

WJEC GCSE Food and Nutrition

Approved by Qualifications Wales

Guidance for Teaching: Unit 1

Teaching from 2025

For award from 2027



This Qualifications Wales regulated qualification
is not available to centres in England.

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Introduction

The WJEC GCSE Food and Nutrition has been approved by Qualifications Wales and is available to all centres in Wales. It will be awarded for the first time in Summer 2027, using grades A* to G.

Aims of the Guidance for Teaching

The principal aim of the Guidance for Teaching is to support teachers in the delivery of WJEC GCSE Food and Nutrition and to offer guidance on the requirements of the qualification and the assessment process. The Guidance for Teaching is **not intended as a comprehensive reference**, but as support for teachers to develop stimulating and exciting courses tailored to the needs and skills of their learners. The guide offers possible classroom activities and links to useful resources (including our own, freely available digital materials and some from external sources) to provide ideas for immersive and engaging lessons.

Additional ways that WJEC can offer support:

- sample assessment materials and mark schemes
- professional learning events
- examiners' reports on each unit
- direct access to the subject officer
- free online resources
- Exam Results Analysis
- Online Examination Review.

Qualification Structure

WJEC GCSE Food and Nutrition consists of three units. The qualification is linear and does not contain tiering. There is no hierarchy to the order the units should be taught.

	Unit title	Type of Assessment	Weighting
Unit 1	Principles of Food and Nutrition	Digital examination	40%
Unit 2	Food Investigation	Non-examination assessment	20%
Unit 3	Food and Nutrition in Action	Non-examination assessment	40%

Assessment

Summary of Assessment – Unit 1

Unit 1: Principles of Food and Nutrition
Digital examination: 1 hour 30 minutes
40% of qualification

80 marks

Questions requiring objective responses, quick-response, short and extended answers.

Overview of Unit 1

Principles of Food and Nutrition

(40% of the qualification)

The purpose of this unit is to:

- develop knowledge and understanding of food and nutrition and food preparation and cooking.

In this unit, learners will develop knowledge, skills and understanding in:	
1.1	Food commodity groups
1.2	Nutrients for a balanced diet
1.3	Diet and health
1.4	Cooking food
1.5	Food spoilage
1.6	From field to fork

Unit 1 Assessment objectives and weightings

AO1	Demonstrate knowledge and understanding of: • food and nutrition • preparing, cooking and presenting food.	15%
AO2	Apply knowledge and understanding of: • food and nutrition • preparing, cooking and presenting food.	15%
AO3	Analyse and evaluate different aspects of: • food and nutrition • preparing, cooking and presenting food (including food and dishes made by themselves and others).	10%
AO4	Plan, prepare, cook and present dishes, using appropriate skills and techniques.	-

Unit 1 Teacher Guidance

1.1 Food commodity groups		
	Content Amplification	Teacher Guidance
1.1.1 Food commodity groups	<p>Learners should know examples from the food commodity groups, including:</p> <ul style="list-style-type: none"> • carbohydrate foods, including fibre, starch and sugar • dairy foods and alternatives • fats and oils • fruits and vegetables • protein foods including eggs, fish, meat and plant-based alternatives. <p>Learners should understand the:</p> <ul style="list-style-type: none"> • nutritional value of the food commodity groups • functions and characteristics of the food commodity groups. <p>Learners should be aware of:</p> <ul style="list-style-type: none"> • storage options relating to the food commodity groups • the origins of the food commodity groups. 	<p>Teachers should ensure that natural links to other areas of the specification are considered when planning and delivering lessons based on commodities. Practical activities offer invaluable opportunities to highlight and reinforce information linked to the ingredients used and how they react during cooking.</p> <p>Commodities can be studied individually or grouped together.</p> <p>Key points to consider for each commodity include:</p> <ul style="list-style-type: none"> • classification and characteristics • nutritional value and contribution to a healthy diet • provenance • purchase and storage. <p>Example Task – Combination</p> <p>Plant based diets are becoming increasingly popular in the UK. Investigate a range of commodities included in this type of diet with the focus being their functions and characteristics, nutritional value and their contribution to a healthy plant-based diet.</p> <p>Teachers can select the number of commodities to focus on when planning this task. It naturally gravitates towards fruits, vegetables and plant-based alternatives to protein foods, but as plant-based diets are not vegan diets, teachers could choose to include some animal products.</p> <p>If resources allow, experimental work/tasting and testing could be carried out e.g. milk alternatives used in sauces. Learners will transfer these skills to Units 2 and 3.</p> <p>Product websites can be used to gather information and customer reviews offer other people's opinions.</p>

Example Task – Individual

Fats and oils have a wide range of functions in food preparation. Research a range of fats and oils with the focus being their properties and characteristics, functions in food preparation, nutritional value and their contribution to a healthy diet.

Resources will dictate the approach to this task. It can be a theory exercise with reinforcement where appropriate during practical lessons or, if resources allow, a range of fats and oils can be provided so that learners can read labels and examine the characteristics to gather information. If possible, learners could carry out some experimental work e.g. shortening in pastry and/or sensory analysis in preparation for Units 2 and 3.

Product websites can be used to gather information and customer reviews offer other people's opinions.

1.2 Nutrients for a balanced diet		
	Content Amplification	Teacher Guidance
1.2.1 Macronutrients	<p>Learners should know the role of macronutrients, including:</p> <ul style="list-style-type: none"> • carbohydrates • fat • protein. <p>Learners should understand, for each macronutrient:</p> <ul style="list-style-type: none"> • functions • sources • effects of deficiency or excess. 	<p>As nutrition underpins this qualification, it is important that teachers ensure that learners are confident discussing the function and sources of proteins, fats and carbohydrates as well as the effects of excess or deficiency of each of these macronutrients.</p> <p>Macronutrients provide the body with energy and learners should know the type of energy they supply together with at least two/three food sources, and both plant and animal sources in the case of protein and fats.</p> <ul style="list-style-type: none"> • Protein – high biological value and low biological value • Fat – saturated, monounsaturated and polyunsaturated • Carbohydrates – sugar, starch and dietary fibre. <p>Application of knowledge is key, and learners should be encouraged to extend their sentences using 'Nutrient – Function – Source' when writing about nutrition throughout the units. For example, 'Protein is required for growth and repair and can be found in eggs and soya beans.'</p> <p>Progression will see learners qualifying the type of macronutrient e.g. HBV or LBV protein and commenting on the effects of excess or deficiency.</p> <p>Using this technique helps when completing higher tariff questions in Unit 1, analysis of experimental results in Unit 2 and the justification of chosen dishes in Unit 3.</p> <p>WJEC GCSE textbooks and online resources provide an accurate guide to the level of nutrition required for this qualification. Blended learning resources and knowledge organisers have been developed for each section of Unit 1. These can be adapted to suit your cohort and cynefin. The current GCSE textbooks can continue to be used as there is very little change to specification content.</p>

		<p>Example Task – Designed as a building block for a broader task involving both macronutrients and micronutrients.</p> <p>The body requires energy in order to function. Discuss the three macronutrients and their importance in the diet.</p> <p>Teachers are looking for information on proteins, fats and carbohydrates written in extended sentences. Knowledge of the macronutrient could include subcategories, functions, sources and the effects of excess or deficiency. A structure strip could be produced to guide learners, maintain focus and improve the overall quality of written work. Remind learners to apply existing literacy skills when completing the task.</p>
1.2.2 Micronutrients	<p>Learners should know the role of micronutrients, including:</p> <ul style="list-style-type: none"> • minerals: calcium, iron, potassium and magnesium • vitamins: fat soluble vitamins A, D, E and K. Water soluble vitamins B1, B2, B3, B12, B9 and C. <p>Learners should understand, for each micronutrient:</p> <ul style="list-style-type: none"> • functions • sources • effects of deficiency or excess. 	<p>A similar approach can be taken when teaching the micronutrients as the macronutrients and questioning during practical sessions will allow recall linked to individual ingredients and their nutritional value.</p> <p>Food commodities and nutrition have clear links and should always be discussed together. As with macro-nutrients, 'Nutrient – Function – Source' and structure strips are excellent tools to use in order to develop knowledge and understanding, providing learners with easy-to-use resources which they can use across all units. Effects of excess and deficiencies can be included using a similar approach.</p> <p>WJEC GCSE textbooks and online resources can be used to identify the level of knowledge required. Blended learning resources and knowledge organisers have been developed for each section of Unit 1. These can be adapted to suit your cohort and cynefin. The current GCSE textbooks can continue to be used as there is very little change to specification content.</p> <ul style="list-style-type: none"> • Learners must concentrate on good sources of each of the listed vitamins and minerals and be able to recall at least two/three good sources, and where appropriate, include both plant and animal sources. • The main functions of each of the micronutrients listed should be clearly identified.

