Topic Sequencing and Rationale

KS3 Review Design Technology and Rationale. Year 7

	Topic/lesson	Overview	Why this?	Why then?
Year 7	Mine Craft Figure	Pine project using a range of hand tools and machines. Engaging first activity allowing students to have an appreciation for manufacture.	To focus and teach the health and safety element of the course. This is an introduction to working in a workshop using hand tools and machinery safely and accurately.	First project from KS2. Introduction to a workshop environment and tools and equipment. The importance of Safety in Design and Technology workshop.
	Isometric and Perspective Drawing	A drawing of the mine craft project enhancing the sketching skills.	To introduce students to a range of drawing techniques to allow them to communicate ideas effectively.	Introduction to drawing tools building on the skills from primary school.
	Modelling and 2D Design Key ring.	Iterative design.	To introduce the use of 2D design as a CAD package linked to production on the laser cutter.	Introduction to CAD CAM. Future input of design and manufacture throughout the course. This is the first design project. In which the students decide in the design.
	Theory work to include, New and emerging technologies, Product Designers, Smart Materials, Biomimicry.	Investigating the world of product Design as distinct topics including: designers, new technologies, biomimicry and smart materials.	Theory lessons to introduce product Design. The work of professionals and the new and emerging technologies that broaden their understanding of the technology and the wider world.	This is an introduction to the way designers design and the reasons for their design choices. Looking at how new materials and technologies influence designs. Students have not studies this before and it gives them an insight into product design.
	Mechanisms autometer	Introduction to design and manufacture. To design and manufacture a photo frame using the natural world as inspiration.	To build on prior knowledge gained over the year to design and manufacture a high-quality product using a variety of design and manufacturing techniques which have been previously used.	Full design and manufacture project. This is designed for students to choose their own materials and manufacturing techniques which would enable them to manufacture a unique product showing and developing their skills. It is completed at the end of the year allowing students to use all their knowledge.

	Creative Modelling project Mobile phone holder.	Sketching nesting compact design A4 sheet no waste of materials.	Introduction to modelling as a tool for development. Key skill for GCSE Spec. Use of craft knife and H&S. Introduction to compliant materials, and sustainability of materials for modelling and design development.	Key skills take time to embed and early introduction allows time for this. Furthering the H&S from previous project with different range of tools and equipment. Leading on to Y8 project 1 when modelling is essential.
	Year 7 End of year assessment.	Test of knowledge of materials, processes and tools & equipment.	To assess students' level of understanding of core knowledge learnt at beginning of KS3.	End of year, all projects are completed.

KS3 Review Food and Rationale. Year 7

	Topic/lesson	Overview	Why this?	Why then?
Year 7	Introduction to food technology - health and safety, knife skills, use of all kitchen equipment, sensory evaluation	Apply the principles of food safety and hygiene; this will ensure that they have a full working understanding of the potential dangers linked with food preparation. Introduction to knife skills – bridge and claw. Introduction to the safe use of equipment. Introduction to sensory evaluation as a tool to improve the overall qualities of end products. Students will learn through their senses how to use sensory vocabulary to describe food products.	Safety and hygienic practical work under pins everything to enable students to make and take-home safe products. Teaching knife skills will enable students to safely chop with confidence a variety of different styles during future food products. Knife skills must be taught to ensure that they can complete tasks independently as we progress to making products. Sensory evaluation introduces students to new flavours and encourages them to try new foods – this pushes them out of their comfort zone.	Assume no prior knowledge of health and safety. To ensure personal safety when using the kitchen. It is essential that this is learnt prior to any practical tasks to ensure a safe and hygienic working environment. To ensure their basic knowledge is there to keep them safe for future practical's and it is key to making successful products. Assume no prior knowledge of knife safety. To establish good sensory vocabulary and introduce them to a selection of unfamiliar ingredients.
	Practical products, healthy eating, ethical and environmental issues and evaluation	Demonstrate a range of food preparation and cooking techniques. The skills include knife skills – bridge and claw, rubbing in method, use of a food processor and blender, safe use of the hob and oven. Product – small cakes, savoury scones, soup. Students will consider the principles of healthy eating including the eat-well guide and the 8 tips for healthy living to their own diet and the products that they make. Identify how and why people make different food and drink choices. This will link to healthy eating, cost, locally sourced, ethical and environmental choice, religious choice. Students understand how to improve products by evaluation, including subject specific terminology, ethical considerations and the science of their ingredients.	To enable students to make a variety of successful products using safe practices. They will need to know which pieces of equipment are needed for individual tasks within a practical product. Healthy eating is a basic life skill to ensure students are aware of how to maintain a healthy balanced diet and make the right decisions when making food choices. Links to possible eating related conditions that could affect them or their families. Encourages students to have an awareness of the word around them and the implications the food industry has on the environment. Encourage good use of sensory descriptive language when describing products. Encourages good literacy skills. Makes students aware of how to improve products.	A knowledge of what each piece of equipment is used for is essential to be able to make a wide variety of food products safely. Understanding the concept of healthy eating will enable students to be able to select ingredients that are healthy and to identify how to maintain a balanced diet – this is the foundation of all food production. To give students an understanding of where food comes form and the impact this has. Making ethical choices when buying food. Evaluation allows them to be able to see where they have achieved and where they need to improve.
	Basic science of ingredients	Be given opportunities to demonstrate and apply their knowledge and	Understanding how ingredients work together is integral to understanding	Understanding basic science at this stage is integral to the making successful products,

