

SVQ Food & Drink Unit Handbook (4768)

Units 251-300

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1 Units

Availability of units

Example 1

The following units can also be obtained from the centre resources section of the City & Guilds website, or are available on a CD-ROM (stock order code CD-0000-11).

They are also on The Register of Regulated Qualifications:

<http://register.ofqual.gov.uk/Unit>

Example 2

Below is a list of the learning outcomes for all the units. If you want to download a complete set of units, go to [**website address**]

Structure of units

These units each have the following:

- City & Guilds reference number
- unit accreditation number (UAN)
- title
- level
- credit value
- guided learning hours
- unit aim
- relationship to NOS, other qualifications and frameworks
- endorsement by a sector or other appropriate body
- information on assessment
- learning outcomes which are comprised of a number of assessment criteria
- notes for guidance.

Unit 251

Principles of dough fermentation and process control

SCQF Level:	6
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	This unit is about understanding dough fermentation and how this is important in controlling the processing of doughs in both non-automated and automated bakery production environments. Fermented dough typically include bread, roll and stick dough; plain and fruited bun dough; doughnuts; and base dough for Danish and croissant.

You will understand the role of yeast and the principles of the fermentation process in dough. You will know the basic structure of dough and how processing affects gas production and retention rates. You will also know how the control of fermentation during processing of dough determines the shape and quality of the eventual product.

Essential knowledge

The learner will need to know and understand:

1. the cell structure and properties of yeast as a living organism
2. the feeding, growth and multiplication of yeast cells
3. the principles of fermentation in dough, ie the role and action of enzymes, carbon dioxide gas and alcohol production
4. the factors affecting fermentation rate, ie temperature, sugar, salt, pH, nitrogen, fats, spices, mould and rope inhibitors
5. what happens if dough fermentation is allowed to progress without processing controls
6. how the rate of dough fermentation is controlled in dough by temperature and humidity controlled processing environments
7. the structure of dough; its capacity to form gas cells and trap gas bubbles; and changes that occur during moulding, shaping, resting, retarding and proving that are critical to successful dough fermentation and development
8. the functions of key ingredients in dough making which can influence dough fermentation rates
9. the gas production and retention properties of long process dough processing methods, ie bulk fermentation process (BFP), sponge and dough process
10. the gas production and retention properties of short process dough processing methods, ie mechanical dough development in the Chorleywood Bread Process (CBP), activated dough development (ADD), no-time dough process
11. how to maintain dough condition and deal with fermentation time constraints
12. how to recognise dough fermentation problems which do not comply with specification
13. how to resolve dough fermentation problems during processing
14. what happens to the products of fermentation during baking.

Unit 252

Principles of egg and egg products in bakery

SCQF Level:	6
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about understanding egg production and structure, and the processing of egg to produce egg products. Egg-based products typically include whole egg, frozen whole egg, pasteurised egg, separated egg white and yolk products, dried egg.</p> <p>You will understand the structure and chemical composition of egg and its products. You will know the functions of egg and egg-based products in baking. You will also know how egg-based emulsifiers work.</p> <p>This unit is for you if you work in food and drink manufacture and/or supply operations and need a broad understanding of egg and egg products to support your role.</p>

Essential knowledge

The learner will need to know and understand:

1. the structure of a hen's egg and the functions of its constituent parts
2. the chemical composition of egg white and egg yolk
3. the properties of egg relating to its protein, carbohydrate, fat and mineral content
4. the constitution of egg yolk as an emulsion
5. how eggs are stored and the natural resistance of egg to spoilage
6. how egg quality is maintained before use as a bakery ingredient
7. the functional properties of whole egg in baking, ie foams, effect of heat on egg proteins, the role of egg in sponge and cake mixtures, the role of egg in custards
8. the functional properties of egg white in baking, ie foaming and the factors affecting egg white foams, and meringue structures
9. how whole egg and frozen whole egg is produced in bulk for bakery food manufacture
10. why and how egg products are pasteurised for use in baking
11. how separated egg products are produced in bulk for bakery food manufacture
12. how dried egg is produced
13. natural egg-based emulsifier and its role in bakery recipes.

Unit 253

Principles of fats and oils in bakery

SCQF Level:	6
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about understanding the sources and extraction methods of fats and oils, and the use of these in the bakery. Fats and oils typically include lard and beef fats, dairy fats, cake and pastry margarines, frying fats and oils, shortenings, vegetable oils and emulsions.</p> <p>You will understand the structures of fats and oils, their purposes and properties. You will know the functions of fats and oils in the bakery in recipes and other functions like releasing agents. You will also know the role of emulsifiers and stabilisers.</p> <p>This unit is for you if you work in food and drink manufacture and/or supply operations and need a broad understanding of fats and oils to support your role.</p>

Essential knowledge

The learner will need to know and understand:

1. the main sources of animal and vegetable fats used in bakery
2. the methods of extracting fats and oils from sources by rendering, expression and solvent extraction
3. removal of impurities from fats and oils by refining, bleaching and deodorising
4. how and why oils are hydrogenated
5. the purpose of fats and oils in bakery products
6. the physical properties of fats and oils
7. how fats and oils are chemically structured around complex glyceride mixtures
8. the triglyceride compound and how **its** make-up affects properties
9. why fats and oils deteriorate, and the development of rancidity by oxidation and decomposition
10. the functional properties of fats and oils in baking, ie shortening, creaming, layering and emulsifying
11. the composition, properties and uses of lard
12. the composition, properties and uses of compound shortenings and pumpable shortening
13. the composition, properties and uses of beef fat
14. the composition, properties and uses of cake and pastry margarines
15. the composition, properties and uses of vegetable oils
16. the composition, properties and uses of emulsions
17. the role of emulsifiers and stabilisers in the use of fat and oils.

Unit 254

Principles of fermented dairy products

SCQF Level:	6
Credit value:	3
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about the principles of fermented dairy products in food and drink manufacturing and/or supply operations. The principles of fermented dairy products are important in providing an underpinning knowledge to the production of fermented dairy products including yoghurt, fermented buttermilk, sour cream, crème fraiche or similar dairy products.</p> <p>You will know and understand the underpinning knowledge relating to the production of fermented dairy products.</p> <p>This unit is for you if you work in food and drink manufacture and/or supply operations and need a broad understanding of the principles of fermented dairy products.</p>

Essential knowledge

The learner will need to know and understand:

1. dairy products which use fermentation as a key part of the production process
2. the functions and purposes of ingredients used in the production of fermented dairy products
3. the key function and purpose of starter cultures in the production of fermented dairy products
4. the advantages and disadvantages of common starter cultures used in the production of fermented dairy products
5. how starter cultures affect the flavour, aroma and acidity of fermented dairy products
6. the advantages and disadvantages of equipment and processes used in the production of fermented dairy products
7. how the different types of fermented dairy products vary in their ingredients, recipes, and equipment and processing requirements
8. how the production of liquid and semi-solid fermented dairy products vary in their ingredients, recipes, equipment, processing and packaging
9. how the production of low fat yoghurt, luxury yoghurt and yoghurt drinks differ in the types of ingredients, recipes, equipment, processing and packaging
10. the common faults found in fermented dairy products and how they occur.

Unit 255

Principles of flour milling and flour types for bakery

SCQF Level:	6
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about understanding the milling of wheat and the blending of flour to produce specific flour types for bakery production. Flour types typically include white bread-making flour, wholemeal and malted wheat flours, mixed grain flours and a range of pastry and cake making flours.</p> <p>You will understand the structure of the wheat grain and the key stages and functions of the flour milling process. You will know how blending of both wheat and flours takes place. You will also know the fractions produced by milling and the critical importance of starch particle size and protein and fibre content.</p> <p>This unit is for you if you work in food and drink manufacture and/or supply operations and need a broad understanding of flour milling and flour types to support your role.</p>

Essential knowledge

The learner will need to know and understand:

1. the structure and physical characteristics of the wheat grain
2. the compositions of the wheat grain and of the constituent parts
3. the difference between hard and soft wheat and the types of flour that they will produce
4. what constitutes strong, medium and weak wheat
5. the blending of wheat grains to produce a grist of the required financial, physical and chemical characteristics for milling
6. how wheat grains are cleaned and washed to remove contaminants
7. how wheat grains are conditioned and why it is important to control moisture content
8. the breaking of the grain using sets of break rolls and sieving or sifting
9. the separation of middlings (endosperm) in purifiers and their treatment through reduction rolls and sifters
10. how the milling operation can be controlled, producing flours of varying extraction rates
11. how the control of milling can produce short to long patent flours and the importance of starch particle size
12. why it is critical to control the amount of starch damaged particles in a flour
13. how protein quality and quantity is important to the breadmaking process
14. what alpha-amylase is and how its activity level in a flour is critical in breadmaking quality
15. how wholemeal and white flour types are blended
16. how malted wheat and mixed grain flour are produced
17. why it is important to store and age flour before use, and the key changes which take place during this time.

Unit 256

Principles of food policy and regulation

SCQF Level:	7
Credit value:	3
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	This unit is about the principles of food policy and regulation. It is about understanding the importance and influence of food policy and regulation in food and drink.

This unit applies to you if you are a manager or consultant who has responsibility for strategic policy development within a food and drink business, where you are expected to ensure compliance with the regulatory framework through the development and application of organisational policy. It is expected that you will control and support others with regard to the development and implementation of organisational policy.

Essential knowledge

The learner will need to know and understand:

1. the purpose of organisational policy and procedures
2. relevant legal and regulatory requirements that control food manufacture and supply
3. how ethical and social requirements impact on food businesses
4. how to access sources of advice and guidance in support of food policy development
5. how to quantify the impact of legal, regulatory, ethical and social requirements on a food business
6. effective methods for collecting and analysing data relevant to food policy development
7. the culture and values of your business and what effect these have on corporate governance
8. how to develop organisational policy in support of organisational culture and values
9. how to support the effective implementation of policies
10. how organisational policy is influenced by and has influence on stakeholders
11. methods for communicating policies effectively to stakeholders
12. techniques for monitoring the way policies and procedures are put into practice

13. how to support others with the implementation of policy
14. how to develop contingency processes for dealing with policy failures
15. how quality assurance processes are needed to support organisational policy development and implementation
16. methods for controlling policy and ensuring ongoing compliance with regulations.

Unit 257

Principles of fresh produce handling and quality

SCQF Level:	6
Credit value:	5
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about understanding the principles of fresh produce handling and quality in support of your role in food and drink manufacture and/or supply operations. These principles underpin your role within your own organisation, providing you with knowledge that is essential for competent performance.</p> <p>The principles apply where fresh produce is processed and/or supplied for human consumption. They can be applied to produce including salads, vegetables and fruit. The characteristics of fresh produce and its vulnerability to physical damage and spoilage determine that this knowledge is essential.</p> <p>You will understand the principles of fresh produce handling so that the techniques and methods you apply avoid damaging the product and maintain the quality demanded by customers and consumers. This includes understanding how growing conditions and farming practices can impact on the quality of fresh produce.</p> <p>This unit is for you if you work in food and drink manufacturing and/or supply chain operations and are involved in production operations.</p>

Essential knowledge

The learner will need to know and understand:

1. the common forms of fresh produce contamination caused by farming methods
2. how growing conditions can affect quality of fresh produce
3. how quality is influenced by the amount of time fresh produce is in the supply chain
4. what the common causes of damage are
5. what the common causes of spoilage are
6. the measures that are taken to limit spoilage
7. how fresh produce must be handled if quality is to be maintained
8. the limitations of produce handling methods
9. how a good manufacturing practice helps to maintain product quality
10. what methods are used to measure the external quality of fresh produce
11. how these methods measure the external quality of fresh produce
12. the destructive methods used to assess the internal quality of fresh produce
13. the non-destructive methods used to assess the internal quality of fresh produce
14. what organoleptic quality assessment techniques are
15. how organoleptic quality assessment techniques are carried out
16. the impact temperature control has on fresh produce quality
17. why time and temperature control during production is essential for quality
18. how product handling systems are designed to maintain product quality
19. what product shelf life is and how it is established for items of produce
20. the legal and company regulations affecting the production of fresh produce
21. how seasons and country of origin can affect the handling and quality requirements of fresh produce
22. how product quality is maintained throughout the supply chain
23. how different types of packaging are used to maintain the quality of fresh produce
24. key performance indicators and their role in the maintenance of quality
25. how use-by dates, best before dates and average weights relate to quality
26. the impact that poor handling can have on profitability
27. how legislation that controls the supply and quality of fresh produce is relevant to use-by dates
28. how legislation affects best before dates in the supply and quality of fresh produce
29. how legislation affects average weights in the supply and quality of fresh produce
30. what are Maximum Residue Levels (MRL)
31. how MRL relate to the safety of fresh produce
32. the legal requirements when handling disease insects found in the handling process.

Unit 258

Principles of fresh produce packaging and preservation

SCQF Level:	6
Credit value:	7
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	This unit is about the principles of fresh produce packaging and preservation in food and drink manufacture and/or supply chain operations. The principles detail the packaging and preservation of fresh produce for human consumption.

The principles detailed apply where fresh produce is packed for human consumption. They can be applied to any type of produce and produce groups including salads, vegetables and fruit. The characteristics and vulnerability to physical damage and spoilage determine that this knowledge is essential for effective packaging and preservation of fresh produce.

You will understand the principles of packaging and preservation so that the techniques and methods you apply avoid damaging the product and maintain the quality demanded by customers and consumers. Understanding the principles of the packaging and how it protects and preserves products will help you understand how your own organisation produces its products to service the needs of its customers.

This unit is for you if you work in food and drink manufacturing and/or supply chain operations and are involved in production operations.

