Long Term Plan & Curriculum Intent Technical & Vocational 2021 2022

SUBJECT: Design & Technology / Food Preparation & Nutrition

Department Curriculum intent:

Design and technology is an inspiring and rigorous and practical subject. Creativity and imagination are encouraged , so pupils design and make products to solve real world problems within a variety of contexts. Studying design technology helps to prepare our young people for living and working in a rapidly changing technological world. At North Durham Academy this is achieved by teaching our students technical understanding as well as building upon other disciplines such as maths, science, engineering, computing and art. Pupils are encouraged to take risks throughout the design process to become effective and innovative problem solvers whilst creating unique designs. Through the analysis of past and present design and technology products, the develop an understanding of positive design on the world that we live in.

At Key Stage 3 (Y7,8,9) all students study DT within a rotation including Graphics, food, Resistant Materials with STEM flowing throughout. In DT lessons students are encouraged to develop confidence and practical expertise using a variety of materials to create a range of good quality products. It is our aim to develop independent, competent learners who progressively increase their subject knowledge. We look to develop and improve their ability to work independently to produce high quality products for a wide range of users.

We aim to challenge student's intellectual, creative and practical abilities during problem solving activities, whilst developing the personal skills they will need when entering employment, and vital life skills whilst being an effective and positive member of the local community.

Food by its very nature is a creative practical and fun subject. It allows students to be imaginative and hands on. Students use their skills to solve real life human need problems in a variety of contexts. It is the only subject where students actually get an edible end product to take home to family after an hour's lesson. Producing a product that is then taken home and shared with family and friends gives students a real sense of achievement and self-worth, with all ability students are able to achieve, as well as promoting and developing the cultural capital within the family home.

Qualities we aim to develop in students:

Social skills	Practical / hand skills
Technical skills & knowledge	Use of CAD CAM
Creative thinking	Materials/ingredient knowledge
Problem solving	Safe working practice

Cross Curricular Links:

Within the food curriculum we have cross curricular links with the following subject areas. These are covered within different year groups to these subjects and develops further knowledge understanding of the topic areas within a food context.

Science:
Heat Transfer methods, microorganisms causing disease, carbohydrates and proteins.

Key Stage 3

Related Documents

Core

- **LTP - Overview of Activities**
- **MTP's**

Assessment Grids

The national curriculum for design and technology aims to ensure that all pupils:	Year 7				Year 8				Year9			
	Food & Nutrition	**Resistant materials – Man Vs Machine**	**Graphics -How to make a card dance**	**Digital technology**	**Food & Nutrition**	**Resistant materials- Picture frame**	**Graphics – Action figure**	**Engineering – Coat Hook**	**Food & nutrition**	**Resistant Materials - Gum ball dispenser**	**Product design - Speaker**	**Food – Cultural Cuisines**
• develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world		-Generating design ideas -Hand skills -CAD skills	-Generating design ideas -Hand skills	-Introduction to programming		-Generating design ideas -Hand skills -CAD CAM skills	-Generating design ideas	-Generating design ideas -Use of CAM		-Generating design ideas -CAM designs /sketch up /2D design.	-Generating design ideas -CAM designs /sketch up /2D design.	
• build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users		--Hand skills -CAD skills -Card prototyping	-Hand skills -Prototyping			-Hand skills -CAD skills -Casting	-Prototyping /modelling	-Use of CAD CAD to product produce quality product. -Increase materials knowledge Metal, Woods.			-Sketch up design ideas	
• critique, evaluate and test their ideas and products and the work of others	-smoothie -pizza wheels -chicken nuggets -egg fried rice -savoury seasonal scones	-Product analysis -Peer evaluation	-Product analysis -Annotating design ideas -Evaluating protypes -Evaluating final product	-Evaluate products performance	-Stir fry -life stage practical -fakeaways product	-Product analysis -Annotating design ideas -Evaluating final product	-Product analysis -Self /peer evaluation	-Product analysis -Testing and evaluating their work.		-Design annotations /self-evaluation	-Design annotations /self-evaluation	
• understand and apply the principles of nutrition and learn how to cook	All theory and practical lessons with food projects				All theory and practical lessons with food projects				All theory and practical lessons with food projects			All theory and practical lessons with food projects
Design												
• use research and exploration, such as the study of different cultures, to identify and understand user needs	-smoothie sensory analysis -Seasonality scones end project	-Product analysis	-Product analysis -Design Specification		-Stir fry -life stage practical -fakeaways product	-Product analysis -Design Specification	-Product analysis -Client profile	-Client profile -Product analysis			-Product analysis -client profile	
• identify and solve their own design problems and understand how to reformulate problems given to them	-Seasonality scones end project		-Identifying suitable mechanisms	-Problem solving in making robot move around the road map	-Fakeaway Project	-Generating design ideas -Casting /mould making.	- Developing design nets	-Use knowledge of CAD CAM to produce a creative original outcome.		--Use knowledge of CAD CAM to produce a creative original outcome.	-Generating design ideas	
• develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations		-Design specification	-Design specification			-Design specification	Design specification					

