

Overview of KS3 Food and Nutrition Curriculum			
Head of Department: Mrs S E Rowlands			
	- .	Year 8 The aim in Year 8 is for students to learn about the working characteristics functional and chemical properties of ingredients in addition to building their practical skills and developing their nutrition, diet and health knowledge.	
Covered over 30 lessons.	 Students will develop their knowledge and understanding of ingredients and healthy eating by covering the following key topics: Diet: The Eatwell Guide, 5 a day and NHS guidelines for healthy eating. Principles of nutrition, energy balance, fibre, water, salt and snacking. Food safety: Food hygiene and kitchen safety. High risk foods, date marks, pathogenic bacteria - Campylobacter. Food Choice: Differing dietary needs e.g. personal choices, religion/culture. Consumer Awareness: Food waste, organic food and labelling. Food Provenance: Where food comes from, sustainability and seasonality. Food Science: Enzymic browning, functional properties and working characteristics of ingredients – fat, flour and sugar. Active Lifestyles: Exercise and water consumption. 	 Key Topics Covered Students will develop their knowledge and understanding of food science and nutrition by covering the following key topics. Diet: Understanding the difference between macro and micronutrients. Role of protein, fat and carbohydrate in the diet. Vegetarian diet and alternative protein. Sugar intake and role in food and drink. Food Safety: Demonstrating a clear understanding of food safety and hygiene when making. Pathogenic bacteria - Bacillus cereus. Food choice: Seasons, portion size, concerns with excess sugar intake, alternative protein. Consumer Awareness: Food waste, recipe modification, nutrition labels, allergies. Food Science: Raising agents, colloids, emulsions, functional properties and working characteristics of ingredients - coagulation, dextrinisation, caramelisation, foam, Maillard Reaction. 	 Key Topics Covered Diet: Dietary needs of teenagers, micronutrients. Coeliac, lactose intolerance and vegan diet. Recipe modification to improve the nutritional value. Food Safety: Food hygiene, preventing food poisoning, pathogenic bacteria, temperature control. Food Choice: Seasons, importance of cooking from scratch (low sugar/low salt), foods from around the world. Consumer Awareness: food waste - buying, preparing and cooking food. Influences of media on food choice. Food styling. Food Provenance: Cereals, staple foods, herbs and spices. Food Science: gluten experiment, functional properties and working characteristics of bread and



Practical Skills	Practical Skills	pastry (gluten development, shortening). Sauces and
Students undertake a range of practical lessons from	Students undertake a range of more skilled dishes from	starch as a thickener – gelatinisation. How
Layered Pasta Salad to Make At Home KFC. This helps to	Swiss Roll to Biryani. They	marinades work.
develop their own practical learning journey with a focus	continue to develop their practical learning journey	
 on the following cooking techniques and skills: Weighing and measuring. Food safety – the 4 C's. Use of small and large equipment in food preparation. Knife skills - slicing/dicing. Bridge/claw grip. Food Science – enzymic browning, functional properties of fat and sugar when baking. Grating/peeling. Methods of heat transfer – conduction, convection, radiation. Hob control – frying, boiling, simmering. Safe oven use. Melting, all in one, creaming and rubbing in method. Stewing fruit. Handling raw meat safely. Coating, enrobing, combining and shaping. Work to time. Selecting and adjusting a cooking process. Careers: Public Health, Environmental Health Officer, Community Nutritionist/Nutritionist, Dietitian, Quality Assurance, Food Styling, Product Development	 becoming more confident and competent with the following additional skills: Weighing and measuring. Rubbing in, whisking, glazing. Combining, rolling and shaping. Making a dough. Dividing mixtures. Safe oven use. Knife skills – vegetables in particular onion and meat preparation. Handling raw meat safely. Marinating. Use of food processor for sauces. Hob control – frying, dry frying, boiling, simmering. Select and adjust a cooking process. Test for readiness Time management. Careers: Food Scientist, Public Health, Community Nutritionist/Nutritionist, Dietitian, Food Styling, Product Development, Food Buyer, Food Technologist, Microbiologist, Pharmaceutical and Healthcare Industry.	 Practical Skills Students broaden their skills by making more complex products from Chelsea Buns to Lasagne and Thai curry. They continue to develop their practical learning journey with a focus on the following additional skills: Making, knead, prove, shape and finish a leavened and unleavened dough. Make, rest, shape and finish pastry. Use of filo pastry - combining, shaping and finishing products. Safe use of electrical equipment. Handling raw meat and checking the core temperature. Combining, mixing and dividing. Making a white sauce – gelatinisation. Making a reduction sauce. Stir frying. Boiling and simmering. Setting agents. Food styling. Careers: Food Buyer, Public Relations, Advertising, Quality Assurance, Food Marketing, Lifestyle and Consultancy, Environmental Health Officer, Dietitian, Sports Nutritionist/Nutritionist, Microbiologists, Food Journalism, Brand Manager.



