

Course planning

Whilst this support pack has been designed for the purpose of unit delivery, it is possible to integrate delivery of the three units Food for Health, Food Product Development and Food Technology as they are designed to be offered as an integrated course or as discrete units.

Guidance on learning and teaching approaches for this course

This should be a practical-based course where students learn through **practical activities**.

Theoretical aspects should be integrated into the **practical work**. The use of outside speakers, for example Environmental Health officers, to talk about hygiene issues, or chefs to demonstrate practical skills should be encouraged whenever possible.

Reference can be made to books, magazines, pamphlets, videos or other departmental resource materials and to the following websites:

www.nutrition.org.uk
www.ces.uga.edu/pubcd/b1024-w.html
www.triz-journal.com/archives/2001/05/e/
www.foodstandards.gov.uk/
www.foodlink.org.uk/

Food Product Development aims to give candidates an understanding of the functions of ingredients within a food product, a knowledge of basic food hygiene rules, and allow them to plan, produce and evaluate products to meet the needs of a given brief.

Students should prepare a range of dishes to demonstrate the functions of ingredients in food products.

Students should complete practical activities to demonstrate skills in planning, producing and evaluating products to meet the needs of a given brief.

Safe and hygienic practices should be demonstrated throughout the practical work undertaken.

This pack should be used in conjunction with the National Assessment Bank materials for the assessment of the outcomes of the units.

Observational checklists, student worksheets, sensory evaluation sheets, design activity sheets and marking instructions mentioned in this pack can be found in the National Assessment Bank materials for the unit/course.

Unit	Outcome	Instrument of Assessment	Method of recording evidence
Food Product Development	Outcome 1 Demonstrate a knowledge and understanding of the functions of ingredients in food products.	Short/restricted response questions	Use of marking instructions (NAB page 33)
	Outcome 2 Prepare dishes to show the functions of ingredients in food products.	Practical exercise	Observational checklist (NAB page 48)
	Outcome 3 Demonstrate a knowledge and understanding of food hygiene rules in food production.	Short/restricted response questions	Use of marking instructions (NAB pages 35–37)
	Outcome 4 Create a food product to meet the needs of a given design activity.	Design activity	Observational checklist (NAB page 49)
Overall attainment to be recorded on checklist. Overall candidate achievement (NAB page 50)			

Food Product Development – Overview

Lesson number	Suggested approaches to learning and teaching	Outcomes and PCs linked to learning/teaching activities	Opportunities for gathering evidence for assessment
1-2	Demonstration/practical work with dishes to show the function of ingredients in food products – aerating Discussion of the ingredients which can be used to aerate food products Discussion of personal and kitchen hygiene rules for the correct preparation/cooking of food	Outcome 1 PC a Outcome 2 PCs a, b, c Outcome 3 PC a	
3-4	Demonstration/practical work with dishes to show the function of ingredients in food products – binding Discussion of the ingredients which can be used to bind food products Reinforcement of personal and kitchen hygiene rules for the correct preparation/cooking of food	Outcome 1 PC a Outcome 2 PCs a, b, c Outcome 3 PC a	
4-5	Demonstration/practical work with dishes to show the function of ingredients in food products – thickening Discussion of the ingredients which can be used to thicken food products Reinforcement of personal and kitchen hygiene rules for the correct preparation/cooking of food	Outcome 1 PC a Outcome 2 PCs a, b, c Outcome 3 PC a	

Lesson number	Suggested approaches to learning and teaching	Outcomes and PCs linked to learning/teaching activities	Opportunities for gathering evidence for assessment
6–7	Demonstration/practical work with dishes to show the function of ingredients in food products – bulking Discussion of the ingredients which can be used to bulk food products Reinforcement of personal and kitchen hygiene rules for the correct preparation/cooking of food	Outcome 1 PC a Outcome 2 PCs a, b, c Outcome 3 PC a	
7–8	Demonstration/practical work with dishes to show the function of ingredients in food products – setting Discussion of the ingredients which can be used to set food products Reinforcement of personal and kitchen hygiene rules for the correct preparation/cooking of food	Outcome 1 PC a Outcome 2 PCs a, b, c Outcome 3 PC a	
9–10	Demonstration/practical work with dishes to show the function of ingredients in food products – glazing Discussion of the ingredients which can be used to glaze food products Reinforcement of personal and kitchen hygiene rules for the correct preparation/cooking of food	Outcome 1 PC a Outcome 2 PCs a, b, c Outcome 3 PC a	
11	Students to complete short answer/restricted response questions (NAB pages 11–12)	Outcome 1 PC a	Question paper/use of marking instructions (NAB page 33)

