

Design and Technology
Creatives Faculty
Curriculum Learning Plans
2018-2019

YEAR PLAN	Year 7 Design & Technology In years 7 & 8 students study Design and Technology as part of a carousel of 6 subjects. This means that students study each subject for a block of lessons before moving on to another subject (the carousel rotates twice during the year).		
TERM	UNIT	ASSESSMENT TYPE	HOMEWORK OPPORTUNITIES
Carousel 1	<p>Introduction to Design and Technology Principles</p> <p>The theme of this first module is polymers. Pupils will cover the basic theory of this material group including types and uses. They will also develop design knowledge and skills using researching, designing and making techniques.</p> <p>Pupils will have material theory within lessons and begin to apply this knowledge through a design and make activity. They will learn about an approved GCSE design style (De-Stijl) and designer (Gerrit Reitveld). They will also be introduced to Computer Aided Design through Techsoft 2D design software and Computer Aided Manufacturing through use of the laser cutter.</p> <p>Pupils will create separate parts of their project design demonstrating what they have learned, that they will complete in the second rotation.</p>	<p>Work will be recorded in theory exercise books and project folders. This will be assessed during and at the end of the rotation using a mixture of self, peer and teacher assessment.</p> <p>Pupils are given targets for improvement and formative feedback.</p>	<p>Researching of key polymer materials and their uses.</p> <p>Learning of key technical words and their definitions.</p> <p>Researching of designers and design styles.</p>
Carousel 2	<p>Development of Design and Technology skills.</p> <p>Pupils will continue with the theme of polymers in the second rotation. Here they will develop their theory knowledge and skills further.</p> <p>Pupils will use a greater range of tools and equipment, including hand files, band facing machines and strip heaters. They will learn to form acrylic with heat and how heat can affect the malleability of materials. Pupils will learn how to evaluate products using key prompts and writing frames.</p>	<p>Practical work will be recorded electronically. This will be assessed during and at the end of the rotation using a mixture of self, peer and teacher assessment.</p> <p>Pupils are given targets for improvement and formative feedback.</p>	<p>Learning of key technical words and their definitions.</p> <p>Analysis of existing products using writing structures.</p> <p>Evaluation of products they produce using writing frames.</p>

YEAR PLAN	Year 8 Design & Technology		
TERM	UNIT	ASSESSMENT TYPE	HOMEWORK OPPORTUNITIES
Carousel 1	<p>Development of Design and Technology skills</p> <p>The theme of this first module is timbers. Pupils will cover the basic theory of this material group including types, sub groups and uses. They will also develop design knowledge and skills using researching, designing and making techniques.</p> <p>Pupils will have material theory within lessons and begin to apply this knowledge through a design and make activity. They will learn about an approved GCSE design style (Art-Deco) and designers (Coco Chanel and Raymond Templier). They will develop their skills in 2D design, using more complex functions such as isometric drawing and rendering. They develop their understanding of CAM using different materials on the laser cutter.</p> <p>Pupils will learn to measure, mark out, cut and shape wood accurately using a range of hand tools and machinery.</p>	<p>Work will be recorded in theory exercise books and project folders. This will be assessed during and at the end of the rotation using a mixture of self, peer and teacher assessment.</p> <p>Pupils are given targets for improvement and formative feedback.</p>	<p>Researching of key timber materials and their uses.</p> <p>Learning of key technical words and their definitions.</p> <p>Researching of designers and design styles.</p>
Carousel 2	<p>Development of Design and Technology skills.</p> <p>Pupils will continue with the theme of Timbers in the second rotation. Here they will develop their theory knowledge and skills further.</p> <p>Pupils will use a greater range of tools and equipment and develop their designing, making and evaluating skills in realising their unique designs in the form of a mini GCSE project. Prompts and writing frames will be used to aid product evaluations.</p>	<p>Practical work will be recorded electronically. This will be assessed during and at the end of the rotation using a mixture of self, peer and teacher assessment.</p> <p>Pupils are given targets for improvement and formative feedback.</p>	<p>Learning of key technical words and their definitions.</p> <p>Analysis of key designing and manufacturing processes and techniques.</p> <p>Evaluation of products they have produce using writing</p>

