



Waterhouses CE Primary Academy and Nursery

“Let your light shine”

Make your light shine, so others will see the good you do and will praise your Father in heaven. Matt 5 v 16

Science Curriculum Statement

Intent

At Waterhouses CE Primary Academy and Nursery, we believe in providing every child with the opportunity to thrive in a learning environment that encourages scientific curiosity. We want to inspire awe and wonder in the natural world, develop a deep understanding of scientific concepts, and equip pupils with the skills to think and work scientifically, preparing them for a future in which scientific literacy and problem-solving are paramount. The Science curriculum Waterhouses CE Primary Academy and Nursery is carefully planned using the Grammarsaurus Scheme and units of work, in line with the 2014 National Curriculum for Science.

Waterhouses CE Primary and Nursery Academy aims to ensure that all pupils:

- Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics (although will not necessarily be referred to in these terms.)
- Develop understanding of the nature, processes, and methods of science through different types of scientific enquiry that helps 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.

We believe science encompasses the acquisition of knowledge, concepts, skills, and positive attitudes. Throughout the programmes of study, the pupils will acquire and develop the key knowledge that has been identified within each unit, as well as the application of scientific skills. We ensure that these skills are built-on and developed throughout pupils' time at Waterhouses so that they can apply their knowledge of science when using equipment, conducting investigations, collecting evidence and explaining concepts and findings.

Implementation

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 Key Stage 1 and 2 Science will be taught in unit blocks by the class teacher, using the Grammarsaurus schemes of work as resources, thus ensuring curriculum coverage over the year.

We recognise the importance of working scientifically in the EYFS as a key area of learning. There are three strands under Physical Development (Health and Self-Care), Understanding the World (The World) and Expressive Arts and Design (Exploring and Using Media and Materials). In both the outdoor and indoor learning areas there are opportunities for both child-led and teacher directed exploratory play. The children are encouraged to follow their curiosity, explore using their senses, observe, predict, investigate and be creative when following their natural inquisitiveness. When appropriate aspects of science will be carefully taught as a response to the children's interests and fascinations.

From Year 1 onwards each new unit of work begins with an opportunity for children to share what they already know. This is done through a flash back activity which is appropriate for each year group. This helps children to retrieve what they have learnt previously, identify what they already may know and possibly highlight any misconceptions held. This provides the teacher with an insight into the children's 'starting points' for the unit and can inform planning. This ensures that new knowledge is taught in the context of previous learning to promote a shift in long term memory.

Key vocabulary for the new topic is also introduced as part of the unit introduction with the Knowledge Organiser, which is stuck in at the start of each new unit of work. This provides definitions and accompanying visuals for each word to ensure accessibility to all. This approach also means that children are able to understand the new vocabulary when it is used in teaching and learning activities and apply it themselves when they approach their work.

Teachers aim to make lessons as engaging and interactive as possible. The Grammarsaurus curriculum carefully embeds working scientifically into the content of the science curriculum of biology, chemistry and physics - with opportunities for pupils to follow their lines of enquiry within each topic. Pupils have opportunities to develop understanding of the nature, process and methods of science through different types of enquiries and are encouraged to ask and answer questions about the world around them.

At the end of the topic, children take part in a review of what they now know. This is in the form of a cumulative quiz and assessment tasks linked explicitly to what has been taught in each unit.

To add context to our learning regular events, such as British Science Week or subject days, allow all pupils to come off-timetable, to provide broader provision and the acquisition and application of knowledge and skills. Wherever possible we try to involve families and the wider community.

Impact

Our approach to teaching Science at Waterhouses CE Primary and Nursery Academy results in a fun, engaging, high-quality science lessons, promoting high levels of pupil engagement and enthusiasm for science. The impact of our science education is evident in the knowledge, skills, attitudes, and aspirations of pupils. It should empower them to excel academically, thrive in further education, embrace a lifelong love of science becoming scientifically literate, fostering a curiosity and appreciation for the natural world.

Through promoting a positive attitude towards Science, we can foster a desire to pursue further study or careers in STEM fields. Children learn the possibilities for careers in science, through trips or visitors to school. This ensuring that children have access to positive role models within the field of science from the immediate and wider local community. They will learn about different scientists of both genders from various backgrounds and ages.

In summary, we create a nurturing and stimulating environment that cultivates a generation of scientifically literate, confident and inquisitive individuals, fully prepared to face the challenges of the future.