Lesson number	Suggested approaches to learning and teaching	Outcomes and PCs linked to learning/teaching activities	Opportunities for gathering evidence for assessment
12–13	Students individually order and plan to make dishes to demonstrate each of the functions of ingredients in the given range. Students to complete sheet (IA2) (NAB page 13) showing dishes chosen and the criteria met		Sheet (IA2) (NAB page 13) completed by students
14–16	Students individually complete practical work as planned in previous lesson/s Tutor to complete observational checklist while students work Tutor to sign sheet (IA2) (NAB page 13) and make relevant comments on the dishes made	Outcome 2 PCs a, b, c	Observational checklist (NAB page 48) Student sheet (IA2) (NAB page 13) signed by tutor with relevant comments
17–18	Discussion of the conditions necessary for the growth of food poisoning organisms Discussion of the methods of prevention of contamination/cross-contamination	Outcome 3 PCs b, c	
19	Discussion of practices for the safe storage of food	Outcome 3 PC d	
20	Students to complete short answer/restricted response questions (NAB pages 14–15)	Outcome 3 PC a–d	Question paper/use of marking instructions (NAB pages 35–37)
21–30	Tutor-led completion of a given design activity	Outcome 4 PC a–f	
31–40	Students individually complete a chosen design activity (NAB pages 16–30)	Outcome 4 PC a–f	Design activity sheets (NAB pages 16–30) completed by students Use of marking instructions (NAB pages 38–43) Observational checklist (NAB page 49)

Outcomes/Performance Criteria	Student Activity	Evidence for Assessment Purposes
Outcome 1 Demonstrate a knowledge and understanding of the functions of ingredients in food products. Performance Criteria a) The functions of ingredients in food products are accurately identified and explained.	Discussion of the function of ingredients in food products	Short/restricted answer questions (NAB pages 11–12) Use of marking instructions (NAB page 33)
Outcome 2 Prepare dishes to show the functions of ingredients in food products. Performance Criteria a) The dishes are prepared to show the functions of ingredients in food products. b) The dishes are prepared to an acceptable standard. c) Safe and hygienic practices in food preparation are demonstrated.	Practical work to show the function of ingredients in food products The dishes meet the required specification Student must wear appropriate clothing, maintain a high standard of personal hygiene, maintain a clean and tidy workstation and use all equipment in a safe manner.	Student worksheets (NAB page 13) to show that dishes meet the required criteria Observational checklist (NAB page 48)

Outcomes/Performance Criteria	Student Activity	Evidence for Assessment Purposes
Outcome 3 Demonstrate a knowledge and understanding of food hygiene rules in food production. Performance Criteria a) Personal and kitchen hygiene rules are identified and explained. b) Conditions for growth of food spoilage organisms are identified and explained. c) Methods of prevention of contamination and cross-contamination are identified and explained. d) Safe practices for food storage are identified and explained.	Practical work to demonstrate understanding of basic personal and kitchen hygiene rules Discussion of conditions necessary for growth of food spoilage organisms Discussion of methods of prevention Discussion of safe practices for food storage	Observational checklist (NAB page 48) Short/restricted response questions (NAB pages 14–15) Use of marking instructions (NAB pages 35–37)

Outcomes/Performance Criteria	Student Activity	Evidence for Assessment Purposes
Outcome 4 Create a food product to meet the needs of a given design activity. Performance Criteria a) The needs of a given brief are identified. b) An appropriate specification is drawn up. c) Ideas generated are appropriate to the brief. d) The plan for the manufacture of the food product is realistic and shows a logical sequence of work. e) The food product or products are manufactured to an acceptable standard. f) The evaluation of the product is relevant and accurate.	Student should identify all the main points from the chosen design brief Student should draw up a minimum which is relevant to the brief of a three point specification Student should select dishes which meet the needs of the chosen brief Student should compile a time plan for the manufacture of the food product/s The food should meet the required specification and should be attractively presented and edible Student should carry out a sensory evaluation of the products made using given criteria	Design Activity sheets (NAB pages 16–30) Observational checklist (NAB page 49)

Work Record Sheet

OUTCOME 1 Demonstrate a knowledge and understanding of the functions of ingredients in food products.	Date assessed
Performance criteria a) The functions of ingredients in food products are accurately identified and explained.	

OUTCOME 2 Prepare dishes to show the functions of ingredients in food products.	Dates assessed
Performance criteria a) The dishes are prepared to show the functions of ingredients in food products. b) The dishes are prepared to an acceptable standard. c) Safe and hygienic practices in food preparation are demonstrated.	