The KS3 Food curriculum takes account of the National Curriculum, the core competencies and the need to prepare students for the GCSE Food Preparation and Nutrition specification. However the rationale behind the curriculum is driven by a vision of what all students should know, understand and be able to do by the end of key stage 3, given that for 70% of the cohort this will be the end of their formal Food education.

KS3 National curriculum

"As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life."

- understand and apply the principles of **nutrition and health**
- cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet
- 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]
- understand the source, seasonality and characteristics of a broad range of ingredient

Core competencies

Core competences for children and young people aged 5-16 years The competences represent core skills and knowledge around the themes of

- Diet (food and drink),
- Consumer Awareness (Food Choice and Food Provenance),
- Cooking (Food Preparation and Handling skills),
- Food Safety
- Active Lifestyles (physical activity)

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

Our key stage 3 FOOD curriculum aims to ensure the following aims are achieved by the end of KS3, with thirty hour lessons in year 7, 8 + 9

- All students should have the skills, confidence and resilience to undertake preparing and cooking a range of dishes independently and safely.
- All students should have some understanding of how the food they consume will impact on the health of their body and mind, both now and in the future.
- All students should understand that ingredients have specific functions in recipes and be beginning to understand some of food science.
- All students should understand some of the impact that growing, rearing and processing foods can have on people and planet.
- All students should have some understanding of their choices as consumers.

Food preparation and cooking skills (food safety) For students to demonstrate effective and safe cooking skills by planning, preparing and cooking using a variety of food commodities, cooking techniques and equipment.

Health and nutrition

To develop students understanding about the relationship between diet, nutrition and health including the physiological and psychological effects of poor diet and health

Food science

To develop knowledge and understanding of the functional properties and chemical processes of food ingredients.

Factors affecting food choice

To understand the economic, environmental, cultural and ethical influences on food availability and choices, diet and health.

Food provenance

To understand the origins and production process of ingredients and the impact that this can have on the environment.



