

# Year 10 Trilogy Science Curriculum (Physics)



**Holly Lodge**  
11–19 Science College

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Focus</b>	<p><b><u>Atomic structure</u></b></p> <ul style="list-style-type: none"> <li>• Structure of an atom</li> <li>• Development of an atom</li> <li>• Nuclear radiation</li> <li>• Radioactive decay</li> <li>• Half life</li> <li>• Nuclear Fission and Fusion</li> </ul>	<p><b><u>Forces</u></b></p> <ul style="list-style-type: none"> <li>• Vectors and scalars</li> <li>• Gravity</li> <li>• Resultant force</li> <li>• Work done</li> <li>• Elasticity and Hooke's law</li> <li>• Speed</li> </ul>	<p><b><u>Forces</u></b></p> <ul style="list-style-type: none"> <li>• Distance time relationships</li> <li>• Acceleration</li> <li>• Newton's 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> law</li> </ul>	<p><b><u>Forces</u></b></p> <ul style="list-style-type: none"> <li>• Momentum</li> <li>• Conservation of momentum</li> </ul> <p><b><u>Waves</u></b></p> <ul style="list-style-type: none"> <li>• Longitudinal and transverse waves</li> <li>• Reflection</li> </ul>	<p><b><u>Waves</u></b></p> <ul style="list-style-type: none"> <li>• Diffraction</li> <li>• Movement and travel of waves</li> </ul>	<p><b><u>Waves</u></b></p> <ul style="list-style-type: none"> <li>• Electromagnetic waves</li> <li>• Uses and dangers of EM waves</li> <li>• Radio and electrical circuits</li> </ul>
<b>Assessment</b>		Week beginning 1 <sup>st</sup> <b>November tests</b> and review sessions will take place covering all work covered so far this year. To include review questions covering Topic 1: Energy	Week beginning 4 <sup>th</sup> <b>January tests</b> and review sessions will take place covering all work covered so far this year. To include review questions covering Topic 2: Electricity	Week beginning 1 <sup>st</sup> <b>March tests</b> and review sessions will take place covering all work covered so far this year. To include review questions covering Topic 3: Particle model of matter	Week beginning 25 <sup>th</sup> <b>April tests</b> and review sessions will take place covering all work covered so far this year. To include review questions covering Topics 1,2&3	Week beginning 13 <sup>th</sup> <b>July Whole school Assessment</b> will take place covering all work covered in Year 9 & 10

# Year 10 Separate Science Curriculum (Physics)



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Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Focus</b>	<p><b>Energy:</b></p> <ul style="list-style-type: none"> <li>• Insulation</li> <li>• Pressure in gas</li> <li>• Increasing pressure</li> <li>• Changing the volume affects pressure</li> </ul> <p><b>Atomic structure</b></p> <ul style="list-style-type: none"> <li>• Structure of an atom</li> <li>• Development of an atom</li> <li>• Nuclear radiation</li> <li>• Radioactive decay</li> <li>• Half life</li> <li>• Nuclear Fission and Fusion</li> </ul>	<p><b>Forces</b></p> <ul style="list-style-type: none"> <li>• Vectors and scalars</li> <li>• Gravity</li> <li>• Resultant force</li> <li>• Work done</li> <li>• Elasticity and Hooke's law</li> <li>• Speed</li> <li>• Distance time relationships</li> <li>• Acceleration</li> <li>• Newton's 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> law</li> </ul>	<p><b>Forces</b></p> <ul style="list-style-type: none"> <li>• Stopping distances</li> <li>• Momentum</li> <li>• Conservation of momentum</li> <li>• Moments and Equilibrium</li> <li>• Moment, Levers and gears</li> <li>• Pressure</li> <li>• Atmospheric pressure</li> <li>• Conservation of momentum</li> <li>• Changes in Momentum</li> </ul> <p><b>Waves</b></p> <ul style="list-style-type: none"> <li>• Longitudinal and transverse waves</li> <li>• Reflection</li> </ul>	<p><b>Waves</b></p> <ul style="list-style-type: none"> <li>• Refraction</li> <li>• Electromagnetic waves</li> <li>• Uses and dangers of Electromagnetic waves</li> <li>• Radio and electrical circuits</li> <li>• How we hear sound</li> <li>• Uses of waves in imaging</li> <li>• Concave and Convex lenses</li> </ul>	<p><b>Waves</b></p> <ul style="list-style-type: none"> <li>• How we see colour</li> <li>• The structure of the eye</li> <li>• Emission and absorption of infrared</li> <li>• Blackbody radiation</li> </ul> <p>Thermal equilibrium</p>	<p><b>Magnets</b></p> <ul style="list-style-type: none"> <li>• Magnets</li> <li>• Solenoid</li> <li>• Electromagnets</li> <li>• The motor effect</li> </ul>
<b>Assessment</b>		<p>Week beginning 1<sup>st</sup> <b>November tests</b> and review sessions will take place covering all work covered so far this year. To include review questions covering Topic 1: Energy</p>	<p>Week beginning 4<sup>th</sup> <b>February tests</b> and review sessions will take place covering all work covered so far this year. To include review questions covering Topic 2: Electricity</p>	<p>Week beginning 1<sup>st</sup> <b>March tests</b> and review sessions will take place covering all work covered so far this year. To include review questions covering Topic 3: Particle model of matter</p>	<p>Week beginning 25<sup>th</sup> April tests and review sessions will take place covering all work covered so far this year. To include review questions covering Topics 1,2&amp;3</p>	<p>Week beginning 13<sup>th</sup> <b>July Whole school Assessment</b> will take place covering all work covered in Year 9 &amp; 10</p>