OUTCOME 3 Demonstrate a knowledge and understanding of food hygiene rules in food production.	Dates assessed
Performance criteria a) Personal and kitchen hygiene rules are identified and explained. b) Conditions for growth of food spoilage organisms are identified and explained. c) Methods of prevention of contamination and cross-contamination are identified and explained. d) Safe practices for food storage are identified and explained.	

OUTCOME 4 Create a food product to meet the needs of a given design activity.	Dates assessed
Performance criteria a) The needs of a given brief are identified. b) An appropriate specification is drawn up. c) Ideas generated are appropriate to the brief. d) The plan for the manufacture of the food product is realistic and shows a logical sequence of work. e) The food product is manufactured to an acceptable standard. f) The evaluation of the product is relevant and accurate.	



Student Helpsheet 1

Outcome 1 PC (a)

Demonstrate a knowledge and understanding of the function of ingredients in food products.

You will be asked to explain the following functions of ingredients and to give an example of where each could be used. You will have about 15 minutes to answer the questions.

Aerating means to add air. The term is used in cookery to mean making food rise or making food light. For example:

- when you make meringues, you whisk air into the egg whites which produces a foam and makes the meringues light
- when you make muffins, you use self-raising flour and the raising agent in the flour produces a gas which expands when heated making the muffins rise
- when you cream butter or margarine in a cake mixture you trap small bubbles of air in the mixture which make the cake lighter
- when you add yeast to a bread mixture the yeast releases a gas which expands and causes the bread to rise

Binding means to hold ingredients together. Usually a liquid is used to bind ingredients together. For example:

- when making pastry, water is used to hold the flour and margarine mixture together
- when making scones, milk is used to hold the flour, margarine and other ingredients together
- when making fish cakes or burgers, eggs are used to hold the other ingredients together

Thickening means to change the consistency of a food product, in other words to make it thicker. For example:

- when making a white sauce, the starch grains in the flour swell and absorb the liquid when it is heated which causes the sauce to thicken

- when making a chocolate sauce cornflour is used instead of flour but the starch grains in the cornflour still swell and absorb the liquid causing the sauce to thicken
- the starch grains in potatoes used in a soup or stew swell and absorb the liquid causing it to thicken
- when you boil sugar with water the water evaporates and the mixture becomes more syrupy and thicker

Bulking means to give texture to a food product or to fill it out. Fruit and vegetables, breadcrumbs, rice and pasta are often used to bulk or fill out a food product. For example:

- mashed potatoes are used in fish cakes to bulk the mixture, the potatoes absorb the flavours of the other ingredients and the liquid used and allow the fish cakes to keep their shape when cooked
- using breadcrumbs in a beefburger mixture gives the beefburger texture and lets the breadcrumbs absorb the flavour of the other ingredients and absorb the liquid used
- rice is used in a risotto to add bulk to the dish and absorb the liquid and flavours of the other ingredients
- a variety of vegetables are used in a savoury wrap to add bulk to the product and improve its flavour and texture

Setting means that the ingredients form a gel or change a liquid to a solid. For example:

- mixing gelatine with warm water and then adding other ingredients, when making a jelly or a cold soufflé, allows the gelatine to swell and form a gel with the liquid
- when making quiche or a custard tart, the egg coagulates on heating setting the mixture
- when making jam, the pectin is mixed with sugar and an acid and boiled together until setting point is reached, so that the jam will be the correct consistency when cooled

Glazing means to give the finished product an attractive appearance. For example:

- egg is brushed over pastry before cooking to give a shiny golden brown colour
- milk is brushed over scones before cooking to give a shiny brown colour
- a boiled sugar and water mixture can be brushed over buns after cooking to give a caramelised topping
- honey can be spread over a piece of gammon before cooking to give a shiny golden brown colour

Student Helpsheet 2

Outcome 2 PCs (a)–(c)

Prepare dishes to show the functions of ingredients in food products.

You will be asked to make dishes which show **four** of the functions of ingredients in food products listed below.

Each dish you choose to make should show at least **one** of the functions of ingredients from the following list:

- Aerating
- Binding
- Thickening
- Bulking
- Setting
- Glazing

The dishes you choose might not show all the functions shown above, but **each** dish should cover at least **one** of them and some dishes may cover more than one.

The food preparation and cooking methods should be appropriate for the dishes you have chosen.

The dishes should be of an acceptable standard, which means they should be edible and attractively presented.

You should take account of relevant hygiene and safety procedures when you are making the dishes.

You must complete sheet **IA2** (NAB page 13) to show which function you have covered in **each** dish and your tutor will sign the sheet when you have completed the practical work.

Student Helpsheet 3

You will be asked some short questions about preventing cross-contamination, storing food correctly and the correct use of fridges and freezers.



