



Highsted Grammar School

The Physics curriculum

The wonder of Physics enriches both students understanding of, and our many adaptations to, our material environment.

In Physics, students learn the complex and dynamic phenomena of the natural world which can be described and explained in a number of universal truths.

The beauty of Physics introduces students to the very small and the very big, from particle physics to the vastness of space and the immensity of time.

Content

Years 9-11

Energy, forces, forces and motion, wave motion, electricity, magnetism and electromagnetism, the structure of matter, atomic structure and space physics.

Sixth Form

In the sixth form, students complete a balance of mathematical calculations and written explanations. The curriculum covers Newton's laws of motion, mechanics, mechanical properties of matter, electric circuits, waves, matter, fields and quantum and nuclear physics.

Examples of cross-curricular links

With Maths, e.g. the use of linear differential equations to measure a working pendulum released from rest.

With History, e.g. the impact of the expanding universe on our concept of time.

With Computer Science, e.g. the potential of quantum computers to revolutionise complex tasks.

Extra-curricular opportunities

Institute of Physics essay competition, sixth form immersion talks.