

Year 10 Design Technology

In Year 10, students follow a similar pattern to Year 9 – but work in different material areas. The quality and complexity of the products made is again increased and students learn more about the materials and tools available to them. The ability to plan and think logically is more important in Year 10, with students recognising the limitations and constraints of the materials, tools and processes available to them. Students complete two projects, a more traditional wood working product that teaches traditional woodwork skills, and the Aluminium Casting project. Both projects are demanding for students and contrast – one ‘evolves’ as students make it, the other is very regimented.

Methods of deepening and securing knowledge:	
Spaced practice	The Year 10 Independent learning schedule and the follow-up PPE uses spaced practice. Work completed and knowledge gained and Year 7-9 is revisited and students begin revising, using the terminology, keywords and processes more frequently.
Retrieval practice	Retrieval is evident in Year 10 as students use their previous knowledge of tools, materials and processes and make more educated decisions about designs based on what they know already. This might be the limitations of a material or tool and how that will influence their design. They can revisit errors or successes from previous Years, which in turn has an impact on their final designs.

	Autumn term 1	Autumn term 2	Spring term 1	Spring term 2	Summer term 1	Summer term 2	
Topic(s)	Nutcracker - Client research - Retrieval, materials tools and processes - Existing product research - Creating initial ideas - Evaluation based on limitations and constraints	Nutcracker - Making products - Laminating timbers - Use of basic hand tools - Designs ‘evolve’ based on on-going work - Demands with accuracy when marking out and using correct tools	Nutcracker - Shaping and finishing - Evaluating use of timber - Evaluating product - Feedback from peers and client	Aluminium Casting - Using existing designs and developing - Personalising designs based on client - Feedback from clients, use of context and understanding of process to influence designs	Aluminium Casting - Pattern making - Working independently - Ensuring a high quality finish - The sand casting process - Working with aluminium	Aluminium Casting - Finishing aluminium - Metal finishing processes - Ensuring a high quality finish - Evaluating product against specifications	

Assessment	- Assessment of design and research		- Assessment of product and end result - End of project test			- End of project assessment - Y10 PPE
CEIAG (<i>Careers that are linked to that topic</i>)	- Product design industry	- Traditional wood working, joinery, carpentry		- Pattern making	- Metal work industry - casting	

Independent Learning:

Year 10 independent learning continues from Year 9. Students complete the question book using their knowledge and experiences in lessons and the accompanying revision guide. Students are encouraged to re-visit work from Year 9 and use the Revision Guide for the Year 10 PPE. By the end of Year 10, students should have completed the Question Book so that theory based lessons and exam question practice can begin in Year 11.