

AUTUMN 1

<p style="text-align: center;">Energy</p> <p>Calculations on kinetic, elastic and gravitational energy. The relationship between work and power. Specific heat capacity, unwanted energy transfers and energy resources.</p>	<p>Prior Learning Pupils were introduced to Energy Stores & Transfers, and Energy Resources in Y7. Atomic structure is introduced in Y9 Chemistry, and Particle diagrams of Solids, liquids & Gases were explicitly taught in Y7.</p>
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AUTUMN 2

<p style="text-align: center;">Particle Model of Matter</p> <p>Particle theory, measuring density and internal energy calculations. The relationship between P & V.</p>	<p style="text-align: center;">Atomic Structure</p> <p>Structure of atoms.</p>	<p>Prior Learning Atomic Structure has been covered in early Y10 Chemistry. Particle diagrams of Solids, liquids & Gases were explicitly taught in Y7. Pupils learn to calculate Pressure.in Y8.</p>
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SPRING 1

<p style="text-align: center;">Atomic Structure</p> <p>Radioactivity and half life. Contamination and irradiation, medical physics.</p>	<p>Prior Learning Atomic Structure has been covered in early Y10 Chemistry. Particle diagrams of Solids, liquids & Gases were explicitly taught in Y7.</p>
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SPRING 2

<p style="text-align: center;">Atomic Structure</p> <p>Fission and Fusion</p>	<p style="text-align: center;">Electricity</p> <p>Static electricity, parallel and series circuits, current, voltage, resistance, Ohms Law.</p>	<p>Prior Learning Static Electricity is addressed in Y8. Circuits and the concept of current flowing and transferring energy is introduced in the Y8 Electricity topic. Students will also have had practical experience of measurement of voltage and current in Y9.</p>
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SUMMER 1

<p style="text-align: center;">Electricity</p> <p>Characteristics of components, electricity in the home, transmitting electricity.</p>	<p>Prior Learning Students have considered where domestic electricity comes from in Y7, and have learned basic circuit component symbols in Y8.</p>
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SUMMER 2

<p style="text-align: center;">Forces</p> <p>Scalars & vectors, distance-time graphs and speed-time graphs.</p>	<p>Prior Learning Pupils have learned about Contact and Non-contact forces in Y7, as well as calculating Speed, and Energy Transfer in Y9.</p>
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CAREERS LINKS

Engineering, data analyst, healthcare, aviation, defence, construction.

CHARACTER LINKS

Motivation, resilience, and teamwork (performance virtues). Confidence and determination Listening, critical thinking and problem solving (intellectual virtues). Evaluation of ideas and process and seeking improvement through better knowledge and techniques (intellectual virtues). Consideration and construction of moral and ethical arguments in Science (moral virtues).

KEY ASSESSMENT DATES

End of topic tests are completed in addition to exam assessments in Oct, Dec and April according to the KS4 assessment calendar.