		understanding of food science. This will give them an understanding of why recipes work and will help them understand the importance of following a recipe when scientific principles are the core of the product.	how recipes work. This will enable them to adapt recipes for use at home and how-to problem solve throughout the practical.	therefore giving students the opportunity to get things wrong and learn from their experience.
	Healthy snack – design and make task - pizza	Adapt and follow recipes using appropriate ingredients and equipment to prepare and cook a healthy food product for a child. This will allow them to create dishes at home using the same techniques but adapting them to the tastes of other people.	This is the last and most complex dish produced in year 7. It will give them the opportunity to combine the scientific and healthy eating knowledge along with food production skills to develops to produce a healthy snack product that is suitable for a child.	To complete a successful product, students must have knowledge of flavour combinations and how ingredients work together. This needs to be taught at this stage to enable students to complete quality outcomes. Students will also be able to replicate this product at home for their families.
	Introduction to the Hospitality and Catering industry	Gain a basic understanding of the catering industry, the areas of a restaurant/café and the staff required to run it.	Broadens knowledge of the different types of cuisine on offer, also introduces them to the different types of provision they might use with their families.	Give students knowledge of how a business runs and what this involves internally.
	End of module assessment	Test of knowledge of nutrition, healthy eating, food science, ethical and environmental issues, tools & equipment.	To assess students' level of understanding of core knowledge learnt during the year.	It is the end of year, student have gained knowledge in a variety of different areas. The end of year assessment will allow the students to show us what they have understood and how they can apply this.

KS3 Review Textiles and Rationale. Year 7

	Topic/lesson	**Overview**	**Why this?**	**Why then?**
Year 7	Multicultural Cushion	Students research, design and make a cushion using range of techniques.	Introduction to the sewing machine. Students are actively encouraged to research the concept of multiculturalism; environmental issues associated with the subject and apply this to designing and making. Students are also introduced to various suitable textiles techniques.	To ensure a safe working environment and that pupils are equipped with the necessary skills to translate ideas into a textile's product.

Topic Sequencing and Rationale

KS3 Review Design Technology and Rationale. Year 8

	Topic/lesson	Overview	Why this?	Why then?
Year 8	Aluminium Tea Light.	Metal work project using a range of hand tools and machines. Engaging first activity allowing students to have an appreciation for manufacture.	To focus and teach the health and safety element of the course. This to consolidate students' knowledge of working in a workshop using hand tools and machinery safely and accurately.	First metal project. Introduction to a metal work environment and tools and equipment. The importance of Safety in Design and Technology workshop.
	Flowol Computer based.	Introduction to Systems and control using a CAD programme to plan and test circuit diagrams.	An area of the curriculum that is best covered digitally as this allows students to cover a wide variety of scenarios in a timely manner.	Introduction to control prior to next project where students will be using electronics.
	Passive amp in the style of a product designer	Project using a range of hand tools and machines to allow students to have an appreciation for manufacture, quality control and working within a structured time frame.	To focus and teach the health and safety element of the course. Use of design and development as a product designer to personalise a product for their own music device.	A practical based project to improve the quality if manufacture. Develop independent use of tools and equipment in the workshop building on prior knowledge of the properties of materials and processes.
	Auto cad scooter design.	Students building on CAD knowledge from previous projects but using advanced software which allows 3D modelling and testing of prototypes.	All students need the opportunity to experience CAD design as it has many applications for careers and further education. Students who take GCSE will use the skills during the NEA and practical lessons.	Introduction to CAD. Students can use the skills in Y9 to model and test design ideas. Allows students who have weak drawing skills to communicate their design ideas in a new way.
	Electronics	Introduction to soldering safety. Consolidation of modelling and testing skills	To produce a physical outcome in systems and control which builds on prior learning.to develop students collaborative learning. To ensure that students develop safe soldering skills	This builds on and consolidates students learning from the Flowol project. Developing their knowledge of systems and control.
	End of Year assessment.	Test of knowledge of materials, processes and tools & equipment and design skills.	To assess students' level of understanding of core knowledge learnt during the year.	End of year, all projects are completed.

