



Key Stage 4

<u>Year group:</u>	<u>Topics covered:</u>
Year 10 and 11	At Wilnecote Design and Technology students study GCSE 3D Design through the Art and Design specification with the AQA exam board. The 3D Design course is 100% coursework based and uses the following structure and assessment objectives: STRUCTURE • COMPONENT 1: Portfolio 60% of the final grade is assessed on the student's Portfolio; a collection of tasks that explore a range of media and techniques as well as a sustained project that is structured around the 4 Assessment Objectives. This is completed in lesson throughout Year 10 and the first term of Year 11. In Component 1 (Portfolio) students develop responses to initial starting points, project briefs or specified tasks and realise intentions informed by research, the development and refinement of ideas and meaningful engagement with selected sources. Responses will include evidence of drawing for different purposes and needs, and written annotation. • COMPONENT 2: Externally Set Assignment 40% of the final grade is an Externally Set Assignment that starts in the January of the examination year and is sustained over four months. Students develop a personal response which will result in an outcome produced in exam conditions in the April/ May time. In Component 2 (Externally Set Assignment) students respond to a starting point provided by AQA. This response provides evidence of the student's ability to work independently within specified time constraints, realise intentions that are personal and meaningful and explicitly address the requirements of all four assessment objectives. ASSESSMENT OBJECTIVES All students are required to cover the 4 Assessment Objectives throughout their Portfolio and Externally Set Assignment. These are planned into the teacher's lessons during the completion of their Portfolios. While in the Externally Set Assignment students have more freedom, they must be aware of evidencing these objectives and take guidance from their teacher. • AO1: Develop ideas through investigations, demonstrating critical understanding of sources. • AO2: Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes. • AO3: Record ideas, observations and insights relevant to intentions as work progresses. • AO4: Present a personal and meaningful response that realises intentions and demonstrates understanding of visual language. The aim for this GCSE is for students to build upon their design and practical knowledge and skills to create a collection of work that covers the following:

	• Primary and secondary research. • Investigating artists and designers. • Primary and secondary observational drawing skills. • Designing in both 2D and 3D drawing techniques • Presentation techniques • Developing design ideas • Modelling techniques using a range of modelling materials including card, corrugated card, foam and wood. • Presenting final designs • Rendering skills • CAD Skills – Computer Aided Design • Traditional making skills • CAM skills – Computer Aided Manufacturing – Using the laser cutter • Joining techniques
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YEAR 10	Autumn 1:	Autumn 2:	Spring 1:	Spring 2:	Summer 1:	Summer 2:
3D Design	Chair Project • Investigating a range of design movements including Art Deco, Art Nouveau, Post Modern and Contemporary Design. • Design movement further research	Chair Project • Developing individual design ideas • CAD Designing Skills- using 2D Design • Using CAD as a design tool. • Creating models using	Skill Building Working with materials and processes. • Developing skills using 2D Design • Using the laser cutter • Line bending using acrylic • Vacuum forming and moulds	Skill Building Wood joints – butt, dowel, finger and lap joints. • None- permanent joining methods when working with metals • Permanent joining methods when working with metals - brazing	Sustained Project • Students respond to teacher set titles and research relevant designers and subject matter. • Researching their chosen theme • Recording (A5 drawing) of a primary resource	Sustained Project • Students will continue with their chosen projects. • Exploring a variety of materials and processes through testing and experimentation

	and analysis. Analysing existing chairs based upon a design movement • Perspective drawing of a chair. • Introduction to card modelling and the techniques used when modelling with card. • Designing - Developing 2D and 3D sketches. • Presentation techniques – using marker rendering, thick and thin enhancement lines.	card/corrugated cardboard • Creating final outcomes	• Wood inlaying- working with timbers	• PPE (Year 10 Mock exam) – Wooden Box Project • Pupils will use skills learnt to create a small wooden outcome	linked to their chosen theme. Pupils will work in a variety of media in including pencil, pencil crayons and markers • Analysing and exploring the work of artists and designers • Investigation of the chosen theme in more depth • Developing initial design ideas • Exploring 3D outcomes using card modelling. • Developing modelling refining ideas	• Developing design ideas based upon materials and processes • Developing a final design idea using isometric or perspective drawing
KNOWLEDGE	• Characteristics of selected design movements and how context influences chair form, materials and construction. • How designer research and analysis of existing chairs can inform a personal response (AO1). • How proportion, scale, structure,	• How iterations develop an initial chair idea in response to research and practical testing. • How dimensions, balance, structural support and joining choices affect a chair model. • How 2D Design can represent components accurately and	• How material properties influence the choice of timber, acrylic and forming sheet for an intended outcome. • The purpose of line bending, vacuum forming, moulds, wood inlay and laser cutting. • How CAD files are prepared for	• How butt, dowel, finger and lap joints differ in construction, appearance and suitability. • The difference between temporary and permanent metal joining; the purpose of brazing. • How measurement, marking out,	• How first-hand and secondary sources, including designers, can inspire a response to a chosen theme. • How analysis of form, structure, scale, surface and context informs the development of personal ideas (AO1).	• Properties, working methods and visual effects of materials and processes relevant to an individual project. • How testing material combinations, joins and surface treatments refines an idea (AO2). • How scale, form, proportion, structure and presentation communicate a final intention.

