



Intent: The Y10 Physics curriculum aims to introduce the first 6 modules of GCSE Physics, which includes the overarching principles of maths in science To allow students to understand how Physics relates to the world that the live in, and how different careers also link to Physics.

<p>Year 10 Physics</p>	<p>Term 1 September to December P1: Key concepts P2a recap and P2b P3 Conservation of Energy</p>	<p>Term 2 January to Easter P4 waves P5 EM spectrum P6 Radioactivity</p>	<p>Term 3 April to July Triple – Astrophysics All – revision and review of Year 10 content</p>
<p>Knowledge (facts, information, concepts and key terminology)</p>	<p>Maths skills including showing calculation work and graph skills. Introduction to Forces, d-t and v-t graphs, stopping distances and energy stores.</p>	<p>Know the key terminology to describe waves and how to carry out the core practical to find the speed of a wave. Know the uses and dangers of EM waves. Know the history of the structure of the atom and the properties of ionising radiation</p>	<p>Know how to show all calculation work appropriately. Define key terms. Know the required equations. Astro- know the life cycle of a star, red shift and the difference between the Big Bang and Steady State theory</p>
<p>Understanding (ability to connect and synthesise knowledge within a context)</p>	<p>Understand the different types of forces and how they link to Newton’s laws. This also includes core practical work. Understand the principle of conservation of energy and how to describe changes in stores of energy</p>	<p>Understand how to apply knowledge of the core practicals to similar but not the same situation. Understand how to describe radioactive decay, half life and complete decay equations</p>	<p>Astro - Explain the evidence that supports each theory, with a particular focus on red shift.</p>
<p>Skills (successful application of knowledge and understanding to a specific task)</p>	<p>Application of ideas of forces and acceleration to real world situations including thinking, braking and stopping distances. Interpret d-t and v-t graphs. Applying knowledge of energy transfers to every day situations and understand how to improve their efficiency</p>	<p>Able to describe how to take appropriate measurements and use equations to find waves speed. Able to interpret half life graphs</p>	<p>Demonstrate a range of mathematical skills including interpreting graphs in a variety of situations.</p>
<p>Formal Assessments (those done by all/vast majority of the cohort)</p>	<p>End of unit tests for P1, P2a, P2b and P3</p>	<p>End of unit tests for P4&5, P6</p>	<p>End of unit test – Astro P7 End of Year exam</p>

By the end of the year students on course for at least a grade 5 will...
Know most of the expected equations. Be able to substitute into and rearrange a 3 part equation. Interpret, at some level, a d-t/v-t/half life graph. Recall different types of forces given a specific situation. Be able to describe changes in energy stores and ways to increase its efficiency. Name the factors that increase thinking and braking distance. Know the key definitions that describe wave. Describe the uses and dangers of most of the EM waves. Know the structure of the atom and describe some of the different types of ionising radiation.

Explain key theories and their origins with regards to astronomical observation