



Curriculum Intent	Science Intent
<p>Everyone at Brookland Infant and Nursery School recognises that our curriculum has to be broad and balanced, offer children opportunities to grow and make progress from whatever their starting points may be. We believe that childhood should be a happy and investigative time, where curiosity and a thirst for new experiences and knowledge is nurtured. We want our children to develop the necessary skills, knowledge and understanding to think and act in ways that will enable them to engage in the culture in which they live and to understand and appreciate the cultures of others. We believe that learning should be memorable, hands on, active and challenging. We also want to develop children's specific subject knowledge, understanding and skills. We want all our children to become confident and successful lifelong learners.</p> <p>Our curriculum is based upon 4 main principles:</p> <p><b>Creative:</b></p> <ul style="list-style-type: none"><li>• Inclusive, exciting and engaging.</li><li>• Stimulates creative thinking and problem solving.</li><li>• Develops effective communication skills.</li><li>• Discovers, nurtures and celebrates children's talents.</li></ul> <p><b>Ambitious:</b></p> <ul style="list-style-type: none"><li>• Ensures children seek out and enjoy challenges.</li><li>• Teaches resilience and the ability to persevere.</li><li>• Promotes independence and motivation.</li><li>• Develops the ability to self-reflect and know how to move forward.</li><li>• Fosters enthusiasm and a love of learning.</li></ul> <p><b>Curious:</b></p> <ul style="list-style-type: none"><li>• Encourages questions to be asked to extend thinking.</li><li>• Enables ideas and experiences to be connected to help make sense of the world we live in.</li><li>• Supports British Values and our School Values.</li><li>• Practical, memorable and fun.</li></ul> <p><b>Healthy:</b></p> <ul style="list-style-type: none"><li>• Encourages a mentally and physically healthy lifestyle.</li><li>• Nurtures and supports social and emotional development.</li><li>• Encourages collaboration with others.</li></ul>	<p>At Brookland Infant and Nursery School, our vision is to provide children with a wide range of Science opportunities which will enable them to confidently explore and discover the world around them. These practical, hands-on experiences encourage curiosity and questioning; a key factor of developing children's scientific enquiry skills. Allowing children to investigate through a variety of contexts will ensure continually and evolving knowledge, which will equip them for an ever-changing world.</p> <p>Science is an integral part of our whole school curriculum; our aim is to develop children's curiosity and fascination about the world around them. This starts in the EYFS where our provision, under the guidance of the Early Year Framework, supports children to make sense of their physical world and fosters their understanding of our technologically and ecologically diverse world simultaneously enriching and widening their vocabulary.</p> <p>In Key Stage 1, The National Curriculum for Science aims to ensure that all children:</p> <ul style="list-style-type: none"><li>• 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.</li><li>• are equipped with the scientific knowledge required to understand the uses and implications of Science, today and for the future.</li></ul> <p>Our Science curriculum is planned to:</p> <ul style="list-style-type: none"><li>• Encourage children to be curious and ask questions about what they notice.</li><li>• Answer their own questions.</li><li>• Notice patterns.</li><li>• Ensure children have first hand practical experiences but also use secondary sources of information to find out answers.</li><li>• Ensure children secure their understanding of each key block e.g. Plants etc of knowledge and concepts in order to progress to the next stage of their Science learning.</li></ul>



## Science Implementation

We provide children with a wide range of Science opportunities which enables them to confidently explore and discover the world around them. These practical, hands-on experiences encourage curiosity and questioning; a key factor of developing children's scientific enquiry skills but also ensures subject knowledge is embedded. The teachers plan according to the expectations in the Early Years Statutory Framework and the National Curriculum. Activities and learning opportunities are linked to the topics being taught, where appropriate.

In the **EYFS** we follow the EYFS Statutory Framework. In EYFS, planning is based upon the children's interests and science learning opportunities and experiments are planned for and linked carefully with these interests. The children then have the opportunity to explore and consolidate their learning through independent and child-initiated time (continuous provision). In EYFS, Science is explored through looking at 'Understanding the World'. Children are encouraged to explore and investigate the world around them, asking questions such as 'why' and 'how' does something work. Children are encouraged to explore similarities and differences in relation to materials and living things. Simple experiments are conducted to develop these skills, both inside the classroom and in the outdoor learning spaces.

In **Key Stage One**, the teachers use the National Curriculum and progression of skills and knowledge documents created by the Subject Lead to ensure they are planning appropriate activities which build on the children's prior knowledge of a concept. This also allows the teachers to identify areas of the Science curriculum where some children may need challenging or more support. In Year 1, children begin to build on their scientific enquiry skills through the exploration of 'identifying and classifying' and performing simple tests. They are also taught about different plants, common animals and everyday materials, as well as seasonal changes. Children are given opportunities to apply their scientific enquiry skills through each of these topics. In Year 2, children continue to further deepen their scientific enquiry skills through practical experiments to build on their scientific questioning skills. They continue to deepen their understanding of plants, animals including humans and everyday materials as well as exploring habitats. The 'working scientifically' objectives are planned as part of the science lessons to provide them the opportunity to explore the concepts they have learnt through practical activities.

Science is taught in blocks across the year and linked to the year group topics which provides meaningful and engaging contexts for their learning. This enables our children to make links with their learning, to deepen their knowledge, inspire them to learn more and help them to remember more.

## Science Impact

Science is an integral part of our whole school curriculum; our aim is to develop children's curiosity and fascination about the world around them. We want to equip our children with the knowledge and skills they need to make sense of our technologically and ecologically diverse world.

In Science our children will:

### **Creative Learners:**

- Confidently communicate their ideas in a variety of ways, for example, by talking, drawing or through computing.
- Use a wide range of correct vocabulary used to describe the scientific process they have learnt and investigated.
- Use their observations and ideas to suggest answers to questions.



- Gather and record data to help answer questions.
- Representing their findings in a variety of ways e.g. tables, diagrams

**Ambitious Learners:**

- Have the opportunity to ask questions.
- Be able to know more and remember more.
- Challenge themselves and solve problems.
- Reflect on their learning and explain what they find out.

**Curious Learners:**

- Recall their prior knowledge and apply it.
- Have a clear understanding of the scientific process they are investigating through the hands-on activities.
- Explore a wide range of sources and hands-on resources.
- Learn outside.

**Healthy Learners:**

- Be equipped with the necessary skills and vocabulary which they can build upon as they progress further up the school confidently.
- Know how to care for their environment and living things.
- Know the importance of exercise, eating the right amount of different types of food and looking after their personal hygiene.

**If you were to walk into a Science lesson at Brookland Infant and Nursery School you would see:**

- All children engaged, challenged and working collaboratively whilst enjoying their Science lesson.
- A purposeful and enthusiastic environment with lots of opportunities for discussions about children's ideas and findings.
- A key skill or scientific process being taught during an experiment planned with the 'Working Scientifically' section of the Science National Curriculum in mind.
- Clear progression of skills and vocabulary within and between the lessons.
- Children who are engaged in interactive activities that are inclusive of all needs.
- Using a variety of sources, the children enjoy discussing their observations and thoughts and are confident to talk about the different aspects of their work.
- Teachers demonstrating secure subject knowledge and clearly modelling scientific vocabulary.