KS3 Review Food and Rationale. Year 8

	Topic/lesson	Overview	Why this?	Why then?
Year 8	Recap of previous knowledge and extension of health and safety in a domestic setting and within industry including the role of the EHO	Students will revisit the area of good hygiene principles and how these relate to both the domestic kitchen and the food industry. Students will be given an insight to the environmental health officer and the importance of this in industry. This continues their learning linked to the hospitality and catering industry.	This builds on knowledge from year 7, developing their knowledge of what happens in the classroom into the wider food world. This understanding will help students make good choices about standards of health and safety and where they want to eat when purchasing food products.	Knowledge of hygiene and safety is important as every product they produce should be safe to eat. Students should be able to apply this knowledge to all of the dishes they prepare especially when they are using raw meat in products. Students must also be able to discuss with their parents how to reheat food and store food safely when they take it home.
	Ethical and environmental issues	Explain the factors that affect food and drink choice linked to ethical, environmental, nutritional needs, healthy eating, religious food groups and special diets. Explanation of why seasonal foods are better for the environment. This is a topic which is integrated into all practical products during the year.	Gives students insight into the wider world and food isn't only about how it tastes. Encourages students to 'find' foods that are seasonal to cook with. This might encourage them to go walking to forage for food with their parents. This also encourages students to consider the cost of their product, not only financial but also environmental.	The food industry is responsible for environmental emissions that cause global warming-students must understand that the choices they make when planning dishes has a direct impact on the world around them. We make a product during the summer months when many fruits are in season – thus encouraging students to forage for their ingredients rather than buying them from the super market and over- seas.
	Food science and its use in everyday food products	Introduction to the science of gluten formation in the production of baked products. Introduction to the science of starch gelatinisation through practical experiment. Introduction to the coagulation and denaturation of proteins and it's many uses in the production of food products.	Students will be given regular opportunities to demonstrate and apply their knowledge and understanding of food science. This will give them an understanding of why recipes work and will help them understand the importance of following a recipe when scientific principles are the core of the product. This builds on the simple concepts taught in year 7.	Students must understand the principles of how ingredients work together to enable them to make successful products. Using gelatinisation opens up a variety of different dishes to make. Students must understand the principles how ingredients work together to enable them to make successful products. Coagulation occurs in many cooking techniques and enables students to make a variety of dishes well, knowing how this process works.
	Multicultural foods - safe cooking of raw meat	Explain the factors that affect food and drink choice linked to ethical, environmental, nutrition, healthy eating, religion and special diets. Apply the principles of food safety and hygiene, key temperatures for	We live in a multicultural society therefore it will give them an understanding of the foods and cultures of other religious and ethnic groups. To give students knowledge of how to avoid food	To make students aware of dishes from around the world. To give students an introduction into eating sustainably. To enable students to work safely with meat and to avoid cross contamination. Students must be able to take meat

		freezing, chilling and cooking linked the reproduction of food poisoning bacteria. Explain the importance of reducing the risk of cross contamination by careful preparation of ingredients.	poisoning as a result of poor preparation, storage and cooking of meat products. Most students will have to cook with meat as some point in their lifetime, therefore need to know how to do this safely.	dishes home and explain to their parents how to safely re heat and store.
	Time management, sequencing, team work recipe development and dietary needs	Students will demonstrate independence through completing a production plan and following this in the production of one of their practical dishes. Students are encouraged to adapt and follow recipes using appropriate ingredients and equipment to prepare and cook a range of dishes throughout the year. In the final task they are encouraged to work in a team to display all of the learnt skills. This will allow them to create dishes at home using the same techniques but adapting them to the tastes of other people.	To encourage students to work independently and follow their own instructions. This develops student's confidence and allows them to recreate dishes at home. To be able to adapt recipes for their own dietary needs and their families. The group work task will give the students the opportunity to show what they have learnt through the year while also developing cooperation skills to design and make a cohesive food product.	In all practical lessons students only have 1 hour to make a successful product and clear up their work station. In learning how to plan their own dishes they will gain confidence in working independently and making decisions. This is an important skill to link in with family life – many people have different dietary requirements, therefore it is important that students understand allergies and intolerances within their family.
	End of year assessment	Test of knowledge of nutrition, food science, ethical and environmental issues, multicultural foods, tools & equipment.	To assess students' level of understanding of core knowledge learnt during the year.	It is the end of year, student have gained knowledge in a variety of different areas. The end of year assessment will allow the students to show us what they have understood and how they can apply this.

KS3 Review Textiles and Rationale. Year 8

	Topic/lesson	**Overview**	**Why this?**	**Why then?**
Year 8	Sustainable Bag	Students are introduced to ethical issues in textiles and are also introduced to new skills such as seams, stencilling and block printing	To raise student's awareness of ethics issues associated with all fabric products, specifically those within the fashion industry. To equip students with the necessary knowledge to make informed fashion purchases. To build on the skill sets acquired in year 7 relating to fabric surface design and fibre sources.	To raise awareness of the wider issues associated within the textiles industry. Pupils can be critical in their research and use this knowledge to make informed decisions.

Topic Sequencing and Rationale

KS3 Review Design Technology and Rationale. Year 9

	Topic/lesson	Overview	Why this?	Why then?
Year 9	Making a sustainable product.	Iterative design cycle. Students have to design, test and manufacture a sustainable product from a range of materials.	A project that develops independence in design and manufacture, within a structured framework that can be carried forward to GCSE. Students are encouraged to use all of the knowledge and skills learnt in previous years to produce a prototype that has been developed and tested in the iterative design cycle.	Students at this point in KS3 have sufficient skills and knowledge to respond to a brief independently. This will allow for a greater range of responses and stretch and challenge for all. At GCSE the students are required to complete a full coursework brief. This is an introduction to the design process.

