

Physics Curriculum Overview

The Physics curriculum at Tiffin School is designed to develop intellectually curious, scientifically literate students who can understand, explain and critically engage with the physical world. Through the study of matter, energy and the fundamental principles governing the universe, students develop a secure understanding of key scientific concepts alongside the analytical, mathematical and practical skills required for academic success and informed participation in modern society. The curriculum encourages students to think critically, solve problems independently and communicate scientific ideas with accuracy and confidence.

The curriculum is carefully sequenced to support progression from Key Stage 3 through GCSE and A-level study. A spiral approach ensures that core concepts are revisited regularly and developed in increasing depth and complexity, promoting long-term retention and stronger connections between topics. GCSE content is taught across three years from Year 9, allowing students sufficient time to consolidate knowledge, deepen understanding and engage meaningfully with practical work. Mathematical reasoning is embedded throughout the curriculum, enabling students to model, analyse and predict physical behaviour while appreciating the links between mathematical representations and real-world phenomena.

Practical work forms a central component of the curriculum and is structured to develop scientific skills progressively over time. Students move from highly supported practical activities in Key Stage 3 to increasingly independent investigations and more sophisticated analytical techniques at GCSE and A-level. Teaching is underpinned by regular retrieval practice, explicit development of scientific vocabulary and the modelling of expert thinking. Through structured questioning, discussion, reflection and assessment, students are encouraged to develop deeper understanding, articulate their reasoning clearly and become confident, resilient and independent learners of physics.

KS3 Physics Curriculum

	Year 7	Year 8
Autumn Term 1		Forces
Autumn Term 2		Motion
Spring Term 1	Waves, Lenses, Colour	Pressure
Spring Term 2		Current
Summer Term 1		Fields
Summer Term 2	Energy	Space

KS4 Physics Curriculum

	Year 9 (current)*	Year 10 (current / future)*	Year 11 (current / future)*
Autumn Term 1	Energy	Static electricity / Radioactivity	Moments Models of the atom / Waves
Autumn Term 2	Energy Resources	Circuits / Forces	Radioactivity Fission / Electromagnetism
Spring Term 1	Static Electricity	Motion / Forces	Fusion Forces / Space
Spring Term 2	Circuits	Forces / Motion	Work energy and power Particle model of matter / Consolidation
Summer Term 1	Particle model of matter	Forces / Pressure	Pressure Electromagnetism / Consolidation
Summer Term 2	Projects	Projects	

KS5 Physics Curriculum

	Year 12	Year 13
Autumn Term 1	TEACHER 1 Measurement Mechanics TEACHER 2 Particles Quantum	TEACHER 1 Gravitational Fields Electric Fields TEACHER 2 Further mechanics Thermal Physics
Autumn Term 2	TEACHER 1 Mechanics TEACHER 2 Particles Quantum	TEACHER 1 Electric Fields Magnetic Fields TEACHER 2 Further mechanics Thermal Physics
Spring Term 1	TEACHER 1 Electricity TEACHER 2 Waves	TEACHER 1 Astrophysics TEACHER 2 Nuclear Physics
Spring Term 2	TEACHER 1 Electricity Capacitors TEACHER 2 Waves Materials	TEACHER 1 Astrophysics TEACHER 2 Nuclear Physics
Summer Term 1	Revision	Revision
Summer Term 2	Exam feedback and review. Consolidation of identified knowledge gaps. Teacher directed and supported project work and/or progressing to learn new material. 6th Form Progression Programme.	

Note:

* Curriculum content and sequencing is correct for the academic year 2026-27.

* From the academic year 2026-27, Year 9 will be modified, followed by Year 10 in 2027-28, and Year 11 in 2028-29.