Overview of KS4 Curriculum		
Subject: GCSE Food Preparation and Nutrition		Nutrition Exam Board: WJEC
	Year 10	Year 11
	EDUQAS GCSE Food Preparation and Nutrition Year 10 is taught through commodities with a balance of practical and theoretical knowledge and application.	Non-examination assessment 50% of the qualification 100 marks
	Assessment: pre/post test for all units. End of unit test using past paper questions from a range of examination boards. Exam technique. Practical assessment for all products.	The non-examination assessment is composed of two assessments that are set by WJEC. Both assessments are to be completed in the academic year in which the learner is entered for the qualification. Learners will be able to select from a choice of two tasks for each assessment. Recommended assessment hours have been allocated to each
	Unit 1: Cereals (including flours, breakfast cereals, bread and pasta)	assessment; these hours have been identified as the optimal (recommended) for completion of the assessment. These recommended assessment hours need to be completed within the centre in compliance with the required regulatory conditions.
	Key Topics Provenance: How climate, soil, etc., affects the types of cereals which can grow. GM crops – discuss Cereal – as a staple food; impact of crop failure on health of a nation (link to sustainability and world health).	NEA 1: The Food Investigation Assessment 15% of total qualification
erm	How commodity is grown/reared and processed: How cereals are grown, harvested and processed. General structure of grain – endosperm, germ and bran. Primary and	A Food Investigation will be set that will require each learner to: (a) research and plan the task
Autumn Term	Secondary processing. Breakfast cereals – use different grains and look at sugar and salt content. Link in food labelling and packaging. Classification : Look at the range of cereals grown and eaten across the world. Discuss	 (b) investigate the working characteristics, function and chemical properties of ingredients through practical experimentation and use the findings to achieve a particular result (c) analyse and evaluate the task
A	free from ranges (gluten free). Nutritional values (include sources, functions, deficiencies, excess, daily	 (d) produce a report which evidences all of the above and includes photographs and/or visual recordings to support the investigation
	requirements): Staple foods and contribution towards energy requirements. Balance of energy input with energy output Nutrient requirements (link to different life stages). Carbohydrate – starch Dietary fibre (NSP: non-starch polysaccharide) – soluble and	WJEC Eduqas recommends: 8 assessment hours for this assessment, to cover all aspects of the assessment.
	insoluble B vitamins Effect of nutrient absorption due to presence of phytates. Principal of fortification of food in the context of flour and breakfast cereals. Water	WJEC expects the total length of the report to be between $1,500 - 2,000$ words. Assessments change annually, released September 1^{st} by WJEC secure site.
	soluble vitamin B group – effect of cooking Dietary Considerations: Importance of wholegrains to reduce risk of heart disease,	Assessment Objectives
	type 2 diabetes and control blood cholesterol. Link to effect of low-fibre diet:	AO2 (10%) AO4 (5%)
	Haemorrhoids, diverticulitis, cancer of the colon Deficiencies: Beriberi – lack of thiamin (vitamin B1) Pellagra – lack of niacin (vitamin B3) Allergies: Coeliac disease Food Science: Chemical and physical structure of cereal grains. Gluten formation, gelatinisation, coagulation, dextrinisation, retrogradation, gels Breadmaking: •	Demonstrate knowledge and understanding of nutrition, food, cooking and preparation. Analyse and evaluate different aspects of nutrition, food, cooking including food made by themselves and others.
	Scientific principles, including problem solving • Chorleywood process in breadmaking •	



	- CD and DMAD also an annual state tool
Vitamin C (ascorbic acid) in large scale bread manufacturing. Yeast as a raising agent.	
Recap on types of raising agents and discuss their principles	- Recap on key principles of now to conduct NEA – ensure learners are farminar with the
Food Safety: Low risk foods (exception includes cooked rice) Food spoilage – mould,	
etc. Food safety issues with cooked rice (Bacillus Cereus).	hypothesis setting, plan of action, writing up an experiment, analysis results of
	experiment and drawing conclusions, referencing sources).
Practical skills:	 Knowledge recall is undertaken on the topic for week 1 and 2 – practical and
Produced produced are high technical skills and are undertaken over a series of one	•
hour lessons.	• Students conduct research for their exam (week 3/4)
Bread and enriched dough.	 Computer sessions for summary of research, mind map, hypothesis and plan of action (week 5/6)
Flatbreads	 Food science and investigation practical exam undertaken (week 7). Students taken
Pasta making.	off timetable.
 Shortcrust pastry 	 Computer sessions for final conclusions (week 8).
Flaky pastry	compater sessions for final conclusions (week o).
 Choux pastry. 	Half Term
Roux sauce,	(Mock Revision List given to students before half term. This revision list is a continuation
 Meringues. 	of what is used in Year 10).
• Mernigues.	Mock exam week falls within NEA2 assessment.
	NEA 2:The Food Preparation Assessment
	35% of total gualification
	Released 1 st November by WJEC secure website.
	This assessment is synoptic and assesses the application of knowledge and understanding
	in relation to selecting dishes and identifying cooking skills/techniques and the execution
	of practical skills.
	This assessment will require learners to:
	Plan, prepare, cook and present a selection of dishes, to meet particular requirements
	such as a dietary need, lifestyle choice or specific context.
	Two options for this assessment will be set by WJEC Eduqas that will require the learners
	to:
	(a) investigate and plan the task, select a final menu to be produced to showcase skills
	and produce a plan of action for the practical execution of the dishes (to include trialling
	and testing)
	(b) prepare, cook and present a menu of three dishes within a single session.
	(c) evaluate the selection, preparation, cooking and presentation of the three dishes