KS3 Review Food and Rationale. Year 9

	Topic/lesson	Overview	Why this?	Why then?
Year 9	Nutrition	Deepen their knowledge and understanding of food and nutrition. To introduce them to the structure of nutrients. Name the main nutrients, sources and functions	Encourage students to think about how to adapt their meals to lower the fat and increase the fibre content – promote the eatwell guide and having a balanced diet.	Nutriention should be linked to the food products that are produced. Pupils will be able to adapt recipes to suit the special needs of different groups in society. This will allow them to cook products for members of their family while considering nutritional needs and personal wants.
	Planning for different people in society, allergens, intolerances, veganism	Understand the nutritional needs of different people within society and be able to plan distinct products that suit their needs. To have an understanding of the importance of allergies and intolerances and how to plan and be aware of allergens advice on food packaging and menus. To give students the opportunity to investigate the highly topical diet of veganism to enable them to make informed food choices.	Create awareness of others special dietary needs and how that may affect their lifestyle. Allergens are a major problem within society and students need an awareness of what food they are in. Students learn through debate and discussion the benefits to the environment and diet living off a vegan diet.	For students to be able to appreciate and plan for dishes for other people in society. Students need to be able to recognise the symptoms of an allergic reaction. They need to be able to choose ingredients well when dealing with people with an allergy or intolerance. Veganism is highly topical - students are more aware of environmental issues and wanting to make a difference.
	Environmental and ethical issues	Packaging and plastic pollution caused by the food industry and farming	Gives students an insight into farming and the impact it has on the environment.	Highly topical - students are more aware of environmental issues and wanting to make a difference.
	Enhanced practical skills	Demonstrate a wider range of food preparation and cooking techniques.	Students are given the opportunity to experiment with a	Students are given the skills to produce familiar products such as pasta, pastry and bread from

		The skills include precise knife skills – bridge and claw, rubbing in method, safe use of the hob and oven, coagulation, gelatinisation, safe preparation and cooking of raw meat.	wide range of skills working with commodities	scratch thus reducing the number of additives and cost involved.
	Types of establishment and event planning considering different end users	Develop their understanding of the hospitality and catering industry, commercial and non-commercial sectors. Linking to the provision of food in industry students will build on knowledge of planning for people in society – students will plan an event of their choice and complete a presentation of ideas to their peers.	Give an insight of all the different types of provision available in hospitality and catering and recognise different job roles. To encourage students to consider the 'wants and needs' of other people their age in society and to understand the how to design an event to meet a variety of needs.	Students will be given an understanding of the different establishments available and the services they provide – this might be something that is not accessible to some students in their home life. To give students an idea of what the different dietary needs of others are and to build on knowledge of special diets and intolerances.

KS3 Review Textiles and Rationale. Year 9

	Topic/lesson	**Overview**	**Why this?**	**Why then?**
Year 9	Working with CAD in textiles.	Students will design and make a product using CAD with designs inspired by designers from GCSE spec.	To consolidate learning and practical skills covered in years 7 and 8. To introduce the use of CAD in textiles and the use of more specialist equipment (sub printing).	Building on skills from year 8 textiles. Students will have a good understanding of more traditional surface decoration and are now given the opportunity to create a more professional finish using technical equipment.

Topic Sequencing and Rationale

Key Stage 4 DT

	Year	What is taught? Overview of Topics	Why this?	Why then?
KS4	10	Core Knowledge • new and emerging technologies • energy generation and storage • developments in new materials • systems approach to designing • mechanical devices • materials and their working properties. • designing and making principles Specialist Areas • RM based materials • Papers and Boards or • textile based materials NEA - Practical based core materials. Coursework.	develop a broad knowledge of materials, components and technologies and practical skills to develop high quality, imaginative and functional prototypes use key design and technology terminology including those related to: designing, innovation and communication; materials and technologies; making, manufacture and production; critiquing, values and ethics.	Develop knowledge and understanding of the specialist technical principles leading from the KS3 Curriculum.
	11	Specialist Areas • RM based materials • Papers and Boards or • textile based materials NEA Coursework Exam preparation	This will follow the introduction of the core knowledge through the NEA coursework. Develop an in-depth knowledge and understanding of the following specialist technical principles: • selection of materials or components • forces and stresses • ecological and social footprint • sources and origins • using and working with materials • stock forms, types and sizes • scales of production • specialist techniques and processes • surface treatments and finishes.	use imagination, experimentation and combine ideas when designing develop the skills to critique and refine their own ideas whilst designing and making communicate their design ideas and decisions using different media and techniques, as appropriate for different audiences at key points in their designing develop decision making skills,

