

# Curriculum Map: DESIGN & TECHNOLOGY / FOOD PREPARATION & NUTRITION

Nothing Short of Remarkable  
We are Ambitious • We are Committed • We are Proud



	Year 7	Year 8	Year 9	Year 10	Year 11
Term 1	<p><b>TOPIC/KNOWLEDGE</b>  <u>Student will rotate around the following three subjects as a carousel through the three terms:</u>  <b>Food Preparation &amp; Nutrition – Healthy Eating</b>            Understand how to utilise sensory testing            Evaluation of diets and understanding of the Eatwell guide            Impact of seasonal food on the environment            The importance of carbohydrates and protein in our diet            Understanding the meaning of Enzymic Browning and Dextrinisation</p> <p><b>Timber: Wooden Aeroplane</b>            To understand the concept of “Quality of Finish”            To fit parts together using either interference or clearance fit            To understand how components are made and fitted together to produce a completed product</p> <p><b>Paper and Board: Ball in the Hole hand held game</b>            How to respond to a Design Brief            Development of original ideas            Writing a specification to meet the user’s needs            Analysis of existing products            Utilising Computer Aided Design and Computer Aided Manufacture</p>	<p><b>TOPIC/KNOWLEDGE</b>  <u>Student will rotate around the following three subjects as a carousel through the three terms:</u>  <b>Food Preparation &amp; Nutrition – International Cuisine</b>            Understand why micro-nutrients and macro-nutrients are required to be in our diet            Be able to explain food miles and carbon footprint and how they relate to different recipes            To learn the importance of dietary fibre            To analyse and evaluate the functions of different ingredients</p> <p><b>Tic Tac Toe</b>            To design a product that compliments an existing range            Understanding ergonomics and aesthetics when designing a product            Explore different styles of typography</p>	<p><b>TOPIC/KNOWLEDGE</b>  <u>Student will rotate around the following three subjects as a carousel through the three terms:</u>  <b>Food Preparation &amp; Nutrition – Special Diets</b>            Understand how fats are used to shorten pastry            Be able to understand the function, sources and deficiency of HBV and LBV            Enrichment of bread to suit specific dietary requirements            Be able to explain the theory of gelatinisation            The use of steam of a raising agent            Comparison of the nutritional requirements of teenagers and the elderly            Calculating the cost and nutritional content of a special diet dish</p>	<p><b>TOPIC/KNOWLEDGE</b>  <b>FOOD PREPARATION &amp; NUTRITION:</b>            We will be finishing off our current topic 'Nutritional Needs and Health' before moving on to the topic of Food Science. This will be broken down into: 'Cooking Food and Heat Transfer' and 'Functional and Chemical Properties of Food'. Each practical lesson will focus on a different aspect of food science, in addition to developing students' practical skills. All practical dates and recipes can be found on Satchel One for this term.</p> <p><b>D&amp;T Graphics (PAPER &amp; BOARD):</b>            This term focuses on developing and building on subject knowledge related to Papers and Board and Specialist Processes. Students will be assessed on two pieces of work – an exam focusing on Papers and Board and a practical based project – which gives students the opportunity to demonstrate</p>	<p><b>TOPIC/KNOWLEDGE</b>  <b>FOOD PREPARATION &amp; NUTRITION:</b>            This term we will be continuing with Non-Exam Assessment 2, the food preparation task. Students should have now completed their research, research summary, design ideas and cooked at least one of their product ideas. All practical work this term will count towards their NEA 2 practical assessment, which forms 35% of their final GCSE grade. Once students have cooked 4 dishes, they will then need to evaluate their work, decide how to improve their dishes (either nutritionally, creatively or both), consider how additional skills can be incorporated into their practical work and plan to make 3 dishes in 3 hours.</p> <p><b>PAPER &amp; BOARD:</b></p>

	<p><b>SKILLS</b>  Safe and Hygienic preparation of ingredients and food products  Use of a variety of kitchen equipment  Adapting a recipe, and working independently with high level presentation skills</p> <p>The importance of Health &amp; Safety in the workshop  Using a variety tools and techniques to mark out materials accurately  Use of range of hand tools to cut and shape materials  Safe use of machine tools such as pillar drill, disc sander and scroll saw</p> <p>Following the design cycle to Investigate, Plan, Create and Evaluate</p> <p><b>Drawing Skills</b>  Learn how to use a range of drawing equipment  Using a drawing board to produce accurate drawings  The purpose of construction lines  Colour theory – including the colour wheel, complimentary and harmonious colour schemes  Isometric drawing with tonal shading.