**Year 13 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)**  |
| **KS / KS** | **MC / CBO** |
| Content  | Approx. date completed  | Content | Approx. date completed  |
| 3.8.1.5 Nuclear radius |  | 3.7.2.1 Newton’s law of gravitation |  |
| 3.8.1.6 Mass and energy |  | 3.7.2.2 Gravitational field strength |  |
| 3.8.1.7 Induced fission |  | 3.7.2.3 Gravitational potential |  |
| 3.8.1.8 Safety aspects |  | 3.7.2.4 Orbits |  |
|  |  | 3.7.3.1 Coulomb’s law |  |
|  |  | 3.7.3.2 Electric field strength |  |
|  |  | 3.7.3.3 Electric potential |  |
| Standard Assessments:* **Further Mechanics EOT assessment**
* **Nuclear EOT assessment**
* **Gravitational fields EOT assessment**
* **October Synoptic Test (Grav fields/Radioactivity 25 marks Multiple Choice)**
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| **Second half term: 3rd Nov to 19th Dec (Christmas holidays)** |
| **KS / KS** | **MC / CBO** |
| Content  | Approx. date completed  | Content | Approx. date completed  |
| 3.10.1.1 Physics of vision |  | 3.7.4.1 Capacitance |  |
| 3.10.1.2 Defects of vision and their correction using lenses |  | 3.7.4.2 Parallel plate capacitor |  |
| 3.10.2.1 Ear as a sound detection system |  | 3.7.4.3 Energy stored by a capacitor |  |
| 3.10.2.2 Sensitivity and frequency response |  | 3.7.4.4 Capacitor charge and discharge |  |
| 3.10.2.3 Defects of hearing |  | **Required practical 9: Investigation of the charge and discharge of capacitors. Analysis techniques should include log-linear plotting leading to a determination of the time constant, RC** |  |
| Paper 1 content review |
| Paper 3a |
| Standard Assessments:* **Electric fields + Capacitance EOT assessment**
* **Option Part 1 EOT assessment**
* **December Synoptic Test (Fields + Radioactivity 25 marks Multiple Choice)**
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| **Third half term: 5th Jan to 13th Feb (February half term)** |
| **KS / KS** | **MC / CBO**  |
| Content  | Approx. date completed  | Content | Approx. date completed  |
| 3.10.3.1 Simple ECG machines and the normal ECG waveform |  | 3.7.5.1 Magnetic flux density  |  |
| 3.10.4.1 Ultrasound imaging |  | **Required practical 10: Investigate how the force on a wire varies with flux density, current and length of wire using a top pan balance.** |  |
| 3.10.4.2 Fibre optics and endoscopy |  | 3.7.5.2 Moving charges in a magnetic field |  |
| 3.10.4.3 Magnetic resonance (MR) scanner |  | 3.7.5.3 Magnetic flux and flux linkage |  |
| 3.10.5.1 The physics of diagnostic X-rays |  | **Required practical 11: Investigate, using a search coil and oscilloscope, the effect on magnetic flux linkage of varying the angle between a search coil and magnetic field direction.** |  |
| 3.10.5.2 Image detection and enhancement |  | 3.7.5.4 Electromagnetic induction |  |
| 3.10.5.3 Absorption of X-rays |  | 3.7.5.5 Alternating currents |  |
| 3.10.5.4 CT scanner |  | 3.7.5.6 Transformers |  |
| Standard Assessments: * **Y13 Mock exams (Paper 1 + mini Paper 3a)**
* **Option Part 1 EOT assessment**
* **February Synoptic Test (Fields + Nuclear 25 marks Multiple Choice)**
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| **Fourth half term: 23rd Feb to 27th March (Easter holidays)** |
| **KS / KS** | **MC / CBO** |
| 3.10.6.1 Imaging techniques |  | 3.6.2.1 Thermal energy transfer |  |
| 3.10.6.2 Half-life |  | 3.6.2.2 Ideal gases |  |
| 3.10.6.3 Gamma camera |  | 3.6.2.3 Molecular kinetic theory model |  |
| 3.10.6.4 Use of high-energy X-rays |  |  |  |
| 3.10.6.5 Use of radioactive implants |  |  |  |
| 3.10.6.6 Imaging comparisons |  |  |  |
| **Required practical 8: Investigation of Boyle's law (constant temperature) and Charles’s law (constant pressure) for a gas.** |  |  |  |
| Standard Assessments: * **Magnetic fields EOT assessment**
* Paper 2 mock
* Paper 3 mock
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| **Fifth half term: 13th April to 22nd May (May half term)** |
| **KS / KS** | **MC / CBO** |
| Paper 1 revision |
| Paper 2 revision |
| Paper 3 revision |
| Standard Assessments:* **FINAL EXAMS**
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