

Subject Long Term Plan Year 7 Design Technology 2021-22

Temperance Term

W/C	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	HALF TERM
Area of Study	Baseline Test – Character Cube			Baseline Intervention		Drawing Techniques		
Core Learning	Graphic and modelling skills to identify the level of understanding for the design process <ul style="list-style-type: none"> Guided introduction of all aspects of the design process from Brief to Evaluation, including paper/card prototypes Design booklet template used to record student outcomes Introduction/explanation of the 11 Assessment Criteria (AC) modelled on GCSE DT spec' Explanation and fundamental experiences of using the DT Sketchbook 			Individual tasks for each student as identified in the assessment of the baseline <ul style="list-style-type: none"> Explain how students use the TA of the Character Cube baseline to improve their work Grouped intervention tasks, focusing upon improving the standard of the Character Cube work based upon TA Re assessment of student work by the teacher. This will be recorded on the DT tracker and used for Y7 data drop 1 		3d drawing and colouring skills <ul style="list-style-type: none"> Introduce isometric projection (cubes, cylinders and combinations) Hatching and toning skills, using graphite and pencil colour Identifying isometric shapes in everyday objects and learning how to deconstruct objects into 'crates' Drawing simple isometric buildings 		
Opportunities for Challenge	By outcome as it is a baseline test Homework: Activities which deepen understanding of the design process and paper/card work covered in the lesson			Exemplars indicate High, Medium and Low Homework: Time given to respond to teacher feedback		Complexity of the drawing and toning techniques Homework: Isometric drawing and rendering of the student's home		
Assessment	Self- Assessment (SA)	SA	Teacher formative assessment (TA)	Peer Feedback (PF) and Teacher verbal feedback (TVF)		Peer Feedback (PF) and Teacher verbal feedback (TVF)		

W/C	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	CHRISTMAS
Area of Study	Trinket Box Project (full design process)						
Core Learning	Intermediate experience of the design folder, introduction to core woodworking skills and prototyping using resistant and well as compliant materials <ul style="list-style-type: none"> Trinket box design booklet issued. Introduced by analysis of the project context (problem) and brief Introduction to Health and safety in the Workshop: responsibilities, protection of humans and equipment, safe woodworking (polymer) practices Recording and reviewing the quality of manufacture and suitability of processes chosen, in the completion of a simple trinket box design Greater independence given to recording work in the design booklet. Guidance given through agreed success criteria and exemplars Marking out tools used for wood: stress learning keywords, safety and precision Cutting natural woods and manufacture boards using saws, drills and sanding (mechanical and by hand) Joining woods using glue (PVA vs Hot glue) Adding a finish to woods (Danish oil and water-based paints) Developing an opening device for the box and exploring the most suitable material for the lid (woods and/or polymers) 						
Opportunities for Challenge	Exemplars indicate High, Medium and Low Homework 1-2: Keyword learning and assessment Homework 3-4: Why has it never been invented yet? Homework 5-6: Time given to respond to teacher feedback						
Assessment	Peer/Self-Assessment each lesson TA on the design folder and wooden trinket box 1						

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Justice Term

W/C	Week 14	Week 15	Week 16	Week 17	Week 18	Week 19	HALF TERM
Area of Study	Trinket Box Project (full design process)					Metalwork 1	
Core Learning	<p>Development of a new product (trinket box 2)</p> <ul style="list-style-type: none"> Expanding on a design brief (the trinket box) and writing a product specification which describes an effective container for small precious items Learning how to undertake a practical investigation and how to record the discoveries Practical investigation into joining woods: Hot glue, PVA glue and the dowel joint. Advantages and disadvantages of each one Developing a design idea through sketching and modelling (corrugated card model of the trinket box 2.0) Planning the stages of manufacture Independently constructing the trinket box 2.0: if the box goes wrong then the student has to overcome the issues Designing a method of testing the trinket box 2.0 and using evaluation to identify improvements 					<p>Core metalworking skills taught through making a standard dog-tag</p> <ul style="list-style-type: none"> Handling metal: burrs and cutting Ferrous vs non-ferrous metals: visual and verbal explanation only Precise metal marking processes: hand tools Cutting aluminium: machines and hand tools Shaping aluminium: filing processes and letter stamps Finishing processes: draw filing, wet/dry, Brasso 	
Opportunities for Challenge	<p>The greatest focus here is independence: teacher must be facilitator. The need to make a well-made box is secondary to overcoming problems</p> <p>Homework 1: Woods keywords 1 Homework 2: Woodworking tools keywords 1 Homework 3: Woodworking processes keywords 1</p>					<p>This is a FPT so accuracy is the only challenge here</p> <p>Homework 1: Metals keywords 1</p>	
Assessment	<p>Self-assessment using the Header Sheet ACs Teacher assessment using the Header Sheet ACs</p>					<p>Self-assessment using the Header Sheet ACs Teacher assessment using the Header Sheet ACs</p>	