Essential knowledge

The learner will need to know and understand:

1. the types of packaging available in the fresh produce sector
2. the properties of each type of packaging and their benefits
3. how packaging is used at point of harvest and in support of transportation
4. how packaging can damage fresh produce
5. which type of packaging is used for each type of fresh produce
6. how different packaging aids the preservation of fresh produce
7. why it is important to match packaging material correctly to product type
8. the advantages of the different packaging materials used with fresh produce
9. the disadvantages of the different packaging materials used with fresh produce
10. how to assess if packaging is fit for purpose
11. why it is important to use process packaging when handling fresh produce
12. how fresh produce packaging methods optimise product quality
13. the storage requirements of packaging materials
14. the use of controlled environment as a method of preservation and conditioning of fresh produce
15. the use of Modified Atmosphere Packaging as a method of preservation
16. the use of heat as a method of preservation for fresh produce
17. the effects of the gases used in fresh produce packaging and preservation
18. the effects of chilled environments used in fresh produce packaging and preservation
19. the effects of freezing in fresh produce packaging and preservation
20. what the possible hazards of preservation systems are
21. the packaging requirements used in high risk zones
22. how the stability and shelf life of fresh produce is affected in packaging
23. how the different forms of packaging are formed from packaging materials
24. how to use packaging machinery in the fresh produce sector
25. why automation of packing machinery is important in the packing process
26. how packaging techniques have an impact on the environment
27. what environmental implications are of preservation techniques
28. the legislative requirements on labelling for the fresh produce sector
29. the voluntary requirements on labelling for the fresh produce sector
30. the packaging regulations and legislation including WRAP
31. the key drivers of packaging costs
32. the advantages and disadvantages of consumer packs
33. how the consumer packs have a role in marketing the product.

Unit 259

Principles of fresh produce ripening

SCQF Level:	7
Credit value:	5
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council

Aim:

This unit is about the principles of fresh produce ripening in food and drink manufacture and/or supply operations. The principles explained in this unit apply to any situation where fresh produce undergoes controlled ripening as an integral part of the supply chain.

You will understand the principles of fresh produce ripening if you are involved in the supply of fruit. This includes understanding the role of ripening in the supply chain for both imported product and product that is grown in the UK. You will also know and understand the use of controlled ripening of fresh produce.

You will need to understand these principles if you are involved in fresh produce ripening.

This unit is for you if you work in food and drink manufacturing and/or supply chain operations and are involved in production operations.

Essential knowledge

The learner will need to know and understand:

1. the key chemical and physical stages in the natural ripening process of fresh produce
2. the factors affecting the natural ripening process of fresh produce
3. how environmental conditions including temperature, humidity and storage room conditions affect natural ripening
4. how the natural ripening process can be suppressed and controlled
5. which fresh produce undergo a natural ripening process
6. where the ripening of fresh produce occurs in the supply chain
7. the timescales involved in the ripening of different fresh produce
8. the different types of controlled ripening available for fresh produce
9. which types of controlled ripening are used for different types of fresh produce
10. which fresh produce commonly undergo controlled ripening
11. how ripening is used in conjunction with long term storage to maintain continuity of supply
12. the importance of effective ripening planning and forecasting for the supply of product
13. how the use of controlled ripening is affected by seasonality of fresh produce
14. the importance of controlled and modified atmosphere storage for controlled ripening
15. how to effectively plan for the controlled ripening of fresh produce to ensure continuity of supply
16. the agents that are used to help ripen fresh produce
17. how product packaging can affect the ripening process
18. how product handling can impact on the ripening process and the quality of ripened product
19. the physical characteristics of ripe and unripe produce
20. how the condition of un-ripe produce can impact on the ripening process
21. the storage requirements of both unripe and ripe products
22. methods for assessing fruit ripeness and quality.

Unit 260

Principles of fresh produce wholesaling

SCQF Level:	6
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council

Aim: This unit is about the principles of fresh produce wholesaling in food and drink manufacture and/or supply operations. The wholesale market is integral to the supply of fresh produce and products derived from fresh produce, and knowledge of fresh produce wholesaling is essential for all those involved in buying and selling.

You will need to understand the principles of fresh produce wholesaling if you are involved in the buying or selling of fresh produce on the wholesale market. This includes understanding the supply chain linked to the buying and selling of both imported product and product grown in the UK.

This unit is for you if you work in fresh produce wholesaling in food and drink manufacture and/or supply operations, and need a broad understanding of fresh produce wholesaling to support your role.

Essential knowledge

The learner will need to know and understand:

1. which main fresh produce products are grown in the UK
2. which main fresh produce products are grown outside the UK
3. how the availability of fresh produce grown in the UK is affected by seasonality
4. how fresh produce originating from outside the UK is affected by seasonality
5. the main UK-based companies supplying fresh produce to the wholesale markets
6. the main companies who buy fresh produce on the wholesale market
7. the types(or categories – you decide) of fresh produce affected by seasonality
8. what the additional factors affecting the availability of fresh produce

are

9. the large wholesale markets operating in the UK and outside the UK
10. the storage and distribution facilities in the wholesale market
11. why it is important to organise storage and distribution when buying and selling fresh produce
12. how to source product specifications and transfer customer requirements to outcomes
13. the methods of transporting fresh produce and an awareness of the issue of food miles
14. the factors affecting the wholesale price of UK-grown fresh produce
15. the factors affecting the wholesale price of fresh produce grown outside the UK
16. what the average current retail price of specific grades of UK-grown fresh produce is
17. how the seasonal trends and requirements of wholesale market customers change during a calendar year
18. what the main factors affecting the quality and shelf life of fresh produce are
19. how the supply chain for fresh produce is organised and maintained to meet customers' needs
20. the key environmental factors to be controlled during the storage and distribution of fresh produce
21. why it is important to maintain an effective supply chain during the distribution of fresh produce
22. what the average shelf life of UK-grown fresh produce products is
23. how the wholesale and distribution environment is organised to maintain product quality
24. the facilities required to support the storage and distribution of fresh produce
25. the financial systems that support the wholesaling of fresh produce.

Unit 261

Principles of frying bakery products

SCQF Level:	6
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	This unit is about understanding how bakery products are deep fried using a deep fat fryer in a non-automated or automated bakery production environment.

You will know how heat is transferred to products, the changes which take place within products during frying, and the importance of correct cooling. You will also understand the changes which occur to frying media when heated and how these changes are controlled to ensure effective frying of products.

Essential knowledge

The learner will need to know and understand:

1. the importance of using fats or oils of the correct type for frying
2. the chemical structure of frying fats and oils
3. how the chemical structures of frying fats and oils are affected by heat over time
4. why it is necessary to replace fats or oils according to specifications
5. how heat is transferred from the frying media to a deep fry product
6. the meaning of the terms 'slip point', 'smoke point' and 'flash point' for a fat or oil and their importance for the operating temperature of the fryer
7. the physical changes that take place within products during the frying process
8. how the absorption of fats into the surface of products during the frying process is important to the eating quality of the product and its resultant calorific value
9. the effects of frying with too low a frying temperature
10. the effects of frying with too high a frying temperature
11. the importance of adequate ventilation during the frying products
12. the importance of correctly positioning, draining and cooling products.

Unit 262

Principles of heat treatment in dairy processing

SCQF Level:	6
Credit value:	3
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about the principles of heat treatment in dairy processing in food and drink manufacture and/or supply operations. The principles of heat treatment in dairy processing, including pasteurisation, sterilisation and Ultra High Temperature (UHT), are important in providing an underpinning knowledge to the production of milk, cream, butter, fermented dairy products, ice cream, cheese and other dairy products.</p> <p>You will know and understand the principles underpinning the heat treatment of dairy products, why dairy products are heat treated, and the different heat treatment methods and equipment commonly used in the dairy industry.</p> <p>This unit is for you if you work in food and drink manufacture and/or supply operations and need a broad understanding of the principles of heat treatment in dairy processing.</p>

Essential knowledge

The learner will need to know and understand:

1. why dairy products are heat treated
2. the effect of heat treatment on dairy products' shelf life, flavour and nutritional value
3. the key features of pasteurisation in dairy processing
4. typical time/temperature combinations used to pasteurise dairy products
5. the key differences between plate and tunnel pasteurisation equipment
6. the key features, equipment and time/temperature combinations used in the sterilisation of dairy products
7. the effect of sterilisation on the final dairy product
8. commonly used equipment and time/temperature combinations used in Ultra-High Temperature (UHT) dairy processing
9. typical time/temperature combinations used in UHT processing
10. dairy products that commonly undergo pasteurisation, sterilisation and UHT processing
11. advantages and disadvantages of pasteurisation, sterilisation and UHT processing of dairy products
12. why thermisation is used in the production of fermented dairy products.

Unit 263

Principles of ice cream production

SCQF Level:	6
Credit value:	3
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about the principles of ice cream making in food and drink manufacture and/or supply operations. The principles of ice cream making are important in providing an underpinning knowledge to the methods and processes needed to make ice cream.</p> <p>You will know and understand the underpinning knowledge relating to the making of ice cream. You will know and understand the importance of equipment, ingredients and recipe to the production of ice cream.</p> <p>This unit is for you if you work in food and drink manufacture and/or supply operations and need a broad understanding of the principles of ice cream production.</p>

Essential knowledge

The learner will need to know and understand:

1. how ice cream is classified and the key differences between dairy ice cream, cream ice and milk ice
2. the regulations relating to the composition requirements for different types of ice cream
3. the regulations relating to the heat treatment and storage of ice cream for sale
4. the functions of skimmed milk powder, whey milk powder, condensed skim milk, anhydrous milk fat, vegetable fat, sucrose, dextrose and glucose syrup in the production of ice cream
5. the common types of emulsifier and stabiliser used in ice cream making and why they are used
6. common flavourings used in the production of ice cream
7. common colours used in the production of ice cream
8. the effect of incorporating different amounts of air on how light the final product tastes
9. the key differences between equipment and processes in large and small scale craft production ice cream producing environments
10. the effect of heat treatment, homogenisation, cooling, ageing and freezing on the final ice cream product quality and yield
11. the effect of mix composition, the amount of air incorporated into the ice cream and the type of freezer on the freezing temperature
12. why freezing must take place quickly and its effect on ice crystal formation and the smoothness of the final ice cream product
13. the term 'overrun' and its importance to ice cream specifications, quality yield and the economic value of the final ice cream product
14. why it is important to control storage temperature of ice cream
15. common faults found in ice cream and how they occur.

Unit 264

Principles of meat or poultry processing by-products

SCQF Level:	6
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about the principles of animal by-products recovery and processing in food and drinks manufacture and/or supply operations. The recovery and processing of animal processing by-products is important for the maximisation of recovery from meat or poultry carcasses.</p> <p>You will know and understand the principles underpinning by-product recovery and processing including regulatory and organisational requirements; how by-products can be sorted into categories 1, 2 and 3; their uses; and retail and wholesale markets.</p> <p>This unit is for you if you work in food and drinks manufacture and/or supply operations and need a broad understanding of the principles of by-products recovery and processing to support your role.</p>

Essential knowledge

The learner will need to know and understand:

1. the definition of specified risk material and its importance in the production of meat and poultry fit for human consumption
2. the regulations and methods relating to the safe disposal of specified risk material
3. the definition of category 1, 2 and 3 by-products
4. health hazards associated with the meat and poultry processing by-products
5. the main red offal and green offal and by-products from meat and poultry
6. why it is important to maximise the recovery of animal by-products from meat and poultry carcasses
7. how to maximise recovery of animal processing by-products from each stage of the production process
8. the relative economic value of the main by-products from animal processing
9. the key features of natural casings production
10. the commercial markets for animal by-products
11. the key nutritional value of edible by-products
12. the key features of hide and skin handling prior to processing.

Unit 265

Principles of mixing dough and process control

SCQF Level:	6
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about understanding dough mixing and the control of dough processing during mixing in both non-automated and automated bakery production environments. Fermented dough typically include bread, roll and stick dough; plain and fruited bun dough; doughnuts; and base dough for Danish and croissant.</p> <p>You will understand the purpose and importance of the mixing process for dough. You will know how blending takes place during the mixing process, how a dough structure begins its development and how this is different depending upon the type of dough required. You will also know what factors affect mixing and how critical the mixing process is to the shape and quality of the eventual product.</p>

Essential knowledge

The learner will need to know and understand:

1. the purpose of the dough mixing process for dough
2. the importance of mixing to the required specifications for the mixing equipment, recipe, ingredients, and process control
3. the importance of loading ingredients at the correct temperatures, in the correct weights/volumes and in the correct order
4. what problems result from overloading the mixer, using an inappropriate mixer or selecting the incorrect mixer attachments
5. the blending of ingredients that occurs during dough mixing that assists in developing a smooth homogenous mass and contributes to developing dough structure
6. the development of dough structure and gluten formation for long process dough processing methods, ie bulk fermentation process (BFP), sponge and dough process
7. the development of dough structure and gluten formation for short process dough processing methods, ie mechanical dough development in the Chorleywood Bread Process (CBP), activated dough development (ADD), no-time dough process
8. the function of key ingredients in dough making (flour improvers, oxidants, emulsifiers, salt) and their role in developing dough structure and quality
9. how to recognise a dough which does not conform to specification
10. what corrective actions are appropriate to dealing with dough which does not conform to specification.

Unit 266

Principles of organisational compliance in a food business

SCQF Level:	6
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about the principles of organisational compliance in a food business in food and drink manufacture and/or supply operations. Compliance is integral to the operation of a food business. Regulations cover the legal status of a food business and additional regulations cover areas such as food safety, environmental health and trading standards requirements, labelling, traceability and product recall. In addition organisations can choose to adhere to the requirements of organisations offering quality standards for food businesses including the British Retail Consortium (BRC) and International Organization for Standardization (ISO). Compliance with internal organisational requirements and external customers and suppliers relating to standard operating procedures and quality specifications and additional areas of compliance in the day to day operation of a food business.</p>

You will know and understand the different types of compliance relating to the operation of a food business. You will also know and understand the importance of systems and procedures, organisational management systems and auditing in ensuring compliance.