</p>	<p>Developing a strong brand image from a logo  Analysing the key information found on product packaging</p> <p><b>Sweet Dispenser</b>  To understand the different properties and uses of wood and polymers  Be able to produce a detailed specification  Working within dimensional tolerances  Appreciation of user requirements when designing and making  Understanding the need for ergonomic design</p> <p><b>SKILLS</b>  Health &amp; Safety awareness – particular focus on cross contamination.  To understand and use stir fry cooking methods.  Be able to cook meats safely and the reduction of liquids to intensify flavours.</p> <p>To develop basic modelling techniques.  Generation of stencils for letters and objects.  Producing a range of initial sketches for a board game.  The use of nets to create packaging.</p> <p>Understanding basic mechanical principles of motion and leverage.  Selecting and using correct tools and machines for different aspects of production.</p>	<p>Planning and presenting a dish for someone who has a special diet</p> <p><b>Board Game</b>  How to carry detailed analytical research into a range of exiting products  To develop a theme and concept for a board game with specifically design characters  Design a product that to be produced commercially and understand different scales of production  Understand the concept of iterative design, and how to critically evaluate each stage  Translation of 2D measurements into 3D objects  Understand the need for tolerances to produce work to a high degree of accuracy  To evaluate the advantages and disadvantages of computer aided design</p> <p><b>Acrylic Clock</b></p>	<p>the practical skills they have learned.</p> <p>Students will also study Polymers and Metals, focusing on specialist Processes and impacts on the environment. Students will also develop practical skills in Polymers, such as Vacuum forming.</p> <p><b>D&amp;T Resistant Materials (TIMBER) :</b>  This term focuses on developing and building on subject knowledge related to Timbers and Specialist Timber Processes. Students will be assessed on two pieces of work – an exam focusing on Timbers and a Timber Wine Caddy project – which gives students the opportunity to demonstrate the practical skills they have learned.</p> <p>Students will also study Polymers and Metals, focusing on specialist Processes and impacts on the environment. Students will also develop practical skills in Polymers, such as Vacuum forming.</p> <p><b>SKILLS</b>  Jointing chicken  Skin &amp; fillet fish</p> <p>Designing for a client  Design development</p>	<p>Students are given a contextual challenge from the exam board from which they have to design and make a product, using all the skills developed in Year 10. This work is their NEA (Non-Exam Assessment) and forms 50% of their overall grade.</p> <p>Students will also complete their Written Assessment (Exam) at the end of year 11, with this forming the remaining 50% of their overall grade.</p> <p><b>TIMBER:</b>  Students are given a contextual challenge from the exam board from which they have to design and make a product, using all the skills developed in Year 10. This work is their NEA (Non-Exam Assessment) and forms 50% of their overall grade.</p> <p>Students will also complete their Written Assessment (Exam) at the end of year 11, with this forming the remaining 50% of their overall grade.</p>
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<p>Term 2</p>	<p><i>TOPIC/KNOWLEDGE</i>  <u><b>Student will rotate around the following three subjects as a carousel through the three terms:</b></u>  <b>Food Preparation &amp; Nutrition – Healthy Eating</b>  Understand how to utilise sensory testing  Evaluation of diets and understanding of the Eatwell guide  Impact of seasonal food on the environment  The importance of carbohydrates and protein in our diet  Understanding the meaning of Enzymic Browning and Dextrinisation  <b>Timber: Wooden Aeroplane</b>  To understand the concept of “Quality of Finish”  To fit parts together using either interference or clearance fit  To understand how components are made and fitted together to produce a completed product</p> <p><b>Paper and Board: Ball in the Hole hand held game</b>  How to respond to a Design Brief  Development of original ideas  Writing a specification to meet the user’s needs  Analysis of existing products  Utilising Computer Aided Design and Computer Aided Manufacture  Design and make packaging for products</p> <p><i>SKILLS</i>  Safe and Hygienic preparation of ingredients and food products  Use of a variety of kitchen equipment  Adapting a recipe, and working independently with high level presentation skills</p>	<p><i>TOPIC/KNOWLEDGE</i>  <u><b>Student will rotate around the following three subjects as a carousel through the three terms:</b></u>  <b>Food Preparation &amp; Nutrition – International Cuisine</b>  Understand why micro-nutrients and macro-nutrients are required to be in our diet  Be able to explain food miles and carbon footprint and how they relate to different recipes  To learn the importance of dietary