

<b>Curriculum Map</b>	<b>Subject</b>	Physics	<b>Year</b>	11
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Unit	Summary	Skills	Assessment	British Values and SMSC	Career links	Cross-curricular links
P8 Forces in balance	Vectors and scalars, forces, resultant forces Centre of mass Higher: Free body diagrams, <i>Triple only: Moments and equilibrium, levers and gears</i>	Definitions and explaining observations Practical: Finding CoM of irregular object. Using formulae Higher: Drawing accurate Free body diagrams	End of Topic Assessment HW – Seneca HW – Exam Booklets	Scientific community Explaining the world	Building and construction Mechanics – car design Research and development :Design – stability and mobility devfices Athletes – balance and centre of mass Sport psychologist	P1 P16 DT: Resistant materials and Product design Mathematical calculations: moments, resolving forces English – literacy History – Isaac Newton
P9 Motion	Speed, acceleration Motion graphs	Recall and use of equation for speed, acceleration and deceleration Describing distance-time and velocitytime graphs Analysing graphs and gradients & distance travelled Higher: tangents	End of Topic Assessment HW – Seneca HW – Exam Booklets	Speed limits, speed cameras, prosecution: Social: recognise legal boundaries and, in so doing, respect the civil and criminal law of England	Police – speeding Formula one design Athletes/Sport psychologist Speed records	P1 & P8 PE speed, velocity and acceleration Maths: calculations, graph plotting and data analysis
P10 Force and Motion	Force and acceleration Weight and terminal velocity Stopping distance Elasticity Higher: momentum and conservation <i>Triple Higher only: Impact force, safety measures</i>	Recall and use of formuale $F = ma$ ; $W=mg$ . Explaining observations Practical: Hooke's law Higher: Explaining inertia. Use of complex formula for acceleration <i>Identifying and explaining how safety measures work</i>	End of Topic Assessment HW – Seneca HW – Exam Booklets	Impact of law on society (driving – highway code) Understanding consequences of behaviour  Scientific community & historical evidence	Police – road traffic accidents and collisions Medicine – affect of collision and impact force Ballistics – gun recoil and momentum Elastic material engineer/technician- product design Health and safety – risk assessor	Synoptic - P8 P9 P6 P1 Maths: calculations PE: Forces, weight DT: Resistant materials and product design English – literacy History – Isaac Newton

P11 Force and pressure – Triple only	Pressure and surfaces. Atmospheric pressure  Higher only: Liquid pressure. Upthrust and floatation	Define pressure on surfaces and gas pressure from the atmosphere. Recall and use pressure formula. Practical: investigating upthrust and explain Higher only: Explain pressure in liquids. Use and carry out multi – step calculations of complex formula .	End of Topic Assessment HW – Seneca HW – Exam Booklets	Scientific community British industry and invention BREXIT	Deep sea divers Mountain climbing – paramedics -altitude sickness Hydraulic engineering Shipping container business Aeronautical engineer Marine engineer; RAF Medical equipment production; Travel industry: flights; Meteorologist	P6 Density and gas pressure P8 Contact forces Maths calculations Food tech, pressure cooking Geography: Earth's atmosphere
P12 Wave properties	Wave properties, wave speed, echoes Higher only: Reflection and refraction Triple Higher only: Sound and ultrasound Seismic waves	Describe & explain types of waves and properties Use equations Measure speed of sound Required practical: Investigating & measuring wave speed Evaluate impacts of sound on health Explain how ultrasound is used Analyse earthquake data	End of Topic Assessment HW – Seneca HW – Exam Booklets	Music production – heritage Scientific community Creativity Tolerant of the views of others	Life guard/ RNLI; Deep sea diver; Royal Navy; Sound engineer, Sonographer Vet/zoologist Audiologist/ENT consultant Dentist – ultrasound use Seismologist Oceanographer Speech and language therapist	P9 Speed equation P14 Reflection and refraction of light Maths calculations  Music  Geography: Earth structure and earthquakes
P13 Electromagnetic waves	EM spectrum Wave speed  Higher only: signals and carrier waves	Describe properties, uses and hazards of EM waves  Higher only: Explain use of carrier waves, optical fibres and X ray therapy	End of Topic Assessment HW – Seneca HW – Exam Booklets	Mobile phone use in children – Impact of actions on others Tolerant of the views of others	Forensic scientist Communications Medical Physicist Pathologist Radiographer Dentist Security Fibre engineer Firefighter	Synoptic P2 Triple P7 P12 Biology – DNA and mutations, diseases Maths Food tech – use of IR and microwave Art and photography – Music - radio
P14 Light – Triple only	Reflection and refraction of light Colour Lenses	Describe & explain the law of reflection Draw accurate diagrams Link wavelength to colour Describe types of lenses and their uses Practical skills Use magnification formula.	End of Topic Assessment HW – Seneca HW – Exam Booklets	Scientific community Use of light – fascination in learning about themselves and the world	Photographer Optometrist Optical manufacturing Fashion/textiles Tv/film production Dentist – mirror use	P12 P13 P16 STEM Space – using telescopes Red - shift

<p>P15 Electromagnetism</p>	<p>Magnetic fields of magnets, Earth and current carrying wire Higher tier only: Motor effect <i>Triple only:</i> <i>Electromagnets Triple Higher only: Generator effect, alternating current generators and transformers.</i></p>	<p>Describe field patterns and induced magnetism. Explain factors affecting solenoid strength. Higher only: Use Fleming's LH rule. Use and carry out multi – step calculations of complex formula.</p>	<p>End of Topic Assessment HW – Seneca HW – Exam Booklets</p>	<p>Environmental impacts -Recycling scrap metal Renewable resources Impacts of actions on others Tolerance of the views Rule of law and democracy</p>	<p>Navigation Robotic engineers MRI technician Mechanic Sea bed mapping/Oceanographer National grid power station Electrician Scrap yard firm Nuclear engineer</p>	<p>P3 P1 P5 Geography – Earth magnetic field and compasses DT – resistant materials and product design Maths</p>
<p>P16 Space – Triple only</p>	<p><i>Solar system Life cycle of stars Planets and satellites Expanding Universe – beginning and future Higher only: Orbits</i></p>	<p><i>Describe the solar system formation, Explanation – solar system – stars – elements – orbits Evaluate evidence of the origin of the Big Bang and the expanding universe – red shift Predict the future of the sun and the universe.</i></p>	<p>End of Topic Assessment HW – Seneca HW – Exam Booklets</p>	<p><i>Scientific community Reflective of own beliefs &amp; tolerant of others Respect Fascination with universe</i></p>	<p><i>Astronomy/astrophysics Astronaut ISS</i></p>	<p><i>P8, P10, P13 P14 RS – origins of the universe</i></p>