

Subject	Year 10 Physics Content Autumn Term	How to support students' learning
Radioactivity	Summary of the concepts covered: <ul style="list-style-type: none"> ➤ Changes in the Nucleus ➤ More about Alpha, Beta and Gamma Radiation ➤ Activity and Half Life 	<p>Alpha, Beta and Gamma are the three types of radiation you need to know. Watch a video to recap: GCSE Physics - Alpha, Beta and Gamma Radiation #33 - YouTube</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: Radioactive Half Life - Pass My Exams: Easy exam revision notes for GCSE Physics</p>
Radioactivity – Triple Content Only	Summary of the concepts covered: <ul style="list-style-type: none"> ➤ Nuclear Radiation – Medicine ➤ Fission ➤ Fusion 	<p>Read up about uses and risks of nuclear Irradiation - Uses and dangers of radiation - AQA - GCSE Physics (Single Science) Revision - AQA - BBC Bitesize</p> <p>Review your knowledge about fission by reading this website: Nuclear fission - Uses and hazards of radiation - GCSE Physics (Single Science) Revision - Other - BBC Bitesize</p> <p>Watch this video here about Nuclear Fusion: GCSE Physics - Nuclear Fusion #39 - YouTube</p>
Conservation and dissipation of energy (Part 2)	Summary of Concepts Covered: <ul style="list-style-type: none"> ➤ Energy and Work ➤ Gravitational Potential Energy ➤ Kinetic and Elastic Stores ➤ Energy and Power ➤ Specific Heat Capacity – Required Practical Task 	<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: Work, power and efficiency - Work, power and efficiency - AQA - GCSE Combined Science Revision - AQA Trilogy - BBC Bitesize</p> <p>Calculating gravitational potential and kinetic energy can be confusing, so watch this video here for some worked examples: P1 GPE and KE Multi step Calculations - YouTube</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: Elastic Potential Energy (1.1.5) AQA GCSE Physics Revision Notes 2018 Save My Exams</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: Work, Energy, and Power: Crash Course Physics #9 - YouTube</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: Specific Heat Capacity - GCSE Science Required Practical - YouTube</p>
Forces In Balance	<p>Summary of Concepts Covered:</p> <ul style="list-style-type: none"> ➤ Vectors and Scalars ➤ Forces between Objects ➤ Resultant Forces ➤ The Parallelogram of Forces ➤ Resolution of Forces ➤ Centre of Mass 	<p>Vectors and scalars is a fundamental topic that is revisited again and again. Review them by reading through this website: Scalars and Vectors (physicsclassroom.com)</p> <p>You need to know about different types of forces, watch this video here: GCSE Physics - Contact and Non-Contact Forces #40 - YouTube</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: Contact forces - Forces - Edexcel - GCSE Combined Science Revision - Edexcel - BBC Bitesize</p> <p>Don't forget to do the test at the end! : Forces test questions - Edexcel - GCSE Combined Science Revision - BBC Bitesize</p>
Moments and Gears - Triple Content Only	<p>Summary of Concepts Covered:</p> <ul style="list-style-type: none"> ➤ Moments ➤ Moments and Gears ➤ Centre of Mass Practical 	<p>Moments, levers and gears is triple content only. Review the work covered by reading the BBC Bitesize website: Gears - Moments, levers and gears - AQA - GCSE Physics (Single Science) Revision - AQA - BBC Bitesize</p> <p>And watch the video available: Moments, levers and gears - AQA - Video - GCSE Physics (Single Science) - BBC Bitesize</p> <p>Also, there is a small test to complete to assess your knowledge: Moments, levers and gears test questions - AQA - GCSE Physics (Single Science) Revision - BBC Bitesize</p> <p>Watch this video on completing the centre of mass practical: Centre of Mass and Gravity GCSE Physics Required Practical - YouTube</p>