

A Level Physics Y12			
2 lessons	Practicals	3 lessons	Practicals
		Physical quantities and units 2.1.1/2.1.2 Scalars and vectors 2.3 (a)(b)(c)(d)	
Charge 4.1.1 (a)-(g) Mean drift velocity 4.1.2 (a) - (c) Circuit symbols 4.2.1 (a) - (b) Homework task 6 - charge and current	Basic circuits	Kinematics 3.1.1	Data loggers with position sensor
E.M.F and P.D. 4.2.2 (a) - (e)		Linear motion 3.1.2 (a) (b)© 1st ASSESSMENT	Ramps and data loggers
E.M.F and P.D. 4.2.2 (a) - (e)	Coloured ions on visualiser	Projectile motion 3.1.13 Homework task 1 - motion 1st ASSESSMENT FEEDBACK	PAG1.1 - acceleration of free fall Monkey + Hunter Ball bearing flicker
E.M.F and P.D. 4.2.2 (a) - (e)		Dynamics 3.2.1 (a) - (f)	
Resistance 4.2.3 (a) - (d)	PAG 3.2 electrical characteristics	Motion with non-uniform acceleration 3.2.2	Trolleys with light gates F=ma
Resistivity 4.2.4 (a) - (c)		Motion with non-uniform acceleration 3.2.2	Balls falling through viscous liquid (e.g. shower gel)
Resistivity 4.2.4 (a) - (c)		Equilibrium 3.2.3 (a) - (f)	Hammer +ruler demo Balance a broom fork and spoon
Power 4.2.5 / 4.2.5 Homework task 7 - Energy, power, resistance	PAG 3.1 Resistivity	3.2.4 Density and pressure Homework task 2 - forces in action	Rulers with holes and masses with hangers Density of regular objects Peeing can Crushing a can
Series and parallel circuits 4.3.1 (a) - (d)		Work and energy 3.3.1 2nd ASSESSMENT	
Series and parallel circuits 4.3.1 (a) - (d)	PAG 4.1 combining resistors	Kinetic and GP energy 3.3.2 2nd ASSESSMENT FEEDBACK	PAG1.3- stopping distance of a block
Series and parallel circuits 4.3.1 (a) - (d)		Power 3.3.3 Homework task 3 - work, energy and power	Efficiency of an electric motor
Catch up/ revision		Springs 3.4.1	PAG2.2 - Springs
Series and parallel circuits (e) -(f)		Mechanical properties of matter (a)- (f) Homework task 4 - Materials	PAG2.1 Young modulus
Internal resistance 4.3.2 (a) - (c)	PAG 3.3 internal resistance of cell	Newton's laws of motion 3.5.1 (a) - (e)	Air track Explosion trolleys
Internal resistance 4.3.2 (a) - (c)		Collisions 3.5.2 Homework task 5 - Newton's laws and momentum	
Potential dividers 4.3.3 (a) - (c)	Sensing circuits with LDRs/ thermistors	Wave motion 4.4.1 (a) - (d)	Ripple tank PAG 5.3 Using an oscilloscope
Homework task 8 - Electrical circuits		Wave motion 4.4.1 (e) - (g)	PAG 6.3 Polarisation
Mock exams week			
Photons 4.5.1		Electromagnetic waves 4.4.2 (a) - (c)	EM circus
Half term			
Photons 4.5.1	PAG 6.1 Planck constant	Electromagnetic waves 4.4.2 (d) - (e) Homework task 9 - Waves 1	Refraction / TIR / Dispersion
Photons 4.5.1	Gold leaf electroscope	Superposition 4.4.3 (a)- (e)	2 speakers - sound interference 2 source microwave interference Light - 2 slit interference
Photoelectric effect 4.5.2 (a) - (f)	Electron diffraction tube	Superposition 4.4.3 (f) - (g)	
Photoelectric effect 4.5.2 (a) - (f)		Stationary waves 4.4.4 (a) - (e)(i)	Stationary wave on elastic string Boomwhackers, Rubens tube
Wave particle duality (a) - (c)		Stationary waves 4.4.4 (e)(ii) - (g) Homework task 10 - waves 2	PAG 5.2 standing waves resonance tube
Wave particle duality (a) - (c) Homework task 11 - Quantum physics		Catch up	
Revision		Revision	
Revision		Revision	
Revision		Revision	
Revision		Revision	
Revision		Revision	
End of year 12 exams			
6.4.1 The nuclear atom (watch atom video)		5.1.1 Temperature 5.1.2 Solid liquid and gas (a)-(c) (watch absolute zero video)	

6.4.2 Fundamental particles		5.1.2 Solid, liquid and gas (d) - (g)	Heating/cooling water/ stearic acid
