

Year 9 Design Technology Long-Term Plan

Temperance Term

W/C	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	HALF TERM	
Topic	Introduction to Y9 DT	Acrylic Puzzle for Zero Gravity		Y9 Consolidation Project: Puzzle -Bag		Pewter Casting and Metal Clay Investigation			
Core	<p>Introduction to the workshop</p> <ul style="list-style-type: none"> Bench expectations Where resources and equipment are stored Risk Assessment – cutting acrylic <p>Check sketchbooks:</p> <ul style="list-style-type: none"> Label, book smart, GCSE/EBI statements and ACCESS FM What it means to be Y9 Options ready Discuss GCSE NEA and Exam <p>Combined Design Activity</p> <ul style="list-style-type: none"> Fun design activity Presenting an idea 	<p>Introduction to working with polymers (acrylic) to make a puzzle and to develop a product for different environments (zero gravity)</p> <ul style="list-style-type: none"> W2 Explore the Header sheet, linking the criteria to GCSE DT standards, and encourage independence with the project: "Work at your pace but finish in 3 lessons" W2 Analyse the brief W2 Investigate acrylic: how it is made, shaping and finishing – make the puzzle W2 Mind-mapping: materials available for the puzzle W2 Develop the puzzle, previously made, for zero-gravity W2-3 Make the puzzle developments W19 Evaluating and costing the puzzle 		<p>Textiles project to consolidate Year 8 knowledge</p> <ul style="list-style-type: none"> W4 Explore the Header sheet, linking the criteria to GCSE DT standards, and encourage independence with the project: "Work at your pace but finish in 3 lessons" W4 Brief, mind-mapping and designing W4 Revisit textile skills/processes used for the swag bag in Y8 W4 Planning making of the drawstring bag W4-5 Making the drawstring bag, including embellishment W5 Evaluating and costing the drawstring bag 		<p>Focussed practical task (FPT) - Introduction to casting metal to make a pendant and semi-precious clay by sculpturing a charm</p> <ul style="list-style-type: none"> W6 Header sheet and the brief for a pewter pendant and charm W6 Observing the pewter casting process: COSHH and safety W6 Creating a design for a pendant combining pewter and acrylic W6 Making a mould for a pendant: 4mm thick wood W6-7 Making the pewter pendant: casting, drilling, filing, edge finishing metal W6-7 Making the necklace cord: leather and cord threads, useful knots W6or7 Observing the kiln: COSHH and safety W6-7 Modelling a design for a charm: plasticine prototyping, pea-sized clay, sculpture tools W6-7 Baking the charm – semi-precious clay W6-7 Polishing the charm W7 Recording casting and kiln knowledge 			
Challenge	Designing for a real client No homework	<p>Creative and effective storage of the puzzle</p> <p>Homework 1: Polymer keywords 1</p> <p>Homework 2: Polymer processes keywords 1</p>		By outcome as it is a baseline test Homework: set 2 <i>Design like...</i> tasks focussing upon two of the most appropriate, in terms of the class being taught, from the AQA GCSE DT 16 designers		Combining pewter with acrylic Homework 1: Design like: Templier or Tiffany Homework 2: Design like: Mackintosh			
Assessment	Self and peer Assessment (SA)	<p>Self-assessment using the Header Sheet ACs</p> <p>Teacher assessment using the Header Sheet ACs</p>		<p>Self-assessment using the Header Sheet ACs</p> <p>Teacher assessment using the Header Sheet ACs</p>		<p>Self-assessment using the Header Sheet ACs</p> <p>Teacher assessment using the Header Sheet ACs</p>			

W/C	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	CHRISTMAS
Topic	Advanced Drawing Techniques			Rapid Prototyping		Respond to Feedback and End of Term Test	
Core	<p>Communicating ideas clearly through 3d drawing and enhancement techniques</p> <ul style="list-style-type: none"> W8 Warming up to Isometric Drawing: revisit using the isometric grid (cubes, cylinders, sloping lines) W8 Revisit colour hatching, tone and shading (apply to the observational drawing) W8 Enhancing drawings: Line Weightings, textures of metal, plastic and fabrics (apply to the observational drawing) W8 Introduction to freehand isometric projection: drawing without a grid and judging size (house and boat) W9 Developing freehand isometric through observational drawing (workshop tools) W10 Introduction to one-point perspective: name or skyscraper W10 Option to use CAD for one-point perspective: name or skyscraper W10 Introduction to two-point perspective: cubes W10 Optional: CAD two-point perspective building 			<p>FPT - Introduction to 3d printing</p> <ul style="list-style-type: none"> W11 Using DesignSpark Mechanical: creating simple shapes with holes and raised portions W11 How to use the 3d Printer: set up, upload, printing and safety W11-12 Design and print a product for keys, coins or mobiles 		<ul style="list-style-type: none"> Book Smart Read Teacher feedback Improve work Respond to teacher feedback (purple pen) End of term keyword test 	
Challenge	<p>Drawing activities will be set as emerging, secure and mastery levels</p> <p>Extended Homework: Designing a home of the future and presenting it as a range of pictorial views which uses all of the skills taught in the Advanced Drawing Techniques lessons.</p>			Competence of 2 or more rapid prototyping techniques Homework 1: Rapid prototyping tools and processes keywords 1		Reassessed	
Assessment	<p>Self-assessment using the Header Sheet ACs</p> <p>Teacher assessment using the Header Sheet ACs</p>					Teacher	