This unit is for you if you work in food and drink manufacture and/or supply operations and are involved in ensuring organisational compliance in a food business.

Essential knowledge

The learner will need to know and understand:

1. the concept of compliance as an integral part of the operation of a food business and how it affects the strategy, policy, plans and culture of a food business
2. the different layers of regulatory, customer and industry compliance affecting a food business
3. the regulations a food business must adhere to and how these regulations are checked
4. voluntary codes of practice and quality standards available to a food business and how these are audited and checked
5. the role of customers and suppliers in adherence to the different compliance requirements and how this is checked and audited
6. what the different methodologies and management systems are for implementing and ensuring organisational compliance in a food business, and their advantages and disadvantages
7. the importance of traceability in a food business and how to ensure this occurs
8. why auditing is important to compliance and how to carry it out.

Unit 267

Principles of packaging in bakery

SCQF Level:	6
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	This unit is about understanding the types of packaging used for bakery products and their purposes and functions. Packaging types typically include paper and board, waxed paper, cellulose films and polypropylene/polythene/PVC bags and wrappings.

You will understand the differences between the packaging types and the reasons for their application to specific products. You will know the limitations and restrictions on the use of packaging types. You will also know packaging can support advertising, labelling and bar coding for products.

This unit is for you if you work in food and drink manufacture and/or supply operations and need a broad understanding of packaging to support your role.

Essential knowledge

The learner will need to know and understand:

1. the purpose and functions of packaging bakery products
2. what the sources of paper, board and cellulose film packaging material are
3. how paper, board and cellulose film is processed into packaging material
4. how board is treated for use in direct contact with food
5. what the business and sustainable advantages are of using paper and board packaging material
6. the typical uses for paper, waxed paper and board packaging material for bakery products
7. the structure of cellulose and its properties in providing a packaging medium
8. the grades of cellulose film available, their functionality and use of codes
9. how polythene films are made
10. the properties and functionality of low density and high density polythene films
11. how polypropylene films are made
12. the properties and functionality of cast, oriented and coated oriented polypropylene films
13. the properties and functionality of polyvinylchloride and polyvinylidenechloride films and their use as shrink wrap films
14. the technical demands of bakery products and the most suitable wrapping application for product categories, ie pastries, high sugar cake, high liquor/low sugar cakes, sponges, low moisture confectionery, decorated cakes, savoury and meat goods, morning goods, soft breads, crusty breads
15. the most suitable packaging for freezing bakery products
16. what the limitations and regulations are in the use of 'food safe' packaging material
17. the role of packaging material in promoting and advertising bakery products
18. the role of packaging material in providing a substrate for labelling and bar coding.

SCQF Level:	6
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	This unit is about understanding pastry lamination and the control of pastry processing in both non-automated and automated bakery production environments. Laminated pastry typically includes puff pastry, Danish pastry and croissant pastry.

You will understand the differences between and effects of various fat incorporation methods and lamination techniques. You will know the factors influencing pastry performance and how to optimise pastry processing conditions and techniques to achieve the specified results.

Essential knowledge

The learner will need to know and understand:

1. the purpose of the mixing process for pastry dough
2. blending and changes that occur during mixing that develop pastry dough structure
3. the purposes of key ingredients in dough making that can influence dough structure, quality and texture for pastry
4. the importance of maintaining a cool base dough temperature during incorporation of fat and lamination in pastry making
5. the importance of handling and processing pastry fats at optimum temperatures for effective incorporation of fat and lamination
6. the key differences between the four methods for incorporating pastry fat in pastry (Scotch method, English method, French method, high speed mixing method), noting how layers of dough and pastry fat have been constructed in readiness for lamination
7. the structural difference between Half Puff, Three quarter puff and Full puff pastry
8. the difference between Half turn and Book fold methods of lamination and how this contributes to building layers within pastry
9. how to maintain the condition of laminated pastry and deal with time constraints during processing
10. how to control the drying out or skinning up of pastry surfaces using temperature and humidity controlled environments
11. how to recognise pastes that do not meet specification

12. what actions can be taken to rectify pastry quality problems occurring during processing.

Unit 268 **Principles of pastry lamination and process control**

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Unit 269

Principles of pre-mixes and concentrates in bakery

SCQF Level:	6
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about understanding the pre-mixes and concentrates used in bakery and their functionality in baking. Pre-mixes and concentrates typically include flour confectionery pre-mixes for scones, muffins and cakes/sponges; breadmaking pre-mixes for specialist breads; and concentrates of pulps, flavours and dough conditioners.</p> <p>You will understand the convenience and use of pre-mixes and concentrates. You will know how these mixtures perform in baking. You will also know the limitations of their use in baking.</p> <p>This unit is for you if you work in food and drink manufacture and/or supply operations and need a broad understanding of pre-mixes and concentrates to support your role.</p>

Essential knowledge

The learner will need to know and understand:

1. the advantages and disadvantages of the use of pre-mixes in flour confectionery processing
2. the advantages and disadvantages of the use of pre-mixes in dough processing
3. what the business advantages and disadvantages of using of pre-mixes are
4. the typical constituents of pre-mixes in scone, muffin, cake and sponge pre-mixes
5. the typical constituents of breadmaking pre-mixes
6. what the storage requirements are of pre-mixes
7. what concentrates are typically used in baking
8. the advantages and disadvantages of the use of concentrates in bakery processing
9. how fruit- and syrup-based concentrates are produced
10. the role of fruit- and syrup-based concentrates in flour confectionery processing and bakery product finishing
11. how dough conditioner (fat-based) concentrates are produced
12. the role of dough conditioning concentrates in dough processing
13. what the storage requirements for concentrates are.

Unit 270

Principles of retarding and proving dough and process control

SCQF Level:	6
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	This unit is about understanding retarding, recovering and proving fermented dough and the control of dough processing in both non-automated and automated bakery production environments. Fermented dough typically include bread, roll and stick dough; plain and fruited bun dough; doughnuts; and base dough for Danish and croissant.

You will understand the purposes and importance of retarding, recovering and proving dough. You will know the principles of the three processes and the importance of controlling key factors like temperature, humidity and time. You also need to know how key ingredients within dough during processing affect dough quality of the eventual product.

Essential knowledge

The learner will need to know and understand:

1. the importance of retarding, recovering and proving to the required specifications for effective process control
2. the purpose of retarding, recovering and proving processes for dough and the importance of achieving the specified outcome
3. the principles of the retarding process; the importance of controlling temperature, humidity and time, and their effect on maintaining dough condition
4. the principles of the recovery process; the importance of controlling temperature, humidity and time, and their effect on maintaining dough condition
5. the principles of the proving process; the importance of controlling temperature, humidity and time, and their effect on maintaining dough condition
6. the functions of key ingredients that can influence dough condition in retarding, recovering and proving in dough processing
7. the controlling factors and dough conditions which are symptomatic

of ineffective retarding, recovery or proving of dough

8. how to recognise a dough which is not conforming to specification during processing
9. what corrective actions may be appropriate for non-conforming doughs during processing
10. the advantages of effective retarding and proving of doughs to the bakery business.

Unit 271

Principles of salt and dough conditioners/improvers in bakery

SCQF Level:	6
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	This unit is about understanding salt and dough conditioners and improvers and their functionality in baking. Dough conditioners and improvers typically include enzyme active soya flour; malt and malt flour; sprouted cereal flour; fungal and bacterial enzyme products; mineral salts; ascorbic acid; emulsifiers; fats; and yeast activators.

You will understand the structure of salt and its functionality in bakery products. You will know how dough conditioners/improvers function in the bakery process. You will also know the limitations and regulations which affect the use of dough conditioners/improvers.

This unit is for you if you work in food and drink manufacture and/or supply operations and need a broad understanding of salt and dough conditioners/improvers to support your role.

Essential knowledge

The learner will need to know and understand:

1. the structure and composition of salt
2. the physical and chemical properties of salt
3. the role and functionality of salt in dough processing, especially fermentation, and products
4. the role and functionality of salt in dough processing and products
5. what the objectives of dough conditioners/improvers are, ie dough processing performance, volume, softness, crustiness, flavour
6. the difference between the use of dough conditioners/improvers by millers and use by bakers
7. the use and advantages of dough conditioners/improvers as convenience pre-mixes of minor bread ingredients
8. the role and chemical action of enzyme active soya flour and other

- similar flour-based additives in dough conditioners/improvers
9. the role and chemical action of fungal and bacterial enzyme products in dough conditioners/improvers
 10. the action of different alpha and beta amylases on starch and the bread properties which result
 11. the role and chemical action of oxidants and reducing agents in dough conditioners/improvers
 12. how oxidants have a beneficial effect on proteins in dough development
 13. the role and chemical action of emulsifiers in dough conditioners/improvers
 14. the role and chemical action of fats in dough conditioners/improvers
 15. the role and chemical action of yeast nutrients and fermentation aids in dough conditioners/improvers
 16. the role of mould and rope inhibitors in dough conditioners/improvers when included
 17. the composition of dough conditioners/improvers for specific dough processes, ie mechanical dough development (CBP), activated dough development (ADD), bulk fermentation process (BFP)
 18. the legal constraints within which dough conditioners/improvers are formulated
 19. the permitted ingredients in addition to flour, yeast and water allowed in white bread.

Unit 272

Principles of sugars and starches in bakery

SCQF Level:	6
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council

Aim: This unit is about understanding the sources and extraction methods of sugars and starches, and the use of these ingredients in the bakery. Sugars and starches typically include white and brown refined sugars (sucrose); glucose; milk powder as a source of lactose; dextrans; cereal flour starches from wheat and maize (corn starch); and vegetable starches.

You will understand the structure of sugars and starches, and their purpose and properties. You will know the functions of sugars and starches in bakery recipes for baking and other functions like that for sugar pastes and marzipans. You will also know the sources and properties of vegetable gum starches.

This unit is for you if you work in food and drink manufacture and/or supply operations and need a broad understanding of sugars and starches to support your role.

Essential knowledge

The learner will need to know and understand:

1. the main sources of sugars and starches used in bakery
2. the methods of extracting sugars and starches from sources by refining, crystallisation and milling
3. the purpose of sugars and starches in bakery products
4. the physical properties of sugars and starches
5. how sugars are chemically structured as monosaccharides and disaccharides
6. how starches are chemically structured as polysaccharides
7. the functional properties of sugars in baking, ie sugar syrups, fondants, caramels
8. the functional properties of starches in baking, ie enzymic breakdown of starch, thickening agent, gelatinisation

9. the composition, properties and uses of glucose, sucrose and lactose
10. the composition, properties and uses of wheat flour starch
11. the composition, properties and uses of corn flour starch
12. sources of vegetable gums used in baking
13. how vegetable gums are sugar and sugar-derived polymers
14. the use of vegetable gums as thickeners, emulsifiers, stabilisers and gel formers in baking.

Unit 273

Principles of the fresh produce handling systems

SCQF Level:	6
Credit value:	5
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about the principles of fresh product handling systems in food and drink manufacture and/or supply operations. The principles explained in this unit detail the handling systems that are used to support the movement of fresh produce within production facilities as part of the production process.</p> <p>The principles apply where fresh produce is processed and/or supplied for human consumption. They can be applied to any type of produce and produce groups including salads, vegetables and fruit. The characteristics of fresh produce and its vulnerability to physical damage require a knowledge and understanding of its effective handling.</p> <p>You will understand the principles of fresh produce handling so that the systems used avoid damaging the product and maintain the quality demanded by customers and consumers.</p> <p>This unit is for you if you work in food and drink manufacturing and/or supply chain operations and are involved in production operations.</p>

Essential knowledge

The learner will need to know and understand:

1. the different handling systems used to handle different types of fresh produce
2. the different handling requirements of specific fresh produce and the reasons why
3. the advantages and disadvantages of different handling systems
4. the utilities and costs associated with different handling systems
5. why it is important to match handling systems to the handling requirements of fresh produce
6. how to match handling systems to the specific requirements of the fresh produce
7. how handling systems can contaminate and cause physical damage to fresh produce
8. how product handling systems are designed to maintain product quality
9. the impact that handling systems can have on product shelf life
10. why additives are used in fluid transfer systems
11. the key differences between additives used in fluid transfer systems
12. the different types of packaging used in the handling process
13. the key differences between storage systems used during the handling of fresh produce
14. why it is important to maintain labelling, identification and traceability throughout the handling process
15. potential causes of waste and their control during handling.

Unit 274

Principles of the fresh produce supply chain

SCQF Level:	6
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council

Aim:

This unit is about understanding the principles of the fresh produce supply chain in support of your role in food and drink manufacture and/or supply operations. These principles underpin your role within your own organisation, providing you with knowledge that is essential to your role.

The fresh produce supply chain is complex in nature and is made up of many different types of organisation, all essential to the supply of produce to the consumer. The smooth running of this supply chain is essential because of the vulnerability of fresh produce to physical damage and the relatively short shelf life of many items. They can be applied to any type of produce and produce groups including salads, vegetables and fruit.

You will understand the principles of fresh produce supply, the role of the people and organisations involved, and how they interact to provide a reliable and continuous supply of fresh produce to consumers. Understanding the principles of the supply chain and how the different parts interact will help you understand how your organisation functions in relation to its suppliers and customers.

This unit is for you if you work in food and drink manufacturing and/or supply chain operations and are involved in production operations.

Essential knowledge

The learner will need to know and understand:

1. the basic structure of the national fresh produce supply chain
2. the basic structure of the international fresh produce supply chain
3. how the UK grower impacts on the fresh produce supply chain
4. the role of the overseas grower on the fresh produce supply chain
5. what a co-operative group is and its role in the supply of fresh produce
6. how dealing with co-operative groups differs to dealing with conventional companies
7. the specific requirements of dealing with co-operative groups
8. the importance of UK importers in the fresh produce supply chain
9. the legal, regulatory and ethical standards that must be adhered to in the import and export of fresh produce
10. the role of UK and overseas wholesale markets in the supply chain
11. the role of a UK pre-packer in the fresh produce supply chain
12. the importance of processors and retailers to the fresh produce supply chain
13. the specific requirements of fresh produce processors and retailers
14. the role of fresh produce logistics, both nationally and internationally
15. where the grower, importer, pre-packer, processor and retailer sit in the supply chain and their relative importance
16. the issue of food miles in the supply of fresh produce to all parts of the supply chain
17. the importance of environmental factors to the effective running of the supply chain.

