

The English Martyrs Catholic School and Sixth Form College



<u>Physics Year 11</u>	<u>Module 1</u>	<u>Module 2</u>	<u>Module 3</u>
<u>Topic Theme and Intent</u>	Students learn about the Particle Model of Matter to describe the densities of substances and the different states of matter . They consider the link between state of matter and internal energy , and the latent energy needed to cause changes in state.	Students learn about Atomic Structure and the behaviour of atoms. This topic focuses on the development of models for the atom over time. It also looks at the natural phenomenon of nuclear radiation and considers the use of nuclear fission and fusion in the modern world.	In this module students consolidate their learning and revise key concepts in the build up to their exams. Students look at specific areas identified in the mocks as weaknesses and complete broader revision of specific topics identified on an individual basis.
<u>Knowledge</u>	<ul style="list-style-type: none"> Density and States of Matter Internal energy and change of state Specific Latent Heat Particle motion in gases 	<ul style="list-style-type: none"> The structure of the atom Types of radiation and nuclear equations Radioactive decay and $\frac{1}{2}$ life Fusion and fission 	<ul style="list-style-type: none"> Energy Particles Forces Waves and electromagnetism Required practicals
<u>Skills</u>	Students will investigate the densities of solid objects and liquids.	Students will observe the measurement of radioactivity and analyse data to identify half-life.	Students practice their exam technique to better prepare them for their exams. They focus on command words and an understanding of mark schemes.
<u>Literacy Links</u>	<p>Reading – Students will read about the density.</p> <p>Writing – Students practise communicating scientific ideas and concepts through writing.</p> <p>Oracy – Students practise the use of scientific vocabulary in discussion and question and answering.</p>	<p>Reading – Students will read about the safe use of nuclear radioactivity.</p> <p>Writing – Students will communicate scientific ideas and concepts through writing.</p> <p>Oracy – Students use scientific vocabulary in discussion and question and answering.</p>	<p>Reading – Students will read about the key ideas they have covered.</p> <p>Writing – Students practise communicating scientific ideas and concepts through writing.</p> <p>Oracy – Students practise the use of scientific vocabulary in discussion and question and answering.</p>
<u>Essential Vocabulary</u>	Particle Model of Matter, density, states of matter, internal energy, specific latent heat, motion.	Proton, Neutron, Electron, Alpha particle, Beta, Gamma, Decay, half-life, Fission, Fusion.	Energy, Particles, Forces, Waves, Electromagnetism

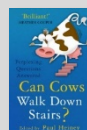
Disciplinary Reading

CGP Books – GCSE Science COM and SEP, & Oxford Revise COM and SEP.



Reading for Pleasure

P. Heiney - Can Cows walk down the stairs?



New Scientist – The Origin of (almost) Everything



N. De Grasse Tyson – Astrophysics in a Hurry