fibre  To analyse and evaluate the functions of different ingredients</p> <p><b>Tic Tac Toe</b>  To design a product that compliments an existing range  Understanding ergonomics and aesthetics when designing a product  Explore different styles of typography  Developing a strong brand image from a logo  Analysing the key information found on product packaging</p> <p><b>Sweet Dispenser</b>  To understand the different properties and uses of wood and polymers  Be able to produce a detailed specification  Working within dimensional tolerances  Appreciation of user requirements when designing and making  Understanding the need for ergonomic design</p> <p><i>SKILLS</i></p>	<p><i>TOPIC/KNOWLEDGE</i>  <u><b>Student will rotate around the following three subjects as a carousel through the three terms:</b></u>  <b>Food Preparation &amp; Nutrition – Special Diets</b>  Understand how fats are used to shorten pastry  Be able to understand the function, sources and deficiency of HBV and LBV  Enrichment of bread to suit specific dietary requirements  Be able to explain the theory of gelatinisation  The use of steam of a raising agent  Comparison of the nutritional requirements of teenagers and the elderly  Calculating the cost and nutritional content of a special diet dish  Planning and presenting a dish for someone who has a special diet</p> <p><b>Board Game</b>  How to carry detailed analytical research into a range of exiting products  To develop a theme and concept for a board game with specifically design characters  Design a product that to be produced commercially and understand different scales of production  Understand the concept of iterative design, and how to critically evaluate each stage  Translation of 2D measurements into 3D objects</p>	<p><i>TOPIC/KNOWLEDGE</i>  <b>FOOD PREPARATION &amp; NUTRITION:</b>  We will be finishing off our current topic 'Nutritional Needs and Health' before moving on to the topic of Food Science. This will be broken down into: 'Cooking Food and Heat Transfer' and 'Functional and Chemical Properties of Food'. Each practical lesson will focus on a different aspect of food science, in addition to developing students' practical skills. All practical dates and recipes can be found on Satchel One for this term.</p> <p><b>D&amp;T Graphic Design (Papers and Board) :</b>  In this term students focus on a range of topics such as New and Emerging technologies, Sustainable design and Mechanisms</p> <p>Students will also develop their design communication skills and prototype modelling, through various methods, such as 3D printing, Laser cutting and hand-sketching.</p> <p><b>D&amp;T Resistant Materials (TIMBER) :</b>  In this term students focus on a range of topics such as New and Emerging technologies, Sustainable design and Mechanisms</p>	<p><i>TOPIC/KNOWLEDGE</i>  <b>FOOD PREPARATION &amp; NUTRITION:</b>  This term we will be continuing with Non-Exam Assessment 2, the food preparation task. Students should have now completed their research, research summary, design ideas and cooked at least one of their product ideas. All practical work this term will count towards their NEA 2 practical assessment, which forms 35% of their final GCSE grade. Once students have cooked 4 dishes, they will then need to evaluate their work, decide how to improve their dishes (either nutritionally, creatively or both), consider how additional skills can be incorporated into their practical work and plan to make 3 dishes in 3 hours.</p> <p><b>PAPER &amp; BOARD:</b>  Students are given a contextual challenge from the exam board from which they have to design and make a product, using all the skills developed in Year 10. This work is their NEA (Non-Exam Assessment) and forms 50% of their overall grade.</p>
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	<p>The importance of Health &amp; Safety in the workshop Using a variety tools and techniques to mark out materials accurately Use of range of hand tools to cut and shape materials Safe use of machine tools such as pillar drill, disc sander and scroll saw</p> <p>Following the design cycle to Investigate, Plan, Create and Evaluate</p> <p><b>Drawing Skills</b> Learn how to use a range of drawing equipment Using a drawing board to produce accurate drawings The purpose of construction lines Colour theory – including the colour wheel, complimentary and harmonious colour schemes Isometric drawing with tonal shading</p>	<p>Health &amp; Safety awareness – particular focus on cross contamination. To understand and use stir fry cooking methods. Be able to cook meats safely and the reduction of liquids to intensify flavours.</p> <p>To develop basic modelling techniques. Generation of stencils for letters and objects. Producing a range of initial sketches for a board game. The use of nets to create packaging.</p> <p>Understanding basic mechanical principles of motion and leverage. Selecting and using correct tools and machines for different aspects of production.