	Unit 2: Meat, Poultry, Fish and Eggs	NEA 2 Exam (35%) of final grade up to Feb half term.
	Key Topics	
	Classification: Animal types Cuts of meat (link in methods of cooking - tender versus	 Computer sessions for planning of trials – 4 products (week 1)
	tough cuts, and cost) Gelatine Categories of fish – white/oily/shell, etc., also flat, round,	Practical trials (week 2/3)
	etc. (link in preservation – canned, smoked, etc.) Types of egg	• Computer session: Reasons for choice and Planning of practical exam (week 4/5)
	Provenance: How commodity is grown/reared and processed	Practical exam undertaken week after half term.
	Nutritional values (include sources, functions, deficiencies, excess, daily requirements).	Computer session for final evaluation (week 7)
	Nutritional Values: Nutrient requirements (link to different life stages) Protein (HBV)	 Additional time is given to food styling techniques/practical work.
	Saturated fat B vitamins Iron (include complementary action of vitamin C with iron)	 NEA samples to be sent to exam board by 5th May.
	Trace element – iodine and fluoride in fish and shellfish Health benefits of eating fish	
	Omega 3 in oily fish.	During NEA2, students are given a past paper revision pack produced by the department.
	Dietary Considerations: Implications of excess or deficiency of protein Healthy blood –	This is used for homework as writing up of NEA2 is undertaken in school under exam
	iron (haem and non-haem iron) Iron deficiency, and recap on complementary actions of	conditions.
	vitamin C and iron. Health benefits of omega 3 Include religious considerations when	
	eating meat.	Exam Preparation.
	Protein - Chemical composition, function and deficiency.	
	Vegetarian diet: lacto ovo, lacto and vegan.	Priority is to focus on areas not covered sufficiently in Year 10, then general revision and
_	Food Science: Chemical and physical structure of meat, fish, poultry and eggs	exam paper technique. Practical skills form part of revision.
E .	Denaturation (e.g. uncoiling of protein molecules when making meringues) Coagulation	
Spring Term	(e.g. setting of egg in cakes) Foaming (e.g. formation of foam when whisking egg white	Targeted revision for final few weeks of term. Focus on extended questions.
ling	protein) Aeration Connective tissue in meat and fish – how this should affect the	
Spi	cooking method Maillard reaction	Written Examination: Principles of Food Preparation and Nutrition
	Food Safety: High risk foods. High risk foods – link to specific food poisoning	50% of the qualification
	bacteria, correct storage temperatures. How to tell if meat and fish is fresh. Lion	100 marks
	mark on egg. Physical, chemical and biological contamination. Bacterial multiplication.	1 hour 45 minutes.
	Storage: Link with food hygiene and safety, also link with preservation (e.g. how to	
	store diced, frozen, canned foods as well as fresh foods)	This component will consist of two sections both containing compulsory questions and will
		assess the six areas of content as listed in the specified GCSE content.
	Practical skills:	Section A: questions based on stimulus material.
	Casserole with dumplings.	Section B: structured, short and extended response questions to assess content related to
	Gut and fillet flat/round fish – free choice practical.	food preparation and nutrition.
	Boning chicken – using all joints to make dishes and stock with the carcass.	
	Chicken Kiev/Katsu curry.	Areas of content:
	Chocolate fondants.	1. Food commodities
	Egg fried rice.	2. Principles of nutrition
		3. Diet and good health
	Unit 3: Soya, tofu, beans, nuts, seeds taught at the end of this unit.	4. The science of food
	<u>Classification</u> : How soya beans are cultivated. Secondary processing: How soya is	5. Where food comes from
	processed into tofu, TVP (textured vegetable protein), and link back to soya milk. How	6. Cooking and food preparation
	beans (pulses/legumes), nuts and seeds are grown. Mycoprotein (Quorn TM) – what it	