Cross-contamination

Cross-contamination is the transfer of bacteria from raw foods to other foods.

If you use a chopping board to cut raw meat and then use the same board to chop vegetables for a salad without cleaning it properly in between, the bacteria from the raw meat will be transferred on to the chopping board and then on to the salad.

To prevent cross-contamination:

1. Wash hands between handling raw and cooked foods
2. Use different knives, chopping boards and preparation equipment for raw and cooked foods
3. In commercial kitchens different preparation areas are used for raw and cooked foods to ensure they are kept separate
4. Use colour-coded preparation equipment for raw and cooked foods
5. Wash food preparation equipment thoroughly between using for raw and cooked foods
6. Do not store raw and cooked foods where they can come into contact with each other
7. Store raw meat at the bottom of fridge or below cooked foods to prevent drips falling on to cooked foods
8. Wrap raw foods or place them in a leakproof box before storage
9. Wash food, where possible, before use
10. Keep food covered and away from insects, flies and dust.

Outcome 3 PCs (a)–(d)

Demonstrate a knowledge and understanding of food hygiene rules in food production.

Personal and kitchen hygiene

You will be asked to remember **four** personal hygiene rules when working with food. You will have about 30 minutes to answer the question.



Personal hygiene rules:

1. Hands should always be kept clean – they should be washed before working with food, after visiting the toilet, between touching raw and cooked foods, after touching hair or face, and after coughing or sneezing
2. Nail varnish should not be worn because it could flake off and fall into the food
3. Nails should be scrubbed before working with food
4. Cuts and spots should be covered with a waterproof plaster; a bright coloured plaster should be used, so that it can be seen easily if it falls into the food.
5. Jewellery should be removed
6. Hair should be tied back or covered with a hat or hairnet
7. A clean apron or overall should be worn; chefs wear special clothing when working in a kitchen
8. You should never cough or sneeze over food. Disposable paper tissues should be used and hands should be washed after touching the tissues
9. Do not smoke in food preparation areas
10. Do not handle food if suffering from colds, flu or gastric upsets.

You will be asked to remember **three** kitchen hygiene rules.



Kitchen hygiene rules when working with food:

1. All work surfaces must be clean – they should be washed thoroughly after use and disinfected regularly
2. Work surfaces should be washed thoroughly between using raw and cooked food
3. All food preparation equipment must be in good condition with no cracks or chips as these can harbour bacteria
4. Cloths used to wipe work surfaces must be clean and should be changed frequently
5. Cloths should be washed and disinfected after use
6. Cloths should be washed thoroughly or disinfected between handling raw and cooked food
7. Whenever possible disposable cloths should be used to wipe work surfaces
8. Food preparation equipment and utensils must be clean; they should be washed thoroughly after use and disinfected frequently
9. Wash food where possible before use
10. Different knives, chopping boards and, in commercial kitchens, different preparation areas should be used for raw and cooked food
11. Waste must be disposed of hygienically; bins should be emptied daily; they should be washed and disinfected daily
12. No pets should be allowed in food preparation areas as they carry bacteria on their fur.

In order to prevent food being contaminated with bacteria it is important that these rules are carefully followed.



Food storage

There are some simple rules to be followed when storing food to make sure it is always used in its best condition.

1. Unpack and put high risk foods away in the refrigerator or freezer as quickly as possible
2. Fresh meat and poultry should be wrapped in plastic or foil or placed in a leakproof container, so that the blood cannot drip on to other foods, and stored in the coldest part of the fridge
3. Use food in order, the oldest first, to avoid having food at the back of the cupboard which is never used and goes out of date; this saves wasting food and money and reduces the risk of food poisoning from food which has gone bad
4. Use food before its 'best before' or 'use by' dates have passed; food which has passed its 'use by' date should be thrown out as it could cause food poisoning
5. Keep root vegetables in a well ventilated, dark, cool place or in a vegetable rack, and green and salad vegetables in the salad drawer of the refrigerator; soft fruits such as raspberries and strawberries should be kept in the refrigerator
6. Canned foods should be kept in a dry cupboard to prevent the cans rusting.

**Correct use of refrigerators and freezers**

1. The operating temperature of a fridge must be between 1°C and 5° C. The operating temperature of a freezer should be -18°C to prevent the growth of food poisoning bacteria
2. Food must be covered with plastic or foil wrapping or placed in a covered dish to prevent the food drying out; this also stops the risk of cross-contamination with other foods
3. The refrigerator must not be over-loaded or the air will not circulate correctly and it will not operate efficiently at the correct temperature
4. Hot food must never be put into the refrigerator or freezer as it would raise the temperature and put other foods at risk
5. Refrigerators and freezers should be defrosted regularly if they do not have an automatic defrost
6. Refrigerators and freezers should be cleaned regularly.

