

Subject	Year 10 Physics Content Autumn Term	How to support students' learning
Radioactivity	Summary of the concepts covered: <ul style="list-style-type: none"> <li>➤ Changes in the Nucleus</li> <li>➤ More about Alpha, Beta and Gamma Radiation</li> <li>➤ Activity and Half Life</li> </ul>	<p>Alpha, Beta and Gamma are the three types of radiation you need to know. Watch a video to recap: <a href="#">GCSE Physics - Alpha, Beta and Gamma Radiation #33 - YouTube</a></p> <p>Half life is an important quantity in physics. Read through this website and see the animation to show you what is meant by half life: <a href="#">Radioactive Half Life - Pass My Exams: Easy exam revision notes for GCSE Physics</a></p>
Radioactivity – Triple Content Only	Summary of the concepts covered: <ul style="list-style-type: none"> <li>➤ Nuclear Radiation – Medicine</li> <li>➤ Fission</li> <li>➤ Fusion</li> </ul>	<p>Read up about uses and risks of nuclear <a href="#">Irradiation - Uses and dangers of radiation - AQA - GCSE Physics (Single Science) Revision - AQA - BBC Bitesize</a></p> <p>Review your knowledge about fission by reading this website: <a href="#">Nuclear fission - Uses and hazards of radiation - GCSE Physics (Single Science) Revision - Other - BBC Bitesize</a></p> <p>Watch this video here about Nuclear Fusion: <a href="#">GCSE Physics - Nuclear Fusion #39 - YouTube</a></p>
Conservation and dissipation of energy (Part 2)	Summary of Concepts Covered: <ul style="list-style-type: none"> <li>➤ Energy and Work</li> <li>➤ Gravitational Potential Energy</li> <li>➤ Kinetic and Elastic Stores</li> <li>➤ Energy and Power</li> <li>➤ Specific Heat Capacity – Required Practical Task</li> </ul>	<p>This topic is the second section of conservation and dissipating of energy from year 9. The second half has been moved to year 10 as there are a variety of complex equations.</p> <p>Review the idea of energy transferred and work done by reading through the BBC bitesize website: <a href="#">Work, power and efficiency - Work, power and efficiency - AQA - GCSE Combined Science Revision - AQA Trilogy - BBC Bitesize</a></p> <p>Calculating gravitational potential and kinetic energy can be confusing, so watch this video here for some worked examples: <a href="#">P1 GPE and KE Multi step Calculations - YouTube</a></p> <p>You will revisit elastic potential energy later on in the year with Hooke's law. Review your knowledge by reading about elastic potential energy here: <a href="#">Elastic Potential Energy (1.1.5)   AQA GCSE Physics Revision Notes 2018   Save My Exams</a></p>

		<p>Energy and power is an important calculation, you would have covered this briefly in year 8 but now in GCSE you need to be able to use it in a variety of examples. Watch this video here: <a href="#">Work, Energy, and Power: Crash Course Physics #9 - YouTube</a></p> <p>You will have completed the required practical in lesson to determine the specific heat capacity of a material. Go through the key content again by watching this video: <a href="#">Specific Heat Capacity - GCSE Science Required Practical - YouTube</a></p>
Forces In Balance	<p>Summary of Concepts Covered:</p> <ul style="list-style-type: none"> <li>➤ Vectors and Scalars</li> <li>➤ Forces between Objects</li> <li>➤ Resultant Forces</li> <li>➤ The Parallelogram of Forces</li> <li>➤ Resolution of Forces</li> <li>➤ Centre of Mass</li> </ul>	<p>Vectors and scalars is a fundamental topic that is revisited again and again. Review them by reading through this website: <a href="#">Scalars and Vectors (physicsclassroom.com)</a></p> <p>You need to know about different types of forces, watch this video here: <a href="#">GCSE Physics - Contact and Non-Contact Forces #40 - YouTube</a></p> <p>Resultant forces link in with motion, to understand the basics reading through the BBC Bitesize website here where you will find loads of examples: <a href="#">Contact forces - Forces - Edexcel - GCSE Combined Science Revision - Edexcel - BBC Bitesize</a></p> <p>Don't forget to do the test at the end! : <a href="#">Forces test questions - Edexcel - GCSE Combined Science Revision - BBC Bitesize</a></p>
Moments and Gears - Triple Content Only	<p>Summary of Concepts Covered:</p> <ul style="list-style-type: none"> <li>➤ Moments</li> <li>➤ Moments and Gears</li> <li>➤ Centre of Mass Practical</li> </ul>	<p>Moments, levers and gears is triple content only. Review the work covered by reading the BBC Bitesize website: <a href="#">Gears - Moments, levers and gears - AQA - GCSE Physics (Single Science) Revision - AQA - BBC Bitesize</a></p> <p>And watch the video available: <a href="#">Moments, levers and gears - AQA - Video - GCSE Physics (Single Science) - BBC Bitesize</a></p> <p>Also, there is a small test to complete to assess your knowledge: <a href="#">Moments, levers and gears test questions - AQA - GCSE Physics (Single Science) Revision - BBC Bitesize</a></p> <p>Watch this video on completing the centre of mass practical: <a href="#">Centre of Mass and Gravity GCSE Physics Required Practical - YouTube</a></p>