



# Swallowfield Science Triple I Statements

**‘Equipped with his 5 senses, man explores the universe around him and calls the adventure... Science’ – Edwin Powell Hubble**

## **Intent**

**(What we want to achieve)**

At Swallowfield, 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. We give the teaching and learning of Science high prominence.

Our curriculum will enable children to become enquiry based learners collaborating through researching, investigating and evaluating experiences. It will encourage respect for living organisms and for the physical environment.

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 natural phenomena. They will be encouraged to ask questions about the world around them and work scientifically to further their conceptual understanding and scientific knowledge.

Children will be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes. It will provide opportunities for the critical evaluation of evidence and rational explanation of scientific phenomena as well as opportunity to apply their mathematical knowledge to their understanding of science, including collecting, presenting and analysing data. Children will be immersed in key scientific vocabulary, which supports in the acquisition of scientific knowledge and understanding.

All children will be provided with a broad and balanced science curriculum which reflects the equality and diversity policies and practice in school.

# Implementation

(How we are going to do it)

The acquisition of key scientific knowledge is an integral part of our Science lessons. Children to learn and retain the important, useful and powerful vocabulary and knowledge contained within each unit. The progression of skills for working scientifically are developed through the year groups, and scientific enquiry skills are of key importance within lessons.

At Swallowfield, 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.

Our whole school approach to the teaching and learning of science involves the following;

- Science will be taught in planned, and arranged, topic blocks by the class teacher. Our strategy is to enable all children to be catered for through adapted planning suited to their abilities
- We plan for problem solving and real life opportunities that enable children to find out for themselves. 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. Planning involves teachers creating practical, engaging lessons with opportunities for precise questioning in class to test conceptual knowledge and skills, and assess children regularly to identify those children with gaps in learning.
- Our curriculum is progressive. We build upon the learning and skill development of the previous years, which is tested through our 'pre-learning quizzes' where teachers can identify misconceptions that need addressing.
- Working Scientifically skills are embedded into lessons to ensure these skills are being developed throughout the children's school career, and new vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in keeping with the topics.
- Teachers demonstrate how to use scientific equipment, and the various Working Scientifically skills in order to embed scientific understanding. Teachers find opportunities to develop children's understanding of their surroundings by accessing outdoor learning and workshops with experts.
- Through enrichment days, such as 'science week', we promote the profile of Science and allow time for the children to freely explore scientific topics.

# Impact

## (Evaluation of success)

The successful approach to the teaching of Science at Swallowfield 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.

Assessment at Swallowfield is teacher based and formed using formal strategies (e.g. periodic year group assessment tasks, quizzes) and informal strategies (Use of concept maps, verbal/written outcomes, reflection tasks/presentations etc).

Formative assessment is used as the main tool for assessing the impact of Science at Swallowfield as it allows for misconceptions and gaps to be addressed more immediately rather than building on insecure scientific foundations.

Children at Swallowfield will:

- demonstrate a love of science work and an interest in further study and work in this field
- retain knowledge that is pertinent to Science 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 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 each academic year.