

# Curriculum Overview

Subject: Physics

Year Group: 10



Year 10 & 11 Physics is **academically ambitious**. Throughout Key Stage 4 (KS4) pupils will extend the **powerful knowledge** already developed in KS3. Each Lesson has a particular **LORIC** and **Career focus** reflecting the school's improvement plan.

With a focus on Key Concepts, Apparatus and Techniques across all topics pupils will develop the **subject disciplinary knowledge** needed to scrutinise the world around them and communicate their findings effectively. Pupils will follow the AQA GCSE Physics specification and are required to undertake 10 required practical activities, developing analytical and rational thought processes through planning, experimentation and reflection. Developing extended science writing through the use of long written questions (LWQ) has been identified as a particular area of development. **Interleaving questions** at the beginning of every lesson allow pupils to spend time recalling previous learning so that **practise** makes permanent.

TERM 1	TERM 2	TERM 3
<p><b>KNOWLEDGE/SKILLS</b></p> <p><b>P5- Electricity in the home</b> (Plugs, power, appliances and efficiency)</p> <p><b>P6 -Molecules and matter</b> (Density, Change of states, Specific latent heat).</p> <p><b>P7 – Radioactivity</b> (Density of material, nuclear decay and half-life, Fission and fusion dangers and uses of radiation)</p> <p>Skills: • AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures.</p>	<p><b>KNOWLEDGE/SKILLS</b></p> <p><b>P8- Force in balance</b> (Vectors and scalars, levers, centre of mass,)</p> <p><b>P9- Motion</b> (Speed, distance, velocity, graph skills)</p> <p><b>P10- Forces and motion</b> (Acceleration, terminal velocity, momentum, extension, impact and safety)</p> <p>Skills: • AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures.</p>	<p><b>KNOWLEDGE/SKILLS</b></p> <p><b>P12- Wave properties</b> (reflection, refraction, nature of waves, uses of ultrasound, seismic)</p> <p>Skills: • AO1: Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures.</p>

<ul style="list-style-type: none"> <li>• AO2: Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and procedures.</li> <li>• AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures.</li> </ul>	<ul style="list-style-type: none"> <li>• AO2: Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and procedures.</li> <li>• AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures.</li> </ul>	<ul style="list-style-type: none"> <li>• AO2: Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and procedures.</li> <li>• AO3: Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures.</li> </ul>
<p><b>KEY ASSESSMENTS</b></p> <p>Half term 1: Topic 5 test</p> <p>Half term 2: EOT test</p>	<p><b>KEY ASSESSMENTS</b></p> <p>Half term 1: Topic 7/8 test,</p> <p>Half term 2: EOT test</p>	<p><b>KEY ASSESSMENTS</b></p> <p>Half term 1: PPE paper 1</p> <p>Half term 2: QLA assessment.</p>
<p>Extended reading suggestions and external resources:</p> <p>KS4 Bitesize Science <a href="https://www.bbc.co.uk/bitesize/subjects/zpm6fg8">https://www.bbc.co.uk/bitesize/subjects/zpm6fg8</a></p> <p>Oak National Academy Lessons <a href="https://classroom.thenational.academy/subjects-by-key-stage/key-stage-4/subjects/physics">https://classroom.thenational.academy/subjects-by-key-stage/key-stage-4/subjects/physics</a></p> <p>Chase High Youtube Playlists <a href="https://www.youtube.com/channel/UCSK4ImJfi5sPH4UBp7cZtyQ">https://www.youtube.com/channel/UCSK4ImJfi5sPH4UBp7cZtyQ</a></p> <p>We actively encourage pupils to read and research about the wider Scientific world- Planet Earth and Perfect Planet both on BBC iPlayer are examples of where pupils can engage with Science from the safety and comfort of their own homes.</p>		