

# Curriculum Guide – Design and Technology



## Year 7 Cooking and Nutrition



Course Description	Course Content	Assessment
<p>Cooking and Nutrition is a part of the Design and Technology curriculum. Students rotate between the 2 subjects on a term and ½ basis.</p>	<p><b>Year 7</b></p> <ul style="list-style-type: none"> <li>• Key principles of kitchen hygiene and safety including knife safety</li> <li>• Names and uses of specific kitchen equipment</li> <li>• The 'Eatwell Guide'</li> <li>• Knowledge and understanding of healthy eating</li> <li>• The government guidelines for healthy eating</li> <li>• Sources and functions of key nutrients</li> <li>• Use of the bridge hold and claw grip</li> <li>• To make a range of healthy dishes (10-12)</li> <li>• Numeracy: Weighing and measuring</li> <li>• Literacy: Key terminology</li> </ul>	<p>Homework: Students to select 4 from the homework menu</p> <p>Students assessed based on making skills and technical knowledge through the use of 'I can' statements</p> <p>Self and peer assessment</p>
Extra-Curricular Opportunities	Important Information	Use Websites
<p>Recipes to be cooked at home</p>	<p>Parent/carers have an option to either purchase ingredients or give a contribution of £10.00 to the Academy, whom will provide the cooking ingredients.</p> <p>Health and safety rules must be abided by at all times.</p>	<p>GCSE Bitesize – Food Google – Recipes</p>



Course Description	Course Content	Assessment
<p>Design and Technology is a part of the Design and Technology curriculum. Students rotate between the 4 subjects on a term and ½ basis completing design and making tasks in a variety of material areas including wood, metal, plastic and electronics. Students are encouraged to use a wide variety of tools and machines to complete high quality practical work, developing theoretical knowledge of materials and their working properties in conjunction with developing practical skills in the use of the tools, equipment and machinery.</p>	<p><b>Year 7 and 8 projects include</b></p> <p><b>The Lamp</b></p> <ul style="list-style-type: none"> <li>• H&amp;S in the wood workshop</li> <li>• Preparing and marking wood</li> <li>• Cutting and finishing wood</li> <li>• Using wood working hand tools</li> <li>• Using wood working power tools</li> <li>• Evaluating and modifying existing products</li> </ul> <p><b>The Bling Ring</b></p> <ul style="list-style-type: none"> <li>• H&amp;S in the metal workshop</li> <li>• Preparing and marking metal</li> <li>• Cutting and finishing metal</li> <li>• Using metal working hand tools</li> <li>• Using metal working power tools</li> <li>• Creating and presenting design ideas</li> </ul> <p><b>The Amplifier</b></p> <ul style="list-style-type: none"> <li>• Electronics and electronic components</li> <li>• Inputs, outputs and processes</li> <li>• Soldering electrical components and circuits</li> <li>• Computer aided design</li> <li>• Computer aided manufacture</li> </ul> <p><b>Board Games/Chocolate Boxes</b></p> <ul style="list-style-type: none"> <li>• Working with paper and card</li> <li>• Nets and developments</li> <li>• Graphic design skills</li> <li>• Generating and presenting design ideas</li> <li>• H&amp;S when creating graphic products</li> </ul>	<p>Throughout each project students are assessed on the work that they complete in lessons. Students are required to complete a learning log of their practical activities to demonstrate their understanding and development of skills in the subject.</p> <p>Assessments will be used by students to help identify misconceptions and make necessary amendments to work. Assessments also take place throughout projects in the form of questioning in lessons, quizzes and mini tests alike. These are again used to aid in the identification and rectification of misconceptions students may have.</p> <p>Homework projects are assessed at key points identified in the homework task booklets.</p>
Extra-Curricular Opportunities	Important Information	Use Websites
<p>In design and technology a series of extra-curricular opportunities are open to students across year 7 and year 8. These run at differing times throughout the year</p>	<p>Health and safety rules must be abided by at all times, it is an essential element of working in design and technology when developing the ability to use tools,</p>	<p><a href="http://www.technologystudent.com/">http://www.technologystudent.com/</a>  <a href="http://www.bbc.co.uk/schools/gcsebitesize/design/">http://www.bbc.co.uk/schools/gcsebitesize/design/</a></p>

<p>and include – jewellery making, electronics/robotics, upcycling, homework club and open workshop time.</p>	<p>equipment and machinery independently.</p> <p>Homework in years 7 and 8 is made up of 3 major projects throughout each year. These projects are designed to increase the students' independence and enquiry within the subject, getting students to act, think and behave like a designer. Parental/Guardian support with these projects is encouraged.</p> <p>Numeracy and literacy is an essential aspect of design and technology and it is encouraged that these skills are highlighted in students' work.</p>	
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## Year 8 Cooking and Nutrition



Course Description	Course Content	Assessment
<p>Cooking and Nutrition is a part of the Design and Technology curriculum. Students rotate between the 2 subjects on a term and ½ basis.</p>	<p><b>Year 8</b></p> <ul style="list-style-type: none"> <li>• Reinforce kitchen hygiene and safety including knife safety</li> <li>• Understand how cross contamination can be prevented</li> <li>• Correct food storage</li> <li>• Factors that can lead to bacterial growth</li> <li>• The effects of food poisoning</li> <li>• The many types of food poisoning</li> <li>• High risk foods</li> <li>• Key temperatures to cooking, storage and serving</li> <li>• Numeracy: Timing</li> <li>• Literacy: Key terminology</li> </ul>	<p>Homework: Students to select 4 from the homework menu</p> <p>Students assessed based on making skills and technical knowledge through the use of 'I can' statements</p> <p>Self and peer assessment</p>
Extra-Curricular Opportunities	Important Information	Use Websites
<p>Recipes to be cooked at home</p>	<p>Parent/carers have an option to either purchase ingredients or give a contribution of £10.00 to the Academy, whom will provide the cooking ingredients.</p> <p>Health and safety rules must be abided by at all times.</p>	<p>GCSE Bitesize – Food</p> <p>Google – Recipes</p>

