

## Curriculum Intent Statement for Design and Technology

At Chase Terrace Academy we aspire for all our students to achieve greater things than they ever thought possible.

We pride ourselves on being a warm and welcoming school that places community at the heart of everything we do. Our ambitious curriculum is enriching and inclusive, providing challenge and breadth for all. This empowers our students to become compassionate, confident, and creative individuals who are resilient, respectful, and equipped with a desire to take up a fulfilling role in society and the wider world.

In Design and Technology pupils will have a grounding in the use of specialised tools, processes and techniques needed in the manufacture of products. They will explore design throughout each key stage and enhance their problem-solving abilities through critical thinking and a variety of approaches. They will understand safe working practices. Importantly they will build resilience when things go wrong and be able to analyse their work to understand how to better themselves.

At KS3 pupils will rotate through projects in the specialist material areas of Product design, Textiles and Food. In this way all pupils will be taught by specialised teachers who fully understand the requirements of their material area and will be able to teach and differentiate in a way best suited to individual learners. This will enable pupils to enjoy every opportunity that Chase Terrace Academy has to offer, allow them to learn beneficial life skills and to be fully informed on their future academic choices. Along with the specialist teaching, each year group will also be taught over-arching themes such as User Needs, Commercial Production, sustainability, and Environmental Factors. This ensures that students feel more prepared for undertaking a GCSE in Design and Technology as well as having an appreciation of the wider aspects that inform designs and consumer choices. Further to this the briefs used to introduce the learning will enable opportunities for Cross curricular study, Cultural appreciation of different contexts and have world of work links imbedded.

The impact of learning will be measured formally through the marking of both design booklets and practical outcomes. Short multiple-choice Knowledge Tests in each project will also test the pupils on-going knowledge and understanding of the subject as well as providing a foundation of theoretical knowledge for those wishing to progress to GCSE.

Design and Technology understands and promotes British values from the understanding of regulations in the materials they are using to the laws regarding Health and Safety. We will address where the materials they are using come from and the environmental impact of sourcing them. A respect for the environment will be explored and an understanding of cultural aspects within design will be examined. 'World of Work' will be integrated throughout projects and experiences across all KS3, KS4 and KS5.

At the heart of every project, we aim for students to foster a love for the subject, for them to become confident individuals. Through working in design specialisms pupils become open to the excitement and inspiration offered by both the natural and made worlds. By engaging in purposeful, imaginative, and creative activities pupils learn to take managed risks, trying out new ideas and new ways of working without

fear of failure. Through a range of processes, including CAD, hand drawings, CAM and textiles design, pupils observe and investigate the world around them, inventing and visualising with increasing independence and ambition. Through allowing their work to be driven by imagination, experience, and

issues in the real world they learn to explore and interpret other's needs. By developing and using sets of values to evaluate their own and others' work, pupils are able to increase confidence in their own opinions, in their feelings of self-worth and in their ability to relate to others.

ideas in line with a brief and develop understanding of

In summary our aims are:

- To develop lifelong interests and a passion for Design and technology.
- To extend an appreciation for the diverse world we live in.
- To establish a reflective & Resilience, to understand that making mistakes is part of the process. Reiteration being essential to success.
- To promote enthusiasm, Innovation & creativity developing personal confidence and self-management skills.
- For students to gain an ability to work independently and as part of a team.
- To embed knowledge of future pathways within the design industry.
- A strong foundation of the technical competencies and critical knowledge required to be a strong future learner.
- To select projects and problems that are relevant to the children in our community.
- To review the school's development plan and design projects that address areas of need.
- To ensure that our curriculum is 'scaffold' to celebrate the diverse cultures within our locality and the wider world from year 7 all the way through to year 13.

