

Design and Technology

2025 – 2026



THE GRANGE SCHOOL



Design and Technology – Year 7

<p>Aims:</p> <p>Key Learning Objectives</p>	<ul style="list-style-type: none"> • Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world • build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users • critique, evaluate and test their ideas and products and the work of others • understand and apply the principles of nutrition and learn how to cook. <p>In Design and Technology, students work closely with the GELS skills in order to investigate, design, make and evaluate several projects throughout KS3. Students will become independent thinkers and problem solvers whilst gaining knowledge of materials, ingredients, processes, and techniques used in a range of different topics. Design and Technology also enables students to understand how Mathematics and Science can be applied through practical scenarios. All projects are designed to allow students to develop skills and be useful if they choose Design and Technology at GCSE.</p>
<p>Curriculum Content:</p>	
<p>Design and Technology: Product Design</p>	<p>Wooden key Holder: Students will be introduced to the workshop where they will learn how to use a selection of hand tools and machinery safety. Students will take on several smaller projects based around sustainability, material knowledge and design. Students will also learn how to research, design, make and evaluate during this project. There will also be a greater focus in this module on Health and Safety when working in Design and Technology.</p> <p>Overview of skills taught in this module:</p> <ul style="list-style-type: none"> • use of hand tools in the workshop • use of machinery in the workshop • health and safety in the workshop • sustainable design • materials and their properties • following a design brief in Design and Technology.
<p>Design and Technology: Compliant Materials</p>	<p>Drawstring Bag: students will be based in our textiles classroom, where they will learn how to control a sewing machine with accuracy and skill. They will learn about the properties and uses of a range of fabrics and make a high visibility drawstring bag. They will also learn a range of presentation techniques including perspective drawing, rendering and creative font design.</p> <p>Overview of skills taught in this module:</p> <ul style="list-style-type: none"> • exploring and understanding textiles equipment and materials • product analysis techniques • working to a design brief • drawing and rendering techniques • Health and Safety.
<p>Food Preparation and Nutrition</p>	<p>Food: All students will participate in Food Preparation and Nutrition. In Year 7, students will begin at a basic level whereby they will focus on how to make proper of use the equipment in cookery. Students will also gain a knowledge of the different ingredients and their purpose in basic level recipes. Furthermore, students will learn the roles of the different nutrients and how they can contribute towards a balanced diet.</p> <p>Overview of skills taught in this module:</p> <ul style="list-style-type: none"> • knife skills • learning how to use hobs, grill and oven • how to adapt recipes to reduce sugar. • how to cook dishes that contribute to a balanced diet • mini science investigation into enzymic browning • Health and Safety.

Assessments	<p>Students' work is assessed throughout the Design and Technology rotation and will be given a level at the end of each rotation. As well as marking and feedback in books, students will also have two formative assessments at mid points through the module to monitor their progress. They will be assessed across two of the key areas of focus, seen below, during each rotation:</p> <ul style="list-style-type: none"> • Investigation and Research • Design and Development • Manufacture • Evaluation and Analysis <p>For each of these areas, students will gain a mark from T5, T6, 1, 2, 3, 4, 5, and 6. In addition to this, students will sit an end of rotation test to check their understanding of the topics taught.</p>
Homework Structure	<p>Homework is set in a grid giving a range of Design and Technology homework activities. Students will select the activities they wish to complete in their own time. Homework activities on the grid have different levels of challenge, a homework that is easily achieved is worth one point and the more challenging and time-consuming homework is worth four points. Each rotation students will be expected to complete homework that equals six points.</p>
School-based enrichment opportunities	<p>Trips and visits to be arranged.</p>
Resources available for home-based study	<p>www.technologystudent.com Exploring Design and Technology for Key Stage 3: Boost eBook (hoddereducation.co.uk)</p>