Student Helpsheet 4



Outcome 3 PC (b)

You will be asked to identify and explain **four** conditions necessary for the growth of food spoilage or food poisoning organisms.

Time: in warm conditions many bacteria will divide in two every twenty minutes. In cooler conditions the bacteria will still divide but will take longer to do so. This is why perishable or high risk foods are often kept in the fridge or freezer as they will take longer to go bad or deteriorate.

Moisture: bacteria need moisture or water to multiply. If the moisture is removed from the food, the bacteria will not multiply and the food will keep for longer. Bacteria prefer a high water content, but most foods contain enough moisture for growth, except dried foods where the moisture has been removed to stop bacterial growth. This is why dried milk keeps for months in a kitchen cupboard while a bottle of fresh milk will only last for a few days even if kept in the fridge.

Food: bacteria grow well on good food which is not too salty, too sweet or too acid. High risk or perishable foods will provide an excellent breeding ground for bacteria and 'go bad' very quickly if not stored in a way that will stop the bacteria multiplying. Meat, fish, cheese, milk and eggs are high-risk foods, and fruit and vegetables are also classed as perishable foods because they have natural moulds or enzymes which can cause them to go bad.

Warmth: bacteria are most active between 5°C and 63°C. If most bacteria are heated to boiling point or 100°C they will die (so food will then be safe to eat).

If food is kept in a fridge or freezer where the temperature is below 5°C the bacteria do not die. They just work less quickly. They are said to be dormant.

The lower the temperature, the slower the bacteria will work. This is why food keeps longer in the freezer than it does in the fridge. But remember, low temperatures do not kill bacteria and when the temperature is allowed to rise again, they will begin to multiply as before.

pH level: the acidity of a substance is measured using the pH scale. The lower the number on the scale the more acid a product is. Most bacteria cannot grow in an acid environment (of pH 4.5 or less), for example, in pickles.

Student Helpsheet – Design Activity

Outcome 4 PCs (a)–(f)

Create a food product to meet the needs of a given design activity.

You will be asked to complete a design activity to make a dish or dishes for a given situation. You must show your analysing, planning and evaluation skills.

First, you will be asked to identify the main points from the brief you have been given. These are the important words in the brief. It is a good idea to underline them to check that you have found them all. You can join some of the words together if you wish.

You should also identify any other points which you think might be relevant to the brief. There are ten lines given in the design activity sheets but you do not **have** to fill them all.

For example:

Make a healthy packed lunch for a toddler to take to nursery school.

1. Make _____
2. healthy _____
3. packed lunch _____
4. toddler _____
5. take _____
6. nursery school _____
7. _____
8. _____
9. _____
10. _____

Additional points (7–10) could include:

- my skills
- time available
- toddler's likes and dislikes

- attractive appearance
- time of year
- cost/budget

or any other valid point.

Remember: every additional point you make must be included in your Final Choice chart – so one or two additional points are sufficient from the list above.

Next, you must draw up a specification for the dishes you will make.

A specification is a **description** of what your finished dishes should be like.

You must have at least **three** specification points. There are six spaces given on the sheet but you do not **have** to fill them all.

Each specification point should finish the sentence 'My finished dishes should be...'

Think about the main points you have identified. Your specification points should be linked to the main points if possible.

For example:

My finished dishes should be:

1. healthy for a toddler to eat
2. suitable for a packed lunch
3. suitable to carry to nursery school
4. within my skills to make
5. made within the time available
6. attractive

Next, re-write the main points **and** any additional main points in the same order as you wrote them in the first chart across the top boxes of the chart.

For example:

List the items that you could make here ↓	List your main points here →	make	healthy	packed lunch	toddler	take	nursery school	my skills	time available	toddler's likes and dislikes	attractive
		1	2	3	4	5	6	7	8	9	10
		Use a tick (✓) if the item meets the main point or additional point									
sandwiches		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
quiche		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
mini-pizzas		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
chocolate crispies		✓	x	✓	✓	✓	✓	✓	✓	✓	✓
cherry muffins		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
sausage rolls		✓	x	✓	✓	✓	✓	✓	✓	✓	✓
lentil soup		✓	✓	x	✓	x	✓	✓	✓	✓	✓
banana bran buns		✓	✓	✓	✓	✓	✓	✓	✓	✓	x

possible ideas

main points and additional re-written

your final choices should have ticks in **every** box

Now that you know what your finished dishes should be like, you should be able to come up with some ideas of dishes to make.

These dishes should fit all the main points of the brief and any additional points which you came up with.