### Curriculum Implementation Plan

Subject – Design & Technology						
	Term 1.1	Term 1.2	Term 2.1	Term 2.2	Term 3.1	Term 3.2
Year 7 (Each groups order of projects will be different)	<b>Product design– Projects dependant on pathway: 'The Boxtroll Project'</b> You will consider and respond to a given design and make challenge. You will need to research, design and then make a new money box to help children to be encouraged to save some of their pocket money.  <b>Assessment: Design process in Booklet and Practical money box.</b>  <b>'Blockhead'</b> Express your creative side by journeying through the iterative design process in design and making. Learning		<b>Textiles — 'Monsters'</b> You will embark on a creative journey to design and create a unique monster toy for a local nursery school. This project will enable you to explore your imagination while learning essential textiles skills. The monster toys should be safe, engaging, and foster imaginative play for young children.  <b>Assessment: Design process in Booklet and Practical monster.</b>		<b>Food — 'Plate it Up'</b> Foundation of knowledge, skills and understanding around food and its hygienic and safe preparation. You will learn basic knife skills and cooking methods to produce a range of dishes including fruit salad and cous cous salad. You will cover topics on nutrition, healthy eating and food choices. After producing fruit crumble, pizza and breakfast muffins you will reflect and evaluate your skills.  <b>Assessment: Food production, planning and safety.</b>	

	<p>basic drawing and rendering skills to help you to design a seasonal blockhead toy, which you learn how to make through using different workshop tools and machines.</p> <p>Assessment: Design process in Booklet and Practical block head.</p>		
<p><b>Year 7 Key Themes</b>—Practical Skills, foundation of knowledge and build passion for subject.</p>			
<p>Year 8 (Each groups order of projects will be different)</p>	<p><b>Product design — Projects dependant on pathway: ‘Project time’</b> Consider and respond to a given design and make challenge. You will need to research, design, and then make a new table clock, which will be themed on <b>Pop Art</b>. You will need to combine skills and understanding using design history to help guide and inspire final practical outcomes.</p> <p>Assessment: Design process in Booklet and Practical clock.</p> <p><b>‘Chocolate creation’ Develop</b> design skills by exploring why sustainability is important, conducting research to inform designs creating a brand-new chocolate brand. You will follow a brief to design wrapper and chocolate moulds.</p> <p>Assessment: Design process in Booklet and Practical packaging design.</p>	<p><b>Textiles — ‘Marine Expressions’</b> In this project, you'll design and make a cool drawstring or tote bag inspired by the ocean. You'll learn about sustainable practices, create colourful tie-dye and batik patterns, and explore different printing and embroidery techniques. Dive into the world of marine life and express your creativity with fun, hands-on activities!</p> <p>Assessment: Design process in Booklet and Practical Bag.</p>	<p><b>Food — ‘Mama Meals’</b> Introduction to more complex practical skills including sauce and bread making. Students will look at the way food intolerances and nutrition impact diet and make dishes to demonstrate this knowledge. There will be a focus on planning and evaluation skills. You will also explore food science both practically and in theory.</p> <p>Assessment: Food production, evaluation, and theory.</p>
<p><b>Year 8 Key Themes</b>—Creativity, responding to a brief and context.</p>			

Year 9 <i>(Each groups order of projects will be different)</i>	<b>Product design — ‘Light up’</b> Sophisticated respond to a design brief. You will research, design, and then make a small new table light, which will be themed on Art Deco. You will need to combine skills/ understanding using design history to guide and inspire your final light.  <i>Assessment: Design process in Booklet and Practical light.</i>  <b>‘Phone holder’</b> Theory imbedded into the design process through responding to a brief. Conducting primary and secondary research to inform phone holder, you will learn drawing techniques facilitate high quality designs. Holder made using range of tools/ equipment finishing a product to high quality.  <i>Assessment: Design process in Booklet and Practical holder.</i>		<b>Textiles — ‘Print fusion’</b> You will design and create a pencil case / make up bag featuring an abstract, bold, and modern repeat pattern inspired by natural elements. You'll use CAD software for your designs, explore various colourways, and create digital mock-ups. The project emphasizes industry-related practices, including sublimation printing, ensuring your final product reflects current trends and appeals to a young, modern audience.  <i>Assessment: Design process in Booklet and Practical case.</i>		<b>Food — ‘Food for life’</b> Food choice, for instance culture/religion, climate change and ethical values around animals. Practical options will be linked to this. Nutritional factors will be taught, and subsequent dishes planned to show how this can be included in food dishes. You will evaluate and reflect on how you can achieve high standard of outcomes.  <i>Assessment: Food choices, nutrition and standard of practical dishes.</i>	
<b>Year 9 Key Themes</b> — <i>Deeper theory (sustainability, processes, application of their knowledge), industry links, more technical practical skills.</i>						
Year 10 GCSE Product design(AQA)	<b>Core Principles: Material Categories &amp; Properties.</b>  Absorbency, Density, Fusibility, Conductivity, Strength, Hardness,	<b>Core Principles: Development in new materials. Energy Generation &amp; Storage.</b>  Fossil Fuels Nuclear power Renewable Energy	<b>Core Principles: New &amp; Emerging Technologies.</b>  Modern Materials Smart Materials Composites Technical Textiles Industry and	<b>Core Principles: Mechanical devices Systems approach to designing.</b>  Inputs and Outputs Processors and Microcontrollers	<b>Specialist Material areas (one of): Papers &amp; Boards Timber &amp; Textiles materials.</b>  Papers and Boards Timbers and	<b>NEA – Context, Research, Design Brief &amp; Specification</b>

