



<p>SEQUENCING (How are we piggybacking learning?)</p> <p><u>Our Science Pathways are:</u> Pathway 1 - Physics Pathway 2 – Chemistry Pathway 3 – Biology Pathway 4 – Working Scientifically</p> <p>All knowledge is sequenced to ensure that existing learning is reviewed and linked to new learning.</p>	<p>CURRICULUM DRIVERS – How?</p> <p>AMBITION (Success) – Develop a progression of investigative skills to enable children to independently test concepts. Children learn to record their investigations and results in a variety of ways and learn to identify the most effective method. Teach series of ‘knowledge-based lessons in a variety of ways, including the use of practical, research, discussion and analysis. Knowledge organisers will be in place to ensure learning outcomes are ambitious for all pupils.</p> <p>BELIEF (Confidence)– Children will develop scientific vocabulary in a variety of ways enabling them to discuss scientific concepts with confidence. We will encourage children to openly share their ideas and discuss them and to work collaboratively usually within year groups but also allowing for cross-year group interaction. Learning logs will highlight the children’s learning and enable them to celebrate their achievements.</p>	<p>DEEP IDEAS (Curriculum Depth)</p> <p>Children work <u>collaboratively</u> and <u>independently</u> to investigate scientific concepts</p> <p>Children develop an extensive knowledge of a range of <u>scientific vocabulary</u> and are able to use them in context.</p> <p>Children begin to recognise how scientific concepts relate to their everyday lives.</p> <p>To begin to consider questions that they are able to investigate scientifically, for themselves.</p>
<p>KEY CONCEPTS (What is the subject Intent?)</p> <p>For children to understand and have the <u>confidence</u> and <u>vocabulary</u> to discuss their knowledge and understanding of science.</p> <p>For children to develop an <u>enquiring mind</u> and desire to <u>independently investigate</u> and <u>research</u> scientific areas of interest.</p> <p>For children to be able to work scientifically in order to investigate using scientific principles.</p>	<p>COMPASSION (Motivation) – Teachers will use ‘hooks’ in lessons to motivate children’s interest. (practical experiments, videos, photographs, questions etc) Children will be encouraged to understand how the concepts relate to their own lives and to further develop their knowledge by asking further questions. Lessons should be practical and ‘hands-on’ wherever possible. Children will learn about scientists from many backgrounds, ethnic groups and genders so that children understand that science is for everyone.</p> <p>PRIDE (Knowledge)– Build up sequences of lessons building on previous knowledge and supported with the use of knowledge organisers. All staff will teach science with a clear understanding of what has previously been taught using the curriculum pathways document. Develop the acquisition of specific scientific vocabulary and deeper learning will be developed on a regular basis.</p> <p>RESPECT (Responsibility) – Build in knowledge and understanding of safety and respect for resources. Children will learn to respect their environments – both immediate and wider, including those of plants and other animals. Children learn to respect the ideas and knowledge of others to encourage open and confident discussion.</p>	<p>TESTING OUT KNOWLEDGE (Has it stuck? How do we know?)</p> <p>Quiz type knowledge based learning log ‘tests’</p> <p>Work books demonstrate the collaborative and independent investigations undertaken and the range of scientific manners of recording.</p> <p>Teacher assessment in lessons will take account of discussion, practical activities and recorded work.</p> <p>Markbooks will track and monitor children’s progress and achievements.</p>