

Science Curriculum

Intent, Implementation, Impact



Intent	Implementation	Impact
<p>At Ashbury Meadow, we aim for our pupils to develop a sense of curiosity and wonder about natural phenomena through our science curriculum. We intend to enrich and empower our young scientists by delivering a practical, investigative curriculum, through which children are able to develop a range of substantive and disciplinary skills.</p> <p>Through our science curriculum, we intend to equip our pupils with the skills to generate their own questions about the universe we live in. Through practical, explorative opportunities, we intend to provide collaborative, scientific experiences for children to then answer their own questions through discussion, investigations and analysis of their findings.</p>	<p>In EYFS, science is taught through the strand 'Understanding the World' following the Statutory Framework for the Early Years Foundation stage. This is taught thematically through cross-curricular topics which are planned around the children's interests. A weekly investigation lesson focuses on scientific aspects of Understanding the World.</p> <p>At Ashbury Meadow, in Years 1 - 6, science is taught in blocks. Children complete a retention activity in each lesson in order to ensure past learning is retained. During science lessons, children develop their substantive and disciplinary knowledge through working scientifically, including developing their understanding of four scientific concepts:</p> <ul style="list-style-type: none"> ● Scientific Methods ● Apparatus, measurement and recording of data ● Data analysis, process, present and communicate results ● Evidence to develop explanations and draw conclusions <p>Our science spiral curriculum has been sequenced to enable pupils to revisit content regularly, and to make learning relevant and meaningful by using local resources, such as the trees within the school grounds when studying plants, and by making relevant links to other subjects, such as geography. Content within units has been carefully chosen so that children build on their prior knowledge in related units and further their understanding.</p> <p>Children are taught to:</p> <ul style="list-style-type: none"> ● ask scientific questions ● use a range of equipment and apparatus ● use scientific vocabulary to communicate and articulate their scientific observations and ideas ● use disciplinary skills effectively alongside the knowledge that they are being taught ● become independent enquirers 	<p>Pupils acquire substantive knowledge and gain proficiency in disciplinary skills and concepts. They understand the necessity of science in understanding our world.</p> <p>Pupils generate their own scientific questions, demonstrating their curiosity about natural phenomena. Where appropriate, children answer their own questions through working scientifically.</p> <p>Children develop positive attitudes towards to science and increase their science capital.</p> <p>Through clear curriculum sequencing, where prior knowledge is identified and retrieved and future knowledge is explicitly linked through the key concepts at the heart of the curriculum, pupils proficiently build their bodies of knowledge.</p>

<p>We intend to imbue children with a scientific appreciation of our world, develop their science capital, provide them with the skills to learn more and to develop knowledge based on empirical evidence to support them in their transition into Key Stage 3.</p>	<p>Science is also implemented through enrichment opportunities such as STEM ambassador visitors including female scientists delivering workshops and trips with a science focus.</p> <p>Throughout the school, each year children experience a “Problem Solving Day”. This provides children with motivating and engaging Science and Design and Technology learning which enriches their experience of these subjects and supports them to develop positive attitudes to STEM subjects.</p> <p>In order to support all pupils in accessing the science curriculum, teachers ensure all lessons are adapted to meet needs. This includes the use of technology, widgeit, adapted scientific equipment or apparatus, as well as the EEF ‘5 a day ‘approach.</p> <p>To support the implementation of a unit of work, curriculum leaders have created unit overviews which contain:</p> <ul style="list-style-type: none">• Links to prior knowledge• Substantive knowledge and disciplinary knowledge to be taught• Links to up to date, specific resources and examples• End points for assessment• Future links to related concepts• Key vocabulary.	
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