is derived from, how it is processed into mycoprotein. Secondary processing: Beans,	
nuts, seeds.	
Classification: Soya products – milk, yoghurt, TVP, tofu, tempeh Beans (legumes) – red	
kidney, black eyed, aduki, etc. Nuts – brazil, cashew, almonds, etc. (highlight 14	
allergens). Seeds – sesame, poppy, caraway, etc.	
Nutritional Values: Recap HBV protein and soya/quorn. Recap on protein	
complementation – nuts, seeds. Recap on fibre and fat.	
Food Science: Nuts as a thickener	
Food hygiene and safety: nut allergy and safe storage. Recap on 14 allergens.	
Practical Skills	
Salt and Pepper Tofu.	
Sticky Lemon Tofu.	
Butter Chicken.	
Unit 4: Commodity: Milk, cheese and yoghurt	
Provenance: Local versus nationally distributed and imported milk. Cost and impact	
on milk prices for farmer's livelihood. Food miles, food wastage and sustainability.	
How commodity is grown/reared and processed: How animals are reared, fed and	
milked. Animal and plant sources of milk. Different methods of preserving milk (drying,	
UHT, pasteurisation, etc.) –link to convenience foods. Importance of hygiene for	
effective food safety (heat treatment). Effect on nutritional content from processing.	
Examples of secondary processing – milk to cream, yoghurt, cheese, etc.	
Classification: Different animal sources (also link in non-dairy milk – e.g. nut, soya,	
coconut; alternatives to non-dairy cream)	
Nutritional values (include sources, functions, deficiencies, excess, daily	
requirements): Recap macronutrients. Focus calcium, Vit A&D, iodine.	
Dietary Requirements: Link to bone health: Calcium and vitamin D. Allergies: lactose	
intolerance.	
Food Science: Chemical and physical structure of dairy based products. Emulsion – explain why milk is an emulsion. Denaturation and coagulation of milk proteins. Making	
butter, yoghurt – the science behind it. Making cheese – use of rennet (curds and	
whey). Benefits of bacteria in the making of yoghurt, cheese, etc. Effect of heat on	
cheese.	
Food hygiene and safety: Heat treating raw milk. Storage of dairy products.	
Storage : Dried, cartons, unopened and opened cans, fresh, frozen, etc. What are	
suitable conditions for storage? Why?	
Practical skills:	



	Butter – cream tea.	
	Paneer – curry,	
	Panacotta.	
	Year 10 Examination – written and practical exam.	Exam Preparation and Revision
Summer Term	Year 10 Examination – written and practical exam. Unit 5: Fruit and Vegetables. Provenance: How/where fruit and vegetables are grown, link to climate. Organic verses non-organic (Soil Association, etc.) Use of pesticides and herbicides –possible impact on health. Cost, seasons and food miles. How commodity is grown/reared and processed: Growing/harvesting/processing of apples and potatoes. Recall on primary and secondary processing. Preservation – fresh, frozen, canned, dried, jam, juiced. Sensory testing on range of fruits. Classification: Difference between fruits and vegetables – leaves, stems, roots, tubers, bulbs, etc Nutritional values (include sources, functions, deficiencies, excess, daily requirements): Recap on 5 a day/Eatwell Guide/Soluble and insoluble fibre. Recap on vitamins and minerals (cover A, B, C, D, calcium and iron), and include complementary actions of the nutrients Vitamin C and iron/vitamin D and calcium. Fat and water soluble vitamins – effect of oxidation, heat on vitamin content of fruits and vegetables Compare nutrient content of a specific fruit or vegetable – fresh, frozen, canned, dried, etc Dietary Requirements: Recap vegetarians (lacto/lacto-ovo/vegan) Bone health – link in with vitamin D and calcium. Healthy blood – link in with vitamin C and iron Food Science: How the texture of fruits and vegetables change when cooked. Oxidation/enzymic browning. Colour of green leaf//red vegetables – NEA 1 style experiment focussing on chlorophyll and anthocyanins. Food Safety: Recap on personal hygiene, temperature control, use by, best before dates. Bagged salads – food poisoning risk (link to processing of leaves for bagged salads). Storage: Ambient – loss of nutrient content over time. Blanching and freezing. Practical Skills Samosas Preservation – jam Potato Salad – making mayonnaise. Fruit/Vegetable Cutting mat. Roast Potatoes and Rosti	 Exam Preparation and Revision Technology in food. Revision of key topics – focus dependent on class and performance in previous exam (areas for revision identified through these activities). Careers: Food Buyer, Public Relations, Advertising, Quality Assurance, Food Marketing, Lifestyle and Consultancy, Environmental Health Officer, Dietitian, Public Health, Sports Nutritionist/Community Nutritionist, Microbiologists, Sensory Science, Food Scientist, Food Technologist, Food Journalism, Brand Manager, Account Manager, Product Development, Research and Development, Market Analyst, Education.