	Toughness, Malleability, Ductility, Elasticity	Energy Storage	Enterprise People Culture and Society Sustainability and the Environment Production Techniques Planned Obsolescence		Boards Metals and Alloys Polymers Textiles	
	Mini Project 1	Mini Project 1	Mini Project 2	Mini Project 2	Mini Project 2	
<b>Year 11 GCSE Design &amp; Technology (AQA)</b>	NEA - Design & Development Specialist Material areas in line with AQA specification.	NEA - Design & Development Specialist Material areas in line with AQA specification.	NEA - Making Specialist Material areas in line with AQA specification.	NEA - Making Specialist Material areas in line with AQA specification.	NEA- Evaluation Revision in line with AQA specification.	Exam
<b>Year 10 NCFE food + cookery (NCFE)</b>	<p>Content Area 1 <b>Health and safety relating to food, nutrition and the cooking environment.</b></p> <p>The learner will understand the purpose of safe and hygienic working practices for self and the cooking environment. The learner will understand the importance of using the Hazard Analysis and</p>	<p>Content Area 2. Food legislation and food provenance The learner will understand food legislation and the provenance of food. Learning about the Food standards Agency, grown reared and caught. Food transportation, food processing and manufacture and their advantages and disadvantages. <b>ASSESSMENT</b> – knowledge test, application test and exam question</p>	<p>Content area 3 – Food Groups s, key nutrients, and a balanced diet The learner will understand the main food groups, key nutrients required for a healthy diet, and the provision of a healthy diet for specific groups of people when food is prepared and cooked. <b>ASSESSMENT</b> – knowledge test, application test</p>	<p>Content area 4 - Factors affecting food choice. The learner will understand that there are many factors that influence what we choose to eat when food is prepared and cooked. They include social factors, the environmental impact, and seasonal constraints. <b>ASSESSMENT</b> – knowledge test, application test and exam question</p>	<p><b>Key skills needed for NEA.</b> You will develop skills needed to support you in your NEA completion, such as sensory evaluation, amending recipes, meal planning, nutritional labelling and interpreting a brief. During practical lessons you will make set meals as well as those that you have planned or amended. <b>ASSESSMENT</b> – end of unit application assessments</p>	

	<p>Critical Control Point (HACCP) system in the food industry to minimise risks and hazards.</p> <p><b>ASSESSMENT</b> – knowledge test, application test and exam question</p>		<p>and exam question</p>		
<p><b>Year 11</b> NCFE food + cookery (NCFE)</p>	<p><b>Content area 6: Recipe amendment, development, production, and evaluation</b> You will respond to a set brief which will require you to understand dietary requirements of a client and adapt a recipe accordingly. You will have to both make this and be about to evaluate your rationale/ choices.</p> <p><b>NEA actual Task 1, 2a and 2b</b> You will complete the NEA task set</p>	<p><b>Content area 7: Plan a menu, create an action plan, produce, and evaluate the dish.</b> You will respond to a brief which will require you to understand dietary, health and safety and food preparation skills. You may be asked to link this to an industry context.</p> <p><b>NEA actual Task 3a, 3b, 3c</b> You will complete the NEA task set by NCFE using their experience from the practice task and covering all the relevant content</p>	<p><b>Model Preparing, cooking, and evaluating a dish for someone with a health-related condition.</b> You will respond to a set brief but be encouraged to use your knowledge and experience to bring your personal interpretation to what you make. You may be required to relate this to a context or industry.</p> <p><b>NEA actual Task 4a and 4b</b> You will complete the NEA task set by NCFE using their experience from the practice task</p>	<p>Preparing and revisiting the subject content (1-5) in <b>preparation for the exam in the June.</b> This includes regular practice of exam questions and quizzes to test retention. Practical will also be used to reinforce prior learning.</p>	<p>Exam</p> <p>A variety of assessment questions will be used, including multiple-choice, short-answer and extended response questions. This will enable learners to demonstrate their breadth of knowledge and understanding of the subject and ensure achievement at the appropriate level, including stretch and challenge.</p>

