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Design & Technology Curriculum Overview

Design and Technology is a unique subject that develops a significant range of key transferable skills. The curriculum is offered from Year 7 to 13 and has been designed to promote a comprehensive understanding of Design and Technology in its broadest sense.

The subject offers pupils in Years 7, 8, and 9 an opportunity to develop a wide range of skills and processes. Skills are taught and documented through project based tasks that incorporate cultural research, an iterative development approach to designing, and practical based activities. Practical making skills are taught through workshop activities. These tasks develop pupils' confidence within a workshop environment and are designed to give students skills in planning, preparation, and making using wood, metal, plastic, and card. The electronics element of the course gives pupils the opportunity to understand electronic components and processes. Pupils will further develop their practical skills by assembling and soldering electronic circuits for use in their designs. Computer Aided design (CAD) has become integral to Design and Technology; pupils are taught the core skills to use CAD in their design projects and to link the drawings they produce to ComputerAided Machinery (CAM) where their designs can be cut or printed.

The skills developed in Years 7, 8 & 9 give pupils a strong understanding of the subject. Should they choose to take it as a GCSE choice, they will continue to learn through practical projects and theory based lessons, pupils in Year 10 cover the core elements of the curriculum. Their final GCSE grade is based on a design and make task they undertake in Year 11 and a written theory based exam during the summer exam season. The subject continues to be a very popular option with recent years being oversubscribed.

A level continues in the same theme as GCSE with a greater depth of knowledge explored through a wide range of projects and activities. Students in Year 13 undertake a personal design and make project which, along with their written exam, forms their final A level grade.

Design and Technology across all years offer pupils a rich variety of skills and knowledge, developing their practical skills and an iterative approach to design and problem solving. The learning environment we aim to create is rich with opportunities that allow pupils to explore and experiment, giving them confidence to develop their interests and pursue their own goals.

KS3 (Design & Technology) Curriculum

	Year 7	Year 8	Year 9
Autumn Term 1	Practical workshop Skills Acrylic maze Isometric drawing Project Make Diary	Practical workshop skills Box construction wood joints Technical drawing Project Make Diary	Practical workshop Skills Amplifier speaker box construction Rebate joints Project Make Diary
Autumn Term 2	Practical workshop Skills Plywood Yoyo Orthographic drawing Project Make Diary	Practical workshop skills Box construction lid lippings Finishing Project Make Diary	Practical workshop Skills Amplifier speaker box construction . assembly and finishing Technical drawings Exploded Isometric and Orthographic Project Make Diary
Spring Term 1	Electronics Soldering skills and electronics Project Make Diary	Pewter Casting MDF mould making Research and designing Project Make Diary	Electronics Soldering skills and electronics Project Make Diary
Spring Term 2	Electronics Dark activated colour changing LED circuit Project Make Diary	Pewter casting Casting and finishing Project Make Diary	Electronics Constructing and assembling the Amplifier kit Project Make Diary
Summer Term 1	CAD Computer Aided design 2D Design Acrylic Bag tag	Plastic forming Vacuum forming Project Make Diary	Plastic forming Acrylic phone stand design and make Line bending Project Make Diary
Summer Term 2	CAD Computer Aided design 2D Design House net drawing	Plastic forming Line bender heat stripper Project Make Diary	Plastic forming Acrylic phone stand design and make Line bending Project Make Diary

KS4 (Design & Technology) Curriculum

	Year 10	Year 11
Autumn Term 1	Practical • Jewellery box • Finger joints, dovetail joints, Mortise and tenon • Rebate hinges • Finishes • Laser etching • 2D design Net drawings Theory • Materials • Wood, Metal, Plastics NEA practice skills • Investigate • Research • Specification	NEA project
Autumn Term 2		
Spring Term 1	Practical • Salad spoon • Ply forming moulds • Finishes • Laser etching • Packaging Theory • Materials • Manufactured boards NEA practice skills • Design ideas • Development of ideas • Final design • Testing and evaluation	NEA project
Spring Term 2		
Summer Term 1	Practical skills • Mini metal project	NEA project
Summer Term 2	NEA project	

KS5 (Design & Technology) Curriculum

	Year 12	Year 13
Autumn Term 1	Theory and Practical skills Practical projects skills and iterative design Art Deco Clock = Metal machine work Flat sheet fruit bowl Pallet chair Theory Factors influencing the development of products Design movements Materials Processes and techniques	NEA project Theory Effects of technologies on development Features of manufacturing industries Design for maintenance
Autumn Term 2		
Spring Term 1	Theory and Practical skills Practical projects skills and iterative design Art Deco Clock = metal machine work CAD CAM Fusion360 and Denford router Metal Casting Theory Digital technologies CAD CAM Materials Performance characteristics of materials	NEA project Theory Current legislation Information handling Further processes and techniques
Spring Term 2		NEA project
Summer Term 1	NEA project primary focus Theory Information handling marketing Processes and techniques specialist tools Information handling intellectual property Current legislation COSHH Health and Safety	
Summer Term 2	Exam feedback and review. Consolidation of identified knowledge gaps. Teacher directed and supported project work and/or progressing to learn new material. 6th Form Progression Programme.	

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