



	Autumn1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Year 12 Teacher 1 MWT (5)</b>	<b>Unit: Measurements and mechanics</b>	<b>Unit: Mechanics</b>	<b>Unit: Materials</b>	<b>Unit: Electricity</b>	<b>Unit: Electricity and thermal physics</b>	<b>Unit: Thermal physics</b>
	Wk 1: SI units, random/systematic errors, sig fig rules, rearranging equations, standard form, prefixes, GCSE recap of motion Wk 2: Types of uncertainty, propagating uncertainties, motion definitions Wk 3: Measuring lengths, density, graph relationships and determining gradients Wk 4: Motion graphs (st and vt), graph plotting (different lines of best fit) and comparing with straight line equation Wk 5: Relative motion, suvat, practical order Wk 6: Error calculations in graphs (gradients and intercepts), error bars, prepwork for required practical Wk 7: Required practical 3—Acceleration due to free-fall, trig	Wk 1: Projectiles Wk 2: Motion assessment Wk 3: Forces (Newton's laws and equilibrium) Wk 4: Forces (inclined planes) Wk 5: Moments and Couples Wk 6: Conservation of energy Wk 7: Work, energy and power	Wk 1: Trial exams. Wk 2: Momentum Wk 3: Impulse Wk 4:Hooke's law and EPE Wk 5: Stress and strain, Young modulus Wk 6:Required practical 4—Young modulus	Wk 1: Mechanics and materials test Wk 2: GCSE recap of electricity, including IV characteristics Wk 3: Solving circuits Wk 4: Potential dividers Wk 5: Resistivity and required practical 5—resistivity Wk 6: Required practical 5—resistivity	Wk 1: EMF and internal resistance and required practical 6—EMF and internal resistance Wk 2: Required practical — EMF and internal resistance Wk 3: Electricity test Wk 4: Recap particle model, laws of thermodynamics Wk 5: Change of temperature (SHC), change of state (SLH) Wk 6: Combining SHC and SLH, continuous flow	Wk 1: Ideal gases (Required practicals to be done at the start of year 13) Wk 2: Work on a gas Wk 3: Molecular kinetic theory model Wk 4: Thermal physics assessment Wk 5: Year 12 review/catch up Wk 6: Year 12 review/catch up
<b>Final Assessment:</b>		Motion test	Trial exam	Mechanics and materials test	Electricity test	Thermal physics test

	<b>Autumn1</b>	<b>Autumn 2</b>	<b>Spring 1</b>	<b>Spring 2</b>	<b>Summer 1</b>	<b>Summer 2</b>
<b>Year 12 Teacher 2 TSN (5)</b>	<b>Unit: Particles and radiation</b>	<b>Unit: Particles and radiation; Waves</b>	<b>Unit: Waves</b>	<b>Unit: Waves</b>	<b>Unit: Further mechanics</b>	<b>Unit: Further mechanics</b>
	Wk 1: Constituents of the atom. Stable and unstable nuclei.	Wk 1: Energy levels and photon emission.	Wk 1: Trial exams.	Wk 1: AQA Required Practical 2.	Wk 1: Uniform circular motion.	Wk 1: Energy and SHM
	Wk 2: Particles, anti-particles, and photons.	Wk 2: Wave-particle duality.	Wk 2: AQA Required Practical 1.	Wk 2: AQA Required Practical 2.	Wk 2: Principles of SHM.	Wk 2: Forced vibrations and resonance.
	Wk 3: Particle interactions.	Wk 3: Radiation assessment.	Wk 3: AQA Required Practical 1.	Wk 3: Refraction.	Wk 3: Principles of SHM	Wk 3: Further mechanics review.
	Wk 4: Classification of particles. Quarks and antiquarks.	Wk 4: Progressive waves.	Wk 4: Double slit interference.	Wk 4: Total internal reflection.	Wk 4: Applications of SHM	Wk 4: Further mechanics assessment
	Wk 5: Particles assessment.	Wk 5: Longitudinal and transverse waves.	Wk 5: Double slit interference.	Wk 5: Particles and radiation & Waves assessment.	Wk 5: Required practical 7.	Wk 5: Year 12 review/catch-up.
	Wk 6: Photoelectric effect.	Wk 6: Stationary waves.	Wk 6: Diffraction.	Wk 6: Particles and radiation & Waves review.	Wk 6: Required practical 7.	Wk 6: Year 12 review/catch-up.
	Wk7: Collisions of electrons with atoms.	Wk 7: Stationary waves.				
<b>Final Assessment:</b>	Particles test	Radiation test	Trial exam	Particles and radiation, and waves test		Further mechanics test