	by NCFE using their experience from the practice task and covering all the relevant content completed in year 10.	completed in year 10.	and covering all the relevant content completed in year 10.		
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### Year 7 - Design & Technology Curriculum Implementation Plan

Knowledge and Skills – Students will be taught to...	Reading, Oracy, Literacy and Numeracy	Formative Assessment (Ongoing)	Summative Assessment (Middle and end of project)	Link to GCSE Content
<ul style="list-style-type: none"> <li>• <b>Develop the Practical Skills, Manufacture Processes and Materials knowledge in all projects.</b></li> <li>• Respond to a context.</li> <li>• Write a design Brief.</li> <li>• Undertake appropriate research.</li> <li>• Produce a small range of ideas.</li> <li>• Explain the strengths and weaknesses of ideas.</li> <li>• Develop their chosen idea.</li> <li>• Use the basic drawing tools of 2D design to develop their idea.</li> <li>• Use tools and processes of manufacture effectively.</li> </ul>	Reading <ul style="list-style-type: none"> <li>• Written context.</li> </ul>	Questioning in lessons  Whole class feedback	Three Knowledge tests throughout the year focussing on: <ul style="list-style-type: none"> <li>• Design Process</li> <li>• Materials</li> <li>• Manufacturing Processes</li> <li>• Equipment/Tools</li> <li>• Health and Safety</li> </ul> Three marked D&T project tasks focussing on: <ul style="list-style-type: none"> <li>• Analysis and Evaluation</li> <li>• Design and Development</li> <li>• Planning and Manufacture</li> </ul> <i>Students in Year 7 will also be awarded a separate 'stand-alone' grade for Food Preparation and Nutrition.</i>	Assessment reflects the 50/50 weighting between coursework and exam.  Developing ability to respond to exam questions.  Developing an iterative design process.  Experiencing a wide range of material areas that can be focussed upon for GCSE courses.  Introducing the use of CAD/CAM required in GCSE NEA's  Developing skills using hand tools.  Health and Safety working practices.
	Numeracy <ul style="list-style-type: none"> <li>• Measuring techniques to ensure accuracy.</li> <li>• Weighing appropriate ingredients.</li> <li>• Use a ruler and understand the difference between millimetres and centimetres.</li> <li>• Dimension CAD files.</li> </ul>	Individual feedback in lessons  Marking areas of focus and identifying areas for improvement.		
	Oracy <ul style="list-style-type: none"> <li>• Individual speaking and explanations of design intentions</li> </ul>	Peer and self- assessment of written work		

<ul style="list-style-type: none"> <li>• Understand how to work safely.</li> <li>• Evaluate their product and suggest possible improvements.</li> </ul>				
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Year 8 - Design & Technology Curriculum Implementation Plan				
Knowledge and Skills – Students will be taught to...	Reading, Oracy, Literacy and Numeracy	Formative Assessment (Ongoing)	Summative Assessment (Middle and end of project)	Link to GCSE Content
<ul style="list-style-type: none"> <li>• <b>Respond to the overarching themes of Creativity, User Needs and Computer Aided Design and Manufacture (CAD/CAM) covered in all projects.</b></li> <li>• Respond to a context analysing the important factors.</li> <li>• Write a detailed Design Brief.</li> <li>• Undertake appropriate research.</li> <li>• Produce creative ideas that solve their brief.</li> </ul>	<p>Reading</p> <ul style="list-style-type: none"> <li>• Written context.</li> <li>• Reading of gathered research prior to analysis.</li> </ul> <hr/> <p>Numeracy</p> <ul style="list-style-type: none"> <li>• Measuring techniques to ensure accuracy.</li> <li>• Weighing appropriate ingredients.</li> <li>• Consider dimensions for the manufacture of their product.</li> </ul>	<p>Questioning in lessons</p> <p>Whole class feedback</p> <p>Individual feedback in lessons</p> <p>Marking areas of focus and identifying areas for improvement.</p>	<p>Three Knowledge tests throughout the year focussing on:</p> <ul style="list-style-type: none"> <li>• Design Process</li> <li>• Materials</li> <li>• Manufacturing Processes</li> <li>• Equipment/Tools</li> <li>• Health and Safety</li> </ul> <p>Three marked D&amp;T project tasks focussing on:</p>	<p>Assessment reflects the 50/50 weighting between coursework and exam.</p> <p>Developing ability to respond to exam questions building in complexity.</p> <p>Developing an iterative design process.</p>



