

# **The Intent, Implementation and Impact of Tickhill Estfeld Primary School's Science Curriculum**

## **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.

At Estfeld School we believe that 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 knowledge and concepts, pupils are encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They are encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

Our Science curriculum has been developed to ensure full coverage of the National Curriculum and to foster a sense of wonder about natural phenomena.

Science in our school is about developing children's ideas and ways of working that enable them to make sense of the world in which they live through investigation, as well as using and applying process skills. The staff at Estfeld are committed to providing a stimulating, engaging and challenging learning environment and ensure that all children are exposed to high-quality teaching and learning experiences, rooted in hands-on, practical and investigative work. Throughout our school children are encouraged to develop and use a range of working scientifically skills including questioning, researching and observing for themselves. The children are immersed in scientific vocabulary, which aids their knowledge and understanding not only of the topic they are studying, but of the world around them. We intend to provide all children regardless of ethnic origin, gender, class, aptitude or disability, with a broad and balanced science curriculum.

## **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 resulting in a curriculum that is progressive and engaging throughout the whole school.

Planning for Science is a process in which all teachers are involved to ensure that the school gives full coverage of, 'The National Curriculum programmes of study for Science 2014' and, 'Understanding of the World' in the Early Years Foundation Stage. Science teaching at Estfeld School involves adapting and extending the curriculum to match all pupils' needs. In Foundation Stage and Key Stage 1, Science is taught in planned and arranged topic blocks. As

children progress into Key Stage 2, Science is taught as discrete units and lessons at least once a week for up to two hours. Science is also discretely taught in many different contexts throughout all areas of the curriculum. Teachers plan to suit their children's interests, current events, their own teaching style, the use of any support staff and the resources available. Teachers are also plan appropriate visits and invite visitors into school to enhance our children's learning experience.

We ensure that all children are provided with rich learning experiences that aim to:

- Prepare our children for life in an increasingly scientific and technological world today and in the future.
- Help our children acquire a growing understanding of the nature, processes and methods of scientific ideas.
- Help develop and extend our children's scientific concept of their world.
- Build on our children's natural curiosity and developing a scientific approach to problems.
- Encouraging open-mindedness, self-assessment, perseverance and developing 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 computing in investigating and recording.
- Provide positive role models to encourage Science as an of further study and as a positive career
- Make links between science and other subjects.

### **Impact**

The impact and measure of this is to ensure children not only acquire the appropriate age-related knowledge linked to the science curriculum, but also skills which equip them to progress from their starting points, and within their everyday lives.

All children will have:

- A wider variety of skills linked to both scientific knowledge and understanding, and scientific enquiry/investigative skills.
- A richer vocabulary which will enable to articulate their understanding of taught concepts.
- High aspirations, which will see them through to further study, work and a successful adult life.