



Art
Photography
3D Design & Technology
Food Preparation & Nutrition

DESIGN & TECHNOLOGY + 3D Design Curriculum Overview 2023/24

Year	Design and Technology at KS3 is delivered on a carousel system between D&T and FOOD. The KS3 overview below is of the Design Skills and Product Design areas of Design and Technology that each group will undertake on rotation during the academic year.		
7	Design Skills	<p>DESIGN SKILLS – Mechanisms</p> <p>Students will:</p> <ul style="list-style-type: none"> • Know a range of simple mechanisms and their key features. • Understand mechanical advantage and how a range of simple mechanisms work. • Be able to recognise and model simple lever and linkage mechanisms as part of a team. <p>Students will:</p> <ul style="list-style-type: none"> • Know where the input, process and output feature in a cam-based mechanism. • Understand the interaction between physical parts of a working model and how more advanced mechanical systems enable changes in movement and force. • Be able to assemble modelling materials to create a simple working cam driven mechanism. 	<p>In class feedback RAG assessment against project FEEDBACK POINTS including those listed under the projects Skills and Knowledge bullet points in this table.</p> <p>H&S Passport check.</p> <p>End of project assessment paper including multiple choice, short answer, creative and technical drawing and designing as well as evaluation questions.</p>
	Product Design	<p>PRODUCT DESIGN – Mini Torch</p> <p>Students will:</p> <ul style="list-style-type: none"> • Understand how plastic products can impact our planet. • Be able to identify the 6 Rs of sustainability • Use recycled materials to create a product <p>Students will:</p> <ul style="list-style-type: none"> • Know the health and safety requirements for using tools and equipment safely. • Understand the key functions and basic tools of the 2D design CAD package. 	<p>In class feedback RAG assessment against project FEEDBACK POINTS including those listed under the projects Skills and Knowledge bullet points in this table.</p> <p>H&S Passport check.</p> <p>End of project assessment paper including multiple choice, short answer, creative and technical</p>

	<ul style="list-style-type: none"> Be able to use skills in Computer Aided Design (CAD) / Computer Aided Manufacturing (CAM) to follow a guide to create a mini torch design including a repeat pattern surface decoration 	<p>drawing and designing as well as evaluation questions.</p>
8	<p>Design Skills</p> <p>DESIGN SKILLS – Flat Pack</p> <p>Students will:</p> <ul style="list-style-type: none"> Know the principles of stable structures. Understand and use the properties of materials and the performance of structural elements in flat pack design Be able to investigate problems, explore design solutions and communicate design ideas using annotated sketches, detailed plans, oral or digital presentations <p>Students will:</p> <ul style="list-style-type: none"> Know the advantages and disadvantages of CAD/CAM. Understand the basic tools for creating CAD drawings in 2D Design. Be able to use skills in Computer Aided Design (CAD) / Computer Aided Manufacturing (CAM) to create a flat pack prototype. 	<p>In class feedback RAG assessment against project FEEDBACK POINTS including those listed under the projects Skills and Knowledge bullet points in this table.</p> <p>H&S Passport check.</p> <p>End of project assessment paper including multiple choice, short answer, creative and technical drawing and designing as well as evaluation questions.</p>
	<p>Product Design</p> <p>PRODUCT DESIGN – Ergonomics</p> <p>Students will:</p> <ul style="list-style-type: none"> Know the key points of the ACCESSFM acronym for analysing and designing products. Understand the use of Anthropometrics and Ergonomics in design. Be able to communicate their ideas in 2D and 3D as well as using modelling to test and improve design ideas. <p>Students will:</p> <ul style="list-style-type: none"> Know the Health and Safety requirements for using tools and equipment safely. Understand how the modelling process informs the planning and making in working with resistant materials. Be able to use tools and processes safely and with some skill to produce an ergonomic product in wood. 	<p>In class feedback RAG assessment against project FEEDBACK POINTS including those listed under the projects Skills and Knowledge bullet points in this table.</p> <p>H&S Passport check.</p> <p>End of project assessment paper including multiple choice, short answer, creative and technical drawing and designing as well as evaluation questions.</p>

9	Design Skills	<p>PRODUCT DESIGN – Enamelling</p> <p>Students will:</p> <ul style="list-style-type: none"> Recognise the key elements of design including Colour, line and shape. Use art movements as a starting point for 3D product design ideas Be able to communicate design ideas in both 2D and 3D for a range of ideas <p>Students will:</p> <ul style="list-style-type: none"> Identify some basic properties of metals Understand the stages in the safe working with metals and enamelling kiln Be able to use tools and processes safely and with some skill to produce a quality product in metal. 	<p>In class feedback RAG assessment against project FEEDBACK POINTS including those listed under the projects Skills and Knowledge bullet points in this table.</p> <p>H&S Passport check.</p> <p>End of project assessment paper including multiple choice, short answer, creative and technical drawing and designing as well as evaluation questions.</p>
	Product Design	<p>DESIGN SKILLS – Casting</p> <p>Students will:</p> <ul style="list-style-type: none"> Know the difference between negative and positive space in the moulding and casting process. Understand how research and exploration different cultures can be used to inform design ideas. Be able mark and measure an accurate template for cutting a suitable casting mould using Computer Aided Design. <p>Students will:</p> <ul style="list-style-type: none"> Know the health and safety requirements for using tools and equipment safely. Understand the stages in the safe moulding and casting process for pewter. Be able to use tools and processes safely and with some skill to produce a quality product in metal. 	<p>In class feedback RAG assessment against project FEEDBACK POINTS including those listed under the projects Skills and Knowledge bullet points in this table.</p> <p>H&S Passport check.</p> <p>End of project assessment paper including multiple choice, short answer, creative and technical drawing and designing as well as evaluation questions.</p>

