Physics Learning Plan 2019-2021

Specification: AQA Physics **Teacher A:** Mr Jones **Teacher B:** Mr Talbot

Year 12						
Term	**Teacher A**			**Teacher B**		
	Exam Focus	*Classroom Learning*	*Independent Learning*	*Exam Focus*	*Classroom Learning*	*Independent Learning*
1	Paper 1 and 3	Chapter 2 Part 1. Particles • Constituents of the atom • Stable and unstable nuclei • Particles, antiparticles and photons. • Particle interactions. • Classification of particles. • Quarks and anti-quarks. • Conservation laws. Chapter 1 Measurements and their errors • Use of SI units and their prefixes. • Limitation of physical measurements. • Estimation of physical quantities.	For every chapter: • Complete associated worksheets in shared area. • Read 'Physics review' • Complete summary and end of chapter questions from Text Book as topics are covered. • Create revision cards for key words (lists of key words for each topic are in the Independent Learning folder) • Complete exam questions on each topic from exam question folder provided by your teacher. • Review revision material on physicsandmathstutor.com • Highlight your specification Red, Amber, Green • Use 'student knowledge checklist' (provided by teacher but also available in Independent learning folder) to RAG your understanding. Use this to focus your revision.	Paper 1 and 3	Chapter 3 Waves Part 1 • Progressive waves • Longitudinal and transverse waves. • Principle of superposition and formation of standing waves.	For every chapter: • Complete associated worksheets in shared area. • Read 'Physics review' • Complete summary and end of chapter questions from Text Book as topics are covered. • Create revision cards for key words (lists of key words for each topic are in the Independent Learning folder) • Complete exam questions on each topic from exam question folder provided by your teacher. • Review revision material on physicsandmathstutor.com • Highlight your specification Red, Amber, Green Use 'student knowledge checklist' (provided by teacher but also available in Independent learning folder) to RAG your understanding. Use this to focus your revision.
2	Paper 1 and 3	Chapter 2 Part 2. Particles • The photoelectric effect. • Collisions of electrons with atoms. • Energy levels and photon emission. • Wave-particle duality.		Paper 1 and 3	Chapter 3 Waves Part 2 • Interference • Diffraction • Refraction at a plane surface.	
3	Paper 1 and 3	Chapter 5. Electricity part 1 • Electricity basics. • Current-voltage characteristics. • Resistivity. • Circuits.		Paper 1 and 3	Chapter 4 Mechanics and materials Part 1. • Scalars and vectors • Moments • Motion along a straight line • Projectile motion. • Newton's Laws	
4	Paper 1 and 3	Chapter 5. Electricity part 1 • Potential dividers. • EMF and internal resistance.		Paper 1 and 3	Chapter 4 Mechanics and materials Part 2. • Momentum • Work, energy and power • Conservation of energy. • Bulk properties of solids. • The Young Modulus.	
5	Paper 1 and 3	AS revision Particles		Paper 1 and 3	AS revision Waves	
6	Paper 2 and 3	Paper 1 Revision Chapter 7 Fields and their consequences • Fields • Gravitational fields • Gravitational field strength. • Gravitational potential. • Orbits, planets and satellites.		Paper 2 and 3	Paper 1 Revision Chapter 6 Further Mechanics • Circular motion. • Simple harmonic motion.	

<table>
<tr><th colspan="7">Year 13</th></tr>
<tr><th rowspan="2">Term</th><th colspan="3">Teacher A</th><th colspan="3">Teacher B</th></tr>
<tr><th>Exam Focus</th><th>Classroom Learning</th><th>Independent Learning</th><th>Exam Focus</th><th>Classroom Learning</th><th>Independent Learning</th></tr>
<tr><td>1</td><td>Paper 2 and 3</td><td>Chapter 7 Fields and their consequences
Fields and electricity recap.
Electric fields
Coulombs law.
Electric field strength.
Electric potential.
Capacitance
Energy in capacitors.
Capacitor charge and discharge.</td><td rowspan="5">For every chapter:
Complete associated worksheets in shared area.
Read ‘Physics review’
Complete summary and end of chapter questions from Text Book as topics are covered.
Create revision cards for key words (lists of key words for each topic are in the Independent Learning folder)
Complete exam questions on each topic from exam question folder provided by your teacher.
Review revision material on physicsandmathstutor.com
Highlight your specification Red, Amber, Green
Use ‘student knowledge checklist’ (provided by teacher but also available in Independent learning folder) to RAG your understanding.
Use this to focus your revision.</td><td>Paper 2 and 3</td><td>Chapter 6 Further Mechanics
Simple harmonic systems
Forced vibrations and resonance.
Chapter 6 Thermal Physics
Thermal energy transfer.
Ideal Gases.
Molecular kinetic theory.</td><td rowspan="5">For every chapter:
Complete associated worksheets in shared area.
Read ‘Physics review’
Complete summary and end of chapter questions from Text Book as topics are covered.
Create revision cards for key words (lists of key words for each topic are in the Independent Learning folder)
Complete exam questions on each topic from exam question folder provided by your teacher.
Review revision material on physicsandmathstutor.com
Highlight your specification Red, Amber, Green
Use ‘student knowledge checklist’ (provided by teacher but also available in Independent learning folder) to RAG your understanding.
Use this to focus your revision.</td></tr>
<tr><td>2</td><td>Paper 2 and 3</td><td>Magnetic fields.
Magnetic flux density.
Electromagnetic induction.
Alternating current.
Transformers.</td><td>Paper 2 and 3</td><td>Chapter 8 Nuclear Physics
Radioactivity
Rutherford scattering.
Alpha, beta and gamma radiation.</td></tr>
<tr><td>3</td><td>Paper 2 and 3</td><td>Chapter 9 Astrophysics
Telescopes.
Reflecting telescopes.
Classification of stars.
Luminosity.
Black body radiation.
Spectral classes.
Super novae, neutron stars and black holes.
Cosmology
Hubble’s Law.
Doppler effect.
Quasars.
Detection of exoplanets.</td><td>Paper 2 and 3</td><td>Radioactive decay
Nuclear instability.
Nuclear radius
Mass and energy, $E=mc^2$.
Induced fission.
Safety aspects.</td></tr>
<tr><td>4</td><td>Paper 2 and 3</td><td>Practical techniques and development of practical methods.
Synoptic application of content.</td><td>Paper 3</td><td>Practical techniques and development of practical methods.
Synoptic application of content.</td></tr>
<tr><td>5</td><td>Paper 1, 2 and 3</td><td>Revision</td><td>Paper 2 and 3</td><td>Revision</td></tr>
</table>