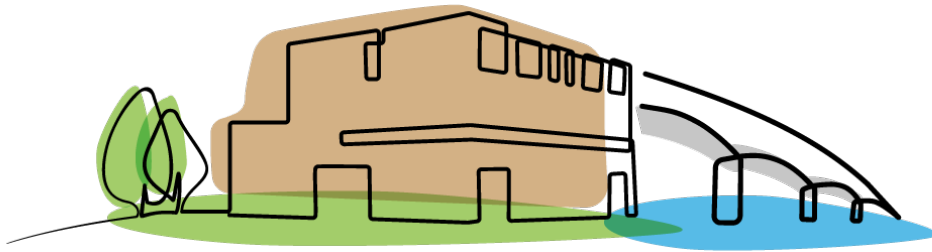


Valentine Primary School



VALENTINE
PRIMARY SCHOOL

Science Curriculum



In partnership with Lion Learning Pathways



SCIENCE CURRICULUM

Intent

At Valentine, we believe that Science has never been a more important curriculum subject than it is in 2023. From the effects of climate change, and scientists working to limit Earth's rising temperature, to understanding adaptation and global warming's impact on the world's flora and fauna. Science is evolving and our children need to be at pace with it.

The planning, amended from Lion Pathways, maps all objectives from the National Curriculum to ensure that progression is clear from EYFS to Year 6. Planning identifies the key knowledge and skills pupils need to truly work scientifically.

Our curriculum is ambitious and exciting enabling pupils to understand the material world around them.

Working Scientifically

Rather than teaching component units in a linear way, our curriculum builds disciplinary knowledge over time to enable pupils to develop skills and understanding as they progress through the curriculum.

Scientific enquiry is more than practical experiments or collecting data. It is about enabling pupils to grapple with research and presenting pupils with new ideas and concepts so that they can extract meaning.

Planning

Throughout our lesson plans and connected lesson visuals, pupils are presented with layered content that builds understanding over time. We know that pupils presented with disconnected information in lessons cannot build fluency or apply the knowledge and skills in meaningful contexts.

The potential for pupils developing misconceptions in Science study is greater because of the deep subject knowledge presented. Knowing this, our lessons are planned to ensure that pupils continually revisit concepts – enabling teachers to quickly address emerging gaps in knowledge or skills. Each lesson begins habitually with a reminder of key content over the sequence of lessons. Sometimes the lesson opening could be prompting prior learning from a previous year where a topic has been studied before – e.g. gauging pupils' understanding of plants from Year 1 into Year 2.

A proportion of time in each lesson is specifically planned to provide pupils with time to practise or implement their new learning.

"The science of today is the technology of tomorrow"

Edward Teller

Experiential learning

Our curriculum is designed to ensure that pupils' knowledge and skills build towards a composite outcome that celebrates their newly acquired learning.

For example: Pupils in KS2 learning about the eye and light will have the opportunity to make and build a spectroscope at the end of the component unit. This ability to showcase their learning is crucial for our children at Valentine as it helps to solidify the substantive concepts taught.

Valentine Great Exhibition

At the end of each term, pupils are set home learning to create a piece of work to exhibit at the Great Exhibition. Our school hall is transformed into an exhibition venue where parents and carers are invited to see the product of learning.

Pupils may choose any subject and any component learnt within that term and a prize is awarded for the best showcase piece.

The aim of the exhibition is to support parents and carers in their understanding of our ambitious curriculum. Further, it enables pupils of all abilities to showcase their newly acquired knowledge in a format that best suits their own learning style.



The exhibition provides pupils with a platform to talk about and articulate their learning in Science.

For families at our school, it provides a home learning activity spanning four to five weeks where pupils and parents can work together to produce an exhibit - bringing the classroom and home closer.



Assessing pupil progress in Science

Teachers continually employ formative assessment to understand how pupils are knowing more and remembering more.

Each lesson, across the curriculum, begins with re-capping of the previous component lesson. Quick fire questions are answered verbally, in books or in groups.

Quizzes, delivered through IT and plenary activities, further demonstrate the knowledge pupils' have acquired. This example of low-stakes testing supports teachers in making balanced decisions on when to recap and repeat knowledge to ensure that is fully embedded.

The Lion Pathways provide a composite assessment task at the end of each component unit. This combines pupil self-assessment with teacher assessment indicating how well pupils have progressed in the component unit.