# Year 11 Trilogy Science Curriculum (Physics)



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Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Focus</b>	<p><b><u>Electricity</u></b></p> <ul style="list-style-type: none"> <li>• Circuit symbols and current</li> <li>• Current and voltage relationships</li> <li>• IV Characteristics</li> <li>• Parallel and series circuits</li> <li>• Resistance</li> <li>• Mains electricity</li> </ul>	<p><b><u>Electricity</u></b></p> <ul style="list-style-type: none"> <li>• Power</li> <li>• Energy transfer</li> <li>• The national grid</li> </ul>	<p><b><u>Energy &amp; Particle model</u></b></p> <ul style="list-style-type: none"> <li>• Revision and exam practice</li> </ul>	<p><b><u>Atomic structure &amp; Forces</u></b></p> <ul style="list-style-type: none"> <li>• Revision and exam practice</li> </ul>	<p><b><u>Waves &amp; Electricity</u></b></p> <ul style="list-style-type: none"> <li>• Revision and exam practice</li> </ul>	
<b>Assessment</b>	<p>Week beginning 18<sup>th</sup> <b>October</b> tests and review sessions will covering all work covered so far this year. To include review questions covering Forces</p>	<p><b>Whole school assessment week starting 22<sup>nd</sup> November.</b> Tests to cover all work in P1,P2,P3 and P4 <b>(Paper1 Content)</b></p>	<p>Week beginning 14<sup>th</sup> <b>February</b> tests and review sessions covering all work covered so far this year. To include review questions covering Forces and Magnets</p>	<p><b>Whole school assessment week starting 7<sup>th</sup> March.</b> Tests to cover all work in P5,P6 and P7) <b>(Paper2 Content)</b></p>	<p><b>GCSE Assessments</b></p>	<p><b>GCSE Assessments</b></p>

# Year 11 Separate Science Curriculum (Physics)



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Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Focus</b>	<p><b>Magnets</b></p> <ul style="list-style-type: none"> <li>• Electromagnetic induction</li> <li>• The generator effect</li> <li>• Transformers</li> </ul> <p><b>Electricity</b></p> <ul style="list-style-type: none"> <li>• Circuit symbols and current</li> <li>• Current and voltage relationships</li> <li>• IV Characteristics</li> <li>• Parallel and series circuits</li> <li>• Resistance</li> <li>• Mains electricity</li> </ul>	<p><b>Electricity</b></p> <ul style="list-style-type: none"> <li>• Power</li> <li>• Energy transfer</li> <li>• The national grid</li> </ul> <p><b>Electricity</b></p> <ul style="list-style-type: none"> <li>• Formation of the solar system</li> <li>• Lifecycle of the star</li> <li>• Planets</li> <li>• Red shift and Doppler effect</li> <li>• Expanding universe</li> <li>• Elements in space</li> </ul>	<p><b>Energy &amp; Particle model</b></p> <ul style="list-style-type: none"> <li>• Revision and exam practice</li> </ul>	<p><b>Atomic structure &amp; Forces</b></p> <ul style="list-style-type: none"> <li>• Revision and exam practice</li> </ul>	<p><b>Waves &amp; Electricity</b></p> <ul style="list-style-type: none"> <li>• Revision and exam practice</li> </ul>	
<b>Assessment</b>	<p>Week beginning 18<sup>th</sup> <b>October</b> tests and review sessions will covering all work covered so far this year. To include review questions covering Forces</p>	<p><b>Whole school assessment week starting 22<sup>nd</sup> November.</b> Tests to cover all work in P1,P2,P3 and P4 <b>(Paper1 Content)</b></p>	<p>Week beginning 14<sup>th</sup> <b>February</b> tests and review sessions covering all work covered so far this year. To include review questions covering Forces and Magnets</p>	<p><b>Whole school assessment week starting 7<sup>th</sup> March.</b> Tests to cover all work in P5,P6 and P7) <b>(Paper2 Content)</b></p>	<p><b>GCSE Assessments</b></p>	<p><b>GCSE Assessments</b></p>