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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 8

Content

Concepts and Skills

TERM 1

Enquiry Processes
Forces 2 – Contact forces & Pressure
Reactions 2 – Acids and Alkalis
Earth 2 – Earth Structure & Universe
Organisms 2 – Breathing
Genes 2 - Variation

Enquiry Processes: Maths– plotting graphs, Rearranging equations, Analysing and evaluating Understanding bias
Forces: converting units, rounding & estimation
Reactions: Maths – log scales, Plotting graphs and lines of best fit
Earth: Maths – converting units, using standard form, Estimating the size of objects
Organisms: Modelling the breathing system
Genes: maths – probability & percentages

TERM 2

Electromagnets 2 – Potential Difference and Resistance, Current, Magnetism & Electromagnets
Reactions 2 – Chemical Energy
Genes 2 – Evolution & Inheritance
Ecosystems 2 - Interdependence

Electromagnets: Maths – using and rearranging equations, Understanding the world around us
Reactions: Maths– plotting graphs, calculating rate of reaction, investigating reactions
Genes: Understanding how life on earth has changed over time and how our genes control many of our characteristics
Ecosystems: Sampling techniques
Maths skills – estimation and percentages

TERM 3

Energy 2 – Energy costs, Energy transfer, Work & Heating and cooling
Earth 2 – Climate & Earth resources
Ecosystems 2 – Respiration & Photosynthesis

Energy: Maths skills – percentages, efficiency, Sankey diagrams, explaining how energy can be used
Earth: Maths skills – drawing and interpreting graphs, evaluating the impacts that humans have on the world around us
Ecosystems: Investigating how plants harness the energy from the sun to produce their own food and how this food is utilised by animals for respiration

