



Year 9 Product Design: Our curriculum intent is: The aim of the Art, Design & Technology Derby Moor Curriculum is to ensure that all pupils are inspired to become creative, to develop their practical skills whilst also understanding the unique properties and qualities that different materials have. We also encourage our pupils to experiment, to invent and to create their own design ideas in our workshops, so they can practise their “hands -on” skills and develop a portfolio of work. At Key Stage 3, our curriculum is structured so pupils can build on skills and knowledge year by year; there are frequent cross curricular links to other subjects and topics plus all of the projects we undertake at Key Stage 3 are strongly linked to the relevant GCSE specifications and to the skills employers require in the world of work today.						
Term	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer 1	Summer 2
Topic (brief description)	Year 9 will study each module on an hourly basis weekly. All pupils will cover all units over the year but depending on availability of workshops and resources, the order may be different to what is shown below. *All projects have elements which link and sequence well together regardless of order - for example designing skills will develop through doing this a number of times and being exposed to different design situations.					
	Casting Plant Pot Project Working with timber and concrete to create a plant pot with stand.	Casting Plant Pot Project Working with timber and concrete to create a plant pot with stand.	Technical Drawing Project Refine technical drawing skills through creating their own robot in isometric view.	Pewter Casting Design and make an interlocking pendant cast out of pewter based on a specific culture.	Pewter Casting Design and make an interlocking pendant cast out of pewter based on a specific culture.	Creativity Challenge A series of challenges to make pupils think outside the box and develop their creative thinking.
Subject Specific Skills	Work with specialist tools to create precise lap and housing joints for the stand. Develop understanding of COSSH and work safely to cast the concrete pot.	Work with specialist tools to create precise lap and housing joints for the stand. Develop understanding of COSSH and work safely to cast the concrete pot.	Build on a range of drawing techniques including crating in 2D and 3D and rendering. Designing and working with proportion and measurements.	Pupils will answer a design brief and develop their designing skills for a specific target market. Use a range of tools to cut, cast, file and polish materials to create a small and intricate piece.	Pupils will answer a design brief and develop their designing skills for a specific target market. Use a range of tools to cut, cast, file and polish materials to create a small and intricate piece.	A range of stand-alone lessons designed to challenge pupils personal and creative thinking skills and sharpen designing skills.
Previous Links	National Curriculum link to KS3 and reference to previous skills from KS2 are available to demonstrate how the Design & Technology Curriculum, strengthens students prior learning and develops these skills further in preparation for KS4. Technology Student is a useful website for extra reading on design and technology curriculum.					



Cross-curricular Skills	Maths: measuring materials and working accurately. Science: understanding material properties, environmental issues and COSHH. Art: Increase proficiency in handling a range of materials	Maths: measuring materials and working accurately. Science: understanding material properties, environmental issues and COSHH. Art: Increase proficiency in handling a range of materials	Art: To use a range of media and create aesthetically pleasing work. Engineering: Sampling of a range of technical drawing techniques used in industry. Maths: Use of rulers, working with scale, proportion and measurements.	Science: understanding material properties & environmental issues. RE & Geog: understanding of cultural and religious differences around the world. Art: Use a range of media to develop the visual impact of their work. Computing: use of computer aided design	Science: understanding material properties & environmental issues. RE & Geog: understanding of cultural and religious differences around the world. Art: Use a range of media to develop the visual impact of their work. Computing: use of computer aided design	PLTS: independent enquirers, creative thinkers, reflective learners, team workers, self-managers, effective participants.
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Post 16 and beyond: The structure of our curriculum in Key Stage 3 flows into the KS4 and KS5 examined content. In Design & Technology, we provide students with essential skills and knowledge to prepare them for the next step in their lives and equip them with confidence to carry these skills through life wherever that is work or further education. We implement exciting projects that pupils will engage with so it creates a love of learning and helps develop essential life skills even if pupils do not choose GCSE or A Level Product Design.



Year 10 Design & Technology: Our curriculum intent is: The aim of the Design & Technology Derby Moor Curriculum is to ensure all pupils are inspired to be creative, develop their practical skills whilst reaching their academic potential. We also aim for pupils to realise the importance of our subjects in the real world and how these subjects can enhance pupils' education to the highest degree. Pupils are to receive engaging lessons, experiences and opportunities which will deepen the understanding of the subjects' theoretical content as well as the 'hands-on' skills. In Key Stage 4, our curriculum is structured so pupils can retrieve their KS3 knowledge and skills but also feel confident in their ability to further study Design & Technology at A level or any other related sector at a higher level. The curriculum follows the exam boards content and is organised so pupils have the best possible chance of optimising their time to develop their knowledge and skills on NEA (coursework) and exam content.