Design and Technology – Year 8

Key Learning Objectives	<p>In Design and Technology, students work closely with the GELS skills in order to investigate, design, make, and evaluate several projects throughout KS3. Students will become independent thinkers and problem solvers whilst gaining knowledge of materials, ingredients, processes and techniques used in a range of different topics. Design and Technology also enables students to understand how Mathematics and Science can be applied through practical scenarios. All projects are designed to allow students to develop skills and be useful if they choose Design and Technology at GCSE.</p>
Curriculum Content:	
Design and Technology: Product Design	<p>Fidget Board: students work using a variety of processes to create a fidget board. In this topic, they learn to work with a range of hand tools and are taught how to select and use hand tools in the workshop safely and independently building on knowledge from year 7. Students gain a further understanding of materials and their properties. Students are also introduced to joining methods, both temporary and permanent and a range of fixtures and fittings.</p> <p>Key Learning Objectives:</p> <ul style="list-style-type: none"> • Using the workshop safely • Selecting, identifying and using tools • Working with a range of materials based on their properties • Casting in pewter • The 6 R's • Working to a design brief • Health and Safety.
Design and Technology: Compliant Materials	<p>Mood Light: students will be learning all about graphic design and products. They will identify where graphic design is found in the world around them and will learn some skills attributed and related to this design area. Such skills include sketching, drawing techniques, rendering and using CAD/CAM to develop and enhance their designs. Students complete a packaging project where they are tasked to design and create a piece of packaging and logo for a mood light company. Students will work with the computers and machinery available in the department to design their own mood light. Gaining skills in using computers to design and learning how CAD/CAM and new technologies are used in the industry and the wider world.</p> <p>Key Learning Objectives:</p> <ul style="list-style-type: none"> • Designing and developing using computer aided design • Computer aided manufacturing techniques • Electronic skills and techniques • New technologies • Selecting tools and equipment • Packaging development • Working to a design brief • Working with a client
Food Preparation and Nutrition	<p>Food: students further establish their knowledge of safe food practice and nutrition. Students learn to make a variety of more complex dishes that build their skills and understanding of how to prepare and handle food safely. They will also carry out a mini science investigation exploring how starches thicken liquids.</p> <p>Key Learning Objectives</p> <ul style="list-style-type: none"> • Knife skills • Following more complex recipes • Ingredients and their purpose • Safe food handling and storage • Meat handling and risk assessment.

Assessments	<p>Students' work is assessed throughout the D&T rotation and will be given a level at the end of each rotation. As well as marking and feedback in books, students will also have two formative assessments at mid points through the module to monitor their progress. They will be assessed across two of the key areas of focus, seen below, during each rotation:</p> <ul style="list-style-type: none"> • Investigation and Research • Design and Development • Manufacture • Evaluation and Analysis. <p>For each of these areas, students will gain a mark from T5, T6, 1, 2, 3, 4, 5, and 6. In addition to this, students will sit an end of rotation test to check their understanding of the topics taught.</p>
Homework Structure	<p>Homework is set in a grid giving a range of D&T homework activities. Students will select the activities they wish to complete in their own time. Homework activities in the grid have different levels of challenge, a homework that is easily achieved is worth one point and the more challenging and time-consuming homework is worth four points. Each rotation students will be expected to complete homework that equals six points.</p>
School-based enrichment opportunities	<p>Trips and visits to be arranged.</p>
Resources available for home-based study	<p>www.technologystudent.com Exploring Design and Technology for Key Stage 3: Boost eBook (hoddereducation.co.uk)</p>

Design and Technology – Year 9

Key Learning Objectives	<p>In Year 9, students decide which two specialist areas they wish to develop and strengthen their skills and understanding in.</p> <p>Projects are focused towards building the skill set in preparation for students to continue into either the Design and Technology or Food Preparation and Nutrition GCSE. Student’s skills and attributes such as communication, creativity, problem-solving, and independence are also further developed.</p>
Curriculum Content:	
Design and Technology: Product Design	<p>Project Title: Pin ball game</p> <p>During Year 9, Product Design students will take on the pin ball game project where they will further gain an understanding into materials, tools and processes in the workshop. Furthermore, they will also cover theory relevant to the practical outcome where they learn about sustainability and quality control.</p>
Design and Technology: Compliant Materials	<p>Project Title: High Profile event</p> <p>In this unit, students will explore compliant materials through the medium of Graphic Design. They will investigate how companies promote their brand and use a combination of hand drawn and CAD techniques to develop their promotional material for a high-profile event of their choice. Outcomes could include prototypes of the event venue, clothing and merchandise.</p>
Food Preparation and Nutrition	<p>In Food Preparation and Nutrition, students will build on their knowledge of the subject to create even more complex dishes that use a combination of skills.</p> <p>A variety of topics and skills are covered including:</p> <ul style="list-style-type: none"> • Batch production and quality control • Exploring pastry • Cultural Cuisine • Design and make a healthy snack • Exploration of raising agents • Hazards, hygiene and handling of high-risk foods. <p>Students will also carry out a science investigation into the conditions needed for yeast to ferment.</p>
Assessments	<p>Students’ work is assessed throughout the D&T rotation and will be given a level at the end of each rotation. As well as marking and feedback in books, students will also have two formative assessments at mid points through the module to monitor their progress. They will be assessed across two of the key areas of focus, seen below, during each rotation:</p> <ul style="list-style-type: none"> • Investigation and Research • Design and Development • Manufacture • Evaluation and Analysis. <p>For each of these areas, students will gain a mark from T5, T6, 1, 2, 3, 4, 5, and 6. In addition to this, students will sit an end of rotation test to check their understanding of the topics taught.</p> <p>As well as marking and feedback in books, students will also have a formative assessment halfway through the module to monitor their progress. At the end of the project, they will be given a final grade based on their success in the 4 Design and Technology areas.</p>