		<ul style="list-style-type: none"> Teachers should emphasise the differences between fat and water soluble vitamins and learners need to know that vitamins can also be categorised as antioxidants. The complementary action between micronutrients e.g. iron and vitamin C should be highlighted. <p>Example Task – Designed as a building block for a broader task involving both the macronutrients and micronutrients. Individually or in pairs, produce an interactive learning resource to help the delivery of the topic 'Vitamins and minerals'.</p> <p>Learners can produce any form of resource to help the delivery of the topic. This allows all types of learners to play to their strengths and gain confidence from peers if they choose to work in a pair. The opportunity to use each other's resources will help learners to retain the information.</p>
1.2.3 A balanced diet	<p>Learners should understand:</p> <ul style="list-style-type: none"> the importance of fibre and water in a balanced diet the complementary actions of nutrients. <p>Learners should know how to calculate energy and nutritional values in food.</p> <p>Learners should be aware of:</p> <ul style="list-style-type: none"> The Eatwell Guide and its recommendations to achieve a balanced diet the importance of determining energy requirements based on levels of physical activity. 	<p>Teachers could use the definition of a 'balanced' diet as a starting point for this area and initiate a discussion linked to a 'healthy' balanced diet. If learners understand that both these elements are important then it provides more scope for application of their knowledge of macronutrients and micronutrients, their complementary action, energy intake and the importance of physical activity.</p> <ul style="list-style-type: none"> It is the teacher's responsibility to keep up to date with current recommended guidelines for a healthy diet and strategies in place for Wales. Using 'The Eatwell Guide' and its recommendations will help demonstrate how to achieve a balanced diet at the same time as providing opportunities to discuss the importance of water and dietary fibre. Quick tasks such as measuring glasses of water and watching a wholegrain breakfast cereal absorb liquid helps to cement abstract concepts and learner understanding. Interpretation of food labelling and the traffic light system on packaging should be referred to. A collection of food labels is an invaluable resource to have in the classroom.

- There are various nutritional analysis programs available to schools e.g. [Food a fact of life](#). Teachers are free to use the one they feel most comfortable with and have the resources in their centre available to run them.
- If skill based practical sessions are delivered alongside this topic, there will be natural opportunities to discuss the recipes made as part of healthy, balanced diets. Learners should be able to suggest adaptions that could be made to existing recipes based on knowledge gained.

Example Task – Dietary Nutritional Analysis

- a) Keep a food diary for one day. Remember to record all your meals, snacks and drinks in as much detail as possible e.g. 2 Weetabix with semi-skimmed milk and a teaspoon of sugar, 1 piece of wholemeal toast with butter and strawberry jam and a glass of sugar free orange squash.
- b) Use a nutritional analysis program to calculate the energy and nutritional value of your diet.
- c) Comment on the data produced identifying changes that might be made in order to improve your diet.
- d) Justify the changes you have suggested to your diet.

Teachers can adapt this task to suit their class. It can be extended by recording additional days or comparing a school day with a weekend day. It can be condensed by providing the learners with an example of a diet and missing out part 'a)', or by selecting the number of nutrients you wish the learners to comment on. Part 'd)' could be included or removed depending on learner ability or time available. Nutritional analysis will also be required when completing Unit 3 and '**Nutrient – Function – Source**' is a good way to access higher mark bands when assessing the quality of work.

Example Task – Recipe Nutritional Analysis

- a) Select a recipe that you have used in one of your practical sessions.
- b) Use a nutritional analysis program to calculate the energy and nutritional value of your recipe. Remember to analyse one portion of the recipe if it serves more than one person.

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| | <p>c) Comment on the data produced, identifying changes that might be made in order to improve the nutritional content of the recipe.</p> <p>d) Justify the changes you have suggested.</p> <p>Teachers can adapt this task to suit their class. It can be extended by adding the accompaniments you would serve as part of a meal. It can be condensed by providing the learners with a recipe and missing out part 'a'), or by selecting the number of nutrients you wish the learners to comment on. Part 'd)' could be included or removed depending on learner ability or time available. Nutritional analysis will also be required when completing Unit 3 and 'Nutrient – Function – Source' is a good way to access higher mark bands when assessing the quality of work.</p> |
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1.3 Diet and health

Content Amplification	Teacher Guidance										
<p>1.3.1 How nutritional needs change over the life stages</p> <p>Learners should understand how nutritional needs change over the life stages, including:</p> <ul style="list-style-type: none"> • infancy • childhood • adolescence • adulthood • later adulthood. <p>Learners should be aware of the daily recommended intake of nutrients over the life stages.</p>	<p>This module builds on the knowledge and understanding gained from previous lessons focusing on nutrients for a balanced diet, and recommended guidelines for a healthy diet. Learners require an understanding of the nutritional needs of the listed groups and should be able to suggest improvements to diets with clear justification for changes made. Case studies provide the opportunity for learners to demonstrate and apply their knowledge and understanding as well as analysing and evaluating different aspects of food and nutrition.</p> <p>Example Task</p> <p>Morgan is a Year 13 student who has just obtained a sport scholarship with Triathlon Cymru. They train at least 9 sessions a week to include swimming, cycling, running, strength and conditioning. Morgan has limited spare time and their diet varies. An example of a day's meals can be seen below:</p> <table border="1" data-bbox="1156 817 1942 1262"> <tbody> <tr> <td data-bbox="1156 817 1336 897">Breakfast</td> <td data-bbox="1336 817 1942 897">Porridge made with whole milk Banana</td> </tr> <tr> <td data-bbox="1156 897 1336 1008">Lunch</td> <td data-bbox="1336 897 1942 1008">Chicken salad sandwich (4 slices bread) Fruit and nut flapjack Apple</td> </tr> <tr> <td data-bbox="1156 1008 1336 1119">Dinner</td> <td data-bbox="1336 1008 1942 1119">Spaghetti bolognese Garlic bread Strawberry yogurt</td> </tr> <tr> <td data-bbox="1156 1119 1336 1198">Snacks</td> <td data-bbox="1336 1119 1942 1198">Carrot and celery sticks Yogurt covered raisins</td> </tr> <tr> <td data-bbox="1156 1198 1336 1262">Drinks</td> <td data-bbox="1336 1198 1942 1262">3 bottles of water Glass of whole milk</td> </tr> </tbody> </table>	Breakfast	Porridge made with whole milk Banana	Lunch	Chicken salad sandwich (4 slices bread) Fruit and nut flapjack Apple	Dinner	Spaghetti bolognese Garlic bread Strawberry yogurt	Snacks	Carrot and celery sticks Yogurt covered raisins	Drinks	3 bottles of water Glass of whole milk
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Drinks	3 bottles of water Glass of whole milk										

1. Use an online program to analyse the nutritional content of Morgan's sample diet.
 2. Complete the table below, adding your initial thoughts in the notes column.

Nutrient	Amount	% of recommended daily amount	Notes
Energy			
Fat			
Saturated fat			
Carbohydrate			
Sugar			
Protein			
Fibre			
Salt			

3. Discuss the nutritional content of Morgan's diet and its suitability for their activity level. Don't forget to use: **NUTRIENT – FUNCTION – SOURCE**
 4. Suggest improvements Morgan could make to their diet and give reasons for the changes.