• use a variety of approaches [for example, biomimicry and user-centred design] to generate creative ideas and avoid stereotypical responses		-Generating design ideas 3D drawing /shading -card prototypes / 2D design	-Generating design ideas Rendering techniques, CAD			-Generating designs / Isometric drawing / 2D design/ Shading skills.	-Generating designs / Isometric drawing / 2D design/ Shading skills.	-Develop new hand skills/ metal work. -Use knowledge of CAD CAM to produce a creative original outcome.			-Generating design ideas / Sketch up	
• develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations		-Design annotations -plan for manufacture	- Generating design ideas - annotations	-Detailed flow chart & mathematical modelling in programming		-Generating design ideas -Design annotations -CAD design -plan for manufacture	-Generating design ideas -Design annotations	-Generating design ideas/ isometric drawing -Final design /sketchup		-3D modelling in sketch up -Designing using 2D design	-3D modelling in sketch up -Designing using 2D design	
Make												
• select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture		-Handmade product -Using machinery	-Card modelling /cutting shaping, folding.	-Introduction to programming /coding		-Planning for manufacture -Making/ wood work skills / casting / engraving	-Cutting skills -Cam skills	-Hand /machine skills, forming steel hook. -Use of CAD CAM to produce the back board.		-CAD CAM skills in manufacturing	-CAM skills in manufacturing -Soldering	
• select from and use a wider, more complex range of materials, components and ingredients, considering their properties	-smoothie -pizza wheels -chicken nuggets -egg fried rice -savoury seasonal scones	-Plastics /Acrylic	-Card types		-Stir fry -life stage practical -fakeaways product	-Wood/ soft/hardwood and their origins?	-Packaging	-Materials and their properties -Metal forming, Plywood/acrlic.				
Evaluate												
• analyse the work of past and present professionals and others to develop and broaden their understanding		-Product analysis of existing products	-Product analysis of existing examples			-Product analysis of existing examples	-Product analysis of existing examples	_-product analysis			-Product analysis	
• investigate new and emerging technologies		-CAM skills		-How can programming & robotics change our society		-CAM skills	-Smart/modern materials				-CAD programming -Cam Skills.	
• test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups		- Modelling card protype	-Modelling card protype	- Evaluate product performance against spec			- Modelling card protype	-Prototyping -Evaluation			-Self evaluation	
• understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists		-Impact of the selected materials	-Impact of the selected materials	-The impact of programming and robotic on society.		-Impact of the selected materials -Origins of selected materials		-impact of materials on the environment				
Technical knowledge												
• understand and use the properties of materials and the performance of structural elements to achieve functioning solutions		-Acrylic /forming & joining	-Card/ structural possibilities. movement			-Properties of hard / soft wood / pewter		-Material properties within practical work			-Joining methods	
• understand how more advanced mechanical systems used in their products enable changes in movement and force			-Card mechanisms/ folding , transferring motion through mechanisms.	- Robotics -Transferring motion from motor to wheels.						-Mechanisms, moving parts within the product.		
• understand how more advanced electrical and electronic systems can be powered and used in their products [for example, circuits with heat, light, sound and movement as inputs and outputs]				-Programming input /output. -Line sensors.							-Electronical components -Soldering -inputs /outputs	
• apply computing and use electronics to embed intelligence in products that respond to inputs [for example, sensors] and control outputs [for example, actuators] using programmable components [for example, microcontrollers]				-Micro bits -Programming input /output. -Line sensors.						-CAD CAM skills Programming the laser cutter	-CAD CAM skills Programming the laser cutter	
Aims/Technical Knowledge: Cooking & Nutrition												
• Understand and apply the principles of nutrition and health	-Eatwell Guide, food diary -final design and make project -food allergy & intolerances				-Nutrients provided by the Eatwell Guide -Nutritional needs of different life stages -Fakeaway Project				-Spaghetti bolognese link -mini roast dinner link -chicken skewers -savoury roly poly bread link			-food choice -multi-cultural cuisines -own choice menu
• Cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet	-pizza wheels -chicken nuggets -egg fried rice -savoury seasonal scones				-Stir fry, -meatballs -spaghetti bolognese-Lasagne -cottage pie -fakeaways product				-spaghetti bolognese -mini roast dinner -chicken skewers -ravioli -Dim sum -chips & mayo -teriyaki chicken -savoury roly poly bread -crumpets			-own choice dish has to bee savoury product
• Become competent in a range of cooking techniques [for example, selecting and preparing ingredients, using utensils and electrical equipment. Applying heat in different ways, using awareness of taste, texture and smell to decide how to season dishes and combine ingredients, adapting and using their own recipes]	-smoothie -pizza wheels -chicken nuggets -egg fried rice -savoury seasonal scones				-Stir fry, -meatballs -spaghetti bolognese-Lasagne -cottage pie -fakeaways product				-spaghetti bolognese -mini roast dinner -chicken skewers -ravioli -Dim sum -chips & mayo -teriyaki chicken -savoury roly poly bread -crumpets -bread and butter pudding -portioning chicken -swiss roll			-multi-cultural cuisines using a range of cooking methods
• Understand the source, seasonality and characteristics of a broad range of ingredients	-sensory analysis -food miles				- Nutrients provided by the Eatwell Guide -Fakeaway project				-Spaghetti bolognese -portioning a chicken -swiss roll -chips & mayo -teriyaki chicken -crumpets			Multi-cultural cuisines -menu planning -sensory evaluation