Term	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer 1	Summer 2
Topic (brief description)	Pupils will learn through practical learning and theoretical lessons, generally the split across each half term is half practical and half theory however pupils gain knowledge and skills through practical sessions so depending on the topic and project, pupils may be learning in a 'hands on' manner for often than not. Also, the arrangement of projects may depend on workshop availability and space therefore the first two term projects can be taught in either term. The GCSE qualification is AQA Design and Technology which will prepare students to participate confidently 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.					
	Core Technical Principles – pupils will learn a breadth of technical knowledge required for the exam and NEA Mini Tealight Project Work with Timbers and Polymers and a range of processes to apply knowledge learnt in first term.	Core Technical Principles - pupils will learn a breadth of technical knowledge required for the exam and NEA Mini Tealight Project Work with Timbers and Polymers and a range of processes to apply knowledge learnt in first term.	Specialist Technical Principle –pupils will earn more in depth technical knowledge on a timber based materials. Design and model project – pupils work through the iterative design process used within the NEA and create prototypes using modelling materials.	Specialist Technical Principle – pupils will earn more in depth technical knowledge on a timber based materials. Design and model project – pupils work through the iterative design process used within the NEA and create prototypes using modelling materials.	Designing & Making Principles Pupils will learn how all design and technology activities take place within a wide range of contexts. NEA Preparation – Pupils will be guided through the NEA process and be given a period of time to fully explore the contextual challenges set.	Designing & Making Principles Pupils will learn how all design and technology activities take place within a wide range of contexts. Non-Exam Assessment: Section A & B



Year 11 Design & Technology: Our curriculum intent is: The aim of the Design & Technology Derby Moor Curriculum is to ensure all pupils are inspired to be creative, develop their practical skills whilst reaching their academic potential. We also aim for pupils to realise the importance of our subjects in the real world and how these subjects can enhance pupils' education to the highest degree. Pupils are to receive engaging lessons, experiences and opportunities which will deepen the understanding of the subjects' theoretical content as well as the 'hands-on' skills. In Key Stage 4, our curriculum is structured so pupils can retrieve their KS3 knowledge and skills but also feel confident in their ability to further study Design & Technology at A level or any other related sector at a higher level. The curriculum follows the exam boards content and is organised so pupils have the best possible chance of optimising their time to develop their knowledge and skills on NEA (coursework) and exam content.

Term	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer 1	Summer 2
Topic (brief description)	In year 11, pupils will be carrying out their Non-Exam Assessment which they will have been working on since June 1 st in Year 10. We try to provide maximum amount of time for NEA completion in lessons however it is still important for pupils to re-cap on the theoretical element of the course; therefore we plan this accordingly based on the classes strengths and weaknesses in terms of knowledge and skills. The GCSE qualification is AQA Design and Technology which will prepare students to participate confidently 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.					
	Non-Exam Assessment: Section C Pupils will generate a range of design ideas Re-cap of Theory content covered in Yr10 – teacher driven based on class strengths and weaknesses	Non-Exam Assessment: Section D Pupils to develop and refine design ideas. This may include, formal and informal 2D/3D drawings (CAD, systems and schematic diagrams, models and schedules) Re-cap of Theory content covered in Yr10 – teacher driven based on class strengths and weaknesses	Non-Exam Assessment: Section E & F Section E : Realising design idea (making) Section F: Analysing and Evaluating Re-cap of Theory content covered in Yr10 – teacher driven based on class strengths and weaknesses	NEA Improvements & Revision Pupils will be given a space of time to self-reflect and improve areas of their NEA. Pupils will consolidate their knowledge as they begin preparing for end of year exam and focus on practicing key skills and exam technique.	Revision & Exams Pupils will consolidate their knowledge as they are preparing for end of year exam and focus on practicing key skills and exam technique.	
Subject Specific Skills	Develop creativity and innovation within ideas avoiding design fixation and with full consideration of functionality &	Develop work using 2D/3D techniques: hand drawn, CAD, physical modelling and test these effectively; Select fully appropriate	Work with accuracy & precision with a range of materials/components to produce prototypes; using	Self-assessment and reflection; interpreting the mark scheme.	Knowledge retrieval, answering exam questions and construction of answers, interpretation of the	