Particle accelerators		5.1.3 Thermal properties of materials (a) - (b)	PAG 11.2 Specific heat capacity
PAG 12 - research task		5.1.3 Thermal properties of materials (c) - (d)	Specific latent heat
Revision + finish thermal physics		Revision + finish thermal physics	
Revision + finish thermal physics		Revision + finish thermal physics	
A Level Physics Y13			
2 lessons	Practicals	3 lessons	Practicals
Capacitors 6.1.1	Supercapacitor demo Build basic circuits to charge capacitors	Radians and centripetal force (5.2.1/5.2.2)	
Capacitors 6.1.1 - PAG 9.2	PAG 9.2 Capacitors in series and parallel	Assessed task 3 - circular motion Gravitational fields Point and Spherical masses / Newtons law of gravitation(5.4.1 / 5.4.2)	Whirling bung experiments Examples of circular motion
Capacitors Energy (6.1.2) Capacitors - Charging and discharging capacitors (6.1.3 a)		5.4.3 Planetary motion	
Capacitors 6.1.3 PAG 9.1	PAG 9.1 Investigating charging and discharging capacitors	5.4.4 Gravitational potential and energy Assessed task 5 - gravitational fields	
Capacitors Charging and discharging capacitors (6.1.3 b -e) Assessed task 15 - Capacitors		SHM 5.3.1	Demos - Bartons pendulum
Electricity revision and consolidation		SHM Energy of a simple harmonic oscillator / Damping (5.3.2 / 5.3.3) Assessed task 4 - Oscillations	PAG 10.1 (or 10.3) Investigating factors affecting simple harmonic motion
Electricity revision and consolidation		practical and maths skills (eg log laws etc)	
6.2.3 Uniform electric fields		Mechanics and waves revision	
6.2.4 Electric potential and energy Assessed task 16 - electric fields		Mechanics and waves revision	
5.1.3 Thermal properties of materials (a) - (b)	PAG 11.2 Specific heat capacity	5.1.1 Temperature 5.1.2 Solid liquid and gas	Heating/cooling water/ stearic acid
5.1.3 Thermal properties of materials (c) - (d) Assessed task 1 thermal physics	Specific latent heat	Ideal gases 5.1.4 (a) - (d)	PAG 8.2 Variation in volume - Boyles law (demo) Pag 8.1 Variation in volume - Charles' law
Quantum physics revision		Ideal gases 5.1.4 (e) - (i) Assessed task 2 ideal gases	
Revision and Y13 test 1 - Circular/SHM/capacitors/ Efields/ thermal			
Test review and revision		Test review and revision	
Nuclear atom 6.4.1 (revision)		Electric fields recap	
Nuclear atom 6.4.2 (particles revision) Assessed task 11 - particle physics		6.3.1 Magnetic fields	magnet demos
6.4.3 Radioactivity (a)-(c)		6.3.2 Motion of charged particles	
6.4.3 Radioactivity (b) PAG 7.2	PAG 7.2 Investigating the absorption of α -particles, β -particles and γ -rays by appropriate materials	6.3.3 Electromagnetism	FLHR demo
6.4.3 Radioactivity (d)-(f)	PAG 7.3 Investigating the half life of radioactive materials	6.3.3 Electromagnetism Assessed task 10 - magnetic fields	Lenz's law demos
Mock exam week			
Half term			
6.4.3 Radioactivity (g) - (h) Assessed task 12 - radioactivity		Stars (5.5.1)	
Nuclear fission and fusion (6.4.4 a-f)		Electromagnetic radiation from stars (5.5.2)	
Nuclear fission and fusion (6.4.4 g-k) Assessed task 13 nuclear		Electromagnetic radiation from stars (5.5.2) Assessed task 6 - stars	PAG 5.1 Determining wavelength with a diffraction grating
Using X-Rays (6.5.1)		Cosmology 5.5.3	
Using X-Rays (6.5.1)		Cosmology 5.5.3 Assessed task 7 - cosmology	
Diagnostic methods in medicine (6.5.2)		Ultrasound 5.4.3	
Diagnostic methods in medicine (6.5.2)		Ultrasound 5.4.3 Assessed task 14 - medical	
Revision		Revision	
Revision		Revision	
Revision		Revision	
Revision		Revision	