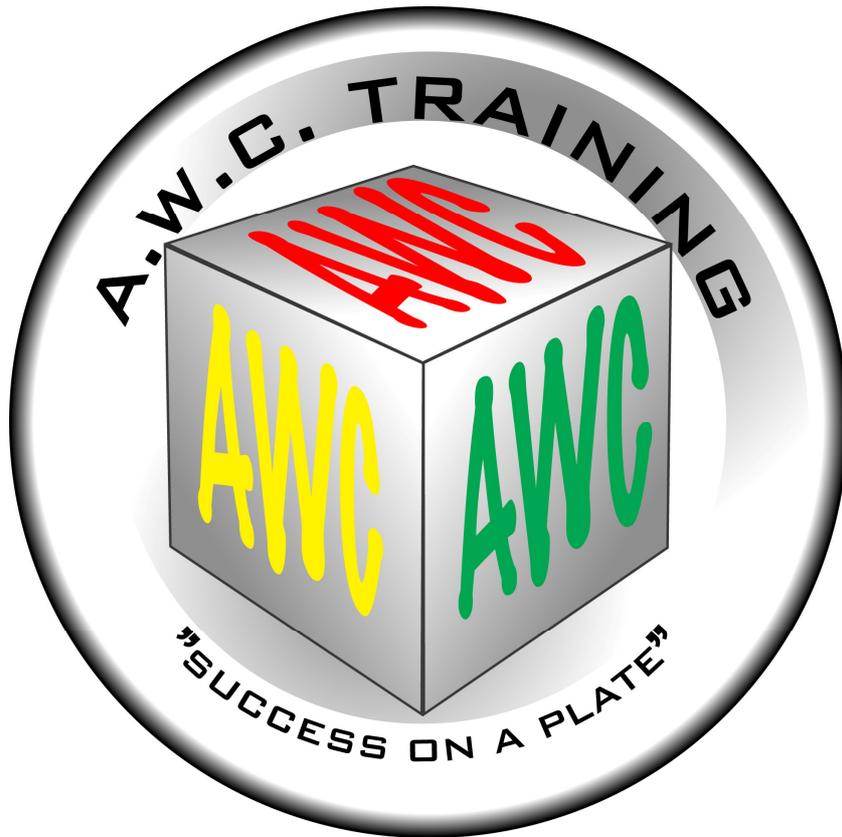


Prepare & Cook Fish and Shellfish



Introduction

This workbook looks at quality, preparation, storage, cooking and finishing of different types of fish and shellfish products. As well as studying this, you will have practical cooking sessions in which you will practise and demonstrate all the skills you have learned to prepare and cook fish and shellfish.

This unit has two sections:

Section 1: Prepare fish and shellfish

Section 2: Cook and finish fish and shellfish

Appendix

There are two charts showing identification of fish and shellfish on pages 35 and 36.

What will I learn?

When you have completed this unit you will be able to:

- Identify types of fish and shellfish.
- Classify fish and shellfish.
- Select the correct tools and equipment for the safe preparation of fish and shellfish.
- Portion fish and shellfish.
- Identify types and quality of fish.

Assessment

There are assessment questions you should attempt when you have worked through the workbook and the learning activities. When you have completed the assessment, submit it to your assessor/tutor who will mark it and give you feedback on your progress. Your assessor/tutor will tell you if there are other practical assessments relevant to this unit.

Section introduction

This section examines in detail the types and quality of fish and shellfish. It will look at types of tools and equipment you need to prepare fish and shellfish. It will also look at methods, portion yield and safe storage of fish and shellfish.

You will look at four main areas:

- **Types and quality of fish and shellfish**
- **Tools and equipment**
- **Preparation methods and portion yield**
- **Storage of prepared fish and shellfish**

Learning required

When you have worked your way through this section you should know how to:

- Identify types of fish and shellfish.
- Classify fish and shellfish.
- Select the correct tools and equipment for the safe preparation of fish and shellfish.
- Portion fish and shellfish.

Types and quality of fish and shellfish

Fish and shellfish have gained in popularity over recent years and now can be found on most menus in catering establishments. The food service sector covers a range of outlets serving fish and shellfish and in most cities you can now find restaurants whose menu is dedicated to fish.

Activity 1

How many different types of catering establishments can you name that are likely to put fish on the menu?

