



SUPERCURRICULUM

Links and resources to maximise your learning potential

COURSE CONTENT

Year 12

Term 1: Measurements and their errors; Electricity; Particles and radiation; Quantum Phenomena

Term 2: Mechanics (Statics; Dynamics; Work, Energy and Power); Waves and Interference

Term 3: Materials; Further mechanics (Circular motion); Optics; Gas Laws

Year 13

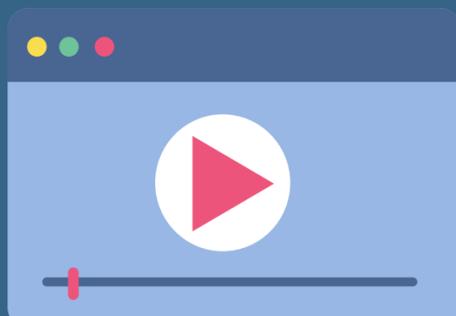
Term 1: Further mechanics (Simple Harmonic Motion); Gravitational Fields; Thermal Physics; Radioactivity (1)

Term 2: Electric Fields; Magnetic Fields; Electromagnetism; Radioactivity (2); Nuclear Radiation

Term 3: Astrophysics; (Stars and Cosmology); Astrophysics (Telescopes)

WATCH

- [Minute Physics](#) – youtube channel hosting interesting, short discussions of physics ideas relating to, and extending beyond the A level syllabus.
- [Veritassium](#) – another youtube channel where the host looks and everyday questions and phenomena and seeks to get to the bottom of the physics behind them.
- [Royal Institution – Levitation](#) – Great video showing some of the amazing physics that leads to behaviours that defy our usual understanding of what can happen. Links to the Electricity topic, where we look at superconductors.



- [A Particle Physics Masterclass](#) – all about particle accelerators and their development and operation
- [In Search of Giants](#) – series of videos from Brian Cox about the history of particle physics

READ



- *Six Easy Pieces: Essentials of Physics Explained by Its Most Brilliant Teacher* Paperback – 22 Mar. 2011 by Matthew Sands, Richard Feynman, Robert Leighton
- *Einstein and the Quantum – The Quest of the Valiant Swabian* Hardcover – 29 Oct. 2013 by A. Douglas Stone
- *Storm in a Teacup: The Physics of Everyday Life* Paperback – 1 Jun. 2017 by Helen Czerski
- *Forces of Nature: The Sunday Times bestselling journey from snowflakes to galaxies*, by Professor Brian Cox, Andrew Cohen
- *Wonders of the Universe: A captivating Sunday Times bestselling journey through space and time* by Brian Cox, Andrew Cohen

LISTEN

- Infinite Monkey Cage (BBC)
- Star Talk Radio (Neil Degrasse Tyson)



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- Institute of physics (for example: https://www.instagram.com/institute_of_physics/)
- BBC Science Focus Magazine – sign up for [email updates](#)
- BBC Sky at Night Magazine – [here](#)

