

Design Technology Curriculum Overview

	Autumn Term First half-term	Autumn Term Second half-term	Spring Term First half-term	Spring Term Second half-term	Summer Term First half-term	Summer Term Second half-term
Year 7	Students will design an LED Torch, developing practical skills and learning about tools equipment in the process. At the end of the half-term they will be tested on work covered.	This half-term will focus on the completion of the design of the torch and then will develop it into making of a functional product. Students will be taught how to use tools and equipment in a safe and appropriate manner. An end of module test will complete the term.	Rotation Every 12 weeks the students rotate to the next area of Creative Computing & Technology	Rotation	Rotation Every 12 weeks the students rotate to the next area of Creative Computing & Technology	Rotation
Year 8	Students will design a USB pen drive case mainly using computer software. The product finally being laser cut out. At the end of the half-term they will be tested on work covered.	During this half-term students will complete their designs and make a USB pen drive case from acrylic. The case will be laser cut out and finished with hand tools. An end of module test will complete the term.	Rotation Every 12 weeks the students rotate to the next area of Creative Computing & Technology	Rotation	Rotation Every 12 weeks the students rotate to the next area of Creative Computing & Technology	Rotation



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Year 9	Students will develop skills learnt in year 7 and 8 by designing and making a range of products. The current Y9 are developing USB stick cases and packaging as this was not studied in year 8 previously. The theory element of the course is developed a lot more as students are studying the GCSE specification. The first module of theory work is based on materials and will be tested at the end of the half-term.	Students will complete the designs and making of their laser cut product and then make a vacuum formed blister pack package. They will complete the materials element of the examination theory and complete end of unit test on this section.	Students will develop presentation and sketching skills more this half-term and produce models during the development stage of practical development. Students will be tested on their use of 2d design software learnt during term autumn term by completing a Headphone tidy design and make task with less teacher support. Theory will be based on paper and card and this will be tested at the end of the half-term	Students will develop skills in use of 3d design this half-term by use of 'Tinkercad' website to create lamps shades that can be 3d printed. They will also start to explore research for a USB LED Lamp project. The theory covered for the year so far will be tested in whole school examination week.	Students will design and then make a USB LED Lamp in natural material i.e laminated and/or steam bent wood. The theory element of the course will be based on construction and manufacturing techniques which will be tested at the end of the half-term	Students will continue to make the USB LED Lamp. This will also include developing a making diary with photographic evidence of stages of production. The project will include a more in-depth evaluation and testing of the final outcome. This project has been moved to then end of Y9 to allow more of Year 10 for Controlled Assessment GCSE work that counts for their final marks.



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Year 10	<p>Current Year 10 are designing and making a USB LED Lamp. The project outline has been described in Year 9 outline as it has been moved for future year groups to allow extra controlled Assessment time in Year 10. The theory element of the course will be based around human factors and manufacturing in industry including CAD/CAM</p>	<p>Students will complete their design work and then make a USB LED Lamp in natural material i.e. laminated and/or steam bent wood. The theory element of the course will be based on packaging and will be tested at the end of half-term</p>	<p>Students will develop skills using 'Tinkercad' website for use on the 3d printer. They will also develop more CAD techniques using Techsoft 2d design software to enhance presentation and manufacturing of products. The theory will look into use of CAD/CAM</p>	<p>Student will produce a design and make laser cut product to test their understanding of 2d design software. They will also prepare for whole school examination covering work done in Y9 and Y10.</p>	<p>Students will begin their GCSE controlled assessment. The project being set by AQA examination board. The project being studied this year is an MP3 docking station/amplifier speaker. Students are encouraged to have a design influence or theme for this project e.g. retro or nature. Theory will be based on Smart Materials and Sustainability issues.</p>	<p>Students will start designing their product for the controlled assessment. This will then develop into model making before the end of the year in preparation to start making on return in Year 11.</p>



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Year 11	Students will have the main focus of making their practical piece for the GCSE controlled assessment. This will involve a wide range of skills/techniques and machining processes dependant on individual designs but will include use of laser cutting and CNC milling of parts. Some student may also make use of the 3d printer to produce components for the final outcome.	Students will continue making their product. This will include soldering a PCB suitable for the amplifier and machining a suitable case. Due to the nature and time scale of this process it will continue all half-term. Students will e required to make an on-going photographic making diary.	Students will start to look at finishing techniques for the main body of the product with the end of this half- term being for the project to be fully completed including all paperwork	Students will continue to develop examination skills and work through theory covered throughout the course. They will have a number of short module type test on specific parts of the theory element of the course. These do not count for the GCSE but will provide good preparation for the summer examination. Some student may need to improve or complete missing controlled assessment work during this period during study support sessions.	Students will continue to develop examination skills and work through theory covered throughout the course. They will have a number of short module type test on specific parts of the theory element of the course. These do not count for the GCSE but will provide good preparation for the summer examination	Final revision sessions based on date of the Final GCSE examination.