Example Task

David is 85 years old and until recently he has lived at home. Arthritic knee joints meant that walking became very painful which limited his mobility and his ability to prepare and cook meals for himself. After a series of hospital admissions, as a result of falls, it was decided that he should move into a nursing home. The menu changes monthly and an example of one day in October can be seen below

Breakfast	Bowl of Weetabix with warm semi-skimmed milk and a teaspoon of sugar
Lunch	Ham and cheese sandwich (2 slices) 2 scoops of vanilla ice cream

		<table border="1"> <tr> <td>Dinner</td><td>2 pork sausages (grilled) Medium jacket potato with 2 teaspoons butter and ½ teaspoon salt Peas Slice of Swiss roll Custard pot</td></tr> <tr> <td>Snacks</td><td>2 rich tea biscuits</td></tr> <tr> <td>Drinks</td><td>5 cups of tea with milk</td></tr> </table> <p>1. Use an online program to analyse the nutritional content of David's sample diet. 2. Complete the table below, adding your initial thoughts in the notes column.</p> <table border="1"> <thead> <tr> <th>Nutrient</th><th>Amount</th><th>% of recommended daily amount</th><th>Notes</th></tr> </thead> <tbody> <tr> <td>Energy</td><td></td><td></td><td></td></tr> <tr> <td>Saturated fat</td><td></td><td></td><td></td></tr> <tr> <td>Sugar</td><td></td><td></td><td></td></tr> <tr> <td>Protein</td><td></td><td></td><td></td></tr> <tr> <td>Fibre</td><td></td><td></td><td></td></tr> <tr> <td>Salt</td><td></td><td></td><td></td></tr> </tbody> </table> <p>3. Discuss the nutritional content of David's diet. Is it suitable for an 85-year-old with limited mobility? Don't forget to use: NUTRIENT – FUNCTION – SOURCE. 4. Suggest improvements the nursing home could make to their menu and give reasons for the changes. 5. Plan, prepare and cook one of your suggested recipes included in the adapted menu.</p> <p>Teachers could adapt scenarios to fit any life stage, differentiate the tasks to suit the ability of the learners, build in progression and where appropriate, plan and carry out practical work. These skills will be transferred when completing the Unit 3 NEA.</p>	Dinner	2 pork sausages (grilled) Medium jacket potato with 2 teaspoons butter and ½ teaspoon salt Peas Slice of Swiss roll Custard pot	Snacks	2 rich tea biscuits	Drinks	5 cups of tea with milk	Nutrient	Amount	% of recommended daily amount	Notes	Energy				Saturated fat				Sugar				Protein				Fibre				Salt			
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<p>1.3.2 Dietary needs and nutritional deficiencies</p>	<p>Learners should understand the nutritional needs of individuals with specific dietary needs or nutritional deficiencies, such as:</p> <ul style="list-style-type: none"> • anaemia • cardiovascular disease • coeliac disease • food intolerances and allergies • type 2 diabetes. <p>Learners should be aware of current trends relating to dietary issues in Wales.</p>	<p>This module can be delivered in isolation; however, there are opportunities to include all the conditions listed when planning tasks linked to nutrition, healthy and balanced diets and feeding different target groups. Case studies similar to the example task in 1.3.1 can be easily written to include any of the specific dietary needs. Practical and experimental work could also be designed to include adaptations to existing recipes in order to meet the necessary requirements. It is important to focus on the nutritional needs of the condition and how to plan healthy and balanced diets to meet these specific needs.</p> <p>Example Task</p> <p>Many people are diagnosed with conditions which require adaptions to their diet. These include:</p> <ul style="list-style-type: none"> • anaemia • cardiovascular disease • coeliac disease • food intolerances • food allergies • type 2 diabetes. <p>Produce an interesting PowerPoint presentation that could be used at a drop-in session in your local health centre. Include basic information linked to each condition (it could be one or more) highlighting any specific nutritional needs. Include suitable suggestions for adapting and planning diets to meet the identified requirements.</p> <p>Teachers could reduce the time required to complete tasks such as these by designing them as group tasks with one condition allocated to each group. The information is then shared during the presentation of the work. ‘Learners leading learning’ requires careful planning and differentiation so learners of all abilities have the information they require at the correct level for them.</p> <p>Example Task</p> <p>Investigate one medical condition which dictates adaptions to the diet.</p>
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	<p>Produce a three-day menu suitable for your chosen condition and select one of the dishes to make in your next practical session.</p> <p>The task above allows learners to apply their knowledge to a specific group they have selected. However, teachers must ensure that all other listed conditions are also covered, and knowledge is not restricted to the chosen one as the final assessment could examine any of the conditions in the specification. Practical work should be focusing on higher level skills in conjunction with Unit 3. Sensory analysis of adapted recipes uses skills also used for the completion of Units 2 and 3.</p>
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<p>1.3.3 Other factors affecting food choices</p>	<p>Learners should know factors that affect food choices, including:</p> <ul style="list-style-type: none"> • cultural influences • food availability • levels of physical activity • lifestyle • personal preferences • religious beliefs • socio-economic influences. <p>Learners should understand the impact of food choices on:</p> <ul style="list-style-type: none"> • animal welfare • energy balance • environmental sustainability • health and wellbeing • society. <p>Learners should be aware of:</p> <ul style="list-style-type: none"> • the contributions cultural influences have had on the food we eat in Wales, including from Black, Asian and minority ethnic communities and individuals • emerging trends in relation to lifestyle choices • unequal distribution of food locally, nationally and internationally. 	<p>Learners will often already have a basic knowledge and understanding of several of the aspects covered in this section due to their own family situation, their religion, the area they live in, travel experiences, social media etc. Food choice can be used as a common thread across many sections of the specification and all three units. Environmental issues and sustainability are areas often covered in other subjects and as a result learners are comfortable applying them to food choice. However, learners might present biased arguments, and care must be taken to ensure information is balanced and factual. Teacher led discussions and cold calling when questioning can encourage varied, in-depth conversations and an appreciation of a wide range of aspects that influence what people choose to eat.</p> <p>Example Tasks – Short, focused activities</p> <ul style="list-style-type: none"> • Carry out a restaurant survey in a given area to identify cultural influences. • Shopping basket comparison to discover how/where to shop economically. • Analysis of the information on food labels and why it is important. • Visiting speaker from the local foodbank to discuss food poverty. • Investigate locally produced commodities and compare their carbon footprint with those produced nationally and internationally. • Identify seasonal ingredients and prepare dishes using them. <p>The opportunities are extensive when looking at factors affecting food choice, but time is a limiting factor. Teachers need to make the natural links when delivering the specification and highlight relevant factors during food preparation sessions.</p>
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1.4 Cooking food		
	Content Amplification	Teacher Guidance
1.4.1 Why we cook food	<p>Learners should know the reasons why we cook food, including:</p> <ul style="list-style-type: none"> • to improve safety • to increase shelf life of food • to improve digestibility and palatability. 	<p>Class discussions are a good way to focus the subject content of this module. Teaching and learning techniques such as 'Think-Pair-Share' and 'Everybody Writes' can be used as starting points for this module by using prompts similar to those below:</p> <ul style="list-style-type: none"> • Discuss the benefits of cooking food. • Describe ways we can improve the flavour, texture and appearance of food. • Explain ways that we can improve the shelf-life of food. • Discuss the ways we can ensure food is safe to eat. • What are some ways to make food easier to digest, and why is this important? <p>Information gained can be reinforced and applied during any practical tasks carried out.</p>
1.4.2 Methods of heat transfer	<p>Learners should understand how heat is transferred when cooking food, including:</p> <ul style="list-style-type: none"> • conduction • convection • radiation. <p>Learners should be aware that some dishes rely on more than one method of heat transfer.</p>	<p>Teachers can make cross-curricular links with science for simple explanations of conduction, convection and radiation as learners will have studied heat transfer in Science and Technology. Teachers need to ensure that learners are able to provide specific food examples in order to demonstrate their ability to apply knowledge to given situations. Simple practical tasks can be undertaken to demonstrate heat transfer.</p> <p>Example Task – Breakfast</p> <ul style="list-style-type: none"> • Conduction – fry an egg (dry fry and discuss the coagulation of protein) • Convection – pot of tea (use a glass jug and tea leaves to observe the convection currents) • Radiation – toast (use the grill and observe the changes). <p>Serve the egg on toast together with a cup of tea and link discussions to 1.4.1 – Why do we cook food?</p>