Year 9 Design Technology Long-Term Plan

Justice Term

W/C	Week 14	Week 15	Week 16	Week 17	Week 18	Week 19	HALF TERM
Topic	Tic-Tac-Toe 2.0					Respond to Feedback and End of Term Test	
Core	Revisiting wood working skills and LaserCut to develop an improved version of the game Tic-Tac-Toe <ul style="list-style-type: none"> W14 Explore the Header sheet, linking the criteria to GCSE DT standards, and encourage independence with the project: "Work at your pace but finish in 5 lessons" W14 Analyse the brief and investigate the game of naughts and crosses: class match of tic-tac-toe W15 Compare CAM to Hand Crafted: Revisit CAD and CAM for the LaserCut: cutting out a wooden key fob and making one using hand tools W15 Mind-map exploration of tic-tac-toe 2.0 W16 Design and Model tic-tac-toe 2.0 W16-17 Making the tic-tac-toe 2.0: combining CAM and hand manufacturing W18 Evaluating and costing the tic-tac-toe 2.0 					<ul style="list-style-type: none"> Book Smart Read Teacher feedback Improve work Respond to teacher feedback (purple pen) End of term keyword test 	
Challenge	Develop the naughts and crosses to fit in a tin and be sold in a vending machine Homework: Design a board game which promotes one of the 6Rs					Reassessed	
Assessment	Self-assessment using the Header Sheet ACs Teacher assessment using the Header Sheet ACs					Teacher	

W/C	Week 20	Week 21	Week 22	Week 23	Week 24	Week 25	EASTER
Topic	Educational Felt Bacteria					Respond to Feedback and End of Term Test	
Core	Mini design challenge: Working with a real client to teach Y5 and 6 students about kitchen bacteria <ul style="list-style-type: none"> W20 Introduction to the project by a client "Explain bacteria in the kitchen to a Y6 child" W20 Explore the Header sheet, linking the criteria to GCSE DT standards, and encourage independence with the project: "Work at your pace but finish in 5 lessons" W20 Analyse the brief W20-21 Mind-map and design the fact file W21 Investigate felt: how it is made, properties and sewing techniques (blanket stitch) W21 Mind-map and design the felt bacteria W22 Pattern making and cutting out the felt W22 Embellishing soft toys: standard items and use of other fabric materials W22-23 Make the felt bacteria and fact file W24 Evaluating and costing the felt bacteria 					<ul style="list-style-type: none"> Book Smart Read Teacher feedback Improve work Respond to teacher feedback (purple pen) End of term keyword test 	
Challenge	Creating an interactive educational toy Homework: Keyword investigation and online testing/quizzes relevant to textiles					Reassessed	
Assessment	Self-assessment using the Header Sheet ACs Teacher assessment using the Header Sheet ACs					Teacher	

Year 9 Design Technology Long-Term Plan

Courage Term

W/C	Week 26	Week 27	Week 28	Week 29	Week 30	Week 31	HALF TERM
Topic	Light Box					Respond to Feedback and End of Term Test	
Core	FPT to apply knowledge of woods, polymers and basic electronics to make a light feature for your bedroom <ul style="list-style-type: none"> W26 Making the dowel joint by hand W26-27 Production techniques: batch production of dowel joint by box frame (working in bench groups to make 4 frames) W28 Revisit 2d Design and the laser cutter: Making the acrylic light panel, engraving, acrylic pens W28 Semi-permanent fixtures: wood screws, sliders, machine screws and rivets W29 Wood finishes: oil, varnish, wax and paint W29 Introduction to electronics: components of electricity, electrical components, simple circuits, soldering technique W29 Assembling and testing the light box, including attaching the lighting circuit W30 Evaluation and Costing 					<ul style="list-style-type: none"> Book Smart Read Teacher feedback Improve work Respond to teacher feedback (purple pen) End of term keyword test 	
Challenge	Producing a commercially viable product Homework 1: Electronic keywords 1 Homework 2: Electronic tools keywords 1 Homework 3: Electronic processes keywords 1					Reassessed	
Assessment	Self-assessment using the Header Sheet ACs Teacher assessment using the Header Sheet ACs					Teacher	

W/C	Week 32	Week 33	Week 34	Week 35	Week 36	Week 37	SUMMER
Topic	None GCSE Students – Independent study GCSE Option Students – DT Transition Project					Book Smart	
Core	Independent study – focussing on an aspect from one of the 5 material groups and developing a deeper understanding on it in terms of designing with and manufacturing from for either a small product or skills demonstration e.g. wood joints, metal fabrication, rapid prototyping, machine sewing... DT Transition Project – Study of 16 designers and learning to design in the style of them. Developing a knowledge of the essential 60 DT subject specific terminology words/terms. Making a silver ring					Ending the year	
Challenge	None GCSE Students – Demonstrating high level skill in the area of study GCSE Option Students – Depth of understanding beyond knowledge or understanding i.e. application, evaluation and synthesis					n/a	
Assessment	None GCSE Students – TVF GCSE Option Students – Testing					n/a	