## KS4 Year 10: 2025-26 Overall Curriculum Intent for Design & Technology

The curriculum intent of Design & Technology is for pupils gain experience of a wide range of practical skills and processes through a multi-disciplinary approach, which develops resilience, reasoning and problem-solving skills. Creativity, imagination and technical understanding are combined to equip our pupils with essential life skills and a love of product design and manufacture. By the end of their five-year journey pupils will have a deep understanding of how a range of factors and stimuli effect how products are design, used, manufactured and disposed of. More important the short-, medium- and long-term impacts products have not just the user but the environment and world they live in. They will also develop their investigation, design, development manufacture and evaluation skills through a range of design, practical projects through the use of workshop equipment and CAD/CAM.

	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Knowledge	Project: Design Challenges -	Project: Lamp Design –	Project: Skills Box	Project: Skills Box	Project: Quick Draw -	NEA - Research & Planning
Introduced	V&A Design Innovation	Prototyping and Development	-		Product Problems & Solutions	
	In this unit pupils will follow a	In this unit pupils will learn how	In this unit pupils will perform a	In the second part of this unit	In this unit pupils will be faced	Exploring the selected a
	innovation design path of	to produce and understand how	range of different wood joining	pupils will carry out a range of	with different and one-off	contextual design form the exam
	research, design, develop and	to use prototyping to help	skills to create a storage	finishing and assembly	design challenges. They must	board list. Carry out primary and
	modelling. Students will carry	improve and create a final	container. It will also have a	techniques, finding some	produce product which solve	secondary research techniques
	out a human-centred design	outcome. Pupils will	laser cut lid with is then also	practical applications of QA/QC.	real life problems using design	to link key topics to chosen
	process and respond to one of	demonstrate range of drawing	attached.	0	and modelling skills. They will	context.
	the three challenges:	skills including exploded and technical views.	Pupils will plan, making out, and	Once assembly a laser cut top will be designed in TS2D and	work both independently and in small groups depending on the	User centred design     Identify and meet with client
	- Doot	technical views.	cut with a variety of wasting	manaufactured before final	task.	- Product analysis /reverse
	<ul><li>Rest</li><li>Join</li></ul>		techniques the following:	assembly.	task.	- Manufacturing Specification
	Reimagine		techniques the following.	assembly.	These will be produced using	- Design Specification
	Keimagine				tinker CDA along with hand	- Initial idea planning
	The secondary focus will work				drawn methods.	- Sustainability
	on understanding assessment					- SMC issues in design
	criteria.					- Ergonomics/Anthropometrics
	Theory Unit: 3.1.6	Theory Unit: 3.1.6	Theory Unit 3.1.1 - 3.1.5	Theory Unit 3.1.1 - 3.1.5	Theory Unit 3.1.1 - 3.1.5	Theory Unit 3.1.1 - 3.1.5
	Materials and their working	Materials and their working	Core technical principles.	Core technical principles.	Core technical principles.	Core technical principles.
	properties.	properties.				
Key	Collaboration	Nets	Lap Joint	Quality Assurance	Quality Assurance	Primary Research
vocabulary/	Iterative	Template	Dovetail	Quality Control	Quality Control	Secondary Research
concepts/ideas	Self-Regulation	Prototype	Dowell	Vector Drawing	Exploded View	Contextual Design
students must	Reflective Designer	Dimensions	Housing with Flex-Ply	Assembly	Technical Drawing	Design Brief
master		Limitations	Screwed Hinge	Finishing		User Centred Design
		Key Features CNC	Glued & Pinned Base			Iterative Process
		Output				Manufacturing Specification Design Specification
Knowledge	Building on initial skills learnt	Building on material	Y8 and Y9 woodwork related	Y7 & Y9 TS2D laser cutting	Reviewing the learning from	Key aspects from Y9 design
revisited	during HT6 2024, jewellery box	understanding form plastics and	projects – bookend & lamp.	projects. All non-CAD projects	sustainable design HT2 to	challenges to identify design
	design. What makes effective	finishing techniques.	Making out and wasting	previously have involved a	further develop modelling skills	scenarios. Again, has been
	design.	lg cccquesi	techniques used on more	variety of assembly methods in	and using material knowledge	reflected in term 1 and term 2
			technical joining methods.	mixed materials.	from design projects.	project in y10.
CEIAG Links/	Graphic Designer	Graphic Designer	Graphic Designer	Graphic Designer	Graphic Designer	Graphic Designer
Opportunities	Product Designer	Product Designer	Product Designer	Product Designer	Product Designer	Product Designer
	CAD Designer	CAD Designer	CAD Designer	CAD Designer	CAD Designer	CAD Designer
	Construction & Engineering	Construction & Engineering	Construction & Engineering	Construction & Engineering	Construction & Engineering	Construction & Engineering
	Gatsby BM: 2/3/4	Gatsby BM: 2/3/4	Gatsby BM: 2/3/4	Gatsby BM: 2/3/4	Gatsby BM: 2/3/4	Gatsby BM: 2/3/4

## KS4 Year 11: 2026-27 Overall Curriculum Intent for Design & Technology

The curriculum intent of Design & Technology is for pupils gain experience of a wide range of practical skills and processes through a multi-disciplinary approach, which develops resilience, reasoning and problem-solving skills. Creativity, imagination and technical understanding are combined to equip our pupils with essential life skills and a love of product design and manufacture. By the end of their five-year journey pupils will have a deep understanding of how a range of factors and stimuli effect how products are design, used, manufactured and disposed of. More important the short-, medium- and long-term impacts products have not just the user but the environment and world they live in. They will also develop their investigation, design, development manufacture and evaluation skills through a range of design, practical projects through the use of workshop equipment and CAD/CAM.

