



Science

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Intent

In order to deliver a high quality National Curriculum for Science at Eastfield, our aim is to ensure that all pupils develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. We strive to teach a creative curriculum that is both investigative and practical, which allows pupils to problem solve, ask scientific questions and encourages curiosity about the diverse world around them. Through the teaching of Science, we endeavor to promote a respect and caring attitude for all living organisms and the environment in which we live.

In line with the aims of the National Curriculum, our curriculum also offers -

- Opportunities for children to gain a deep understanding of the concepts taught.
- Build resilience when faced with challenging scientific enquiry questions.
- Show pride when presenting through the practical and investigative aspect of their work.
- Develop the language and vocabulary of Science

- Research the work of past and present scientists, identify their impact on the world we live in, in order for children to build their aspirations to become future scientists.

Implementation

At Eastfield Primary School, both in Key Stage 1 and Key Stage 2, our children have Science lessons that take place one afternoon or morning, every week. This longer session allows children the time to build on their prior scientific knowledge and learn new skills. Within the Early Years Foundation Stage, Science is taught through 'Understanding the World' which has links with the 3 prime areas of learning, this gives the children a foundation to achieve their end of year ELG 'The Natural World' along with areas of the two other ELG, 'Past and Present' and 'People, Culture and Communities'. Scientific experiences will begin at this early stage of their learning and our Science curriculum exposes children to consistent, high quality Science lessons, which advance their scientific understanding throughout their entire primary school education. We encourage the investigative nature of early years in its broadest sense.

Science is taught through explicit units that have been planned in line with the National Curriculum. Cross-curricular links are made where possible to the year group's termly topic. Within each year and with each new unit, plans are developed in response to the interests and questions of the children, to give purposeful learning about what they want to find out, thus giving pupils a voice within their science education. Teachers also take into consideration cultural capital,

addressing issues specific to our community allowing children to access a broader curriculum.

The science curriculum includes a range of investigative and practical activities, providing children with the opportunity to work scientifically, acquiring the necessary skills to problem solve, work collaboratively and share their findings. Investigations allow children to think like scientists, make predictions based on prior knowledge, challenge theories and plan their own activities. Key vocabulary is shared and consistently modelled by the teachers; new words are displayed within the classroom and are in their books encouraging children to incorporate this language in both oral and written work. A variety of equipment is available for children to use according to their planned investigation, developing a sense of excitement and curiosity to enhance the love of Science.

Throughout the school year, teachers are encouraged to take part in Science week to form links with external providers including the University of Wolverhampton. Workshops are used to broaden the opportunity for our children to see other Scientists in our school environment.

To monitor the progress made within science lessons, all teachers are required to assess at the end of each unit in line with the moderation materials provided by the Wolverhampton Local Authority. Assessments are reported in the same manner as other core subjects. Assessments are completed before the new unit to ascertain prior learning and to inform the planning of a unit of work that is progressive

and tailored to the interests of the children. Teachers are expected to complete summative assessments to monitor progress and formative assessments both during and at the end of each weekly lesson. The Science Subject Leader is responsible for monitoring of this core subject, the development of medium term planning and weekly Smart planning, alongside the monitoring of standards within children's science books through moderation. Throughout the year, training is provided to disseminate new information, guidance on changes within science and addressing any CPD needs, resulting in the best science provision delivered by teachers to all pupils in their care.

Impact of Science

The effective planning and teaching of Science by our staff, which is in line with our skills progression (incorporating all of the strands of the National Curriculum) allows us to ensure that our children have access to an up to date, challenging curriculum. A curriculum that meets the needs of our students in order for them to make good progress. Our streamed progression will enable teachers to complete meticulous assessments, track progress and plan from it as part of our commitment to inspire all children to develop their scientific skills.

Our effective teaching of Science will impact on the students in the following ways:

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- The Science curriculum provides children with access to an investigative approach, with a mix of research, teacher led/child initiated practical lessons. They are taught scientific knowledge and understanding as well as scientific enquiry.
- A varied, progressive and rich scientific vocabulary to enable children to articulate both orally and written their understanding of the concepts taught.
- Science lessons are engaging, fun and designed to encourage all learners to gain a scientific foundation that they will require to have a better understanding of the world around them.
- Children are provided the opportunities to learn about the 3 elements of Science: Biology, Physics and Chemistry. Scientists from these fields that have changed the world and community around them.
- Children's scientific understanding is consistently being built upon year on year, term on term with high aspirations to see them through to further study and success in adult life