

N5 PC

Unit 2

Cookery Skills, Techniques and Processes



Name:

Weighing and Measuring

Look at the table below that details the equipment used to weigh and measure each ingredient used to make the Sweet Potato & Lentil Soup and the Savoury Scones.

Amount	Ingredients used for Sweet Potato and Lentil Soup	Equipment Used
150g	Sweet potato (prepared weight)	
50g	Onion (prepared weight)	
5g	Fresh chilli (prepared weight)	
50g	Lentils	
10ml	Sunflower oil	
$\frac{1}{2}$	Vegetable stock cube	
50ml	Coconut milk	
Pinch	Salt and pepper	
15ml	Single cream	
5ml	Chopped chives (prepared weight)	

Amount	Ingredients used for Savoury Scones	Equipment Used
25g	Smoked bacon	
25g	Cheddar cheese	
100g	Plain flour	
5ml	Baking powder	
25g	Block margarine	
70ml	Milk	

Amount	Ingredients used for	Equipment Used

Amount	Ingredients used for	Equipment Used

Amount	Ingredients used for	Equipment Used

Amount	Ingredients used for	Equipment Used

Terms used in Practical Cookery

Term Used	Meaning or Description
Bake blind	To bake a pastry case without a filling
Blanch	To plunge food into boiling water to preserve its natural colour and to stop enzyme action
Blend	To mix together dry ingredients with a liquid to give a smooth paste
Chop	To cut food into small, uneven sized pieces
Cream	To mix together Fat (margarine or butter) and sugar until light and fluffy
Dice	To cut food usually vegetables or meat into small, even sized cubes
Fold in	To gently mix one ingredient into another with a metal spoon to minimise air loss
Glaze	To add shine to food using beaten egg, milk or meat juices
Grate	To shave food into small shreds using a grater
Line	To cover the bottom and sides of tin with pastry or greaseproof paper
Knead	To gently handle a pastry or dough mixture to remove cracks before rolling or shaping. When kneading bread dough the process creates a strong, stretchy and elastic dough through the formation of gluten
Marinate	To give flavour and to help to tenderise meat or fish by soaking in a richly spiced liquid. Fruit and vegetables can also be marinated.
Mix	To combine ingredients
Pass	To push a mixture through a strainer leaving behind solid particles
Peel	To cut a thin skin off fruits or vegetables, e.g. apples, potatoes and carrots
Pipe	To force a semi solid mixture through a shaped nozzle to produce a decorative effect
Puree	To break down raw or cooked food to a smooth pulp
Roll out	To flatten a dough to the required thickness, shape and size using a rolling pin
Rub-in	To combine fat and flour using the fingertips until the mixture resembles fine breadcrumbs

Season	The process of adding salt, pepper, herbs and spices to food to enhance the flavour
Segment	To cut or divide into sections
Shape	To form the required shape using the hands, palette knife or piping bag and nozzle
Sieve	To separate coarser particles from finer particles or for reducing soft solids to a pulp,
Slice	To cut food into thin rounds or slices using a sharp knife
Strain	To separate a liquid from solid foods passing through a strainer
Whisk	To increase the volume of a mixture by adding air

Use the space below to write down any terms and their meaning/description not included above.

Food Preparation Techniques

Using recipes cooked in class, fill in the chart below, trying to give a different recipe for each technique.

Preparation Technique	Recipe including this skill
Bake blind	
Blanch	
Blend	
Chop	
Cream	
Dice	
Fold in	
Glaze	
Grate	
Line	
Knead	
Marinate	
Mix	

Pass	
Peel	
Pipe	
Puree	
Roll out	
Rub-in	
Season	
Segment	
Shape	
Sieve	
Slice	
Strain	
Whisk	

Equipment

Look at the range of equipment on display numbered 1-20, then write the name of one in the first column. In the second column make suggestions for their use.

