



Science at Mill Dam



Intent

Scientific knowledge and understanding and the building of science capital are vital parts of a broad and balanced curriculum and of increasing importance in a technologically and scientifically developing world. During their progression through the science curriculum children will acquire knowledge and skills in a structured way building upon previous learning and gaining an increased breadth and depth of scientific understanding that they can link both to their real world experiences and wider curriculum learning.

Implementation

The science curriculum is presented and delivered to our children in a structured way, each discreet unit of learning contains identified key learning points, both knowledge and skills which build upon previous learning and equip children to deepen their understanding through further learning. Each unit of learning will begin by looking back and ensuring these previous steps are secure before moving onto new learning. Science learning will not sit wholly in the rote learning of facts but also in the building of a range of practical skills and building science capital to prepare children to apply their learning as they progress through education and in future careers.

Where ever appropriate and practicable opportunities for learning through observations and investigation will form a key part of scientific learning, be that through the planning and carrying out of practical work, observation of the world around them including the wider school environment, or examining and categorising real world materials and artefacts. Correct scientific vocabulary will be modelled by adults working with children throughout to aid them in the acquisition of these words, and their use in written recording should be encouraged. A progression of technical vocabulary sits alongside the knowledge and skills for each unit of learning.

As effective science learning, in many units, requires a large amount of hands on or practical activity it will not always be appropriate for a written outcome or recording to be produced for every lesson. Learning will be recorded in a range of formats including shared forms such as floors books or interactive displays, film and photo or child generated show and tells. Regardless of the form of recording, accurate use of subject specific vocabulary, accurate description (including measurements) of observations and careful explanation findings will be expected and scaffolded.

Impact

As children progress through the science curriculum they will develop their questioning and observation skills as well as acquiring further knowledge and skills which build their science capital. Children will have gained a wide range of deep understanding of scientific knowledge and processes building on the learning of previous years and making links between areas of their learning. Through experiencing a curated selection of practical investigation children will have acquired skills allowing them to plan and carry out investigation with greater independence. We have identified key knowledge and understanding at each point in the scientific learning journey; these are also the learning points through which progress and attainment will be measured as well as readiness to progress to the next learning step.

Cross curricular and extra curricular links.

- Logging and recording data – Computing and maths links.
- Presenting findings – Computing and English links.
- Medicine, health and diet – PSHE and wider world links.
- Destruction of biomes and habitats – Climate change and wider world links.
- Habitats – Geography links.
- Annually learners take part in the Great Science share for schools, participating in regional and national investigations as well as planning investigations based in their own questions and linking to their wider learning.
- Strong links can be made between biology areas of the science curriculum and opportunities offered by Forest Schools.
- Possible visits and visitor – Magna (materials and physics), Eureka (KS1 general science), Tropical World (Habitats), Yorkshire Wildlife Park (Animals inc humans)