<ul style="list-style-type: none"> <li>Analyse ideas to explain their strengths and weaknesses.</li> <li>Develop their chosen idea using a range of different techniques.</li> <li>Use 2D design effectively to develop their idea.</li> <li>Consider appropriate materials and processes to be used for the manufacture of their product</li> <li>Develop their use of tools and processes in manufacture.</li> <li>Demonstrate safe working practices.</li> <li>Evaluate their product and suggest possible improvements.</li> </ul>	<ul style="list-style-type: none"> <li>Dimension CAD files.</li> </ul> <p>Oracy</p> <ul style="list-style-type: none"> <li>Individual speaking:</li> <li>Discussion of design work through peer feedback and through the evaluation of a product.</li> </ul>	<p>Peer and self-assessment of written work</p>	<ul style="list-style-type: none"> <li>Analysis and Evaluation</li> <li>Design and Development</li> <li>Planning and Manufacture</li> </ul>	<p>Experiencing a wide range of material areas that can be focussed upon for GCSE courses.</p> <p>Developing the use of CAD/CAM required in GCSE NEA's</p> <p>Developing skills using hand tools.</p> <p>Demonstrate an understanding of Health and Safety working practice in different environments in D&amp;T.</p> <p>Considering real world problems to solve and the ability to design to an overall theme.</p>
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Year 9 - Design & Technology Curriculum Implementation Plan				
Knowledge and Skills – Students will be taught to...	Reading, Oracy, Literacy and Numeracy	Formative Assessment (On-going)	Summative Assessment (Middle and end of project)	Link to GCSE Content
<ul style="list-style-type: none"> <li><b>Respond to the overarching themes of Commercial Production and 'World of Work', Environmental Factors and Enhancement Techniques.</b></li> </ul>	<p>Reading</p> <ul style="list-style-type: none"> <li>Written context</li> <li>Reading of gathered research prior to analysis.</li> </ul>	<p>Questioning in lessons</p> <p>Whole class feedback</p>	<p>Three Knowledge tests throughout the year focussing on:</p> <ul style="list-style-type: none"> <li>Design Process</li> </ul>	<p>Assessment reflects the 50/50 weighting between coursework and exam.</p>

<ul style="list-style-type: none"> <li>• Creatively respond to a context analysing all factors.</li> <li>• Write a detailed Design Brief that fully meets the need of their user.</li> <li>• Undertake appropriate research.</li> <li>• Write a comprehensive specification or criteria.</li> <li>• Respond to the work of others in producing a creative range of ideas that solve their brief.</li> <li>• Fully analyse ideas and explain how these impact on the development.</li> <li>• Identify and undertake appropriate further research.</li> <li>• Develop their chosen idea using a range of different techniques appropriate to their product.</li> <li>• Choose from a range of CAD programmes (such as 2D design, Photoshop, SketchUp) effectively to develop their idea.</li> <li>• Plan the use of appropriate materials and processes to be used for the manufacture of their product.</li> <li>• Independently use an ever-increasing range of tools and processes in the safe manufacture of products.</li> <li>• Evaluate their product against all criteria and develop possible improvements.</li> </ul>	<ul style="list-style-type: none"> <li>• Development of presentations of work to showcase their learning to others</li> </ul>	<p>Individual feedback in lessons</p> <p>Marking areas of focus and identifying areas for improvement.</p> <p>Peer and self-assessment of written work</p>	<ul style="list-style-type: none"> <li>• Materials</li> <li>• Manufacturing Processes</li> <li>• Equipment/Tools</li> <li>• Health and Safety</li> </ul> <p>Three marked D&amp;T project tasks focussing on:</p> <ul style="list-style-type: none"> <li>• Analysis and Evaluation</li> <li>• Design and Development</li> <li>• Planning and Manufacture</li> </ul>	<p>Developing ability to respond to more sophisticated exam questions building in complexity.</p> <p>Demonstrating that their work follows a clear and iterative design process.</p> <p>Choosing from a wide range of material areas that can be focussed upon for GCSE courses.</p> <p>Independently make use of CAD/CAM required in GCSE NEA's</p> <p>Selecting appropriate tools and processes using them skilfully to create high quality products.</p> <p>Demonstrate an understanding of Health and Safety working practice in different environments in D&amp;T.</p> <p>Meeting users or target market groups needs effectively through the development of a final product.</p>
	<p>Numeracy</p> <ul style="list-style-type: none"> <li>• Measuring techniques to ensure accuracy.</li> <li>• Weighing appropriate ingredients.</li> <li>• Consider dimensions for the manufacture of their product.</li> <li>• Dimension CAD files.</li> </ul>			
	<p>Oracy</p> <ul style="list-style-type: none"> <li>• Individual speaking:</li> <li>• Discussion of design work through peer feedback and through the evaluation of a product.</li> </ul> <ul style="list-style-type: none"> <li>• Present the outcomes of products produced and learning through small group presentations to peers and staff.</li> </ul>			