Rotation	Food & nutrition	Resistant Materials	Graphics	Digital Technology
Year 7	Food preparation and nutrition: Bronze level chef de partie Assessment Task: End of Project Written Test / Practical Assessment which includes design brief, research, design development, making and evaluating. Knowledge: Food hygiene & Safety Weighing & Measuring – units of measurement, various measuring equipment Sensory Analysis Food Allergies & Intolerances Food Nutrition – Eatwell Guide, dietary guidelines, balanced diet Food Provenance – food miles, seasonality Design brief, research, time planning and evaluation Skills: Weighing & Measuring – units of measurement, various measuring equipment (chicken nuggets, egg fried rice, seasonal scones) Knife Skills – different grips and cutting techniques (smoothies, pizza wheel, chicken nuggets, egg fried rice, seasonal scones) Food preparation – washing, peeling (smoothies, pizza wheels, seasonal scones) Applying heat – use of the hob, oven (chicken nuggets, egg fried rice, seasonal scones) Awareness of taste – sensory analysis smoothie tasting, home v shop bought chicken nuggets (smoothie, chicken nuggets, egg fried rice, seasonal scones) Adapting/using own recipe – final design and make task (egg fried rice, seasonal scones) GCSE Skill links for progression: S1: General Practical Skills, S2: Knife skills, S3: Preparing Fruit & Vegetables, S4: Use of the cooker, S6: Cooking Methods, S7: Prepare, shape & combine, S10: Dough, S11: Raising Agents	Man vs Computer Maze / Keyring Assessment Task: Design development, making planning, making practical skills, Evaluating, and Technical knowledge. Knowledge: Knowledge of materials –acrylic and laminating methods –liquid solvent cement. Analysis of existing products. Generation of ideas and annotations. Planning for manufacture Skills: CAD CAM skills -2D design laser cutter. Hand skills –cutting, shaping, and finishing techniques. Creative design. Evaluating.	How do you make a card dance? Pop up card Assessment Task: Design development, making planning, making practical skills, Evaluating, and Technical knowledge. Knowledge: Critiquing the work of other designers. Making a product for a client. Mechanisms that can be created using card /paper. Use of CAD to produce products. Skills: Hand skills –craft knife, scissors, sticking. Developing card mechanisms. Shading, colouring, Shadows and highlighting. Evaluating.	How do we talk to machines? Coding micro bit Robots. Assessment Task: Algorithmic thinking skills, programmed route instructions, Success of practical activity, Problem solving - de-bugging. Knowledge: Computational thinking, Digital decomposition, Algorithmic thinking skills, Digital Abstraction. Planning & specific instruction. Introduction to micro bits. Coding robots Use of sketch up. Skills: Planning & specific instruction. Problem solving. Evaluating. 3D drawing skills. CAD CAM skills.
	STEM links: Weigh & measure – reading scales Proportions – recipe modification/creation Use of charts and graphs Bacteria growth, development & control Heat transfer	**STEM links:** Origins of materials- production of plastics Environmental impact Adhesives -liquid solvent Manufacturing skill – Machine /tool knowledge CAD CAM skills Measuring -making out Measurements / coordinates CAD Isometric drawing	**STEM links:** Environmental impact of materials Motion -mechanisms Mechanisms – changing the direction of motion CAD Skills Hand skills – marking out cutting **Measuring /marking/ folding**	**STEM links:** Mechanisms – changing the direction of motion CAD Skills sequencing problem solving
