

Subject Long Term Plan Year 10 Design Technology 2021-22

Temperance Term

W/C	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	HALF TERM
Topic	Transition Project – Jewellery Box Design Like...key 16 designers					Drawing Techniques Exam Techniques		
Core	<p>Introduction to the workshop and team building with a focus on Wood</p> <ul style="list-style-type: none"> Explain and apply the Health and Safety at Work Act to a school workshop: Read the act, complete risk assessments throughout the topic Investigate how to make a dowel joint; two methods. Learn how to record this investigation into the sketchbook for: future reference; to identify how to improve precision Make a simple pine box, using a standard design, with precision Record stages of production and learn how to use QA and QC throughout; self (QA) and peer (QC) assessment Explore finishing processes for wood: rough and fine sanding; oiling; varnishing; painting (primer and gloss); wax Explore the development of a lid and the interior of the box: hinges, lift odd, pivot, felt lining... Technical language recorded and tested through homework <p>Research and learn to design like 10 of the Essential 16 Designers</p> <ul style="list-style-type: none"> Learn how to use the sketchbook: presenting work from KS3 and the <i>Summer Task</i> Each week focus on two new designers from the AQA spec; history, products and designing in the style of them for new products Experience Exam style questions about the designers Support lesson work with homework 					<p>Developing strong visual communication techniques</p> <ul style="list-style-type: none"> Orthographic projection Techsoft 2d Design (2d CAD) Design Spark Mechanical (3d CAD) Toning, texturing and Line Type Techniques 1 point and 2-point perspective <p>Learning how to analyse and answer exam questions</p> <ul style="list-style-type: none"> Introduction and exploration of the 7-step exam approach Short exam questions focussing on wood Mid exam questions involving drawing Long answer evaluation questions focusing on application of wood/H&S 		
Challenge	<p>Style of lid and fitting out the interior of the jewellery box</p> <p>Homework: 1. Combining the styles of 2 designers and developing own unique style 2. Investigation and quiz on wood working keywords</p>					<p>Complexity of the drawing and colour produced</p> <p>Homework: 1. Independent drawing worksheets 2. Two mid length written exam questions</p>		
Assessment	TVF, SA, online quizzes TA and online quizzes					SA and TVF		

W/C	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	CHRISTMAS
Topic	Investigating Wood Joints Introduction to the 400 DT Keywords		Picture Frame Project Woodworking DT Keywords completed				
Core	<p>Learn how to gather research for completing a practical activity</p> <ul style="list-style-type: none"> Make 3 wood joints (corner halving, cross halving and corner dovetail) Learn how to assess accuracy and methods for improving this Experience remaking the wood joints to demonstrate mastery Continue to develop the use of the sketchbook for recording the investigation with the addition applying the wood joints to different situations e.g. a picture frame <p>How to research and record the definitions of the 400 Keywords</p> <ul style="list-style-type: none"> Use of an Excel spreadsheet How to research keywords: definitions, website references and video links Revision techniques to learn definitions: keyword book; flash cards; writing exam questions Routine of learning information 		<p>Introduction to the traditional, linear, GCSE Design Process to apply woodworking knowledge and to design for a real client</p> <ul style="list-style-type: none"> Create a full design folder to meet the requirements of the GCSE NEA 23 Assessment Criteria; combine ACs where possible: use templates to introduce and encourage personalisation of the work to develop own style; refer to past GCSE folders Designing for a client: interview, analysis of requests and creating a specification which meets their brief Introduction to orthographic projection: standard items drawn on paper; using Techsoft 2d Design; orthographic of the final picture frame (include balloon referencing and parts lists) Apply the knowledge recorded from the 16 Essential Designer investigation to create a retro picture frame Applying the woodworking knowledge from the wood joint investigations to design a well made and original picture frame: encourage development of wood joints through own investigations, for example, a stylised dovetail joint Introduction to prototyping of ideas: sketching ideas, modelling ideas and using resistant materials to make a final prototype Introduction to woodworking machinery: hand sander (palm and belt), router, bag press etc Testing, reviewing and improving a prototype with a client <p>Completing Wood Keywords</p> <ul style="list-style-type: none"> Research the remaining keywords associated with wood; refer to the 400 list Video and practical starters to cover wood processes: making MDF and plywood; laminating and bag press; and so forth 				
Challenge	<p>Dovetail joint</p> <p>Homework: Gather video clips and websites for the wood working keywords</p>		<p>Own wood joint design, frame which can both be wall mounted and free standing, <i>finish</i> applied to the wood</p> <p>Homework: Exam questions, short/mid/long, associated with wood. Use hand written and online examples to test this</p>				
Assessment	SA Online quizzes		SA Online quizzes and walking-talking exams				

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Justice Term

W/C	Week 14	Week 15	Week 16	Week 17	Week 18	Week 19	HALF TERM
Topic	<p align="center">Picture Frame Project 400 DT Keywords</p>						
Core	<p align="center">Creating a full design folder in the style of a GCSE NEA Applying the knowledge about the styles of the essential 16 designers to create frame designs Designing for a client Independently producing a picture frame Use of woodwork machine tools Testing and evaluating a product with a client Researching the definitions of the 400 Keywords</p>						
Challenge	<p align="center">Own wood joint design, frame which can both be wall mounted and free standing, <i>finish</i> applied to the wood Gather video clips and websites</p>						
Assessment	<p align="center">SA and Teacher Summative Assessment of the project against NEA criteria Online quizzes and walking-talking exams</p>						

W/C	Week 20	Week 21	Week 22	Week 23	Week 24	Week 25	EA STE R
Topic	<p align="center">Industrial Techniques</p>					<p align="center">Long Mark Exam Questions</p>	
Core	<p align="center">Production Lines Quality Assurance and Control Forming woods Composite materials (GRP and CFRP)</p>					<p align="center">Exam technique for long mark answers Practicing long mark answers focussing on Industrial manufacture processes</p>	
Challenge	<p align="center">Managing the production line, applying the knowledge to make formed wood furniture concepts</p>					<p align="center">Achieving target grade</p>	
Assessment	<p align="center">SA and TVF</p>					<p align="center">TA</p>	

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Courage Term

W/C	Week 26	Week 27	Week 28	Week 29	Week 30	Week 31	HALF TERM
Topic	Sundial Project 400 DT Keywords			Toolbelt Project 400 DT Keywords			
Core	Metalwork fabrication techniques Metalworking hand tools Metalworking machine tools Researching the definitions of the 400 Keywords			Textile fabrication techniques Hand sewing Machine sewing Researching the definitions of the 400 Keywords			
Challenge	Build a pedestal for the sundial through applying prior woodwork knowledge Gather video clips and websites			Combining belt with metals, bespoke toolbelt design for a specific trade Gather video clips and websites			
Assessment	SA Online quizzes and walking-talking exams			Online quizzes and walking-talking exams			

W/C	Week 32	Week 33	Week 34	Week 35	Week 36	Week 37	SUMMER
Topic	Rapid Prototyping Mock exam preparation			Practical Exam	End of year exam	Y11 NEA preparation	
Core	Lasercutter 3d Printer Card press Collating revision material for the Y10 mock			Manufacturing a multi material product	Testing on all material groups	Analyse the AQA Design Challenge contexts Choose a context Create page 1 of the Y11 NEA design folder	
Challenge	Master the 3d printer to create working artefacts of own design Hit your target grade in the Y10 mock			Achieve target grade	Achieve target grade	Achieve target grade	
Assessment	SA Online quizzes and in lesson practice tests			TA	TA	SA	