Homework Structure	Homework will be set regularly throughout the rotation of each project and will be set by the classroom teacher. Marked and feedback given back. The work set will be designed to build on skills and knowledge learnt in lessons and will be a mix of tasks such as online quiz, project, investigations, designing, long answer exam type questions.
School-based enrichment opportunities	Trips and visits to be arranged.
Resources available for home-based study	www.technologystudent.com Exploring Design and Technology for Key Stage 3: Boost eBook (hoddereducation.co.uk)

Construction and the Built Environment

<p>Course Details</p>	<p>Exam Board: Edexcel</p> <p>Level: Tech Level 2</p> <p>Examination Structure:</p> <ul style="list-style-type: none"> • Two internal set units Construction in Practice and Construction and Design. • One External (exam) Construction Technology <p>The three components focus on the assessment of applied knowledge, skills and practices. These are all essential to developing a basis for progression and therefore learners need to achieve all components in order to achieve the qualification.</p> <p>Written exam:</p> <p>Component 1: Construction Technology (1 ½ Hours). 60 marks (January/February)</p> <p>Coursework/Controlled Assessment:</p> <ul style="list-style-type: none"> • Component 2: Construction in Practice • Component 3: Construction and Design
<p>Key Learning Objectives</p>	<p>This course allows you to study construction and the built environment, giving you the opportunity to gain a broad knowledge and understanding of the industry. You will develop skills such as interpreting and analysing information, identifying the infrastructure required for safe and efficient work, and understanding how client needs can shape building design.</p> <p>Learners will have the opportunity to develop applied knowledge and practical skills in the following areas:</p> <ul style="list-style-type: none"> • Construction technology • Construction in practice • Construction and design. <p>You will build on the knowledge gained in the mandatory units by completing the Exploring Carpentry and Joinery Principles unit. This will provide you with an opportunity to develop a wider understanding and appreciation of a specific aspect of the construction industry.</p>
<p>Curriculum Content</p>	
<p>Autumn Term (September – December)</p>	<p>In the Autumn term of Year 10, students will begin their first assignment brief, Component 2: Construction in practice.</p> <p>This unit is the practical element of the course and in this term, students will be able to explore working in the workshop using the tools and machinery.</p> <p>In this component, you will learn and apply vocationally correct techniques to perform construction activities which include the appropriate selection and use of a range of tools to perform construction activities. In doing this you will develop some understanding of working safely in a craft role in the construction industry. You will also have to analyse hazards and risks and then complete some practical work in carpentry and joinery.</p> <p>Learning Outcomes</p> <p>In this unit you will:</p> <p>A - Be able to understand hazards and risk for safe production of a practical construction outcome</p> <p>B - Be able to produce a practical construction outcome.</p> <p>As well as building a frame with 4 different types of joints, they will be tasked to complete a risk assessment and to demonstrate their understanding of tools and machinery.</p>

