



Science



Archdiocese of Liverpool

Curriculum intent:

We aim to provide a high-quality science education in sympathy with the Catholic ethos of the school. We believe that science provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils will be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils will be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They will be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

Year 9

	Content	Concepts and Skills
TERM 1	<p>Biology – Cell structure and transport, Cell division</p> <p>Chemistry – Atomic structure, the Periodic Table</p> <p>Physics – Conservation and dissipation of energy</p>	<p>Biology: Maths – converting units Standard form, Significant figures Practical skills related to microscopes and transport across cell membranes. Understanding the cell cycle</p> <p>Chemistry: Maths– common multiples Multiplication & division, interpreting chemical formulae and balancing equations</p> <p>Physics: Maths – percentages, efficiency calculations, Fractions, how energy is dissipated and transferred</p>
TERM 2	<p>Biology – Organisation and the digestive system</p> <p>Chemistry – Structure and bonding</p> <p>Physics – Energy transfer by heating, Energy resources</p>	<p>Biology: Practical skills related to digestive processes Understanding how organisms function</p> <p>Chemistry: Maths skills – calculations using negative numbers, Understanding different types of bonding</p> <p>Physics: Maths skills – pie charts, Resolution of scales, Efficiency calculations, Percentages, Understanding heating and cooling Evaluating the use of renewable and non-renewable energy resources</p>
TERM 3	<p>Biology – Organising animals and plants</p> <p>Chemistry – Chemical changes</p> <p>Physics – Electrical circuits</p>	<p>Biology: Understanding the structure and function of blood, Circulatory system and the respiratory system</p> <p>Chemistry: Balancing equations</p> <p>Physics: Maths skills – rearranging equations Calculating voltage and resistance</p>

