

Year 13 Physics

The second year of the A-Level course finishes off all of the A2 content and reviews the AS content taught in Year 12. Students also complete the optional topic 'Turning Points in Physics', which covers some of the biggest discoveries in the history of physics.

The course is taught by two teachers, so students will be learning two different topics simultaneously. Lessons will involve a mix of teacher led lessons, individual work and group work. Students are encouraged to work together and to ask questions throughout.

Twelve required practicals must be completed in order for the students to gain a teacher endorsement, these are completed throughout the two years of the course. In addition, lots of other practical work will be carried out to support learning and develop practical skills.

Practical work is important for a number of reasons; it supports and consolidates the concepts being taught, develops investigative, transferable skills and also helps students learn how to master practical skills such as handling specialist equipment with confidence.

There are three exams at the end of this year:

- Paper 1: Year 12 content.
- Paper 2: Year 13 content.
- Paper 3: Turning Points in Physics.
Practical Skills.

Methods of deepening and securing knowledge:

Interleaving	Starter tasks are designed to check knowledge from not only the previous lesson, but also lessons earlier in the topic and sometimes even other topics within physics which students will have covered previously.
Checkpoints/ mini plenaries	These are used within lessons to check understanding and address any misconceptions before moving on.
Independent study	Exam questions are used to provide plenty of practise at applying students' knowledge to new situations. Students are also expected to use their specification to make their own set of notes to reinforce the lessons.
Assessment for progress	Each of the topics conclude with an end of topic test from which feedback is provided.

	Autumn term 1	Autumn term 2	Spring term 1
Topic(s)	<ul style="list-style-type: none"> ● Capacitors. ● Periodic motion. 	<ul style="list-style-type: none"> ● Electric fields. ● Magnetic fields. 	<ul style="list-style-type: none"> ● Gravitational fields. ● Turning points: discovery of the electron.

Assessment	End of topic tests.	End of topic tests.	End of topic tests. Year 13 trial exams.
CEIAG <i>(Careers that are linked to that topic)</i>	Electronics engineer, structural engineer.	Medical imaging.	Space scientist.

	Spring term 2	Summer term 1	Summer term 2
Topic(s)	<ul style="list-style-type: none"> • Thermal physics. • Turning points: wave particle duality. 	<ul style="list-style-type: none"> • Nuclear physics. • Turning points: special relativity. 	<ul style="list-style-type: none"> • Practical skills. • Preparation for the exam.
Assessment	End of topic tests.	End of topic tests.	External exams
CEIAG <i>(Careers that are linked to that topic)</i>	Theoretical physicist.	Nuclear physicist.	

Independent Study

Exam question independent study (both long answer questions and multiple choice) is given weekly and Seneca learning is used to support learning and provide low-stakes assessment tasks. Cornell notes and other independent study skills are developed.