Check the list on page 37.

In addition to providing fresh and processed food for our consumption, fish provides other products, such as oil, fertiliser and isinglass. (Isinglass is a sort of gelatine obtained from the air bladders of some fish and used in the clarification of wines and beers.)

Although we live on an island surrounded by the sea, fish supply is not unlimited. Over-fishing and the dangers of pollution in our rivers and seas, restrict the supply of fish and the types of fish that are readily available.

More and more fish farms are now being brought into production to help with the supply. Fish, such as trout and salmon, and shellfish, such as oysters, can now be sourced from such farms. As a nation we also import frozen fish from countries such as Canada, Japan and Scandinavia.

Fish are valuable to caterers for their menus because:

- They provide a good source of **protein**.
- Some fish are a good source of **vitamins A and D**.
- There is a great **variety**.
- They can be cooked and presented in many ways.
- They add interest to a menu because of **different textures, tastes and appearance**.
- They are considered a **healthy option**.
- They are very **tender** once cooked.
- They can be very **economical**.

Fish is an important ingredient of a healthy diet. It provides protein, fats and oils, vitamins and minerals and Omega 3 fatty acids, which helps to keep the heart and circulation healthy, as well as having other positive effects on the body. The fats provided by fish are polyunsaturated fats, which are good for our health.

Fish can be **freshwater**, such as trout, or **seawater**, such as cod, haddock or monk fish. Fish can be **classified as**:

Oily fish: these are always round in shape and have dark flesh. The oil, which provides vitamins A and D, is distributed throughout the flesh. One example is mackerel.

White fish: these can be either **round**, such as cod, or **flat**, such as plaice. The flesh is white and not oily (the oil is stored in the liver of the fish).

You can identify different types of fish by looking at the colour and texture of the flesh.

Activity 2

See how many fish you can think of - or find out about - that caterers might use on their menus and classify them in the table below.

Note that some fish might fit into more than one classification.

To start you off, there is one example for each classification of fish.

Classification	Type of fish
Round	<i>Cod</i>
Flat	<i>Plaice</i>
Oily	<i>Mackerel</i>
White	<i>Plaice</i>
Freshwater	<i>Trout</i>
Seawater	<i>Cod</i>

Check your answers on page 37.

Shellfish is also rich in minerals and vitamins and generally low in fat. Prawns have a higher level of cholesterol than other shellfish, but still have less in 100g of fish meat than would be contained in one egg. Raw shellfish can cause food poisoning if it is not fresh or has been caught in polluted waters, but these problems should be avoided if you buy from a reputable supplier and prepare and store correctly. Shellfish is best avoided in pregnancy.

Shellfish are classified as follows:

- **Crustacea:** these shellfish carry their shells on their backs.
- **Mollusca:** these shellfish are encased in shell and are also known as bivalves.

Some shellfish live in freshwater, such as crayfish and freshwater mussels.

Activity 3

List as many examples of the two classifications of shellfish can think of.

Crustacea:

Mollusca:

Check your answers on page 37.

Fish should be purchased daily and usually will come direct from a supplier, or perhaps from a fish market. As fish is so perishable, it should come into the kitchen correctly iced or frozen to ensure that it arrives in good condition. You should then ensure that it is stored correctly prior to preparation and service.

Whichever fish or shellfish you choose, you must consider a number of things when buying or taking delivery of fresh fish or shellfish. This is because fish and shellfish are perishable and only have a limited 'shelf life' when fresh.

Fresh fish

You should look for the following quality indicators in fresh fish:

- Eyes should be bright and full.
- Gills should be bright red.
- Flesh should be firm and when pressed should spring back.
- Skin should be moist and feel slightly slippery.
- Tail should be stiff.
- On whole fish, there should be plenty of scales and they should be firmly attached to the skin.
- Fish should have a clean, fishy smell and should not smell strong or unpleasant.

Fish can be bought ready filleted or on the bone. It is worth noting that waste from boning fish can be high as you prepare them for service. Sometimes waste from a round fish will amount to as much as 60%, with up to a 50% ratio for flat fish.

Depending on the recipe requirements, it is advisable to look for medium-sized fish for purchase, as these should yield the best flavour.