	function and visual elements affect a three-dimensional design. - Conventions of perspective drawing, isometric sketching and marker rendering. - How card grain, folds, tabs and joints affect the strength and accuracy of a model.	support refinement. Properties and limitations of plain and corrugated card for three-dimensional modelling.	accurate cutting, including line types, dimensions and layout. Workshop hazards and appropriate safe working procedures for the processes taught.	tolerances and sequence affect fit and quality. - How a small wooden box can demonstrate informed material, joint and finish choices. - Safe use of tools, equipment and appropriate protective equipment during making.	- How drawing, photographs, notes and models record observations and decisions as work progresses (AO3). - How card models reveal spatial relationships and guide iterative development.	How to justify a final design through evidence from research, experiments and models.
SKILLS	- Research and compare chairs from design movements; annotate form, materials, construction and function. - Record chair features through observational and perspective drawing. - Generate two-dimensional and three-dimensional sketches informed by research. - Render form and material using marker tones and thick and thin lines.	- Develop and annotate alternative chair ideas, explaining design decisions. - Create and edit accurate chair components using 2D Design. - Produce scaled card and corrugated card models using suitable cuts, folds and joins. - Test stability, proportion and appearance; photograph and annotate refinements (AO2 and AO3).	- Prepare simple 2D Design drawings for laser-cut test pieces. - Mark out, heat and line-bend acrylic accurately under supervision. - Prepare a mould and vacuum-form a sheet to test shape and surface detail. - Cut, fit and finish timber inlay samples; compare the visual and practical effects of each process. - Record test results and select processes that	- Mark out, cut, assemble and assess sample wood joints for fit and accuracy. - Select and practise suitable metal joining processes under supervision. - Plan a making sequence and produce a small wooden box using selected joints. - Apply an appropriate surface finish and evaluate construction, function and appearance.	- Investigate a chosen theme and analyse relevant designer or artist work. - Record a primary source through observed drawing, photography and purposeful annotation. - Generate and develop a range of personal three-dimensional ideas. - Build and adapt card models; document feedback, testing and next steps.	- Produce material and process samples and record their strengths and limitations. - Refine designs in response to practical tests and feedback. - Develop further card or mixed-material models to resolve form and construction. - Present and annotate a final proposal using isometric or perspective drawing.

	Cut, score, fold and join card to test a chair concept; record what the model reveals.		support a design intention.			
ASSESSMENT	Formative Assessment - Verbal teacher feedback throughout - Peer-Assessment & self-assessment Focussed Summative Assessment - Design movement research and chair analysis. - Card Modelling Outcome – Designer chair AO Assessment AO1, AO2 and AO3	Formative Assessment - Verbal teacher feedback throughout - Peer-Assessment & self-assessment Focussed Summative Assessment - Initial Design Ideas - Final Design Idea AO Assessment AO2, AO3 and AO4	Formative Assessment - Verbal teacher feedback throughout - Peer and self-assessment Focussed Summative Assessment - CAD CAM – Laser cutting and line bending - Wood Inlaying AO Assessment AO3 and AO4	Formative Assessment - Verbal teacher feedback throughout - Peer-Assessment & self-assessment Focussed Summative Assessment - Wood Joints - Working with metals AO Assessment AO2 and AO4 PPE: Box Project – AO4 assessed.	Formative Assessment - Verbal teacher feedback throughout - Peer-Assessment & self-assessment Focussed Summative Assessment - Designer Research - Initial Ideas AO Assessment AO1, AO2 and AO3	Formative Assessment - Verbal teacher feedback throughout - Peer-Assessment & self-assessment Focussed Summative Assessment - Exploration of materials/processes - Design Development AO Assessment AO1,AO2 and AO3

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YEAR 11	Autumn 1:	Autumn 2:	Spring 1:	Spring 2:	Summer 1:	Summer 2:
3D Design	Sustained Project - Students will continue with their chosen projects. - Developing outcomes using CAD (Computer Aided Design)	Sustained Project - Students will continue with their chosen projects realising their intentions through manufacturing a final piece. - Creating material lists and making plans. - The final piece can be manufactured using any materials and processes students have explored.	Exam Unit - Students respond to one of the given AQA exam titles and research relevant artists/designers and also different subject matter. - Creating a mind map exploring the theme - Analysing and exploring the work of artists and designers - Investigation of the chosen theme in more depth - Developing initial design ideas - Exploring 3D outcomes using card modelling	Exam Unit - Continue further with card modelling and development - Exploring a variety of materials and processes through testing and experimentation - Developing a final design idea using isometric or perspective drawing - Developing outcomes using CAD (Computer Aided Design)	Exam Unit 10 hour exam to take place. Students will be supported in planning their time prior to the exam. Exam time will result in the realising of intentions in the form of a three-dimensional outcome.	N/A
KNOWLEDGE	- How CAD can resolve dimensions, component relationships and the construction of an individual outcome. - How digital models and physical prototypes reveal	- The material quantities, equipment, sequence and time needed to realise a personal outcome. - How suitable construction, assembly and finishing methods support form,	- How to interpret an AQA starting point and identify a personal direction for three-dimensional design. - How relevant designer, artist and contextual sources inform ideas (AO1).	- How iterative modelling and experiments resolve proportion, structure, materials and surface (AO2). - How CAD and hand drawing communicate components and	- The planned sequence, materials, equipment and safe working methods needed to realise the chosen intention. - How form, construction, surface and presentation contribute to a	N/A