Now choose some dishes you think will be suitable. You should list them in the first column of the chart.

Think carefully about whether the dishes you have chosen fit in with the main points in the chart. If they do, tick the column, if not put a cross in the box.

The dishes you finally decide to make should have **ticks** in **every** box and you should then re-write them in the next chart

sandwiches	cherry muffins
quiche	
mini-pizzas	

You must now complete a plan to show how you are going to make the dishes.

This plan **must** be completed **before** you start making the dishes and **must not** be written in the past tense.

Plan for manufacture	
Date of practical work: For example: 26th January	
<i>Time</i>	<i>Work to be carried out</i>
Give an outline of the times at which you will be carrying out the activities.	Write the description of what work you will carry out in this column next to the correct times. Your description should: • be in a logical order • make the best use of your time For example:
10.30	chop vegetables for pizza

When you have made the dishes you must evaluate them by awarding **each** dish a star rating for appearance, texture and taste based on the following scale

- *** —————> very good
- ** —————> good
- * —————> needs improvement

Remember to evaluate **every** dish that you made.

If you were absent and did not make some of the dishes that you had planned for, write them in the chart and put the word absent beside them.

Evaluation area —————>	Appearance	Texture	Taste
Item(s) made ↓			
sandwiches	*	*	**
quiche	**	***	***
mini-pizzas	***	*	***
cherry muffins	**	***	**

The last step in the design activity is to explain **why** you awarded each of the star ratings.

In each of the charts you should explain **why** you gave the number of stars that you did.

Your explanations should **link** to the number of stars you awarded, for example: 'My mini-pizzas looked very attractive because of the brightly coloured vegetables on the top.'

Rewrite each of the dishes in the first column of all three charts, copy the star ratings into the next column and put your explanations in the last column.

Make sure your comments refer to the heading in the chart – don't talk about the taste of the dish when you are explaining the appearance.

Take care to copy the number of stars correctly.

The words shown in the chart below may help you in your explanation but remember it is not enough to make a statement such as 'My dish was attractive'.

You must explain **why** you awarded the stars: 'My dish was attractive **because** of the brightly coloured vegetables.'

Appearance	Texture	Taste
Attractive	Hard	Sweet
Unattractive	Soft	Sour
Pleasant	Crisp	Sharp
Acceptable	Crunchy	Tangy
Bright	Rubbery	Fruity
Colourful	Soggy	Mild
Dull	Dry	Bland
Creamy	Powdery	Creamy
Dry	Lumpy	Bitter
Golden	Smooth	Salty
Burnt	Juicy	Sugary
Dark	Chewy	Gritty
Pale	Sticky	Spicy
Lacks colour	Watery	Strong
	Thick	Weak
	Thin	Peppery
	Crumbly	Herby
	Greasy	Lacks flavour
	Heavy	
	Light	
	Spongy	
	Firm	

Dishes	Star rating given	Explanation for star rating for appearance
sandwiches	*	My sandwiches did not look good because they were very untidy. I should have taken more care when I was filling and cutting them.
quiche	**	My quiche looked good but it was a bit pale because I didn't leave it in the oven long enough to brown.
mini-pizzas	***	The mini-pizzas looked very attractive because of the brightly coloured vegetables on the top.
cherry muffins	* *	The cherry muffins were a bit dark in colour as I left them in the oven too long.

Dishes	Star rating given	Explanation for star rating for texture
sandwiches	*	The texture of my sandwiches was not very nice because the tomato juices had soaked into the bread and made it go soggy.
quiche	***	The texture of the quiche was very good because the egg had set and the pastry was light and crispy.
mini-pizzas	*	The mini-pizzas could have been better as the base was a bit doughy.
cherry muffins	* * *	The texture of the cherry muffins was very good because they were light and spongy.

Dishes	Star rating given	Explanation for star rating for taste
sandwiches	**	The sandwiches tasted a bit bland because I used a mild cheese.
quiche	***	The quiche tasted great because of the mixture of egg, cheese and spring onions in the filling.
mini-pizzas	***	The mini-pizzas were very good because the herbs gave an unusual flavour.
cherry muffins	* *	The cherry muffins would have tasted better if they had been sweeter. I could have added icing to the top and this would have improved them.

