

Curriculum Intent, Implementation, Impact

Subject: PAIL Life – Science

Intent (Curriculum design, coverage and appropriateness)	Implementation (Curriculum delivery, teaching and assessment)	Impact (Attainment and progress, destinations)
<p>As part of the PAIL curriculum, Science teaching at The Courtyard aims to give all pupils a strong understanding of the world around them whilst acquiring specific skills and knowledge to help them think scientifically, gain an understanding of scientific processes and also an understanding of the uses and implications of Science today and in the future.</p> <p>We want our pupils to develop an understanding of natural phenomena and we aim to stimulate our natural curiosity in finding out why things happen in the way they do!</p> <p>The curriculum is designed to incorporate the aims of the National Curriculum for Science.</p>	<p>The approach at Courtyard results in a fun, engaging, quality science education that provides pupils with the foundations and knowledge for understanding the world. Our engagement with the local environment ensures that pupils learn through varied and first-hand experiences of the world around them. Through various practicals, workshops, and trips, pupils have the understanding that science has changed our lives and that it is vital to the world's future prosperity.</p> <p>Science lessons teach methods of enquire and investigation to stimulate creative thought. We learn to ask questions and begin to appreciate the way Science will affect our future on a personal, national and global level, also learning the possibilities for careers in Science. The objectives within each strand support the development of learning across the key stages, ensuring a solid grounding for future learning and beyond. Practical experiments are an integral part of the teaching to enable learners to have a hands-on experience which will enhance and broaden their thinking skills.</p> <p>At the Courtyard we measure the impact of our curriculum through the following methods:</p> <ul style="list-style-type: none"> - Carry out a practical linked to their learning topic; - Tracking of knowledge in pre and post learning quizzes; - A written summary or evaluation of what they have understood; - A celebration of learning for each term which demonstrates progression across the school; - Pupil discussions about their learning. 	<p>By the time they leave The Courtyard, pupils will have gained key knowledge and skills in the three main areas of the Science curriculum: biology, chemistry and physics, meeting many aspects of the National Curriculum; to ensure that all children:</p> <p>Develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.</p> <p>Pupils will develop an understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them.</p> <p>The impact and measure of this are to ensure learners not only acquire the appropriate knowledge linked to the science curriculum, but also skills which equip them to progress from their starting points, and within their everyday lives.</p> <p>All learners will have:</p> <ul style="list-style-type: none"> - A wider variety of skills linked to both scientific knowledge and understanding, and scientific enquiry/investigative skills. - A richer vocabulary which will enable them to articulate their understanding of taught concepts. - High aspirations, which will see them through to further study, work and successful adult life. <p>Pupils are constantly working towards objectives which will enable them to gain a BTEC qualification.</p>

PAIL Life – Science Teaching Overview

Autumn Term PAIL The Self/Identity and Relationships	Spring Term PAIL Communication	Summer Term PAIL Our World
Year 1 (Chemistry) How metals are used in our surroundings, where they come from and are they having an impact on our environment, positively or negatively. What relationships metals have to each other and with other elements in the periodic table.	Year 1 (Physics) Energy and our universe; how electrical energy is produced from different sources and how it can be transferred through the National Grid to homes and industry and how energy is used as radio waves or lasers to communicate.	Year 1 (Physics) Energy and our universe; gaining knowledge of the components of the Solar System, the way the Universe is changing and the methods we use to explore space.
Year 2 (Biology) Students will learn the role of genes and environment variables. How characteristics are used to classify organisms.	Year 2 (Biology) Pupils will learn about the impact that different human activities have on the ecosystems. Pupils will learn the different methods used to help reduce the impact of human activities on the ecosystem. Students will learn how pathogens affect human health. Students will understand how lifestyle choices can affect human health.	Year 2 (Chemistry) Pupils will be able to describe the physical and chemical properties of group elements. Pupils will learn to draw dot-and-cross diagrams of simple ionic and covalent substances. Pupils will need to describe how human activities are affecting the earth and its environment. Students will learn how natural factors that have changed the surface and atmosphere of the Earth.