### Year 10/ 11 – NCFE Food Curriculum Implementation Plan

Knowledge and Skills – Students will be taught to...	Reading, Oracy, Literacy and Numeracy	Formative Assessment (Ongoing)	Summative Assessment (Middle and end of project)	GCSE Content covered
<ul style="list-style-type: none"> <li>• Developing, honing and applying food preparation skills</li> </ul>	<p><b>Reading:</b></p> <ul style="list-style-type: none"> <li>• Reading and analysing the design brief</li> </ul>	<p>Questioning in lessons</p> <p><b>Self-assessment</b> of their practical</p>	<p>End of content area test for each unit – to include</p>	<ul style="list-style-type: none"> <li>• Assessment reflects the 60:40 weighting of NEA: Exam.</li> </ul>

<p>and techniques to achieve a consistent standard of the product over time.</p> <ul style="list-style-type: none"> <li>• Recipe development and amendment</li> <li>• An understanding of the importance of planning and sequencing when cooking dishes</li> <li>• Effective time management.</li> <li>• An understanding of how to present, decorate, garnish, evaluate and improve dishes</li> </ul>	<p><b>Recipe Analysis:</b> Provide students with recipes to read, highlighting specific terms or techniques.</p> <p><b>Research Assignments:</b> Assign short readings on food origins, cultural dishes, or nutrition.</p> <p><b>Instructional Texts:</b> Use food labels, safety guidelines, or equipment manuals as reading exercises.</p> <hr/> <p>Numeracy</p> <p><b>Measurements and Conversions:</b> Practice weighing ingredients, converting between units (grams to kilograms, millilitres to litres), and adjusting recipes for different servings.</p> <p><b>Time Management:</b> Use timed activities to help students develop skills in sequencing tasks and managing preparation and cooking times.</p> <hr/> <p>Oracy</p> <ul style="list-style-type: none"> <li>• <b>Group Discussions:</b> Facilitate debates on food ethics or environmental impacts of food choices.</li> <li>• <b>Practical Demonstrations:</b></li> </ul>	<p><b>Peer assessment-</b> written work for examples exam questions or of their practical work</p>	<p>knowledge, applications, and Exam question,</p>	<ul style="list-style-type: none"> <li>• Developing the ability to respond to exam questions.</li> <li>• Hygiene and safety working practises.</li> <li>• Developing skills variety of ingredients</li> </ul>
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	<p>Students verbally explain each step as they prepare a dish.</p> <ul style="list-style-type: none"> <li>• <b>Peer Feedback:</b> Encourage students to present their dishes and give constructive feedback to one another.</li> </ul>			
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### Year 10/11- Product Design Curriculum Implementation Plan