Item Number	Name of Equipment	Possible uses for the Equipment
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		

14		
15		
16		
17		
18		
19		
20		

Can you think of any other equipment that you have used that is not displayed?
 Include these in the chart below.

Item Number	Name of Equipment	Possible uses for the Equipment
1		
2		
3		
4		
5		
6		

Knife Skills

Basics

1. What do you do to prevent a chopping board from slipping?
2. Two grips are used in Practical Cookery when preparing fruit, vegetables and meat.

a) What grip do you call this?



b) What grip do you call this?



3. Why are these "grips" used when preparing ingredients?

4. Which type of knife would you use for:

- a) Cutting steak
- b) Removing the bones from chicken
- c) Julienne carrot
- d) Filleting haddock
- e) Slicing a tomato

5. Label the following equipment

Name
Use



Name
Use



Name
Use



Name
Use



Safety

6. Describe how you would carry a knife.

7. What should you do when passing a knife to another person?

8. How would you wipe the blade of a knife?

Sharpening

9. Why should you always work with a sharp knife?

10. How would you test your knife for sharpness?

Cleaning and Storage

11. Explain how you clean your knives.

12. How should you store your knives?

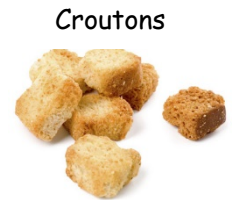
Culinary Terms (Knife Skills)

Match up the terms in the box below with the appropriate explanation.

brunoise	concasse	chiffonade	croutons
garnish	jardiniere	julienne	fines herbes
macedoine	mirepoix	paysanne	bouquet garni

Explanations

- _____ Vegetables cut into batons.
- _____ Roughly cut onions, carrots & celery
- _____ Cut into circles, triangles, squares.
- _____ Decoration for a dish.
- _____ Bundle of herbs, parsley, thyme, bay
- _____ Chopped fresh herbs, parsley, tarragon & chervil.
- _____ Small dice
- _____ Large dice.
- _____ Coarsely chopped, e.g. tomato.
- _____ Cut into fine strips.
- _____ Fine shreds e.g. spinach, herbs
- _____ Cubes of fried or toasted bread.



Jardiniere

Julienne

Macedoine

Brunoise



Vegetable Cuts

You have been practicing your vegetable cuts and should have a good awareness of the size, shape and vegetables used for each style of cut.

Complete the chart below by providing the name, shape, size and vegetables used for each style of cut.

Name of Cut	Size (in mm)	Shape (diagram & description)	Suitable Vegetables	Examples of dishes in which this cut is used.
Brunoise				
Chiffonade				
Concasse				
Jardiniere				
Julienne				
Macedoine				
Mirepoix				
Paysanne				

The Cooker and Cooking Food

How is Food Cooked?

Convection

A gas oven or cooking in boiling water are good illustrations of heat being transferred by convection. When heated, the particles of a liquid (e.g. water) or a gas (e.g. air) become lighter and rise, while colder particles sink to the bottom and are then heated in turn.

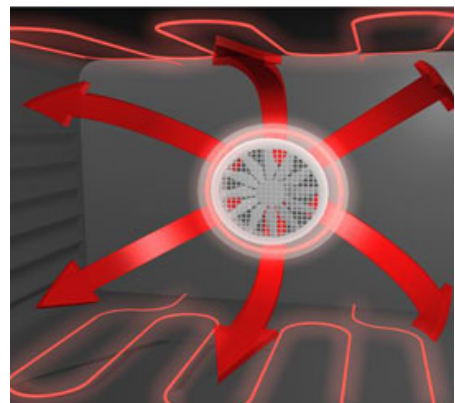
The Oven

The oven is a well-insulated steel box. The oven is used for baking, roasting and for casseroles. In both *GAS* and *ELECTRIC* ovens food is cooked by convection currents which are produced by the heat source as the warm air expands and rises taking the place of the colder air.

Using the Oven Safely

Electric Ovens

In an electric oven the heat comes from the elements along the sides of the oven.



