

What is Parkside aiming to achieve through its Engineering curriculum?

- To enable learners to be able to problem solve confidently.
- Use maths and sciences to develop existing designs to solve every day problems.
- Students to learn how to design and communicate their designs, they will learn the design process along with engineer's drawings and what's involved within industry.

## <u>Parkside School Subject Curriculum Plan</u> <u>Subject: Engineering – KS4</u>



Year	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Year 10	<ul> <li>Half Term 1</li> <li>Baseline Unit 3 assessment paper from previous summer.</li> <li>P4P using Pareto.</li> <li>Unit 3 Theory AC1.3. Explain how environmental issues affect engineering applications</li> </ul>	<ul> <li>Unit 3 Theory</li> <li>AC3.2.</li> <li>AC4.1.</li> <li>AC2.1 &amp; AC 2.3</li> <li>A.C.4.4.</li> <li>A.C.3.1</li> <li>How materials are removed, shaped, manipulated &amp; assembled.</li> </ul>	<ul> <li>Half Term 3</li> <li>Unit 3 Theory</li> <li>AC2.1</li> <li>AC 2.3</li> <li>Select materials for a purpose.</li> <li>Properties &amp; how this material is tested in school and industry</li> <li>Mock exam</li> </ul>	<ul> <li>Unit 3 Theory</li> <li>AC2.1</li> <li>AC 2.2</li> <li>AC2.3</li> <li>Select materials for a purpose.</li> <li>Properties &amp; how this material is tested in school and industry</li> <li>Structural, mechanical</li> </ul>	<ul> <li>Unit 3 Theory</li> <li>AC1.1</li> <li>AC3.1</li> <li>AC3.2</li> <li>AC4.1 - 4.4.</li> <li>Engineering developments: structural, mechanical &amp; electronic.</li> <li>Engineering processes</li> </ul>	<ul> <li>Unit 3 – revision</li> <li>Preparation for Exam –</li> <li>revision based on QLA.</li> <li>Exam Technique / practice</li> <li>Mock Unit 2</li> <li>LO2 – Be able to plan engineering production</li> <li>LO3 – Be able to use</li> </ul>
	<ul> <li>AC2.1. Describe properties required of materials for engineering products</li> <li>End of term assessment (covering all theory topics)</li> <li>Unit 1 &amp; 2</li> <li>Drawing skills practice Baseline Unit 2 practical</li> </ul>	<ul> <li>Maths elements</li> <li>Selection of materials for a purpose.</li> <li>Manufacturing methods.</li> <li>CAD, CAM &amp; CNC</li> <li>End of term assessment (covering all theory topics)</li> <li>Unit 1 &amp; 2</li> </ul>	Unit 1 (Coursework) <ul> <li>AC1.1</li> <li>AC1.2</li> <li>AC1.3</li> <li>AC 2.2, AC 3.1 &amp; AC 3.2</li> </ul> <li>Re-design a phone charger based on plans from Derry</li>	<ul> <li>&amp; electronic products</li> <li>&amp; match them to the material properties and state why</li> <li>Explore the effects engineers have had within the home, industry and society. Case studies and analysis.</li> </ul>	<ul> <li>&amp; applications for material removal/shaping.</li> <li>Engineering maths</li> <li>Technical drawing</li> <li>Analyse engineering problems &amp; propose solutions.</li> <li>Unit 3 – revision</li> <li>Preparation for Exam –</li> </ul>	engineering equipment - LO4 –Be able to use engineering processes
	assessment.	<ul> <li>Drawing skills practice Baseline Unit 2 practical assessment.</li> </ul>	electricals. - Unit 1 coursework	End of term assessment (covering all theory topics) Unit 1 (Coursework) AC1.1 AC1.2 AC1.3 AC 2.2, AC 3.1 & AC 3.2 Derry electricals.	<ul> <li>revision based on QLA.</li> <li>Exam Technique / practice</li> <li>Mock Unit 2 <ul> <li>LO1 – Be able to interpret engineering information</li> <li>LO2 – Be able to plan engineering production</li> </ul> </li> </ul>	

## <u>Parkside School Subject Curriculum Plan</u> <u>Subject: Engineering – KS4</u>



Year	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
11	Unit 3	Unit 3	Unit 3	Unit 3	Unit 3	Unit 3
	Recap revision for those	Mock exam preparation	Exam – January for those	Exam Preparation & Mock	Exam preparation based on	Exam preparation based on
	entered to Jan exam	Mock exam – end of term	entered	Exam	QLA	QLA
	<b>Unit 2</b> Completion of controlled assessment AC1.1-2.2	<b>Unit 2</b> Completion of controlled assessment AC1.1 – 2.2	Complete any outstanding work for Unit 1 & 2. <b>(Make</b> <b>improvements)</b>			