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| Staff Responsibility: | Lisa Thackway |
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| Signed by chair: |  |
| Date: |  |



**Boarshaw Community Primary School**

**Science Policy**

**Mission statement.**

At Boarshaw primary school, we believe that ‘Every Moment Matters’ and that our children deserve the best experiences, curriculum and resources available. Our curriculum is designed to be inclusive to all our pupils and their families, utilising our local community and area to enhance our curriculum.

**Introduction**

At Boarshaw Community Primary School we value Science because it makes an increasingly important contribution to all aspects of life. We aim to nurture each child’s natural curiosity about their environment on a personal, national and global level. We believe that Science makes a valuable contribution to a child’s knowledge and understanding of their world.

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

At Boarshaw Primary, we encourage children to be inquisitive throughout their time at the school and beyond. We want our children to see science all around them and to also see themselves as scientists. We aim for our children to see science in every part of their lives. We want them to see themselves as successful scientists. The Science curriculum fosters a healthy curiosity in children about our universe and promotes respect for the living and non-living. We believe science encompasses the acquisition of knowledge, concepts, skills and positive attitudes. 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. The key knowledge identified by each year group is informed by the national curriculum and builds towards securing this key knowledge in accordance with NC expectations. Key skills are also mapped for each year group and are progressive throughout the school. We build on previous knowledge, skills and understanding through the use of Flashback in Science which is spiral in its nature. Reviewing previous learning allows children to embed their knowledge and retain information to prepare them for further and new learning. These too ensure systematic progression to identified skills which are in accordance with the Working Scientifically skills expectations of the national curriculum. The curriculum is designed to ensure that children are able to acquire key scientific knowledge through practical experiences; using equipment, conducting experiments, building arguments and explaining concepts confidently. The school’s approach to science takes account of the children who go beyond their year group expectations and can demonstrate their deeper thinking in a variety of ways. Children are encouraged to ask questions and be curious about their surroundings and a love of science is nurtured through a whole school ethos and a varied science curriculum. Our use of formative assessment to capture children’s thoughts and understanding allows inclusion and gives every child a voice. This allows **all** children to be a scientist.

**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 and all pupils are scientist. 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 and these are recorded on Long Term Plans. Some areas will be taught throughout the year to allow for deeper thinking and to be put in to context at the correct time of year.
* The use of Flashback in Science is used at the beginning of every science lesson to revisit previous key skills and knowledge to ensure greater retention of facts is maintained.
* Knowledge Organisers are created for every unit for the children to use and refer to throughout the unit.
* Pre and Post assessments are completed at the beginning and end of each unit. These are used to inform questions for Flashback in Science.
* Post-it notes are used to record children’s thinking and understanding throughout the lesson and displayed on working wall.
* 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.
* Tasks are selected and designed to provide appropriate challenge to all learners, in line with the school’s commitment to inclusion in the form of next steps and challenges. Higher ability children are given opportunities to record their deeper thinking whilst the rest of the class can still access the same learning.
* We build upon the knowledge and skill development of the previous years. As the children’s knowledge and understanding increases, they become more proficient 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 that skills are systematically 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.
* 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.
* Whole school work analysis is carried out to celebrate and share good practise. Learning walks and lesson observations are conducted to ensure a triangulation of monitoring is informing the successfulness of teaching and learning.
* Working collaboratively as a staff to share good practise and reflect on ways to further improve our practise is essential to ensure science is taught well.

**Impact**

The successful approach at Boarshaw results in a fun, engaging, high-quality science education, that provides children with the foundations and knowledge for understanding the world. Our children learn through varied and first-hand experiences of the world around them. Frequent, continuous and progressive learning inside and outside the classroom is embedded throughout the science curriculum. Our use of pre and post assessments inform further teaching of key school through Flashback in Science. All children feel they are scientists and capable of achieving. The use of pupil, staff and parent voice surveys allows us to review what is important to us as a school and involve all stakeholders in any further changes to improve our science curriculum. Children at Boarshaw overwhelmingly enjoy science and this results in motivated learners with sound scientific understanding. They all feel like a scientist and have their scientific voice heard.

**Role of the Subject Leader**

The subject leader’s responsibilities are:

● To ensure the high profile of the subject and provide a strategic lead and direction for science in the school.

● To maintain and ensure use of the central supply of science resources, in accordance with those specific to each year group and topic

● To support colleagues in their teaching of science and support the CPD of others

● To ensure progression of the key knowledge and skills identified within each unit and that these are integral to the programme of study and secure at the end of each age phase.

● To monitor books and ensure that key knowledge is evidenced in outcomes, alongside and as supported, by SLT

● To monitor planning and oversee the teaching of science

● To lead further improvement in and development of the subject as informed by effective subject overview

● To ensure that the science curriculum enables the progress and raises the attainment of all pupils, including those who are disadvantaged or have low attainment

● To ensure that approaches are informed by and in line with current identified good practice and pedagogy; to attend regular opportunities for CPD, including Subject Leader meetings with PIRAMID

● To establish and maintain existing links with external agencies and individuals with specialist expertise to enrich teaching and learning in science.

* To organise an annual whole-school science week, in accordance with the national theme, ensuring a focus on practical and investigative activities.