Fan assisted ovens cook the food more quickly and evenly and can be run at lower temperatures, so are cheaper to run. The fan circulates the heated air and ensures that there is an even temperature throughout the whole oven.

Thermostat control light

All electric ovens have a thermostat control light. When you switch the oven on to heat up, a light comes on. When the oven has reached the required temperature the light will go off. That tells you that the oven is ready for the food to be put in.

Gas Oven

A gas oven has three zones of heat. The number on the dial shows the heat at the centre of the oven. Because hot air rises, the top of the oven is the hottest

Questions

- 1 Why does hot air rise?
- 2 Explain what the fan is for in an electric oven.
- 3 When will the thermostat light go off in an electric oven?
- 4 In the gas oven, which shelf is the hottest?
- 5 What **must** you use when handling baking trays in and out of the oven?
- 6 How do you know the electric oven is on?

Using the Hob Safely

Conduction

Heating a pan on a hob is a good illustration of conduction. In this method, heat travels through a solid, e.g. the pan. Metal objects are good conductors of heat and so these are used in the making of saucepans.

Using the Hob

The hob can be used for boiling, frying and stewing food. Control dials for each ring or burner allow you to control the heat.



Activity

- 1 Practice turning the hob on/off. Find the main electric switch for the electric hob. Find and use the ignition button for the gas hob.
- 2 Discuss safety rules when using the hob. Write out three of these rules below:
- 3 If something is spilled on the hob what should you do and why?
- 4 Which way should pan handles be facing when on the hob? Why?

Boiling

In the many soup recipes the cookery process of BOILING is used.

BOILING: The food is cooked in a liquid at boiling point (usually water). Boiling water will make lots of big bubbles.



List three other foods that you could cook in boiling water:

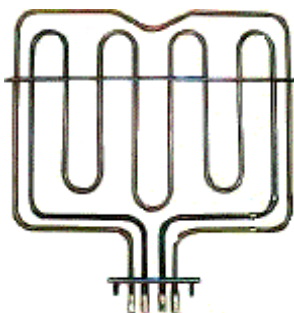
- 1
- 2
- 3

Using the Grill

Radiation

When heat is radiated it travels in straight lines and any object in its path becomes heated. Using a toaster and grilling food are good examples of using radiation to transfer heat.

Grill - ELECTRIC



The heating element in the grill usually heats the whole of the grill pan area so that large quantities of food can be grilled at a time.

Grill - GAS

The gas is lit by an electronic ignition.

Always check that the gas has been lit.

Warning - do not shut the grill door. This will extinguish the flame but the gas will still be flowing out.



Grill Handle

The grill handle can get very hot. PLEASE USE OVEN GLOVES WHEN HANDLING THE GRILL.