Student Worksheet 1

Functions of Ingredients

Outcome 1 PC (a)

1. Explain what is meant by the following functions of ingredients:

(a) Aerating _____
_____ **1**

(b) Binding _____
_____ **1**

(c) Thickening _____
_____ **1**

(d) Bulking _____
_____ **1**

(e) Setting _____
_____ **1**

(f) Glazing _____
_____ **1**

2. Which function are the ingredients below performing in each of the following situations?

(a) Potatoes in a stew _____ $\frac{1}{2}$

(b) Self-raising flour in buns _____ $\frac{1}{2}$

(c) Fruit in a fruit tart _____ $\frac{1}{2}$

- (d) Egg brushed over sausage rolls before cooking _____ ½
- (e) Gelatine in a soufflé _____ ½
- (f) Water in pastry _____ ½

Total 9 marks

Student Worksheet 2

Outcome 3 PCs (a)–(d)

Hygiene

1. State **three** occasions when it is important to wash your hands when working with food.

1. _____ 1
2. _____ 1
3. _____ 1

2. Why should nail varnish not be worn when preparing food?

_____ 1

3. Why should work surfaces be cleaned thoroughly between handling raw and cooked food?

_____ 1

4. Why should pets be kept out of food preparation areas?

_____ 1

5. What is meant by the term cross-contamination?

_____ 1

6. Explain why each of the following may cause cross-contamination in the kitchen:

- (a) the same chopping board used to chop raw meat and salad vegetables

_____ 1

- (b) a chicken left to defrost on a plate at the top of a fridge

_____ 1

7. Explain how the following foods should be stored correctly

- (a) Raw meat _____ **1**
- (b) Canned fruit _____ **1**
- (c) Green vegetables _____ **1**
- (d) Fresh strawberries _____ **1**
- (e) Ice-cream _____ **1**

8. What is the correct operating temperature of a refrigerator?

_____ $\frac{1}{2}$

9. What is the correct operating temperature of a freezer?

_____ $\frac{1}{2}$

Total 15 marks

Student Worksheet 3

Choose **five** of the areas in the kitchen below which may cause food safety hazards and, for each, explain the hazard and how it could be corrected.



1. Area of the kitchen _____

How it could be corrected _____

1

2. Area of the kitchen _____

How it could be corrected _____

1

3. Area of the kitchen _____

How it could be corrected _____

1

4. Area of the kitchen _____

How it could be corrected _____

_____ **1**

5. Area of the kitchen _____

How it could be corrected _____

_____ **1**

Total 5 marks

Student Worksheet 4

Complete the following chart to show where each of these foods should be stored:

fresh mince

butter

eggs

milk

cream

cheese

fresh strawberries

fresh fish

breakfast cereal

dried fruit

tin of soup

tin of peas

packet of biscuits

jar of pickles

bag of flour

bag of sugar

packet of pasta

bag of potatoes

fresh carrots

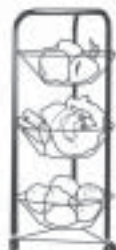
fresh onions

frozen chicken

ice-cream

frozen peas

oven chips



Refrigerator	Food cupboard	Vegetable rack	Freezer

Total 24 marks

Student Worksheet 5

Arrange the following statements into the correct order when preparing to work with vegetables.

- Wash dishes and work surfaces
- Wrap up food waste and put in bin
- Tie back long hair
- Wash hands
- Remove jewellery
- Put on clean apron
- Wash and prepare vegetables

Statement 1 _____

Statement 2 _____

Statement 3 _____

Statement 4 _____

Statement 5 _____

Statement 6 _____

Statement 7 _____

Total 7 marks

WORKSHEET ANSWERS

Student Worksheet 1 Answers

Functions of Ingredients

Outcome 1 PC (a)

1. Explain what is meant by the following functions of ingredients:
 - (a) Aerating: *to make food rise/to incorporate air/to make food light*
 - (b) Binding: *to hold ingredients together*
 - (c) Thickening: *to change the consistency of a food product*
 - (d) Bulking: *to give texture to/ fill out a product*
 - (e) Setting: *to form a gel/to change liquids to solids*
 - (f) Glazing: *to give the finished product an attractive appearance*

1 mark for each function of ingredients correctly explained
Total 6 marks

2. Which function are the ingredients below performing in each of the following situations?

- | | |
|---|-------------------|
| (a) Potatoes in a stew | <i>Thickening</i> |
| (b) Self-raising flour in buns | <i>Aerating</i> |
| (c) Fruit in a fruit tart | <i>Bulking</i> |
| (d) Egg brushed over sausage rolls before cooking | <i>Glazing</i> |
| (e) Gelatine in a soufflé | <i>Setting</i> |
| (f) Water in pastry | <i>Binding</i> |

½ mark for each function
Total 3 marks

Total for worksheet 9 marks

Student Worksheet 2 Answers

Outcome 3 PCs (a)–(d)

Hygiene

1. State **three** occasions when it is important to wash your hands when working with food
 - *before working with food*
 - *between handling raw and cooked food*
 - *after visiting the toilet*
 - *after touching face or hair*
 - *after coughing or sneezing*

