



Intent, Implementation and Impact for Science

INTENT

Science is a fascinating subject, which helps to strengthen our pupil's knowledge of **how the world around them works**. The **discoveries and inventions** that have occurred through scientific endeavours can act as an inspiration for our pupils who may go on to be scientists in their future lives. The subject provides us with a fantastic platform to enhance our pupils 'learning powers', as they show curiosity, demonstrate resilience, work collaboratively and reflect on what they have discovered. We intend for children to have the opportunity, wherever possible, to learn through **carrying out investigations**, leading to them being equipped for life to ask and answer scientific questions about the world around them. As our pupil's progress, they build on their skills in **working scientifically**, as well as on their scientific knowledge, as they develop greater independence in planning and carrying out fair tests to answer a range of scientific questions. Knowledge organisers are used to help reinforce the key knowledge for each area of study as set out in the science national curriculum. The knowledge organisers help our pupil's to communicate as scientists, as they consolidate and retain the **science knowledge** they have learnt and also reinforce **key scientific vocabulary**. Our Science schemes of work ensures that our pupil's have a varied, progressive and well-mapped-out science curriculum that provides the opportunity for progression across the full breadth of the science national curriculum for KS1 and KS2.

IMPLEMENTATION

The attainment of key scientific knowledge is an essential part of our science lessons. Linked knowledge organisers enable our pupil's to learn and retain the important, useful and powerful vocabulary and knowledge contained within each area of study. The progression of skills for working scientifically are developed through the phases and **scientific enquiry skills are of key importance** within lessons. The progression of knowledge and skills are set out in the Science Progression Map. Each lesson has a clear focus. Scientific knowledge and enquiry skills are developed with increasing depth and challenge as pupil's move through the phases. They complete **investigations** while gaining the scientific knowledge for each area of study. Each sequence of lessons helps to embed scientific knowledge and skills, with each lesson building on previous learning. Activities are effectively differentiated so that all of our pupils have an appropriate level of support and challenge. Our teacher's ensure that their subject knowledge is secure by planning and preparing effectively. This enables them to deliver high-quality teaching and learning opportunities while making them aware of possible scientific misconceptions. Clear and appropriate cross curricular links to underpin learning in multi areas across the curriculum giving the children opportunities to learn life skills and apply skills to **'hands on' situations'** in a purposeful context.

Children will undertake design tasks and use skills from across the curriculum to fully explore the design process evaluating work ensuring that it is of the highest possible quality. Children are also asked to self-evaluate their work.

IMPACT

Progress is measured through a pupil's ability to **know more, remember more and explain more**. This can be measured in different ways. The use of key questions ensures opportunities are built into the lesson for ongoing assessment. Attainment and progress is measured across the school using the Educater Assessment Tracker. The learning environment across the school displays scientific vocabulary, spoken and used by all learners. Whole-school and parental engagement is improved through the sharing of knowledge organisers. 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.