Curriculum Map: DESIGN & TECHNOLOGY / FOOD PREPARATION & NUTRITION



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

SKILLS

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

The importance of Health & 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

Following the design cycle to Investigate, Plan, Create and Evaluate

Drawing Skills

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. Developing a strong brand image from a logo Analysing the key information found on product packaging

To understand the different

Sweet Dispenser

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

SKILLS

Health & Safety awareness – particular focus on cross contamination.

To understand and use stir fry cooking methods.

Be able to cook meats safety and the reduction of liquids to intensify flavours.

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.

Understanding basic mechanical principles of motion and leverage. Selecting and using correct tools and machines for different aspects of production.

Planning and presenting a dish for someone who has a special diet

How to carry detailed

Board Game

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

Acrylic Clock

the practical skills they have learned.

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.

D&T Resistant Materials (TIMBER) :

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.

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.

SKILLS
Jointing chicken
Skin & fillet fish

Designing for a client Design development

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.

Students will also complete their Written Assessment (Exam) at the end of year 11, with this forming the remaining 50% of their overall grade.

TIMBER:

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.

Students will also complete their Written Assessment (Exam) at the end of year 11, with this forming the remaining 50% of their overall grade.

(Be able to identify and analyse		SKILLS
	a range of different artists and	Research into the work of	Developing dishes to
	art movements	others	meet specific user
	Use the work of others to	Working with precision and	requirements, accurate
	influence design so that	accuracy to make scale	planning and budgeting.
	product is "In the style of"	models	, , , , , , , , , , , , , , , , , , ,
	To evaluate existing products in		Design development,
	depth using ACCESSFM		initial prototype
	Understand the difference		modelling to test ideas
	between permanent and		against customer needs
	temporary mechanical		5
	fasteners		Design development,
	Understand the limitations and		initial prototype
	applications of acrylic		modelling to test ideas
	To know the different		against customer needs
	properties and applications of		
	thermoplastic and		
	thermosetting materials		
	-		
	SKILLS		
	Lean how to use Bain Maire		
	Be able to use computer		
	software to render and modify		
	surface graphics		
	Selection of correct tools and		
	materials suitable for each		
	component		
	Utilise "Extend the Range"		
	technique to generate		
	innovative and creative ideas		
	To develop a full size, detailed		
	prototype to evaluate chosen		
	design idea		
	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		

Term 2

TOPIC/KNOWLEDGE

Student will rotate around the following three subjects as a carousel through the three terms:

Food Preparation & Nutrition – Healthy Eating

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

Timber: Wooden Aeroplane

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

Paper and Board: Ball in the Hole hand held game

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

SKILLS

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

TOPIC/KNOWLEDGE

Student will rotate around the following three subjects as a carousel through the three terms:

Food Preparation & Nutrition – International Cuisine

Understand why micro-nutrients and macro-nutrients are required to be in our diet

Be able to explain food miles and

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

Tic Tac Toe

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

Sweet Dispenser

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

SKILLS

TOPIC/KNOWLEDGE

Student will rotate around the following three subjects as a carousel through the three terms:

Food Preparation & Nutrition – Special Diets

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

Board Game

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

TOPIC/KNOWLEDGE

FOOD PREPARATION & NUTRITION:

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.

D&T Graphic Design (Papers and Board):

In this term students focus on a range of topics such as New and Emerging technologies, Sustainable design and Mechanisms

Students will also develop their design communication skills and prototype modelling, through various methods, such as 3D printing, Laser cutting and handsketching.

D&T Resistant Materials (TIMBER):

In this term students focus on a range of topics such as New and Emerging technologies, Sustainable design and Mechanisms

TOPIC/KNOWLEDGE FOOD PREPARATION & NUTRITION:

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.

PAPER & BOARD:

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.

The importance of Health & 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

Following the design cycle to Investigate, Plan, Create and Evaluate

Drawing Skills

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 Health & Safety awareness – particular focus on cross contamination.

