FARINGDON COMMUNITY COLLEGE

Year 12 Physics – Outline Programme of Study

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Big ideas/ topics	Measurements and their uncertainties	Particles and radiation Mechanics	Waves Mechanics	Waves Properties of Materials	Electricity	Electricity, Catch-up time, and of year testing And Beginning of Periodic Motion (Y13 content)
Key Knowledge	Calculating uncertainties/Data Handling/graphical techniques/ practical design/use of significant figures	Classification of particles/ Conservation Laws/ anti-particles/photoelectric effect/ production of line spectra Force, energy and momentum Moments/ Motion along a straight line	Progressive waves/ Longitudinal and transverse waves/ Principle of superposition of waves and formation of stationary waves/ Projectile motion/ Newton's laws of motion/ Momentum / Work, energy and power/ Conservation of Energy	Refraction, diffraction and interference Bulk properties of solids The Young modulus	Basics of electricity Current–voltage characteristics Resistivity Circuits Potential divider Electromotive force and internal resistance	Time to complete and consolidate electricity, review Y12 content, preparation and execution of end of year test Circular motion (A-level only) Simple harmonic motion (SHM) (A-level only)

- AQA A specification followed
- AQA A Level Physics Student Book 2, Nick England, Jeremy Pollard, Nicky Thomas, Carol Davenport 9781471807763
- Excellent straight forward Textbook: Advanced Physics For You (Advanced for You), Keith Johnson, Simmone Hewett, Sue Holt, John Miller ISBN: 1408527375
- Higher level for able students: Advanced Physics by Steve Adams

Ways to support and extend student learning in this subject

Students who need support or who wish to stretch themselves should come to the weekly support sessions on Friday after school in lab E.

Students who wish to maximise their grades should attempt as my past paper questions as they can from physics and maths tutor.