Activity

1. Some grills have two circuits so that only part of the grill need be heated. Can you think of a reason for this?

2. Practice LIGHTING THE GRILL. Is the flame lit or the element glowing?

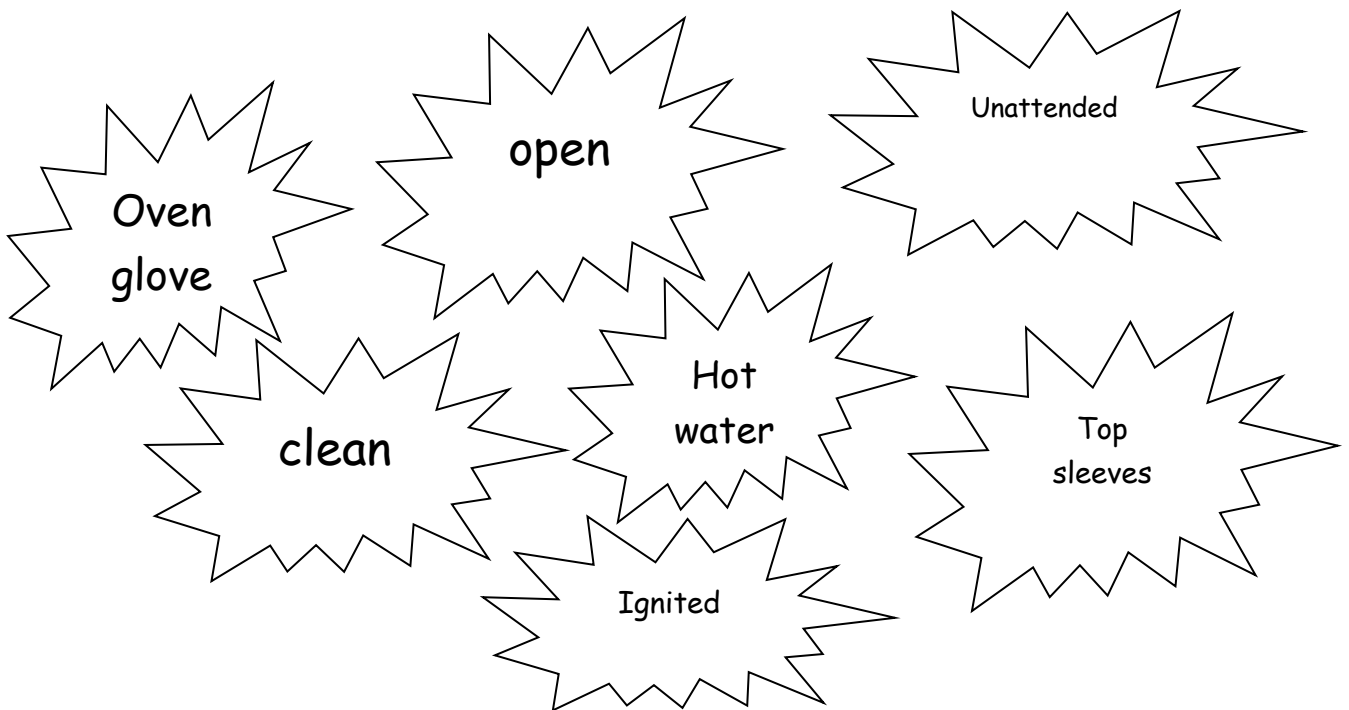
Grill Safety

Complete the sentences.....

- 1 Always leave the grill door _____ when using the grill.
- 2 Use _____ when lifting the grill pan in and out of the grill.
- 3 Never leave the grill _____.
- 4 Do not put the grill pan into the _____ of the grill.
- 5 Ensure the flame is _____ when using the *GAS* grill.

Hygiene when using the Grill:

1. Always make sure you _____ the grill properly after use.
2. Use _____ and washing up liquid



The cookery processes in the Melba Toast recipe is **GRILLING**

The nearer the food is to the grill, the quicker it will cook. If the food is thick, the outside will be cooked first and may burn before the inside is cooked.

List three other foods that would be suitable to grill:

Heating Transference

There are three main reasons for cooking food:

- To improve its **digestibility**, that is, to make it easier to eat, break down and absorb,
- To increase its **palatability**, which means to make it more attractive by improving the taste, smell and colour, and
- To make it **safe** (or safer) to eat, in relation to food poisoning and spoilage micro-organisms.

Cooking food requires the transfer of heat to the food or the generation of heat within the food, both of which can be achieved in many ways. In fact, most of the common cooking methods, such as boiling, roasting and frying, involve more than one of the types of heat transfer which are:

- **Conduction**,
- **Convection**, and
- **Radiation**

What are Conduction, Convection and Radiation?

Draw a line to match the term with the description

Conduction

Thermal energy is transferred from hot places to cold places by this method of heat transfer. It occurs when warmer areas of a liquid or gas rise to cooler areas in the liquid or gas. Cooler liquid or gas then takes the place of the warmer areas which have risen higher. This results in a continuous circulation pattern. Water boiling in a pan is a good example of these currents.