	- issues of scale, fit and structure. - How CAM preparation, material choice and tolerances affect a finished component. - How to use test results to refine an intention before making (AO2 and AO3).	- function and meaning. - How a resolved three-dimensional response communicates an intention through form and visual language (AO4). - How the completed portfolio evidences research, refinement, recording and the final response.	- How primary observation and purposeful recording support the development of a response (AO3). - How form, purpose, material, construction and surface can communicate an interpretation.	- the intended assembled form. - How evidence of research, refinement and recording supports a personal response across the assessment objectives. - What resources and making sequence the chosen outcome requires in the supervised period.	- meaningful three-dimensional outcome (AO4). - How the final response connects with the student's preparation and demonstrates the four assessment objectives.	
SKILLS	- Create and refine CAD drawings or models for selected project components. - Prepare appropriate files for CAM and make trial card or material components. - Check dimensions, assembly and appearance against the intended outcome. - Annotate changes and document evidence of development.	- Prepare a materials list, cutting information and a realistic making plan. - Make, assemble and finish a three-dimensional outcome using appropriate processes safely. - Resolve construction problems while retaining evidence of significant decisions. - Photograph and present the final outcome clearly, including useful views and details.	- Map possible responses to the chosen starting point and select a clear direction. - Research and critically analyse relevant sources, linking findings to personal ideas. - Record observations with drawings, photographs, notes and annotations. - Generate initial ideas and use card models to explore three-dimensional possibilities.	- Develop, test and refine card or mixed-material models. - Experiment with suitable processes, joins, finishes and material combinations. - Produce annotated isometric or perspective drawings and relevant CAD work. - Resolve a final design and prepare a practical plan for making.	- Manage the ten hours to make and complete the planned three-dimensional response. - Select and use appropriate materials, tools and processes accurately and safely. - Adapt practical decisions where necessary while maintaining the intended personal response. - Present the completed outcome as required by the centre's exam arrangements.	N/A

ASSESSMENT	Formative Assessment				Exam	N/A
	- Verbal teacher feedback throughout - Peer-Assessment & self-assessment Focussed Summative Assessment - CAD Drawings - CAM – Card model AO Assessment AO2 and AO3	- Verbal teacher feedback throughout - Peer-Assessment & self-assessment Focussed Summative Assessment - Final Outcome AO Assessment AO4 All AO's will be marked as a completed project.	- Verbal teacher feedback throughout - Peer and self-assessment Focussed Summative Assessment - Designer Research - Initial Design Ideas AO Assessment AO1, AO2 and AO3	- Verbal teacher feedback throughout - Peer and self-assessment Focussed Summative Assessment - Developed Model - Final Design AO Assessment AO1, AO2 and AO3	Exam Unit marked holistically -A01-4.	

Assessment:	How Will I be assessed at Key Stage 4?
	Summative Specific tasks are identified as Focused assessments and will be graded based on one or more of the 4 Assessment Objectives: Develop, Refine, Record or Present. Though Art and Design courses are assessed holistically i.e., as a whole collection of work, student's still benefit from these focused assessments by familiarising themselves with AOs, the wording of the criteria and the teacher's approach to marking. A student's school-set target grade sets the standard expected and is used to help gauge the progress they are making. If a student is meeting this target grade quite early on in the course the teacher will informally set a higher Art grade for them to aim for. When a task is completed, the teacher makes an entry into a class PLC (Personalised Learning Checklist) using the following codes: Red – missing or incomplete, Amber –working towards expectations, Green – meeting or exceeding expectations. Wherever possible the teacher will extend a task to challenge a student further. <i>As Art and Design is a holistic subject, any one task can usually meet two or more of the assessment objectives which the teacher will always consider when awarding an overall grade during the school's monitoring process.</i> Formative Live verbal feedback is used each lesson and is our main form of formative assessment. It allows us as teachers to immediately feedback allowing students to make the quickest progress. This is vital in immediately supporting weaker students, encouraging resilience in students, improving confidence and challenging the more able. To accompany verbal feedback, teachers may write feedback online and also provide feedback for specific tasks on post-it notes guiding students on how to refine work to meet their target grade. The Path to Progress is shared with students before a sustained task so they can independently gauge their current performance and understand how to improve it. Often students reflect on their progress through self or peer assessment using 'WWW's and identifying 'Acts'..