Science – Intent, Implementation and Impact Statement

Intent

At Wistow Primary School, it is our intention to provide a high-quality science education, that provides children with the foundations they need to recognise the importance of Science in every aspect of daily life. As one of the core subjects, we give the teaching of science the prominence it requires.

We aim to equip pupils with knowledge, skills and understanding and to encourage children to be inquisitive throughout their time at Wistow Primary School. Our curriculum will enable children to become enquiry-based learners: collaborating through researching, investigating and evaluating experiences.

Teachers will ensure that all children are exposed to high quality teaching and learning experiences. These will hook the children's interest, enabling them to develop a sense of excitement and curiosity about scientific theories and processes. Throughout the programmes of study, pupils will be encouraged to ask questions about the world around them and work scientifically to further their conceptual understanding and scientific knowledge, that has been identified within each unit and across each year group. We will 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, building arguments and explaining concepts confidently. Children will be immersed in key scientific vocabulary, which supports in the acquisition of scientific knowledge and understanding.

In lessons, children will be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes. We will provide opportunities for the critical evaluation of evidence. At Wistow Primary School, we recognise the importance of applying mathematical and computational knowledge within our science curriculum by providing opportunities to use skills from across the curriculum when collecting, presenting and analysing data.

Implementation

Teachers at Wistow Primary School 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.

In the Early Years Foundation Stage, children are taught Science through the key area of learning set out within the EYFS Statutory Framework. Through a broad range of teacher-led, child-initiated and continuous learning opportunities, children will be taught to:

- Use their senses to investigate a range of objects and materials
- Find out about, identify and observe the different features of living things,
- objects and worldly events
- Look closely at similarities, differences, patterns and change
- Ask questions about why things happen and why things work
- Develop their communication and co-operation skills
- Talk about their findings, sometimes recording them
- Identify and find out about features of the place they live and in the natural world around them.

In Key Stage 1 and 2, Science topics are taught within each year group in accordance with the National Curriculum. Topics are blocked and carefully organised into a 2 year cycle to allow children to focus on developing their knowledge and skills, studying each topic in depth. Medium term planning identifies areas where children will build upon the prior learning from previous year groups, therefore developing depth of understanding and progression of skills.

In order to plan effectively, teachers will provide opportunities for children to evaluate their knowledge at the beginning of each unit, before encouraging them to develop relevant lines of enquiry.

Lessons and units will foster an interest and understanding for three scientific disciplines: Biology, Chemistry and Physics. Through all three disciplines, children explore, question, predict, plan, carry out investigations and observations as well as conclude their findings. When presenting their findings, children are supported to develop their use of science specific language and include a range of observations and diagrams.

We encourage and promote the use of computational skills when analysing, presenting and evaluating data. At Wistow Primary School, we aim to make

links across the curriculum that allow pupils to apply skills in a range of contexts. We believe this creates enthusiastic, confident learners.

To further enhance our curriculum, effective use of education visits and visitors are planned to enrich and enhance the pupil's learning experiences within the Science curriculum. These experiences are well planned and essential to building a broad and balanced science curriculum that further promotes the development of cultural capitol in all learners. They also work to provide further CPD opportunities for staff.

Teachers use highly effective assessment for learning techniques in each lesson to ensure misconceptions are highlighted and addressed. At Wistow School, we value the importance of immediate clarification and feedback through live marking and formative assessment. This continuous approach to assessment ensures timely differentiation can be facilitated by teachers, to ensure that each pupil can access and experience the full Science curriculum.

Impact

Our approach approach to the teaching of science at Wistow Primary School will result in a fun, engaging, high quality science education, that provides children with the foundations for understanding the world that they can take with them once they complete their primary education.

Through various workshops, trips and interactions with experts our Science curriculum will lead pupils to be enthusiastic Science learners and understand that science has changed our lives and that it is vital to the world's future prosperity.

Children at Wistow Primary School will:

- demonstrate a love of science work and an interest in further study and work in this field
- retain scientific knowledge, with a real-life context.
- be able to question ideas and reflect on knowledge.
- be able to articulate their understanding of scientific concepts and be able to reason scientifically using rich language linked to science.
- demonstrate a high love of mathematical and computational skills through their work; organising, recording and interpreting results.
- work collaboratively and practically to investigate and experiment.
- achieve age related expectations in Science at the end of their cohort year.