Unit 276

Process offal and meat processing by-products

SCQF Level:	5
Credit value:	4
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council

Aim: This unit is about the skills needed for you to process meat or poultry offal or processing by-products in food and drink manufacture and/or supply operations. Processing offal and by-products is important for the maximisation of profit from carcasses.

You will be able to prepare to process meat or poultry offal or by-products. You will also be able to trim and process offal or by-products, adhering to regulatory and organisational requirements.

This unit is for you if you work in food and drink manufacture and/or supply operations and are involved in the processing of meat or poultry offal or processing by-products.

Performance objectives

The learner must be able to:

1. prepare to process offal or by-products.

This means you:

- 1.1 wear and use personal protective equipment required in the processing of offal and by-products
- 1.2 check availability and cleanliness of equipment and work area for processing offal or by-products
- 1.3 access organisational specifications
- 1.4 check that there is a clear flow from the point of offal or by-product sorting to the processing work area
- 1.5 check that facilities are available for receiving offal or by-products after processing.

Performance objectives

The learner must be able to:

2. trim and process offal or by-products of slaughter.

This means you:

- 2.1 check offal or by-product conforms to organisational specification
- 2.2 inform relevant person if offal or by-product do not conform to specification
- 2.3 trim offal or by-product to organisational quality and yield specification
- 2.4 store offal or by-products in the correct place after processing
- 2.5 work within limits of your responsibility.

Essential knowledge

The learner will need to know and understand:

1. the regulatory and organisational requirements relating to the processing of meat or poultry offal and processing by-products
2. the work area, tools, equipment, facilities and storage equipment needed to process meat or poultry offal or processing by-products
3. the offal removed from meat or poultry carcasses
4. the by-products removed from meat or poultry carcasses
5. why meat and poultry by-products are sorted into category 1, 2 or 3
6. how meat and poultry by-products can be sorted into category 1, 2 or 3
7. how to access organisational specifications relating to the processing of meat or poultry offal and by-products
8. why it is important to inform relevant people if incoming sorted meat or poultry offal or by-product does not adhere to organisational specifications
9. the importance of adhering to quality specifications to organisational and customer requirements when processing meat or poultry offal or by-products
10. the importance of maximising yield when processing meat or poultry offal or by-products, in terms of the economic value of a carcass.

Unit 276 **Process offal and meat processing by-products**

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **preparing to process offal or by-products** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **trimming and processing offal or by-products** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Unit 277

Produce added value meat or poultry products

SCQF Level:	5
Credit value:	4
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about the skills needed for you to add value to meat or poultry products in food and drink manufacture and/or supply operations. Adding value to meat or poultry products is important for meeting customer requirements and maximising revenue from meat and poultry sales. Adding value includes rolling, forming, stringing, using sticks and skewers, and adding flavour to meat or poultry products.</p> <p>You will be able to add value to meat or poultry products including following product specifications and organisational procedures.</p> <p>This unit is for you if you work in food and drink manufacture and/or supply operations and are involved in adding value to meat or poultry products.</p>

Performance objectives

The learner must be able to:

1. prepare to add value.

This means you:

- 1.1 adhere to organisational and regulatory standards when adding value to meat or poultry products
- 1.2 wear and use the correct personal protective equipment
- 1.3 check the availability and cleanliness of work area, tools and equipment
- 1.4 source product specification
- 1.5 check availability of flavourings, additional recipe ingredients, packaging and meat or poultry product
- 1.6 address problems within the limits of your responsibility.

Performance objectives

The learner must be able to:

2. produce added value meat or poultry products.

This means you:

- 2.1 follow organisational specification to make up added value product
- 2.2 ensure final product adheres to visual quality specification
- 2.3 take effective action if the final product does not meet quality specification
- 2.4 maintain quality of meat and poultry when handling
- 2.5 make product available to next stage of process
- 2.6 store waste for disposal according to organisational requirements.

Essential knowledge

The learner will need to know and understand:

1. why it is important to follow organisational standard operating procedures during the classification process
2. why it is important to check the cleanliness of the work area, tools and equipment
3. how to avoid contamination when adding value to meat or poultry products
4. the work area tools, equipment, ingredients and packaging needed to add value to meat or poultry products
5. how to access the correct added value product specification
6. why it is important to interpret and apply the specification when adding value to meat or poultry products
7. how to package added value product for display or storage
8. how to handle the meat or poultry to maintain its quality
9. how to dispose of waste products from classification operations
10. how adding value to meat or poultry ineffectively can lead to wastage, potential customer complaints and lost revenue
11. why it is important to work within the limits of your responsibility.

Unit 277 Produce added value meat or poultry products

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **preparing to add value** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **producing added value meat or poultry products** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Unit 278

Produce batch meat or poultry products by hand

SCQF Level:	5
Credit value:	4
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about the knowledge needed for you to produce batch meat or poultry products by hand in food and drink manufacture and/or supply operations. Producing batches of meat or poultry products including meat pies, sausage rolls and pasties by hand is a key skill in food manufacturing and butchery outlets.</p> <p>You will be able to prepare ingredients and equipment; follow a product specification; and work to organisational recipes, standard operating procedures and production requirements. You will also know how to hand produce a batch of meat or poultry products.</p> <p>This unit is for you if you work in food and drink manufacture and/or supply operations and are involved in the production of meat or poultry products by hand.</p>

Performance objectives

The learner must be able to:

1. prepare to produce batch meat or poultry products.

This means you:

- 1.1 wear and use the correct personal protective equipment
- 1.2 check the availability and cleanliness of work area, tools and equipment
- 1.3 source meat or poultry, recipe, product specification and additional ingredients
- 1.4 source recipe ingredients, tools and equipment
- 1.5 prepare product ingredients to produce meat product
- 1.6 deal with problems within the limits of your responsibility.

Performance objectives
The learner must be able to: 2. produce batch meat or poultry products.
This means you: 2.1 shape pastry into required shape or baking tin 2.2 follow product recipe to prepare meat filling 2.3 assemble meat filling into final meat product 2.4 complete meat or poultry product with glaze, garnish or specific decorative markings according to organisational specifications 2.5 check meat product yield and quality against product recipe and specification 2.6 make completed product available for storage or cooking 2.7 work within the limits of your responsibility.

- 2.1 shape pastry into required shape or baking tin
- 2.2 follow product recipe to prepare meat filling
- 2.3 assemble meat filling into final meat product
- 2.4 complete meat or poultry product with glaze, garnish or specific decorative markings according to organisational specifications
- 2.5 check meat product yield and quality against product recipe and specification
- 2.6 make completed product available for storage or cooking
- 2.7 work within the limits of your responsibility.

Performance objectives
The learner must be able to: 3. complete production.
This means you: 3.1 store meat product according to organisational specification and requirements 3.2 clean personal protective equipment, work area, tools and equipment according to organisational procedures 3.3 store waste for disposal according to organisational procedures.

- 3.1 store meat product according to organisational specification and requirements
- 3.2 clean personal protective equipment, work area, tools and equipment according to organisational procedures
- 3.3 store waste for disposal according to organisational procedures.

Essential knowledge

The learner will need to know and understand:

1. how to access organisational procedures
2. the organisational and regulatory procedures that must be adhered to when producing batch meat or poultry products by hand
3. the personal protective equipment required to produce a batch of meat or poultry products
4. the tools and equipment needed to produce a batch of meat or poultry products
5. why it is important to have hygienically clean personal protective equipment, work area, tools and equipment when producing a batch of meat or poultry products
6. how to access the organisational specifications and recipes for the specific meat or poultry product
7. why it is important to adhere to the specific meat or poultry product recipe
8. the importance of keeping waste to a minimum when producing batch meat or poultry products, and the effect of waste on yield and potential loss of revenue
9. how to check meat product yield against product recipe and specification
10. why it is important to check for yield when producing meat or poultry products
11. the importance of carrying out quality checks against organisational specifications
12. the different types of waste occurring as a result of producing meat products by hand, and how they should be stored for disposal
13. why it is important to work within the limits of your responsibility and report problems to the relevant people.

Unit 278 Produce batch meat or poultry products by hand

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **preparing to produce batch meat or poultry products** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **producing batch meat or poultry products** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **completing production** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Unit 279

Produce butter

SCQF Level:	5
Credit value:	5
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about the skills needed for you to control dairy processing equipment in food and drink manufacture and/or supply operations. Controlling dairy processing equipment, including that which carries out heat treatment, filtration, separation or other dairy processes is important for the production of a number of dairy products including butter, ice cream, mixed fat spreads, cream, milk, cheese, yoghurt and fermented dairy products.</p> <p>You will be able to prepare to control dairy processing equipment and control the equipment adhering to organisational standard operating procedures. You will also be able to work within the limits of your responsibility and take action to address problems.</p> <p>This unit is for you if you work in food and drink manufacture and/or supply operations and are involved in controlling dairy processing equipment.</p>

Performance objectives

The learner must be able to:

1. prepare to control dairy processing equipment.

This means you:

- 1.1 wear and use the correct personal protective equipment
- 1.2 source organisational standard operating procedures and product recipe
- 1.3 establish and maintain effective spoken and written communication with relevant people
- 1.4 ensure that all necessary plant, equipment and services are available and fit for use
- 1.5 ensure ingredients are available and conform to specification.

Performance objectives

The learner must be able to:

2. control dairy processing equipment.

This means you:

- 2.1 start up and control dairy processing equipment, following organisational standard operating procedures
- 2.2 make adjustments to equipment to maintain organisational product specifications
- 2.3 take representative samples for testing, adhering to organisational sampling plan
- 2.4 evaluate faults for impact on product and processing equipment operations
- 2.5 work within the limits of your responsibility and take action to address problems
- 2.6 take prompt, relevant action in response to faults, within the limits of your own responsibility
- 2.7 complete the necessary documentation accurately and process to organisational requirements
- 2.8 make dairy product available to next stage of processing or packaging.

Essential knowledge

The learner will need to know and understand:

1. the regulatory and organisational requirements relating to the production of butter
2. how to source and select the tools, equipment and ingredients needed to produce butter
3. the appropriate personal protective equipment for producing butter and how to use and wear it
4. how to access organisational specifications and equipment standard operating procedures relating to butter production
5. the importance of adhering to organisational quality, yield and productivity specifications when producing butter
6. how to maintain communication with relevant people when producing butter
7. how to control the processing equipment used in butter production
8. how to vary moisture, salt, pH, organoleptic and physical properties of butter by control and regulation of processing equipment
9. why it is important to monitor the consistency of the butter throughout the churning and separating process and how to do this
10. the action needed to address changes in the cream fat levels, type of fat and season
11. how to adjust the process controls in response to quality testing to ensure the butter meets organisational final product quality and yield specifications
12. how to work within the limits of your responsibility and take action to address problems
13. how to deal with ingredients and product that can be recycled or reworked.

Unit 279 Produce butter

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **preparing to control dairy processing equipment** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **controlling dairy processing equipment** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

SCQF Level:	5
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about the skills needed for you to control dairy processing equipment in food and drink manufacture and/or supply operations. Controlling dairy processing equipment, including that which carries out heat treatment, filtration, separation or other dairy processes is important for the production of a number of dairy products including butter, ice cream, mixed fat spreads, cream, milk, cheese, yoghurt and fermented dairy products.</p> <p>You will be able to prepare to control dairy processing equipment and control the equipment, adhering to organisational standard operating procedures. You will also be able to work within the limits of your responsibility and take action to address problems.</p> <p>This unit is for you if you work in food and drink manufacture and/or supply operations and are involved in controlling dairy processing equipment.</p>

Performance objectives
The learner must be able to:
1. prepare to control dairy processing equipment.
This means you:
1.1 wear and use the correct personal protective equipment
1.2 source organisational standard operating procedures and product recipe
1.3 establish and maintain effective spoken and written communication with relevant people
1.4 ensure that all necessary plant, equipment and services are available and fit for use
1.5 ensure ingredients are available and conform to specification.

Performance objectives

The learner must be able to:

2. control dairy processing equipment.

This means you:

- 2.1 start up and control dairy processing equipment, following organisational standard operating procedures
- 2.2 make adjustments to equipment to maintain organisational product specifications
- 2.3 take representative samples for testing, adhering to organisational sampling plan
- 2.4 evaluate faults for impact on product and processing equipment operations
- 2.5 work within the limits of your responsibility and take action to address problems
- 2.6 take prompt, relevant action in response to faults within the limits of your own responsibility
- 2.7 complete the necessary documentation accurately and process to organisational requirements
- 2.8 make dairy product available to next stage of processing or packaging.

Essential knowledge

The learner will need to know and understand:

1. the regulatory and organisational requirements relating to the production of cheese
2. how to source and select the tools, equipment and ingredients needed to produce cheese
3. the personal protective equipment needed to carry out cheese production and why it is important to use and wear it
4. how to maintain communication with relevant people when producing cheese
5. how to access the relevant cheese recipe and organisational equipment standard operating procedures
6. the importance of adhering to recipe requirements and standard operating procedures
7. what actions address variations in intake milk fat levels and environmental factors including seasonality and temperature
8. how to source, select and mix starter cultures in the production of cheese
9. the organisational requirements for dosing cheese vats with starter culture and rennet and how to carry this out
10. how to control equipment used in cheese production
11. how to adjust the process controls in response to quality testing to ensure the cheese meets organisational final product quality and yield specifications
12. how to work within the limits of your responsibility and take action to address problems
13. how to deal with ingredients and product that can be recycled or reworked.