## Year 9 Design and Technology (8-1)



Course Description	Course Content	Assessment
<p>AQA GCSE Design and Technology will prepare students to participate confidently and successfully in an increasingly technological world. Students will gain awareness and learn from wider influences on Design and Technology including historical, social, cultural, environmental and economic factors. Students will get the opportunity to work creatively when designing and making and apply technical and practical expertise.</p> <p>Throughout year 9 students' focus on the development for the skills required to be a successful design and technology student, independently generating design ideas, modelling these and consequently bringing them to life.</p>	<p><b>Content areas covered throughout year 9</b></p> <ul style="list-style-type: none"> <li>• Working with, sources of, stock forms, properties and selection of materials including; <ul style="list-style-type: none"> <li>▪ Papers and boards</li> <li>▪ Timber</li> <li>▪ Metals and alloys</li> <li>▪ Polymers</li> <li>▪ Textiles</li> <li>▪ Composites</li> <li>▪ Modern materials</li> <li>▪ Smart materials</li> </ul> </li> <li>• Scales of production</li> <li>• Specialist manufacturing techniques</li> <li>• Surface treatments and finishes</li> <li>• Inputs, processes and outputs</li> <li>• Investigating primary and secondary data</li> <li>• Design principles and strategies</li> <li>• The work of others</li> <li>• Communication of design ideas</li> <li>• Prototype development</li> </ul>	<p>Throughout the year students are assessed on the work that they complete in lessons. Students are required to complete a learning log of their in lesson activities to demonstrate their understanding and development of both skills and knowledge in the subject.</p> <p>Assessments will be used by students to help identify misconceptions and make necessary amendments to work. Assessments also take place throughout the year in the form of questioning in lessons, quizzes and mini tests and mock exams alike. These are again used to aid in the identification and rectification of misconceptions students may have.</p> <p>Homework projects are assessed at key points identified in the homework task booklets.</p>
Extra-Curricular Opportunities	Important Information	Use Websites
<p>In design and technology a series of extra-curricular opportunities are open to year 9 students additional to those they can attend alongside year 7 and 8 students. Year can take part in the green power racer project or attend course work sessions at lunch or after school and also attend open workshops throughout the year.</p>	<p>Health and safety rules must be abided by at all times, it is an essential element of working in design and technology when developing the ability to use tools, equipment and machinery independently.</p> <p>Homework in year 9 is made up of 3 major projects throughout each year. These projects are designed to increase the students' independence and enquiry within the subject, getting students to act, think and behave like a designer. Parental/Guardian support with these projects is encouraged.</p>	<p><a href="http://www.technologystudent.com/">http://www.technologystudent.com/</a>  <a href="http://www.bbc.co.uk/schools/gcsebitesize/design/">http://www.bbc.co.uk/schools/gcsebitesize/design/</a>  <a href="http://www.aqa.org.uk/subjects/design-and-technology/gcse/design-and-technology-8552/introduction">http://www.aqa.org.uk/subjects/design-and-technology/gcse/design-and-technology-8552/introduction</a></p>

	<p>Numeracy and literacy is an essential aspect of design and technology and it is encouraged that these skills are highlighted in students' work.</p>	
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Course Description	Course Content	Assessment
<p>WJEC Level 1/2 Vocational Awards enable learners to gain knowledge, understanding and skills relating to a specific vocational sector. In addition to development sector specific knowledge and understanding, these qualifications also support learners to develop the essential employability skills that are valued by employers, further and higher education.</p>	<p><b>Key Learning</b></p> <ul style="list-style-type: none"> <li>• They should acquire knowledge of all aspects of the industry</li> <li>• Propose new hospitality and catering provision for specific locations</li> <li>• Different types of establishment and job roles</li> <li>• Kitchen operations to determine how the proposed hospitality and catering provision will operate efficiently legally and financially viably</li> <li>• Controlled Assessment 1 (60%)</li> <li>• Examination (40%).</li> </ul>	<p>WJEC Level 1/2 Vocational Awards are;</p> <ul style="list-style-type: none"> <li>• designed primarily for 14-16 year old learners in a school environment</li> <li>• include an element of external assessment through either a written exam or controlled assignment</li> <li>• graded L1 Pass, L2 Pass, L2 Merit, L2 Distinction, L2 Distinction*</li> </ul>
Extra-Curricular Opportunities	Important Information	Use Websites
<p>To attend a Wednesday lunchtime club</p>	<p>Parent/carers will be expected to provide ingredients on a weekly basis, the Academy will only provide some of the ingredients.</p>	<p><a href="http://www.eduqas.co.uk/qualifications/hospitality-and-catering/">www.eduqas.co.uk/qualifications/hospitality-and-catering/</a>  <a href="http://www.bha.org.uk">www.bha.org.uk</a>                      The British Hospitality Association is the leading representative organisation in the hospitality industry, representing hotels, restaurants and food service providers  <a href="http://www.bighospitality.co.uk">www.bighospitality.co.uk</a>                      Comprehensive site including current hospitality news, features, video links and other general information.  <a href="http://www.cipd.co.uk">www.cipd.co.uk</a>                      Chartered Institute of Personnel and Development – information on recruitment and legal aspects of staff employment.  <a href="http://www.food.gov.uk">www.food.gov.uk</a>                      Official website for the Food Standards Agency</p>