Gnocchi

NEA1 Practice – Sugar in Cakes.

2018 NEA 1 task undertaken. Following commodity taught through this task.

Unit 6: Butter, oils, margarine, sugar and syrup

Classification: Butter, oils, margarine (animal and vegetable fats) Hard fats – solid at room temperature. Liquid fats – liquid at room temperature. Butter, lard, suet. Margarine – different oil bases (sunflower, olive, soya, etc) Margarine and hydrogenation. Sugar and syrup. Sugar cane, sugar beet, types of syrup (monosaccharides and disaccharides, e.g. treacle, golden syrup, sugar substitutes. Food Science: Chemical and physical structure of butter, oils, margarine. Hydrogenation of oils to produce hard fats – health implications. Plasticity, Shortening, Emulsification. Melting point/smoke point. Chemical and physical structure of sugar and syrup, caramelisation.

Food hygiene and safety: Rancidity of fat.

Careers: Food Buyer, Public Relations, Advertising, Quality Assurance, Food Marketing, Lifestyle and Consultancy, Environmental Health Officer, Dietitian, Public Health, Sports Nutritionist/Community Nutritionist, Microbiologists, Sensory Science, Food Scientist, Food Technologist, Food Journalism, Brand Manager, Account Manager, Product Development, Research and Development, Market Analyst, Education.



Curriculum Rationale:

The Eduqas GCSE in Food Preparation and Nutrition equips learners with the knowledge, understanding and skills required to cook and apply the principles of food science, nutrition and healthy eating. It encourages learners to cook, enables them to make informed decisions about food and nutrition and allows them to acquire knowledge in order to be able to feed themselves and others affordably and nutritiously, now and later in life.

This course has been designed to enable centres to concentrate on innovative delivery of the course whilst creating a balance between practical and theoretical knowledge and understanding. The layout of the content into six areas of content promotes flexibility of delivery, and releasing two tasks for each of the assessments that constitute the non-examination assessment will ensure learners are able to complete assessments suitable to their aspirational goals.

By studying food preparation and nutrition learners will:

- be able to demonstrate effective and safe cooking skills by planning, preparing and cooking a variety of food commodities whilst using different cooking techniques and equipment.
- develop knowledge and understanding of the functional properties and chemical characteristics of food as well as a sound knowledge of the nutritional content of food and drinks.
- understand the relationship between diet, nutrition and health, including the physiological and psychological effects of poor diet and health.
- understand the economic, environmental, ethical and socio-cultural influences on food availability, production processes, diet and health choices.
- demonstrate knowledge and understanding of functional and nutritional properties, sensory qualities and microbiological food safety considerations when preparing, processing, storing, cooking and serving food.
- understand and explore a range of ingredients and processes from different culinary traditions (traditional British and international) to inspire new ideas or modify existing recipes.

This course provides a suitable foundation for WJEC Level 3 Food, Science and Nutrition.