	Cross curricular links: Science: Bacteria growth, development & control, Heat transfer Geography: Food miles, seasonality - country climates Culture: range of ingredients, food miles, food choice – allergens/intolerances Careers: food hygiene/industry, food nutrition	**Cross curricular links:** **IT –** Use of 2D design. Introduction to computer programming laser cutter. **Maths –** Measurements marking out practical work, measuring /estimating existing products. CAD drawing / coordinates. Isometric drawing **Science** - Origins of materials- production of plastics. Environmental impact . Adhesives -liquid solvent. **Art & design –** Creative design within generating design ideas. Drawing skills, cross hatching, highlighting, Isometric drawing. **Cultural –** material source, environmental impact , ethical design choices , Client /target market,	**Cross curricular links:** **IT –** 2D design to design a product, printing. **Maths –** Measuring and marking out products, folding. **Art** - Creative design within generating design ideas. Drawing skills, rendering, cross hatching, highlighting, Isometric drawing. **RE**- Possibility of linking the design to religious celebration. **Art & design –** Creative design within generating design ideas. Drawing skills, cross hatching, highlighting, Isometric drawing. **Cultural –** material source, environmental impact, ethical design choices, Religious festivals, Client /target market,	**Cross curricular links:** **IT –** Coding & programming **Mathematics** – sequencing, problem solving **Design Technology** – CAD CAM , Problem solving, evaluating . **Cultural –** Ethics of automation.
	Food & nutrition	**Resistant Materials**	**Graphics**	**Engineering**
Year 8	Food preparation and nutrition: Silver level Executive Chef Assessment Task: End of Project Written Test / Practical Assessment which includes design brief, research, design development, making and evaluating. Knowledge: Hygiene & Safety Knife Skills – cutting techniques Nutrients provided by the Eatwell Guide Nutritional needs of different life stages Design brief, research, time planning and evaluation Skills: Weighing & Measuring – units of measurement, various measuring equipment (Stir fry, meatballs/spaghetti bolognese/lasagne/cottage pie, fakeaways product) Knife Skills – different grips and cutting techniques (Stir fry, meatballs/spaghetti bolognese/lasagne/cottage pie, fakeaways product) Food preparation – washing, peeling (Stir fry, meatballs/spaghetti bolognese/lasagne/cottage pie, fakeaways product) Applying heat – use of the hob, oven (Stir fry, meatballs/spaghetti bolognese/lasagne/cottage pie, fakeaways product) Awareness of taste (Stir fry, meatballs/spaghetti bolognese/lasagne/cottage pie, fakeaways product) Adapting/using own recipe – final design and make task (fakeaways product)	What's the best part of a picture? Picture frame Assessment Task: Design development, making planning, making practical skills, Evaluating, and Technical knowledge. Knowledge: Knowledge of materials –Pine- soft & hard woods. Joining methods, wood glues, permanent and tempura fixture. Analysis of existing products. Generation of ideas and annotations. Planning for manufacture, selecting appropriate tooling and machinery. Metals and casting. Skills: A development of CAD CAM skills -2D design laser cutter. Lap joint, dowel joint mitre joints. Hand skills –cutting, shaping, and finishing techniques. Safe working with tools and machinery. Creative design. Evaluating.	Why do we need to design packaging? Action figure design Assessment Task: Specification, Product analysis, Design development, making practical skills, Evaluating, and Technical knowledge. Knowledge: Creating a design brief and specification. Analysing existing products. CAD using 2D to plan and manufacture a product. Using the vacuum former to produce shapes. Creative design ideas of the packaging. Vacuum forming. Hand skills, clay modelling/ card prototyping. Use of CAD 2D design & Photoshop. Evaluating.	How do we make hanging around look good? Coat hook Assessment Task: Client profile ,Design development, Orthographic drawing skill, Sketchup drawing /computer modelling ,2D design , making practical skills, Evaluating, and Technical knowledge. Knowledge: Client profile -identifying needs of the user. Varied methods of design techniques. Programming CAD CAM Materials knowledge Metals & Manufactured boards. Finishing skills Skills: Creative deign -generating design ideas using drawing skills and SketchUp Final design – orthographic drawing Working 2D design drawings for the laser cutter- use of varied colours. Operating the laser cutter. Marking /shaping /forming steal. Powder coating. Evaluation

