

PRODUCT DESIGN GCSE

Year 10	Curriculum content covered
Term 1	<p>Introduction to Machine capabilities and skills:</p> <ul style="list-style-type: none"> • Students will be taught how to use Health and safety in an Industrial workshop environment • Students will be taught how to recognise a risk and to carry out a risk assessment when working in an Industrial workshop environment • Students will be taught how to wear the appropriate PPE in an Industrial workshop environment, use marking out tools and their capabilities when working with materials, use hand tools and their capabilities when working with materials. • Students will be taught how to use CAD/CAM and its capabilities when working with materials • Students will be taught how to use workshop equipment including the wood turning lathe (under supervision) and its capabilities when working with materials • Students will be taught how to use the electric hand tools and their capabilities when working with materials • Students will be taught how to use techniques to apply an appropriate finish to materials • Students will be taught how to carry out quality control measures when working with hand tools and machines • Students will be taught how to plan and keep a log book of work carried out in an Industrial workshop environment • Students will carry out small task assignments to ensure Quality Assurance when using hand tools and machine in a Industrial workshop environment
Term 2	<p>Design and make assignment:</p> <ul style="list-style-type: none"> • Students will be given a set sized material and asked to design and make a product of their choice • Students will produce a Mood board based on an individual 'theme' or 'movement' taken from the internet. • Students will investigate into existing products and analyse key features looking at specific good points that could be used to help them with their designs and who the product is aimed at (the target market).. • Students will profile and investigate a target market for their product of choice using techniques learnt to design and manufacture an original product • Investigate 'Cultural and Moral' issues as well as recycling in the 'Real world' including 'Technology Push' and 'Market Pull'. • Students will carry out primary and secondary research to assist in their designs • Students will research industrial practise and manufacture in the manufacturing industry. • Students will be taught how to use 2D and 3D method type sketching and drawing skills and how to use them • Students to design and manufacture their product of choice • Students to complete homework to high standard that will develop skills

Term 3	<p>Controlled assessment and section A focus GCSE:</p> <ul style="list-style-type: none"> • Students will be introduced to controlled assessment task for GCSE and select a choice with teachers guidance • Fully research context of design brief and produce section one of e portfolio based on key coursework criteria. • Examine section A of exam paper, focusing on quality of sketching and drawing (including CAD) and design annotations • Research into smart and modern materials and how they are used in products. • Individualised design specification to be produced by all students. • Students to attend three workshop lunch-time or afterschool club to solve their designing or manufacturing problems encountered throughout designing and making • Students to complete homework to high standard that will develop skills
Year 11	Curriculum content covered
Term 1	<p>Controlled assessment (design development) and section B focus GCSE:</p> <ul style="list-style-type: none"> • Focus on the use of CAD and CAM in industry and the workshop – including CAD tutorial. • Students will focus on individual development of their design solutions using practical skills; develop design ideas to a final idea with model making. • Students will evaluate all design developments against design specification • Students will produce a ‘Flow Chart’ and manufacturing specification will be produced as well in order of manufacture with quality control checks. • Students to attend three workshop lunch-time or afterschool club to solve their designing or manufacturing problems encountered throughout designing and making • Students to complete homework to high standard that will develop skills
Term 2	<p>Controlled assessment (manufacture and evaluation) and section C focus GCSE:</p> <ul style="list-style-type: none"> • Students manufacturing own product and documenting process (log book), amending as they go along • Evaluate and analyse success of final product and identifying areas of improvement • Students should have secure knowledge of industrial processes including manufacture, tools and equipment and finishing processes. • Students get realistic feed-back and act on this accordingly when designing for ‘batch’ or ‘mass production. • Students to carry out assessment check to ensure that they have completed to a high standard: • Part 1: Initial Thoughts, Design brief and Specification. • Part 2; Designing a wide range of ideas with high quality annotation • Part 3: Development and planning through modelling, testing making modifications to final design idea • Part 4: Making a ‘working’ product to a high standard and recording in detail steps to manufacture with evidence • Part 5: Detailed Evaluation of a product using sketches, SWAT and feedback from user and consumer groups.
Term 3	Exam preparation and revision through past exam papers, revision notes and study sessions..