Knowledge and Skills – Students will be taught to...	Reading, Oracy, Literacy and Numeracy	Formative Assessment (Ongoing)	Summative Assessment (Middle and end of project)	GCSE Content covered
<p><b>Knowledge covered in theory lessons gaining a large understanding of the designing world:</b></p> <ul style="list-style-type: none"> <li>• New &amp; Emerging Technologies.</li> <li>• Energy, Materials, systems, and devices</li> <li>• Materials and there working properties.</li> <li>• Common specialist technical principles</li> <li>• Specialist Material areas (one of):               <ul style="list-style-type: none"> <li>– Papers &amp; Boards</li> <li>– Timber &amp; Textiles materials.</li> <li>– Product Design focus on Timber</li> </ul> </li> </ul>	<p>Reading</p> <ul style="list-style-type: none"> <li>• Reading               <ul style="list-style-type: none"> <li>• Exam questioning and exam command wording.</li> <li>• Reading of gathered research.</li> <li>• Reading of theory content and understanding</li> <li>• Reading of exam style questions and how they are answered.</li> </ul> </li> </ul> <p>Numeracy</p> <ul style="list-style-type: none"> <li>• Practice of maths within exams – Percentages, profit margins, radius,</li> </ul>	<p>Questioning in lessons</p> <p>Whole class feedback</p> <p>Individual feedback in lessons</p> <p>Marking areas of focus and identifying areas for improvement.</p> <p>Peer and self- assessment of written work</p>	<p>End of Unit tests for all 7 units – students take an end of unit exam in the theory content they have covered for each Unit of work. They get a percentage grade back to indicate how well they are doing against grade boundaries.</p> <p>Mini Nea – Pupils undertake 3 mini-NEAs across the year. At the end of each mini-NEA pupils are given a percentage grade</p> <p>These get brought together 50/50 to give overall grades representing where pupils</p>	<p>Assessment reflects the 50/50 weighting between coursework and exam.</p> <p>Developing ability to respond to more sophisticated exam questions building in complexity.</p> <p>Demonstrating that their work follows a clear and iterative design process.</p> <p>Theory content covered:</p> <ul style="list-style-type: none"> <li>• New &amp; Emerging Technologies.</li> <li>• Energy, Materials, systems, and devices</li> <li>• Materials and there working properties.</li> <li>• Common specialist technical principles</li> </ul>

<p>based materials:</p> <ul style="list-style-type: none"> <li>• Design Principles</li> <li>• Making Principles</li> </ul> <p><b>Knowledge gained through Mini-NEA projects:</b></p> <ul style="list-style-type: none"> <li>• Creatively respond to a context analysing all factors.</li> <li>• Write a detailed Design Brief that fully meets the need of their user.</li> <li>• Undertake appropriate research.</li> <li>• Write a comprehensive specification or criteria.</li> <li>• Respond to the work of others in producing a creative range of ideas that solve their brief.</li> <li>• Fully analyse ideas and explain how these impact on the development.</li> <li>• Identify and undertake appropriate further research.</li> <li>• Develop their chosen idea using a range of different techniques appropriate to their product.</li> <li>• Choose from a range of CAD programmes (such as 2D design, Photoshop, SketchUp)</li> </ul>	<p>diameter, circumferences</p> <p>Units of measurements – MM, CM, M., etc..</p> <hr/> <p>Oracy</p> <ul style="list-style-type: none"> <li>• Individual speaking:</li> <li>• Discussion of design work through peer feedback and through the evaluation of a product.</li> <li>• Present the outcomes of products produced and learning through small group presentations to peers and staff.</li> </ul>		<p>currently are using the same format as GCSE</p>	<ul style="list-style-type: none"> <li>• Specialist Material areas (one of):           <ul style="list-style-type: none"> <li>– Papers &amp; Boards</li> <li>– Timber &amp;</li> <li>– Textiles materials.</li> <li>– Product Design focus on Timber based materials:</li> </ul> </li> <li>• Design Principles Making Principle</li> </ul>
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<p>effectively to develop their idea.</p> <ul style="list-style-type: none"> <li>• Plan the use of appropriate materials and processes to be used for the manufacture of their product.</li> <li>• Independently use an ever-increasing range of tools and processes in the safe manufacture of products.</li> <li>• Evaluate their product against all criteria and develop possible improvements.</li> </ul>				
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**Year 12 – 3D design Curriculum Implementation Plan**

