



Subject Design and Technology

Curriculum vision

An inherent aspect of the human condition is the need to create. Art and technology subjects are a positive reflection of the human experience and through each individual discipline students in our subjects have the power to influence others.

Art and technology subjects are about escapism, in our lesson's students celebrate expression; this helps them to understand the world around them and improves mental wellbeing. Art and technology subjects develop life skills. Students in our subjects learn process and improve through practise. Students in our subjects recognise that mastery will lead to freedom to expression.

The art and technology subjects are part of our cultural and social identity. Art and technology students are accepting of others; our subjects have the power to break down barriers, uniting people with a sense of pride and enjoyment. Through art and technology subjects' students learn to appreciate their environment, and in so doing should always aim to improve it.

Students will demonstrate passion and enthusiasm for our subjects through understanding, self-discipline, mastery and intellectual thinking. Art and technology lessons provide you with something different and meaningful. In our lessons you will feel pride, ownership and recognise the value of your own and others' work.

Passion is at the core of art and technology subjects, where students create and share. Our subjects are a celebration of expression, and the enjoyment students feel in art and technology lessons. Art and technology subjects are of the utmost importance, our overarching aim is to encourage independence and ambition. Students in our subjects recognise and encourage values such as resilience, equality, support, trust, and honesty. The art and technology subjects are part of a broad education, in these lessons' students appreciate the interconnectivity of the world around them.

Art and technology subjects focus on expression, interpreting and appreciating aesthetics. Students in our subjects explore meaning, making implicit concepts and ideas explicit. Students in our subjects share and communicate what they have learnt and understood. They access emotions, change perceptions and generate connections with their audience.

In our subject students will become creative lifelong learners. These subjects will provide them with access to the creative, food and design industries.



Curriculum Overview - Key Stage 3

Throughout years 7, 8 and 9 students will complete term-long projects in each of the three specialist areas of Design and Technology, Textiles and Food Technology. The order in which these projects will be completed will vary for each student.

Year 7		Year 8		Year 9	
Project Overview	Why this? Why now?	Project Overview	Why this? Why now?	Project Overview	Why this? Why now?
D&T Mechanical Card	In this project, students are introduced to using the design process to come up with a finished piece. The mechanical card teaches creativity while working to a specification and encourages creativity in designing.	D&T Chocolate Bar Display	This project serves as a continuation of the use of the design process, but in more depth. Students are introduced to analysing products to inform their own designs, and it takes their 3D drawing to the next level with one point perspective, while still maintaining a high level of creativity.	D&T Mood Light	The year 9 project aims to improve student's workshop skills by teaching a range of basic tools and machines, as well as CAD/CAM and the use of the laser cutter. This puts students in an excellent position for taking on the GCSE Design and Technology course in year 10 and 11.
Textiles Embellished Seascape	This project serves as an introduction to basic core textiles skills that students may not have encountered before. They have the opportunity to use creative skills developed in primary school, with a material area new to them. Students learn about the work of textile artists Shaun Kardinal and Francesca Colussi Cramer.	Textiles Aerial Weaving	This project builds on textile skills from year 7 and allows students to develop their interest in textiles by focusing on an influential artist, Tammy Kanat, while still allowing for creativity in their work. Students will learn a new diverse practical skill, which contrasts with the skills learned in Year 7.	Textiles Print and Stitch	In year 9, another textile artist, Angie Lewin, is introduced along with the high-level skill of poly-tile printing, used alongside embroidery skills learned in year 7. Embroidery is used to further embellish one of the polytile prints. This project prepares students to consider textiles as a form of art if they continue it into KS4.



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<p>Food</p> <p>Introduction to Food</p>	<p>In this module students are introduced to the Eatwell Guide in order to make more informed choices of food and develop healthier eating habits. The practical sessions are to ensure safe use of the oven and hob, boiling and simmering plus safe use of knives</p>	<p>Food</p> <p>Nutrition and raising agents</p>	<p>This module develops further understanding of the Eatwell Guide focusing on macro nutrients. In addition, the practical work focuses on the use of raising agents in pizza dough and American muffins plus adapting a pasta sauce for nutritional balance.</p>	<p>Food</p> <p>Nutrition and the Consumer</p>	<p>This module focuses on safe preparation and cooking of high-risk foods and the prevention of cross contamination when using them. There is a focus on developing accuracy in cutting skills and increasing the pace of work. Students will have to make their own choices in the future so the topic of food labelling will support their informed choices of food.</p>
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Curriculum Overview - Key Stage 4 and 5 – Design and Technology