Unit 280 Produce cheese

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **preparing to control dairy processing equipment** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **controlling dairy processing equipment** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Unit 281

Produce cream

SCQF Level:	5
Credit value:	5
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about the skills needed for you to control dairy processing equipment in food and drink manufacture and/or supply operations. Controlling dairy processing equipment, including that which carries out heat treatment, filtration, separation or other dairy processes is important for the production of a number of dairy products including butter, ice cream, mixed fat spreads, cream, milk, cheese, yoghurt and fermented dairy products.</p> <p>You will be able to prepare to control dairy processing equipment and control the equipment, adhering to organisational standard operating procedures. You will also be able to work within the limits of your responsibility and take action to address problems.</p> <p>This unit is for you if you work in food and drink manufacture and/or supply operations and are involved in controlling dairy processing equipment.</p>

Performance objectives

The learner must be able to:

1. prepare to control dairy processing equipment.

This means you:

- 1.1 wear and use the correct personal protective equipment
- 1.2 source organisational standard operating procedures and product recipe
- 1.3 establish and maintain effective spoken and written communication with relevant people
- 1.4 ensure that all necessary plant, equipment and services are available and fit for use
- 1.5 ensure ingredients are available and conform to specification.

Performance objectives

The learner must be able to:

2. control dairy processing equipment.

This means you:

- 2.1 start up and control dairy processing equipment, following organisational standard operating procedures
- 2.2 make adjustments to equipment to maintain organisational product specifications
- 2.3 take representative samples for testing, adhering to organisational sampling plan
- 2.4 evaluate faults for impact on product and processing equipment operations
- 2.5 work within the limits of your responsibility and take action to address problems
- 2.6 take prompt relevant action in response to faults within the limits of your own responsibility
- 2.7 complete the necessary documentation accurately and process to organisational requirements
- 2.8 make dairy product available to next stage of processing or packaging.

Essential knowledge

The learner will need to know and understand:

1. the regulatory and organisational requirements relating to the production of cream
2. how to source and select the tools, equipment and ingredients needed to produce cream
3. the personal protective equipment required for processing cream and why it is important to use and wear it
4. how to access organisational specifications and equipment standard operating procedures relating to cream production
5. the importance of adhering to organisational quality and yield specifications when producing cream
6. how to maintain communication with relevant people when producing cream
7. the importance of separation and pasteurisation to cream production
8. the importance of fat levels to cream production
9. how to control product temperature when storing and processing dairy products and ingredients used in making cream
10. how to control equipment to ensure the cream meets organisational final product quality, yield and productivity specifications
11. how to adjust cream processing in response to product quality tests
12. what actions address variations in intake milk fat levels, type of fat and environmental factors including seasonality and temperature
13. how to work within the limits of your responsibility and take action to address problems
14. common sources of contamination during processing, how to avoid these and what might happen if this is not done
15. how to deal with product that can be recycled or reworked.

Unit 281 Produce cream

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **preparing to control dairy processing equipment** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **controlling dairy processing equipment** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

SCQF Level:	5
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council

Aim: This unit is about the skills needed for you to produce curds and whey in food and drink manufacture and/or supply operations. Curds and whey can undergo further processing to produce a variety of dairy products including soft and hard cheese, whey powder and whey butter.

You will be able to prepare the equipment and ingredients needed to produce curds and whey. You will also be able to control the production of curds and whey, adhering to product recipes and organisational standard operating procedures.

This unit is for you if you work in food and drink manufacture and/or supply operations and are involved in producing curds and whey.

Performance objectives
The learner must be able to:
1. prepare to produce curds and whey.
This means you:
1.1 adhere to regulatory and organisational specifications when controlling production of curds and whey
1.2 use and wear personal protective equipment when producing curds and whey
1.3 source product recipe and organisational standard operating procedures
1.4 ensure that all necessary plant, equipment, raw materials and services are available and fit for use.

Performance objectives

The learner must be able to:

2. control curds and whey production.

This means you:

- 2.1 combine recipe ingredients including starter culture and rennet, adhering to product recipe and organisational requirements
- 2.2 assess the coagulum for correct set characteristics according to organisational requirements and recipe
- 2.3 make the necessary titratable acidity and/or pH checks in accordance with organisational standard operating procedures, and accurately record the results
- 2.4 evaluate titratable acidity and/or pH check results for impact on operations and take action to address problems
- 2.5 follow organisational 'slow vat' procedures if necessary
- 2.6 ensure that heating, cutting, stirring, scalding and pitching processes are undertaken in accordance with organisational standard operating procedures and recipe specifications.

Performance objectives

The learner must be able to:

3. complete curds and whey production.

This means you:

- 3.1 complete the necessary documentation according to organisational requirements
- 3.2 communicate availability of curds and whey to storage or next stage of processing.

Essential knowledge

The learner will need to know and understand:

1. the regulatory and organisational requirements relating to the production of curds and whey
2. how to source and select the tools, equipment and ingredients needed to produce curds and whey
3. the personal protective equipment needed to carry out production of curds and whey and why it is important to use and wear it
4. how to maintain communication with relevant people when producing curds and whey
5. how to access the relevant curds and whey recipe and organisational equipment standard operating procedures
6. the importance of adhering to recipe requirements and standard operating procedures
7. what actions address variations in intake milk fat levels and environmental factors including seasonality and temperature
8. the importance of starter cultures and rennet to the production of curds and whey and why it is important to adhere to organisational requirements and product recipe when dosing the vats
9. how to control equipment used in curds and whey production
10. how to adjust the process controls in response to quality testing to ensure the curds and whey meets organisational final product quality and yield specifications
11. how to work within the limits of your responsibility and take action to address problems
12. how to deal with ingredients and product that can be recycled or reworked.

Unit 282 Produce curds and whey

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **preparing to produce curds and whey** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **controlling curds and whey production** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **completing curds and whey production** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Unit 283

Produce dried milk/whey powder

SCQF Level:	5
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about the skills needed for you to control dairy processing equipment in food and drink manufacture and/or supply operations. Controlling dairy processing equipment, including that which carries out heat treatment, filtration, separation or other dairy processes is important for the production of a number of dairy products including butter, ice cream, mixed fat spreads, cream, milk, cheese, yoghurt and fermented dairy products.</p> <p>You will be able to prepare to control dairy processing equipment and control the equipment, adhering to organisational standard operating procedures. You will also be able to work within the limits of your responsibility and take action to address problems.</p> <p>This unit is for you if you work in food and drink manufacture and/or supply operations and are involved in controlling dairy processing equipment.</p>

Performance objectives
The learner must be able to: 1. prepare to control dairy processing equipment.
This means you: 1.1 wear and use the correct personal protective equipment 1.2 source organisational standard operating procedures and product recipe 1.3 establish and maintain effective spoken and written communication with relevant people 1.4 ensure that all necessary plant, equipment and services are available and fit for use 1.5 ensure ingredients are available and conform to specification.

Performance objectives

The learner must be able to:

2. control dairy processing equipment.

This means you:

- 2.1 start up and control dairy processing equipment, following organisational standard operating procedures
- 2.2 make adjustments to equipment to maintain organisational product specifications
- 2.3 take representative samples for testing, adhering to organisational sampling plan
- 2.4 evaluate faults for impact on product and processing equipment operations
- 2.5 work within the limits of your responsibility and take action to address problems
- 2.6 take prompt, relevant action in response to faults within the limits of your own responsibility
- 2.7 complete the necessary documentation accurately and process to organisational requirements
- 2.8 make dairy product available to next stage of processing or packaging.

Essential knowledge

The learner will need to know and understand:

1. the regulatory and organisational requirements relating to the production of dried milk or whey powder
2. how to source and select the tools and equipment needed to produce dried milk or whey powder
3. the personal protective equipment required for processing milk and why it is important to use and wear it
4. how to maintain communication with relevant people when producing dried milk or whey powder
5. how to access organisational specifications relating to dried milk or whey production
6. the importance of adhering to organisational quality and yield specifications when producing dried milk or whey powders
7. how to control equipment used in dried milk powder and whey powder production
8. why it is important to control temperature when storing and processing dairy products used in dried milk powder production, and how to do this
9. how to adjust dried milk powder and whey powder processing in response to product quality tests
10. how to check for milk or product leaks during evaporation, drying, separation, reverse osmosis and ultra filtration
11. how to check the vacuum seal on an evaporation system
12. what actions address variations in intake milk fat and protein
13. how to standardise the composition of intake milk
14. how to work within the limits of your responsibility and take action to address problems
15. how to deal with product that can be recycled or reworked.

Unit 283 Produce dried milk/whey powder

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **preparing to control dairy processing equipment** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **controlling dairy processing equipment** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Unit 284

Produce fermented dairy products

SCQF Level:	5
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about the skills needed for you to control dairy processing equipment in food and drink manufacture and/or supply operations. Controlling dairy processing equipment, including that which carries out heat treatment, filtration, separation or other dairy processes is important for the production of a number of dairy products including butter, ice cream, mixed fat spreads, cream, milk, cheese, yoghurt and fermented dairy products.</p> <p>You will be able to prepare to control dairy processing equipment and control the equipment, adhering to organisational standard operating procedures. You will also be able to work within the limits of your responsibility and take action to address problems.</p> <p>This unit is for you if you work in food and drink manufacture and/or supply operations and are involved in controlling dairy processing equipment.</p>

Performance objectives

The learner must be able to:

1. prepare to control dairy processing equipment.

This means you:

- 1.1 wear and use the correct personal protective equipment
- 1.2 source organisational standard operating procedures and product recipe
- 1.3 establish and maintain effective spoken and written communication with relevant people
- 1.4 ensure that all necessary plant, equipment and services are available and fit for use
- 1.5 ensure ingredients are available and conform to specification.

Performance objectives

The learner must be able to:

2. control dairy processing equipment.

This means you:

- 2.1 start up and control dairy processing equipment, following organisational standard operating procedures
- 2.2 make adjustments to equipment to maintain organisational product specifications
- 2.3 take representative samples for testing, adhering to organisational sampling plan
- 2.4 evaluate faults for impact on product and processing equipment operations
- 2.5 work within the limits of your responsibility and take action to address problems
- 2.6 take prompt, relevant action in response to faults within the limits of your own responsibility
- 2.7 complete the necessary documentation accurately and process to organisational requirements
- 2.8 make dairy product available to next stage of processing or packaging.

Essential knowledge

The learner will need to know and understand:

1. dairy products which use fermentation as a key part of the production process
2. the functions and purposes of ingredients used in the production of fermented dairy products
3. the key function and purpose of starter cultures in the production of fermented dairy products
4. the advantages and disadvantages of common starter cultures used in the production of fermented dairy products
5. how starter cultures affect the flavour, aroma and acidity of fermented dairy products
6. the advantages and disadvantages of equipment and processes used in the production of fermented dairy products
7. how the different types of fermented dairy products vary in their ingredients, recipes, and equipment and processing requirements
8. how the production of liquid and semi-solid fermented dairy products vary in their ingredients, recipes, equipment, processing and packaging
9. how the production of low fat yoghurt, luxury yoghurt and yoghurt drinks differ in the types of ingredients, recipes, equipment, processing and packaging
10. the common faults found in fermented dairy products and how they occur.

Unit 284 Produce fermented dairy products

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **preparing to control dairy processing equipment** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **controlling dairy processing equipment** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Unit 285

Produce ice cream

SCQF Level:	5
Credit value:	5
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about the skills needed for you to control dairy processing equipment in food and drink manufacture and/or supply operations. Controlling dairy processing equipment, including that which carries out heat treatment, filtration, separation or other dairy processes is important for the production of a number of dairy products including butter, ice cream, mixed fat spreads, cream, milk, cheese, yoghurt and fermented dairy products.</p> <p>You will be able to prepare to control dairy processing equipment and control the equipment, adhering to organisational standard operating procedures. You will also be able to work within the limits of your responsibility and take action to address problems.</p> <p>This unit is for you if you work in food and drink manufacture and/or supply operations and are involved in controlling dairy processing equipment.</p>

Performance objectives
The learner must be able to: 1. prepare to control dairy processing equipment.
This means you: 1.1 wear and use the correct personal protective equipment 1.2 source organisational standard operating procedures and product recipe 1.3 establish and maintain effective spoken and written communication with relevant people 1.4 ensure that all necessary plant, equipment and services are available and fit for use 1.5 ensure ingredients are available and conform to specification.

Performance objectives

The learner must be able to:

2. control dairy processing equipment.

This means you:

- 2.1 start up and control dairy processing equipment, following organisational standard operating procedures
- 2.2 make adjustments to equipment to maintain organisational product specifications
- 2.3 take representative samples for testing, adhering to organisational sampling plan
- 2.4 evaluate faults for impact on product and processing equipment operations
- 2.5 work within the limits of your responsibility and take action to address problems
- 2.6 take prompt, relevant action in response to faults within the limits of your own responsibility
- 2.7 complete the necessary documentation accurately and process to organisational requirements
- 2.8 make dairy product available to next stage of processing or packaging.

Essential knowledge

The learner will need to know and understand:

1. the regulatory and organisational requirements relating to the production of ice cream
2. how to source and select the tools, equipment and ingredients needed to produce ice cream
3. how to access the organisational ice cream recipe and equipment standard operating procedures
4. the importance of adhering to quality specifications and to organisational requirements when producing ice cream
5. how to control temperature when storing and processing dairy products and ingredients used in ice cream production
6. how to weigh ingredients accurately and why it is important to do so
7. why it is important to add ingredients in the correct order and mix thoroughly
8. how to control equipment used in ice cream production
9. what the process controls are for temperature control, mixing, cooling, ageing and freezing in ice cream production, and how to use them
10. how to adjust the process controls in response to quality testing to ensure the ice cream meets organisational final product quality and yield specifications
11. why it is important to check overrun in ice cream production and how to do this
12. how to adjust process control in response to overrun checks
13. how to work within the limits of your responsibility and take action to address problems.