Key Stage 4 Food Science and Nutrition

	Year	What is taught? Overview of Topics	Why this?	Why then?
KS4	10	Food preparation skills	To understand and apply appropriate hygiene and safety procedures when preparing, cooking and serving food. To develop secure knife and complex practical skills.	It is essential to develop these skills throughout the whole of KS4. Food preparation skills will be interleaved into all topics within the GCSE course as they are intrinsically linked to all aspects of the course.
	10	Food Nutrition and health	To understand the functions and main sources of both macro and micro nutrients in the diet, to understand the effects of deficiency and excess related to dietary reference values. To understand current guidelines for a healthy diet. To understand major diet related health risks. To know how to carry out nutritional analysis. To analyse a recipe and be able to modify the dish to improve the nutritional content. To understand nutritional needs for different life stages. To understand the nutritional requirements for specific dietary groups: vegetarian, vegan, coeliac, lactose intolerant, reduced fat and high fibre.	Nutrition is taught at the start of the course as it is the corner stone of food education. To have an understanding of why we need different nutrients in the diet will influence recipe choices in practical lessons. Aspects of this topic will be interleaved with other topics as the year progresses to show an understanding of how nutritional needs change with different end users.
	10	Food Science	To understand the scientific principles underlying the cooking of food. Areas to cover: protein denaturation and coagulation, gluten formation, foam formation, gelatinisation, caramelisation, dextrinisation, shortening and plasticity, emulsification, aeration, enzymic browning and oxidation. To understand the heat transference methods: conduction and convection and radiation. To understand the scientific principles of raising agents. (chemical/ mechanical)	Students need to understand why foods react as they do during cooking. These scientific principles will allow them to develop complex practical food products and also enable them to rectify mistakes when they happen. The understanding of the science of ingredients is also a key aspect of the NEA1 which will be completed in the second year of the course.
	10	Food Safety	To understand the food safety principles when buying and storing, preparing, cooking and serving food. To know and apply key temperatures. To understand the different sources of bacterial contamination and hazards. To know how to correctly use a food probe. To understand how to prevent cross contamination.	It is essential that all students know how to ensure that all their products are safe for others to eat. This is taught at the start of the course to ensure that students can work independently to produce good quality, safe food.
	10	Methods of food production	To know the difference between primary and secondary processing. To understand the processing of milk to make cheese and yogurt. To understand the use of micro-organisms in food production. To understand the processing of wheat to make flour. To understand	This is taught to give the students an understanding of where their food comes from. It also gives them more choice of processes that they can use during the production of their food products.

			how processing affects the sensory and nutritional properties of ingredients. Technological developments to support better health and food production including fortification and modified foods with health benefits and the efficacy of these.	
	10	Food Provenance Environmental issues and sustainability	To understand the impact of food and food security on local and global markets. To understand where and how ingredients are grown, reared and caught. Environmental impact and sustainability of foods, food sources.	Students need an awareness of the wider picture of food production. In understanding the different issues relating to food choice they can make valued judgements when choosing their own ingredients.
	10	Food Choice and International cuisine	To understand how different staple food are used around the world. To understand the issues related to ethical and environmental food issues when choosing foods. To understand the term sensory evaluation and fair testing. To know the different methods for carrying out sensory evaluation. To understand the conditions and controls required when carrying out sensory evaluation	Food choice links to many of the topics within this course. It is also important to learn about foods eaten around the world to give breadth to their food choices. Information learnt throughout this topic will help students to make choices when they work on their NEA2.
	11	NEA 1	The NEA's consolidate the learning from year 10 to show understanding through a series of written and practical tasks. NEA1 allows the students to show their understanding of the scientific principles underlying the cooking of food. This assessment is released by the board at the start of September and is time limited. The topics change every year and the students get a choice of 3 to complete.	The students will have gained all of the background information necessary to successfully complete this NEA task through the content of year 10. Students have 10 formal hours to complete the assessment with theory work taught alongside relating to the topics proposed by the exam board.
	11	NEA 2	The NEA's consolidate the learning from year 10 to show understanding through a series of written and practical tasks. NEA2 allows the students to show their understanding of nutrition and meal planning and to display their practical skills. This assessment is released by the board at the start of November and is time limited. The topics change every year and the students get a choice of 3 to complete.	The students will have gained all of the background information necessary to successfully complete this NEA task through the content of year 10. Students have 20 formal hours to complete the assessment with theory work taught alongside relating to the topics proposed by the exam board.
	11	Revision for external examination	On completion of the NEA's students will review all information completed through the course to revise for the external examination.	The examination will assess all areas of the specification. Revision will take many forms to try and maximise the learning styles of all students.