## Year 10 WJEC GCSE Hospitality



Course Description	Course Content	Assessment
<p>A course in Hospitality and Catering offers an unique opportunity in the curriculum for candidates to develop their knowledge and extend their skills within hospitality and catering in a vocational context. It will provide opportunities to develop candidates' interdisciplinary skills, a range of Key Skills and their capacity for imaginative, innovative thinking, creativity and independence. It is a suitable qualification for those who want a broad background in this area and for those who wish to progress to further education. It will offer valuable preparation for those entering the world of work</p>	<p><b>Key Learning</b></p> <ul style="list-style-type: none"> <li>• The hospitality industry</li> <li>• Types of service and client groups</li> <li>• Job roles, employment and training</li> <li>• Customer care</li> <li>• Standards of service</li> <li>• Communication</li> <li>• Menu planning, preparation and presentation</li> <li>• Planning for functions and events</li> <li>• Costing menus and events</li> <li>• Teamwork</li> <li>• Environmental considerations</li> <li>• Controlled Assessment 1 (60%)</li> <li>• Examination (40%)</li> </ul>	<p>The Single Award in Hospitality consists of two units:</p> <ul style="list-style-type: none"> <li>• Unit 3: ONE event based task selected from a list set by the WJEC.</li> <li>• Unit 4: ONE written paper of 1½ hours externally set and marked.</li> </ul>
Extra-Curricular Opportunities	Important Information	Use Websites
<p>To attend a Wednesday lunchtime club</p>	<p>Parent/carers will be expected to provide ingredients on a weekly basis, the Academy will only provide some of the ingredients.</p>	<p><a href="http://www.wjec.co.uk/qualifications/hospitality-and-catering/">http://www.wjec.co.uk/qualifications/hospitality-and-catering/</a>  <a href="http://www.bha.org.uk">www.bha.org.uk</a>                      The British Hospitality Association is the leading representative organisation in the hospitality industry, representing hotels, restaurants and food service providers  <a href="http://www.bighospitality.co.uk">www.bighospitality.co.uk</a>                      Comprehensive site including current hospitality news, features, video links and other general information.  <a href="http://www.cipd.co.uk">www.cipd.co.uk</a>                      Chartered Institute of Personnel and Development – information on recruitment and legal aspects of staff employment.  <a href="http://www.food.gov.uk">www.food.gov.uk</a>                      Official website for the Food Standards Agency</p>

# Year 10 Design Technology GCSE Product Design



Course Description	Course Content	Assessment
<p>GCSE Product Design (AQA) is part of the ‘Design and Technology’ suite of subjects offered at GCSE level. It is a practical subject which requires the application of knowledge and understanding when developing ideas, planning, producing products and evaluating them. The distinction between Designing and Making is a convenient one to make, but in practice the two often merge. For example, research can involve not only investigating printed matter and people's opinions, but also investigating e.g. proportions, adhesives, colour, structures and materials through practical work.</p> <p>Students will find that it provides excellent preparation for higher study and employment in the field of design engineering. This field allows students to directly apply their subject knowledge and special skills. It is directly related to the role of the industrial or product designer working to create new products as well as to make improvements on existing ones.</p> <p>Year 10 in this subject sees the beginning of controlled assessment projects and a consistent focus on exam preparation with the examination general knowledge. Students develop specific investigation, design and manufacturing skills which will allow them to be successful in the course.</p>	<p>GCSE Design and Technology: Product Design enables students to design and make products with creativity and originality, using a range of materials and techniques.</p> <p>Packaging, labelling and instructions are encouraged as part of the complete design proposal and advertising, points of sale can be used to supplement the making experience and help create products which can be evaluated for their commercial viability.</p> <p>The course has 60% of the overall grade made up from controlled assessment work in order to recognise the importance of practical work and hands on experience within this subject. The final 40% of the grade for the course comes from the final examination at the end of the year.</p> <p><b>Course structure</b> Controlled assessment that makes up 60% of the course is comprised of 4 main sections; researching, designing and developing, manufacture and finally evaluation and modifications. Y11 students focus on the completion of practical projects and consequently their evaluation.</p> <p>Exam preparation then becomes the primary focus and the preliminary material (theme for the examination) is shared with students in March. Students then complete an intensive course of preparation to ensure they can approach the exam with full confidence.</p>	<p>In Y11 students will be required to sit the final examination this is Unit 1: Written Paper 40% of total marks 2 hours 120 marks Students will need to understand:</p> <ul style="list-style-type: none"> <li>• Materials and Components</li> <li>• Design and Market Influences</li> <li>• Processes and Manufacture</li> </ul> <p>Candidates answer all questions in two sections. Pre-Release material issued in March outlines the theme of the first section of the paper and the final section tests general understanding of product design. For more information about the content of this exam please consult the AQA website and follow the specification link provided.</p> <p>Year 10 predominantly focusses on the completion of controlled assessment work. Unit 2: Controlled assessment is completed and assessed in the classroom and sees the students go through the entire design cycle, going from a design brief or task right through to manufacture and evaluation. This is assessed in 4 main sections which total 90 marks. 32 of these marks come from the designing section and 32 more for the manufacturing, emphasising the importance of these sections to the subject area.</p> <p>This project contributes 60% of the student’s final grade.</p>

	<p>In year 10 of the course students complete the first 2 areas of the controlled assessment project and begin work on the manufacturing stage. Throughout the year students are also prepared in part for their examination and begin to get to grips with what a GCSE product design examination really is.</p>	
Extra-Curricular Opportunities	Important Information	Useful Websites
<p>Gifted and talented students are always encouraged to lead others in manufacturing. Known as 'Lead learners', these students often take a small group of students to demonstrate things they have done well or to help out with a practical element of the lesson. Pupils will have the opportunity to learn and understand the processes behind 3D Design.</p> <p>Homework will focus on a deeper learning and will consist of a variety of tasks including skill development, additional practical sessions, quizzes, revision topics and much more.</p> <p>Lunch and after school STEM and intervention clubs are available in accordance with the department timetable, a comprehensive programme of additional sessions is provided to students in D&amp;T.</p>	<p><b>Health &amp; Safety</b>  Students will be introduced to a variety of new equipment ranging from traditional hand tools to machinery and manufacturing techniques. They will be required to pass using these particular specialist tools and machinery to aid manufacturing for the controlled assessment task. It is essential students with due regard for their own personal safety and for the safety of those around them in order for them to complete this subject.</p> <p>Examination date:  <b>Not yet available for Y10 students.</b></p> <p>Product design is a skill based subject and as such it is a basic expectation that students spend additional time throughout the course practicing and developing skills that they have learnt. Without this practice students are much more likely to struggle with the course.</p>	<p><a href="http://www.bbc.co.uk/schools/gcsebitesize/design/">http://www.bbc.co.uk/schools/gcsebitesize/design/</a>  <a href="http://www.technologystudent.com/">http://www.technologystudent.com/</a>  <a href="http://www.aqa.org.uk/subjects/design-and-technology/gcse/design-and-technology-product-design-4555">http://www.aqa.org.uk/subjects/design-and-technology/gcse/design-and-technology-product-design-4555</a>  <a href="https://www.youtube.com/user/producttank">https://www.youtube.com/user/producttank</a></p>