Unit 285 Produce ice cream

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **preparing to control dairy processing equipment** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **controlling dairy processing equipment** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Unit 286

Produce laminated pastry

SCQF Level:	6
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	This unit is about preparing base doughs for lamination by incorporating pastry fat and then laminating pastry in a bakery production environment. Pastry types typically include puff pastry, Danish pastry and croissant pastry.

You will be able to incorporate pastry fat using recognised preparation methods. You will be able to produce laminated pastry using specified methods, meet final specifications and store pastry for processing. Compliance with health and safety, food safety and organisational requirements is an essential feature of this unit.

Performance objectives
The learner must be able to: 1. prepare dough for lamination.
This means you: 1.1 check the condition and quantity of the base dough in accordance with instructions and specifications, and take prompt action on discovering any discrepancy 1.2 select and prepare the correct quantity of pastry fat for incorporating fat 1.3 incorporate fat into the base pastry dough correctly using the specified method, tools and equipment 1.4 work with practice which minimises waste and correctly deal with scrap material 1.5 position and maintain prepared pastry correctly for further processing 1.6 comply with health, safety, food safety and organisational requirements throughout fat incorporation operations.

Performance objectives

The learner must be able to:

2. laminate pastry.

This means you:

- 2.1 check the condition and quantity of the prepared pastry in accordance with instructions and specifications, and take prompt action on discovering any discrepancy
- 2.2 identify and prepare work area, tools and equipment for lamination
- 2.3 laminate prepared pastry correctly using the specified method, tools and equipment
- 2.4 work with practice which minimises waste and correctly deal with scrap material
- 2.5 place laminated pastry in the correct condition and location, and label where required, for further processing
- 2.6 comply with health, safety, food safety and organisational requirements throughout lamination operations
- 2.7 operate within the limits of your own authority and capabilities.

Essential knowledge

The learner will need to know and understand:

1. the standards of health and safety and food safety to which you are required to work, why it is important that you do so, and what might happen if standards are not met
2. requirements of bread weight regulations and the importance of accurate dividing and check weighing of fermented dough to comply with these regulations
3. why it is important to follow work instructions, product specifications or recipes throughout dough processing to ensure successful dough processing
4. how to seek advice and make process adjustments to dough to take into account minor changes in ingredient performance, production timing and environmental conditions that are necessary to keep a dough within specification
5. common sources of dough contamination during processing
6. how to avoid contamination during dough processing and what might happen if this is not done
7. how to recognise and report dough that do not meet specification during processing
8. the procedure for rejecting and isolating failed dough and dough portions
9. what the lines and methods of effective communication during processing are and why it is important to use them correctly
10. what the documentation requirements during processing are and why it is important to meet them
11. personal protective clothing/equipment and working practices which are useful in combating the potentially harmful effects of dust and allergies resulting from breathing or skin contact with ingredients or dough
12. how to maintain dough condition and deal with time constraints and variations to conditions throughout processing
13. the correct method for loading and unloading trays in racks.

Unit 286 Produce laminated pastry

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **preparing dough for lamination** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **laminating pastry** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

SCQF Level:	6
Credit value:	8
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about the skills needed for you to control dairy processing equipment in food and drink manufacture and/or supply operations. Controlling dairy processing equipment, including that which carries out heat treatment, filtration, separation or other dairy processes is important for the production of a number of dairy products including butter, ice cream, mixed fat spreads, cream, milk, cheese, yoghurt and fermented dairy products.</p> <p>You will be able to prepare to control dairy processing equipment and control the equipment, adhering to organisational standard operating procedures. You will also be able to work within the limits of your responsibility and take action to address problems.</p> <p>This unit is for you if you work in food and drink manufacture and/or supply operations and are involved in controlling dairy processing equipment.</p>

Performance objectives
The learner must be able to:
1. prepare to control dairy processing equipment.
This means you:
1.1 wear and use the correct personal protective equipment
1.2 source organisational standard operating procedures and product recipe
1.3 establish and maintain effective spoken and written communication with relevant people
1.4 ensure that all necessary plant, equipment and services are available and fit for use
1.5 ensure ingredients are available and conform to specification.

Performance objectives

The learner must be able to:

2. control dairy processing equipment.

This means you:

- 2.1 start up and control dairy processing equipment, following organisational standard operating procedures
- 2.2 make adjustments to equipment to maintain organisational product specifications
- 2.3 take representative samples for testing, adhering to organisational sampling plan
- 2.4 evaluate faults for impact on product and processing equipment operations
- 2.5 work within the limits of your responsibility and take action to address problems
- 2.6 take prompt, relevant action in response to faults within the limits of your own responsibility
- 2.7 complete the necessary documentation accurately and process to organisational requirements
- 2.8 make dairy product available to next stage of processing or packaging.

Essential knowledge

The learner will need to know and understand:

1. the regulatory and organisational requirements relating to the production of liquid milk
2. how to source and select the tools and equipment needed to process liquid milk
3. what is the personal protective equipment required for processing milk and why it is important to use and wear it
4. how to maintain communication with relevant people when processing liquid milk
5. how to access organisational specifications and equipment standard operating procedures relating to the processing of liquid milk
6. the importance of adhering to quality specifications when processing liquid milk
7. how to control temperature when storing and processing milk and why it is important to do so
8. how to control processing equipment used to process liquid milk
9. how to adjust liquid milk processing in response to product quality tests
10. the actions required to standardise milk to organisational requirements
11. common sources of contamination during processing, how to avoid these and what might happen if this is not done
12. how to deal with product that can be recycled or reworked.

Unit 287 Produce liquid milk

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **preparing to control dairy processing equipment** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **controlling dairy processing equipment** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Unit 288

Produce mixed fat spreads

SCQF Level:	5
Credit value:	5
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about the skills needed for you to control dairy processing equipment in food and drink manufacture and/or supply operations. Controlling dairy processing equipment, including that which carries out heat treatment, filtration, separation or other dairy processes is important for the production of a number of dairy products including butter, ice cream, mixed fat spreads, cream, milk, cheese, yoghurt and fermented dairy products.</p> <p>You will be able to prepare to control dairy processing equipment and control the equipment, adhering to organisational standard operating procedures. You will also be able to work within the limits of your responsibility and take action to address problems.</p> <p>This unit is for you if you work in food and drink manufacture and/or supply operations and are involved in controlling dairy processing equipment.</p>

Performance objectives

The learner must be able to:

1. prepare to control dairy processing equipment.

This means you:

- 1.1 wear and use the correct personal protective equipment
- 1.2 source organisational standard operating procedures and product recipe
- 1.3 establish and maintain effective spoken and written communication with relevant people
- 1.4 ensure that all necessary plant, equipment and services are available and fit for use
- 1.5 ensure ingredients are available and conform to specification.

Performance objectives

The learner must be able to:

2. control dairy processing equipment.

This means you:

- 2.1 start up and control dairy processing equipment, following organisational standard operating procedures
- 2.2 make adjustments to equipment to maintain organisational product specifications
- 2.3 take representative samples for testing, adhering to organisational sampling plan
- 2.4 evaluate faults for impact on product and processing equipment operations
- 2.5 work within the limits of your responsibility and take action to address problems
- 2.6 take prompt, relevant action in response to faults within the limits of your own responsibility
- 2.7 complete the necessary documentation accurately and process to organisational requirements
- 2.8 make dairy product available to next stage of processing or packaging.

Essential knowledge

The learner will need to know and understand:

1. the regulatory and organisational requirements relating to the production of mixed fat spreads
2. how to source and select the tools, equipment and ingredients needed to produce mixed fat spreads
3. the personal protective equipment needed for producing mixed fat spreads and why it is important to use and wear it
4. how to access the organisational mixed fat spread recipe and equipment standard operating procedures
5. the importance of adhering to quality specifications and to organisational requirements when producing mixed fat spreads
6. how to source and select the ingredients used in the production of mixed fat spreads
7. how to control equipment used in mixed fat spread production
8. why it is important to control temperature when storing and processing dairy products and ingredients used in mixed fat spread production, and how to do this
9. why it is important to follow product recipes
10. what actions address variations in type of fat, ingredients and environmental factors including seasonality and temperature
11. how to control equipment in response to quality testing to ensure the mixed fat spread meets organisational final product quality and yield specifications
12. why it is important to work within the limits of your responsibility and refer problems to relevant people
13. common sources of contamination during processing, how to avoid these and what might happen if this is not done
14. how to deal with ingredients and product that can be recycled or reworked.

Unit 288 Produce mixed fat spreads

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **preparing to control dairy processing equipment** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **controlling dairy processing equipment** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Unit 289

Produce portion controlled raw meat or poultry products

SCQF Level:	5
Credit value:	4
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about the skills needed for you to produce portion controlled raw meat or poultry products in food and drink manufacture and/or supply operations. Meat and poultry can be cut and trimmed into individual cuts or joints to meet organisational and customer specifications. Producing portion controlled raw meat and poultry is a key skill in meat processing and butchery outlets.</p> <p>You will need to be able to use tools and equipment, follow a product specification and work to organisational procedures to produce portion controlled raw meat or poultry.</p> <p>This unit is for you if you work in food and drink manufacture and/or supply operations and are involved in producing portion controlled raw meat or poultry.</p>

Performance objectives

The learner must be able to:

1. prepare to produce portion controlled raw meat or poultry products

This means you:

- 1.1 adhere to organisational and regulatory standards when carrying out production of raw meat products
- 1.2 use and wear personal protective equipment
- 1.3 check with the relevant person the quantity and specification of portions required
- 1.4 check the availability and cleanliness of work area, tools and equipment
- 1.5 source the meat or poultry requiring portioning
- 1.6 choose the correct knives and ensure they are sharp, clean and suitable for purpose
- 1.7 check availability of storage areas for final product and waste materials
- 1.8 refer problems outside limits of your responsibility to relevant

people.

Performance objectives

The learner must be able to:

2. produce portion controlled raw meat or poultry products

This means you:

- 2.1 use appropriate tools and equipment to produce portion controlled raw meat or poultry products at the pace to meet organisational
- 2.2 produce portions that meet customer or organisational yield and quality specifications
- 2.3 store waste for disposal and make portion controlled product available to next stage of production
- 2.4 maintain pace of production to organisational requirements
- 2.5 work within the limits of your responsibility.

Essential knowledge

The learner will need to know and understand:

1. why it is important to follow organisational standard operating procedures when producing portion controlled raw meat products
2. the tools and equipment required to carry out production of portion controlled raw meat or poultry products
3. why it is important to check the cleanliness of tools and equipment
4. how to handle the meat or poultry to maintain its quality
5. how to avoid product contamination and maintain food safety during portioning operations
6. how to access the correct organisational specifications
7. why it is important to adhere to organisational yield and quality specifications
8. the importance of precision cutting in portioning operations
9. why it is important to work precisely and accurately to produce consistent portion controlled products
10. why it is important to maintain the pace and flow of production according to organisational requirements
11. how to store waste products for disposal from portioning operations
12. how ineffective portioning can lead to wastage, potential customer complaints and lost revenue
13. how to deal with operating problems within the limits of your responsibility.

Unit 289 Produce portion controlled raw meat or poultry products

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **preparing to produce portion controlled raw meat or poultry products** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **producing portion controlled raw meat or poultry products** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Unit 290

Produce product packs in a food environment

SCQF Level:	5
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about the skills needed for you to produce product packs in food and drink manufacture and/or supply operations. The correct production of packs is essential to maintaining the integrity of the product. It is therefore essential to maintaining product quality and safety.</p>

You will need to be able to prepare to produce individual packs. You also need to show you can carry out production of individual packs. You must also show you can finish production of individual packs.

This unit is for you if you work in food and drink manufacture and/or supply operations and are involved in carrying out packing operations.

Performance objectives
The learner must be able to: 1. prepare to produce individual packs
This means you: 1.1 follow health, safety and hygiene standards when preparing to produce individual packs 1.2 check packing specifications at the right time 1.3 set up equipment according to specification 1.4 make sure that there is sufficient packing material available and fit for use 1.5 make sure that services meet requirements 1.6 make sure that the product to be packed is available and fit for use 1.7 take effective action in response to operating problems 1.8 maintain effective communication with the relevant people.

Performance objectives

The learner must be able to:

2. carry out production of individual packs

This means you:

- 2.1 follow health, safety and hygiene standards when carrying out production of individual packs
- 2.2 use equipment correctly and make sure that it is correctly supplied with materials
- 2.3 monitor pack quality and quantity and take effective action in response to defects
- 2.4 achieve the required quality and quantity of output within the specified time
- 2.5 make sure that there is minimal waste
- 2.6 maintain effective communication with the relevant people.

Performance objectives

The learner must be able to:

3. finish production of individual packs

This means you:

- 3.1 follow health, safety and hygiene standards when finishing production of individual packs
- 3.2 dispose of surplus consumables correctly
- 3.3 deal correctly with waste, scrap and non-standard products
- 3.4 stop the packaging run at the right time
- 3.5 make equipment ready for future use after the completion of the process
- 3.6 maintain effective communication with the relevant people
- 3.7 complete all records promptly and accurately.

