



# 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 10

TERM 1

### Content

**Biology** – Photosynthesis, Respiration

**Chemistry** – Chemical Calculations, Electrolysis, Energy Changes

**Physics** – Electricity in the home, Molecules and matter, Radioactivity

### 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** – Forces in balance

**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