YEAR PLAN	<p>Year 9 Design & Technology – In year 9 pupils have 2 lessons per week studying the subject having opted for it in Year 8. Pupils work through a number of projects aimed at developing the knowledge and skills required to take the subject as a GCSE.</p>		
TERM	UNIT	ASSESSMENT TYPE	HOMEWORK OPPORTUNITIES
Project 1	<p>Development of Design and Technology skills. PROJECT 1 – Art Deco Storage Unit. The theme of this first project is to use Bauhaus Design Movement (Marcel Breuer) as the theme for the design and make of a small storage unit. Pupils will cover the basic theory of this material group including types, sub groups and uses. They will also develop design knowledge and skills using researching, designing and making techniques.</p> <p>Pupils will have material theory within lessons and begin to apply this knowledge through a design and make activity. They will develop their skills in 2D design and develop their understanding of CAM using different materials on the laser cutter. Pupils will learn to measure, mark out, cut and shape wood accurately using a range of hand tools and machinery.</p>	<p>Work will be recorded in theory exercise books and project folders (e-folios). This will be assessed during and at the end of the project using a mixture of self, peer and teacher assessment.</p> <p>Pupils are given targets for improvement and formative feedback.</p>	<p>Researching of key timber materials and their uses.</p> <p>Learning of key technical words and their definitions.</p> <p>Researching of designers and design styles.</p>
Project 2	<p>Development of Design and Technology skills. PROJECT 2 – Furniture Modelling.</p> <p>Pupils will use the inspiration of architecture and key designers (Norman Foster) to create a piece of furniture. The final outcome will be developed in the form of a scale model using appropriate modelling materials. Here they will develop their theory knowledge and skills further.</p> <p>Pupils will use a greater range of tools and equipment and develop their designing, making and evaluating skills in realising their unique designs in the form of a mini GCSE project. Prompts and writing frames will be used to aid product evaluations.</p>	<p>Work will be recorded in theory exercise books and project folders. This will be assessed during and at the end of the project using a mixture of self, peer and teacher assessment.</p> <p>Pupils are given targets for improvement and formative feedback.</p>	<p>Learning of key technical words and their definitions.</p> <p>Analysis of key designing and manufacturing processes and techniques.</p> <p>Evaluation of products they have produce using writing</p>
Project 3	<p>Project 3 - Money Box Project</p> <p>Pupils will use any one of the approved design styles and their creativity to design and make an original storage container for money.</p> <p>The final outcome will be created using CAD/CAM.</p>	<p>Work will be recorded in theory exercise books and project folders. This will be assessed during and at the end of the project using a mixture of</p>	<p>Research into coin sizes and mathematical question related to volume.</p>

	<p>Task Analysis – Pupils to brainstorm the task to demonstrate an understanding of the challenge in front of them. Pupils to produce an analysis of existing products that have been designed to store money.</p> <p>Pupils to Develop a Range of Design Ideas and decide which idea to take forward as a Final Design. Pupils to Produce their Final Design using CAD drawing program 2D Design.</p> <p>Demonstrate the use of the Laser Cutter to cut out Designs. Pupils to use the Laser Cutter to realise their designs.</p>	<p>self, peer and teacher assessment.</p> <p>Pupils are given targets for improvement and formative feedback.</p>	
Project 4	<p>Introduction to GCSE Theory: Lessons and homework's in preparation for the GCSE course, will relate to the areas of Designers and design styles, mechanisms and material groups.</p>	<p>Work will be recorded in theory exercise books and project folders. This will be assessed during and at the end of the project using a mixture of self, peer and teacher assessment.</p> <p>Pupils are given targets for improvement and formative feedback.</p>	<p>Homework's to support and reinforce the work done in lessons.</p>