Essential knowledge

The learner will need to know and understand:

1. relevant health, safety and hygiene standards and why it is important that you follow them
2. how to obtain information about products, materials and coding
3. how to identify different types of packing materials and products
4. the functions of the main packing materials being used
5. the required manual handling techniques for the packing materials being used
6. what action to take if you discover faults in products, materials, equipment settings and equipment condition
7. why it is important to have checking procedures and what might happen if checking is not carried out accurately
8. how to establish fitness for use and how to deal with materials and products which are unfit for use
9. why it is important to communicate effectively and what might happen if this is not done
10. the physical characteristics of products and these characteristics affect packing
11. the expected rate of use of product and materials, and what action to take if the supply of product and materials is interrupted
12. the main types of packing materials and sealing methods
13. what precautions to take to avoid injury when handling packing materials
14. why it is important to control consumables to match the packing run and what might happen if this is not done
15. how to measure the quantity of product to go into the packs
16. the expected quality, output and wastage standards and what might happen if these are not met
17. why it is important to have quality standards
18. how to monitor operations and why it is important to do so
19. why it is important to supply the right materials in the correct quantity and at the right time, and what might happen if this is not done
20. the limits of your own authority and abilities, and why it is important to work within them
21. why it is important to meet output targets and what might happen if they are not met
22. why it is important to control consumables to match the packing run and what might happen if this is not done
23. why it is important to have a shut-down sequence and what might happen if this is not followed
24. what might happen if the correct waste and scrap disposal procedures are not followed
25. what preparations are required for the next phase in the cycle
26. how to prepare the work area for future use
27. why it is important to communicate effectively and what might happen if this is not done
28. why it is important to keep accurate records and what might happen if this is not done.

Unit 290 Produce product packs in a food environment

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **preparing to produce individual packs** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **carrying out production of individual packs** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **finishing production of individual packs** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Unit 291

Produce sausages by hand

SCQF Level:	5
Credit value:	5
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	This unit is about the skills needed for you to produce sausages by hand in food and drink manufacture and/or supply operations. Producing batches of sausages by hand using semi-automated equipment is a key skill in meat processing and butchery outlets.

You will need to be able to prepare ingredients and equipment, follow a product specification and work to organisational procedures. You must also be able to hand produce a batch of sausages.

This unit is for you if you work in food and drink manufacture and/or supply operations and are involved in the production of sausages by hand

Performance objectives
The learner must be able to: 1. prepare to produce sausages
This means you: 1.1 wear and use the correct personal protective equipment 1.2 check the availability and cleanliness of work area, tools and equipment 1.3 source sausage recipe and product specification 1.4 collect recipe ingredients to produce required sausages 1.5 mince meat and fat, ensuring even distribution of fat through the mixture 1.6 check visual lean of meat and adjust if necessary 1.7 prepare sausage casings according to organisational procedures 1.8 address problems within the limits of your responsibility.

Performance objectives
The learner must be able to: 2. produce sausages
This means you: 2.1 weigh ingredients accurately adhering to product recipe 2.2 add ingredients to meat/fat mince, mixing thoroughly after each addition 2.3 start up sausage extruder, load with casings and meat mixture and check it is operating correctly 2.4 produce sausage length to required product specification 2.5 link sausages, by hand, to required product specification 2.6 check sausage yield and quality against product recipe and specification 2.7 work within the limits of your responsibility.

Performance objectives
The learner must be able to: 3. complete sausage production
This means you: 3.1 store sausages according to organisational specification and requirements 3.2 clean personal protective equipment, work area, tools and equipment to organisational procedures 3.3 store waste for disposal according to organisational procedures.

Essential knowledge

The learner will need to know and understand:

1. how to access organisational procedures
2. the organisational and regulatory procedures that must be adhered to when producing sausages by hand
3. the personal protective equipment required to produce sausages by hand
4. the tools and equipment needed to produce sausages by hand
5. why it is important to have hygienically clean personal protective equipment, work area, tools and equipment when producing sausages by hand
6. why it is important to keep meat or poultry cold when making sausages
7. how to access the organisational specifications and recipes for sausages
8. why it is important to adhere to the specific sausage recipe
9. why it is important to mix ingredients thoroughly
10. the specifications relating to the names pork: sausage, link, chipolata and sausage meat
11. how to estimate “visual lean” and why it is important to sausage making
12. the importance of keeping waste to a minimum, its affect on yield and the loss of revenue from sausage production
13. how to check sausage yield and quality against organisational specification
14. why it is important to check for yield and quality when producing sausages by hand
15. the importance of carrying out quality checks against organisational specifications
16. the different types of waste occurring as a result of producing sausages by hand and how they should be disposed
17. why it is important to work within the limits of your responsibility and report.

Unit 291 Produce sausages by hand

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **preparing to produce sausages** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **producing sausages** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **completing sausage production** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Unit 292

Produce specialist individual dough based products

SCQF Level:	6
Credit value:	8
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about producing specialist individual dough based products, in a non-automated bakery production environment. Typical products of this type require advanced craft production techniques and skills specifically to meet customers' orders for specialist products. Examples include presentation breads like wheat sheaves, shields and plaques, specialist pastry products for special occasions and other speciality products using dough as their base. Whilst these products are not designed for batch or continuous production, they may be adapted for these purposes through further product development.</p>

You need to show that you can plan the production of individual and specialist products to meet customers' needs. You will need to produce these products using advanced craft designs, techniques and skills to satisfy customers' specialist needs. Finally, you will need to be able to store and prepare your product for despatch.

Performance objectives
The learner must be able to: 1. plan production
This means you: 1.1 identify the resources required for production to meet the individual product specification 1.2 order, arrange and assemble resources to meet production requirements 1.3 identify any conflicting production requirements with other production activity and resolve with the relevant personnel 1.4 plans meet health, safety, food safety and organisational requirements 1.5 agree plans for production with relevant personnel.

Performance objectives

The learner must be able to:

2. produce specialist individual product

This means you:

- 2.1 check the availability of resources to meet production requirements
- 2.2 use resources effectively and apply advanced craft techniques skilfully to meet requirements of the product specification
- 2.3 respond promptly and effectively to production related and technical problems
- 2.4 identify and act upon opportunities to recover and utilise waste
- 2.5 comply with health, safety, food safety and organisational requirements
- 2.6 present the completed product to the relevant personnel for approval.

Performance objectives

The learner must be able to:

3. store and prepare product for despatch

This means you:

- 3.1 correctly store the completed product
- 3.2 provide advice and guidance on the appropriate packing, wrapping and transportation for the product
- 3.3 ensure that the product meets organisational requirements including those for health, safety and food safety.

Essential knowledge

The learner will need to know and understand:

1. to what standards of health & safety and food safety you are required to work, why it is important that you do so and what might happen if they are not met
2. how to plan production for specialist individual products
3. application and use of resources for individual products
4. how to quality control production for individual products
5. accurate interpretation and use of product specifications
6. correct use of individual advanced craft production tools and equipment
7. behaviour, characteristics and changes of materials used during production and storage
8. recovery, utilisation and disposal of production waste materials
9. permitted use of colours and additives in advanced craft production
10. correct storage for specialist individual products
11. how to provide appropriate advice and guidance for the despatch and transport of specialist individual products.

Unit 292 Produce specialist individual dough based products

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **planning production** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **producing specialist individual products** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **storing and preparing products for despatch** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Unit 293

Produce specialist individual flour confectionery

SCQF Level:	6
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about producing specialist individual flour confectionery products, in a non-automated bakery production environment. Typical products of this type require advanced craft production techniques and skills specifically to meet customers' orders for specialist products. Examples include wedding cakes, celebration cakes for special occasions and other speciality flour confectionery. Whilst these products are not designed for batch or continuous production, they may be adapted for these purposes through further product development.</p> <p>You need to show that you can plan the production of individual and specialist products to meet customers' needs. You will need to produce these products using advanced craft designs, techniques and skills to satisfy customers' specialist needs. Finally, you will need to be able to store and prepare your product for despatch.</p>

Performance objectives
The learner must be able to: 1. plan production
This means you: 1.1 identify the resources required for production to meet the individual product specification 1.2 order, arrange and assemble resources to meet production requirements 1.3 identify any conflicting production requirements with other production activity and resolve with the relevant personnel 1.4 plans meet health, safety, food safety and organisational requirements 1.5 agree plans for production with relevant personnel.

Performance objectives

The learner must be able to:

2. produce specialist individual product

This means you:

- 2.1 check the availability of resources to meet production requirements
- 2.2 use resources effectively and apply advanced craft techniques skilfully to meet requirements of the product specification
- 2.3 respond promptly and effectively to production related and technical problems
- 2.4 identify and act upon opportunities to recover and utilise waste
- 2.5 comply with health, safety, food safety and organisational requirements.

Performance objectives

The learner must be able to:

3. store and prepare product for despatch

This means you:

- 3.1 present the completed product to the relevant personnel for approval
- 3.2 correctly store the completed product
- 3.3 provide advice and guidance on the appropriate packing, wrapping and transportation for the product
- 3.4 ensure that the product meets organisational requirements including those for health, safety and food safety.

Essential knowledge

The learner will need to know and understand:

4. to what standards of health & safety and food safety you are required to work, why it is important that you do so and what might happen if they are not met
5. how to plan production for specialist individual products
6. application and use of resources for individual products
7. how to quality control production for individual products
8. accurate interpretation and use of product specifications
9. correct use of individual advanced craft production tools and equipment
10. behaviour, characteristics and changes of materials used during production and storage
11. recovery, utilisation and disposal of production waste materials
12. permitted use of colours and additives in advanced craft production
13. correct storage for specialist individual products
14. how to provide appropriate advice and guidance for the despatch and transport of specialist individual products.

Unit 293 Produce specialist individual flour confectionery

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **planning production** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **producing specialist individual products** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **storing and preparing products for despatch** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Unit 294

Protect the vehicle and the load

SCQF Level:	5
Credit value:	2
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about checking a goods vehicle and its load at appropriate times during a journey. It covers the physical checks that a driver needs to make and the procedures and associated documentation that they may need to complete if damage or other problems are found. It requires drivers to be aware of factors that may affect the security of the vehicle and its load and the actions they can take to reduce risks.</p> <p>This unit is relevant to drivers of goods vehicles and those who are responsible for goods vehicles within logistics organisations.</p>

Performance objectives

The learner must be able to:

1. protect the vehicle and the load

This means you:

- 1.1 obtain information on the organisation's procedures and all relevant legal, safety and operating requirements relating to the protection of the vehicle and load
- 1.2 take appropriate action if you identify any problems in complying with the organisation's procedures
- 1.3 monitor the condition of the load at regular intervals
- 1.4 report any change in the condition of the load according to the organisations procedures
- 1.5 follow the organisations protection procedures in relation to the vehicle and the load in different locations
- 1.6 report any theft or damage to the vehicle or load, according to the organisations procedures
- 1.7 carry out vehicle security checks at appropriate times.

Essential knowledge

The learner will need to know and understand:

1. where to obtain information on legal, safety and operating requirements for the vehicle and load
2. the actions required if there are any problems in complying with the organisations procedures
3. how to identify damage or deterioration in the condition of the load
4. what the reporting procedures are if there is a change in the condition of the load
5. methods for protecting different types of load
6. the type of problems that can occur with protecting the vehicle and load
7. what different risks are associated with protecting the vehicle and load at different locations.

Unit 294 Protect the vehicle and the load

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **protecting the vehicle and the load** in accordance with workplace procedures

Unit 295

Provide accessories and store celebration cakes

SCQF Level:	5
Credit value:	5
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	This unit is about providing accessories to accompany celebration cakes and ensuring adequate protection and storage for celebration cakes in a bakery production environment. Celebration cakes may include cakes designed for birthdays, anniversaries, weddings, Christmas and other special occasions like Mothers Day or Easter.

You need to show that you can source and provide the specified accessories to accompany celebration cakes like pillars, vases, flowers and stands. You will need to demonstrate that you can properly protect and store celebration cakes for delivery or collection. Complying with health & safety, food safety and organisational requirements are essential features of this unit.

Performance objectives
The learner must be able to: 1. provide accessories for celebration cakes
This means you: 1.1 identify and check the condition of celebration cakes according to your instructions and specifications 1.2 correctly identify accessories required to accompany celebration cakes 1.3 promptly source required accessories 1.4 position accessories correctly on or with celebration cakes 1.5 take prompt action to isolate substandard celebration cakes 1.6 comply with health, safety, food safety, and organisational requirements throughout accessory operations 1.7 identify and check the condition of celebration cakes according to your instructions and specifications.

Performance objectives

The learner must be able to:

2. protect and store celebration cakes

This means you:

- 2.1 correctly assess the protection needs of celebration cakes
- 2.2 identify and select the appropriate packaging and protective materials for celebration cakes
- 2.3 pack and protect celebration cakes to ensure safe storage and transport
- 2.4 correctly store celebration cakes for despatch
- 2.5 take prompt action to isolate substandard celebration cakes
- 2.6 comply with health, safety, food safety and organisational requirements throughout protecting and storing operations
- 2.7 operate within the limits of your own authority and capabilities.

Essential knowledge

The learner will need to know and understand:

1. to what standards of health & safety and food safety you are required to work during flour cake decoration, why it is important that you do so, and what might happen if they are not met
2. how to source and read work instructions and specifications to check and monitor decoration requirements
3. why it is important to follow work instructions or product specifications or recipes with accuracy throughout decoration to ensure successful products
4. common sources of contamination and damage to celebration cakes
5. how to avoid contamination during cake decoration and what might happen if this is not done
6. how to recognise and report cakes during decoration and on completion that do not meet specification
7. the procedure for rejecting and isolating failed semi-prepared and prepared celebration cakes
8. how to maintain and adjust consistency of confectionery fillings for spreading and decorative materials
9. how to assemble bases and fill cakes efficiently without causing damage
10. how to maintain and adjust consistency of masking and covering materials
11. how to source and obtain accessories to meet customer's needs
12. how to protect, package and store celebration cakes correctly.

Unit 295 Provide accessories and store celebration cakes

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **providing accessories for celebration cakes** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **protecting and storing celebration cakes** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Unit 296

Receive and communicate information in livestock markets

SCQF Level:	5
Credit value:	3
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	All enterprises and organisations deal with information. This standard is concerned with the correct handling and communication of information.

You are required to receive and communicate information relevant to your particular job role. This may simply entail the accurate passing on of a message, or the collection and passing on of written information. Alternatively, it may entail the formal processing of information.

Throughout this standard, you are expected to communicate clearly and effectively with those that you come into contact with, whether they are colleagues, customers, the general public, supervisors or managers. You must be aware of the different ways in which information can be handled.

