

Year 13

Turning Points - This option topic develops on the core concepts covered earlier in the course. This includes the theory of special relativity, wave-particle duality and the discovery of the electron.

Nuclear Physics - Students will delve deeper into radioactivity, learning about exponential decay, Einstein's equation, as well as getting hands on experience with a radiation source.

Fields - Fields are one of the great underlying ideas in physics. This topic looks at gravitational, electric and magnetic field and builds on previous topics.

Thermal Physics - In thermal physics students learn about the ideal gas laws, kinetic theory equation and brownian motion (even in stationary objects).



Knowledge	Attributes / Character	Skills	Experiences
<p>Further mechanics and thermal physics Fields and their consequences Nuclear physics Turning points</p>	<p>Confidence Students need to show full competency in all required practicals. Students are given a scaffolded approach with multiple opportunities to help build their confidence in practicals. To help students become confident with the use of logarithms, their knowledge is built from the foundations up. Giving them examples which are concrete, helping them to understand less abstract models. Students will also use radiation for the first time, which will give them an experience they have never encountered before.</p> <p>Organisation Students are expected to keep an organised folder to help them revise and identify gaps in their knowledge, whilst keeping pride in their work. Extra support is provided to students in the form of booster/intervention sessions. Students should make time to attend these sessions, to help maximise their progress.</p> <p>Resilience Exam practice is embedded throughout the curriculum to give students as much experience as possible at tackling these problems. For their practical endorsement students will need to be reflective on their practical work.</p> <p>Empathy Learning about the work of Marie Curie and how she helped to change how women were viewed in science.</p>	<p>Be able to recognise potential errors and calculate uncertainties Use the mathematical technique of proportionality Practising and developing and practical skills independently Collaborative work Written and oral communication/a ssesments Research and presentation Critical thinking and problem solving</p>	<p>Use of radiation equipment</p>