	GCSE Skill links for progression: S1: General Practical Skills, S2: Knife skills, S3: Preparing Fruit & Vegetables, S4: Use of the cooker, S5: Use of equipment, S6: Cooking Methods, S8: Sauce Making			
	STEM links: Weigh & measure – reading scales Proportions – recipe modification/creation Use of charts and graphs Bacterial cross contamination Heat transfer Gelatinisation	**STEM links:** Origins of materials- Woods, metals – producing and casting. Environmental impact of the product Adhesives – PVA wood glue. Finishes – Polyurethane varnish plastics. Materials – Metals, pewter casting /forming. Practical skills – cutting, filling, joining methods, drilling. Measuring -making out Measurements / coordinates CAD Isometric drawing	**STEM links:** Environmental impact of the product – Printing process Adhesives **Mechanisms – Transferring motion** Measuring -making out Isometric drawing Drawing /measuring the box net	**STEM links:** Origins of materials- Manufactured boards, Steal. Environmental impact of the product Finishes – Polyurethane varnish plastics. Materials – Metals, Steal, acrylic **Metal working skills, Material properties** **Knowledge of specialist workshop tools & equipment.** **CAM skills** Measuring -Reading working drawings -making out Measurements / coordinates CAD Use of MM when designing in Sketchup.
	Cross curricular links: Science: Bacteria-cross contamination, Heat transfer Culture: range of ingredients, food choice – life stage Careers: food hygiene/industry, food nutrition	**Cross curricular links:** **IT-** 2D design /programming the laser cutter for engraving and mould making. **Maths -** Measurements marking out practical work, measuring /estimating existing products. CAD drawing / coordinates. Isometric drawing **Science** - Origins of materials- Woods, metals – producing and casting. Environmental impact of the product. Adhesives – PVA wood glue. Finishes – Polyurethane varnish plastics. Materials – Metals, pewter casting /forming. **Art & design** -generating design ideas **Culture** - material source, environmental impact, Carbon footprint, ethical design choices hardwood, softwood? Client /target market.	**Cross curricular links:** **IT –** 2D design / programming laser cutter for packaging. Designing packaging. **Maths -** Measurements marking out practical work, measuring /estimating existing products. CAD drawing / coordinates. Isometric drawing. **Art & design** -generating design ideas	**Cross curricular links:** **IT-** 2D design /programming the laser cutter **Maths -** Measurements, reading working drawings, marking out practical work, measuring /estimating existing products. CAD drawing / coordinates. Isometric drawing. **Science** - Origins of materials- Woods, metals –. Environmental impact of the product. Finishes – Polyurethane varnish plastics. Materials – Metals/ forming.
	Food & nutrition	**Resistant Materials**	**Graphics**	**Cultural Food Project**
Year 9	Food preparation and nutrition: Gold Level – working towards GCSE Assessment Task: End of Topic Test / Practical Assessment Knowledge: Students will learn the theory behind the 12 key practical skills as well as how to demonstrate them effectively and independently, linking these back to key concepts learned within Y7&8. S1: General Practical Skills – Spaghetti Bolognese: nutritional needs, traditional cuisines S2: Knife skills – Portioning a chicken: food provenance, food safety S3: Preparing Fruit & Vegetables – Mini roast chicken dinner: nutritional needs, seasonality, food provenance S4: Use of the cooker – Chicken Skewers: nutritional needs S5: Use of equipment – Ravioli Pasta: traditional cuisines S6: Cooking Methods – Dim Sum: Traditional cuisines S7: Prepare, shape & combine – Swiss roll: traditional cuisines, food choice S8: Sauce Making – Chips and Mayonnaise: food science, food choice S9: Tenderise & Marinade – Teriyaki Chicken: traditional cuisines S10: Dough – Savoury Roly Poly Bread: nutritional needs S11: Raising Agents – Crumpets: traditional cuisine S12: Setting Mixture – Bread and butter pudding: seasonality, food science Skills: S1: General Practical Skills, S2: Knife skills, S3: Preparing Fruit & Vegetables, S4: Use of the cooker, S5: Use of equipment, S6: Cooking Methods, S7: Prepare, shape & combine, S8: Sauce Making, S9: Tenderise & Marinade, S10: Dough, S11: Raising Agents, S12: Setting Mixture.	