		<p>Example Task</p> <p>Many recipes rely on a combination of heat transfer methods in order to cook successfully.</p> <p>Select a recipe you have made which illustrates this e.g. Victoria sandwich.</p> <p>This element is designed to be delivered in conjunction with the investigational and practical work assessed in Units 2 and 3. Focused questioning during these sessions will allow teachers to track and monitor progression of learner understanding of heat transfer. Use of equipment is relevant here too, e.g. wooden spoons versus metal spoons for stirring hot liquids, ceramic quiche dishes versus metal quiche tins when baking pastry cases.</p>
1.4.3 Cooking methods	<p>Learners should understand the effects of a selection of cooking methods, including:</p> <ul style="list-style-type: none"> • dry methods • fat based • water based. <p>Learners should be aware of:</p> <ul style="list-style-type: none"> • cooking methods introduced from other cultures, including from Black, Asian and minority ethnic communities and cultures • the environmental impact of cooking. 	<p>Teachers should try to plan and deliver this section in conjunction with the Unit 2 investigational work and Unit 3 practical tasks. There is plenty of scope to map practical skills with different cooking methods used locally, nationally and internationally. Correct technical terms should be reinforced in preparation for any recall or application of knowledge for the Unit 1 assessment. Resources will dictate equipment available for the learners to use, but an awareness of trends and developments in cooking methods and equipment e.g. air fryers, is important. This can be researched online where information and tutorials etc. are readily available.</p> <p>Example Task – TV Review</p> <p>Select a cookery programme of your choice e.g. Nadiya's Cook Once Eat Twice. Watch the programme carefully and write a review based on:</p> <ul style="list-style-type: none"> • cooking methods used to produce the dishes • cultural influences on recipes made • origin of ingredients used in the recipes • the environmental impact of cooking the selected food. <p>This task is suitable for a homework exercise and can be tailored to suit learner ability and the focus of the lessons before or after it. There are natural links with module 1.3.3. Teachers might prefer to select the programme for the class and watch this in school in order to consolidate learning and highlight discussion points linked to other modules. Extension work might include the preparation of dishes influenced by other cultures.</p>

Example Task

Examine the list of recipes that you have completed during your GCSE course. Identify the methods of cooking used to make each dish and comment on how the cooking affects the finished outcome. This could include:

- nutritional value
- appearance
- texture
- flavour.

Learners could complete this task in the form of a table and write a conclusion. The task could be easily extended to identify the methods of heat transfer, different cultures studied and/or equipment used. All practical tasks should be planned with a clear focus and every opportunity taken to reinforce as many areas of the specification as possible that naturally occur.

1.5 Food spoilage		
	Content Amplification	Teacher Guidance
1.5.1 Storage and temperature control	<p>Learners should know how to store foods correctly, including:</p> <ul style="list-style-type: none"> • dry and cold storage • packaging and covering • refrigeration and freezing. <p>Learners should understand the risks of not storing food correctly for themselves and others.</p> <p>Learners should be aware of Food Standards Agency (FSA) guidelines for storing and cooking food, including:</p> <ul style="list-style-type: none"> • cooking and reheating • temperature control • use by and best before dates. 	<p>The focal point for this module will be the main conditions required for the multiplication of micro-organisms: food, warmth, moisture and time. This will underpin the topic. A sound understanding of these conditions will help learners to respond well to questions based on all elements of this module. Progression will be evident when conditions for multiplication are applied theoretically to given situations and used correctly when undertaking practical tasks.</p> <p>Teachers should take advantage of the opportunity for learners to navigate the Food Standards Agency website.</p> <p>Example Task – Starter</p> <ol style="list-style-type: none"> 1. Watch the 'Multiplication song (Jeff Simmonds)' found on YouTube. 2. Watch again and identify three important points. <p>Learners could identify the names of pathogenic bacteria, conditions required for reproduction, binary division and symptoms of food poisoning. There is an opportunity for application of numeracy skills here.</p> <p>Example Task</p> <p>Carry out a storage survey in your kitchen at home. Make a note of where different foods are stored and comment on the suitability of the location.</p> <p>This task can be adapted and carried out in the classroom if necessary and differentiated to include an in-depth analysis linking to key temperatures (1.5.2), types of food spoilage agents (1.5.4) and preservation (1.5.3). Learners should consider what the result would be of unsuitable storage of foods.</p>

1.5.2 Hygiene and safety	<p>Learners should understand microbiological principles when preparing, cooking and serving food, including:</p> <ul style="list-style-type: none"> • personal hygiene practices and procedures • food safety practices and procedures • key temperatures for food safety, storage and cooking • physical, biological and chemical contamination. 	<p>It is likely that teachers will deliver some of this information at the beginning of the course in order to ensure safe and hygienic practices when learners are preparing food e.g. personal hygiene. However, it is important that learners are prepared for the Unit 1 assessment and therefore detailed information including different types of contamination, accurate temperatures, important points to consider when buying, storing, preparing and cooking food are all needed.</p> <p>Example Task</p> <p>Resource – Teacher compiles a selection of photographs linked with real life food hygiene and safety situations, both good and bad. These could include evidence collected during practical lessons of personal hygiene as well as storage, preparation and cooking of food. Try to include evidence of food temperature probes being used, fridge/freezer thermometers etc.</p> <ol style="list-style-type: none"> 1. Carefully examine the photographic evidence presented to you. 2. Write a critical review of the food preparation area and people working in it. 3. Suggest any improvements you think are necessary, giving clear reasons why. <p>Example Task</p> <p>Case studies – these could include scenarios linked to:</p> <ul style="list-style-type: none"> • street food and festivals • buffets for any occasions • care settings • schools and nurseries • restaurants and cafes. <p>Teachers can write case studies linked to areas of interest and build in the level of demand required to differentiate for learner ability and time available. Careful planning can allow all sections of this module to be covered as there is clear cross over. Practical work can be easily included.</p>
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<p>1.5.3 Preservation</p>	<p>Learners should know preservation techniques that help keep food for longer, including:</p> <ul style="list-style-type: none"> • bottling • canning • freeze-drying • jam making • pickling • vacuum packing. <p>Learners should be aware of industrial methods of preservation used in food production.</p>	<p>As with 1.5.1, the focal point for this module will be the main conditions required for the multiplication of micro-organisms: food, warmth, moisture and time. Learners will understand that one or more of these conditions will need to be removed in order to preserve foods. Cross-curricular links to science can be utilised when explaining concepts such as osmosis and the surface area of ice crystals during fast and slow freezing.</p> <p>Example Task – Short, focused activities</p> <ul style="list-style-type: none"> • Mind map – why do we preserve food? • How can we preserve food to reduce food waste? • What is irradiation and how is it used to preserve food? • Use YouTube clips to explain techniques such as freeze drying, MAP etc. • Completion of a preservation table: <table border="1" data-bbox="994 687 2126 827"> <thead> <tr> <th data-bbox="994 687 1365 763">Method of preservation</th><th data-bbox="1365 687 1758 763">How this method works</th><th data-bbox="1758 687 2126 763">Food examples</th></tr> </thead> <tbody> <tr> <td data-bbox="994 763 1365 827"></td><td data-bbox="1365 763 1758 827"></td><td data-bbox="1758 763 2126 827"></td></tr> </tbody> </table> <p>Teachers should reinforce the presence of internal and external food spoilage agents and the most successful ways of preventing deterioration of specific foods at home and in industry. Terms such as blanching, available moisture, enzymic activity etc. are important and demonstrate a good level of understanding when applied correctly by learners.</p>	Method of preservation	How this method works	Food examples			
Method of preservation	How this method works	Food examples						