Performance objectives
The learner must be able to: 1. receive and communicate information
This means you: 1.1 request information in accordance with work requirements 1.2 communicate information to others clearly and accurately by means of visual signs and personal contact 1.3 take and pass on messages accurately at an appropriate time 1.4 acknowledge the receipt of information 1.5 treat confidential information in an appropriate manner.

Essential knowledge

The learner will need to know and understand:

1. information which is required for your role
2. the right time at which information should be requested and passed on
3. ways of communicating effectively
4. the different purposes for which information may be required, and the degree of detail necessary for these different purposes
5. why it is important to take and report messages accurately and the potential effects of not so doing
6. the extent to which messages may differ in urgency
7. the reasons why the receipt of information should be acknowledged.

Unit 296 Receive and communicate information in livestock markets

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **receiving livestock into the display area** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Unit 297

Receive and offload bulk liquids in food manufacture

SCQF Level:	5
Credit value:	4
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council

Aim: This unit is about the skills needed for you to receive and offload bulk liquids in food and drink manufacture and/or supply operations. Receiving and offloading bulk liquids including raw milk, cream, concentrated milk, syrup and oil is important to the maintenance of production schedules and the maximisation of yield and quality from incoming materials.

You will need to be able to ensure the tanker bay and hosing equipment is available to receive the tanker. You will also be able to check that the offloading equipment is ready and in working order. You must also be able to adhere to organisational and regulatory requirements and address problems within the limits of your responsibility.

This unit is for you if you work in food and drink manufacture and/or supply operations and are involved in receiving and offloading bulk liquids in food manufacture.

Performance objectives
The learner must be able to: 1. check the vehicle and contents
This means you: 1.1 check the liquid matches delivery schedule documentation 1.2 check product temperature and record details according to organisational requirements 1.3 take pre-delivery samples for testing adhering to organisational hygiene and sampling procedures 1.4 take action to address problems.

Performance objectives

The learner must be able to:

2. prepare work area and equipment to receive bulk dairy liquids

This means you:

- 2.1 make sure that there is enough storage space available for the expected delivery volume
- 2.2 make sure offloading pumps and hoses are available and clean
- 2.3 check that the tank or silo is clean and fit for use
- 2.4 ensure that the correct routes have been set to pump the product to the correct tank or silo
- 2.5 check that all drain valves and inspection hatches are securely closed
- 2.6 inform relevant people when unloading is about to begin.

Performance objectives

The learner must be able to:

3. offload bulk dairy liquids

This means you:

- 3.1 check for leaks during offloading
- 3.2 ensure off-loading is complete
- 3.3 inform relevant people when off-loading is complete
- 3.4 work within the limits of your responsibility and take action to address problems
- 3.5 store pumps and hoses according to organisational requirements
- 3.6 complete delivery documentation to organisational requirements.

Essential knowledge

The learner will need to know and understand:

1. the organisational procedures relating to the receipt of bulk products
2. how to access delivery schedules documentation that tells you the quantity and type of deliveries to expect
3. the communication structures and procedures within the organisation and why it is important to follow them
4. how to check equipment is clean and suitable for use and what may happen if they are not carried out
5. the organisational requirements for testing on pre-delivery liquids
6. acceptable reasons for refusing bulk products into storage
7. organisational procedures to follow if faults are found in the liquid
8. what the correct routing is to transfer bulk product from tanker to storage vessel
9. how to deal with waste or spillage and what may happen if this is not done
10. what to do if there is contamination or loss of bulk product
11. how to check for leaks during the offloading process
12. why it is important to store hoses and other equipment correctly
13. how to work within the limits of your responsibility and take action to address problems
14. organisational requirements for the completion of documentation and why it is important to follow them.

Unit 297 Receive and offload bulk liquids in food manufacture

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **checking the vehicle and contents** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **preparing work area and equipment** to receive bulk dairy liquids in your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **offloading bulk dairy liquids** in your role in accordance with workplace procedures and within the limits of your own responsibilities.

Unit 298

Receive and pen livestock in livestock markets

SCQF Level:	5
Credit value:	4
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	This unit is about making ready to receive livestock, accepting the livestock into the market and penning the livestock. You will need to show that you can follow animal welfare procedures and understand how to deal with the animal welfare problems. You will also need to prove that you deal correctly with the documents recording the delivery

This unit is for you if you work in a livestock market.

Performance objectives
The learner must be able to: 1. prepare to receive livestock
This means you: 1.1 make sure that the delivery vehicle is in the correct position and it is safe to unload 1.2 arrange for appropriate space in which to pen the livestock and check the pen is in the correct position 1.3 make sure the route from the vehicle to the pen is clear 1.4 check that all ramps, rails and handling equipment are safe and secure to unload livestock 1.5 report any problems to the appropriate person or people.

Performance objectives

The learner must be able to:

2. accept livestock

This means you:

- 2.1 check the condition of the livestock and whether they are suitable to be accepted
- 2.2 receive documentation from the delivery driver and carry out appropriate checks in accordance with organisational requirements
- 2.3 identify and report any discrepancies to the relevant person or people
- 2.4 report any livestock to be unacceptable to the animal welfare officer and any other relevant personnel
- 2.5 follow instructions to deal with any unacceptable livestock
- 2.6 move livestock to the holding area in a safe and responsible manner in accordance with the recommended codes of practice.

Performance objectives

The learner must be able to:

3. pen livestock

This means you:

- 3.1 maintain the health and welfare of the livestock throughout operations
- 3.2 ensure the pens are suitable and ready for reception of the livestock
- 3.3 introduce the livestock into the pens in a way that minimises stress and maintains their health and welfare
- 3.4 ensure all the livestock are correctly located in the pens in the correct numbers
- 3.5 handle and move the livestock correctly and safely
- 3.6 monitor the livestock carefully to ensure their ongoing health and welfare and deal appropriately with anything of concern
- 3.7 deal with any difficulties within the limits of your authority, and promptly report those that you cannot deal with to the appropriate person or people
- 3.8 use safe working methods and practices consistent with relevant legislation and codes of practice.

Essential knowledge

The learner will need to know and understand:

1. your responsibilities under animal health and welfare regulations and legislation
2. your responsibilities under health and safety regulations and legislation
3. why fallen, diseased, fractious or injured livestock must be identified
4. signs of health, stress and potential problems in different species of livestock in relation to appearance, posture, movement and behaviour and what to do if any problems are observed
5. how to maintain the health and welfare of livestock and how to minimise the chances of stress or injury
6. how to check and make ready for accepting livestock and the importance of preparations
7. appropriate types of holding facilities for different livestock
8. organisational procedures for accepting livestock into the market
9. documentation and reporting procedures
10. reasons for checking and keeping records and the importance of accuracy
11. penning which is suitable for the livestock with which you are working
12. the different factors which need to be taken into account when preparing pens for livestock
13. environmental conditions which livestock need within the pens to maintain their health and welfare
14. the potential hazards to livestock and people which may occur in pens and how these can be minimised
15. methods of handling livestock safely
16. methods of introducing livestock into the pens in a way which minimises their stress
17. normal and abnormal behaviour of the livestock once introduced into the pens
18. limits of your authority in dealing with difficulties and concerns.

Unit 298 Receive and pen livestock in livestock markets

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **preparing to receive livestock** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **accepting livestock** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **penning livestock** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Unit 299

Receive goods and materials in a food environment

SCQF Level:	5
Credit value:	7
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	<p>This unit is about the skills needed for you to receive food and drink goods and materials for storage in food and drink manufacture and/or supply operations. Receiving food and drink goods and materials for storage is important to the efficient and effective control of stock. It is also therefore essential to production flow.</p> <p>You will need to be able to check goods and materials. You also need to show you can move and handle goods and materials safely and hygienically. You must also show you can update records, stock control systems, and finish goods and materials intake.</p> <p>This unit is for you if you work in food and drink manufacture and/or supply operations and are involved in receiving goods and materials for storage</p>

Performance objectives

The learner must be able to:

1. check goods and materials

This means you:

- 1.1 check that goods and materials entering storage match the type, quality and quantity as stated in the documentation
- 1.2 take immediate action within your limit of authority to deal with any discrepancies and report your actions accurately to the relevant person
- 1.3 complete accurately any necessary preparation and labelling.

Performance objectives

The learner must be able to:

2. move and handle goods and materials safely and hygienically

This means you:

- 2.1 follow health and safety, hygiene and environmental standard and instructions when receiving goods and materials
- 2.2 use safe and hygienic methods for handling goods and materials
- 2.3 use methods to accept goods and materials that minimise damage to stock
- 2.4 carry out the operation in optimum time
- 2.5 deliver the consignment to the right place
- 2.6 take correct action when there is damage or loss to goods and materials.

Performance objectives

The learner must be able to:

3. update records and stock control systems

This means you:

- 3.1 identify and record accurately any discrepancies
- 3.2 record accurately the reasons for refusing goods and materials into storage and communicate this information clearly to the relevant person
- 3.3 update stock control systems to record the progress of goods and materials into storage
- 3.4 make sure that documentation is complete, accurate and up to date.

Performance objectives

The learner must be able to:

4. finish goods and materials intake

This means you:

- 4.1 inform those who need to know that the delivery is about to finish
- 4.2 store required equipment correctly when the delivery is completed
- 4.3 deal with waste, spillage or rubbish correctly.

Essential knowledge

The learner will need to know and understand:

1. what checks need to be made on the goods and materials
2. what handling equipment is required in the unloading of goods and materials
3. what checks need to be made on handling equipment before they are used for unloading
4. why it is important to position the vehicle correctly for unloading
5. why it is important to make sure the vehicle is safe and secured for unloading
6. procedures for setting up handling equipment if used
7. methods of handling goods and materials to avoid risks to personnel and product safety
8. visual checks to be carried out during unloading process
9. temperature controls and other hygiene and food safety controls relating to the goods and materials during the unloading process
10. relevant legislation relating health, safety and food safety.

Unit 299 **Receive goods and materials in a food environment**

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **checking goods and materials** in accordance with workplace procedures.

This must include two types of goods or materials.

Evidence of **moving and handling goods and materials safely and hygienically** in accordance with workplace procedures.

This must include two types of goods or materials.

Evidence of **updating records and stock control systems** in accordance with workplace procedures and taking effective action in response to two operating problems.

Evidence of **finishing goods and materials intake** in accordance with workplace procedures.

This must include two types of goods or materials.

Unit 300

Receive livestock in food manufacture

SCQF Level:	5
Credit value:	6
Endorsement by a SSC:	This unit is endorsed by Improve, the Food & Drink Skills Council
Aim:	This unit is about receiving livestock for food and drink manufacturing operations. It covers preparing to receive livestock, checking the condition of the livestock and reporting discrepancies as well as unloading and penning livestock.

This unit is for you if you work in meat and/or poultry processing operations and your role requires you to receive livestock.

Performance objectives

The learner must be able to:

1. prepare to receive livestock

This means you:

- 1.1 direct vehicles to the holding area for unloading of livestock
- 1.2 make sure that the delivery vehicle is in the correct position and it is safe to unload
- 1.3 check that the vehicle is secured and safe to unload
- 1.4 arrange for appropriate space to receive the livestock
- 1.5 check that the holding area is suitable and in the correct condition to receive livestock
- 1.6 make sure the route from the vehicle to the holding area is clear
- 1.7 check that all ramps, rails and handling equipment are available, safe and secure to unload livestock
- 1.8 report any problems to the appropriate person.

Performance objectives
The learner must be able to: 2. accept livestock
This means you: 2.1 check the condition of the livestock and whether they are suitable to be accepted 2.2 receive documentation from the delivery driver and carry out appropriate checks 2.3 identify and report any discrepancies to the relevant person 2.4 follow instructions to deal with any unacceptable livestock.

Performance objectives
The learner must be able to: 3. unload and pen livestock
This means you: 3.1 gather livestock and move them to their holding area in a safe and humane way 3.2 pen livestock in their holding area in a safe and humane way 3.3 check that livestock have a readily available constant supply of drinking water 3.4 check that all livestock are correctly located in the holding areas in the correct numbers 3.5 deal with any difficulties within the limits of your authority 3.6 direct vehicles away from holding area when unloading is completed.

Essential knowledge

The learner will need to know and understand:

1. your responsibilities under animal welfare regulations and legislation
2. your responsibilities under health and safety regulations and legislation
3. why dead, diseased, injured or dirty livestock must be identified
4. how to recognise signs of ill-health, stress and potential problems in different species of livestock in relation to appearance, posture, movement and behaviour, and what to do if any problems are observed
5. how to keep livestock healthy during transport and minimise the chances of stress or injury
6. methods of handling different species of livestock safely
7. how to introduce livestock into holding areas in a way which minimises their stress
8. why it is important for animals to be moved along a clear route from vehicle to holding area
9. the effects of stress and damage on carcase meat
10. methods of securing the vehicle and preparing it for unloading and why it is important
11. how to check and prepare holding areas and equipment for unloading, and why preparations are important
12. types of holding facilities for different livestock and how to prepare them
13. why the size and type of holding facility is important
14. regulations relating to holding locations for vehicles containing livestock
15. why environmental conditions for holding livestock are important
16. potential hazards to livestock and people which may occur in the holding areas and how these can be minimised
17. procedures for receiving and unloading livestock
18. documentation and reporting procedures
19. reasons for keeping records accurately and why it is important
20. reasons for checking records and identifying mismatches
21. limits of your authority in dealing with difficulties and concerns.

Unit 300 Receive livestock in food manufacture

Supporting information

Evidence requirements

You must provide your assessor with evidence for all the learning outcomes and assessment criteria. The evidence must be provided in the following ways taking into account any of the special considerations below.

Evidence of **preparing to receive livestock** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **accepting livestock** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.

Evidence of **unloading and holding livestock** as part of your role in accordance with workplace procedures and within the limits of your own responsibilities.