How can mechanism give us a reward? Gumball dispenser Assessment Task: End of unit assessment Design development, making planning, making practical skills, Evaluating, and Technical knowledge. Knowledge: Mechanisms, modelling /prototyping, tool and technique selection CAD CAM 3.client profile 7.Design specification 8.Generating design ideas 21.Evaluationg against specification Skills: Problem solving, creative thinking. Specialist techniques. Tool selection – materials properties -manufacturing techniques. A development of CAD CAM skills -Google SketchUp ,2D design laser cutter.	How can we make materials talk? Speaker Assessment Task: End of unit assessment Design & making skills assessed by Design development, making planning, making practical skills, Evaluating, and Technical knowledge. Knowledge: Electronic - components, inputs & outputs. Knowledge of materials –acrylic and manufactured boards adhesives. 4.Product analysis 6.Design brief 8.Generating design ideas 20.Testing & evaluating Generation of ideas and annotations. Product evaluation. Skills: Electronics – soldering A development of CAD CAM skills -Google SketchUp ,2D design laser cutter. Creative design. Evaluating.	Cultural Cuisines Assessment Task: Practical Assessment which includes design brief, research, design development, making and evaluating. Knowledge: Multi-cultural cuisine/traditional cuisines from around the world Multi-cultural ingredients Multi-cultural cooking methods Food Choice Menu Planning/time planning Evaluation and testing Skills: Research – multicultural foods/ingredients – develop into a focus on 1 culture Design – recipe choice and development to suit their brief Plan – time plan, possible problem solving Make – recipe 1 and 2 Evaluate – nutritional analysis, sensory analysis GCSE Skill links for progression: S1: General Practical Skills, S2: Knife skills, S3: Preparing Fruit & Vegetables, S4: Use of the cooker, S5: Use of equipment, S6: Cooking Methods, S7: Prepare, shape & combine, S8: Sauce Making, S9: Tenderise & Marinade, S10: Dough, S11: Raising Agents, S12: Setting Mixture.
	STEM links: Weigh & measure – reading scales Proportions – recipe modification/creation Use of charts and graphs Bacterial cross contamination Heat transfer Emulsification	**STEM links:** Origins of materials- production of plastics Environmental impact Adhesives -liquid solvent Manufacturing skill – Machine /tool knowledge CAD CAM skills Measuring -making out Measurements / coordinates CAD Isometric drawing	**STEM links:** Electronics- soldering , components, inputs/outputs. Materials – environmental impact. **Metal working skills, Material properties** **Knowledge of specialist workshop tools & equipment.** **CAM skills** Measurements / coordinates CAD Use of MM when designing in Sketchup.	**STEM links:** Weigh & measure – reading scales Proportions – recipe modification/creation Use of charts and graphs Bacterial cross contamination Heat transfer
	Cross curricular links: Science: Bacteria-cross contamination, Heat transfer, emulsification Culture: range of ingredients, food choice – life stage, celebration, traditional cuisines Careers: food hygiene/industry, food nutrition, food presentation	**Cross curricular links:** **IT –** Use of 2D design. Introduction to computer programming laser cutter. **Maths –** Measurements marking out practical work, measuring /estimating existing products. CAD drawing / coordinates. Isometric drawing **Science -** Origins of materials- production of plastics. Environmental impact . Adhesives -liquid solvent.	**Cross curricular links:** **IT-** 2D design /programming the laser cutter for cutting box. **Maths -** Measurements marking out practical work, measuring /estimating existing products. CAD drawing / coordinates. Isometric drawing **Science** - Origins of materials- manufactured board , acrylic. Environmental impact of the product. Adhesives – PVA wood glue.	**Cross curricular links:** Science: Bacteria-cross contamination, Heat transfer, emulsification Geography: Multi-cultural foods Culture: range of ingredients, food choice – traditional cuisines Careers: food hygiene/industry, food nutrition, food presentation, recipe development