## Curriculum Area: Physics



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Year 13 Teacher 1 MWT (6)</b>	<b>Unit: Further mechanics</b>	<b>Unit: Gravitational and electric fields, Capacitance</b>	<b>Unit: Capacitance and Magnetic fields</b>	<b>Unit: Nuclear</b>	<b>Unit: Revision</b>	<b>Unit: Examinations</b>
	Wk 1: Uniform circular motion (angular speed vs. linear speed, circular motion, centripetal force, apparent weight) Wk 2: SHM (equations as a function of t and x)  Wk 3: Mass-spring system, Required practical 7  Wk 4: Simple pendulum, Required practical 7  Wk 5: UCM as SHM, damping, forced vibrations and resonance  Wk 6: Assessment—further mechanics  Wk 7: Fields introduction, Newton's law, and gravitational field strength	Wk 1: Gravitational potential  Wk 2: Orbits of planets and satellites  Wk 3: Trial exam  Wk 4: Coulomb's law and electric field strength  Wk 5: Electric potential  Wk 6: Capacitance and parallel plate capacitors, energy stored in a capacitor  Wk 7: Capacitor charge and discharge	Wk 1: Test and Required practical 9—charge and discharge of capacitors  Wk 2: Magnetic flux density and Required practical 10—force on a wire  Wk 3: Moving charges in magnetic fields, magnetic flux and flux linkage Wk 4: Required practical 11—search coils  Wk 5: EM induction  Wk 6: AC and transformers	Wk 1: Fields comparison and test  Wk 2: Rutherford scattering and $\alpha\beta\gamma$  Wk 3: Radioactive decay, nuclear instability, and nuclear radius Wk 4: Required practical 12—inverse square law  Wk 5: Mass and energy, induced fission and safety  Wk 6: Nuclear test	Wk 1: Revision  Wk 2: Revision  Wk 3: Revision  Wk 4: Examinations  Wk 5: Examinations  Wk 6: Examinations	Wk 1: Examinations  Wk 2: Examinations  Wk 3: Examinations  Wk 4: Examinations  Wk 5: Examinations  Wk 6: Examinations
<b>Final Assessment:</b>	Further mechanics test	Trial exam	Gravitational and electric fields test	Fields test Nuclear test		

	<b>Autumn1</b>	<b>Autumn 2</b>	<b>Spring 1</b>	<b>Spring 2</b>	<b>Summer 1</b>	<b>Summer 2</b>
<b>Year 13 Teacher 2 RFG (3)</b>	<b>Unit: Astrophysics</b>	<b>Unit: Astrophysics</b>	<b>Unit: Thermal physics</b>	<b>Unit: Thermal physics</b>	<b>Unit: Revision</b>	<b>Unit: Examinations</b>
	Wk 1: Telescopes (two converging lenses)	Wk 1: Supernovae, neutron stars, and black holes	Wk 1: Recap particle model, laws of thermodynamics	Wk 1: Charles' law, Required practical (Charles' law)	Wk 1: Revision	Wk 1: Examinations
	Wk 2: Reflecting telescopes	Wk 2: Doppler effect and quasars	Wk 2: Change of temperature (SHC)	Wk 2: Ideal gas law constants, mass, molar mass, and molecular mass	Wk 2: Revision	Wk 2: Examinations
	Wk 3: Single dish radio telescopes, IR, UV, X-ray telescopes, and advantages of large diameter telescopes	Wk 3: Trial exam	Wk 3: Change of state (SLH), combining with SHC	Wk 3: Work and types of processes (isobaric, isothermal, isochoric, adiabatic)	Wk 3: Revision	Wk 3: Examinations
	Wk 4: Classification by luminosity	Wk 4: Going through assessment	Wk 4: Continuous flow	Wk 4: Molecular kinetic theory model (derivation and practice)	Wk 4: Examinations	Wk 4: Examinations
	Wk 5: Absolute magnitude	Wk 5: Hubble's law	Wk 5: Ideal gas laws, Boyle's law	Wk 5: Comparing Kinetic theory and ideal gas laws	Wk 5: Examinations	Wk 5: Examinations
	Wk 6: Classification by temperature, black body radiation  Wk 7: Principles of the use of stellar spectral classes and the HR diagram	Wk 6: Detection of exoplanets  Wk 7: Astrophysics test	Wk 6: Required practical (Boyle's law)	Wk 6: Assessment—thermal physics	Wk 6: Examinations	Wk 6: Examinations
<b>Final Assessment:</b>	N/A	Astrophysics test		Thermal physics test		