# Year 11 Design Technology GCSE Product Design



Course Description	Course Content	Assessment
<p>GCSE Product Design (AQA) is part of the 'Design and Technology' suite of subjects offered at GCSE level. It is a practical subject which requires the application of knowledge and understanding when developing ideas, planning, producing products and evaluating them. The distinction between Designing and Making is a convenient one to make, but in practice the two often merge. For example, research can involve not only investigating printed matter and people's opinions, but also investigating e.g. proportions, adhesives, colour, structures and materials through practical work.</p> <p>Students will find that it provides excellent preparation for higher study and employment in the field of design engineering. This field allows students to directly apply their subject knowledge and special skills. It is directly related to the role of the industrial or product designer working to create new products as well as to make improvements on existing ones.</p> <p>Year 11 in this subject sees the completion of controlled assessment projects and a focus on exam preparation with the examination pre-release materials becoming available in March that academic year.</p>	<p>GCSE Design and Technology: Product Design enables students to design and make products with creativity and originality, using a range of materials and techniques.</p> <p>Packaging, labelling and instructions are encouraged as part of the complete design proposal and advertising, points of sale can be used to supplement the making experience and help create products which can be evaluated for their commercial viability.</p> <p>The course has 60% of the overall grade made up from controlled assessment work in order to recognise the importance of practical work and hands on experience within this subject. The final 40% of the grade for the course comes from the final examination at the end of the year.</p> <p><b>Course structure</b></p> <p>Controlled assessment that makes up 60% of the course is comprised of 4 main sections; researching, designing and developing, manufacture and finally evaluation and modifications. Y11 students focus on the completion of practical projects and consequently their evaluation.</p> <p>Exam preparation then becomes the primary focus and the preliminary material (theme for the examination) is shared with students in March. Students then complete an intensive course of preparation to ensure they can approach the exam with full confidence.</p>	<p>Unit 1: Written Paper 40% of total marks 2 hours 120 marks Students will need to understand:</p> <ul style="list-style-type: none"> <li>• Materials and Components</li> <li>• Design and Market Influences</li> <li>• Processes and Manufacture</li> </ul> <p>Candidates answer all questions in two sections. Pre-Release material issued in March outlines the theme of the first section of the paper and the final section tests general understanding of product design. For more information about the content of this exam please consult the AQA website and follow the specification link provided.</p> <p>Unit 2: Controlled assessment is completed and assessed in the classroom and sees the students go through the entire design cycle, going from a design brief or task right through to manufacture and evaluation. This is assessed in 4 main sections which total 90 marks. 32 of these marks come from the designing section and 32 more for the manufacturing, emphasising the importance of these sections to the subject area.</p> <p>This project contributes 60% of the student's final grade.</p>

Extra-Curricular Opportunities	Important Information	Useful Websites
<p>Gifted and talented students are always encouraged to lead others in manufacturing. Known as 'Lead learners', these students often take a small group of students to demonstrate things they have done well or to help out with a practical element of the lesson. Pupils will have the opportunity to learn and understand the processes behind 3D Design.</p> <p>Homework will focus on a deeper learning and will consist of a variety of tasks including skill development, additional practical sessions, quizzes, revision topics and much more.</p> <p>Lunch and after school STEM and intervention clubs are available in accordance with the department timetable, a comprehensive programme of additional sessions is provided to students in D&amp;T.</p>	<p><b>Health &amp; Safety:</b> Students will be introduced to a variety of new equipment ranging from traditional hand tools to machinery and manufacturing techniques. They will be required to pass using these particular specialist tools and machinery to aid manufacturing for the controlled assessment task. It is essential students with due regard for their own personal safety and for the safety of those around them in order for them to complete this subject.</p> <p>Examination date: <b>June 20<sup>th</sup> 2017</b></p> <p>Product design is a skill based subject and as such it is a basic expectation that students spend additional time throughout the course practicing and developing skills that they have learnt. Without this practice students are much more likely to struggle with the course.</p>	<p><a href="http://www.bbc.co.uk/schools/gcsebitesize/design/">http://www.bbc.co.uk/schools/gcsebitesize/design/</a>  <a href="http://www.technologystudent.com/">http://www.technologystudent.com/</a>  <a href="http://www.aqa.org.uk/subjects/design-and-technology/gcse/design-and-technology-product-design-4555">http://www.aqa.org.uk/subjects/design-and-technology/gcse/design-and-technology-product-design-4555</a>  <a href="https://www.youtube.com/user/producttank">https://www.youtube.com/user/producttank</a></p>

