**Why Science is important at St Augustine’s CE Junior School**

We are surrounded by technology and the products of science every day. Decisions that affect every aspect of our lives are based on scientific evidence such as suppressing a virus or finding ways to combat climate change. And, of course, the immensely complex natural world that surrounds us illustrates infinite scientific concepts. As children grow up in an increasingly technologically and scientifically advanced world, they need to be scientifically literate to succeed. At St Augustine’s, we believe by providing an engaging, hands-on and inspiring Science Curriculum, we can commit to increasing our children’s science capital, encouraging all children to see that science is relevant in their lives now and in the future. Teaching science to students is teaching them how to think, learn, solve problems and make informed decisions. These skills are integral to every aspect of a child’s education and life, from school and beyond.

**Intent**

* The national curriculum for science aims to ensure that all pupils:
develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
* 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
* are equipped with the scientific skills required to understand the uses and implications of science, today and for the future. We understand that it is important for lessons to have a skills-based focus, and that the knowledge can be taught through this.

At St Augustine’s we aim for our pupils to be:

* Inquisitive thinkers who are keen to explore the world around them and to question the unknown.
* Equipped with accurate and appropriate scientific vocabulary so that they are able to communicate and contribute to scientific discussions, explaining their learning and different concepts.
* Able to draw upon and build on their prior scientific knowledge in order to make effective predictions, explaining their reasoning.
* Able to plan and carry out a scientific investigation, thinking carefully about what equipment they will require, what recordings they could make and conclusions they will draw.
* Reflective learners who can consider the science behind different concepts, able to articulate what they have learnt, not just what they have done.
* Able to evaluate their practice, considering what has worked well and how they would improve in the future.
* Effective communicators who can communicate their ideas, opinions, questions and scientific findings to others through both the written and spoken word.
* Involved in whole-school science weeks, where they can share their learning with other learners and our wider school community.
* Involved in science events working collaboratively with other schools in the local area.

**Implementation**

Teachers create a positive attitude to science learning within their classrooms and reinforce an expectation that all pupils 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 blocks, linked with the overall topic where possible.
* Existing knowledge is checked at the beginning of each topic through the use of informal assessment for learning tasks (a mixture of written and/or practical).
* Through our planning, we involve problem solving opportunities that allow children to apply their knowledge, and find out answers 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 engaging lessons, often involving high-quality resources to aid understanding of conceptual knowledge. Teachers use precise questioning in class to test conceptual knowledge and skills, and assess pupils regularly to identify those children with gaps in learning, so that all pupils keep up. Tasks are selected and designed to provide appropriate challenge to all learners.
* We build upon the knowledge and skill development of the previous years. Teachers use the PLAN Progression in Knowledge document to ensure work is pitched appropriately. As the children’s knowledge and understanding increases, 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.
* Working Scientifically skills are embedded into lessons to ensure that skills are systematically 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 use the PLAN Progression in Working Scientifically document to ensure an accurate and consistent progression of learning when working scientifically.
* 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.
* Children are offered a range of extra-curricular activities such as, visits, trips and visitors to complement and broaden the curriculum. These are purposeful and link with the knowledge being taught in class.
* Regular events, such as Science Week allow all pupils to come off-timetable, to provide broader provision and the acquisition and application of knowledge and skills.
* Pupils are assessed regularly during lessons using formative tasks as well as at the end of a unit using a summative task. Teachers track the overall progress of pupils’ knowledge, understanding and skills in science by recording information on Arbor regularly throughout the year.

**Impact**

* Pupils show a positive attitude to science and their learning.
* Pupils are curious and want to question the world around them.
* Pupils see science as important for their future and understand the links to other subjects.
* Pupils talk scientifically using age appropriate vocabulary – they can articulate their learning confidently.
* By the end of Year 6, all pupils are expected to know, apply and understand the matters, skills and processes specified in the national curriculum programme of study for Science.

**Other relevant documents:**

* PLAN Progression of Knowledge in Science
* PLAN Progression of Working Scientifically Skills