1.5.4 Food poisoning	<p>Learners should know:</p> <ul style="list-style-type: none">the types of food poisoning bacteria, including campylobacter, salmonella, e-coli, Staphylococcus Norovirus, listeriathe symptoms commonly associated with food poisoning. <p>Learners should be aware of the risks and consequences of inadequate or unacceptable food hygiene practices.</p>	<p>Teachers can introduce and discuss food poisoning in isolation, with learners investigating the named micro-organisms, food sources, incubation period and symptoms. This could be presented in a table and used where appropriate e.g. Unit 3, as well as being an ideal revision resource for learners at the end of the course. ‘Food poisoning’ can be integrated in 1.5.2, when discussing biological contamination, and by extending tasks to include specific foods which might become contaminated or cause food poisoning due to incorrect handling and cooking procedures.</p> <p>Carefully designed case studies can cover all aspects of 1.5. Food Spoilage and practical tasks will reinforce the information.</p> <p>Links made to 1.5.1 – Food Standards Agency (FSA) and Environmental Health Officers (EHOs) will ensure that learners are aware of the risks and consequences of inadequate or unacceptable food hygiene practices.</p>
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1.6 From field to fork		
	Content Amplification	Teacher Guidance
1.6.1 Food origin	<p>Learners should know the methods used to source the food we eat, including foods that are:</p> <ul style="list-style-type: none"> • caught • grown • reared. <p>Learners should be aware of:</p> <ul style="list-style-type: none"> • developments in producing food • trends in the availability of Welsh produce. 	<p>Teachers might consider conducting an audit across the curriculum and/or a learner voice exercise in order to establish any prior knowledge of this topic. Natural links can be made with 1.1: Food Commodity Groups, Unit 2 investigational work and Unit 3 practical tasks and all areas could be covered when planning these lessons. The focus for this element is the methods used to source food and should include:</p> <ul style="list-style-type: none"> • caught: trawling, purse seining, dredging, line fishing, farmed and pots • grown: arable – cereals, fruit, vegetables, pulses and nuts • reared: factory, organic, free range, extensive and intensive. <p>Learners need an awareness of how the foods they eat are sourced and where in the world commodities are caught, grown and reared. They should appreciate the importance of Welsh produce such as dairy products, and the benefits that buying locally bring to the community.</p> <p>Example Task – Short, focused activity Where does it come from?</p> <p>Teachers could produce a range of flash cards with pictures of foods caught, grown and reared locally, nationally or internationally. This will focus the learners and provide opportunity for questioning, discussion and checking learner progress and subject specific vocabulary in preparation for 1.6.2.</p>

1.6.2 Food and the environment	<p>Learners should know the methods used to transport food on a local, national and international scale including, refrigerated transport, insulated containers, shipping containers and air freight.</p> <p>Learners should understand the environmental issues associated with food, including:</p> <ul style="list-style-type: none"> • food miles • intensive farming • extensive farming. <p>Learners should be aware of the availability of seasonal foods and issues relating to food security.</p> <p>Learners should understand the advantages and disadvantages of buying food locally.</p>	<p>This module naturally links to 1.6.1. and the short, focused activity above can easily be extended to include the methods of transport on a local, national and international scale. Learners should make the link between food safety and refrigerated transport and be aware of the importance of the links in the cold chain when getting high risk food from farm to field.</p> <p>Example Task</p> <p>A wide range of fruit and vegetables are available in our supermarkets all year round.</p> <ol style="list-style-type: none"> 1. Identify fruits and vegetables produced locally, nationally and internationally and investigate the food miles linked to these products. 2. Comment on the environmental impact these fruits and vegetables have, suggesting ways to reduce food miles. <p>Example Task</p> <p>Farmers markets, farm shops, pick your own and veg box schemes are outlets for locally produced foods. They often supply seasonal products which are loose and not pre-packaged.</p> <p>Prepare a presentation pitching a new pop-up farmers market to your local council. Your pitch needs to highlight the benefits that the scheme would bring to the food producers, the consumer, the local community and the environment.</p> <p>Teachers should reinforce terminology such as carbon footprint, food security, seasonal produce, intensive farming and extensive farming for both tasks. Progression will show the justification of points made, as well as consistent use of subject specific terminology. Learners should be encouraged to apply their cross-curricular knowledge.</p>
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<p>1.6.3 Primary and secondary food processing</p>	<p>Learners should understand:</p> <ul style="list-style-type: none"> • the primary stages of food processing and production, including: <ul style="list-style-type: none"> • harvesting and cleaning • treating • packaging. • processing methods to change primary food products into secondary food products, including: <ul style="list-style-type: none"> • flour to bread • fruit to jams, jellies, juices • milk to cheese and yoghurt. <p>Learners should be aware of:</p> <ul style="list-style-type: none"> • the effects of processing foods on: <ul style="list-style-type: none"> • nutritional value • sensory qualities • shelf life of food. 	<p>All practical sessions demonstrate how primary food products are changed into secondary food products. Questioning and discussions during these practical tasks deepen thinking and develop a holistic understanding of the subject matter. Nutritional value, sensory qualities and shelf life should be considered at each stage. Continued use of subject terminology helps learners to connect the different modules and make their own cross-curricular links when applying knowledge and understanding to higher tariff questions during the Unit 1 online assessment.</p> <p>Example Task - Primary Processing Where does flour come from?</p> <ul style="list-style-type: none"> • Investigate the primary processing of wheat. • Comment on how the processing affects the nutritional value, sensory qualities and shelf life. <p>Teachers can extend the task by including a range of different flours and, if resources allow, learners could sieve wholemeal flour and work out the percentage of bran per 100g. Links could be made to Unit 2 when investigating the gelatinisation of starch and the suitability of different flours and ratios to produce a sauce. YouTube offers numerous clips of primary processing of ingredients e.g. wheat into flour - 'Where does flour come from?'</p> <p>Example Task – Secondary Processing</p> <ul style="list-style-type: none"> • Use your knowledge and understanding of the physical properties of ingredients to discuss secondary processing of foods. • Select one of your ingredients and prepare a dish to illustrate the secondary processing of food. <p>Teachers can guide learners to select dishes using high level skills and extend the task by setting evaluation exercises in preparation for Units 2 and 3. YouTube offers numerous clips of secondary processing e.g. how to make cheese and yoghurt, turning fruit into jam, how to make breakfast cereals etc.</p>
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Learning Experiences

Learners should be encouraged to consider the following learning experiences and skills to further develop their understanding, appreciation and awareness of the subject content. Information in the table below provides opportunities for teachers to integrate the learning experiences into delivery.

Learning Experience	Exemplification of Learning Experience
Take part in a variety of cooking tutorials and experiences, such as practical demonstrations from teachers or professional chefs, either in person or online	Opportunities for this learning experience can be found in: <ul style="list-style-type: none"> ● 1.4.2 ● 1.4.3 ● 1.6.3
Gain experience of receiving and responding to feedback	Opportunities for this learning experience can be found in: <ul style="list-style-type: none"> ● 1.4.3 ● 1.6.3
Work collaboratively when planning and preparing meals and menus	Opportunities for this learning experience can be found in: <ul style="list-style-type: none"> ● 1.3.1 ● 1.3.2
Explore the various career opportunities within the related sectors	Opportunities for this learning experience can be found in: <ul style="list-style-type: none"> ● 1.5.1 ● 1.5.2
Make appropriate use of digital technology	Opportunities for this learning experience can be found in: <ul style="list-style-type: none"> ● 1.1.1 ● 1.2.2 ● 1.2.3 ● 1.3.1 ● 1.3.2 ● 1.3.3 ● 1.5.1

Opportunities for embedding elements of the Curriculum for Wales

Curriculum for Wales Strands		
Cross-cutting Themes		
<p>There are many opportunities to include Local, National and International Contexts in GCSE Food and Nutrition. These opportunities are important to Learners because it will develop an appreciation of the origins of the foods we eat in Wales today and the importance of the contributions made by different cultures including from Black, Asian and minority ethnic communities and individuals. This will develop an understanding of how cultural influences shape our eating habits and determine the ingredients, cooking methods used and the meal patterns of the Welsh people. Learners will also have an awareness of food inequality on a local, national and international scale and be confident discussing the disparity certain groups and societies face relating to the unequal access to food around the world.</p> <p>Below are some examples of how Local, National and International Contexts can be embedded into teaching and learning:</p>		
Local, National & International Contexts	<p>Specification Reference</p> <p>1.3.3</p> <p>1.4.3</p>	<p>Amplification</p> <p>The contributions cultural influences have had on the food we eat in Wales, including from Black, Asian and minority ethnic communities and individuals.</p> <p>Learners will have the opportunity to plan and prepare different dishes illustrating a variety of cooking methods introduced from other cultures, including from Black, Asian and minority ethnic communities and cultures.</p> <p>Example</p> <p>Learners will have the opportunity to investigate cultures and cuisines from around the world and appreciate key ingredients and popular dishes from a range of countries.</p>