When purchasing cuts of fish, smoked fish or frozen fish you need to look for the following:

Fillets:

- Fillets should be neat with firm flesh.
- They should be firm and closely packed together.
- White fish should have a white translucent colour with no discolouration.

Smoked fish:

- Should have a glossy appearance.
- Flesh should feel firm and not sticky.
- Has a pleasant, smoky smell.

Frozen fish:

- Fish should be frozen hard with no signs of thawing.
- There should be no damage to packaging.
- There should be no dull, white, dry patches which may indicate freezer burn.

When **purchasing shellfish** you should always consider the following points:

- As with other fish, shellfish should **smell of the sea**.
- Always purchase live wherever possible to **ensure maximum freshness**.
- With some types of shellfish such as **clams, mussels and oysters**, you should make sure that the shells are tightly closed and without gaps or cracks. If they are open you should tap them sharply and if they do not close, discard as being potentially unsafe.
- **Prawns and shrimps** should be firm to the touch and will be pink or greyish in colour depending on variety.
- **Lobsters and crabs** should have all their limbs and be heavy for their size.-They should be purchased live and should move their claws. Lobsters should flap their tails tightly against their chests or curl them under their shells. If they have been refrigerated, they will not be very active.
- **Chilled, shelled shellfish** should smell fresh and be firm to the touch. They should be free of bits of broken shell. Cooked prawns will be pink and firm with veins removed.
- **Frozen shellfish** should be packaged in a close-fitting, moisture-proof package that is intact at the time of purchase.

After purchase, all shellfish should be stored correctly and in suitable containers, covered and stored in a cold room or refrigerator. You should always try and use shellfish as soon as possible after purchase to avoid risk of contamination and possible food poisoning.

Before choosing fish, you should check the recipe requirements for:

- **Type of fish required** - oily, white, round, flat or specific fish, such as cod or mackerel.
- **Cut required** - for example, whole fish, fillets, steaks - you will need to choose ready-prepared cuts or buy fish suitable to cut into steaks or fillets etc.
- **Quantity required** - calculate portion size and number of portions, remembering to allow for wastage if buying whole fish.

Before choosing shellfish, you should check the recipe requirements for:

- **Type of shellfish required** - making sure that the fish is in season.
- **Quantity required** - calculate portion size and number of portions, remembering to allow for wastage if buying whole.

Some flexibility in recipe ideas is good, as it will allow you to choose fish that looks nice on the day.

Tools and equipment

Now you are going to look at some of the tools and equipment that you are likely to use when preparing fish and shellfish. It is important that you use the right tools and equipment necessary to achieve the best results and in the safest way.

It is likely that in the time spent from sourcing your fish and shellfish, to the time when the customer will eat them, they will have gone through the various stages of the food processes identified here.

- **Delivery**
- **Preparation**
- **Storage**
- **Cooking**
- **Service**

Delivery

You already know that fish and shellfish should be as fresh as possible and should be delivered from the supplier in clean, suitable containers. The correct **storage** of fish is very important and you will look at this in more detail in a later section.

Preparation

One of the most important tools that a caterer will use in the preparation of fish and shellfish, is the appropriate knife to be used in preparation for cooking and eating. It is important to use the correct tools when preparing fish, as using the right knife will make your job easier and safer.

An important knife is the **filleting knife**. These knives are specially designed to perform the specific task of filleting the fish. Ideally, it will have a flexible blade tapering to a sharp point. This feature ensures that fish fillets are removed from the bone with the minimum of waste.

In practical sessions, you will learn that you can angle the blade, which facilitates ease of movement.

A large cook's knife is useful to cut through bones. Remember that fish bones are generally not too dense and should be fairly easy to cut through, but safety with knives is always paramount. Fish scissors are used to trim the fins and tail of the fish.

Activity 4

Can you name a type of fish that may have backbone that needs cutting through?

Check your answer on page 38.

An **oyster knife** is specifically designed to open fresh oysters safely. It should have a small rigid blade with a guard. This is to protect the hand during preparation. Using this knife means that the shell should be less likely to break as you open them and this is important if you are going to serve the oysters fresh in their shells, A small sharp knife is generally used to trim and cut shellfish. A stiff brush should be available for scrubbing the shells.

It is important that all knives are kept sharp to ensure safety and to maintain a sharp edge for more efficient cutting. You might use a cook's steel to sharpen knives, or you may use a table-top knife sharpener, purpose made to undertake this task.

