



Gosford Hill School

AQA A-level Physics (7408) – Curriculum Map (Years 12–13)

Big Idea	Year 12 (Paper 1)	Year 13 (Paper 2 + Option)
<i>Measurement, data and uncertainty</i>	Measurements & their errors; scalars and vectors; standard form; uncertainty estimation and propagation.	
<i>Matter, particles and radiation</i>	Particles and radiation: atomic structure, photoelectric effect; nuclear structure; fundamental particles.	Nuclear physics: decay, activity and half-life; nuclear energy; fission and fusion.
<i>Waves and information transfer</i>	Waves: superposition, diffraction, refraction, polarisation, interference and stationary waves. Required practical: Young double slit.	
<i>Forces, motion and mechanics</i>	Mechanics and materials: kinematics; forces and Newton's laws; momentum; work, energy and power; materials.	
<i>Energy and power across systems</i>	Energy transfers, conservation and efficiency within mechanics and electricity.	Thermal physics: internal energy, temperature, energy transfer; energy in nuclear processes.
<i>Electricity and charge</i>	Electric circuits: charge, current, potential difference, resistance, power and resistivity.	Capacitors; electric fields and potential; magnetic fields and forces.
<i>Oscillations and circular motion</i>	Further mechanics: circular motion and simple harmonic motion (including energy in SHM).	
<i>Thermal behaviour of gases and materials</i>		Thermal physics: ideal gas laws and kinetic theory. Required practical: Boyle's law.
<i>Fields and interactions at a distance</i>		Gravitational, electric and magnetic fields; field strength and potential; Coulomb's law.
<i>Assessment and synoptic mastery</i>	End-of-Year 12 Paper 1 mock examination.	November Paper 1 mock; March Paper 2 mock; Option topic followed by in-class mock.