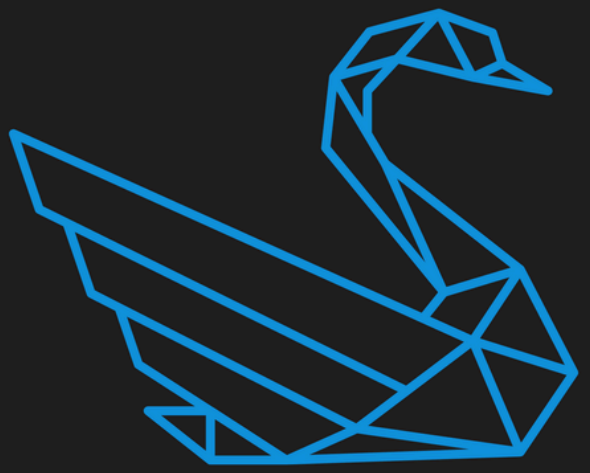


CHELMER VALLEY SIXTH FORM

#THE HEART OF THE SCHOOL



PHYSICS A LEVEL

Contact: Dr Lardge,
Head of Physics

Course Content:

Paper 1 (2 hours):

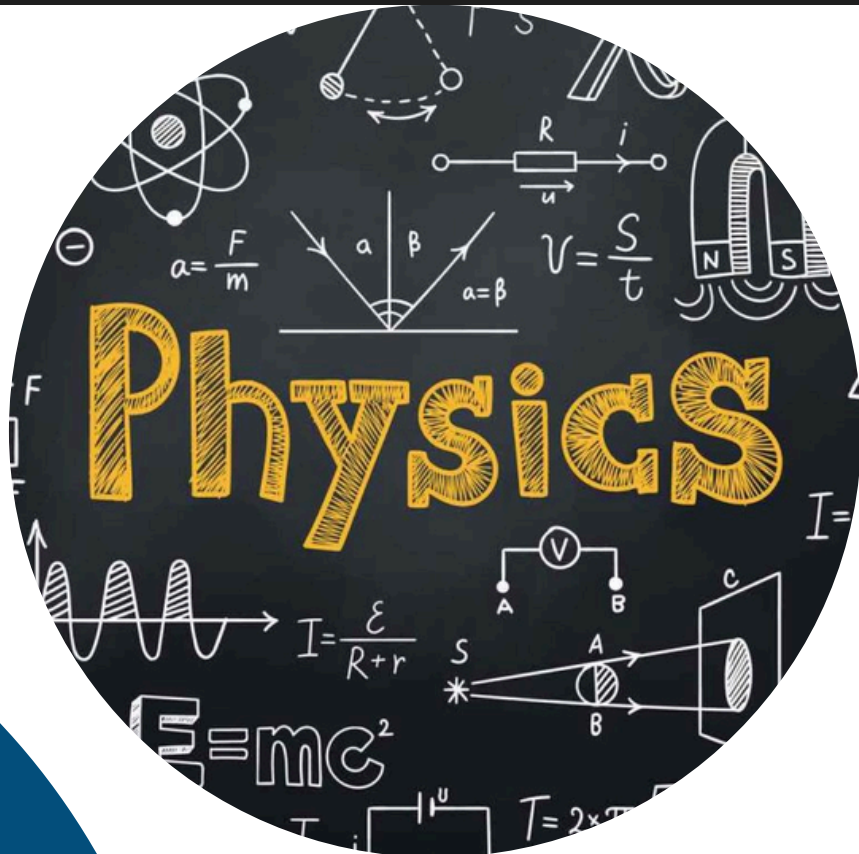
Measurements and their errors
Particles and radiation
Waves
Mechanics and materials
Electricity
Periodic motion

Paper 2 (2 hours):

Thermal physics
Fields and their consequences
Nuclear physics

Paper 3 (2 hours):

Practical skills
Astrophysics



Why you should do this course...



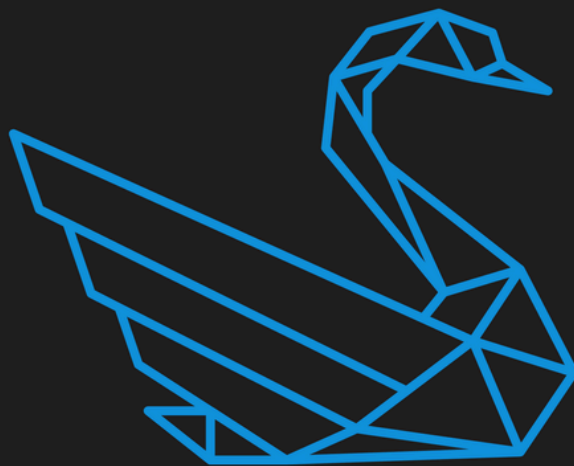
Our physics course explores the fundamental laws that govern our Universe. We explore gravitational fields, nuclear physics and astrophysics.



As a department we understand the need to see physics in action and we endeavour to visit sites where physics can be seen in action or is a fundamental reason for its existence. A normal series of visits include the nuclear power plant Sizewell B and a residential trip to CERN's LHC in Geneva.

CHELMER VALLEY SIXTH FORM

#THE HEART OF THE SCHOOL



PHYSICS A LEVEL

More detail on the Course:

Year 1

Measurements and their errors - fundamental units, estimation, errors and uncertainties in experimental data.

Particles and radiation - fundamental particles of the Universe, the photoelectric effect and wave-particle duality.

Waves - progressive waves, standing waves, refraction, diffraction and interference.

Mechanics - scale drawings, moments, equations of motion, Newton's laws, momentum and conservation of energy.

Materials - stress, strain and Young's modulus of materials.

Electricity - Current, voltage, and resistance in circuits, resistivity and potential dividers.

Core Practicals

A total of 12 core practicals are conducted during the course, including mechanics investigations, investigations into electrical components and properties and learning to handle radioactive sources.



Year 2

Further mechanics - circular motion and simple harmonic motion.

Thermal physics - internal energy, ideal gases and kinetic theory.

Fields - gravitational, electric and magnetic fields.

Nuclear physics - radioactivity, mass and energy equivalence and fission.

Plus one option. Currently we offer - Astrophysics - telescopes, classification of stars, and cosmology.

