Science at Fairford

Intent

It is our intent to give all children a strong understanding of the world around them whilst equipping them with the skills and knowledge to help them think scientifically. We encourage children to be inquisitive and we strive to foster a healthy curiosity about our universe, whilst ensuring children gain an understanding of scientific processes. We strive to ensure children are equipped with an understanding of the use and implications of Science, today and for the future. Children will be exposed to a number of scientists and their research and be able to appreciate advances that have been made in science throughout history.

We aim to provide an inclusive provision which equips all pupils with the skills to work scientifically, asking and answering their own questions through using a range different enquiry types. Children will be scientifically literate and have a strong understanding of scientific vocabulary in the curriculum. From Nursery to Year 6 our pupils will build up a knowledge, through revisiting key areas and building upon previous learning- embedding procedural knowledge into the long term memory.

Children will be given opportunities to engage in extra-curricular science activities such as exploring our outdoor environment, visiting a science event/museum and presenting science investigations to their peers. Through these things and the national curriculum we endeavour to distil a lifelong love for science within our pupils through both the curriculum and extra-curricular activities.

Implementation

Science Lessons at Fairford have a skilled based learning objective, which subsequently leads the acquisition of key scientific knowledge. Each lesson has a clear focus.

Scientific knowledge and enquiry skills are developed with increasing depth and challenge as children move through the year groups and this is mapped on our long term plan.

The sequence of lessons produced by teachers helps to embed scientific knowledge and skills, with each lesson building on previous learning. Activities are effectively differentiated so that all children have an appropriate level of support and challenge. Through ongoing assessment of both skills and knowledge teaching staff are aware of the next steps.

Topic overviews give teaching staff guidance to ensure that they are equipped with secure scientific subject knowledge and a chronological understanding of previous learning. They are given a bank of ideas to support all enquiry types and how these scientific concepts could be revisited to strengthen children's schemas through other areas of the curriculum. These topic overviews along with regular CPD opportunities enable teaching staff to deliver high-quality teaching and learning opportunities while making them aware of possible scientific misconceptions the children may face.

Children have access to outdoor environments. EYFS and Year one attend Forest school throughout each year.

Where possible teaching staff will invite different professions and STEM ambassadors who use science in their roles to talk to the children. e.g. Dentists, Gardeners, Doctors, Nurses, Chefs, Farmers.

Impact

Teaching staff feel more confident in delivering an engaging science programme.

Progress is measured through a child's ability to know more, remember more and explain more. Attainment and progress is measured across the school using our target sheets and assessment spreadsheets. The Science Subject leader is able to monitor progression in working scientifically skills across all year groups and give accurate reports to governors and SLT. As a result interventions and CPD needs can be put in place.

The learning environment across the school will be more consistent with science technical vocabulary displayed, spoken and used by all learners.

Whole-school and parental engagement will be improved through the use of science-specific home learning tasks, family learning nights and messages directing them to local events they could attend.

Children who feel confident in their science knowledge and enquiry skills will be excited about science, show that they are actively curious to learn more and will see the relevance of what they learn in science lessons to real-life situations and also the importance of science in the real world.

Children who engage with the natural environment want to care for it. Children will recognise common English plants and animals in our local area and further afield and understand how to care and protect them.