## Year 11 Design Technology GCSE Engineering



Course Description	Course Content	Assessment
<p>GCSE Engineering enables students to develop skills and understanding which will be of use generally and as part of a progressive career path leading to further technical or academic engineering qualifications.</p> <p>This course has 60 per cent controlled assessment in order to recognise the importance of practical work within this subject.</p> <p>This GCSE qualification adopts a practical approach that encourages students to design and make products with creativity and originality in a variety of practical activities, using a range materials and technologies.</p> <p>Students will find that it provides excellent preparation for higher study and employment in the field of design engineering.</p> <p>Year 11 in this subject sees the completion of controlled assessment projects and a more intense focus on exam preparation with the examination pre-release material being made available in March of the academic year.</p>	<p>GCSE Design and Technology: Engineering enables students to design and manufacture products with creativity and originality, using a range of materials and techniques. The content is outlined below. For more information with regards to this please use the links provided.</p> <p>The course has 60% of the overall grade made up from controlled assessment work in order to recognise the importance of practical work and hands on experience within this subject. The final 40% of the grade for the course comes from the final examination at the end of the year.</p> <p>The course requires students to learn and apply information and skills in both the controlled assessment and examination alike. The key areas of study throughout the course include:</p> <ul style="list-style-type: none"> <li>• Using client design briefs.</li> <li>• Converting briefs into specifications.</li> <li>• Using the design process to generate ideas and propose solutions.</li> <li>• Simple drawing techniques.</li> <li>• Manual drawing methods.</li> <li>• Computer aided design.</li> <li>• Explaining a design proposal to a third party.</li> <li>• Using tools and equipment.</li> <li>• Engineering processes.</li> <li>• Mechanical operations.</li> <li>• Cutting.</li> <li>• Shaping.</li> </ul>	<p>In Y11 of the course students will be required to sit the final examination this is Unit 1: Written Paper 40% of total marks 1 hour 75 marks Students will need to understand the content discussed on the left.</p> <p>Candidates answer all questions in each section and will be required to complete technical drawings or circuit diagrams.</p> <p>Pre-Release material issued in March outlines the theme of the paper. For more information about the content of this exam please consult the AQA website and follow the specification link provided.</p> <p>Examination date: <b>24<sup>th</sup> May 2017</b></p> <p>Year 11 focusses on the completion of controlled assessment work prior to the end of the February half term.</p> <p>Unit 2: Controlled assessment is completed and assessed in the classroom and sees the students complete two projects. A design and development project alongside a manufacturing project. These two are consequently combined to form the students overall grade for controlled assessment.</p> <p>Controlled assessment deadline: <b>17<sup>th</sup> February 2017</b></p>

	<ul style="list-style-type: none"> <li>• Forming.</li> <li>• Joining.</li> <li>• Surface finishing.</li> <li>• Impact of modern technologies.</li> </ul>	
Extra-Curricular Opportunities	Important Information	Useful Websites
<p>Gifted and talented students are always encouraged to lead others in manufacturing. Known as 'Lead learners', these students often take a small group of students to demonstrate things they have done well or to help out with a practical element of the lesson. Pupils will have the opportunity to learn and understand the processes behind 3D Design.</p> <p>Homework will focus on a deeper learning and will consist of a variety of tasks including skill development, additional practical sessions, quizzes, revision topics and much more.</p> <p>Lunch and after school STEM and intervention clubs are available in accordance with the department timetable, a comprehensive programme of additional sessions is provided to students in D&amp;T.</p>	<p><b>Health &amp; Safety</b> Students will be introduced to a variety of new equipment ranging from traditional hand tools to machinery and manufacturing techniques. They will be required to pass using these particular specialist tools and machinery to aid manufacturing for the controlled assessment task. It is essential students with due regard for their own personal safety and for the safety of those around them in order for them to complete this subject.</p> <p>Controlled assessment deadline: <b>17<sup>th</sup> February 2017</b></p> <p>Examination date: <b>24<sup>th</sup> May</b></p> <p>Engineering is a skill based subject and as such it is a basic expectation that students spend additional time throughout the course practicing and developing skills that they have learnt. Without this practice students are much more likely to struggle with the course.</p>	<p><a href="http://www.aqa.org.uk/subjects/engineering/gcse/engineering-4850">http://www.aqa.org.uk/subjects/engineering/gcse/engineering-4850</a></p> <p><a href="http://www.bbc.co.uk/schools/gcsebitesize/design/">http://www.bbc.co.uk/schools/gcsebitesize/design/</a></p> <p><a href="http://www.technologystudent.com/">http://www.technologystudent.com/</a></p> <p><a href="http://www.aqa.org.uk/subjects/engineering/gcse/engineering-4850/subject-content/unit-1">http://www.aqa.org.uk/subjects/engineering/gcse/engineering-4850/subject-content/unit-1</a></p>

Course Description	Course Content	Assessment
<p>A course in Hospitality and Catering offers an unique opportunity in the curriculum for candidates to develop their knowledge and extend their skills within hospitality and catering in a vocational context. It will provide opportunities to develop candidates' interdisciplinary skills, a range of Key Skills and their capacity for imaginative, innovative thinking, creativity and independence. It is a suitable qualification for those who want a broad background in this area and for those who wish to progress to further education. It will offer valuable preparation for those entering the world of work.</p>	<p><b>Key Learning</b></p> <ul style="list-style-type: none"> <li>• The industry – food and drink</li> <li>• Job roles</li> <li>• Employment and training</li> <li>• Specialist equipment (for food preparation, cooking and serving)</li> <li>• Communication and record keeping</li> <li>• Environmental considerations</li> <li>• Health, safety and hygiene</li> <li>• Nutrition</li> <li>• Menu Planning</li> <li>• Portion control and costing</li> <li>• Controlled Assessment 1 (20%)</li> <li>• Controlled Assessment 2 (40%)</li> <li>• Examination (40%)</li> </ul>	<p>The Single Award in Catering consists of two units: Unit 1: TWO practical tasks (controlled assessments) selected from six that are set by the WJEC.</p> <p>Unit 2: ONE written paper of 1¼ hours externally set and marked</p>
Extra-Curricular Opportunities	Important Information	Use Websites
<p>To attend a Wednesday lunchtime club</p>	<p>Parent/carers will be expected to provide ingredients on a weekly basis, the Academy will only provide some of the ingredients.</p>	<p><a href="http://www.wjec.co.uk/qualifications/hospitality-and-catering/">http://www.wjec.co.uk/qualifications/hospitality-and-catering/</a>  <a href="http://www.bha.org.uk">www.bha.org.uk</a>                      The British Hospitality Association is the leading representative organisation in the hospitality industry, representing hotels, restaurants and food service providers  <a href="http://www.bighospitality.co.uk">www.bighospitality.co.uk</a>                      Comprehensive site including current hospitality news, features, video links and other general information.  <a href="http://www.cipd.co.uk">www.cipd.co.uk</a>                      Chartered Institute of Personnel and Development – information on recruitment and legal aspects of staff employment.  <a href="http://www.food.gov.uk">www.food.gov.uk</a></p>

