



Year 11 Curriculum Overview: Physics (Combined Science – Trilogy)



	Topics/ content outline:	Powerful Knowledge (key concepts, skills)	What will you be assessed on?	How can you help at home?
Autumn Term	<p>Energy (continued from Y10)</p> <p>Forces & Elasticity (aka Forces, Bending & Stretching)</p> <p>Y11 Electricity (Mains electricity)</p>	<p>Energy stores, the transfer of energy between stores and the conservation of energy. Work done & power. Efficiency. Energy resources – pros/cons of different resources</p> <p>Elastic & inelastic behaviour. The spring constant. Hooke's law</p> <p>Alternating/direct current/PD. Mains PD, frequency & max current. Safety features – earthing & fuses Transformers used to maximise transmission efficiency</p>	<p>Y9 topics "Motion", "Waves", "Electromagnetic Waves", & "Y9 Electricity" Y10 topics "Forces & Motion", "Atomic Structure & Radioactivity", "Energy", "Forces & Elasticity" & "Y11 Electricity"</p> <p>The most up-to-date listings re. what's on the tests will be on Showbie "Physics ALL Y11"</p>	<ul style="list-style-type: none"> - Question students to test their recall of the Knowledge Organisers ("KOs" or Checklists - Encourage students to turn KOs into fact cards - Encourage students to use fact cards properly - Encourage students to use the practice topic questions, or work on them together - Encourage students to follow the links to Bitesize or Free GCSE Science lessons & show them how to use them effectively eg turning content into a visual representation, pausing & rewinding where necessary. <p>Links, topic questions etc are available in the Showbie class "Physics ALL Y10".</p>
Spring Term	<p>Electromagnetism</p> <p>Particle model of matter</p>	<p>Induced & permanent magnets Magnetic fields around bar magnets, conducting wires and solenoids The motor effect & $F = BIl$</p> <p>Density. Measuring density. The nature of solids, liquids and gases – a particle model. Specific heat capacity & specific latent heat. Internal energy.</p>	<p>Y10 topics "Forces & Motion", "Energy" Y11 topics "Forces & Elasticity" & "Electromagnetism"</p> <p>The most up-to-date listings re. what's on the tests will be on Showbie "Physics ALL Y11"</p>	<ul style="list-style-type: none"> - Question students to test their recall of the Knowledge Organisers ("KOs" or Checklists - Encourage students to turn KOs into fact cards - Encourage students to use fact cards properly - Encourage students to use the practice topic questions, or work on them together - Encourage students to follow the links to Bitesize or Free GCSE Science lessons & show them how to use them effectively eg turning content into a visual representation, pausing & rewinding where necessary. <p>Links, topic questions etc are available in the Showbie class "Physics ALL Y10".</p>
Summer Term	<p>Revision including past paper practice.</p>	<p>Everything!</p>	<p>Assessment could cover any topic & will depend on strengths/weaknesses identified in revision work.</p>	<ul style="list-style-type: none"> - Question students to test their recall of the Knowledge Organisers ("KOs" or Checklists - Encourage students to turn KOs into fact cards - Encourage students to use fact cards properly - Encourage students to use the practice topic questions, or work on them together - Encourage students to follow the links to Bitesize or Free GCSE Science lessons & show them how to use them effectively eg turning content into a visual representation, pausing & rewinding where necessary. <p>Links, topic questions etc are available in the Showbie class "Physics ALL Y10".</p>



Year 11 Curriculum Overview: **Physics (Separate Science)**



	Topics/ content outline:	Powerful Knowledge (key concepts, skills)	What will you be assessed on?	How can you help at home?
Autumn Term	<p>Energy (continued from Y10)</p> <p>Forces & Elasticity (aka Forces, Bending & Stretching)</p> <p>Y11 Electricity (Mains electricity)</p> <p>Forces & Pressure</p> <p>Static Electricity</p>	<p>Energy stores, the transfer of energy between stores and the conservation of energy.</p> <p>Work done & power.</p> <p>Efficiency.</p> <p>Energy resources – pros/cons of different resources</p> <p>Elastic & inelastic behaviour. The spring constant. Hooke's law</p> <p>Alternating/direct current/PD.</p> <p>Mains PD, frequency & max current.</p> <p>Safety features – earthing & fuses</p> <p>Transformers used to maximise transmission efficiency</p> <p>Pressure at depth in a fluid. Atmospheric pressure. Upthrust.</p> <p>Electric fields & charges.</p>	<p>Y9 topics "Motion", "Waves", "Electromagnetic Waves", & "Y9 Electricity"</p> <p>Y10 topics "Forces & Motion", "Atomic Structure & Radioactivity", "Energy", "Forces & Elasticity" & "Y11 Electricity", "Forces & Pressure" & "Static Electricity"</p> <p>The most up-to-date listings re. what's on the tests will be on Showbie "Physics ALL Y11"</p>	<ul style="list-style-type: none"> - Question students to test their recall of the Knowledge Organisers ("KOs" or Checklists - Encourage students to turn KOs into fact cards - Encourage students to use fact cards properly - Encourage students to use the practice topic questions, or work on them together - Encourage students to follow the links to Bitesize or Free GCSE Science lessons & show them how to use them effectively eg turning content into a visual representation, pausing & rewinding where necessary. <p>Links, topic questions etc are available in the Showbie class "Physics ALL Y11".</p>
Spring Term	<p>Electromagnetism</p> <p>Particle model of matter</p> <p>Generators & Transformers</p> <p>Particles & Pressure</p>	<p>Induced & permanent magnets</p> <p>Magnetic fields around bar magnets, conducting wires and solenoids</p> <p>The motor effect & $F = BIl$</p> <p>Density. Measuring density.</p> <p>The nature of solids, liquids and gases – a particle model.</p> <p>Specific heat capacity & specific latent heat.</p> <p>Internal energy</p> <p>Electromagnetic induction: microphones, transformers and generators</p> <p>Pressure in gasses. $pV = \text{constant}$</p>	<p>Y10 topics "Forces & Motion", "Energy"</p> <p>Y11 topics "Forces & Elasticity", "Electromagnetism", "Generators & Transformers" & "Particles & Pressure".</p> <p>The most up-to-date listings re. what's on the tests will be on Showbie "Physics ALL Y11"</p>	<ul style="list-style-type: none"> - Question students to test their recall of the Knowledge Organisers ("KOs" or Checklists - Encourage students to turn KOs into fact cards - Encourage students to use fact cards properly - Encourage students to use the practice topic questions, or work on them together - Encourage students to follow the links to Bitesize or Free GCSE Science lessons & show them how to use them effectively eg turning content into a visual representation, pausing & rewinding where necessary. <p>Links, topic questions etc are available in the Showbie class "Physics ALL Y11".</p>
Summer Term	<p>Revision including past paper practice.</p>	<p>Everything</p>	<p>Assessment could cover any topic & will depend on strengths/weaknesses identified in revision work.</p>	<ul style="list-style-type: none"> - Question students to test their recall of the Knowledge Organisers ("KOs" or Checklists - Encourage students to turn KOs into fact cards - Encourage students to use fact cards properly - Encourage students to use the practice topic questions, or work on them together - Encourage students to follow the links to Bitesize or Free GCSE Science lessons & show them how to use them effectively eg turning content into a visual representation, pausing & rewinding where necessary. <p>Links, topic questions etc are available in the Showbie class "Physics ALL Y11".</p>