



Year 10 Separate Science (Physics - AQA)

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topics	P4 Energy energy stores, potential and kinetic energy	P4 Energy conservation of energy P5 Forces vector and scalar quantities, springs and Hooke's law	P5 Forces graphs of motion, acceleration, Newton's laws	P5 Forces Pressure, moments. P6 Waves Transverse & longitudinal, wave speed	P6 Waves Electromagnetic spectrum, waves at boundaries, uses and dangers of electromagnetic waves	Exam skill and prior knowledge development
Assessment	End of unit assessment	End of unit assessment	End of unit assessment	End of unit assessment	End of unit assessment	Paper 1 PPE

Building on Prior Learning	Pupils will have knowledge of the fundamental concepts in Physics including, electricity, energy and atomic structure. They will be able to identify variables, understand the requirements to collect valid data experimentally and analyse results. Learning components at the start of lessons remind student of prior learning and point out links to previous topics.
Links with other subjects	Maths - using equations, rearranging equations, basic mathematical functions, standard form, tabulating and analysing data. English - extended response questions, where students need to go into detail with experimental methods and use precise language. The language of science is common across chemistry, physics and biology.
Extracurricular opportunities	We run lecture trips to the University of Birmingham in the evenings, and science students are invited to GCSE Science Live! in February each year. Developing STEM ambassador visits to engage and inspire students.
A successful learner in this subject will demonstrate	Physicists demonstrate the ability to investigate problems and identify relationships, as well as use precise language to describe experimental uncertainty. Learning from their mistakes, successful students will apply prior learning and organised thought to work through problems, looking to find solutions rather than giving up.
Impact on personal development	Science will help students to become logical thinkers and problem solvers with a better understanding of the world around them. Demonstrating resilience and the ability to consider moral and ethical implications of scientific developments.

Ways to support student learning in this subject
<ul style="list-style-type: none"> • Encourage the completion of homework • Encourage discussions of science issues that arise in the news • Discuss science lessons and their progress • Encourage a positive attitude towards science • Equations sheet and personalised learning checklists (PLC) • Encourage students to use Seneca Learning (https://www.senecalearning.com/) to consolidate knowledge and build on recall skills. • Use of low stakes questioning and exam material to build confidence and knowledge base • Solid grounding in units, unit conversions, standard form and rearranging equations and encouragement in the use of maths skills • CGP science revision guides and workbooks available through ParentPay during the year.