</p>	<p>Understand the need for tolerances to produce work to a high degree of accuracy To evaluate the advantages and disadvantages of computer aided design <b>Acrylic Clock</b> Be able to identify and analyse a range of different artists and art movements Use the work of others to influence design so that product is “In the style of” To evaluate existing products in depth using ACCESSFM Understand the difference between permanent and temporary mechanical fasteners Understand the limitations and applications of acrylic To know the different properties and applications of thermoplastic and thermosetting materials</p> <p><b>SKILLS</b> Learn how to use Bain Maire</p> <p>Be able to use computer software to render and modify surface graphics Selection of correct tools and materials suitable for each component</p> <p>Utilise “Extend the Range” technique to generate innovative and creative ideas To develop a full size, detailed prototype to evaluate chosen design idea</p>	<p>Students will also develop their design communication skills and prototype modelling, through various methods, such as 3D printing, Laser cutting and hand-sketching.</p> <p><b>SKILLS</b> Jointing chicken Skin &amp; fillet fish</p> <p>Designing for a client Design development Research into the work of others Working with precision and accuracy to make scale models</p>	<p>Students will also complete their Written Assessment (Exam) at the end of year 11, with this forming the remaining 50% of their overall grade.</p> <p><b>TIMBER:</b> Students are given a contextual challenge from the exam board from which they have to design and make a product, using all the skills developed in Year 10. This work is their NEA (Non-Exam Assessment) and forms 50% of their overall grade.</p> <p>Students will also complete their Written Assessment (Exam) at the end of year 11, with this forming the remaining 50% of their overall grade.</p> <p><b>SKILLS</b> Developing dishes to meet specific user requirements, accurate planning and budgeting.</p> <p>Design development, initial prototype modelling to test ideas against customer needs</p> <p>Design development, initial prototype</p>
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			Learn how to cut, shape and smooth acrylic pieces To appreciate the need for a high degree of accuracy to generate a high-quality outcome		modelling to test ideas against customer needs
Term 3	<p><i>TOPIC/KNOWLEDGE</i> <u><i>Student will rotate around the following three subjects as a carousel through the three terms:</i></u> <b>Food Preparation &amp; Nutrition – Healthy Eating</b></p> <p>Understand how to utilise sensory testing Evaluation of diets and understanding of the Eatwell guide Impact of seasonal food on the environment The importance of carbohydrates and protein in our diet Understanding the meaning of Enzymic Browning and Dextrinisation</p> <p><b>Timber: Wooden Aeroplane</b> To understand the concept of “Quality of Finish” To fit parts together using either interference or clearance fit To understand how components are made and fitted together to produce a completed product</p> <p><b>Paper and Board: Ball in the Hole hand held game</b> How to respond to a Design Brief Development of original ideas Writing a specification to meet the user’s needs Analysis of existing products Utilising Computer Aided Design and Computer Aided Manufacture</p>	<p><i>TOPIC/KNOWLEDGE</i> <u><i>Student will rotate around the following three subjects as a carousel through the three terms:</i></u> <b>Food Preparation &amp; Nutrition – International Cuisine</b> Understand why micro-nutrients and macro-nutrients are required to be in our diet Be able to explain food miles and carbon footprint and how they relate to different recipes To learn the importance of dietary fibre To analyse and evaluate the functions of different ingredients</p> <p><b>Tic Tac Toe</b> To design a product that compliments an existing range Understanding ergonomics and aesthetics when designing a product Explore different styles of typography Developing a strong brand image from a logo Analysing the key information found on product packaging</p> <p><b>Sweet Dispenser</b> To understand the different properties and uses of wood and polymers</p>	<p><i>TOPIC/KNOWLEDGE</i> <u><i>Student will rotate around the following three subjects as a carousel through the three terms:</i></u> <b>Food Preparation &amp; Nutrition – Special Diets</b> Understand how fats are used to shorten pastry Be able to understand the function, sources and deficiency of HBV and LBV Enrichment of bread to suit specific dietary requirements Be able to explain the theory of gelatinisation The use of steam of a raising agent Comparison of the nutritional requirements of teenagers and the elderly Calculating the cost and nutritional content of a special diet dish Planning and presenting a dish for someone who has a special diet</p> <p><b>Board Game</b> How to carry detailed analytical research into a range of exiting products To develop a theme and concept for a board game with specifically design characters</p>	<p><i>TOPIC/KNOWLEDGE</i> <b>FOOD PREPARATION &amp; NUTRITION:</b> Topic of functional and chemical properties of food, and costing recipes and working to a budget. We will continue to cook fortnightly and politely request students bring in their own clean aprons from home for practical lessons. Each practical lesson will focus on a different aspect of food science, in addition to developing students' practical skills. All practical dates and recipes can be found on the Homework Hub.