

Year 9 Design and Technology

In Year 9 Design and Technology, students will build on prior knowledge of tools, materials and processes to create products that are more complex. Students will complete two projects in different material areas, allowing students to demonstrate progression from the first to the second. Both projects follow the iterative design process of investigating materials, techniques and inspiration, designing, creating iterations of designs, making, and evaluating.

Methods of deepening and securing knowledge:	
Retrieval practice	Students use retrieval of previous processes, rules, routines and knowledge of materials to design and make products. They may use machinery and equipment used in previous years, which also ensures students retrieve information learned in Year 7 and Year 8.
Elaboration	By creating products that link with real-life scenarios or by making something that will be commercially viable, students can link the learning to their own experiences and considerations based on their knowledge of their own lives. Students may design products for family members or use real-life clients. Students will also have to elaborate on ideas and give evidence linking with clients and research to justify their reasoning in picking an idea, developing it and then making it.
Concrete examples	Students will learn using concrete examples by experiencing the tools, materials and processes first hand.

	Autumn term 1	Autumn term 2	Spring term 1	Spring term 2	Summer term 1	Summer term 2	
Topic(s)	Clock Project - Identifying clients - Researching existing products - Identifying requirements and creating a specification - Generating initial design ideas - Gathering feedback	Clock Project - Creating 2D Design CAD Drawings and developing - Prototyping - Generating iterations of design ideas after testing - Creating acrylic body - Electronics – Creating circuit boards - Assembling and finishing	Clock Project - Finishing product - Quality checking, evaluating and testing - Gathering feedback - Evaluating the product and process - Self-evaluation	Body Adornment - Using contexts to design products - Discussing ideas with peers and client - Creating designs for jewellery based on research of materials, tools and processes	Body Adornment - Creating unique products - Using metal processes and treatments - Creating products with more ‘freedom’ and less structure - Cutting, shaping and finishing jewellery	Body Adornment - Evaluating process - Gathering feedback from users and clients - Evaluating product against specification	

Assessment	On-going research and design assessment		- End-of-project test			- End-of-project Test
CEIAG (<i>Careers that are linked to that topic</i>)	- Use of CAD in industry	- Electronics Industry – creating prototype circuits	Product Buyer	- Metal Work	- Metal Heat Treatments - Bespoke Jewellery industry	Product Designer Product Developer

Independent learning:

Independent Learning tasks aim to improve knowledge of keywords, literacy, and extend knowledge of the subject area. Students will be required to independently investigate and analyse different topics - sometimes related to lessons, sometimes as retrieval and spaced learning tasks.