SCIENCE

Intent, Implementation, and Impact Statement

"The important thing is never to stop questioning" - Albert Einstein

Science Curriculum Rationale

Have you ever wondered how rainbows are made, how far away the sun is or how caterpillars turn into butterflies?

Here at Thornhill Primary School, staff are passionate about science and are on a mission to instill that passion in the children. We ensure that the children are exposed to a variety of opportunities to develop their science knowledge and to connect this to real-life experiences; the goal is to fuel children's ambitions, allowing them to see that there is a world of opportunity ahead of them, especially if they want to pursue careers in science in the future.

Intent – What do we teach?

Our educational beliefs at Thornhill Primary School revolve around the fundamental importance of Science in everyday life. Our mission goes beyond academic standards, as we are dedicated to igniting curiosity and nurturing scientific minds. We foster a positive learning environment in which students actively participate in scientific inquiry, investigation, and theory development. Our goal with this approach is to provide students with essential scientific knowledge and transferable skills for everyday life, while also fostering a deep understanding of Science's vital role in the world. Our science curriculum's overarching goal is to provide a high-quality education that sparks curiosity, fosters a love of scientific inquiry, and ensures that all students, regardless of background or ability, develop a deep understanding of the world through engaging and purposeful scientific learning experience.

Implementation – How do we teach it?

Firstly, our science curriculum follows the National Curriculum and is designed to progressively develop scientific knowledge and conceptual understanding, while also nurturing the essential skills of scientific inquiry, problem-solving, critical thinking and working scientifically. The curriculum is structured around the key scientific disciplines, ensuring that pupils gain a solid foundation across biology, chemistry, and physics.

Teachers at Thornhill are committed to delivering engaging and stimulating science lessons that capture the imagination of our pupils. We use a diverse range of practical investigations, interactive demonstrations, and real-world applications to bring science to life, making learning both enjoyable and meaningful. Everybody has worked very hard across the school to achieve the PSQM (Primary Science Quality Mark) Award, which aims to celebrate and develop the profile of Science in Primary Schools.

With the recent addition of our new Silver Birch site, we are able to incorporate many outdoor learning opportunities linked to science, and are in the process of creating wildlife areas to attract a more diverse range of animals and insects, allotments on which we will grow vegetables to use in our kitchen and which will teach the children about self-sufficiency and chicken coops which will help to bring the teaching of lifecycles to life. We hope to develop these areas with support of our Eco-Warriors team and to develop links with our local community.

Our implementation includes strategies for effective differentiation and inclusion to ensure that all pupils are appropriately challenged and supported. We provide opportunities for pupils with different abilities and learning styles to excel and make progress in science, drawing on their individual strengths and interests.

We believe in the value of making cross-curricular connections to enhance the understanding of science. By linking our science curriculum with other subjects such as mathematics, literacy, and technology, we foster a holistic approach to learning and enable pupils to appreciate the interconnectedness of knowledge.

In addition to the core curriculum, we offer a range of enrichment activities, including trips, such as science museums, participation in science fairs and interactive workshops with external experts. These experiences enrich and extend pupils' learning, broadening their exposure to the wonders of science.

Impact – What is the impact of our teaching for our pupils?

The impact of Thornhill's outstanding science education is evident in the high levels of engagement and enthusiasm shown by our pupils. They display a genuine passion for scientific learning, actively participating in discussions, posing insightful questions, and expressing a hunger for exploration and discovery.

Our focused approach to teaching science produces excellent progress in both knowledge and skill development. Pupils demonstrate a secure understanding of scientific concepts through their performance in assessments, hands-on experiments, and application of knowledge in various situations.

The impact of our approach to science education extends to promoting inclusivity and supporting the well-being of all pupils. Through our inclusive practices, we ensure that every child feels valued and empowered to excel in science, contributing to a positive and supportive learning environment for all.

By instilling a love for science, our primary school equips pupils with the aspirations and readiness to pursue further study or careers in STEM fields. We nurture the next generation of scientists, engineers, and innovators equipping them well for the challenges of the modern world.