		Cultural – material source, environmental impact , ethical design choices , Client /target market,	**Culture** - material source, environmental impact, Carbon footprint, ethical design choices? Client /target market.	

Key Stage 4

Related Documents
- **Specification**
- **LTP's**
- **MTP's**

Assessment Plan

Curriculum Intent – Key Stage 4

GCSE Food Preparation and Nutrition is an exciting and creative course which focuses on practical cooking skills to ensure students develop a thorough understanding of:

- Food Nutrition,
- Food provenance
- The working characteristics of food materials.

This qualification focuses on nurturing students' practical cookery skills to give them a strong understanding of nutrition. There are five core areas covered:

1. Food, nutrition and health
2. Food science
3. Food safety
4. Food choice
5. Food provenance.

By the end of the qualification students will have developed their knowledge and understanding in these 5 areas as well as becoming independent and confident within their cooking abilities which they can continue to use throughout life.

Aims – National Curriculum/Core Competencies

- The competences represent core skills and knowledge around the themes of Diet (food and drink), Consumer Awareness, Cooking (Food Preparation and Handling skills), Food Safety and Active Lifestyles (physical activity) and provide an essential benchmark.
- The competences are progressive and cumulative from one age phase to the next.
- They could be met at home, school or through other activities.
- They show essential knowledge and capability – they are neither a curriculum nor an examination specification.
- The competences reflect UK-wide practice.

Their aim is to help children and young people to develop the skills and knowledge to make and implement healthy food choices.

Year 10

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 10	**Assessment Task**: End of Half Term Test ***Knowledge****: 3.2 – Food Nutrition & Health part 1* Macronutrients: protein, carbohydrates, fats Micronutrients: minerals and water Nutritional needs and health ***Skills****:* Evaluation Practical skills: S1: General Practical Skills, S2: Knife skills, S3: Preparing Fruit & Vegetables, S4: Use of the cooker, S5: Use of equipment, S6: Cooking Methods, S7: Prepare, shape & combine, S8: Sauce Making, S9: Tenderise & Marinade, S10: Dough, S11: Raising Agents, S12: Setting Mixture.	**Assessment Task**: End of Half Term Test ***Knowledge****: 3.2 – Food Nutrition & Health part 2* Micronutrients: minerals and water Nutritional needs and health ***Skills****:* Evaluation Practical skills: S1: General Practical Skills, S2: Knife skills, S3: Preparing Fruit & Vegetables, S4: Use of the cooker, S5: Use of equipment, S6: Cooking Methods, S7: Prepare, shape & combine, S8: Sauce Making, S9: Tenderise & Marinade, S10: Dough, S11: Raising Agents, S12: Setting Mixture.	**Assessment Task**: End of Half Term Test ***Knowledge****: 3.2 Food Nutrition & Health, 3.3 Food Science* Nutritional needs and health Cooking of food and heat transfer Functional and chemical properties of food ***Skills****:* Evaluation Practical skills: S1: General Practical Skills, S2: Knife skills, S3: Preparing Fruit & Vegetables, S4: Use of the cooker, S5: Use of equipment, S6: Cooking Methods, S7: Prepare, shape & combine, S8: Sauce Making, S9: Tenderise & Marinade, S10: Dough, S11: Raising Agents, S12: Setting Mixture.	**Assessment Task**: End of Half Term Test ***Knowledge****: 3.2 Food Nutrition & Health, 3.3 Food Science,3.4 Food Spoilage & safety* Functional and chemical properties of food Food spoilage ad contamination Principles of food safety ***Skills****:* Evaluation Practical skills: S1: General Practical Skills, S2: Knife skills, S3: Preparing Fruit & Vegetables, S4: Use of the cooker, S5: Use of equipment, S6: Cooking Methods, S7: Prepare, shape & combine, S8: Sauce Making, S9: Tenderise & Marinade, S10: Dough, S11: Raising Agents, S12: Setting Mixture.	**Assessment Task**: End of Half Term Test ***Knowledge****: 3.2 Food Nutrition & Health, 3.3 Food Science,3.4 Food Spoilage & safety, 3.5 Food Choice* Factors affecting food choice British and International Cuisine ***Skills****:* Evaluation Practical skills: S1: General Practical Skills, S2: Knife skills, S3: Preparing Fruit & Vegetables, S4: Use of the cooker, S5: Use of equipment, S6: Cooking Methods, S7: Prepare, shape & combine, S8: Sauce Making, S9: Tenderise & Marinade, S10: Dough, S11: Raising Agents, S12: Setting Mixture.	**Assessment Task**: End of Half Term Test ***Knowledge****: 3.2 Food Nutrition & Health, 3.3 Food Science,3.4 Food Spoilage & safety, 3.5 Food Choice, 3.6 Food Provenance* Sensory Evaluation Food Labelling & Marketing ***Skills****:* Evaluation Practical skills: S1: General Practical Skills, S2: Knife skills, S3: Preparing Fruit & Vegetables, S4: Use of the cooker, S5: Use of equipment, S6: Cooking Methods, S7: Prepare, shape & combine, S8: Sauce Making, S9: Tenderise & Marinade, S10: Dough, S11: Raising Agents, S12: Setting Mixture.