Year 12: Our curriculum intent is to: The A level in Design and Technology course offers a unique opportunity in the curriculum for learners to identify and solve real problems by designing and making products or systems. Design and Technology is an inspiring, rigorous and practical subject. The Year 12 curriculum aim is to encourage learners to use creativity and imagination when applying iterative design processes to develop and modify designs, and to design and make prototypes that solve real world problems, considering their own and others' needs, wants, aspirations and values. The course enables learners to identify market needs and opportunities for new products, initiate and develop design solutions, and make and test prototypes. Learners will be inspired to take the broad subject further in their education and specialise in an area which they feel passionate about; whether this is through an apprenticeship, college or at university level.						
Term	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer 1	Summer 2
Topic (brief description)	Year 12 cover the whole of the exam unit content throughout the year. Generally, 2 lessons a week are theory & 3 lessons are practical or coursework based – reflecting the 40/60 weighting of the course. Coursework is referred to by the exam board as Non-Exam Assessment and it is split into 5 sections; Section A: Identifying and investigating design possibilities, Section B: Developing a design brief and specification, Section C: Generating and developing design ideas, Section D: Manufacturing a prototype, Section E: Analysing and evaluating design decisions and prototypes.					
	Pupils cover theory content, specifically learning about Design & Innovation within the design industry & will also learn about a range of materials & their properties. Pupils will complete a modelling project where they will work with a range of modelling materials & create an accurate prototype of a glue gun.	Pupils cover theory content & will deepen their knowledge on materials & properties . Pupils will also learn in detail about a range of industrial processes such as injection moulding & sand casting. Pupils will complete a multi skills project where they will work with soft woods, plastic & the laser cutter to create a storage box with a variety of joints & techniques.	Pupils will cover section 4 of the theory content which is industrial & commercial practice ; learners will develop knowledge & understanding on a range of processes from manufacturing systems in factories to hand processes in the workshop. Section A: Pupils will start their final major project & investigate into their own design problem.	Pupils will cover theory on product analysis & systems ; understanding the requirements a product must satisfy, critical assessment of existing products & visualising new products in a context of past, present & future possibilities. Section A: Pupils will continue on researching into their design problem & their client, all of the research they undertake will be analysed to a high standard.	Pupils will cover theory on human responsibility ; they will acquire the knowledge & understanding of the designer's social, moral, ethical & legal responsibilities. Learners to explore the environmental & consumer factors which impact on designers. Section B: Pupils will move onto the second section of their coursework where they will write a professional design brief & specification on their chosen product.	The final theory section is about Public interaction – how product design has its place within the market. Learners will develop an appreciation of the effects of social, economic, cultural & ethical issues in addition to material & manufacturing technologies. Section C: Pupils will start to design a range of ideas for their product, they will use a variety of drawing techniques.
Subject Specific Skills	Working with accuracy and precision, refining skills with craft tools and machinery such as the hot wire sculpture. Skills using hand tools and machinery will be developed.	Developing independent and safe working practice within the workshop. Pupils will refine their wood working and plastic working skills along with CAD and CAM skills.	Pupils will develop their researching skills along with investigating not only in a theoretical manner but a practical manner too for example exploring the suitability of materials and their properties.	Pupils will further develop their researching & evaluation skills as they near the end of the investigation section. Investigations should be direct to their design problem, so pupils will develop their ability to focus their research appropriately.	Develop their ability to condense & refine written information & communicate this through a design brief & specification. Pupils will need to develop their ability to articulate their project whilst being concise.	Pupils will develop their technical drawing skills & further develop CAD skills on new software such as sketch up and space claim. Pupils will develop professional rendering skills in a variety of media as they will need to produce quality design work.
Previous Links	This specification builds on the knowledge, understanding and skills established at GCSE. Most learners will have studied either the AQA Design and Technology course or the OCR Cambridge Nationals in Engineering Design. It is preferable that those learners who are from another centre upon arrival of Sixth Form should have studied a Design or Engineering based subject.					

Cross-curricular Skills	Maths – working with precision and accuracy. History – understanding design movements and designers' key contributions to movements in history.	Maths – working with precision, accuracy and problem solving. Geography – environmental, social and moral issues. Computing & IT – development of CAD work.	Geography – environmental, social and moral issues. IT – use of computers and communicating research on various software.	English – analysis and evaluation skills, comprehension of information. IT – use of computers and communicating research on various software.	English – comprehension of information, condensing information, articulation through written work. Geography & Business studies- designer's social, moral, ethical & legal responsibilities.	Business Studies – public interaction content is similar to content learnt in BS course. Art – using tonal and textural detail to represent a material or a product.
Post 16 & beyond: This course provides a suitable foundation for the study of design & technology or a related area through a range of higher education courses, progression to the next level of vocational qualifications or employment. In addition, the specification provides a coherent, satisfying & worthwhile course of study for learners who do not progress to further study in this subject specifically; but will enhance their general knowledge, mathematical skills, problem solving skills.						



