

We seek to use lively minds, to work hard, to develop all our talents and to grow through sharing, to be the best version of ourselves

Physics

Our intent: In KS3 Science journey our core intention is to share our passion for the three separate subjects. We care deeply about the nurturing of critical thinking skills, problem solving, natural curiosity and creative thought. We aim to provide a rich, exciting, and challenging programme for our very able cohort.

Skills: Our curriculum is designed to develop the skills and knowledge we know stimulates interest and enthusiasm. The purpose is to allow each child to thrive within the scientific disciplines. Our aim is to build confidence and ability in practical science, develop social skills such as teamwork, negotiation, supporting others and working towards common goals.

Knowledge: By the end of KS3 in Physics students will recognise that particles, forces and energy are the three concepts that underpin all the fundamental principles.

Students should be able to apply the ideas covered to familiar and unfamiliar scenarios. The coherence of Physics and Maths should be apparent in the way mathematical manipulations are a key tool in explaining phenomena.

Year	Half term	Content
7	a)	Energy (Energy types and conversions)
	b)	Energy (Energy investigations, fuels and alternative energy resources)
	c)	Forces (Measuring forces, balanced and unbalanced forces, friction)
	d)	Forces (air resistance, contact and non-contact forces, magnetism) Earth in Space (Motion of the Earth and Seasons)
	e)	Earth in Space (Phases of the moon, Structure of the solar system, planetary properties, gravity)
	f)	Sound (Ear, transmission of sound, frequency and amplitude, speed of sound, noise)
8	a)	Light (Shadows, Reflection, refraction, visible spectrum)
	b)	Light (filters, coloured light, viewing coloured objects, the eye)
	c)	Heat Transfer (Heat and temperature, conduction, convection, insulation)
	d)	Heat transfer (Absorption and emission of heat) Electricity (Symbols, conductors and insulators)
	e)	Electricity (Series and parallel circuits, current, voltage, resistance)
	f)	Gravity in Space (gravity, planetary motion, satellites)
9	a)	Forces and Motion (Motion calculations and graphs)
	b)	Forces and Motion (Pressure, moments and Terminal Velocity)
	c)	Magnets and electromagnetism (magnets and magnetic fields, electromagnets and their uses)
	d)	Energy (Potential energy, kinetic energy and Work done)
	e)	Energy (Power, thermal energy, specific heat capacity and dissipation of energy)
	f)	Energy (Efficiency, energy resources and global energy supplies)