

AQA GCSE Design & Technology



GCSE Design & Technology is a practical and knowledge-based course. The exam is worth 50% of the final grade and the Non-Examined Assessment (NEA), consisting of a design and make project, is worth a further 50%. Our lesson time and homework are carefully planned to prepare pupils for all aspects of this course.

Year 10 Curriculum Map

Autumn Term	Spring Term	Summer Term
<p>Theme/ project Designing and making a unique birdhouse.</p> <p>Knowledge</p> <ul style="list-style-type: none"> - Pupils learn all aspects of planning, designing, and creating products, using timber to produce an original birdhouse. - Pupils will be able to research and identify a customer base within its market and explain how existing products are successful. - Pupils will be able to analyse the design and production processes. <p>Design and Make</p> <ul style="list-style-type: none"> - Pupils will learn how to make technical drawings and diagrams in their planning. 	<p>Theme/ project: Repurposing and recycling to create new products.</p> <p>Knowledge</p> <ul style="list-style-type: none"> - Pupils research sustainable, environmentally friendly and carbon neutral approaches to product design. - Pupils investigate associated markets, current design trends and identify customer needs. <p>Design and Make</p> <ul style="list-style-type: none"> - Pupils source found objects and identify materials to inform studies into ferrous and nonferrous metals, plastics and processes. - Pupils plan and design ways to utilise pre-used products to create 	<p>Themes/ projects: Exploring and investigating how electricity is produced with wind turbines. Introduction to textiles and fashion design.</p> <p>Knowledge</p> <ul style="list-style-type: none"> - In teams, pupils explore and investigate how wind turbines create usable energy. Pupils study the theory of electronic and mechanical systems. <p>Design and make</p> <ul style="list-style-type: none"> - In teams, pupils develop their design skills to plan ways of making a mechanical system to produce energy from wind.

<ul style="list-style-type: none"> - Pupils will be able to apply the theory that they have learnt on timber materials and processes in their practical work. Pupils will produce written annotations for the key steps of their design and practical work. <p>Key Assessment:</p> <ul style="list-style-type: none"> - Pupils will be assessed on their practical skills and working safely and independently with the correct tools. - GCSE criteria is introduced in small stages to make pupils familiar with the language used in year 11. - Pupils will also have to prove their knowledge and understanding through a mid-point test and an end of unit test. Opportunities for revision will be given in lessons and set for homework. 	<p>new products, with an emphasis on creativity and originality.</p> <p>Key Assessment:</p> <ul style="list-style-type: none"> - Pupils will be assessed on their practical skills and working safely and independently with the correct tools. - GCSE criteria is introduced in small stages to make pupils familiar with the language used in year 11. - Pupils will also have to prove their knowledge and understanding through a mid-point test and an end of unit test. Opportunities for revision will be given in lessons and set for homework. 	<ul style="list-style-type: none"> - Using the iterative process, teams build and develop functioning prototypes of their designs. - Teams work their prototypes under load in test conditions, measuring power generated. <p>Key Assessment:</p> <ul style="list-style-type: none"> - Pupils investigate materials, properties and processes of textiles production and design applications of the fashion industry. - Pupils explore producing prototypes and tooling in the textiles industry. <p>Key Assessment:</p> <ul style="list-style-type: none"> - Pupils showcase their achievements, practical experiences and successful innovations with an end of year show. - Pupils will also prove their knowledge and understanding through an end of unit test.
<p>Tier 3 vocabulary: Timber, durability, structural purpose, density, seasoning, joining, renewable</p>	<p>Tier 3 vocabulary: Sustainability, repurposing, recycling, ferrous, nonferrous, conceptual stage,</p>	<p>Tier 3 vocabulary: Automation, mechanical system, continuous improvement, iterative design, fabricate, finite, functionality,</p>

resource, forming, shaping, isometric, precision.	commercial stage, ecological solutions, tolerance.	fusibility, planned obsolescence, schematic diagrams.
Year 11 Curriculum Map		
During year 11, The course structure is divided by pupils having time and resources to work on their Non-Exam Assessment (NEA) and studying the theory needed to prepare for their GCSE examination.		
Autumn Term	Spring Term	Summer Term
<p>Theme/ project Set by AQA Examining Body. Design and Make</p> <ul style="list-style-type: none"> - Pupils are provided with limited guidance on how to approach their NEA, with emphasis on the success criteria and Assessment Objectives. - Pupils have weekly double lessons to work on their prototypes and are provided with the specialist tooling, machinery, materials, resources and equipment needed to make their products. <p>Knowledge</p> <ul style="list-style-type: none"> - A revision audit will be given to pupils at the beginning of term to help manage revision with a targeted plan of comprehensive study into the principles of technology. 	<p>Knowledge</p> <ul style="list-style-type: none"> - Pupils will have a 2-hour mock exam paper during the exam period in January. - Pupils will continue their theory study in weekly lessons and through their targeted revision program at home. <p>Design and Make Non-Exam Assessment (continued)</p> <ul style="list-style-type: none"> - Pupils will be able to apply the knowledge and skills to independently design and make their prototypes. - It is an essential success criteria that complex skills and the correct use of technology are demonstrated in the development of the NEA project, showing creativity and innovation to a high level of precision and accuracy. 	<p>Exam Preparation</p> <ul style="list-style-type: none"> - All lesson time will now be devoted to preparing pupils for their GCSE exam in June. - It is expected that pupils are now engaging in extra revision to fully prepare for their exam. - Pupils will be invited to attend a weekly after school revision club with "Flashcard" games and other alternative learning resources to practice knowledge retrieval. - The revision audit will be regularly revisited and reviewed. - A range of different exam questions will be practised regularly to help students apply their knowledge and build their confidence. - Different revision techniques will be practice alongside traditional

<ul style="list-style-type: none"> - Pupils will be encouraged to work independently at home, writing weekly annotations to reflect the development of each step of their NEA. <p>Key Assessment</p> <ul style="list-style-type: none"> - GCSE criteria is used to assess pupils' NEA projects and final grades are moderated by AQA, the examining board. 	<p>Key Assessment:</p> <ul style="list-style-type: none"> - GCSE criteria is used to assess pupils' NEA projects and final grades are moderated by AQA, the examining board. - 	<p>study to help pupils maximise their knowledge and understanding.</p> <p>Key Assessment:</p> <ul style="list-style-type: none"> - The final exam is 2 hours long and will consist of multiple-choice questions, long answers, technical drawing and mathematical problems.
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