Pliers are another item of specialist equipment that you might use when preparing fish. These are used for removing fine pin bones from fillets of fish. This ensures that when the fish is cooked, it will have a better appearance and be safer for the customer to eat.

Whilst preparing fish and shellfish you must always be mindful about the possibility of cross-contamination and should always use a **separate chopping board with a non-slip mat** underneath for safety. Often kitchens use colour-coded boards to help prevent the risk of cross-contamination.

Activity 5

Find out which colour boards are used for fish and shellfish preparation in a kitchen that you work in and record your answer here.

The answers to this activity will depend on the colours used in your own workplace - ask your supervisor to check your answer.

Storage

Prepared fish should be stored in the fridge in plastic trays, covered with cling film or in suitable containers. (You will learn more about this in the later section on storage.)

Cooking

Different methods of cooking means lot different cooking utensils will be utilised dependent on the recipe requirements.

Activity 6

From the list below identify the most common types of cooking vessel used to cook fish and/or shellfish by ticking the appropriate box.

Type of cooking vessel	Can be used to cook fish	Generally used to cook other foods
Stockpot		
Sugar boiler		
Saute pan		
Salmon kettle		
Deep-frying vessel		
Omelette pan		
Frying pan		
Turpot kettle		
Brioche tin		

Check your answers on page 38.

You will experience using a lot of these types of cooking vessels as you work in practical situations during your studies.

Service

Depending on the recipe, fish and shellfish will be served in a variety of ways and in and on a variety of dishes.

Activity 7

Look at the range of service dishes used in a kitchen that you are currently working in and list all the dishes that you think would be suitable serving dishes.

Check your answers on page 38.

Preparation methods and portion

Under this heading you are going to look at the most common methods of preparing fish and shellfish for service.

It is important that all fish is **washed under cold, running water** before and after any manual preparation. This will ensure that the fish is clean and free from any blood or innards prior to cooking and service.

Scales and fins should be removed and, in most cases, the head also. The head might be retained, for example, if you are presenting a whole cooked salmon at a buffet table. The fish may have to be gutted and you should ensure that all blood and innards are removed and that the fish is dried before further preparation.

Some small fish, such as trout and lemon sole, can be **cooked whole** and large ones, such as turbot and salmon, are often cooked whole for special menu occasions. However, most large fish is **cut into portions**, usually cut into steaks or filleted. White round fish is usually skinned and can be cut into steaks or fillets easily because the texture is firmer. For oily fish the skin is often left on because removing it can damage the softer flesh.

Different cuts and preparations of fish have a range of names.

The most common ones are:

Steaks are thick slices of fish, which can be on or off the bone.

Fillets are cuts of fish free from the bone. A flat fish will yield four fillets and a round fish will yield two fillets.

Delice is a fillet folded into three.

A **paupiette** is a rolled fillet filled with a stuffing mixture, known as a farce.

A **goujon** comes from filleted fish cut into strips. A good size guide for these would be 8cm x 0.5cm.

Supremes come from larger types of fish and are portions cut at an angle from a large fillet.

Darne is a term usually related to a salmon. It is a cross cut (steak) from a large round fish on the bone.

Troncon is a cross cut (steak) from a large flat fish on the bone. **Plier** is a fillet folded in two.

Plaited can also be known as **en tresse**. It applies to fillets of fish, usually sole, that have been cut into three even pieces lengthwise to within 1cm of the top and neatly plaited.

Other preparation methods include:

Ciseler - thin cuts into a round fish to help ensure that it is cooked through thoroughly.

Pane means to coat the fish in flour, egg and breadcrumbs.

Farce is a filling made from breadcrumbs and herbs, or from minced fish.

Mousseline is a light mousse mixture made from minced fish, egg white and cream.

Fish is often **coated** with a batter or breadcrumbs or a herb mix, or **marinated** in liquids before cooking. Doing this gives the fish more flavour and helps to keep the fish moist. Coating helps to preserve the shape of the fish, particularly when it is fried.

Activity 8

Find out what types of fish are suited to the following types of preparation.

Common types of cuts used in the preparation of fish	Examples of fish suited to this type of preparation
Steak	
Fillet	
Delice	
Paupiette	
Goujon	
Supreme	
Trongon	
Plier	
Plaited	
Darne	
Ciseler	

Check your answers on page 39.

