

Physics Separate Sciences

Content (Intent)	Links to prior learning	Skills and Assessment (Implementation)	Expected Learning Outcomes (Impact)
Term 1 P6 particles	Year 10 density practical Year 8 P3.3 – 3.5 density in solids liquids and gases Year 4 solids liquids and gases, materials change state when heated	Maths calculating density and specific latent heat Practical skills – measuring mass and volume	How substances change state. Types of internal energy Effects of temperature, pressure and volume on a gas
P7 Radiation	Year 9 electromagnetic spectrum	Maths – calculating proton and mass number of daughter particles. Maths – calculating half life	How radiation is produced and it's effect on living tissue. Uses of radiation. Different types of radiation
Term 2 Mock exam P11 Forces and pressure	Year 10 P8 Forces Year 8 P2.4.1 -P2.4.3 pressure in solids, liquids and gases	Maths – calculating pressure	Effects of liquid and gas pressure. Why some objects float
P14 Light	Year 9 electromagnetic spectrum Year 7 P3.1 light Year 5 light travels in straight lines. Objects are seen when light is reflected off them.	Maths – calculating refractive index Maths – use of a protractor Practical – working with light	Reflection and refraction of light. Why we see colour. How lenses work.
Term 3 Electromagnetism	Year 10 P15 Magnetic Fields	Practical skills – building an electric motor	Magnetic fields around current carrying wire. How motors, generators and transformers work

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	Year 8 P2.4 electromagnets Year 3 what materials are attracted to a magnet, magnetism is a none contact force. North and south poles. Like poles repel, opposites attract	Maths – calculating magnetic field strength	
Term 4 P10.5, 10.6 & 10.7 Momentum and impact forces	Year 9 P10 Forces and motion	Maths – calculating momentum and impact forces	How momentum and impact forces are used to make cars safer, design helmets, playgrounds etc.
P12.5 – 12.7 Sound waves and seismic waves	Year 9 P12 waves Year 7 P1.2 sound	Maths – calculating distance from a reflected sound	Uses of sound waves. Understanding seismic waves and how they're detected
P16 Space	Year 9 space topic Year 8 P4.3.2 radiation and energy Year 7 P1.4 space Year 5 relative motion of earth, sun and moon		How the universe, our sun and the solar system were formed. Life of a star. Possible fates of the universe