of conceptual knowledge. 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. As the children's knowledge and understanding increases, and they improve their skills of recording and interpreting fair testing results, they become increasingly confident in their growing ability to come to conclusions based on real evidence independently found.

- Working Scientifically skills are embedded into lessons to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching are displayed on knowledge organisers in science books/on scientific displays. This is developed through the years, in-keeping with the topics studied.

- Teachers demonstrate how to use scientific equipment, and the various Working Scientifically skills in order to embed scientific understanding. Teachers find opportunities to develop children's understanding of their surroundings by accessing outdoor learning and workshops with experts.

- Children are offered a range of extra-curricular activities, visits, trips and visitors to complement and broaden the curriculum. These are purposeful and link with the knowledge being taught in class.

- Regular events, such as Science week (which follows the annual British Science Week), allow all pupils to come off-timetable, to provide broader provision and the acquisition and application of knowledge and

skills via lots of experimentation and self-discovery. These events often involve families and the wider community and aim to inspire children to love science by fostering their curiosity.

Impact

The successful approach at Downview 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 such as the woodland area and the local coast, ensures that children learn through varied and first hand experiences of the world around them. Frequent, continuous and progressive learning outside the classroom is embedded throughout the science curriculum.

It is our aim as primary science educators to enable every child to leave the school equipped for Science education in secondary school without gaps in their learning often reported by secondary schools. Through developed links with Felpham Community College science department, we are able to focus on preparing our children for secondary science in year 7 and beyond. Our other main aim is that they leave with a fondness for science and a thirst for questioning the world around them.

The role of the Science co-ordinator is to:

- Support colleagues in teaching the subject content and developing their skills in planning, teaching and assessing science.
- Renew, update and oversee the audit of resources needed to deliver the curriculum
- Monitor and evaluate the learning and teaching of science
- Develop assessment and record keeping ensuring progression and continuity
- Keep abreast of developments in the teaching and learning of science.

Assessment

At the end of each year we make a summative judgement about the achievement of each pupil. At this point we decide upon a 'best fit' judgement as to whether the pupil has achieved and embedded the expected learning goals, exceeded expectations or is still working towards the goals. This decision draws upon the professional knowledge and judgement that teachers possess about the progress of each pupil and occasional formative informal assessment may be

undertaken to support the judgement decision for each pupil. Achievement against the learning goals for science at the end of the year is used as the basis of reporting progress to parents.

Monitoring and Evaluation

The teaching and learning of science will be monitored through subject monitoring observations; book scrutiny; pupil interviews.

Health and Safety

This policy needs to be read alongside our 'Health and Safety Policy'. Consideration needs to be given to conducting appropriate Risk Assessments and ensuring the safeguarding of children and staff when planning and carrying out scientific activities and experiments.

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 recognise that science may strongly engage our gifted and talented children, and we aim to challenge and extend them.

Reviewed: May 2023

To be reviewed: May 2025