



# LIFTON PRIMARY SCHOOL

## Statement of Intent for Science

### Intent

**Why do we teach science? Why do we teach it the way we do?**

Science provides children with the opportunity to understand the world around them and provides an exciting context to apply many of the other skills and disciplines they learn at school. The science National Curriculum identifies three key areas in which the children should be taught: knowledge and understanding; working scientifically and the application of science. Our school has a carefully planned science curriculum that ensures children, from reception to year 6, cover these three aims in an accessible, creative and engaging way. We believe that children learn science best by doing and seeing; by providing the children with a range of opportunities to actively carry out different types of scientific enquiries, we ensure that working scientifically and application of knowledge is embedded into the heart of our science curriculum. Our school endeavours to ensure that every child is given the opportunity to enjoy and make progress in science. In addition, the wider curriculum provides many opportunities to apply and deepen children's understanding of science. Teachers are expected to plan for these opportunities in their wider teaching.

### Implementation

**What do we teach? What does this look like?**

The science curriculum follows the year by year progression of knowledge and skills as set out in the National Curriculum. Where mixed year group classes

exist, a rolling programme is followed to ensure full coverage of the curriculum. Children in Foundation are taught science as part of their continuous provision.

We believe that for the children to become scientists, they not only need knowledge, but also the skills to work scientifically and opportunities for skills and knowledge to be applied. The science lead has developed a curriculum plan that uses the Primary Assessment Network (PLAN) and Teaching and Assessment of Primary Science (TAPS) assessment materials. This provides clear guidance to all teaching staff on the progression and application of skills and knowledge expected for each topic, in each year group. Key vocabulary is identified for each science topic and it is expected that these keywords will be explored through teaching and be displayed on science working walls. Big questions and key ideas (and misconceptions) are included within the curriculum planning; these promote discussion, challenge thinking and ensure the full coverage of all **five types** of scientific enquiry.

Children have the opportunity to develop their science capital through extra curricular activities such as, after school science club, visitors and trips and special science learning days. The school takes part in national science events such as British Science Week, The Great Science Share and Citizen Science projects. We make full use of our unique school grounds and rural setting; for example, our woodland and school pond area, or by arranging visits from local farmers and wildlife charities. Our promotion of outdoor learning and the children's weekly outdoor learning lessons, complement the science curriculum and provide a real context for the children to apply their knowledge and skills.

Although the majority of the science teaching (y1-6) is taught as a discrete subject, there is an expectation that all class teachers will promote and incorporate science across the wider curriculum. The implementation of this is monitored by the subject leader. Class teachers are given regular CPD to ensure they have the skills and knowledge to be able to do this.

### **Impact**

**What will this look like? By the time children leave our school they will:**

We want children to enjoy and value science and appreciate the range of skills it will provide them with. An essential part of the children becoming scientists is

promoting curiosity and encouraging the children to ask questions. By the end of KS2, our expectation is that children will be able to develop their own questions, plan different types of enquiries to answer those questions and communicate their findings in a variety of ways. Children will understand that part of science is failing and that problem solving helps us to overcome these failures. Children will have a clear understanding of how scientists both past and present have contributed to society's understanding of the world around them. They will understand the role that science and other STEM subjects play in solving some of the key problems facing the world, such as climate change.

Pupils are provided with a range of opportunities to showcase and communicate their ideas, research and findings. Teachers use a variety of assessment tools, including: pre and post learning unit tasks, pupil discussions about their learning and scrutiny of books (and digital platforms such as Seesaw and Google Drive) by the subject leader and SLT to check for progress. Progress of our science curriculum is demonstrated through outcomes and the record of coverage in the process of achieving these outcomes. The use of TAPS and PLAN assessment materials and attendance at area subject leader meetings, supports teachers to ensure a robust and effective internal moderation process of the children's work, can take place. The impact of our science curriculum will also be reflected in our **Principles of teaching science in Lifton School:**

**"We know good science happens in our school when..."**

1. We are excited by and understand the importance of science.
2. We see ourselves as scientists - we ask questions, make observations, experience, discover and develop new skills.
3. We get to be creative, curious and understand the need for us to develop a caring and responsible attitude for the wider world.
4. We can make connections between what we have learnt in science to other topics.
5. We can apply our knowledge, vocabulary and skills to solve a range of problems and questions both in and out of the classroom.
6. We are encouraged and given time to share our ideas and findings and to learn from our mistakes.
7. Our lessons are engaging and carefully sequenced to allow us all to have the opportunity to achieve and make progress in science.