

Physics

The Physics Department of St Thomas More Catholic School aims to develop an appreciation of how bodies interact with each other, how energy is used, transferred and delivered to our homes, how communication works on a global scale and how scientists build on evidence and proof to shape their ideas and theories.

Key Stage 3 and 4

The Physics Department curriculum has been built around the following procedural concepts that students need to grasp:

Energy sources, uses and transfers	Forces and interactions of physical bodies	Waves and communication	Earth and Space	Electricity and Magnetism
------------------------------------	--	-------------------------	-----------------	---------------------------

Overall, by the end of Key Stage 3, students should be able to see the connections between topics studied, are aware of the big ideas underpinning Physical theory and will have developed accurate use of specialist vocabulary. They should understand that Physics is about working objectively, modifying explanations to take account of new evidence and ideas and subjecting results to peer review. They should evaluate their results and identify further questions arising from them.

The table below shows you the topics pupils will study throughout Key Stage 3:

	Module 1	Module 2	Module 3
Year 7	Energy Resources and the Energy needs of consumers Identifying and using forces	Interactions of the Earth, Moon and Sun + the Solar System How light behaves	How electricity behaves and simple circuits Magnetic force and Electromagnets
Year 8	Motion and Turning effects Density and Pressure	Scale and Size of the solar system and other bodies in space Measuring electricity	Heat Transfers and Uses Behaviour of waves
Year 9	Energy types and Transfers	Energy resources, Power and Efficiency	Electrical Circuits and Components

Having developed their knowledge of the key concepts throughout Key Stage 3, the aim of Key Stage 4 is to ensure that students are able to apply their understanding of these key concepts to allow them to develop a full working knowledge of the topics.

The table below shows you the topics pupils will study throughout Key Stage 4:

	Module 1	Module 2	Module 3
Year 10	Electrical Circuits and Energy in the real world (Particle Model T)	Particle Model of Matter (Atomic Structure T)	Atomic Structure (Forces and Motion T)

Year 11	Forces and Motion (Space Physics T)	Waves and Wave Behaviour Magnetism and Electromagnetism	
----------------	--	---	--

Key Stage 5

Students studying Physics at Key Stage 5 will build on the knowledge, understanding and skills established at GCSE, developing their ability to apply formulae and key concepts to higher level problems and explain how matter, forces and fields interact. Success at this Key Stage aims to encourage learners to:

Develop interest, enthusiasm and essential knowledge and understanding of different areas and how they relate to each other	Develop and demonstrate a deep appreciation of the skills involved in scientific methods	Develop competence and confidence in a variety of practical, mathematical and problem solving skills	Understand how society makes decisions about scientific issues and how physics contributes to the success of the economy and society.
---	--	--	---

The table below shows you the topics pupils will study throughout Key Stage 5:

	Module 1	Module 2	Module 3
Year 12	Foundations of Physics	Forces and Motion	Electrons, Waves and Photons
Year 13	Newtonian World and Astrophysics	Particles and Medical Physics	