



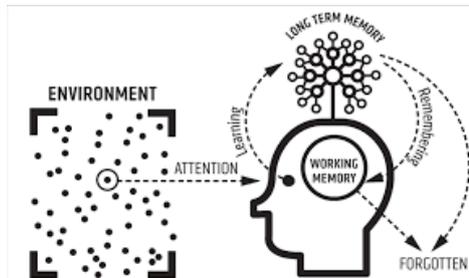
Science Curriculum Delivery Document

Intent	<p>We take the National Curriculum statements and use the PLAN science to support the planning and assessment of science. We provide an enhanced version of this through the use of Learning Challenge questions and carefully selected resources and equipment to progressively develop scientific knowledge, skills and understanding. Exposing our Learners to a breadth of enquiry, curiosity and investigations, inspires learners to develop a love of science and appreciate the power of it, how it has changed our lives and is essential for the future!</p> <p>We plan opportunities for children to ask and answer questions to develop scientific knowledge and to understand the nature, processes and methods of science. Using PLAN science, these have been put into a coherent and sequential progression model that outlines the knowledge, skills and vocabulary needed at each stage, which will build on prior knowledge and show where the children need to be. Teachers take the progression grid and map this into a long-term plan for their year group. Teachers then plan at a more detailed level the sequencing of content to be taught across each unit. Throughout these lessons, we plan to equip children with the scientific knowledge required to understand the uses and implications of science, today and for the future.</p>
Implementation	<p>Teachers are supported in order to develop their subject knowledge and leadership supports the acquisition of this for Early career teachers.</p> <p>Learners are given opportunities to practise their skills and developing knowledge through a wide range of activities which are scaffolded to meet all needs. A combination of whole class teaching, group work and individual choice is used to promote learning. Learners engage in practical activities and the 5 areas of scientific enquiry</p> <p>Modelling is used to demonstrate how to plan, carry out, interpret and conclude.</p> <p>Photographs, books, and videos are used to promote understanding.</p> <p>Learners are encouraged and scaffolded to ask questions to investigate or clarify their understanding. Subject specific vocabulary is taught through discussion, research, and reading. It is used consistently, recorded on displays and in books;</p> <p>Outdoor learning opportunities enhance the teaching and learning in science. Demonstrations are used to aid understanding of concepts.</p> <p>The learners observe over time; look for patterns; identify, classify and group; carry out comparative and fair testing (controlled investigations); and research using secondary sources. Learners seek answers to questions through collecting, analysing and presenting data.</p> <p>Based on Rosenshein's theory, Learners have the opportunity to revisit and build on prior learning. Learners are given the opportunity to practise and applying their new acquired knowledge, skills and understanding through a wide range of areas during science lessons. We offer high quality modelling, opportunities for learners to problem solve and provide opportunities for them to demonstrate their understanding and develop their learning through effective questioning.</p>
Impact	<p>When they leave each phase, Learners have the knowledge, skills and vocabulary necessary to progress to the next stage of their learning. As a result of high quality teaching, Learners make sustained progress in science. We check this through regular pupil voice and collecting evidence of outcomes which we measure against the PLAN grids.</p> <p>Learners enjoy science and can speak about their learning.</p>



How do we ensure that knowledge gained is transferred from the working memory into the long term memory?

Rosenshine's principles in action (bridging research and classroom practice) is providing support and strategies to secure pedagogical understanding for staff.



What do our lessons look like?			
Introduction	Teacher Input	Pupil Activity	Ongoing Assessment
Daily review	Present new materials using small steps	Guided student practice- You do, I do.	Questioning
	Provide models	Independent practice	Check for understanding and address misconceptions
	Provide scaffolds	Use of scaffolds where needed	Reviews
	Introduce key vocabulary	Obtain high success rate	Daily, monthly, weekly reviews

Principles identified	What do we expect to see in our maths lessons?
Daily Review	Resurface previously taught skills and vocabulary (All available on PLAN grid). Call and response, show me how to____, Explain____ Label the diagram, Spot the odd one out, complete the sentence stem. What do we mean by____
Questioning	A variety of key questions are individually planned by teachers. This allows staff to check understanding and address misconceptions. Some of the questions don't require an answer there and then but are for the children to consider as they practice their skills and begin to use and apply these. Consider..... How can you? What happens if? Question stems are used to scaffold, these could be verbal and visual. Link to steps to success. Basketball questions, show me, say it again better, cold call, tell me how and why. Learners encouraged to and scaffolded to ask and pose questions in lessons.
Sequence concepts and modelling	Modelling is provided by the teacher and peer models. These models are repeated and learners are given the time to practice for as long as required. Lesson plans are progressive but broken down into small steps. Scaffolds are used to support and develop understanding, skills and knowledge.. The model and steps to success/success criteria are visual throughout lessons.
Stages of practice	Close supervision during guided practice from the staff. Providing instant feedback to learners. Time for independent practice when the learners are ready to use and apply their skills, knowledge and understanding.