10	<p>Term 1</p> <p>PROJECT 1 - Natural Forms/ Colour, Line and Shape</p> <p>Students will:</p> <p>AO1</p> <ul style="list-style-type: none"> Develop ideas through investigations of artists, designers, products and themes. Demonstrate a critical understanding of sources by reflecting on their work and that of others and, by stating their own intentions as a result of ongoing investigations. <p>AO3</p> <ul style="list-style-type: none"> Record ideas, observations through & insights relevant to intentions as work progresses. Demonstrate their observations by drawings, photographs and written reflections. 	<p>Assessment against AO1, AO1, AO3 + AO4 objectives as set by the exam board.</p> <p>AO1 -</p> <ul style="list-style-type: none"> Develop ideas through investigations of artists, designers, products and themes. Demonstrate a critical understanding of sources by reflecting on their work and that of others and, by stating their own intentions as a result of ongoing investigations. <p>AO2 -</p> <ul style="list-style-type: none"> Refine work by exploring ideas, selecting & experimenting with appropriate media, materials, techniques & processes including mark making, shaping and cutting metal, moulding and casting. <p>AO3 -</p> <ul style="list-style-type: none"> Record ideas, observations through & insights relevant to intentions as work progresses. Demonstrate their observations by drawings, photographs and written reflections. <p>AO4 -</p> <ul style="list-style-type: none"> Present personal & meaningful responses through prototypes and products that realise their intentions & demonstrate an understanding of visual language. <p>Project Checklists, Individual Feedback and Personal Learning Checklist (PLCs) used 'PINK POINTS'</p>
	<p>Term 2</p> <p>PROJECT 1 - Natural Forms 1</p> <p>Students will:</p> <p>AO2</p> <ul style="list-style-type: none"> Refine work by exploring ideas, selecting & experimenting with appropriate media, materials, techniques & processes including mark making, shaping and cutting metal, moulding and casting. 	
	<p>Term 3</p> <p>PROJECT 1 - Natural Forms</p> <p>Students will:</p> <p>AO4</p> <ul style="list-style-type: none"> Present personal & meaningful responses through prototypes and products that realise their intentions & demonstrate an understanding of visual language. 	
	<p>Term 4</p> <p>PROJECT 2 – Light and Dark</p> <p>Students will:</p> <p>AO1</p> <ul style="list-style-type: none"> Develop ideas through investigations of artists, designers, products and themes. Demonstrate a critical understanding of sources by reflecting on their work and that of others and, by stating their own intentions as a result of ongoing investigations. <p>AO3</p> <ul style="list-style-type: none"> Record ideas, observations through & insights relevant to intentions as work progresses. Demonstrate their observations by drawings, photographs and written reflections. 	
	<p>Term 5</p> <p>PROJECT 2 –Light and Dark</p>	

		Students will: AO2 <ul style="list-style-type: none"> Refine work by exploring ideas, selecting & experimenting with appropriate media, materials, techniques & processes including CAD/CAM, working with hardwoods, softwoods, manufactured board and thermoplastics. 	Mock examination 5 hours Teacher marked and moderated followed by Exam board Moderation
	Term 6	PROJECT 2 –Light and Dark Students will: AO4 <ul style="list-style-type: none"> Present personal & meaningful responses through prototypes and products that realise their intentions & demonstrate an understanding of visual language. <p>Summer Project TBC</p>	
11	Term 1	Consolidation of Summer project + Design Workshop	Evidence will be used to support Assessment against AO1, AO1, AO3 + AO4 objectives.
	Term 2	Consolidation of Summer project + Design Workshop	
	Term 3	Exam Project Students will: AO1 <ul style="list-style-type: none"> Develop ideas through investigations of artists, designers, products and relating specifically to the THEMES issued by the exam board. Demonstrate a critical understanding of sources by reflecting on their work and that of others and, by stating their own intentions as a result of ongoing investigations. AO3 <ul style="list-style-type: none"> Record ideas, observations through & insights relevant to intentions as work progresses. Demonstrate their observations by drawings, photographs and written reflections. 	Preparation in lesson in response to exam board set topic, followed by Formal 10 hours practical exam. Project Checklists, Individual Feedback and Personal Learning Checklist (PLCs) used Assessment against AO1, AO1, AO3 + AO4 objectives as set by the exam board.
	Term 4	Exam Project Students will: AO2 <ul style="list-style-type: none"> Refine work by exploring ideas, selecting & experimenting with appropriate media, materials, techniques & processes of their choice 	Teacher marked and moderated followed by Exam board Moderation

	Term 5	Exam Project Students will: AO4 <ul style="list-style-type: none">• Present personal & meaningful responses through prototypes and products that realise their intentions & demonstrate an understanding of visual language.	
	Term 6	N/A	