	<p>Alongside component 2 student will also be developing their knowledge and understanding of component 1: Construction technology (exam)</p> <p>This component will develop knowledge and understanding of processes, terminology and technology used in the construction of the built environment.</p> <p>An exam worth 60 marks will be completed under supervised conditions. The supervised assessment period is a maximum of 1.5 hours and should be arranged in the period timetabled by Pearson. The assessment availability is January/February and May/June.</p> <p>Assessment Objectives</p> <p>AO1 Demonstrate knowledge of work of the construction industry and the different technology used in low-rise construction projects</p> <p>AO2 Demonstrate understanding of work of the construction industry and the different technology used in low-rise construction projects</p> <p>AO3 Be able to make connections between different construction technologies to ensure appropriateness of low-rise construction projects in different scenarios</p>
<p>Spring Term (January - April)</p>	<p>During this term the student will continue to work on component 2: Construction in practice and prepare themselves for the assessment in March.</p> <p>Student will continue to develop their knowledge and understanding of component 1: Construction technology (exam).</p>
<p>Summer Term (May - July)</p>	<p>In the Summer term, students will go on to begin their third assignment brief Component 3: Construction and design. Learners will gain an understanding of clients' needs and develop skills in producing building design briefs and sketches that consider construction constraints.</p> <p>Learning Outcomes</p> <p>In this unit you will:</p> <p>A - understand the needs of a client and the constraints on design when designing a low-rise building</p> <p>B - be able to graphically communicate the design of a low-rise building.</p> <p>The component will bring together knowledge and understanding from other components in order for you to gain an insight into the work of the designer. This will give you a broad understanding of construction and enable you to make informed choices when considering your post-16 education. It will facilitate pathways into technician or craft education and further training.</p>
<p>Curriculum Content – Year 11</p>	
<p>Autumn Term (September – December)</p>	<p>During this term the student will continue to work on component 3: Construction in practice and prepare themselves for the assessment in November.</p> <p>Student will continue to develop their knowledge and understanding of component 1: Construction technology (exam).</p>
<p>Spring Term (January - May)</p>	<p>In January of this term student will take their exam (Component 1).</p>
<p>Assessments</p>	<p>Students will carry out tasks/assignments throughout the course. Their teacher will mark these, and students will receive feedback as to how they are getting on.</p> <ul style="list-style-type: none"> • Construction technology (exam) Externally marked • Construction in practice – Assignment internally marked • Construction and design – Assignment internally marked

Homework / independent study	Over the duration of the course, students will be set homework regularly in order to improve understanding of the topics covered in theory lessons.
School-based enrichment opportunities	Afterschool sessions are often run for students who would like to improve their work. Students should ask their teacher for more details with regards to which days of the week they may stay.
Books suggested for independent/wider reading	BTEC First Construction and the Built Environment Student Book
Resources available for home-based study	

Design and Technology - Graphic Products GCSE

Course Details	<p>Exam Board: AQA</p> <p>Level: GCSE Grades 9-1</p> <p>Examination Structure: 50% Coursework 50% Exam</p> <p>Written exam: 2 hours (100 marks) 50% of GCSE</p> <ul style="list-style-type: none"> • Section A: Core Technical Principles (20 marks) • Section B: Specialist Technical Principles (30 marks) • Section C: Designing and Making Principles (50 marks) <p>Coursework / Controlled Assessment:</p> <p>Non-exam assessment (NEA): 30-35 hours approx. (100 marks) 50% of GCSE</p> <ul style="list-style-type: none"> • Core Technical Principles. • Specialist Technical Principles. • Designing and Making Practice. 	
Key Learning Objectives	<p>In Key Stage 4 Design and Technology, students will gain a breadth of knowledge that covers the whole Design and Technology Curriculum. This includes building on knowledge they have gained in Key Stage 3 during both Product Design and Compliant materials units. During Year 10, students will be able to complete a series of projects building on their designing, making and CAD skills, preparing them for Year 11 when they start their NEA (design and make project). The project includes researching and investigating a design context, generating, and developing ideas, realising and making prototypes and evaluating the design process.</p> <p>Students following the Graphic Products pathway will work with and develop skills and knowledge of Cards, paper, and plastic. They will produce a graphic outcome for their final make.</p>	
Curriculum Content – Year 10		
Autumn Term (September – December)	<p>What will be covered?</p> <ul style="list-style-type: none"> • New and emerging technologies. • Sustainability in Design and Technology (Finite and non-finite resources, disposal of waste). • Enterprise in Design and Technology (Crowdfunding, virtual marketing, and fair-trade). • Culture and Society in Design and Technology (SMSC considerations in Design). • Environment and Design and Technology (Continuous improvement, efficient working, pollution and global warming). • Production Techniques and Systems (automation, CAD, CAM, FMS, JIT and lean manufacturing). • Fossil fuels (Coal, oil and gas), Nuclear Power and Renewable Energy (Wind, solar, tidal, hydro-electrical, biomass), Energy Storage. 	<p>Project: NEA Prep</p> <p>Introduction to the design context. Researching and investigating.</p> <p>Analysing the task/context. Investigating a client. Writing a design specification</p>