Year 13: Our curriculum intent is to: The A level in Design and Technology course offers a unique opportunity in the curriculum for learners to identify and solve real problems by designing and making products or systems. Design and Technology is an inspiring, rigorous and practical subject. The Year 12 curriculum aim is to encourage learners to use creativity and imagination when applying iterative design processes to develop and modify designs, and to design and make prototypes that solve real world problems, considering their own and others' needs, wants, aspirations and values. The course enables learners to identify market needs and opportunities for new products, initiate and develop design solutions, and make and test prototypes. Learners will be inspired to take the broad subject further in their education and specialise in an area which they feel passionate about; whether this is through an apprenticeship, college or at university level.						
Term	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer 1	Summer 2
Topic (brief description)	Year 13 re-cover the whole of the exam unit content throughout the year so by the time pupils sit the exam they will have re-visited each topic. Year 13 is very coursework heavy so theory is lighter in the Autumn Term where pupils will cover 1 hour of theory a week along with some theory-based homework. In the spring and summer term. Coursework is referred to by the exam board as Non-Exam Assessment and it is split into 5 sections; Section A: Identifying and investigating design possibilities, Section B: Developing a design brief and specification, Section C: Generating and developing design ideas, Section D: Manufacturing a prototype, Section E: Analysing and evaluating design decisions and prototypes.					
	Pupils re-cover theory content on Design & Innovation. Section C: Pupils will continue to work on their design ideas and will start to develop these in CAD form and physical form using a variety of modelling materials.	Pupils re-cover theory content on Materials and Properties. Section D: Pupils will continue to work on section D of coursework which focuses on development and refinement of ideas. Pupils will start to make their final product at the start of December.	Pupils re-cover theory content on Industry Processes and Industry and commercial practices. Section D: Pupils will continue to work on making their final product whilst working safely and independently in the workshop.	Pupils re-cover theory content on product analysis and systems and human responsibility. Section D & E: Pupils will complete their making and will evaluate the success of their project and reflect on improvements or modifications that could be made.	Pupils re-cover theory content on Public interaction. This half term will then revise (identified based on group) key areas which will ready pupils for their final exam.	
Subject Specific Skills	Pupils will further develop their technical drawing & CAD skills. Working with accuracy and precision, refining skills with craft tools and machinery. CAD skills will be refined. Independent working skills will become stronger throughout the year.	Working with accuracy and precision, refining skills with hand tools and machinery such as the belt sander and pillar drill. Developing independent and safe working practice within the workshop.	Working with accuracy and precision, refining skills with hand tools and machinery such as the belt sander and pillar drill. Developing independent and safe working practice within the workshop.	Pupils will develop their finishing skills as they complete their final product. Pupils will further develop their reflection & evaluation skills as they near the end of the project.	Revision skills will be refined and pupils will identify revision methods which are effective for themselves.	
Previous Links	This specification builds on the knowledge, understanding and skills established at GCSE. Most learners will have studied either the AQA Design and Technology course or the OCR Cambridge Nationals in Engineering Design. It is preferable that those learners who are from another centre upon arrival of Sixth Form should have studied a Design or Engineering based subject.					
Cross-curricular Skills	Art – using tonal and textural detail to represent a material or a product. Maths – working with precision, accuracy and problem solving. Computing & IT – development of CAD work.	Maths – working with precision, accuracy and problem solving. Geography – environmental, social and moral issues. Computing & IT – development of CAD work.	Geography – environmental, social and moral issues. IT – use of computers and communicating their work through PowerPoint, Word etc.	English – comprehension, condensing information, articulation through written work. IT – use of computers & communicating work through Powerpoint, Word etc.	Business Studies – public interaction content is similar to content learnt in BS course. English – comprehension of information, condensing information, articulation through written work.	

				Geography & Business studies - designer's social, moral, ethical & legal responsibilities.		
Post 16 & beyond: This course provides a suitable foundation for the study of design & technology or a related area through a range of higher education courses, progression to the next level of vocational qualifications or employment. In addition, the specification provides a coherent, satisfying & worthwhile course of study for learners who do not progress to further study in this subject specifically; but will enhance their general knowledge, mathematical skills, problem solving skills.						