Curriculum Map

Year 10 Design & Technology

Year 10 students will develop independence and understanding of the: • Core Technical principles • Specialist Technical principles • Designing and making principles



ASPIRE #BeMore	(A)UTHENTI	C (S	(S)ACRED		(I)NSPIRATIONA	AL (R)E	(R)ESILIENT	
Y10 Design & Technology								
Advent 1	Advent 2	DIRT & Summative 1) Materials test	Lent 1	Lent 2	DIRT & Summative	Pentecost 1	Pentecost 2	Review of learning DIRT & summative
Toolbox Project	Toolbox Project	 Industrial processes Geometry and measures Final Practical Outcome 	Mock NEA	Mock NEA	 Generating ideas Developing ideas 	Testing	NEA live	Summative assessment of Section A
Unit intent:	Unit intent:	Disciplinary knowledge	Unit intent:	Unit intent:	Disciplinary knowledge	Unit intent:	Unit intent:	Disciplinary knowledge
For their first GCSE projects, students will learn how to manufacture the Joiners Toolbox. This introduce a range of complex joints to students. This project aims to introduce: Manufacturing a range of joints using correct production aids, tools and machinery, reading orthographic drawings independently, working to close tolerances, understanding quality control, using templates	This half term sees the continuation of the Joiners Toolbox project. Students learn to use CAM to create moulds for casting. They then cast pewter to create a badge for their toolbox. Students learn about permanent and non- permanent joining techniques and assemble the toolbox. select appropriate finishes for the parts of the toolbox. This project will see a mixture of practical and	Core technical principles Designing and making principles Specialist technical principles CEST The Common Good Option for the Poor Peace Creation and Environment The Dignity of Work and Participation	During their second term in D&T pupils will learn how to respond to a contextual challenge. They will be encouraged to explore the context and write their own design brief. One of the main focuses this term will be an introduction to industry- based computer software Fusion 360 which will enable pupils to design and develop a range of creative and innovative ideas. Core technical and specialist technical	cond term vill learn d to a illenge. couraged couraged context ownDuring this term pupils will be taught how to create manufacturing specifications which they will use to produce a final OAD model.Core technical principles Designing and making principlesIn preparation for beginning the NI students will tes of materials and processes incluin focuses in focuses in focuses in focuses in an 360 ble pupils delivered through theory lessons alongside the mock NEA, to ensure pupils have completed twe and as.Core technical principles principlesIn preparation for beginning the NI students will tes of materials and principlesCore technical and specialist technical principles will be ter mock NEA, to ensure pupils have completed the course of study by as.Core technical principles core technical and specialist technical principles will be common Good Option for the Poor Peace Creation and Environment The Dignity of Work and Participation. Cutting and woods, poly metals1 and urindCore technical and specialist technical principles will be ter delivered through theory the course of study by as.Core technical and specialist technical principles will be the course of study by the course of study by the course of study by the student of the NEA.These skills will documented an as a reflection to the NEA.	 In preparation for beginning the NEA, students will test a range of materials and processes including: Cutting and shaping woods, polymers and metals Line bending and vacuum forming polymers Casting metals Using CAD and CAM These skills will be documented and will act as a reflection tool during the NEA. 	Students will start their NEA during this half term. Designing and making principles Demonstrate skills in applying the knowledge to: • Researching and investigating (A) • Writing a design brief (B) • Generating ideas (C) • Developing ideas (D) • Realizing an idea (E) • Reflecting and evaluating (F) Section A will be completed during this half term: 10 marks	Core technical principles Designing and making principles Specialist technical principles CST Subsidiarity: Students are given 3 different contexts to choose from Options for the poor: considering the needs of a range of clients including the poor and the vulnerable Stewardship of creation	
control, using templates to manufacture organically shaped parts and reading orthographic drawings. This project will see a mixture of practical and theory lessons.	mixture of practical and theory lessons.	Careers BBC bitesize lesson dedicated to careers in the creative industry	specialist technical principles will be delivered through theory lessons alongside the mock NEA, to ensure pupils have completed the course of study by Christmas of Y11		Careers Discussion about careers in CAD/CAM and industry		 Investigating a contextual challenge Exploring a design opportunity Identifying a client with specific wants and needs The work of other designers to influence design ideas Research into materials and their properties 	Careers Discussions into how the work produced during the NEA would allow students to gain valuable skills for future careers