SCIENCE Intent and Implementation Statement

About our school and what our curriculum looks like and why

At Eton Park Junior School, we recognise that science has shaped the world we live in and we shape our curriculum to encompass science aspects that are in in our lives today. We aim to provide the children with the science knowledge and investigational skills that they need to equip them with the knowledge required to understand the uses of science today and for the future. Our science curriculum embraces the community in which it is situated, recognising local history, heritage, geographical and most importantly, the aspirations of all our children. We want our children to be naturally curious about the world around them. Our children don't have many opportunities to explore concepts out of school and therefore we have designed our science curriculum to foster a sense of awe and wonder. We are committed to providing a stimulating, engaging and challenging learning environment that provides first-hand experiences and that allows the children to become creative, critical thinkers. As well as going on science-based trips, we also make much use of our school grounds, in particular our 'woodland area' and the local environment is used to support and enrich learning. It is our intention that all children develop a curiosity about the world they live in; we encourage children to research areas of interest and share their findings both in school and at home.

We want our children to know the scientific knowledge and skills within each curriculum topic that we teach to aid their knowledge about key areas of Scientific Enquiry, Life Processes and Living Things, Materials and their Properties, and Physical Processes through a variety of teaching and learning strategies.

We want our children to understand that science is the study of the physical world, involving a collection of facts from observations, physical experiments and working scientifically from which they form ideas of their world. We provide opportunities for children to actively learn, by developing their own investigations based on ideas given by the teacher, and their own ideas. The curriculum has a heavy emphasis on investigation where children can make predictions, observations, carry out fair testing and evaluations using a range of methods to communicate their scientific knowledge and present this in a systematic and scientific manner. We ensure that children build on their skills to build arguments, explain concepts confidently and continue to ask questions about their surroundings.

Implementation

- The Science subject leader is responsible for the curriculum design, delivery and impact in this subject. This includes regularly meeting with Governors to review and quality assure the science subject areas to ensure that it is being implemented well and that coverage, breadth and balance is adequate.

- We do not follow any science schemes of work but have devised our own curriculum based upon the 2014 Primary National Curriculum in England and have devised our progression map of science and skills to ensure that it is developing the knowledge for each year group.

- Teachers plan lessons for their class using our progression of knowledge and skills document, which incorporates Working Scientifically. When teaching science, teachers should follow the children's interests to ensure their learning is engaging, broad and balanced.

- Knowledge organisers show clear content of the topic -biology, chemistry or physics. They show the progression of the topic identifying progressive knowledge and understanding, skills and vocabulary.
- The science curriculum is designed to recognise children's prior learning and we build on knowledge and skills from previous year groups.
- Children are provided with knowledge mats to aid their learning about the topic.
- We ensure that teachers have the same expectations during Science lessons that they would have when teaching English or Mathematics and that any mathematical task is pitched at an age-appropriate level to ensure sufficient challenge. It is vital that any mathematical or English barriers should not impede a child's scientific learning
- Science provides excellent opportunities to enhance the learning of more able pupils through planning lines of enquiry, asking opened ended problems, analysing results and drawing conclusions based on scientific findings.
- Science assessment is based on teacher's assessment of children. This is then reported on the school's assessment online tool and the percentage of children working at, above and below the expected standard are identified. At the end of a unit, teachers will identify if a child is working at the expected standard for that objective. This is then passed on to the next class teacher as a record of the child's progress throughout the year.
- Science monitoring is timetabled and conducted through learning walks, looking at pupil books and pupil voice and data analysis. This is then used to form action planning and monitoring of pupils.

Impact

Our science curriculum is well thought out and is planned to demonstrate progression. We focus on progression of knowledge, skills and vocabulary within each unit of work.

We measure the impact of our curriculum through the following methods:

- Marking of written work in books
- Summative assessment of pupil discussions about their learning.
- Images and videos of the children's practical learning.
- Interviewing the pupils about their learning (pupil voice)
- Moderation staff meetings where pupil's books are scrutinised and there is the opportunity for a dialogue between teachers to understand their class's work
- Formal reporting of standards at the end of each Key Stage
- Annual reporting of standards across the curriculum to parents

The science subject leader will continually monitor the impact teachers have on the children's learning through looking at books to ensure the progress of knowledge and skills is being taught. They will also ensure the knowledge taught is retained by the children and continually revisited and that the learners are able to apply the skills they have been taught to a variety of different settings, showing independence with their learning.