Spring Term (January - April)	<ul style="list-style-type: none"> • Modern Materials (New or improved processes), Function alterations (LCDs, Nanomaterials). • Smart Materials and their properties. • Composite Materials and Technical Textiles. • Electronics (Inputs, processes and outputs). • Different types of movement (Linear, rotary, reciprocating and oscillating). • Levers, linkages and rotary systems. (1st, 2nd, 3rd order, bell cranks, push/pull, CAMS, gears, pulleys and belts). • Materials and their working properties (Papers and boards, timbers, metals, polymers and textiles). • Skills Build Projects. 	Year 10 NEA Preparation Project Generating and presenting ideas around the context. Developing ideas through a range of methods. Realising Ideas and creating a final prototype.
Summer Term (May - July)	Students begin final assessed project (NEA). Theory lessons covering: <ul style="list-style-type: none"> • selecting materials (functionality, aesthetics, environmental factors, availability, cost, social factors, cultural factors and ethical factors) • testing materials against forces and stresses (tension, compression, bending, torsion and shear) • improving properties of materials (lamination, bending, folding, webbing, fabric interfacing) • carbon footprint and Ecological issues in design and manufacture (Deforestation, mining, drilling and farming) • the 6 R's (reduce, refuse, re-use, repair, recycle and rethink) • social issues (safe working conditions, reducing pollution). 	
Curriculum Content – Year 11		
Autumn Term (September – December)	What will be covered? <ul style="list-style-type: none"> • Primary sources of materials. • Properties of materials. • Modification of material properties for specific purposes. • Shaping and forming using cutting, abrasion and addition. • Stock forms, types and sizes of materials. • Scales of production (Prototype, batch, mass and continuous). 	Project: NEA Prep Students continue to develop final NEA. Generating and developing their ideas.
Spring Term (January - May)	<ul style="list-style-type: none"> • The use of production aids (patterns, jigs, templates). • Tools, equipment and processes (wastage, addition, deforming and reforming). • Industrial processes. • The preparation and application of treatments and finishes. • Application of quality control. 	Students continue to develop final NEA. Realising and evaluating their ideas. Completion of final NEA project
Assessments	Students will be assessed on their final NEA project and exam. These parts of the course are both worth 50%. Throughout the course, students' progress will be monitored closely. In Year 10, students will be assessed in the same way that they will be assessed in Year 11, enabling them to understand the criteria and assessment procedure for their final NEA in Year 11.	

Homework / independent study	<p>Over the duration of the course, students will be set homework regularly in order to improve understanding of the topics covered in theory lessons.</p> <p>Students will gain an understanding of how to work independently as this is essential for their final project. Afterschool sessions are often run for students who would like to improve their work.</p>
School-based enrichment opportunities	<p>Afterschool sessions are often run for students who would like to improve their work. Students should ask their teacher for more details with regards to which days of the week they may stay.</p>
Books suggested for independent/wider reading	<p>AQA GCSE (9-1) Design and Technology - Authors: Michael Ross</p> <p>http://www.aqa.org.uk/resources/design-and-technology/gcse/design-and-technology/teach/textbooks - See the AQA website for books more closely relating to each specialist topic.</p>
Resources available for home-based study	<p>http://www.bbc.co.uk/schools/gcsebitesize/design/</p> <p>http://www.technologystudent.com/</p>