Key Stage 4 Hospitality and Catering

	Year	What is taught? Overview of Topics	Why this?	Why then?
KS4	**10**	Unit 1: Health and safety in the kitchen. students learn basic knife skills, use of the oven, colour coding, personal hygiene. Food related causes of ill health: students learn about the safe storage and preparation of food and foods harmful to health if not cooked properly. Unit 1 LO1: Understand the environment in which hospitality and catering providers operate. Gain an understanding of the types of different establishment. Describe the structure of the hospitality and catering industry. Job roles in the H&C industry – front and back of house. Employment / entitlement / personal attributes	To enable students to understand the importance of good hygiene and to allow them to work in a safe environment. To keep students and their families safe when preparing and eating products made at school. Students need to gain knowledge of the wider hospitality and catering industry and are introduced to the different sectors and the type of food and services they provide. Students need knowledge of the different job roles front and back of house and what these entail. Students need to understand legislation linked to the food industry HACCP, COSHH, HASAWA	Health and safety is crucial at the start of the year to minimize accidents and to give confidence to students when handling equipment. Learning how to avoid food poisoning and cook food properly underpins all practical lessons, it is crucial that students learn this from the beginning in order to make successful products. Students need to know how varied the catering industry is in order to be able to plan for different scenarios – this is prep for the unit 1 exam. This ties in with a careers talk and a trip to Rudding Park Hotel.
	10	Standards and ratings Role of the EHO Factors effecting the success of the hospitality and catering business. The operation of the kitchen: Layout, Work Flow, Operational activities and materials, Stock control, Documentation and administration, Staff allocations, Dress code, Safety and security.	Students learn about 'scores on the doors' and how to obtain these – what does this mean for industry. Students must understand the process and the role of the Environmental health officer – this is vital to ensure a business is successful. Students learn about the economy and how a business can fail. Students look at how the industry changes to meet customer needs and changes to the environment. Students understand the work flow of the kitchen and how the food starts in the kitchen from delivery to being served in the dining room.	Exam preparation. Students must learn about legislation and how to protect the general public from food poisoning. The time plan shows the examiner that the student knows exactly how to make their product step by step and be aware of the hazards and how to avoid them – vital for making a successful product, It is important that students recognize how industry must change in order to suit the economy and the needs of the consumer and the environment. A tour of the school kitchen is organised and students are shown around by head chef, this gives the students an insight into the working of a commercial kitchen.

	10	AC2.3 explain how hospitality and catering provision meets customer requirements. Consideration of the Customer, Leisure facilities, Business/corporate facilities, Local resident requirements, Customer needs, Customer expectations, Customer trends, Equality regulations, Customer rights. Health and safety – responsibility of employers and employees for personal safety. HACCP Special diets and medical conditions	Students must understand that different venues offer different experiences depending on the customer requirements. Students must understand the legislation surrounding the responsibilities of the employer and employee. Students must have a full understanding of these requirements to ensure that they have a can apply their knowledge both in their unit 1 examination and the Unit 2 coursework.	Students must plan for different scenarios in the unit 1 exam therefore they need to know how to plan for different customer needs. Students need to understand the laws surrounding employment and the acronyms to help them describe these within the Unit 1 examination. Students need to start thinking about planning meals for different dietary needs. This is an important aspect of the Unit 2 NEA.
	10	Practical skills Time planning	To understand and apply appropriate hygiene and safety procedures when preparing, cooking and serving food. To develop secure knife and complex practical skills. To learn new skills and techniques to enable the students to prepare more complex practical dishes. To learn the process of writing a time plan so that students can order their work in readiness for the Unit 2 NEA.	It is essential to develop these skills throughout the whole of KS4. Food preparation skills will be interleaved into all topics within the GCSE course as they are intrinsically linked to all aspects of the course.
	10	Revision for external examination	Students will review all information completed through the course to revise for the external examination.	The examination will assess all areas of the specification. Revision will take many forms to try and maximise the learning styles of all students.
	11	Introduction to Unit 2 and expectations. The function of nutrients in the body Dietary guidelines Eatwell Guide Nutritional needs of specific groups Special diets for different food choices and medical conditions Nutritional needs for different activity levels Characteristics of unsatisfactory nutritional intake Practical tips /cooking methods A series of practical products to show different cooking methods, modifications and presentation skills. Menu planning	It is important that all students understand the assessment criteria as if they miss any in their NEA it will result in a 'fail' in Unit 2. Students must gain an understanding of nutrition in order to be able to plan dishes for specific target groups. Students need to understand how to plan dishes to maximise profit, meet customer needs, using ingredients that have minimal impact on the environment. Through gaining knowledge in these areas, the student will be able to incorporate this information into their Unit 2 work.	Unit 2 revolves around making dishes to a given brief, this is 60% of the overall qualification. It is important to introduce all of this knowledge prior to the students completing a practice NEA so that they can fully understand what is expected of them. Through competing the practical tasks focusing on skilled presentation the students will be able to maximise the look of their product and therefore increase their potential score in the practical examination.