To understand and use stir fry cooking methods.

Be able to cook meats safety and the reduction of liquids to intensify flavours.

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.

Understanding basic mechanical principles of motion and leverage. Selecting and using correct tools and machines for different aspects of production.

Understand the need for tolerances to produce work to a high degree of accuracy To evaluate the advantages and disadvantages of computer aided design

Acrylic Clock

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

SKILLS
Lean how to use Bain Maire

thermosetting materials

Be able to use computer software to render and modify surface graphics Selection of correct tools and materials suitable for each component

Utilise "Extend the Range" technique to generate innovative and creative ideas To develop a full size, detailed prototype to evaluate chosen design idea

Students will also develop their design communication skills and prototype modelling, through various methods, such as 3D printing, Laser cutting and handsketching.

SKILLS
Jointing chicken
Skin & fillet fish

Designing for a client
Design development
Research into the work of
others
Working with precision and
accuracy to make scale
models

Students will also complete their Written Assessment (Exam) at the end of year 11, with this forming the remaining 50% of their overall grade.

TIMBER:

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.

Students will also complete their Written Assessment (Exam) at the end of year 11, with this forming the remaining 50% of their overall grade.

SKILLS

Developing dishes to meet specific user requirements, accurate planning and budgeting.

Design development, initial prototype modelling to test ideas against customer needs

Design development, initial prototype

			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
three subject three terms: Food Prepara Eating Understand h Evaluation of the Eatwell gr Impact of sea environment The importan protein in our Understandir Browning and Timber: Woo To understan Finish" To fit parts to interference of To understan made and fitt completed pr Paper and Bo held game How to respon Development Writing a spen needs Analysis of ex Utilising Com	notate around the following as as a carousel through the ation & Nutrition – Healthy now to utilise sensory testing diets and understanding of uide asonal food on the ace of carbohydrates and ar diet ag the meaning of Enzymic di Dextrinisation den Aeroplane die the concept of "Quality of agether using either or clearance fit die how components are ased together to produce a	Student will rotate around the following three subjects as a carousel through the three terms: Food Preparation & Nutrition — International Cuisine 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 Tic Tac Toe 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 Sweet Dispenser To understand the different properties and uses of wood and polymers	TOPIC/KNOWLEDGE Student will rotate around the following three subjects as a carousel through the three terms: Food Preparation & Nutrition – Special Diets 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 Board Game 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	TOPIC/KNOWLEDGE FOOD PREPARATION & NUTRITION: 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. D&T Graphic Design (Papers and Board): 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.	FODD PREPARATION & NUTRITION: 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. Revision and theory content in readiness for GCSE final exam PAPER & BOARD: 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. Students will also complete their Written Assessment (Exam) at the end of year 11, with this forming the

Design and make packaging for products

SKILLS

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

The importance of Health & 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

Following the design cycle to Investigate, Plan, Create and Evaluate

Drawing Skills

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. 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

SKILLS

Health & Safety awareness – particular focus on cross contamination.

To understand and use stir fry cooking methods.

Be able to cook meats safety and the reduction of liquids to intensify flavours.

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.

Understanding basic mechanical principles of motion and leverage. Selecting and using correct tools and machines for different aspects of production.

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

Design a product that to be

Understand the need for tolerances to produce work to a high degree of accuracy To evaluate the advantages and disadvantages of computer aided design

Acrylic Clock

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

SKILLS
Lean how to use Bain Maire

Be able to use computer software to render and modify surface graphics Selection of correct tools and materials suitable for each component

This is to prepare them for 'the real thing' in Year 11.

D&T Resistant Materials (TIMBER):

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.

SKILLS

remaining 50% of their overall grade.

TIMBER:

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.

Students will also complete their Written Assessment (Exam) at the end of year 11, with this forming the remaining 50% of their overall grade.

SKILLS

		Utilise "Extend the Range" technique to generate innovative and creative ideas To develop a full size, detailed prototype to evaluate chosen design idea 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	
Career Pathways			