Design and Technology - Product Design

Course Details	<p>Exam Board: AQA</p> <p>Level: GCSE Grades 9-1</p> <p>Examination Structure: 50% Coursework 50% Exam</p> <p>Written exam: 2 hours (100 marks) 50% of GCSE</p> <ul style="list-style-type: none"> • Section A: Core Technical Principles (20 marks) • Section B: Specialist Technical Principles (30 marks) • Section C: Designing and Making Principles (50 marks) <p>Coursework / Controlled Assessment:</p> <p>Non-exam assessment (NEA): 30-35 hours approx. (100 marks) 50% of GCSE</p> <ul style="list-style-type: none"> • Core Technical Principles. • Specialist Technical Principles. • Designing and Making Practice. 	
Key Learning Objectives	<p>In KS4 Design and Technology, students will gain a breadth of knowledge that covers the whole Design and Technology Curriculum. This includes building on knowledge they have gained in KS3 during both Product Design and Compliant materials units. During Year 10, students will be able to complete a series of projects building on their designing, making and CAD skills, preparing them for year 11 when they start their NEA (design and make project). The project includes researching and investigating a design context, generating, and developing ideas, realising and making prototypes and evaluating the design process.</p> <p>Students following the Product Design pathway will work with and develop skills and knowledge of woods, plastic and metals.</p>	
Curriculum Content – Year 10		
Autumn Term (September – December)	<p>What will be covered?</p> <ul style="list-style-type: none"> • New and emerging technologies. • Sustainability in Design and Technology (Finite and non-finite resources, disposal of waste). • Enterprise in Design and Technology (Crowdfunding, virtual marketing, and fair-trade). • Culture and Society in Design and Technology (SMSC considerations in Design). • Environment and Design and Technology (Continuous improvement, efficient working, pollution and global warming). • Production Techniques and Systems (automation, CAD, CAM, FMS, JIT and lean manufacturing). • Fossil fuels (Coal, oil and gas), Nuclear Power and Renewable Energy (Wind, solar, tidal, hydro-electrical, biomass), Energy Storage. 	<p>Project: NEA Prep</p> <p>Introduction to the design context. Researching and investigating.</p> <p>Analysing the task/context. Investigating a client. Writing a design specification</p>

Spring Term (January - April)	<ul style="list-style-type: none"> • Modern Materials (New or improved processes), Function alterations (LCDs, Nanomaterials). • Smart Materials and their properties. • Composite Materials and Technical Textiles. • Electronics (Inputs, processes and outputs). • Different types of movement (Linear, rotary, reciprocating and oscillating). • Levers, linkages and rotary systems. (1st, 2nd, 3rd order, bell cranks, push/pull, CAMS, gears, pulleys and belts). • Materials and their working properties (Papers and boards, timbers, metals, polymers and textiles). • Skills Build Projects. 	Year 10 NEA Preparation Project Generating and presenting ideas around the context. Developing ideas through a range of methods. Realising Ideas and creating a final prototype.
Summer Term (May - July)	Students begin final assessed project (NEA). Theory lessons covering: <ul style="list-style-type: none"> • selecting materials (functionality, aesthetics, environmental factors, availability, cost, social factors, cultural factors and ethical factors) • testing materials against forces and stresses (tension, compression, bending, torsion and shear) • improving properties of materials (lamination, bending, folding, webbing, fabric interfacing) • carbon footprint and Ecological issues in design and manufacture (Deforestation, mining, drilling and farming) • the 6 R's (reduce, refuse, re-use, repair, recycle and rethink) • social issues (safe working conditions, reducing pollution). 	
Curriculum Content – Year 11		
Autumn Term (September – December)	What will be covered? <ul style="list-style-type: none"> • Primary sources of materials. • Properties of materials. • Modification of material properties for specific purposes. • Shaping and forming using cutting, abrasion and addition. • Stock forms, types and sizes of materials. • Scales of production (Prototype, batch, mass and continuous). 	Project: NEA Prep Students continue to develop final NEA. Generating and developing their ideas.
Spring Term (January - May)	<ul style="list-style-type: none"> • The use of production aids (patterns, jigs, templates). • Tools, equipment and processes (wastage, addition, deforming and reforming). • Industrial processes. • The preparation and application of treatments and finishes. • Application of quality control. 	Students continue to develop final NEA. Realising and evaluating their ideas. Completion of final NEA project
Assessments	Students will be assessed on their final NEA project and exam. These parts of the course are both worth 50%. Throughout the course, students' progress will be monitored closely. In Year 10, students will be assessed in the same way that they will be assessed in Year 11, enabling them to understand the criteria and assessment procedure for their final NEA in Year 11.	

Homework / independent study	<p>Over the duration of the course, students will be set homework regularly in order to improve understanding of the topics covered in theory lessons.</p> <p>Students will gain an understanding of how to work independently as this is essential for their final project. Afterschool sessions are often run for students who would like to improve their work.</p>
School-based enrichment opportunities	<p>Afterschool sessions are often run for students who would like to improve their work. Students should ask their teacher for more details with regards to which days of the week they may stay.</p>
Books suggested for independent/wider reading	<p>AQA GCSE (9-1) Design and Technology - Authors: Michael Ross</p> <p>http://www.aqa.org.uk/resources/design-and-technology/gcse/design-and-technology/teach/textbooks - See the AQA website for books more closely relating to each specialist topic.</p>
Resources available for home-based study	<p>http://www.bbc.co.uk/schools/gcsebitesize/design/</p> <p>http://www.technologystudent.com/</p>