Convection

This is a method of heat transfer that does not rely upon any contact between the heat source and the heated object as is the case with the other two methods of heat transfer. Heat can be transmitted through empty space.

Radiation

This is the transfer of heat between substances that are in direct contact with each other. It occurs when a substance is heated, particles will gain more energy, and vibrate more. These molecules then bump into nearby particles and transfer some of their energy to them. This then continues and passes the energy from the hot end down to the colder end of the substance.

Methods of Cooking

Dry Cooking Methods

Methods	Description	Uses	Advantages	Disadvantages
Baking Dry baking Bain Marie	Cooking occurs in an oven. Steam may be produced, by the food itself, and modify the cooking.	Flour based products (e.g. bread, cakes & pastries), meat (covered with pastry or breadcrumbs), fish, fruit and vegetables	A wide range of sweet & savoury foods can be produced. Suitable for bulk cooking. Products have an appetising appeal.	Requires regular attention. Pre-heating if the oven is essential. Ovens are expensive to heat due to high fuel costs. £££
Roasting	The cooking of food with fat or oil. The temperatures vary up to about 240°C.	Meat, fish and some vegetables, especially root vegetables	Meat juices used for basting & adding flavour of gravy. Meat is tender & succulent	Requires good quality cuts of meat. Requires regular attention. £££
Grilling	A fast, high temperature method of cooking. The heat source may be below or above the food. The temperature is between 150°C and 210°C.	Meat (tender, small and regular shaped cuts are best), poultry, fish, shellfish, veg, reformed food products (e.g. fish cake, burgers and sausages), finishing dishes with a golden topping	A hot grill cooks food quickly. Improves flavour. Gives a distinctive appearance. Control of cooking is easier as food is highly visible. Over heat grilling removes fat making the food healthier.	More suitable for expensive/quality cuts of meat. Requires monitoring. Ensure thorough cooking to prevent food poisoning. Use salt sparingly on grilled food as draws moisture from the meat.
Shallow Frying Saute Griddle Stir Frying	Food is cooked in a small amount of fat. The temperatures used may be as low as 95°C, are usually between 150°C and 175°C, but are in some cases as high as 195°C.	Lean, tender cuts of meat (e.g. sirloin, fillet and rump steak), burgers, offal, vegetables, fish, shellfish and eggs	Quick method if cooking. No loss of soluble nutrients. Good colour.	Only suitable for expensive cuts of meat. Requires constant supervision. Cooking fat is absorbed by the food.
Deep Frying	The immersions of food into hot oil. High temperatures are often used, up to 195°C, and the food cooks rapidly because there is even heating over the whole surface.	Fish, shellfish, meat, poultry, Scotch eggs, doughnuts, veg (e.g. potatoes, onion rings), vegetables and fruit coated in batter	Quick method of cooking. No loss of soluble nutrients. Ensures good colour.	Safety hazard! Not easily digested. Never fry too much at once, it's dangerous & will increase frying time. Strain fat regularly to remove debris.
Microwave	A rapid method of cooking where the heat is generated within the food itself. Water in the food absorbs microwaves and	Foods which benefit from rapid cooking (e.g. fruit and veg), foods which benefit from even cooking (e.g. custard), foods which do not require	Very quick. Fast for defrosting. Economical £. Food cooked in own juices so flavour & goodness retained.	Not suitable for all foods. Limited space restricts use to small quantities.

	vibrate, leading to the production of heat, which cooks the food.	browning (e.g. chocolate and ginger cakes), food that does not need a crisp surface texture (e.g. soups and pasta dishes)	Minimises food shrinkage and drying out.	Can only penetrate 5cm into food from all sides
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Moist Cooking Methods