Term 1

	Autumn 1	Why this? Why now?	Autumn 2	Why this? Why now?
Year 10	Block Lettering Timbers theory	Student's introduction to GCSE Design and Technology will consist of timbers theory so they become familiar with different timbers and boards, their properties and their uses. This knowledge is then applied in the workshop to design and make block letters which will introduce basic and more complex workshop skills, with the opportunity to extend to CAD/CAM skills.	Finger jointed wooden box Commercial Processes theory	The second practical project will introduce more complex marking out and cutting skills, with students learning how to refine their practical work to ensure a high quality outcome. The introduction of CAD/CAM for all will add to their skill set. The theory is based on workshop processes and how they are applied in an industrial setting giving an overview of Technology in the real world.
Year 11	NEA: Section B: Design Brief and Specification Section C: Initial Ideas Section D: Development of Ideas	The focus on the NEA is coming up with a wide range of design ideas that are suitable and realistic for their project brief, and this section is completed now as it gets students thinking creatively, and drawing on their knowledge from year 10 about timbers, their properties, their uses, and environmental issues associated with using them.	NEA: Section D: Development of Ideas	Students will begin to develop their ideas and look at how their product might be made commercially for their NEA – they can draw on the examination theory being learned as part of this and consider if their product is environmentally friendly, are the materials being used from a renewable source, and what might happen to their product at the end of its life.



<p>Year 12</p>	<p>Theory: Timbers and papers and boards</p> <p>Project: Skills based</p>	<p>Over the course of the year students will cover a range of material areas in depth, and they will start in Autumn 1 learning about timbers and paper / boards. This will include how to work with them and manipulate them using various processes.</p> <p>Over the first term students will encounter a range of skills based projects designed to improve their designing and making skills. This will include CAD/CAM, technical drawing, practical skills, tradition woodworking and an introduction to working with polymers and metals.</p>	<p>Theory: Metals and Polymers</p> <p>Project: Skills based</p>	<p>The next two material areas that students will study are metals and polymers. This gives them an overview of how to work with these materials and incorporate them into their designing. Over the first term students will encounter a range of skills based projects designed to improve their designing and making skills. This will include CAD/CAM, technical drawing, practical skills, tradition woodworking and an introduction to working with polymers and metals.</p>
<p>Year 13</p>	<p>NEA - Development</p>	<p>Students will take their completed initial ideas and develop them through a range of testing, modelling, development, research and evaluation to produce a final design solution.</p>	<p>NEA - Development</p>	<p>Students will take their completed initial ideas and develop them through a range of testing, modelling, development, research and evaluation to produce a final design solution. As part of this, they will also plan how to make their product as well as costing up materials and labour involved in the project.</p>



Term 2

	Spring 1	Why this? Why now?	Spring 2	Why this? Why now?
Year 10	Architectural modelling	Students will focus on one project for two half terms, which will introduce them to the whole design and make process. Students will research, design, develop, plan and make a project based on fantasy architectural models. The level of independent work will increase with this project standing them in good stead for their NEA in the Summer term.	Architectural modelling	Students will focus on one project for two half terms, which will introduce them to the whole design and make process. Students will research, design, develop, plan and make a project based on fantasy architectural models. The level of independent work will increase with this project standing them in good stead for their NEA in the Summer term.
Year 11	NEA: Section E: Realising Design Ideas	Students will spend the majority of this half term making the product that they designed for their GCSE NEA. Using a range of skills that they have learned in KS3 and year 10, picking up new ones as they go and developing skills they learned during the development stage, their final ideas will be realised ready for testing and evaluation.	NEA: Section E: Realising Design Ideas Section F: Testing and Evaluation	The NEA making process finishes during this half term, around mid March, as students then move onto testing and evaluating their product ready to hand in, in time for the school deadline of end of Spring 2.



<p>Year 12</p>	<p>Theory: Composites, modern and smart materials</p> <p>Project: Hobbies</p>	<p>The final material areas to be covered are composites, modern and smart materials. This will arm students with a wide range of knowledge that will set them up well for their project. The project this term is based on the word "Hobbies". Students can take this in any way they wish to, and choose to produce a product that will educate others in any topic of their choosing. The focus will be on research and development while working closely with a client to come up with their final idea.</p>	<p>Theory: Industrial and commercial processes, digital design and manufacture, design development, health and safety and intellectual rights</p> <p>Project: Hobbies</p>	<p>The next section of theory for this year will cover topics relating to design and technology in the wider world. Industrial and commercial processes, digital design and manufacture, design development, health and safety and intellectual rights will be covered in depth. For their project, students will turn their attention to making their product with a high quality final outcome completed by Easter.</p>
<p>Year 13</p>	<p>NEA: Making</p>	<p>As projects will have been finalised students will spend the half term bringing their ideas to life using a wide range of practical skills including traditional woodworking, CAD/CAM, polymers, metalwork etc.</p>	<p>NEA: Making, testing and evaluating</p>	<p>As projects will have been finalised students will spend the half term bringing their ideas to life using a wide range of practical skills including traditional woodworking, CAD/CAM, polymers, metalwork etc. Students will then work with their client to test and evaluate their product to ensure that the outcome is successful and can be developed further if necessary.</p>



