Park Brow Primary School

Happy - Respect - Pride - Caring - Potential

Science Curriculum Policy 2025

Introduction

Our curriculum has been reviewed in the light of national developments, including the new Primary Curriculum published in Autumn 2014. (To be read in conjunction with the Creative Curriculum Policy). The whole school curriculum has been organised and established in full consultation with all teaching staff. Staff took the "ingredients" of the new National Curriculum and the Plymouth Scheme of Work to create the most exciting curriculum for our pupils. With the SOW in place, this ensured consistency across all key stages for the subject area. The subject area is regularly reviewed and developed in accordance with the DfE guidelines, the School Improvement Plan, and following consultation with Governors, Parents, Children and Teaching Staff.

Intent

A high-quality science education provides the foundations for understanding the world. Through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. 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. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

Aims

Our Science Curriculum is...

- Underpinned by clear aims, values and purpose
- Broad, balanced and has clear progression in subject knowledge and skills.
- Prepare our children for life in an increasingly scientific and technological world.
- Foster concern about, and actively care for, our environment.
- Help develop and extend our children's scientific concept of their world.
- 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 scientific enquiries that help our children answer scientific questions about the world around them.
- Equip children with the scientific knowledge required to understand the uses and implications of science today and for the future.

Scientific Skills

- Give our children an understanding of scientific processes.
- Help our children to acquire practical scientific skills.
- Develop the skills of investigation – including observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating.
- Develop the use of scientific language, recording and techniques.
- Develop the use of ICT in investigating and recording.
- Enable our children to become effective communicators of scientific ideas, facts and data.

Implementation

Long, medium and short term planning formats are provided through the SOW. 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, to have a project-based approach. This is a strategy to enable the achievement of a greater depth of knowledge.

● 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 become more proficient 3 in selecting, using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence.

● 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. This is developed through the years, in-keeping with the topics.

● 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 wide 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 or project days, such as Nature Day, allow all pupils to come off-timetable, to provide broader provision and the acquisition and application of knowledge and skills. These events often involve families and the wider community.

Curriculum Drivers

In addition to the content that is driven by the curriculum objectives, we have developed curriculum drivers (alongside our cultural capital offer) – key elements that form relentless, consistent threads that run through our curriculum. These were devised by teaching staff to meet the wider needs of our children specifically as they go forward in their lives. These drivers ensure that wherever possible the curriculum is delivered in a way that explores these issues.

- Promoting Possibilities:

Children cannot aspire to things they have never encountered. At Park Brow, we work to broaden our pupils' horizons, expanding their knowledge of the world by nurturing their interests as well as encaging fearlessness of what is new or unknown.

- Increasing Knowledge of the world:

Our pupils are all part of a global community. Our aim is to help the children to gain a sense of place and understanding that they play a part in its future. At Park Brow, we provide opportunities for them to explore similarities and differences between communities and they fit into the wider world.

- Developing Emotional Awareness:

We set high standards for personal conduct and character development. Our pupils are encouraged to demonstrate integrity, empathy, kindness, compassion and respect in their interactions with peers, teachers, and the wider community.

- Embracing Cultural Richness:

We aim to expose our students to the diversity and richness of cultures worldwide. Through engaging activities, multicultural events, and exposure to different perspectives, we prepare our students to thrive in an increasingly interconnected world. At Park Brow, we celebrate diversity and strive to create an environment where all cultures are respected and appreciated.

At Park Brow Primary School, our commitment extends beyond academic excellence. We are dedicated to nurturing compassionate, aspirational, and culturally aware individuals who are well-prepared to contribute positively to society. We believe that by focusing on the personal development of our students, we equip them not only for academic success but also for a lifetime of ethical leadership and responsible citizenship. With this core belief in mind, we are steadfast in our commitment to delivering an education that not only imparts knowledge but also nurtures the moral and ethical compass of our students.

Cultural Capital

Teaching staff are encouraged to broaden the experience of the topics for their children through promotion of the outdoor curriculum, off-site visits, visitors into school and shared experiences with the wider school community, e.g. involvement with parents/carers, local, national and international school.

The science curriculum is delivered through stand alone science sessions with a balance between direct teaching and child-led exploration.

Children have the opportunity to take part in after school science club.

We are working towards earning the Primary Science Quality Mark.

Impact

A comprehensive assessment system is in place. Children are RAG rated against the national curriculum objectives; either greater depth (dark green) expected standard (green), working towards (yellow) or working towards expected standard (red). These milestones are taken directly from the National Curriculum expectations for each year group. End of year data from each year group is collated and used to inform planning in order to close gaps in knowledge, skills and understanding. Opportunities for children to revisit prior learning will be planned in systematically using online interactive quizzes. Monitoring and review takes place on a regular basis in accordance with the School Monitoring cycle, the School Improvement Plan and the Science Action Plan.

Responsibilities and Roles

The Headteacher and Governing Body has overall responsibility for the Science Curriculum, supported by the Curriculum lead and subject lead.

The Subject lead is responsible for overseeing the delivery of the Science Curriculum through:

- Regular formal and informal discussions with staff.
- Monitoring planning to ensure curriculum coverage
- Carrying out book scrutinies alongside planning to ensure cross-curricular links are optimised.
- Ensure progress is being made within the science topics.
- Regular reviews of the curriculum through staff and pupil questionnaires and open dialogue.
- Making changes where necessary.
- Formulating an action plan to move the school forward

All teaching staff are responsible for the planning and delivery of the curriculum on a day-to-day basis and for making cross-curricular links where appropriate. Staff make amendments to planning in order to optimise learning opportunities when they arise.

Updated September 2025 by G Barry

To be reviewed September 2026