

Y10 GCSE Edexcel Design & Technology Mixed Materials

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topics	<p>Unit 1 – Structure Project</p> <p>A01 Investigate</p> <ul style="list-style-type: none"> Research – Architecture, image inspiration Designers of 20th & 21st Century User Profile Product Analysis Material & Component Categories/ Properties/ origins Smart Materials Specification <p>A02 Design</p> <ul style="list-style-type: none"> Communication of Ideas: Drawing skills including isometric, perspective, exploded. Initial Designs Modelling Final Design <p>A03 Technical skills</p> <ul style="list-style-type: none"> Making patterns/ templates Joining Skills including fastenings and reinforcement techniques Experimenting with different materials and components Hand skills <p>A04 Test and Evaluate</p> <ul style="list-style-type: none"> Identify strengths and weaknesses of Design development 	<p>Unit 2 – Surface Decoration Structure Project</p> <p>A01 Investigate</p> <ul style="list-style-type: none"> Surface Treatments Methods of applying decoration Sizing and Fit-Ergonomics/ Anthropometrics Issues related to Design Constraints <p>A02 Design</p> <ul style="list-style-type: none"> Design Placement Quality Control & Assurance-creating Flow charts <p>A03 Technical Skills</p> <ul style="list-style-type: none"> CAD CAM Consider methods of manufacture Use of specialist machinery Cutting skills Machine Skills Finishing skills <p>A04 Test and Evaluate</p> <ul style="list-style-type: none"> Identify strengths and weaknesses of Product development <p>A04 Test and Evaluate</p> <ul style="list-style-type: none"> Identify strengths and weaknesses of final outcome Test suitability against Product Specification 	<p>Unit 3 – Interactive Game/ Toy</p> <p>A01 Investigate</p> <ul style="list-style-type: none"> Existing Interactive Games/ Toy Analysis Electronic Systems Programmable components Market Research Research SMES Issues-sustainable materials Plan of Manufacture/ Technical Specification <p>A02 Design</p> <ul style="list-style-type: none"> Design Development Design Contexts New and Emerging technologies Collaborative Design Process 	<p>Unit 4 – Interactive Game/ Toy</p> <p>A03 Technical Skills</p> <ul style="list-style-type: none"> CAD CAM Digital Portfolio Construction of end product Mechanical devices Production of suitable packaging-instructions Scales of Production Energy Sources <p>A04 Test and Evaluate</p> <ul style="list-style-type: none"> Test and evaluate quality of outcome 	<p>Unit 5 – Contextual Challenge Practice</p> <p>A01 Investigate</p> <ul style="list-style-type: none"> Research Methodology Methods of gathering data responding to feedback How selection of materials is influenced Stock Control Calculating materials <p>A02 Design</p> <ul style="list-style-type: none"> Interpret data Design Ideas Design Analysis Gathering of feedback Analysis of Data 	<p>GCSE NEA</p> <p>A01 Investigate</p> <ul style="list-style-type: none"> Respond to Context Identifying User Needs Investigate Existing Products Market Research Research of Materials Existing Product Analysis Research into Context Analysis of materials Sustainability Issues Product Specification
		<p>Knowledge Checks</p> <p>Peer Assessment</p> <p>Self-assessment</p> <p>End of Unit Assessment</p>	<p>Knowledge Checks</p> <p>Peer Assessment</p> <p>Self-assessment</p> <p>Exam</p>	<p>Knowledge Checks</p> <p>Peer Assessment</p> <p>Self-assessment</p> <p>End of Unit Assessment</p>	<p>Knowledge Checks</p> <p>Peer Assessment</p> <p>Self-assessment</p> <p>End of Unit Assessment</p>	<p>Knowledge Checks</p> <p>Peer Assessment</p> <p>Self-assessment</p> <p>End of Unit Assessment</p>

Arts Mark	Designer Research Drawing Skills Designing	CAD Drawing	CAD Drawing		Designing	
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Building on prior learning	Work in Year 10 will build on knowledge and skills gained at KS3 Design and Technology Advancing Skills in techniques and processes and knowledge of materials and their properties.
Enrichment within the Curriculum	Designer/ Design Movement Links
Extracurricular opportunities	Weekly upskilling workshop (Rotation around the C Block workshops moving to where Key Machinery is positioned for the skill being taught)
Positive impacting on personal development (SMSC)	SMSC: Reasons for looking for substitute materials, impact on the environment, recycling Building higher level practical skills. Promoting independence during practical lessons.
Preparing for the next stage of education	Key skills learned will be built on in Year 10 Course content will be completed by the end of Year 10 preparing pupils for both the coursework and exam element of their GCSE.
Ways to support your child's learning	Praise for effort rather than being 'clever' shows them that by working hard they can always improve. Encourage students to check SPACE for homework tasks and look for helpful resources in the DT Folder > KS4> Year10 DT.
Visits and trips Websites / books /papers / magazines TV/Films Blogs/ podcasts	BBC Bitesize for revision of class topics. Promote design and manufacture of own products at home, hand crafts such as knitting, crochet, wood carving etc which can be used to compliment class skills. Stacy Dooley documentaries on how products are wrecking the Earth Any BBC I player series related to The War on Plastics. Recommend material stores for students to visit. Recommend magazines to keep abreast of current trends. Read and research 20 th / 21 st Century design movements linked to their areas of specialism.