Sustainability	<p>There are many opportunities to include Sustainability in GCSE Food and Nutrition. These opportunities are important to Learners because they prompt important discussions linked to the impact food production and distribution has on the environment. They will assess the benefits of buying locally produced food, using seasonal produce and planning menus carefully in order to reduce food waste. Learners will be able to focus research on the area they live in, at the same time gaining a global perspective of the complexities and vulnerabilities of the food system.</p> <p>Below are some examples of how Sustainability can be embedded into teaching and learning:</p> <table border="1"><thead><tr><th><i>Specification Reference</i></th><th><i>Amplification</i></th><th><i>Example</i></th></tr></thead><tbody><tr><td>1.6.1</td><td>Food origin.</td><td>'From field to fork'. Learners will have the opportunity to develop an awareness of how the foods they eat are sourced and where in the world commodities are caught, grown and reared. They should appreciate the benefits of purchasing locally produced commodities.</td></tr><tr><td>1.6.2</td><td>Food and the environment.</td><td>Learners will have the opportunity to trace food products to their country of origin and understand the impact of food miles on the environment.</td></tr></tbody></table>	<i>Specification Reference</i>	<i>Amplification</i>	<i>Example</i>	1.6.1	Food origin.	'From field to fork'. Learners will have the opportunity to develop an awareness of how the foods they eat are sourced and where in the world commodities are caught, grown and reared. They should appreciate the benefits of purchasing locally produced commodities.	1.6.2	Food and the environment.	Learners will have the opportunity to trace food products to their country of origin and understand the impact of food miles on the environment.
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Relationships and Sexuality Education	<p>There are many opportunities to include Relationships and Sexuality Education (RSE) in GCSE Food and Nutrition. These opportunities are important to Learners because it allows the development of empathy towards under-represented groups affected by disparities in food availability. Expanding their knowledge of a range of health issues and exploring the dietary needs across various life stages, and of people with specific conditions, gives Learners an insight into the challenges faced by individuals helping to dispel stereotypes.</p> <p>Below are some examples of how RSE can be embedded into teaching and learning:</p> <table border="1"><thead><tr><th><i>Specification Reference</i></th><th><i>Amplification</i></th><th><i>Example</i></th></tr></thead><tbody><tr><td>1.2.3</td><td>The importance of a balanced diet and the effects of nutritional deficiencies and excesses across different life stages.</td><td>Learners will have the opportunity to discover the importance of a balanced diet at all life stages and understand the link between food availability, diet and health.</td></tr><tr><td>1.3.1</td><td></td><td>Learners will have the opportunity to explore how the nutritional requirements change across different life stages.</td></tr></tbody></table>	<i>Specification Reference</i>	<i>Amplification</i>	<i>Example</i>	1.2.3	The importance of a balanced diet and the effects of nutritional deficiencies and excesses across different life stages.	Learners will have the opportunity to discover the importance of a balanced diet at all life stages and understand the link between food availability, diet and health.	1.3.1		Learners will have the opportunity to explore how the nutritional requirements change across different life stages.
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Human Rights Education and Diversity	<p>There are many opportunities to include Human Rights Education and Diversity in GCSE Food and Nutrition. These opportunities are important to Learners because they encourage them to consider a wide range of factors that affect food choice locally, nationally and internationally with particular emphasis on human rights. This, in turn, highlights that food availability varies among individuals and societies and unequal distribution of food resources exists. These discussions prompt Learners to consider the ethical and human rights implications inherent in these disparities.</p> <p>Below are some examples of how Human Rights Education and Diversity can be embedded into teaching and learning:</p> <table border="1"><thead><tr><th>Specification Reference</th><th>Amplification</th><th>Example</th></tr></thead><tbody><tr><td>1.3.3</td><td>Factors that affect food choices such as food availability and socio-economic factors.</td><td>Learners will have the opportunity to discover the importance of Food Banks, and how they are vital for some people who are living in food poverty. Learners will have the opportunity to develop an awareness of the unequal distribution of food locally, nationally and internationally.</td></tr></tbody></table>	Specification Reference	Amplification	Example	1.3.3	Factors that affect food choices such as food availability and socio-economic factors.	Learners will have the opportunity to discover the importance of Food Banks, and how they are vital for some people who are living in food poverty. Learners will have the opportunity to develop an awareness of the unequal distribution of food locally, nationally and internationally.
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Careers and Work-Related Experiences	<p>There are many opportunities to include Career and Work-Related Experiences (CWRE) in GCSE Food and Nutrition. These opportunities are important to Learners because it will help them make informed choices when making decisions about further studies and future career options. Tasks including meal planning and preparation offer the Learners an authentic insight into the hygiene and safety practices required in the workplace in preparation for work experience and careers in the food industry. Nutritional analysis and understanding the dietary requirements of individuals provides Learners with an appreciation of the opportunities in the health and social care system linked to the subject. Learners investigating the primary and secondary processing of foods highlights industrial food practices and encourages reflection on careers of the past, present and future.</p>								
	<p>Below are some examples of how CWRE can be embedded into teaching and learning:</p> <table border="1"><thead><tr><th data-bbox="572 627 774 706">Specification Reference</th><th data-bbox="774 627 1335 706">Amplification</th><th data-bbox="1335 627 1941 706">Example</th></tr></thead><tbody><tr><td data-bbox="572 706 774 944">1.5.2</td><td data-bbox="774 706 1335 944">The importance of food hygiene and safety.</td><td data-bbox="1335 706 1941 944">Learners will have the opportunity to investigate the role of Environmental Health Officers and understand the importance of the food hygiene and safety practices.</td></tr><tr><td data-bbox="572 944 774 1084">1.6.3</td><td data-bbox="774 944 1335 1084">The primary and secondary stages of food processing and production.</td><td data-bbox="1335 944 1941 1084">Learners will have the opportunity to view clips of primary and secondary processing of commodities to develop an understanding of industrial processes.</td></tr></tbody></table>	Specification Reference	Amplification	Example	1.5.2	The importance of food hygiene and safety.	Learners will have the opportunity to investigate the role of Environmental Health Officers and understand the importance of the food hygiene and safety practices.	1.6.3	The primary and secondary stages of food processing and production.
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1.6.3	The primary and secondary stages of food processing and production.	Learners will have the opportunity to view clips of primary and secondary processing of commodities to develop an understanding of industrial processes.							

Cross-curricular Skills – Literacy			
	<p>There are many opportunities to include Literacy in GCSE Food and Nutrition. These opportunities are important to Learners because they need to be able to communicate effectively to different target groups in a range of settings, read and interpret instructions when following methods and listen carefully to other people's opinions when carrying out sensory testing and evaluations. Learners must be able to select appropriate and relevant information when researching topics and use discipline-specific vocabulary when responding to Food and Nutrition based questions. Learners will demonstrate their ability to write in depth, structure sentences and express opinions, while sharing their knowledge and understanding of all areas of the subject.</p> <p>Below are some examples of how Literacy can be embedded into teaching and learning:</p>		
	Specification Reference	Amplification	Example
Listening	1.1.1	The different characteristics of commodities.	Learners will have the opportunity to listen to other peoples' opinions when conducting sensory analysis exercises.
	1.4.3	Cooking methods.	Learners will have the opportunity to listen, and follow instructions when preparing, cooking and presenting food.
Reading	Specification Reference	Amplification	Example
	1.2.3	The importance of planning healthy, balanced diets.	Learners will have the opportunity to read from a variety of resources and select relevant information when carrying out research into the importance of a healthy balanced diet.
	1.3.2		Learners will have the opportunity to proofread and amend presentations linked to diet related diseases.

Speaking	Specification Reference	Amplification	Example
	1.3.3 1.6.2	The impact of food choices on: <ul style="list-style-type: none">• animal welfare• energy balance• environmental sustainability• health and wellbeing• society.	Learners will have the opportunity to explain their choices when justifying adaptions made to recipes and menus. Learners will have the opportunity to present information to their peers when discussing the importance of Welsh produce and the benefits buying locally brings to the community.
Writing	Specification Reference	Amplification	Example
	1.5.4 1.5.2	The importance of food hygiene and safety when handling food.	Learners will have the opportunity to write extended, well-structured sentences when explaining how to prevent cross contamination in the kitchen. Learners will have the opportunity to use discipline – specific vocabulary when demonstrating their knowledge and understanding of the importance of temperature control when preparing, cooking and storing high risk foods.

