



Science Policy 2022

The National Curriculum for England dictates that "... a high quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics" (National Curriculum 2014) and at Abacus Primary School we want our children to embark on a scientific learning journey with high aspirations, a good understanding and the necessary skills to enable them to become a future scientist. To help achieve this we will encourage the children to develop their own ideas and stimulate their curiosity about the world around them. Children will learn to be inquisitive and to work scientifically in order to make sense of the world and the natural phenomena that surrounds them. As children progress through the years they will embed the earlier taught scientific disciplines and continue to build upon their conceptual and factual knowledge.

Our Aims - Intent

At the heart of our curriculum are the Drivers that underpin everything we do at Abacus Primary: **Communication, independence, engagement and wellbeing.**

Communication

Good communication is at the heart of our curriculum and the science curriculum allows for a wealth of communication between pupils and adults. There are opportunities for children to ask and answer questions, make predictions, sort and classify and work collaboratively on various tasks which are fundamental when 'working scientifically.' Children are encouraged to use subject specific vocabulary, which is explicitly taught through the various topics.

Topic mats with scientific language are provided for each topic in each year group so children are able to 'Talk like a Scientist'

Independence

At Abacus we strive for our pupils to be independent learners. This is reinforced in the Science curriculum where children are encouraged to think for themselves and share their own thoughts and ideas whilst engaged in tasks. Children share their own observations and ideas and develop the skills to give reasons for their own thought process.

Engagement

As children grow they develop a natural curiosity for the world around them; developing this curiosity lies at the heart of the Science curriculum. Pupils are interested to find out how things work, how they're made and the interaction between different objects and phenomena. By teaching our curriculum we are enabling the children to explore the answers to their own questions and also ask new ones. Part of our curriculum is to take children on different field trips to further develop their knowledge and understanding of Science and to promote further learning.

Wellbeing

Wellbeing is a vital aspect of our whole school curriculum. The Science curriculum ensures the wellbeing of all children. Children are taught explicitly how to take care of their own health and wellbeing right from the start of their education. The curriculum teaches healthy eating and good nutrition to ensure good growth of all children. Children learn how to keep their teeth strong and how to maintain good digestion.

This area also links well with P.E and the P.S.H.E curriculum.

Teaching and learning - Implementation

Scheme of work

To ensure a comprehensive delivery of the science curriculum, all members of staff have access to the Rising Stars scheme of work (FS-Year 6) and the Edukent scheme of work. (Years 1-6) which can provide ideas and links to ensure a balanced and fun curriculum.

KS1 and KS2

Children will learn the Science curriculum through implicit and explicit methods. They will have the opportunity to develop their scientific knowledge and their ability to work scientifically using a broad range of skills including: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources. Pupils should seek answers to questions through collecting, analysing and presenting data. They will have the opportunity to use these skills while learning the topics of the National Curriculum specific to the children's year group. As a school, children will have opportunities to explore the 'working scientifically' skills as staff will be planning and delivering 'awe and wonder' lessons on a termly basis to enable students to engage and become excited about science!

EYFS

Children in early years will develop their science knowledge through the 'Understanding of the World' strand in their curriculum. Children will be provided with opportunities to be inquisitive about the natural world around them and will have some explicit lessons to develop their skills to work scientifically. By the end of the Foundation Stage, children should be able to explain 'What science is' as a subject and discuss some prior learning.

Organisation

Every classroom will have a Science display board which will indicate the topic that children are being taught with a mix of both their learning and key vocabulary/display materials.

Science lessons will take place every week in KS1 for a minimum of 1 hour (in order to regularly revisit the key scientific concepts and practise using key vocabulary) and KS2 will block their learning to allow children to have a more focused and immersive learning experience, one which enables their knowledge to become more deeply embedded. (KS2 blocked lessons will still be the agreed equivalent of 1 hour per week in an academic year) Any work will be recorded in a green exercise book or the curriculum journal (unless for display purposes)

Every term children will engage in a one off science lesson directed by an adult to enable them to focus on working scientifically but also to allow the children to see just how fun science can be.

Teachers will also plan for opportunities to learn about famous Scientists and explore the impact that these people have had on our every-day lives.

Science within Abacus Primary School is inclusive; all children will have access to the subject regardless of their needs. Activities will be differentiated where necessary and children will be supported when needed to enable them to participate fully.

Science/STEM week will take place each year during the Spring Term which the whole school will take part in. Children will have opportunities to dress up as a 'STEM' person on a chosen day and our external links from the RSC will help to plan and deliver some exciting lessons using their wealth of experience.

Monitoring - Impact

The impact of effective science teaching and learning can be monitored in many ways with the primary goal of changing a child's knowledge and acquired skills on a permanent basis.

Monitoring of science to be carried out termly by the science lead in the following ways:

- Pupil Perception questionnaires
- Book looks
- Classroom visits
- Informal discussion
- Observation of science boards

Staff will continue to grow and develop their own understanding of the science curriculum by attending regular staff meetings and continuing their own CPD.

This policy was reviewed and amended on 28th September 2022 by Tina Lee and is due for review on 28th September 2023