		Factors to consider when proposing dishes such as: Needs of the customer, price, availability, seasonality, locally sourced, food and environmental issues –how to plan dishes that have less of an impact on the environment. Needs of the customer linked to nutrition, organoleptic qualities and cost.		All of these skills will be incorporated into their Unit 2 NEA.
	11	Unit 2 – NEA	The NEA consolidates the learning from year 11 to show understanding through a written task and a practical examination. Unit 2 allows the students to show their understanding of nutrition and meal planning and to display their practical skills. This assessment is published by the board and is time limited. The topics change every few years and the students get a choice of 3 to complete.	The students will have gained all of the background information necessary to successfully complete this NEA task through the content of year 11. Students have 9 formal hours to complete the assessment with theory work taught alongside relating to the topics proposed by the exam board.
	11	Revision for external examination	On completion of the NEA students will review all information completed through the course to revise for the external examination re-sit where necessary.	The examination will assess all areas of the specification. Revision will take many forms to try and maximise the learning styles of all students.

Topic Sequencing and Rationale

Key Stage 5 DT

	Year	What is taught? Overview of Topics	Why this?	Why then?
KS5	**12**	Technical principles Designing and making principles NEA Coursework preparation through a series of mini projects. NEA Coursework	Students should develop the ability to draw on and apply a range of skills and knowledge from other subject areas to inform their decisions in design and the application or development of technology. Be open to taking design risks, showing innovation and enterprise whilst considering their role as responsible designers and citizens to develop intellectual curiosity about the design and manufacture of products and systems, and their impact on daily life and the wider world.	This is developed through the KS4 curriculum. Work collaboratively to develop and refine their ideas, responding to feedback from users, peers and expert practitioners.
	13	Technical principles Designing and making principles NEA Coursework	Develop an in-depth knowledge and understanding of materials, components and processes associated with the creation of products that can be tested and evaluated in use. Be able to create and analyse a design concept and use a range of skills and knowledge from other subject areas, including maths and science, to inform decisions in design and the application or development of technology. Be able to work safely and skilfully to produce high-quality prototypes/products and have a critical understanding of the wider influences on design and technology.	Following on from the mini project's students develop the capacity to think creatively, innovatively and critically through focused research and the exploration of design opportunities arising from the needs, wants and values of users and clients.

Key Stage 5 FD S&N

	Year	What is taught? Overview of Topics	Why this?	Why then?
KS5	**12**	Understand the importance of food safety	To gain an understanding of how individuals can take responsibility for food safety both in a domestic setting and within the food industry. To further develop understanding of methods used by food handlers to keep themselves clean and hygienic in both a domestic setting and within the food industry. To understand methods used to keep work areas clean and hygienic both in a domestic setting and within the food industry. To understand how to analyse risks associated with food safety both in their own cooking and in an industrial setting.	In previous study students have learnt about food safety in the home and for personal use. As this course progresses, we need to also apply this understanding to the food industry. Food safety underlies all topics of the food curriculum therefore it is taught at the start of this course.
	12	Understand properties of nutrients	To understand the scientific properties of nutrients and how they are structured. To understand how to classify nutrients in food according to their structure and uses in food production. To understand how different methods of food production impact on the nutritional value of foods and learn how to incorporate these methods into their practical work.	This course is based around an understanding of how food reacts under different conditions. To fully understand this the students must first learn about the structures of the nutrients and the scientific principles underlying the cooking of food.
	12	Understand the relationship between nutrients and the human body	To understand the functions of both macro – protein, Fats and Carbohydrates- and micro – Vitamins and Minerals - nutrients in the human body. To understand the importance of hydration and fibre content on the human body. To understand the characteristics of unsatisfactory nutritional intake related to different groups in society. To understand the requirements of special dietary needs: Diabetes, Coeliac, Lactose intolerance, CHD, High blood pressure, Vegetarian, Religious diets. Lifestages – Children, Adolescents, Pregnancy and lactation, Adults, the elderly.	Nutrition is taught throughout the course as it is the corner stone of food education. To have an understanding of why we need different nutrients in the diet will influence recipe choices in practical lessons. Aspects of this topic will be interleaved with other topics as the year progresses to show an understanding of how nutritional needs change with different end users.
	12	Be able to plan nutritional requirements	To develop their skills in nutritional analysis, using software to clearly calculate nutritional values and then analyse these values against the nutritional needs of specific groups. To understand how different situations, affect nutritional needs of individual users. To develop skills to evaluate fitness for purpose of diets for different people within society.	As part of the Unit 1 NEA students will need to choose, prepare and analyse food products for specific groups of people. Learning about the process of nutritional analysis will help them to make better choices of both ingredients and cooking methods.