1 mark for each point

Total 3 marks

2. Why should nail varnish not be worn when preparing food?
 - *it may flake off and fall into the food*

1 mark for correct explanation

Total 1 mark

3. Why should work surfaces be cleaned thoroughly between handling raw and cooked food?
 - *to prevent cross-contamination*
 - *to prevent germs from raw food contaminating cooked food*

1 mark for correct explanation

Total 1 mark

4. Why should pets be kept out of food preparation areas?
 - *to prevent germs from their fur/paws/tongues coming into contact with food*

1 mark for correct explanation

Total 1 mark

5. What is meant by the term cross-contamination?
 - *the transfer of bacteria from raw foods to other foods*

1 mark for correct explanation

Total 1 mark

6. Explain why each of the following may cause cross-contamination in the kitchen.

- (a) the same chopping board used to chop raw meat and salad vegetables
the germs from raw meat would go on to the chopping board and then be transferred to the salad vegetables
- (b) a chicken left to defrost on a plate at the top of a fridge
the blood from the chicken would contain germs and, if this were allowed to drip on to other foods, the germs would be transferred on to the other foods contaminating them

2 × 1 mark for correct explanation

Total 2 marks

7. Explain how the following foods should be stored correctly

- (a) Raw meat
- *wrapped in plastic film/foil/in a covered box and placed in the fridge*
 - *at the bottom of the fridge*
 - *in the coldest part of the fridge*
- (b) Canned fruit
- *in a cool, dry cupboard*
- (c) Green vegetables
- *in a dark, well ventilated place*
 - *in the salad drawer of the fridge*
- (d) Fresh strawberries
- *in the fridge*
- (e) Ice-cream
- *in the freezer*

5 × 1 mark for each correct explanation

Total 5 marks

8. What is the correct operating temperature of a refrigerator?
- *between 1°C and 5°C*

½ mark for correct temperature

Total ½ mark

9. What is the correct operating temperature of a freezer?
- *-18°C*

½ mark for correct temperature

Total ½ mark

Total marks for worksheet – 15 marks

Student Worksheet 3 Answers

Choose **five** of the areas in the kitchen below which may cause food safety hazards and, for each, explain the hazard and how it could be corrected.



1. Area of the kitchen
Uncovered meat lying on work surface with flies buzzing around it

How it could be corrected

Cover meat with cling film/place in a plastic box and put into fridge

2. Area of the kitchen
Dirty work surfaces

How it could be corrected

Wipe/wash work surfaces with a clean cloth/use anti-bacterial cleanser

3. Area of the kitchen
Dirty cloths lying on the work surface

How it could be corrected

Remove dirty cloths/wash cloths after use/always use clean cloths/use disposable cloths

4. Area of the kitchen
Overflowing rubbish bin with more flies around it
- How it could be corrected
Empty and wash out rubbish bins regularly
5. Area of the kitchen
Milk bottle on the work surface
- How it could be corrected
Place milk/perishable foods in the fridge
6. Area of the kitchen
Fridge with the door ajar
- How it could be corrected
Close fridge door
7. Area of the kitchen
Man sneezing
- How it could be corrected
Cover nose and mouth when sneezing or coughing, then wash hands/turn away from food when sneezing or coughing/do not work in a kitchen if suffering from a cold
8. Area of the kitchen
Spilled food on work surface
- How it could be corrected
Wipe up spills as soon as they happen
9. Area of the kitchen
Dirty plates on table
- How it could be corrected
Remove and wash dirty dishes as soon as possible

5 × 1 mark for each correctly identified area and method of correction

Total 5 marks

Student Worksheet 4 Answers

Complete the following chart to show where each of the foods should be stored:

Refrigerator	Food cupboard	Vegetable rack	Freezer
fresh mince	breakfast cereal	bag of potatoes	frozen chicken
butter	dried fruit	fresh carrots	ice-cream
eggs	tin of soup	fresh onions	frozen peas
milk	tin of peas		oven chips
cream	packet of biscuits		
cheese	jar of pickles		
fresh strawberries	bag of flour		
fresh fish	bag of sugar		
	packet of pasta		

24 × ½ marks for each correctly stored food
Total 12 marks

Student Worksheet 5 Answers

Arrange the following statements into the correct order when preparing to work with vegetables.

- Statement 1 Tie back long hair
- Statement 2 Remove jewellery
- Statement 3 Wash hands
- Statement 4 Put on clean apron
- Statement 5 Wash and prepare vegetables
- Statement 6 Wrap up food waste and put in bin
- Statement 7 Wash dishes and work surfaces

7 × 1 mark for each correctly positioned statement
Total 7 marks