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	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6				
Knowledge	NEA - Design & Development	NEA - Prototyping & Final Idea	NEA - Manufacture & Evaluation	Exam - Specialist Materials Unit	Exam – Personal Study Topics					
Introduced										
	Contextual design-based NEA	Contextual design-based NEA	Contextual design-based NEA	To include:	To include:					
	coursework.	coursework.	coursework.							
				Priority of section A unit. Then	RAG rated knowledge gaps of					
	To include:	To include:	To include:	recapping on the remaining	students to create bespoke					
		5 1 5 1	6 1 6.1 6. 1	theory topics and working	exam learning plan.					
	- Initial idea drawing	Early Practical work, working	Completion of the final	through exam technique using						
	- Modelling	towards the final prototype,	prototype, and the wide range	past paper examples.	Faculta and taken from MOK					
	- Virtual Prototyping	using the correct processes,	of processes this requires. Final	Faculta and taken from NAOK	Focuses areas taken from MOK					
	<ul><li>Final design idea</li><li>Client feedback.</li></ul>	based on learning from year 7.	evaluation and product in-situ, potential methods of industrial	Focuses areas taken from MOK book fortnightly lessons and	book fortnightly lessons and home learning outcomes for					
	- Client reedback Material testing		production.	home learning outcomes for	whole class and pupil focused					
	- Production methods		production.	whole class and pupil focused	tasks/topics.					
	- Assembly and Finishes.			tasks/topics.	tasks/topics.					
	- Assembly and Fillishes.			tasks/topics.						
	Theory Unit 3.2	Theory Unit 3.2	Theory Unit 3.2	Theory Unit 3.3	Theory Unit 3.3					
	Specialist Technical Principles	Specialist Technical Principles	Specialist Technical Principles	Designing and Making Principles	Designing and Making Principles					
	Specialist recrimed rimeiples	Specialist reclinical rinicipies	Specialist recrimed rimeiples	Designing and waking i melpies	besigning and Making Principles					
Key	Design Ideas	Prototype	Manufacturing Specification	Key vocabulary including tier 2	Key vocabulary including tier 2					
vocabulary/	Concept	3D modelling	Quality Control	and 3 will be consolidating from	and 3 will be consolidating from					
concepts/ideas	Sketching	Virtual Prototyping	Quality Assurance	the vocabulary in all previous	the vocabulary in all previous					
students must	Isometric	Assembly Drawing	Client Feedback	years.	years.					
master	Exploded	Exploded Views	Commercial Production							
	Design Development	Final Prototype (outcome)	Equipment specific to project							
		Material & processes as specific	outcome.							
		to project.								
Knowledge	Linked to previous NEA section	Linked to previous NEA section	Linked to previous NEA section	Linked all to section of NEA. The	Linked all to section of NEA. The					
revisited				theory is reinforced by the CA.	theory is reinforced by the CA.					
	Key aspects from Y9 design	Key aspects from Y9 design	Key aspects from Y9 design							
	challenges and T1 and t2 Y10	challenges and T1 and t2 Y10	challenges and T1 and t2 Y10	Core elements have been built	Core elements have been built					
	Projects. Supported by core	Projects. Supported by core	Projects. Supported by core	from all KS3 projects.	from all KS3 projects.					
	skills and knowledge form KS3.	skills and knowledge form KS3.	skills and knowledge form KS3.							
CELAC Limber	Crankia Dasiman	Carabia Dasianan	Crankia Dasiman	Cranbia Dasiman	Cyanhia Dasianan					
CEIAG Links/	Graphic Designer	Graphic Designer Product Designer	Graphic Designer	Graphic Designer	Graphic Designer Product Designer					
Opportunities	Product Designer CAD Designer	CAD Designer	Product Designer CAD Designer	Product Designer CAD Designer	CAD Designer					
	_	9			S					
	Construction & Engineering	Construction & Engineering	Construction & Engineering	Construction & Engineering	Construction & Engineering					
	Gatsby BM: 2/3/4	Gatsby BM: 2/3/4	Gatsby BM: 2/3/4	Gatsby BM: 2/3/4	Gatsby BM: 2/3/4					
	Galsby DIVI. 2/3/4	Galsby DIVI. 2/3/4	Galsby DIVI. 2/3/4	Galoby DIVI. 2/5/4	Galsby DIVI. 2/3/4					