Curriculum Intent

At Valley Primary School, we recognise the importance of Science in every aspect of daily life. As one of the core subjects taught in Primary Schools, we give the teaching and learning of Science the prominence it requires.

The Scientific area of learning is concerned with increasing pupils’ knowledge and understanding of our world and with developing skills associated with Science as a process of enquiry. It will develop the natural curiosity of the child, encourage respect for living organisms and the physical environment and provide opportunities for critical evaluation of evidence.

At Valley Primary school, we want our children to be naturally curious about the world around them. Our curriculum has been developed to ensure full coverage of the National Curriculum and to foster a sense of wonder about natural phenomena. We are committed to providing a stimulating engaging and challenging learning environment. Throughout our school, children are encouraged to develop and use a range of working scientific skills including questioning, researching and observing for ourselves. We promote and celebrate these skills. We want our children to have a broad vocabulary. Scientific language is to be taught and built upon as topics are revisited in different year groups and across key stages.

Science Implantation

As a school, there is a Science overview which falls in line with the National Curriculum. This is to ensure that by the end of year 6, a child will be able to work scientifically by asking their own questions about what they have noticed, observe changes over time, notice patterns, group and classify things and carry out comparative tests. There is a clear repetitive nature to our curriculum which enable topics to be visited throughout the school. This is the ensure that children are having the confidence to build upon what they have learnt whilst opening them up with wider scientific discovery.

Through planning, teachers reflect on what has been taught and what new vocabulary will be introduced. Our Science lessons tend to lend a hand to one of our Curriculum Drivers, Ambition and Aspiration. We ensure that we are exposing a variety of Scientists, particularly from minority groups, to our students. As a school, we are particularly focused on ‘Challenging Stereotypes’ within Science as we believe that, as a primary school, we play a crucial role in shaping children’s mind.

Each new unit recaps on previous learning. This helps children to retrieve what they have learnt in the earlier sequence of the programme of study, and ensures that new knowledge is taught in the context of previous learning to promote a shift in long term memory. New vocabulary, which is provided in the front of every Science book, is introduced. This ensures that children have a visual aid to support correct spelling.

Teachers plan progressive questioning with their lessons and challenge greater depth learners with opportunities to ask questions about wider scientific phenomena. New lessons are often introduced with answering ‘Deeper Learning Questions’ to allow children the time to explore and talk about their ideas.

EYFS:

We recognise the importance of working scientifically in the EYFS as a key area of learning. In both the outdoor and indoor learning, areas there are opportunities for both child-led and teacher directed exploratory play.  The children are encouraged to follow their curiosity, explore using their senses, observe, predict, investigate and be creative when following their natural inquisitiveness. Children are encouraged to talk about features of their immediate environment and how environments might vary from one another.

KS1

Within KS1, children recognise how to develop their skills, knowledge and understanding through a range of scientific investigations, where children work individually, in pairs or in groups.  We cover scientific aspects relating to plants, animals (including humans), everyday materials, seasonal changes and living things (including their habitats) as prescribed within the National Curriculum’s Science programmes of study for key stages 1 and 2.

When children leave KS1 we expect them to be able to:

* convey their knowledge of processes associated with biology, chemistry and physics
* apply knowledge to understand the world around them
* understand methods of scientific enquiries
* know current uses of science
* retain and recall scientific vocabular

KS2

Within KS2 children continue to recognise how to develop their skills, knowledge and understanding through a range of scientific experiments. We cover scientific aspects relating to plants, animals (including humans), rocks, light, forces, magnets, living things (including their habitats), states of matter, sound, electricity, materials (including properties and changes), earth (including solar system) and evolution (including inheritance) as prescribed within the National Curriculum’s Science programmes of study for key stages 1 and 2.

When children leave KS2 we expect them to be able to:

* develop knowledge and understanding of processes associated with biology, chemistry and physics
* apply knowledge to understand the world around them
* understand and apply methods of scientific investigation
* know current uses of science and consider future implications
* retain and recall scientific vocabulary