The Welbeck Federation of Schools
Science Policy
September 2024

At Eastlands Junior School we recognise the importance of science in everyday life. Our science curriculum is intended to broaden pupil's knowledge and understanding of the world, and develop the skills needed to understand science as a process of enquiry. We will develop the natural curiosity of children, encourage respect for living things and our environment and provide opportunities for critical evaluation of evidence through practical experiments and investigations.

Intent

The science curriculum taught at Eastlands Junior School is designed to nurture independent thought and resilience in learning. When working scientifically children are encouraged to question, evaluate and debate, and curiosity is celebrated in the classroom. Communication skills are embedded in the curriculum; every science lesson taught will encourage questioning, reasoning and discussion amongst the class. Children are taught the skills they need to communicate their ideas and reasoning effectively: in written form, verbally, and through the use of appropriate data handling and analysis.

Key Concepts

Lessons will develop the key concepts of being a scientist, throughout the range of subjects studied through the National Curriculum. The key disciplinary skills for science are:

- Asking questions
- Planning investigations

- Making observations
- Taking measurements
- Gathering, recording and classifying data
- Presenting findings
- Answering questions and making conclusions
- Evaluating

Learning Objectives will usually focus on attaining or developing a skill within the context of substantive knowledge, but as part of the lesson attention will be given to the development of disciplinary skills that will enable the learner to 'think like a scientist'. Each topic will include Key Knowledge, which will be the main point of each lesson. Key Knowledge links directly to the Progression of Substantive Knowledge document and is made clear on Medium Term Plans so teachers are aware of what the pertinent information is for each lesson.

The Welbeck Values are woven through the science curriculum, for example through teaching respect for the world around us and developing curiosity through lessons that stimulate and encourage independent thought.

Implementation

All lessons have clear learning objectives which are shared with the children. Vocabulary is discussed and the start of each lesson includes a recap of the previous learning, put in the context of a 'Learning Journey', to allow children to visualise their journey towards answering the Big Question. Each lesson also includes a discussion of the specific disciplinary knowledge relevant to the learning, to encourage the children to put their learning in the context of 'being a scientist'.

Lessons start with Simmering Skills; a quick task or set of questions that revisits relevant learning from previous units of work, and give children opportunities to connect new learning with what they already know. Lessons are planned for children to acquire both substantive and disciplinary knowledge through the topic they are learning about.

Key scientific vocabulary and key knowledge is shown on Knowledge Organisers, which are given to children at the start of every unit. During lessons children have plentiful opportunities to talk about their learning and use scientific vocabulary, both with groups or talk partners and through whole class discussions.

Science is taught weekly across KS1 and KS2. In EYFS children access science learning throughout their sessions via continuous provision, carpet times and small focus groups. Learning in EYFS is recorded through Tapestry observations and the class floor books.

EYFS

Foundation 1 and Foundation 2 children develop their Understanding the World knowledge and skills through continuous provision areas including the 'investigation station' and our outdoor provision as well as carpet times, high quality texts and small group guided work. Activities are carefully planned to deepen children's knowledge, understanding and skills as well as providing the opportunity for them to explore and ask questions. Key vocabulary is identified and modelled by staff.

Opportunities in provision are also carefully planned to develop the Characteristics of Effective Learning - these are the key to building the foundations of disciplinary knowledge and skills for our early learners.

Impact

Learners make links between aspects of science studied across the whole of the Welbeck Federation. Learners are equipped with skills to develop, test and answer their own scientific questions about the world around them. Ultimately, learners will possess the scientific knowledge required to understand the uses and implications of science, today and for the future. Year 6 learners are well equipped to continue their learning in KS3.