Cross-curricular Skills – Numeracy			
Developing Mathematical Proficiency	<p>There are many opportunities to include Numeracy in GCSE Food and Nutrition. These opportunities are important to Learners because they will develop the ability to confidently apply their number skills to everyday situations. They will be able to calculate energy and nutritional values in food in order to plan balanced diets and maintain good health throughout their different stages of life. Practical activities will highlight the need for accurate weighing and measuring, as well as an understanding of the importance of ratio, when preparing and cooking food. Learners will be able to present research data as graphs and charts allowing the comparison of figures and exploration of trends.</p> <p>Below are some examples of how Numeracy can be embedded into teaching and learning:</p>		
	Specification Reference	Amplification	Example
	1.2.3 1.1.1	The interpretation of figures related to commodities and Dietary Reference Values.	Learners will have the opportunity to comment on the nutritional content of a specific diet in relation to the daily recommended amounts. Learners will have the opportunity to calculate the nutritional value of given quantities of commodities and evaluate their role in the diet.
Understanding the number system helps us to represent and compare relationships between numbers and quantities	1.1.1 1.3.2	Using ratio and proportion to calculate quantities of ingredients for successful recipes.	Learners will have the opportunity to investigate the ratio of starch to liquid when preparing sauces. Learners will have the opportunity to adapt recipes to reduce the amount of fat, salt or sugar by a given percentage.

<p>Learning about geometry helps us understand shape, space and position and learning about measurement helps us quantify in the real world</p>	<p>Specification Reference</p> <p>1.1.1</p> <p>1.4.3</p>	<p>Amplification</p> <p>Using data to select and construct graphs with suitable scales.</p> <p>Accurate weighing and measuring of ingredients.</p>	<p>Example</p> <p>Learners will have the opportunity to present their sensory analysis results in the form of star profiles (Radar graphs).</p> <p>Learners will have the opportunity to demonstrate their ability to accurately weigh and measure ingredients when preparing and cooking foods.</p>
<p>Learning that statistics represent data and that probability models chance help us make informed inferences and decisions</p>	<p>Specification Reference</p> <p>1.3.1</p> <p>1.3.2</p>	<p>Amplification</p> <p>The collection of dietary related data using suitable methods.</p>	<p>Example</p> <p>Learners will have the opportunity to collect data using a carefully designed food diary which includes portion size and quantities.</p> <p>Learners will have the opportunity to construct an effective questionnaire with both open and closed questions to assess dietary needs of an individual.</p>

Cross-curricular Skills – Digital Competence		
<p>There are many opportunities to include Digital Competence in GCSE Food and Nutrition. These opportunities are important to Learners because they will become proficient when accessing online tools such as The Eatwell Guide and use their discretion when selecting appropriate and relevant information linked to diet and health. The use of a nutritional analysis program utilises a large data set and Learners will be able to identify current trends relating to dietary issues in Wales. Learners will demonstrate their ability to select appropriate sources and act responsibly when using digital tools and resources during Food and Nutrition lessons.</p> <p>Below are some examples of how Digital Competence can be embedded into teaching and learning:</p>		
Citizenship	<p>Specification Reference</p> <p>1.6.2</p>	<p>Amplification</p> <p>Food and the environment.</p> <p>Example</p> <p>Learners will have the opportunity to demonstrate their ability to act responsibly online, using only reliable, unbiased sources when carrying out research into environmental issues linked to food production.</p> <p>Learners will have the opportunity to show an awareness of data protection and plagiarism when summarising findings on environmental issues linked to food production.</p>

Interacting and Collaborating	Specification Reference 1.5.1 1.5.2	Amplification The importance of food hygiene and safety when handling food.	Example Learners will have the opportunity to store and share information with specific people when working collaboratively to research the role of the Environmental Health Officer. Learners will have the opportunity to use a range of online communication tools to design a presentation on the importance of food hygiene and safety.
Producing	Specification Reference 1.3.2	Amplification Differing dietary requirements and health related diseases.	Example Learners will have the opportunity to use a variety of software tools and techniques to create information leaflets focused on disease of affluence. Learners will have the opportunity to make detailed and specific changes to their digital work, both text and images, after it has been reviewed by the target audience.
Data and Computational Thinking	Specification Reference 1.3.1 1.1.1	Amplification Investigating the nutritional needs at different life stages. Efficient planning of practical tasks.	Example Learners will have the opportunity to collect their own data via a food diary and use an appropriate program to analyse the nutritional content of the results. Learners will have the opportunity to select an appropriate method to design a food production flow chart for dishes they make.

Integral Skills			
Creativity and Innovation	<p>There are many opportunities to include Creativity and Innovation in GCSE Food and Nutrition. These opportunities are important to Learners because it allows development of ingenuity and practical skills. Recipe adaption for dietary requirements, personal preferences, food availability or socio-economic issues can often result in interesting changes and Learner success.</p> <p>Below are some examples of how Creativity and Innovation can be embedded into teaching and learning:</p>		
	Specification Reference	Amplification	Example
	1.3.3	Factors that affect what we eat?	<p>Learners will have the opportunity to examine the contents of a typical bag provided by a Food Bank and suggest ways to use the ingredients to produce creative meals with limited facilities.</p> <p>Learners will have the opportunity to adapt recipes so that they are suitable for a range of dietary requirements, different religious beliefs, lifestyle choices and personal preferences.</p>

Critical Thinking and Problem Solving	<p>There are many opportunities to include Critical Thinking and Problem Solving in GCSE Food and Nutrition. These opportunities are important to Learners because an in-depth understanding of the dietary needs of individuals and diet related diseases will allow for issues to be highlighted, and solve any problems. Learners will apply these skills in practical situations where food preferences or financial constraints might call for recipe adaption and lack of equipment or ingredients could lead to problems being solved. When learning about hygiene and safety there will be the opportunity to think critically about the potential dangers associated with cooking food and the implications for themselves and others.</p> <p>Below are some examples of how Critical Thinking and Problem Solving can be embedded into teaching and learning:</p> <table border="1"><thead><tr><th data-bbox="579 589 781 632">Specification Reference</th><th data-bbox="781 589 1185 632">Amplification</th><th data-bbox="1185 589 1944 632">Example</th></tr></thead><tbody><tr><td data-bbox="579 632 781 927">1.5.3 1.1.1 1.6.2</td><td data-bbox="781 632 1185 927">Locally produced food products in Wales.</td><td data-bbox="1185 632 1944 927"><p>Learners will have the opportunity to investigate the ways in which the shelf life of locally produced seasonal produce could be extended.</p><p>Learners will have the opportunity to identify commodities which are often wasted and suggest ways of alleviating the issue.</p></td></tr></tbody></table>	Specification Reference	Amplification	Example	1.5.3 1.1.1 1.6.2	Locally produced food products in Wales.	<p>Learners will have the opportunity to investigate the ways in which the shelf life of locally produced seasonal produce could be extended.</p> <p>Learners will have the opportunity to identify commodities which are often wasted and suggest ways of alleviating the issue.</p>
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Planning and Organisation	<p>There are many opportunities to include Planning and Organisation in GCSE Food and Nutrition. These opportunities are important to Learners because time management is a skill employed across all three Units as well as throughout life. Planning effectively for practical tasks will help to ensure successful outcomes and instil safe and hygienic practices in the kitchen. Structured writing should help the Learners focus when answering higher tariff questions and ensure that all requirements of tasks are completed within the time constraints set.</p> <p>Below are some examples of how Planning and Organisation can be embedded into teaching and learning:</p> <table border="1"><thead><tr><th>Specification Reference</th><th>Amplification</th><th>Example</th></tr></thead><tbody><tr><td>1.5.3</td><td>Food spoilage – how can we prevent the multiplication of micro-organisms and prevent food poisoning when handling high risk foods?</td><td>Learners will have the opportunity to use structure strips to plan and organise their extended responses to questions linked to methods of preservation.</td></tr><tr><td>1.5.4</td><td></td><td>Learners will have the opportunity to write detailed, timed orders of work to ensure practical sessions are carried out safely and efficiently in the allocated time.</td></tr></tbody></table>	Specification Reference	Amplification	Example	1.5.3	Food spoilage – how can we prevent the multiplication of micro-organisms and prevent food poisoning when handling high risk foods?	Learners will have the opportunity to use structure strips to plan and organise their extended responses to questions linked to methods of preservation.	1.5.4		Learners will have the opportunity to write detailed, timed orders of work to ensure practical sessions are carried out safely and efficiently in the allocated time.
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Personal Effectiveness	<p>There are many opportunities to include Personal Effectiveness in GCSE Food and Nutrition. These opportunities are important to Learners because they will gain an appreciation for the complex and diverse society in which we live. They will consider the contributions cultural influences have had on the food we eat in Wales, including from Black, Asian and minority ethnic communities and individuals.</p> <p>Below are some examples of how Personal Effectiveness can be embedded into teaching and learning:</p>		
	<i>Specification Reference</i>	<i>Amplification</i>	<i>Example</i>
	1.3.3	The cultural influences on our eating habits in Wales.	Learners will have the opportunity to carry out a restaurant survey in their local area to identify the extent to which different cultures have influenced our eating habits in Wales.
	1.4.3		Learners will have the opportunity to review cookery programmes on television to appreciate cooking methods introduced from other countries, including from Black, Asian and minority ethnic communities and individuals.