Term 3

	Summer 1	Why this? Why now?	Summer 2	Why this? Why now?
Year 10	Technical Drawing Environmental issues	Students will use their knowledge of how products are created to consider the environmental issues associated with these products and processes. Alongside this they will have the opportunity to study 3D technical drawing in preparation for their GCSE exam.	NEA (project): Section A: Investigating the context	In the final half term of year 10, students will begin their GCSE NEA (non exam assessment) project worth 50% of their grade. The contexts are released by the exam board on June 1 st , and the focus is on analysing and researching the task before the summer holidays so discussions around their design idea can be had over the summer holidays, and students return in year 11 to embark on the designing and making sections.
Year 11	Core Technical Principles, plus revision	With NEA completed and handed in, focus turns to examination theory where revision of topics from year 10 happens, and students are introduced to the names and uses of a variety of other materials, preparing them fully to take on the D&T A Level with an excellent knowledge of the relevant topics.		
Year 12	NEA	Students will begin their A Level NEA project after Easter, with lesson time focusing solely on this, while incorporating designing and making principles alongside it. While the project is not linear, the focus will be on researching and developing a wide range of ideas alongside a client of their choosing.	NEA	Students will continue with their A Level NEA, with the focus on development and planning the making of their product. This ensures that they are able to utilise all the skills they have learned throughout year 12 in a timely manner.



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<p>Year 13</p>	<p>Technical Principles Designing and Making Principles</p>	<p>Students will return to their examination theory at this point to revise all topics previously covered and to practise for their upcoming A Level exams.</p>	<p>Technical Principles Designing and Making Principles</p>	<p>Students will return to their examination theory at this point to revise all topics previously covered and to practise for their upcoming A Level exams.</p>
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Wider reading

Competitions & Associations

- Rotary Technology Tournament
- Design Ventura
- Arkwright Scholarship

Places to visit

- Design Museum, London
- V&A, London
- Natural History Museum and Science Museum, London

Revision Guides

AQA Design and Technology: timber, metal-based materials and polymers

GCSE AQA Design and Technology for grade 9-1 exam: Complete revision and practise (CGP)

Academic Reading

“The Design of Everyday Things” – Don Norman

“Invisible Women: Exposing data bias in a world designed for men” – Caroline Criado Perez

“Dieter Rams: As little design as possible” – Sophie Lovell

“Ten Principles for Good Design: Dieter Rams” – Cees W. de Jong



Curriculum Overview - Key Stage 4 – Hospitality & Catering

Term 1

	Autumn 1	Why this? Why now?	Autumn 2	Why this? Why now?
Year 10	<p>Theory: Unit 1: 1.4 How food causes ill health</p> <p>Practical: Students complete a 'back to basics' section to include knife skills, cutting and shaping, sauces, and pastry.</p>	<p>We begin with how contaminated food can cause food poisoning and other food related illness as this is core to all practical work that will be carried out over the 2 years. Being aware of how medical conditions can impact on food intake in a commercial environment. Practical work revisits basic skills to build a foundation for the 2 years to ensure accuracy in knife safety, cutting skills, a basic roux sauce, use of pastry and varied cooking methods</p>	<p>Theory: Unit 1: 1.3 Health & Safety at Work</p> <p>Practical: Developing skills in a variety of dishes to increase skills – puff pastry, soups, mousses, and seasonal food. Also, creating methods of production and evaluating dishes made throughout the term</p>	<p>We continue with this unit to link the impact of food induced ill health to other ways of ill health. The focus here is the physical environment and the different laws effecting the Hospitality & Industry such as the Health & Safety at Work Act. Practical work continues to expand the variety of techniques required at this stage to include making homemade puff pastry to create an individual dish, soups to use blenders and food processors and using high risk foods.</p>
Year 11	<p>Unit 2: NEA</p> <p>Theory: Students are responding to a brief given by the exam board to research, plan, prepare and cook several dishes. They are looking at individual nutritional needs and planning menus to meet environmental needs</p> <p>Practical: Cheesecake brownies, risotto, meringue roulade then specific dishes ready for final practical exam in December</p>	<p>Students begin their research into the nutritional needs of specific customer groups and then how cooking can affect the nutritional value of food to gain an understanding of what types of food to include in dishes and the best methods to retain the nutritional value. Practical work continues to be varied so students can take these techniques into their own dishes.</p>	<p>Unit 2: NEA</p> <p>Theory: NEA work on choice of dishes, creating a time plan that will be followed in the 3 hours practical exam in March plus evaluating their dishes and personal performance</p> <p>Practical work: Testing dishes for the exam, improving skills and techniques for exam in December</p>	<p>As part of the NEA students need an understanding of how to plan for customer requirements and so dishes must meet this need along with how food production and its impact on the environments. Ideas are now selected and the plan for making is completed ready for the practical exam</p>