Food Preparation and Nutrition - GCSE

Course Details	<p>Exam Board: AQA</p> <p>Level: GCSE 9-1</p> <p>Examination Structure: Multiple choice and extended answers - 50% of final grade.</p> <p>Coursework/Controlled Assessment: Coursework - 50% of final grade. NEA1: Food Investigation (15%, 10 hours). NEA2: Food Preparation Task (35%, 20 hours and 3-hour practical exam).</p>
Key Learning Objectives	<p>The specification sets out the knowledge, understanding, and skills required to cook and apply the principles of food science, nutrition, and healthy eating. Students will learn about how to apply nutrition through practical work, cooking of food and heat transfer, functional and chemical properties of food, food spoilage and contamination, principles effecting food safety, sustainability, food labelling and marketing, food processing and production and sensory evaluation. Throughout Year 10, students will acquire knowledge and practise the acquisition of food preparation skills. They will complete 2 pieces of NEA in Year 11 which are timed. The first piece of coursework is a science investigation with a focus on the functional and chemical properties of food. The second piece of coursework involves showcasing food preparation methods to make three dishes based on a topic set by AQA. Students will then have a written examination at the end of Year 11.</p>
Curriculum Content – Year 10	
Autumn Term (September – December)	<p>Students will acquire knowledge on the specification topics in order to apply this in the practical classroom. This is to prepare students with the knowledge required for their written examination. Learning in depth food preparation skills. Students will also apply nutritional knowledge to dishes produced and explore the different types of food chemistry and functions. This is to prepare students for their NEA in Food Science and their NEA in Food Preparation.</p>
Spring Term (January - April)	<p>Students will continue to acquire knowledge on the specification topics in order to apply this in the practical classroom.</p> <p>Research tasks, preparation for practical dishes exploring the knowledge learnt in nutrition and food chemistry through further practical exploration.</p> <p>Mock Exam - Food Science Investigation Introduction to NEA1 in preparation for their Yr11 assessment. Students spend a maximum of 10 hours experimenting with different types of food products and their functions in recipes. They then produce a written or electronic report including photographs (1500 - 2000 words).</p>
Summer Term (May - July)	<p>Mock exam - Food Preparation Assessment Introduction to NEA2 in preparation for their Yr11 assessment. Using task previously set by exam board AQA. Produce 3 dishes showing as many preparation skills as possible. Maximum of 20 hours. 3 hours for the practical production as an exam.</p> <p>Mock exam (written exam paper) Introduction to the written exam paper in preparation for their final Yr11 exam.</p>

Curriculum Content – Year 11	
Autumn Term (September – December)	<p>NEA1 Food Science investigation (15%) Released by AQA on 1st September. Applying food science and chemistry knowledge to experiments and writing up your findings in a 1500—2000 word report / essay with photographs.</p> <p>NEA2 Food Preparation (35%) Released by AQA on 1st November. Produce three dishes around a set brief within a 3-hour timed assessment showing as many food preparation skills as possible. Write up and evaluate your findings within a 20-hour written report.</p>
Spring Term (January - May)	<p>Revision programme for the end of Year 11 Revisiting topics learnt in year 10 Written examination (50% of final grade).</p>
Assessments	<p>Written examination 1hour 45 minutes (50% of final grade)—multiple choice, descriptive and essay/extended writing style questions. Question themes: How you can apply nutrition through practical work, cooking of food and heat transfer, functional and chemical properties of food, food spoilage and contamination, principles effecting food safety, sustainability, food labelling and marketing, food processing and production, sensory evaluation.</p> <p>NEA1: Food Investigation (15% 10 hours) NEA2: Food Preparation Task (35% 20 hours and 3-hour practical exam)</p>
Homework / independent study	A commitment is required to bring ingredients in on a regular basis and complete homework that builds on the theoretical knowledge gained in class.
School-based enrichment opportunities	<p>Culinary Skills Build afterschool clubs. Future Chef & Rotary Club competition entry.</p>
Resources available for home-based study	<p>‘AQA GCSE Food Preparation & Nutrition’ by Anita Tull ‘AQA GCSE Food Preparation & Nutrition Revision guide’ by CGP</p>

