



Science



Archdiocese of Liverpool

Curriculum intent:

To provide a high-quality science education in accordance with the Catholic ethos and charisms 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; all pupils are taught essential aspects of the knowledge, methods, processes and uses of science to enrich their lives and understand the world around them. Through building up a body of key 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. We will use a wide range of methods to assess pupils learning so that we can best support pupils in their journey.

Year 10

TERM 1

Content

Biology – Photosynthesis, Respiration
Chemistry – Chemical Calculations, Electrolysis, Energy Changes
Physics – Energy stores and transfer mechanisms. Electricity and simple circuits

Concepts and Skills

Biology: Maths – prefixes/suffixes, Converting units
Calculating surface area and volume
Investigating photosynthesis and respiration
Chemistry: Maths – rearranging and applying equations
Combining equations. Converting units.
Physics: Maths – standard form. Fractions. Graph skills
Quantitative comparisons

TERM 2

Biology – Communicable diseases, Preventing and treating disease, Non-communicable diseases, The Nervous System
Chemistry – Rates and equilibrium
Physics – Particle model and the atomic model

Biology: Maths- basic statistics, Graph skills
Investigating pathogens and the treatment of disease
Chemistry: Maths - calculating the gradient of a line
Drawing tangents to curves
Investigating factors that affect the rate of a reaction
Physics: Maths – vectors and scalar quantities
Algebra

TERM 3

Biology – Hormonal coordination, Reproduction, Variation and evolution, Genetics and evolution
Chemistry – Crude oil and fuels
Physics – Motion, Force and motion

Biology: Maths – interpreting graphs
Percentages, Understanding how hormones control processes in the human body
Chemistry: Maths – algebra
Formulas
Physics: Maths – using and rearranging equations
Conversion of units