Term 2

	Spring 1	Why this? Why now?	Spring 2	Why this? Why now?
Year 10	<p>Theory: Unit 1: 1.1 Hospitality & Catering Industry, its structure and operations</p> <p>Theory: Unit 2: 2.1.1 content for NEA: Nutrition</p> <p>Practical: Rice dishes, baking cookies and choux pastry and dough making</p>	<p>This term begins with how the industry is structured, the job roles and responsibilities within it. This links to understanding how a provision is successful and meeting the needs of customers.</p> <p>Students now study nutrition to be prepared for the mock in Summer and NEA in Year 11. Students will find out nutritional needs of people at various life stages plus those with specific medical needs to prepare suitable food for them. Practical work develops further techniques such as choux pastry for profiteroles and dough making in a calzone.</p>	<p>Theory: Unit 1: 1.3 Health & Safety in Hospitality & Catering</p> <p>Health & safety Laws Accident Forms Risk Assessments Hazard Analysis and Critical Control Points</p> <p>Practical: Enriched shortcrust pastry, meringue, Coulis and Sauces for desserts.</p>	<p>Students now develop an understanding of the need for planning for production ready for NEA, being able to dovetail a production plan and selecting dishes that will enable them to achieve a grade in the higher mark bands.</p> <p>Practical work develops to introduce students to the need to reduce waste for budgets and also environmental awareness by portioning a whole chicken and then using the parts for different dishes.</p>
Year 11	<p>Theory: Unit 1: 1.1 Hospitality & Catering Industry, its structure and operations</p>	<p>This term begins with how the industry is structured, the job roles and responsibilities within it. This links to understanding how a provision is successful and meeting the needs of customers.</p>	<p>Unit 1: 1.2 The operation of the front and back of House and How the industry meets the needs of customers.</p>	<p>This unit will link all others together with how a Hospitality provision operates both in front and back of house.</p>



Term 3

	Summer 1	Why this? Why now?	Summer 2	Why this? Why now?
Year 10	<p>Theory: Unit 2: 2.2 Factors affecting menu planning and planning for production Evaluating performance Completion of outstanding work on 1.1; Structure and organisation of the hospitality industry</p> <p>Practical: Portioning a chicken and using it to avoid waste, chicken supreme and sticky chicken. Homemade pasta.</p> <p>Practical: Specific dishes and also student choice to meet different situations in order to prepare for the NEA in Year 11</p>	<p>To complete the theory content before the EOY exam this unit will focus on the front of house roles in hospitality such as reception and restaurant service. Then all the work from this unit will combine to answer a long answer question ready for the summer exam.</p>	<p>Unit 2 Content: The theory content on food and nutrition will be covered investigating the role of nutrients in the body and the needs of people throughout their life.</p> <p>Practical: Students will continue to learn and develop techniques in a variety of dishes. They will have a mock practical exam.</p>	<p>Students will sit their EOY written exam successfully attempt the written paper. Unit 2 will begin so students have all the information they require when they complete their NEA under controlled conditions using class notes and homework. Practical work continues to work alongside the need for techniques and dishes to choose from in the NEA.</p>
Year 11	<p>Theory: Exam preparation Unit 1 1.11.4: this will be revision for the summer exam in June 2025</p>	<p>The focus is on how a provision operates to meet the needs of its customers and their expectations. Practical work is not needed as the NEA is complete. Exam preparation underway.</p>		



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Wider reading

Competitions & Associations

Rotary Young Chef Competition

Future chef

Revision Guides

Hospitality & Catering level 1 /2 Study & Revision Guide by Anita Tull (Illuminate Publishing)

My Revision Notes WJEC Level 1 /2 Hospitality & Catering by Bev Saunders (Hodder Education)

CGP Hospitality & Catering Study Guide

Academic Reading

A Taste of My Life by Raymond Blanc

The Science of Cooking by Dr Stuart Farrimond

How Food works DK Books