Glossary for Unit 1

Term	Definition
Aeration	Incorporating air into mixtures.
Allergens	Ingredients that cause an allergic reaction.
Ambient foods	Foods that can be stored at room temperature.
Amino acids	Small units that make up proteins.
Anaerobic	Ability to exist without oxygen.
Antioxidant	Compounds that inhibit oxidation and help to prevent food deteriorating. Antioxidants can improve our immune system and help prevent diseases such as heart disease and cancers.
Binary fission	The division of a single cell into two identical cells.
Biotechnology	The manipulation of living organisms to create different products.
Caramelisation	When sugar is heated causing a change in flavour, texture and appearance.
Cardiovascular disease - CVD	Any disease involving the heart and blood vessels.
Cellulose	The insoluble substance which is found in the plant cell wall.
Chlorophyll	The green pigment found in plants which absorbs light to provide energy for photosynthesis.
Cholesterol	A fatty substance found in blood and in animal foods and is associated with an increased risk of coronary heart disease.
Coagulate	To set or become a solid.
Coeliac disease	An intestinal disorder caused by an intolerance to gluten.
Conduction	Heat transfer through solids.
Convection	Heat transfer through air or liquid currents.
Denature	To change e.g. altering a protein's characteristic by heating.
Dextrinisation	The browning that occurs when starch is heated, exposed to an acid, alkali or enzyme.
Dietary reference values - DRVs	An estimation of the nutritional requirements of a healthy population.
Disaccharides	A simple carbohydrate made from two sugar molecules.
Emulsification	Where two ingredients that would usually separate mix together and form a stable mixture.
Enzymic browning	The process where enzymes react with oxygen causing the food surface to become brown.

Estimated average requirement – EAR	An estimation of the amount of a nutrient that the average healthy person requires.
Extensive farming	Farming that utilises a small amount of labour and capital in relation to the area being farmed.
Extrinsic sugar	Sugar added to food products.
Fat-soluble vitamins	The vitamins that dissolve in fat – vitamins A, D, E and K.
Farm assured	A British organisation that promotes and regulates food quality.
Fermentation	The chemical process by which molecules such as sugar are broken down anaerobically.
Food poverty	Not having access to sufficient food, or food of an adequate quality to meet an individual's basic needs.
Food security	The state of having reliable access to a sufficient quantity of affordable, nutritious food.
Free radicals	Chemicals which can cause harm. Antioxidants can protect the body from these.
Fortification	Nutrients are added to foods to increase the nutritional value.
Functional foods	Foods which provide health benefits.
Gelatinisation	The thickening of a liquid when starch grains swell and burst when heated.
Gluten	A low biological value protein found in wheat and some other grains.
Glycaemic index	The effect that a carbohydrate food has on the blood sugar level.
High biological value	Protein foods containing all the essential amino acids that the body cannot make.
Homogenised	The process of emulsifying fat droplets in milk so the cream does not separate.
Humectant	A substance that helps another substance retain moisture.
Hydrogenation	The process of changing oil to a solid fat by the addition of hydrogen.
Insoluble fibre	Fibre which the body cannot digest and absorb.
Insulin	A hormone produced by the pancreas which controls the blood sugar level.
Intensive farming	Farming that produces as much food as possible, often with the use of chemicals.
Intolerances	An adverse effect resulting from the consumption of foods which cannot be properly processed and absorbed by our digestive system.
Intrinsic sugar	Natural sugar found within the cell structure.

Low biological value	Protein foods lacking in one or more of the essential amino acids that the body cannot make.
Macronutrients	The nutrients which provide energy and are required in larger amounts in the diet – proteins, fats and carbohydrates.
Maillard reaction	Non-enzymic browning reaction between a protein and a carbohydrate in the presence of dry heat.
Malnutrition	Imperfect nutrition.
Micronutrients	The nutrients which are required in small quantities – vitamins and minerals.
Microorganism	Single celled organisms such as bacteria, yeasts and moulds.
Monosaccharide	A simple carbohydrate comprising of one sugar molecule.
Monounsaturated fat	Fats which contain one double bond in a fatty acid chain.
Mycoprotein	A high biological value protein product made from the fungi family.
Mycotoxins	Dangerous toxins produced by different types of fungi.
Non-milk extrinsic sugar – NMES	Added sugar from sources other than milk.
Non starch polysaccharide NSP	A complex carbohydrate known as dietary fibre.
Nutrients	The chemical substances found in food required to sustain basic functions.
Nutritional value	The nutrients found in food and how they impact on the body.
Omega 3 and omega 6	Essential fatty acids which the body cannot make and therefore must be obtained from food.
Onset time	The time it takes pathogenic bacteria to produce symptoms.
Organic food	Any food that is grown or produced without the use of chemicals.
Oxidation	Contact with oxygen in the air.
Pasteurisation	Heating food to a high temperature to make it safe for consumption and improve the shelf life.
Pathogen	A microorganism that can cause disease.
Pectin	A soluble polysaccharide found in ripe fruit used as a setting agent in jam.
Plasticity	The ability of fats to spread and hold their shape.
Polysaccharide	A complex carbohydrate made up from long chains of glucose molecules.
Polyunsaturated fats	Fats which contain several double bonds in a fatty acid chain.
Preservation	The process of treating foods to stop or slow down food spoilage.

Primary processing	The first stage of converting raw materials into food commodities.
Provenance	The place where food is grown, raised or reared.
Pulses	Peas, beans and lentils.
Radiation	Heat transfer through particles or waves.
Rancidity	An unpleasant flavour and odour that fats and oils develop over time.
Reference nutrient intake – RNI	An estimate of the amount of protein, vitamins and minerals that should meet the need of most people in a target group.
Regional foods	Foods identifiable with a particular area of a country.
Retrogradation	When a gel leaks liquid after solidifying.
Saturated fat	Fats which contain only single bonds in a fatty acid chain.
Secondary processing	The conversion of primary processed foods into other food products.
Shelf life	The length of time a commodity may be stored before becoming unfit for human consumption.
Soluble fibre	Fibre which attracts and dissolves in water making it easier for the body to digest.
Spinabifida	A congenital neural tube defect.
Stanols	Chemical compounds found in plants known to reduce cholesterol levels in the blood.
Staple food	Food that forms a large part of a population's diet.
Starch	A complex carbohydrate made up from long chains of glucose molecules.
Starter culture	Bacteria added to a food to improve some characteristics such as appearance, texture or flavour.
Sustainability	Activity which does not harm the environment to maintain ecological balance.
Sustenance	Food and drink that sustains the body and life.
Syneresis	The leaking of moisture from protein molecules.
Toxins	Substances created by plants and animals that are poisonous to humans.
Traceability	The ability to track food through all stages of production, processing and distribution – 'From Field to Fork.'
Trans-fats	Unsaturated fatty acids formed when vegetable oil is hydrogenated. This is believed to raise blood cholesterol levels.
Under nutrition	Consumption of too little food to meet the body's needs.
Viscous	A thick and sticky liquid.

Water soluble vitamins

The vitamins that dissolve in water – vitamins C and the B group.