Term 1.1	Term 1.2	Term 2.1	Term 2.2	Term 3.1	Term 3.2
<p>The beginning of the course is teacher led. We focus on developing skills and a deeper level of understanding that will prepare students to work more independently moving forward. Staff deliver workshops that focus on 3 of the assessment objectives. AO1 Develop ideas: Critical and contextual links, and AO2 Refine ideas: Experiment with and explore materials. These workshops may have / but do not always make critical reference. In the critical references students build upon skills learnt at KS4 learning how to write about increasingly challenging artwork in an increasingly sophisticated and mature way. They explore cultural links and consider the work of artists and designers in context. Work is then presented appropriately often in A3 folders. Often as responses, they will produce pieces of work in relevant media which could include wood joinery, laser cutting, 3D printing, vacuum forming and card modelling. The intention is to develop and refine student's skill base and deepen their understanding of the aesthetic properties and communicative strengths of these media. Staff also lead workshops on AO3 Record: Ideas and insights relevant to their intentions. Here staff teach students how to draw and render in a range of media from subject matter that will link to their course work. These</p>			<p>Critical and contextual links (AO1) Experimentation with media (AO2) Students research contexts and produce media experiments along an independently chosen theme in their folders for the coursework component. They research the work of relevant designers writing critically about them considering the wider cultural context. They explore a self-negotiated theme. In responding to and presenting the work students develop skills in a range of media and understanding of design practise. The skills they develop prepare them for higher education and beyond and are transferable to a wide range of careers and tasks. Links to the world of work and the transferable nature of the skills are explored when relevant. Visual Recording (AO3) Students draw, render and photograph outcomes relevant to the ideas explored in their coursework. Student's build upon skills learnt at KS4 producing outcomes of an increasingly sophisticated and challenging nature. They work in a range of media appropriate to the subject and theme and they develop an understanding of how these are linked. At A Level the level of skill and refinement required increases as does the maturity and sophistication of the critical and contextual content of the work. Themes are often more mature and challenging and reflect</p>		

will be completed both by hand and using CAD. Again, there may be critical and contextual links when appropriate. Students are required to handle materials with an increasingly mature level of skills and critical understanding. The themes explored in the workshops and the work produced offers students a base for a project they can develop more independently during the remainder of the course. The first term and a half aim to provide students with the skills to work independently of staff and the judgment needed to take charge of their own creative process. **(CW 60% of final mark)**

students' personal interests. The emphasis is on students adopting a self-negotiated path with support and guidance from staff. Teachers begin to act in an increasingly advisory capacity guiding and making suggestions to students with less focus on instruction. Technical advice and instruction are still offered but this is on an increasingly bespoke and one to one basis as the course develops. **(CW 60% of final mark)**

**During this time, students also produce a 1000–3000-word critical essay that supports or is in some way linked to their practical work. This is delivered alongside their practical work as its content is informed by it.**

**Year 13 - 3D design Curriculum Implementation Plan**

Term 1.1	Term 1.2	Term 2.1	Term 2.2	Term 3.1	Term 3.2
<p>As previous detailed above students continue to Develop ideas within a context and in reference to designers (AO1), explore and experiment (AO2) create outcomes and record ideas relevant to the CW topic (AO3). Their approach to their work is increasingly independent as they begin to think about how they will bring their ideas to a conclusion <b>(realise their intentions)</b> with advice and support from staff <b>(CW 60% of final mark)</b></p>	<p>Realising Intentions (AO4) Students produce a final piece that brings their coursework to a conclusion. They use this as an opportunity to realise the ideas explored in earlier work and make connections to the work of other practitioners. At A Level outcome are increasingly sophisticated <b>(CW 60% of final mark)</b></p>	<p>Exam work begins. Student produce drawings and 3D outcomes (AO3), designer research pages in sketchbooks and media experiments (AO1-2) to support ideas for their chosen exam title. This preparatory work follows the same format as their CW. (details above) Students produce work increasingly independently making connections for themselves <b>(Exam 40% of final mark)</b></p>	<p>2.4 – As with the previous half term students continue to work independently exploring their ideas and fulfilling the assessment objectives. Staff support and guide them in this process whilst students negotiate their own creative process making connections for themselves <b>(Exam 40% of final mark)</b></p>		<p>2.5 – Exam. Students produce a final piece (AO4) for their exam unit during a 15hrs controlled conditions exam. They use this as an opportunity to realise the ideas explored in earlier work and make connections to the work of other practitioners. In doing so they bring their ideas to a well resolved considered conclusion. <b>(Exam 40% of final mark)</b></p>