Methods	Description	Uses	Advantages	Disadvantages
Boiling	Involve cooking in liquid containing water. The temperature is 100°C.	Vegetables, starchy foods (e.g. pasta or rice), tough cuts of meat, jam making, reducing sauces and syrups	Makes cheaper cuts more palatable and digestible. Good for large scale cookery Economical ££ Well flavoured stocks. Colour of green veg kept with short time	Foods can look unattractive. There is a loss of soluble vitamins in the water. Many boiled dishes require a long cooking time. Requires careful monitoring.
Poaching	Involve cooking in liquid containing water. The temperature is kept at 63°C.	Foods which easily fall apart (e.g. fish, eggs)	Makes food easy to digest & palatable. No fat = healthier. Gentle for delicate cuts and quick.	Requires skill. Many foods are not suitable for this. Process needs to be monitored to prevent boiling.
Steaming	Food is cooked using steam at atmospheric pressure. The temperature is between 100°C and 103°C. Cooking is quicker than standard boiling.	Fish fillets, vegetables, suet or sponge puddings	Retains nutrients in vegetables. Makes food lighter & easy to digest. Allows frequent cooking of small quantities of veg. Economical £ as multi-tiered pans.	Food can look unattractive as no browning takes place It can be a slow method so time needs to be planned. Veg must be cooked as close to serving as possible as cool
Stewing / Casseroling	Food is cooked in a pan with minimum liquid. Food & liquid served together.	Tougher cuts of meat, curry, goulash, chilli, ratatouille, fruit	Water soluble vitamins retained. Good for cheap cuts. Makes food tender.	Takes a long time. Needs frequent checking & stirring. Not to be reheated

Combination Cooking Methods

Methods	Description	Uses	Advantages	Disadvantages
Braising	This involves cooking in a small amount of liquid in a covered container. The temperature is usually between 175°C and 200°C.	Meat, especially large or tough joints, e.g. mutton, stewing steak, add veg to enhance flavour, apples.	Good for older, tougher, cheaper cuts of meat. Maximum flavour & nutritive value retained.	Takes a long time to cook. Food with need regular basting

Activity: Complete the sentences below

1. _____ is a moist method of cooking where foods are cooked in a liquid which should always be _____ vigorously. Pasta and rice should always be placed in _____ water and the water must be _____ at all times. Examples of foods which can be _____ include: spaghetti, _____, potatoes, _____ and carrots.
2. _____ is a moist, healthy method of cooking which makes foods lighter and easier to digest. This method helps to reduce _____ loss as the food is not sitting in the liquid. Examples of foods which can be _____ include: carrots, potatoes and _____.
3. _____ is a gentle method of cooking where the cooking liquid is kept below _____ point. The liquid can be stock, _____, water or wine. Examples of foods which can be _____ include: _____, _____, tomatoes, pears and apples.
4. _____ is a moist method of cooking where _____ bubbles gently burst through the surface of the cooking liquid. It makes foods tender and easier to _____. Examples of foods which can be _____ include: sausages, steak, tomatoes, _____, _____ and carrots.

5. _____ is a dry method of cooking which is suitable for a wide range of sweet and savoury foods. It is important that the _____ has reached the correct temperature before food is placed in the _____. Examples of foods which can be _____ include: tomatoes, scones, pears, fish, _____, apples, chicken and sausages.
6. _____ is a dry and healthy method of cooking as it allows the _____ to drain away from the food. It can produce an attractive appearance on dishes, e.g. macaroni cheese and cottage pie. Examples of foods which can be _____ include: tomatoes, steak, fish, chicken and _____.
7. Deep frying is a _____ of cooking using hot _____ or _____. Some advantages of deep frying are that _____ are lost and it ensures a _____ on the food. However, deep frying can be _____ because the oil gets very _____. Examples of foods which can _____ include _____, _____ and _____.
8. A cookery process to reheat food is _____. It is a quick method of cooking and a fast way to _____ food. It uses _____ waves to activate water _____ causing heat by friction. However, it is _____ for all foods.

9. _____ is a dry method of cooking using either a _____ or a spit with the aid of _____ or _____ . When using the oven method of heat _____ is _____ . It ensures meat is cooked _____ though regular attention must be paid. Examples of foods which can be _____ include _____ and _____ .