		This is the official government website for the Food Standards Agency
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## Year 12 Design Technology AS GCE Product Design

Entry Requirements: For all Design and Technology A Level/BTEC minimum of good passes at GCSE in: English, Mathematics, Science and any D & T related GCSE



Course Description	Course Content	Assessment
<p>A-level Design and Technology: Product Design (3-D Design) helps students take a broad view of design and technology, develop their capacity to design and make products and appreciate the complex relations between design, materials, manufacture and marketing.</p> <p>The specification provides students with the opportunity to design and make a product (or in the case of AS, a number of smaller products) in both years of the course.</p> <p>The course has 50 per cent coursework in order to recognise the importance of practical work within this subject, the other 50% of the work consists of an end of year examination.</p>	<p>AS Product design is comprised of 2 main elements; a controlled assessment project and an examination, both worth 50% of the overall As level grade. In turn this grade counts towards 50% of the overall A-level in Y13.</p> <p><b>AS Unit 1 (Prod 1) Materials, components and application</b>                      This unit is comprised of 3 main sections and students are expected to understand and apply this knowledge to real products. The main sections in the examination based unit are: Section A: Materials and Components                      Section B: Design and Market Influences                      Section C: Processes and Manufacture</p> <p>This knowledge is also expected to assist students within their controlled assessment projects. For more information for the specific content of the specification please refer to the AQA specification page 6 available on their website. See the link below.</p> <p><b>AS Unit 2 (Prod 2) Learning through designing and making</b>                      This unit is the AS Centre-Assessed Component and is completed and assessed in lessons. Students are expected to take a design brief and go through the entire design and make process to create high quality, commercial products.                      The Assessment Criteria for AS Coursework are given below.</p>	<p><b>Unit 1</b> is an examination using and is assessed externally by AQA moderators and markers. This is PROD1 – Materials, Components and Application and is a 2 hour, externally assessed written paper (80 marks). This examination is available June only.</p> <p>Students will be prepared for this examination through lessons, assessments and activities throughout the year which become more heavily focussed on after February half term. The examination date is 22<sup>nd</sup> May 2017.</p> <p><b>Unit 2</b> is the controlled assessment project and is assessed and moderated internally by subject staff. This is PROD 2 – Learning Through Designing and Making. This internally assessed coursework, which approximately takes 50 hours to complete, is worth 80 marks.</p> <p>Coursework comprises two smaller projects and a portfolio of work produced during the course which satisfies the course requirements. The deadline for controlled assessment work to be completed and submitted is 3<sup>rd</sup> April 2017.</p> <p><b>AS</b>  <b>Unit 1:</b> 80 marks (50% AS); <b>Unit 2:</b>80 marks (50% AS).                      AS represents 50% of the total A2 marks</p>

	<p>AQA will provide exemplar material and detailed guidance to illustrate the standard of work required for this coursework unit, students can obtain this work from their subject teachers.</p> <p>AS candidates' work will be marked out of a total of 80 marks and as previously stated will contribute to 50% of their AS grade.</p> <p>The controlled assessment projects are marked in 5 main bands which are totalled for the final grade. These bands include investigation, development, manufacture, evaluation and communication. Designing and manufacturing are most heavily weighted to reflect their importance to the subject. For a full breakdown of the marking criteria again refer to the AQA specification available using the link below.</p> <p>In year 12 students complete 2 projects to form their controlled assessment task ensuring all assessment criteria are fully addressed. Project 1 is based around the design and prototype of a scale chair to be sold in NEXT and the second project is the design and manufacture of a lamp to be sold in IKEA.</p>	
Extra-Curricular Opportunities	Important Information	Useful Websites
<p>Staff in the department are extremely accommodating of KS5 pupils working in the subject area and give up time throughout the school day, lunch, break and after school to ensure pupils are fully supported. This can take the form of simple drop in sessions or can be arranged on a more individual basis with subject staff.</p>	<p><b>Health &amp; Safety</b>  Students will be expected to make the most of a variety of tools, equipment and machinery, ranging from traditional hand tools to machinery and manufacturing techniques. They will be required to pass using these particular specialist tools and machinery creatively to aid modelling and manufacturing for the controlled assessment tasks. It is essential students with due regard for their own personal safety and for the safety of those</p>	<p><a href="http://filestore.aqa.org.uk/subjects/specifications/alevel/AQA-2550-W-SP-14.PDF">http://filestore.aqa.org.uk/subjects/specifications/alevel/AQA-2550-W-SP-14.PDF</a>  <a href="http://www.bbc.co.uk/schools/gcsebitesize/design/">http://www.bbc.co.uk/schools/gcsebitesize/design/</a>  <a href="http://www.technologystudent.com/">http://www.technologystudent.com/</a>  <a href="http://www.aqa.org.uk/subjects/design-and-technology/as-and-a-level/design-and-technology-product-design-3d-2550">http://www.aqa.org.uk/subjects/design-and-technology/as-and-a-level/design-and-technology-product-design-3d-2550</a>  <a href="https://www.youtube.com/user/producttank">https://www.youtube.com/user/producttank</a></p>

around them in order for them to complete this subject.

