BISHOPTON PRIMARY SCHOOL

SCIENCE

INTENT:

At Bishopton Primary School, we recognise the importance of science in every aspect of daily life. We believe that a high-quality science education provides the foundation for understanding the world, through the aspects of physics, biology and chemistry. As one of the core subjects taught in primary schools, we give the teaching and learning of science the prominence it requires.

The 2014 National Curriculum for Science aims to ensure that all children:

- Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics, thus forming and developing substantive knowledge in science.
- 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, thus forming and developing disciplinary knowledge.
- Are equipped with the scientific skills required to understand the uses and implications of science, today and for the future.

The Science curriculum fosters a healthy curiosity in children about the world around them and our universe. We believe science encompasses the acquisition of knowledge, concepts, skills and positive attitudes towards the subject.

IMPLEMENTATION:

Throughout the programmes of study, the children will obtain and develop the key knowledge that has been identified within each unit of each year group, as well as the application of scientific skills, through a range of theoretical and practical lessons. We ensure that the Working Scientifically skills are built-on and developed as they progress through the school, so that they can apply their knowledge of science when using equipment, conducting experiments and explaining concepts confidently. We encourage children to ask and answer questions that draw upon their higher order thinking skills. Bishopton aims to prepare children for life in an increasingly scientific and technological world.

Teachers create a positive attitude to science learning within their classrooms and reinforce an expectation that all children are capable of achieving high standards in science. We use the Plymouth Science Scheme to implement our whole school approach to the teaching and learning of science, which includes the following:

- Sequential learning: we build upon the learning and skill development of the previous years.
- Science is taught consistently, once a week for up to two hours.
- Planning is progressive and ambitious and allows children to learn essential aspects; we seek to build on what the children already know about a subject.
- 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.
- Teachers use precise questioning in class to test conceptual knowledge and skills.
- Working Scientifically skills are embedded into lessons to ensure these skills are being developed throughout the children's school career.
- Children will experience opportunities to devise, plan and carry out their own investigations through increasing child-led learning.
- New vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in-keeping with the topics.

- Where possible, science is planned to link with class topics, however when this is not possible, some units are taught discretely to ensure complete curriculum coverage. We make links between science and other subjects explicit.
- Children with SEND are included in whole class sessions and the activities and support given will scaffold their learning.
- Regular events, such as Science Week and project days, provide pupils with broader provision and the acquisition and application of knowledge and skills.
- Assessment for learning forms and important part of each lesson and sequence of learning and is used to inform next steps as well as identify misconceptions to address.

The implementation of our science curriculum is monitored through discussions with staff, pupil interviews / conversations, assessment data, planning and book trawls. We monitor regularly to identify those children with gaps in learning, so that all children can make progress.

IMPACT:

Our curriculum is designed so that children are taught a variety of activities throughout their key stage(s) and there is a progression journey through all of these.
Children will:

- Develop a wide variety of disciplinary skills.
- Experience a wide variety of types of scientific enquiry.
- Develop a rich vocabulary which will enable them to articulate their understanding of taught concepts.
- Form a growth mindset approach to science and be able to ask questions to develop their scientific skills and understanding.
- Have high levels of pride in the quality and presentations of the work in science.
- Further their substantive knowledge of science, deepening this as years progress and units are revisited.