Year 11

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 11	**NON-EXAMINED ASSESSMENT** **(Assessment Task**: NEA Task 1 ***Knowledge****:* 3.3 Food Science, 3.6 Food Provenance ***Skills****:* Investigation, research, analysis, evaluation.) THIS IS THE USUAL CURRICULUM BUT EXAM BOAD AMMENDMENTS FOR THIS ACADEMIC YEAR HAVE REMOVED THIS TASK FROM THE EXPECTED OUTCOME SO THE AMMENDED INTENT IS BELOW **Assessment Task**: NEA Task 2 ***Knowledge****: 3.2* Food Nutrition & Health, 3.4 Food Spoilage & safety, 3.5 Food Choice, 3.6 Food Provenance ***Skills****:* Practical skills: S1: General Practical Skills, S2: Knife skills, S3: Preparing Fruit & Vegetables, S4: Use of the cooker, S5: Use of equipment, S6: Cooking Methods, S7: Prepare, shape & combine, S8: Sauce Making, S9: Tenderise & Marinade, S10: Dough, S11: Raising Agents, S12: Setting Mixture	**NON-EXAMINED ASSESSMENT** **Assessment Task**: NEA Task 2 ***Knowledge****: 3.2* Food Nutrition & Health, 3.4 Food Spoilage & safety, 3.5 Food Choice, 3.6 Food Provenance ***Skills****:* Practical skills: S1: General Practical Skills, S2: Knife skills, S3: Preparing Fruit & Vegetables, S4: Use of the cooker, S5: Use of equipment, S6: Cooking Methods, S7: Prepare, shape & combine, S8: Sauce Making, S9: Tenderise & Marinade, S10: Dough, S11: Raising Agents, S12: Setting Mixture	**NON-EXAMINED ASSESSMENT** **Assessment Task**: NEA Task 2 ***Knowledge***: 3.2 Food Nutrition & Health, 3.4 Food Spoilage & safety, 3.5 Food Choice, 3.6 Food Provenance ***Skills****:* Practical skills: S1: General Practical Skills, S2: Knife skills, S3: Preparing Fruit & Vegetables, S4: Use of the cooker, S5: Use of equipment, S6: Cooking Methods, S7: Prepare, shape & combine, S8: Sauce Making, S9: Tenderise & Marinade, S10: Dough, S11: Raising Agents, S12: Setting Mixture	**EXAM PREARATION** **Assessment Task**: Revision Review Test 1 ***Knowledge****:* 3.2 Food Nutrition & Health & 3.3 Food Science ***Skills****:* Identify, Describe, Explain, Discuss, Debate, Evaluate, Analyse	**EXAM PREARATION** **Assessment Task**: Revision Review Test 2 ***Knowledge****:* 3 .2 Food Nutrition & Health, 3.3 Food Science, 3.4 Food Spoilage & safety, 3.5 Food Choice ***Skills****:* Identify, Describe, Explain, Discuss, Debate, Evaluate, Analyse	**EXAM PREARATION** **Assessment Task**: Revision Review Test 3 ***Knowledge****:* 3 .2 Food Nutrition & Health, 3.3 Food Science, 3.4 Food Spoilage & safety, 3.5 Food Choice, 3.6 Food Provenance ***Skills****:* Identify, Describe, Explain, Discuss, Debate, Evaluate, Analyse