Examination date:

**May 22<sup>nd</sup> 2017**

Product design is a skill based subject and as such it is a basic expectation that students spend additional time throughout the course practicing and developing skills that they have learnt. Without this practice students are much more likely to struggle with the course.

# Year 12/13 Engineering BTEC Level 3 Extended Certificate

Entry Requirements: For all Design and Technology A Level/BTEC minimum of good passes at GCSE in: English, Mathematics, Science and any D & T related GCSE



Course Description	Course Content	Assessment
<p>Pearson BTEC Level 3 National Extended Certificate in Engineering (360 GLH) 601/7584/9</p> <p>This qualification provides a broad basis of study for the engineering sector. It has been designed to support progression to higher education when taken as part of a programme of study that includes other appropriate BTEC Nationals or A levels.</p> <p>Engineering covers a broad variety of roles and it involves the application of scientific principles and practical knowledge to transform ideas and materials into products and systems safely and support them during their lifetime. This qualification has a focus on a broad range of engineering specialist areas. Learners taking this qualification will study mandatory content covering:</p> <ul style="list-style-type: none"> <li>• engineering principles and mathematics</li> <li>• health and safety, team work and interpreting and creating computer-aided engineering</li> <li>• drawings</li> <li>• design and manufacture of products.</li> </ul>	<p><b>Equivalent in size to one A Level.</b></p> <p>Mandatory units There are 3 mandatory units, 1 internal and 2 external. Learners must complete and achieve at pass grade or above for all these units. Optional units Learners must complete at least 1 optional unit.</p> <p>The Pearson BTEC Level 3 National Extended Certificate in Engineering is designed for learners who are interested in a career in the engineering sector and want to progress to further study in the sector. Learners will take a practical, applied engineering course as part of their Level 3 study programme, which gives them an introduction to the sector. They will be able to combine this with other qualifications, such as a GCE A Level in Mathematics or Physics, which would allow them to progress to higher education to study engineering or other STEM-related programmes</p> <p><b>Unit 1 Engineering Principles</b> Learners apply mathematical and physical science principles to solve electrical-, electronic- and mechanical-based engineering problems.</p> <p><b>Unit 2 Delivery of Engineering Processes Safely as a Team</b> Learners explore how processes are undertaken by teams to create engineered products or to deliver engineering services safely.</p> <p><b>Unit 3 Engineering Product Design and Manufacture</b></p>	<p>Assessment is specifically designed to fit the purpose and objective of the qualification. It includes a range of assessment types and styles suited to vocational qualifications in the sector. There are three main forms of assessment that you need to be aware of: external, internal and synoptic.</p> <p>Each external assessment is linked to a specific unit. All of the units developed for external assessment allow learners to demonstrate breadth and depth of achievement. Each assessment is taken under specified conditions, then marked by Pearson and a grade awarded. Learners must achieve all external units at pass grade or above. Learners are permitted to resit any external assessment only once during their programme. The styles of external assessment used for qualifications in the Engineering suite are:</p> <ul style="list-style-type: none"> <li>• examinations – all learners take the same assessment at the same time, normally with a written outcome</li> <li>• set tasks – learners take the assessment during a defined window and demonstrate understanding through completion of a vocational task.</li> </ul> <p>Some external assessments include a period of preparation using set information. External assessments are available once or twice a year</p> <p>Unit 1 Engineering Principles – externally assessed by examination (Mandatory Unit)</p> <ul style="list-style-type: none"> <li>• Written exam set and marked by Pearson.</li> <li>• Two hours.</li> <li>• 80 marks.</li> </ul> <p>Available Jan and May/June</p>

	<p>Learners will explore engineering product design and manufacturing processes and will complete activities that consider function, sustainability, materials, form and other factors.</p> <p>The final unit is an optional selected by the centre and is internally assessed by completion of a set of unit assignments</p>	<p>Unit 2 Delivery of Engineering Processes Safely as a Team – internally assessed by completion of assignments (Mandatory Unit)</p> <p>Unit 3 Engineering Product Design and Manufacture - externally assessed by completion of a timed project</p> <ul style="list-style-type: none"> <li>• A task set and marked by Pearson and completed under supervised conditions.</li> <li>• Prior to the supervised assessment, learners will be provided with a case study in order to carry out research in approximately 3 hours in a two week period timetabled by Pearson.</li> <li>• The supervised assessment period is 10 hours and can be arranged over a three-week period timetabled by Pearson.</li> <li>• Written submission.</li> <li>• 60 marks.</li> <li>• Available December/January and May/June</li> </ul> <p>The final unit is selected by the centre and is internally assessed by completion of a set of unit assignments</p>
<p><b>Extra-Curricular Opportunities</b></p>	<p><b>Important Information</b></p>	<p><b>Useful Websites</b></p>
<p>Staff in the department are extremely accommodating of KS5 pupils working in the subject area and give up time throughout the school day, lunch, break and after school to ensure pupils are fully supported. This can take the form of simple drop in sessions or can be arranged on a more individual basis with subject staff.</p> <p>Visits to external employers are encouraged and provided to support academic learning</p>	<p><b>Health &amp; Safety</b></p> <p>Students will be expected to make the most of a variety of tools, equipment and machinery, ranging from traditional hand tools to machinery and manufacturing techniques. They will be required to pass using these particular specialist tools and machinery creatively to aid modelling and manufacturing for the controlled assessment tasks. It is essential students with due regard for their own personal safety and for the safety of those around them in order for them to complete this subject.</p>	<p><a href="http://qualifications.pearson.com/content/dam/pdf/BTEC-Nationals/Engineering/2016/specification-and-sample-assessments/9781446938294_BTEC_NAT_ENG_ExtCert_SPEC_Iss2C.pdf">http://qualifications.pearson.com/content/dam/pdf/BTEC-Nationals/Engineering/2016/specification-and-sample-assessments/9781446938294_BTEC_NAT_ENG_ExtCert_SPEC_Iss2C.pdf</a></p> <p><a href="http://qualifications.pearson.com/en/qualifications/btec-nationals/engineering-2016.coursematerials.html#filterQuery=category:Pearson-UK:Category%2FSpecification-and-sample-assessments&amp;filterQuery=category:Pearson-UK:Document-Type%2FSpecification">http://qualifications.pearson.com/en/qualifications/btec-nationals/engineering-2016.coursematerials.html#filterQuery=category:Pearson-UK:Category%2FSpecification-and-sample-assessments&amp;filterQuery=category:Pearson-UK:Document-Type%2FSpecification</a></p>

