

Design & Technology - Curriculum Overview

Below is a curriculum overview, showing what is taught at each stage of the year.

	Cycle 1	Cycle 2	Cycle 3
Year 7	<p>Topic: Design & Technology – Basic Designing and Making Skills. Product Design.</p> <p>Overview: Health & Safety - Workshop rules. Basic hand tools & machines. Tower of Hanoi project. Photo Frame & Ball bearing game. Cake Slice.</p> <p>Mid-Cycle Assessment: Online Baseline Assessment (1)</p> <p>Assessment Week: End of rotation – basic Design & Technology online test (1).</p>	<p>Topic: Design & Technology – Basic Designing and Making Skills. Product Design 2</p> <p>Overview: Woods – Plywood & dowel. Plastics – Acrylic & polystyrene. Strip Heater. Vacuum former. Sustainability & the Environment.</p> <p>Mid-Cycle Assessment: Online Baseline Assessment (2).</p> <p>Assessment Week: End of rotation – basic Design & Technology online test (2).</p>	<p>Topic: Design & Technology – Basic Designing and Making skills. CAD/CAM</p> <p>Overview: Introduction to 3D printing. Understanding 3D Printing. 2D & 3D Sketching Skills. Turning 2D into 3D. Perspective drawing.</p> <p>Mid-Cycle Assessment: Online Baseline Assessment.</p> <p>Assessment Week: End of rotation – basic Design & Technology online test (3).</p>
	Cycle 1	Cycle 2	Cycle 3
Year 8	<p>Topic: Design & Technology – intermediate Designing and Making Skills.</p> <p>Overview: Health & Safety. Basic hand tools & machines. Spatula project. Wooden Cross project.</p> <p>Assessment Week: End of rotation – basic Design & Technology online test (1).</p>	<p>Topic: Design & Technology – intermediate Designing and Making Skills.</p> <p>Overview: Circuit Wizard. Fuse tester project. Circuit construction principles. Timing systems. Programming.</p> <p>Assessment Week: End of rotation – basic Design & Technology online test (2).</p>	<p>Topic: Design & Technology – intermediate Designing and Making Skills.</p> <p>Overview: Mobile phone holder. Product Comparison. Natural structures and systems. Geometric shapes in nature. Constructing natural forms.</p> <p>Assessment Week: End of rotation – basic Design & Technology online test (3).</p>

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Year 9	<p>Topic: Hardwoods, Softwoods and Manufactured boards. Nail Puzzle, Cross Puzzle and</p> <p>Overview: Sources & Origins. Timbers - Working with timbers. Commercial manufacturing. Industry & Enterprise. Sustainability and the Environment.</p> <p>Assessment Week: Unit 5b assessment – Timber Based Materials</p>	<p>Topic: Electronic Systems & Circuit Wizard. Fuse tester project.</p> <p>Overview: Sources, origins and properties. Working with Electronics. Manufacturing & Finishing. People, Culture and Society. Production techniques and systems.</p> <p>Assessment Week: Unit 5f assessment – Electronic systems.</p>	<p>Topic: Ferrous metals, Non-ferrous metals and Alloys.</p> <p>Overview: Sources, origins and properties. Working with metal based materials. Commercial manufacturing, surface treatments and finishes. Informing design decisions.</p> <p>Mid-Cycle Assessment: Unit 1 – New and Emerging Technologies.</p> <p>Assessment Week: Unit 5c assessment – Metals.</p>

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Year 10	<p>Topic: Mechanism + Forces & Stresses. Complete the Automata Project.</p> <p>Overview: Motion & Movement. Mechanical Devices. Energy generation. Energy Storage. Modern Materials Smart Materials.</p> <p>Assessment Week: Unit 2 – Energy, materials, systems and devices.</p>	<p>Topic: Common Specialist Technical Principles. Complete the Pizza cutter project.</p> <p>Overview: Forces & Stresses Improving functionality Ecological and social footprint The 6 R's Scales of Production. Composite materials. Systems approach to designing.</p> <p>Assessment Week: Unit 4 assessment – Common Specialist Technical Principles.</p>	<p>Topic: Electronic Systems – Systems & control</p> <p>Overview: Systems approach to designing. Electronic systems processing. Circuit wizard. Simple Circuits. Symbols & Diagrams. Electronic components. Designers & Companies. The work of others.</p> <p>Assessment Week: Unit 6 assessment – Designing principles.</p>

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Year 11	<p>Topic: NEA and November Mock Examination. Unit 7 – Making Principles.</p> <p>Overview: Complete sections 1-3 of Non Examination Assessment. Selection of materials and components. Tolerances. Material Management. Tools, equipment, techniques and finishes. Surface treatments and finishes.</p> <p>Mid-Cycle Assessment: PG Online – Mock Paper 1</p> <p>Assessment Week: November Mock Written Examination – 2hrs</p>	<p>Topic: NEA and Easter Mock. Unit 1-7 Revision.</p> <p>Overview: Complete sections 4-6 of the NEA Units 1-7 PG Online Units NEA Deadline – 7th May</p> <p>Mid-Cycle Assessment: PG Online – Mock Paper 2.</p> <p>Assessment Week: Easter Mock Written Examination – 2hrs</p>	<p>Topic: 2 hr Written Examination</p> <p>Overview: 2hr Written Examination. 100 mark paper Section A – 20 Marks Section B – 30 Marks Section C – 50 Marks</p> <p>Mid-Cycle Assessment: PG Online – Mock paper 3.</p> <p>Assessment Week: Written Examination – last week in May.</p>