**Physics Curriculum Map Year 10**

| Half term | Topics to be covered | Overview of content | Assessment |
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| Advent 1.1 | P.1 Conservation and Dissipation of Energy | • Changes in energy stores<br>• Conservation of energy<br>• Energy and Work<br>• Gravitational potential energy store<br>• Kinetic energy store<br>• Energy and Efficiency<br>• Energy and Power | AP1: P1 |
| Advent 1.2 | P.2 Energy Transfers by Heating<br><br>P.3 Energy Resources | • Energy Transfer by conduction<br>• Infrared radiation<br>• Specific Heat Capacity<br>• Required Practical 1: Determine the Specific Heat Capacity of One or More Materials<br>• Heating and Insulating Buildings<br>• Required Practical 2: Investigate the effectiveness of different materials as thermal insulators<br>• Homework Project: Research project on how energy is generated via sun, wind, the Earth and fossil fuels<br>• Energy demands<br>• Big Energy Issues | Test: P2 and P3 |
| Lent 2.1 | P.4. Electric Circuits | • Static Electricity<br>• Current and Charge<br>• Potential Difference and Resistance | AP2: P1-4 |

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| | | • Required Practical 3: Investigate factors affecting the resistance of a circuit<br>• Component Characteristics<br>• Required Practical 4: Investigate the V-I characteristics of filament lamp, resistor, and diode<br>• Series Circuits<br>• Parallel Circuits | |
| Lent 2.2 | P.5. Electricity in the Home | • Alternating Current<br>• Cables and Plugs<br>• Electrical Power<br>• The National Grid<br>• Appliances and Efficiency | Test P5 |
| Pentecost 3.1 | P.7 Radioactivity | • Atoms and Radiation<br>• Models of the Atom<br>• Alpha, beta, and gamma radiation<br>• Activity and half-life<br>• Nuclear Radiation in Medicine<br>• Nuclear Fission<br>• Nuclear Fusion<br>• | Test P7 |
| Pentecost 3.2 | P.6 Molecules and Matter | • Density<br>• Required Practical 5: Make and record measurements to determine the densities of regular and irregular solids and liquids.<br>• States of Matter<br>• Internal Energy<br>• Specific Latent Heat<br>• Gas pressure, temperature, and volume | End of year 10 exam P1-P7<br><br>1 hour 45 minutes |

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| | P8 Forces in Balance | • Forces and Elasticity<br>• Required Practical 6: Describe the relationship between force and extension of a spring | |