## Year 13 Design Technology A2 GCE Product Design

Entry Requirements: For all Design and Technology A Level/BTEC minimum of good passes at GCSE in: English, Mathematics, Science and any D & T related GCSE



Course Description	Course Content	Assessment
<p>A-level Design and Technology: Product Design (3-D Design) helps students take a broad view of design and technology, develop their capacity to design and make products and appreciate the complex relations between design, materials, manufacture and marketing.</p> <p>The specification provides students with the opportunity to design and make a product (or in the case of AS, a number of smaller products) in both years of the course.</p> <p>The course has 50 per cent coursework in order to recognise the importance of practical work within this subject, the other 50% of the work consists of an end of year examination.</p>	<p>A Level Product design is comprised of 2 main elements; a controlled assessment project and an examination, both worth 25% of the overall A level grade. In turn this grade counts towards 50% of the overall A-level when combined with the AS grades previously obtained.</p> <p><b>AS Unit 3 (Prod 3) Design and Manufacture</b> This unit is comprised of 3 main sections and students are expected to understand and apply this knowledge to real products. The main sections in the examination based unit are: Section A: Materials and Components Section B: Design and Market Influences Section C: Processes and Manufacture This knowledge is also expected to assist students within their controlled assessment projects. For more information for the specific content of the specification please refer to the AQA specification page 6 available on their website. See the link below.</p> <p><b>A2 Unit 4 (Prod 4) Design and Making Practice</b> This unit is the A2 Centre-Assessed Component and is completed and assessed in lessons. Students are expected to take a design brief and go through the entire design and make process to create a single high quality, commercially viable product. The Assessment Criteria for A2 Coursework are given below. AQA will provide exemplar material and detailed guidance to illustrate the standard of work required for this coursework unit, students can obtain this work from their subject teachers.</p>	<p><b>Unit 3</b> is an examination using and is assessed externally by AQA moderators and markers. This is PROD3 – Design and Manufacture and is a 2 hour, externally assessed written paper (84 marks). This examination is available June only. Students will be prepared for this examination through lessons, assessments and activities throughout the year which become more heavily focussed on after February half term. Students are required to select the most appropriate questions to answer throughout the exam and are not required to answer every question. The examination date is not yet released.</p> <p><b>Unit 4</b> is the controlled assessment project and is assessed and moderated internally by subject staff. This is PROD 4 – Learning Through Designing and Making. This internally assessed coursework, which approximately takes 60 hours to complete, is worth 85 marks. Coursework comprises of one major project and a portfolio of work produced during the course which satisfies the course requirements. The deadline for controlled assessment work to be completed and submitted is not yet available.</p> <p><b>A2</b> <b>Unit 3:</b> 84 marks (25%), <b>Unit 4:</b> 85 marks (25%) A2 and AS are combined to obtain the overall A-Level grade.</p>

	<p>A2 candidates' work will be marked out of a total of 85 marks and as previously stated will contribute to 25% of their A Level grade.</p> <p>The controlled assessment projects are marked in 6 main bands which are totalled for the final grade. These bands include Context and objectives, plan and clarification of problem, development, manufacture, evaluation and communication.</p> <p>Designing and manufacturing are most heavily weighted to reflect their importance to the subject. For a full breakdown of the marking criteria again refer to the AQA specification available using the link below.</p> <p>In year 13 students complete 1 major project to form their controlled assessment submission. This project is driven entirely by the student.</p>	
Extra-Curricular Opportunities	Important Information	Useful Websites
<p>Staff in the department are extremely accommodating of KS5 pupils working in the subject area and give up time throughout the school day, lunch, break and after school to ensure pupils are fully supported. This can take the form of simple drop in sessions or can be arranged on a more individual basis with subject staff.</p>	<p><b>Health &amp; Safety</b></p> <p>Students will be expected to make the most of a variety of tools, equipment and machinery, ranging from traditional hand tools to machinery and manufacturing techniques. They will be required to pass using these particular specialist tools and machinery creatively to aid modelling and manufacturing for the controlled assessment tasks. It is essential students with due regard for their own personal safety and for the safety of those around them in order for them to complete this subject.</p> <p>Examination date: <b>Not yet available.</b></p> <p>Product design is a skill based subject and as such it is a basic expectation that students spend additional time throughout the course practicing and developing skills that they have learnt. Without this practice students are much more likely to struggle with the course.</p>	<p><a href="http://filestore.aqa.org.uk/subjects/specifications/alevel/AQA-2550-W-SP-14.PDF">http://filestore.aqa.org.uk/subjects/specifications/alevel/AQA-2550-W-SP-14.PDF</a></p> <p><a href="http://www.bbc.co.uk/schools/gcsebitesize/design/">http://www.bbc.co.uk/schools/gcsebitesize/design/</a></p> <p><a href="http://www.technologystudent.com/">http://www.technologystudent.com/</a></p> <p><a href="http://www.aqa.org.uk/subjects/design-and-technology/as-and-a-level/design-and-technology-product-design-3d-2550">http://www.aqa.org.uk/subjects/design-and-technology/as-and-a-level/design-and-technology-product-design-3d-2550</a></p> <p><a href="https://www.youtube.com/user/producttank">https://www.youtube.com/user/producttank</a></p>

