**Year 12 Physics 2025/2026**

**Pre–assessment:** Practice exam questions to be completed and self-assessed in green pen. This must be kept in student folders. This will be checked before students sit the assessment. No pre–assessment work = no assessment. Assessment rearranged in student’s own time upon completion of pre-assessment work.

**Assessment:** Teacher assessed in red pen and marks put onto the spreadsheet. This must be kept in students’ folders at all times.

**Post assessment:** Responsive lesson with DIRT work. This must be kept in students’ folders at all times

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| **First half term: 1st Sept till 24th Oct (October half term)** | | | |
| **Tues 2nd September - Year 12 in lessons from period 3 onwards**  **Wed 3rd September - Year 12 in lessons period 2-5**  **Friday 5th September - Year 12 out all day at university trip**  **25th October -> Half term** | | | |
| **KS / AMU** | | **MC / CBO** | |
| Content | Approx. date completed | Content | Approx. date completed |
| 3.1.1 Use of SI units and their prefixes |  | 3.5.1.1 Basics of electricity |  |
| 3.1.2 Limitation of physical measurements |  | 3.5.1.2 Current–voltage characteristics |  |
| 3.1.3 Estimation of physical quantities |  | Recap and practise understanding uncertainties |  |
| Understanding uncertainties |  | **RPA Practise (write up and self-assess in lesson): Resistance of a length of wire (from GCSE)** |  |
| 3.4.2.1 Bulk properties of solids |  | 3.5.1.3 Resistivity |  |
| 3.4.2.2 The Young modulus |  | **Required practical 5: Determination of resistivity of a wire using a micrometer, ammeter and voltmeter.** |  |
| **Required Practical 4: Determination of the Young Modulus by a simple method.** |  | 3.5.1.4 Circuits |  |
|  |  | 3.5.1.5 Potential divider |  |
|  |  | 3.5.1.6 Electromotive force and internal resistance |  |
|  |  | **Required practical 6: Investigation of the emf and internal resistance of electric cells and batteries by measuring the variation of the terminal pd of the cell with current in it.** |  |
| Standard Assessments:   * **Physics foundation assessment – Week 3/4** * **Materials EOT assessment** * **October Synoptic Test (Electricity/Materials 25 marks Multiple Choice) – Week 6/7 (marked prior to Y12 reports close)** | | | |
| **Second half term: 3rd Nov to 19th Dec (Christmas holidays)** | | | |
| **KS / AMU** | | **MC / CBO** | |
| Content | Approx. date completed | Content | Approx. date completed |
| 3.3.1.1 Progressive waves |  | Complete electricity topic if required |  |
| 3.3.1.2 Longitudinal and transverse waves |  | 3.2.1.1 Constituents of the atom |  |
| 3.3.1.3 Principle of superposition of waves and formation of stationary waves |  | 3.2.1.2 Stable and unstable nuclei |  |
| **Required practical 1: Investigation into the variation of the frequency of stationary waves on a string with length, tension and mass per unit length of the string** |  | 3.2.1.3 Particles, antiparticles and photons |  |
|  |  | 3.2.1.4 Particle interactions |  |
| Standard Assessments:   * **Electricity EOT assessment** * **Waves EOT assessment** * **December Synoptic Test (Waves/Particles 25 marks Multiple Choice)** | | | |

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| **Third half term: 5th Jan to 13th Feb (February half term)** | | | |
| **KS / AMU** | | **MC / CBO** | |
| Content | Approx. date completed | Content | Approx. date completed |
| 3.3.2.1 Interference |  | 3.2.1.5 Classification of particles |  |
| 3.3.2.2 Diffraction |  | 3.2.1.6 Quarks and antiquarks |  |
| **Required practical 2: Investigation of interference effects to include the Young’s slit experiment and interference by a Diffraction grating** |  | 3.2.1.7 Applications of conservation laws |  |
| 3.3.2.3 Refraction at a plane surface |  | 3.4.1.1 Scalars and vectors |  |
|  |  | 3.4.1.2 Moments |  |
| Standard Assessments:   * **Particles EOT assessment** * **Optics EOT assessment** * **February Synoptic Test (Electricity/Materials/Waves/Particles 25 marks MC)** | | | |

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| **Fourth half term: 23rd Feb to 27th March (Easter holidays)** | | | |
| **KS / AMU** | | **MC / CBO** | |
| 3.2.2.1 The photoelectric effect |  | 3.4.1.3 Motion along a straight line |  |
| 3.2.2.2 Collisions of electrons with atoms |  | **Required practical 3: Determination of g by a freefall method** |  |
| 3.2.2.3 Energy levels and photon emission |  | 3.4.1.4 Projectile motion |  |
| 3.2.2.4 Wave-particle duality |  | 3.4.1.5 Newton’s laws of motion |  |
|  |  | 3.4.1.6 Momentum |  |
| **Y12 Exam prep work** | | | |
| Standard Assessments:   * **Y12 Exams** | | | |

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| **Fifth half term: 13th April to 22nd May (May half term)** | | | |
| **KS / AMU** | | **MC / CBO** | |
| 3.8.1.1 Rutherford scattering |  | 3.4.1.7 Work, energy and power |  |
| 3.8.1.2 Radiation |  | 3.4.1.8 Conservation of energy |  |
| **Required practical 12: Inverse square law** |  | 3.6.1.1 Circular motion (A-level only) |  |
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| Standard Assessments:   * **Mechanics EOT assessment** * **Quantum EOT assessment** | | | |

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| **Final half term: 1st June to 17th July (Summer holidays)** | | | |
| **KS / AMU** | | **MC / CBO** | |
| 3.8.1.3 Radioactive decay |  | 3.6.1.2 Simple harmonic motion (SHM) (A-level only) |  |
| 3.8.1.4 Nuclear instability |  | 3.6.1.3 Simple harmonic systems (A-level only) |  |
|  |  | 3.6.1.4 Forced vibrations and resonance (A-level only) |  |
|  |  | **Required practical 7: Investigation into simple harmonic motion using a mass–spring system and a simple pendulum.** |  |
| Standard Assessments:   * **Radioactivity EOT assessment** * **Full paper 1 practice** | | | |