W/C	Week 20	Week 21	Week 22	Week 23	Week 24	Week 25	EASTER
Area of Study	Metalwork 1		Metalwork 2 – Awesome Ornaments				
Core Learning	<p>Core metalworking skills taught through making a standard dog-tag</p> <ul style="list-style-type: none"> Handling metal: burrs and cutting Ferrous vs non-ferrous metals: visual and verbal explanation only Precise metal marking processes: hand tools Cutting aluminium: machines and hand tools Shaping aluminium: filing processes and letter stamps Finishing processes: draw filing, wet/dry, Brasso 		<p>Designing and developing a non-ferrous ornament for the garden</p> <ul style="list-style-type: none"> Analysing a design brief and writing a product specification Investigation into metal surface treatments: annealing, work hardening and anodising Introduction to new metals: copper, brass and steel Intermediate cutting techniques: fret saw, chain drilling and needle files Demonstration of metal processes: bending, pop riveting, soft soldering Gathering research to inspire the design process Development of a design through sketching and modelling Planning the stages of manufacture Guided manufacture of the sculptures Client evaluation of the ornament 				
Opportunities for Challenge	<p>This is an FPT so accuracy is the only challenge here</p> <p>Homework 2: Metalworking tools keywords 1 Homework 3: Metalworking processes keywords 1</p>		<p>Combing two metals, complexity of the ornament, inclusion of standard items</p> <p>Homework 2: Metalworking tools keywords 2 Homework 3: Metalworking processes keywords 2</p>				
Assessment	<p>Self-assessment using the Header Sheet ACs Teacher assessment using the Header Sheet ACs</p>		<p>Self-assessment using the Header Sheet ACs Teacher assessment using the Header Sheet ACs</p>				

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Courage Term

W/C	Week 26	Week 27	Week 28	Week 29	Week 30	Week 31	HALF TERM
Area of Study	Metalwork 2 – Awesome Ornaments						
Core Learning	<p style="text-align: center;">Designing and developing a non-ferrous ornament for the garden</p> <ul style="list-style-type: none"> Analysing a design brief and writing a product specification Investigation into metal surface treatments: annealing, work hardening and anodising Introduction to new metals: copper, brass and steel Intermediate cutting techniques: fret saw, chain drilling and needle files Demonstration of metal processes: bending, pop riveting, soft soldering Gathering research to inspire the design process Development of a design through sketching and modelling Planning the stages of manufacture Guided manufacture of the sculptures <p style="text-align: right;">Client evaluation of the ornament</p>						
Opportunities for Challenge	<p style="text-align: center;">Combining two metals, complexity of the ornament, inclusion of standard items</p> <p style="text-align: center;">Homework 1: Design like: Marcel Breuer, Gerrit Reitveld and Walter Gropius</p> <p style="text-align: center;">Homework 2: Design like: Templier, Tiffany and Mackintosh</p>						
Assessment	<p>Self-assessment using the Header Sheet ACs</p> <p>Teacher assessment using the Header Sheet ACs</p>						

W/C	Week 32	Week 33	Week 34	Week 35	Week 36	Week 37	SUMMER
Area of Study	Design Challenge						
Core Learning	<p style="text-align: center;">Independently following the design process to create a product for celebrations</p> <ul style="list-style-type: none"> Exploring what a design challenge is: choosing a context, identifying a client and writing a brief Creating a product specification Investigation into common papers and cards: look like, used for, taking colour, joining, cutting Investigation in nets: range of shapes, embossing, debossing Investigation into mechanical card technology: V-fold, pivot, slider Designing a solution Building a prototype Pitching a product to an audience Industrial manufacturing processes: offset lithography, inkjet, card cutting Using questionnaires to evaluate a product 						
Opportunities for Challenge	<p style="text-align: center;">Complexity of the mechanism used in the card</p> <p style="text-align: center;">Use of graphic skills to produce a marketable product</p> <p style="text-align: center;">Homework: continuation of independent study</p>						
Assessment	<p>Self-assessment using the Header Sheet ACs</p> <p>Teacher assessment using the Header Sheet ACs</p>						