KS5 Food Science and Nutrition

Course Details	<p>Exam Board: WJEC</p> <p>Level: Level 3 Diploma 'Food Science and Nutrition'</p> <p>Examination Structure: Unit 1: External exam 90 marks (90 minutes) plus an internally marked assessment. Unit 2: Externally assessed assessment. Unit 3 or 4: Internally assessed assessment.</p> <p>Coursework/Controlled Assessment: Unit 1 – internal assessment Unit 2 – external assessment Unit 3 or 4 – internal assessment</p>
Key Learning Objectives	<p>An understanding of food science and nutrition is relevant to many industries and job roles. Care providers and nutritionists in hospitals use this knowledge, as do sports coaches and fitness instructors. Hotels and restaurants, food manufacturers and government agencies also use this understanding to develop menus, food products and policies that support healthy eating initiatives. Many employment opportunities within the field of food science and nutrition are available to graduates. The WJEC Level 3 Diploma in Food Science and Nutrition has been designed to provide learners with underpinning knowledge, understanding and skills to progress to further study and training. It offers exciting and interesting experiences that focus learning for 16-19 year-old learners and adult learners through applied learning, i.e. through the acquisition of knowledge and understanding in purposeful contexts linked to the food production industry.</p> <p>Unit 1 will enable the learner to demonstrate an understanding of the science of food safety, nutrition and nutritional needs in a wide range of contexts, and through on-going practical sessions, to gain practical skills to produce quality food items to meet the needs of individuals.</p> <p>Unit 2 allows learners to develop their understanding of the science of food safety and hygiene; essential knowledge for anyone involved in food production in the home or wishing to work in the food industry. Again, practical sessions will support the gaining of theoretical knowledge and ensure learning is a tactile experience.</p> <p>Studying one of the two optional units (unit 3, unit 4) subjects of particular interest or relevance to them, building on previous learning and experiences.</p>
Curriculum Content – Year 1	
Autumn Term (September – December)	Unit 1 Meeting Nutritional needs of Specific Groups Nutrition theory and related practical work. Focused complex skills practical work. Unit 2 Ensuring Food is Safe to Eat Relate theory to practical work.
Spring Term (January - April)	Unit 1 Meeting Nutritional needs of Specific Groups Nutrition theory Meal planning Jan – Feb half term: Practise practical brief (not the scenario for the real task) Feb – April: Begin 9½ chosen brief (option A or B) • Planning 3 hours • Practical exam 3½ hours • Evaluation 3 hours Mock unit 1 Examination Unit 2 Ensuring Food is Safe to Eat relate to theory and practical work
Summer Term (May - July)	Unit 1 Meeting Nutritional needs of Specific Groups Nutrition theory Complete Unit 1 practical brief, complete Mark Record sheet and observation sheet. SEND TO WJEC FOR MODERATION BY 15 MAY REVISION FOR UNIT 1 Meeting Nutritional needs of Specific Groups WRITTEN PAPER: JUNE After exams: Prepare research for optional brief Unit 3 or 4

Curriculum Content – Year 2	
Autumn Term (September – December)	Unit 3 Experimenting to Solve Food Production Problems OR Unit 4 Current Issues in Food Science and Nutrition planning possible practise task as a group (not the brief for the real task) Oct – Dec: complete chosen brief for Unit 3 or 4 Unit 3 = 12 hours Unit 4 = 14 hours. Hand in completed Unit 3 or 4 task. Complete Mark record sheet and Observation sheet for any practical work
Spring Term (January - May)	Unit 2 Ensuring Food is Safe to eat Theory and practical work Mar – April: Practise task as a group 'Easy Eats' Unit 1 Meeting Nutritional needs of Specific Groups theory and practise papers if retaking exam in June Unit 2 Ensuring Food is Safe to eat 1st. MAY BEGIN Unit 2 Ensuring Food is Safe to eat 8 HOUR TASK Complete in 3 weeks UNIT 3 OR UNIT 4 TO WJEC FOR MODERATION BY 15 MAY SEND UNIT 2 FOR MARKING TO WJEC BY 1 JUNE REVISION FOR UNIT 1 Meeting Nutritional needs of Specific Groups WRITTEN PAPER: JUNE if retaking exam
Assessments	The WJEC Level 3 Diploma in Food Science and Nutrition is assessed through a combination of a written exam and external assignment set and marked by WJEC and two centre marked assignments.
Homework / independent study	A variety of tasks are set in response to ongoing studies.
School-based enrichment opportunities	Develop community ties with local food businesses.
Resources available for home-based study	Access to Jenny Ridgewell Nutrition Program, supporting nutritional analysis, costing and sensory analysis.