	12	Be able to plan production of complex dishes	To develop skills in planning how to produce multiple recipes within a restricted time while ensuring that quality and food safety are not compromised. To develop skills in how to interpret recipes for complex menus, matching tastes, textures, nutritional value and time restrictions that will suit specific end users. To develop skills in production planning, linking processes, food safety and risk assessment to produce good quality products within a restricted time.	This skill was introduced at KS4 but with the increased complexity of dishes required further development is needed. Clear links to risk assessment will be developed alongside the clear sequencing of production methods. This understanding is essential to complete the Unit 1 practical examination.
	12	Be able to cook complex dishes	To use tools in the preparation of commodities to produce complex dishes. To assure quality of materials to be used in food preparation and use advanced techniques in the cooking of commodities. To present their complex dishes using advanced presentation techniques to ensure that products are restaurant quality. To use food safety practices and monitor food production throughout.	Students have been developing practical skills since KS3, they must now be able to combine those skills and add new techniques to create complex dishes. They must also be able to risk assess their own production methods to ensure quality products in the Unit 1 practical examination.
	12	Unit 1 NEA		
		Revision for externally assessed examination Unit 1		
	13	Ensuring food is safe to eat and to understand how food safety is managed in different situations	Students will develop an understanding of hazards and risks in relation to the storage, preparation and cooking of food in different environments. They will need to understand and implement control measures needed to minimise these risks. From this understanding, students will be able to recommend the control measures that need to be in place, in different environments, to ensure that food is safe to eat. To understand how food safety hazards present in different environments linked to the commercial production of food. To be able to assess risk to food safety in different environments and explain control measures that could be used to minimise food safety risks. To have the ability to justify proposals for control measures in different environments clearly explaining links to food safety.	When looking at both their own practical work and the production of food in industry students need to understand the importance of ensuring that food products are safe to eat. This topic will develop their previous knowledge of food safety to include an in-depth knowledge for use within the food industry.
	13	To understand how micro-organisms affect food safety	To understand the classification of different micro- organisms – bacteria, yeasts, moulds and viruses. To understand the properties of micro-organisms and how changing conditions affect their growth and development in different environments. To explain how micro-organisms affect food quality and how they can link to food poisoning. To be able to assess how preservation methods can prevent the growth of micro-organisms and extend the life of a wide	Students will have prior knowledge of food poisoning and the conditions needed for the growth of micro-organisms. They will now build on that knowledge to have an understanding of more specific micro-organisms and be able to link them to the food industry.

			variety of different food products. To be able to explain the physiological basis of food poisoning.	
		To understand how food can cause ill health in relation to allergies and intolerances.	To understand and explain the physiology of food intolerances – gluten intolerance, lactose intolerance, caffeine sensitivity, Phenylketonuria (PKU), Salicylate sensitivity and monosodium glutamate (MSG) sensitivity. To understand and explain the physiological basis of food allergies – 14 key allergens: celery, cereals containing gluten, crustaceans, eggs, fish, lupin, milk, molluscs, mustard, peanuts, sesame, soybeans, sulphur dioxide and sulphites and tree nuts. To understand the difference between an allergy and an intolerance. To understand and be able to describe the symptoms of food induced ill health linked to different symptoms and foods.	The students need to build on their previous knowledge of allergies and intolerances to understand the differences between these 2 conditions on a physiological level. They will need to be able to identify the possible risks linked to these conditions for a variety of end users and within a variety of industry-based situations.
	13	To understand the scientific properties of food and be able to scientifically investigate potential changes to food during production.	To build on previous knowledge linked to the scientific principles of food. To develop a clear understanding of how food properties can be changed in different conditions and be able to explain the variables that affect the physical properties of food. To be able to set up scientific investigations, setting success criteria for the investigations. To be able to obtain acurate outcomes from scientific investigations, record the outcomes with clear analysis, process data and review the suitability of investigative methods used. To show understanding of how to analyse results from the investigations using their results to make valued judgements on methods and ingredients used.	Students will build on the knowledge learnt at GCSE to understand the scientific principles of food. They must have a clear understanding of these principles to fully understand how food works in different conditions to enable them to produce a good quality food product. This understanding is essential for them to perform well in the Unit 3 NEA task.
	13	To be able to solve food production problems	To understand why problems occur during food preparation and how those problems can be solved to ensure good quality end products. They will gain an understanding of how to analyse food production situations, propose practical options to solve food production problems and how to scientifically justify proposed options to improve the end products.	Students need to have the understanding of production methods to be able to spot problems with their products and have the ability to solve those problems. They need to develop previous knowledge in this area to apply techniques to an industry-based situation.
	13	Unit 3 extended NEA project	The Unit 3 task will allow the students to consolidate the learning from earlier in the course to show understanding through a series of written and practical tasks. Unit 3 allows the students to show their understanding of the scientific principles underlying the cooking of food within an industrial setting. This assessment is set by the board and is time limited. The topics change every few years with the students getting a choice of 3 to complete.	The students will have gained all of the background information necessary to successfully complete this Unit 3 task through the content of both the GCSE NEA1 and theory work earlier in the course. Students have 12 formal hours to complete the assessment with theory work taught alongside relating to the topics proposed by the exam board.

	13	Unit 2 externally assessed examination project	The Unit 2 examination consolidates the learning from all aspects of the course to show understanding through a series of written and practical tasks. Unit 2 allows the students to show their understanding of nutrition and food preservation, risk assessment and food related ill health. This assessment is released by the board on May 1st and is time limited. The topics changes every year and the task is completed under controlled conditions.	The students will have gained all of the background information necessary to successfully complete this examination through the content of theory work from year 12 and 13. Students have 8 hours to complete the assessment, these must be taken within a 3 week period of starting the task. Theory work will be taught alongside relating to the topics proposed by the exam board.