Science

INTENT, IMPLEMENTATION AND IMPACT STATEMENT

Intent

Science should form part of our daily lives and it's important that this is recognised in our curriculum. At The British Section, we give the teaching and learning the prominence it requires. The aim of the scientific areas of learning is to increase pupils' knowledge and understanding of the world we live in, with developing the skills associated with science as a process of enquiry. We will strive to develop the natural curiosity of the child, encourage respect for living organisms and the physical environment while providing opportunities for the critical evaluation of evidence. Science will be taught weekly throughout Key Stages 1 and 2. In Early Years, Science will be taught **through the children learning about the world around them.** Where possible, we will provide additional opportunities to explore science and enhance our curriculum through educational visits and using the local environment. We work hard to ensure that the Science curriculum we provide for our children will give them the confidence and motivation to continue to further develop their skills into the next stage of the education and life experiences.

The aims of teaching science in our school are:

- To develop the children's understanding of the nature, processes and methods of Science through different types of enquiries that help them to ask and answer scientific questions about the world around them.
- To equip the children with the scientific knowledge required to understand the uses and implications of Science, today and for the future.
- To use a range of methods to communicate their scientific information and present it in a systematic, scientific manner, including ICT, diagrams, graphs and charts.
- For the children to develop a respect for the materials and equipment the children handle with regard to their own and other children's safety.
- To encourage the children to foster an enthusiasm and enjoyment of scientific learning and discovery.

Implementation

At SHAPE International School British Section, teachers strive to 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. Teachers work creatively to engage and inspire all children in the classroom.

Our whole school approach to the teaching and learning of Science involves the following:

- Science is taught in units carefully planned by the class teacher, following the Developing Experts programme. This ensure that there is full curriculum coverage and allows the children to achieve a greater depth of knowledge.
- Developing Experts works to provide examples of Science in real-life contexts, inspiring children to pursue careers in Science.
- Every classroom will have a Science learning wall, which will showcase the children's learning and provide key vocabulary and knowledge to build on throughout the unit.
- Through our lesson delivery, we involve problem solving opportunities through a range of investigations which allow the children to explore and make their own scientific enquiries. We encourage children to ask their own questions and provide opportunities for them to apply their scientific skills to a range of contexts and to research to discover the answers independently. This celebrates the child's curiosity within the classroom.
- Teachers create engaging lessons which involve high-quality resources to aid the understanding of conceptual knowledge.
- Teachers use precise and targeted questioning to regularly identify those children with gaps in learning, so that all children are able to keep up, not catch up.
- Formative and summative assessments are made regularly. Whole school tracking of progress is updated following assessments.
- We build upon the learning and skill development of the previous years. As the children's knowledge and understanding increases, and 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.
- Substantive and disciplinary knowledge are embedded into lessons to ensure that these skills are being developed throughout the child's school career. New vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in keeping with the units of learning.
- Teachers demonstrate how to use scientific equipment, and the various working scientifically skills in the curriculum. This will embed scientific understanding. Teachers will find opportunities to develop the children's understanding of their surroundings by accessing outdoor learning, often during Forest School sessions.
- Monitoring of Science takes place with strengths and next steps clearly identified. Lesson visits, book looks and pupil voice are used to inform monitoring, assessment and judgements.

- Pupil voice is used to further develop the Science curriculum, through questioning of pupil's views and attitudes to Science to support the children's enjoyment of Science and also to ensure that they are building on their skills and understanding as they progress through the school.

Impact

This successful approach to the planning, delivery and assessment of Science at our schools means that the standards in Science are excellent and our assessment data reflects this consistently. When completing pupil voice activities and speaking to the children about their learning, it is clear that they are enthusiastic about their Science lessons and that they enjoy them. Through Developing Experts, we have ensured that there is a clear progression of children's work and teachers' expectations across our school. We prepare the children for their next steps in Science learning as they move onto to new schools and to their Secondary Schools. The work that children complete shows a range of units and there is clear evidence of full curriculum coverage in this subject. Our children are encouraged to become independent Scientists who can select their own tools and materials, complete child lead investigations and select their own strategies for recording.