</p> <p><b>D&amp;T Graphic Design (Papers and Board) :</b> In this term students complete two assessments. They complete a Mock examination, which assessing students recall of subject knowledge. The second assessment is a Mock NEA, which provides students the opportunity to design and make a product in response to a given design challenge.</p>	<p><i>TOPIC/KNOWLEDGE</i> <b>FOOD PREPARATION &amp; NUTRITION:</b> Completion of Non-Exam Assessment 2, the food preparation task. Students should have now completed their research, research summary, design ideas and cooked at least one of their product ideas.</p> <p>Revision and theory content in readiness for GCSE final exam</p> <p><b>PAPER &amp; BOARD:</b> Students are given a contextual challenge from the exam board from which they have to design and make a product, using all the skills developed in Year 10. This work is their NEA (Non-Exam Assessment) and forms 50% of their overall grade.</p> <p>Students will also complete their Written Assessment (Exam) at the end of year 11, with this forming the</p>

	<p>Design and make packaging for products</p> <p><b>SKILLS</b>  Safe and Hygienic preparation of ingredients and food products  Use of a variety of kitchen equipment  Adapting a recipe, and working independently with high level presentation skills</p> <p>The importance of Health &amp; Safety in the workshop  Using a variety tools and techniques to mark out materials accurately  Use of range of hand tools to cut and shape materials  Safe use of machine tools such as pillar drill, disc sander and scroll saw</p> <p>Following the design cycle to Investigate, Plan, Create and Evaluate</p> <p><b>Drawing Skills</b>  Learn how to use a range of drawing equipment  Using a drawing board to produce accurate drawings  The purpose of construction lines  Colour theory – including the colour wheel, complimentary and harmonious colour schemes  Isometric drawing with tonal shading.</p>	<p>Be able to produce a detailed specification  Working within dimensional tolerances  Appreciation of user requirements when designing and making  Understanding the need for ergonomic design</p> <p><b>SKILLS</b>  Health &amp; Safety awareness – particular focus on cross contamination.  To understand and use stir fry cooking methods.  Be able to cook meats safely and the reduction of liquids to intensify flavours.</p> <p>To develop basic modelling techniques.  Generation of stencils for letters and objects.  Producing a range of initial sketches for a board game.  The use of nets to create packaging.</p> <p>Understanding basic mechanical principles of motion and leverage.  Selecting and using correct tools and machines for different aspects of production.</p>	<p>Design a product that to be produced commercially and understand different scales of production  Understand the concept of iterative design, and how to critically evaluate each stage  Translation of 2D measurements into 3D objects  Understand the need for tolerances to produce work to a high degree of accuracy  To evaluate the advantages and disadvantages of computer aided design  <b>Acrylic Clock</b>  Be able to identify and analyse a range of different artists and art movements  Use the work of others to influence design so that product is “In the style of”  To evaluate existing products in depth using ACCESSFM  Understand the difference between permanent and temporary mechanical fasteners  Understand the limitations and applications of acrylic  To know the different properties and applications of thermoplastic and thermosetting materials</p> <p><b>SKILLS</b>  Learn how to use Bain Marie</p> <p>Be able to use computer software to render and modify surface graphics  Selection of correct tools and materials suitable for each component</p>	<p>This is to prepare them for ‘the real thing’ in Year 11.</p> <p><b>D&amp;T Resistant Materials (TIMBER) :</b>  In this term students complete two assessments. They complete a Mock examination, which assessing students recall of subject knowledge. The second assessment is a Mock NEA, which provides students the opportunity to design and make a product in response to a given design challenge. This is to prepare them for ‘the real thing’ in Year 11.</p> <p><b>SKILLS</b></p>	<p>remaining 50% of their overall grade.</p> <p><b>TIMBER:</b>  Students are given a contextual challenge from the exam board from which they have to design and make a product, using all the skills developed in Year 10. This work is their NEA (Non-Exam Assessment) and forms 50% of their overall grade.</p> <p>Students will also complete their Written Assessment (Exam) at the end of year 11, with this forming the remaining 50% of their overall grade.</p> <p><b>SKILLS</b></p>
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Career Pathways					