YEAR PLAN	Year 10 Design & Technology In year 10 pupils follow the AQA Design and Technology course. This will involve Theory lessons and small focused design and make tasks.		
TERM	UNIT	ASSESSMENT TYPE	HOMEWORK OPPORTUNITIES
Autumn Term 1	<p>Theory lessons: New and Emerging technologies, Energy generation and storage,</p> <p>Design and Make tasks: Childs toy construction kit. <i>(Skills covered include Design sheets, CAM / CAM, basic Modelling, manufacturing to fine tolerances).</i></p>	<p>Formal 50 minute written exam during lesson time. Pupil reflection and self assessment on this.</p> <p>Assessment & grading of design folio and practical outcome. Pupil reflection and self assessment through evaluation.</p>	<p>Research tasks.</p> <p>Revision book / practice questions.</p> <p>Self evaluation of design work.</p>
Autumn Term 2	<p>Theory lessons: Approaches to designing, energy & mechanisms, material groups.</p> <p>Design and Make tasks: Begin Furniture based on design influences. <i>(research on designers and design styles, develop design and CAD / CAM, more advanced modelling, working to fine tolerances.)</i></p>	<p>Formal 50 minute written exam during lesson time. Pupil reflection and self assessment on this.</p> <p>Assessment & grading of design folio and practical outcome. Pupil reflection and self assessment through evaluation.</p>	<p>Research tasks.</p> <p>Revision book / practice questions.</p> <p>Self-evaluation of design work.</p>
Spring term 1	<p>Theory lessons: Materials and their properties,</p> <p>Design and Make tasks: Complete Furniture based on design influences. <i>(research on designers and design styles, develop design and CAD / CAM, more advanced modelling, working to fine tolerances.)</i></p> <p>Begin Practice NEA: Mobile phone holder. <i>(Production of e-folio focusing on key areas for the NEA. This includes, Analysing task, detailed secondary research, primary research and questionnaires, specification, initial and developed design sheets, 3D CAD and final design sheets, testing and evaluation).</i></p>	<p>Formal 50 minute written exam during lesson time. Pupil reflection and self assessment on this.</p> <p>Assessment & grading of design folio and practical outcome. Pupil reflection and self assessment through evaluation.</p>	<p>Research tasks.</p> <p>Revision book / practice questions.</p> <p>Self-evaluation of design work</p>

Spring term 2	<p>Theory lessons: Material groups and their properties (completion), Tools, equipment and processes.</p> <p>Design and Make tasks: Complete Practice NEA: Mobile phone holder. <i>(Completion of e-folio focusing on key areas for the NEA. To include, initial and developed design sheets, 3D CAD and final design sheets, testing and evaluation).</i></p>	<p>Formal 50 minute written exam during lesson time. Pupil reflection and self assessment on this.</p> <p>Assessment & grading of design folio and practical outcome. Pupil reflection and self assessment through evaluation.</p>	<p>Research tasks.</p> <p>Revision book / practice questions.</p> <p>Self-evaluation of design work</p>
Summer term 1	<p>Theory lessons: Designing products, reflection on practice NEA, areas for development, review and revision for year 10 examination.</p>	<p>Pupil reflection and self assessment on exam questions.</p>	<p>Revision book / practice questions.</p>
Summer term 2	<p>Design and Make tasks: Begin NEA project task.</p>	<p>Preliminary grading of NEA task elements.</p>	<p>Research tasks</p> <p>NEA prep work</p>

YEAR PLAN	Year 11 Design & Technology In year 10 pupils follow the AQA Design and Technology course. This will involve Theory lessons and small focused design and make tasks.		
TERM	UNIT	ASSESSMENT TYPE	HOMEWORK OPPORTUNITIES
Autumn term 1	<p>Theory lessons: Review of prior knowledge, Practice examination questions (low stakes testing to improve confidence and reduce stress, testing prior knowledge to improve memory recal).</p> <p>Design and Make tasks: Continue with NEA Project task.</p>	<p>Pupil reflection and self assessment on exam questions.</p> <p>Preliminary grading of NEA task elements.</p>	<p>Revision book / practice questions.</p> <p>Self-evaluation of design work</p> <p>NEA prep work</p>
Autumn term 2	<p>Theory lessons: Review of prior knowledge, Practice examination questions (low stakes testing to improve confidence and reduce stress, testing prior knowledge to improve memory recal).</p> <p>Design and Make tasks: Continue with NEA Project task.</p>	<p>Pupil reflection and self assessment on exam questions.</p> <p>Preliminary grading of NEA task elements.</p>	<p>Revision book / practice questions.</p> <p>Self-evaluation of design work</p> <p>NEA prep work</p>
Spring term 1	<p>Theory lessons: Review of prior knowledge, Practice examination questions (low stakes testing to improve confidence and reduce stress, testing prior knowledge to improve memory recal).</p> <p>Design and Make tasks: Complete NEA Project task.</p>	<p>Pupil reflection and self assessment on exam questions.</p> <p>Final grading of NEA.</p>	<p>Revision book / practice questions.</p> <p>Self-evaluation of design work</p> <p>NEA prep work</p>
Spring term 2	<p>Theory lessons: Review of prior knowledge, Practice examination questions (low stakes testing to improve confidence and reduce stress, testing prior knowledge to improve memory recal).</p>	<p>Pupil reflection and self assessment on exam questions.</p>	<p>Review of revision / mastery learning techniques.</p> <p>Revision book / practice questions.</p>