As with all preparation of food, it is important that **value for money**, both for the customer and the caterer is considered when planning menus.

Portion yields are a key factor in recipe management and are vital to the economy of the business.

Flat fish can lose up to 50% of their purchased weight when filleted. Preparation of a whole round fish can facilitate the loss of 40 to 60% of their purchased weight if the intention is to remove the bone. This means that it is usual to serve small round fish whole. This reduces the weight lost to around 5% through gutting and scaling only - a considerable saving.

Generally, it is usual to allow 100g (4oz) of fish **off the bone** and 150g (6oz) of **fish on the bone** for a portion.

Portion yields for shellfish vary, but the following table can be used as a guide.

Type of shellfish	Portion guide
Mussels	Allow 2 litres for 4 portions
Cooked lobsters 2lb in weight	4 portions
Cooked lobsters 5lb in weight	10 portions
Shelled scampi 3/4 to 1lb weight	4 portions
Shelled scampi 2.5 lb in weight	10 portions
Peeled prawns 8oz in weight	4 portions
Scallops 8oz in weight	4 portions

Basic fish preparation

Before you begin to prepare your chosen recipe, you will have to ensure that certain things have been checked.

Activity 9

What things should you look for before you begin preparing your fish?

Check your answer on page 39.

If there is any problem with the fish or any other ingredients, you should inform your supervisor. If it is up to you to make the decision, change the dish and discard any unsuitable ingredients.

Most fish need to be trimmed to remove scales, fins and, in most cases, the head. The best pieces of equipment to use to remove the head are fish scissors or kitchen scissors and a knife.

Activity 10

When might you leave a head on a fish?

Check your answer on page 39.

Generally, the next stage of preparation for fresh fish is the **gutting** process.

You will be given the opportunity to practise this exercise and it should involve the following stages:

- Cut from the vent to two thirds along the fish.
- Draw out the intestines with fingers. Dispose of these safely.
- Clean out any blood that remains in the main cavity of the fish.
- Wash, drain and dry thoroughly.

Sometimes the recipe requires the fish to be stuffed whole and with practise you can learn to remove the intestines through the gill slits. This leaves the stomach skin intact and forms a pouch suitable for stuffing. This improves the appearance of the finished dish, but care must be taken to ensure that all blood and intestinal material is removed prior to stuffing.

Both round fish and flat fish can be **filleted**, but slightly different processes are used for each type.

Filleting flat fish requires the following process. (The only exception to this is a Dover sole, which you will look at later.)

- Using a filleting knife, make an incision from the head to tail down the line of the backbone.
- Holding the knife almost parallel to the work surface and keeping the knife close to the backbone of the fish, remove each fillet.

Activity 11

Can you remember how many fillets you can get from a flat fish?

Check your answer on page 39.

You then might have to **skin** the fish.

Skinning of flat fish (apart from Dover sole) requires the following process:

- Ensure that you are holding the fillet firmly at the tail end.
- Using a filleting knife, make a cut as close to the tail end as possible right through the flesh to the skin.
- Keeping the knife parallel to the work surface, move the knife firmly up the fish using a side to side motion and remove the skin.

The preparation of **Dover sole** requires a different technique as it is usually served whole.

Filleting:

- Hold the tail end firmly and cut away at the skin until you have enough to grip firmly.
- Pull the skin away from the tail to the head. It should come away without using a knife.
- Both the black and white skin can be removed in this way.
- Trim the fins with fish or kitchen scissors.
- Remove the eyes and wash and dry the fish thoroughly.

Turbot is another fish that requires different techniques, as it can be much larger than other types of fish.

- Remove the head with a large chopping knife.
- Cut off the side bones.
- Starting at the tail end, cut down the centre of the backbone, dividing the fish into two halves.
- Divide each half into steak portions as required.

Round fish is also filleted for some recipes, but by a different process:

- Remove the head and dispose of safely.
- Clean the fish thoroughly.
- Using a filleting knife, make a cut along the backbone from head to tail and remove the first fillet.
- The knife should be kept close to the bone to minimise waste and maintain the appearance of the fillet.
- Reverse the fish and repeat the process to remove the second fillet. This time the cut should be made from the tail to the head.

When **filleting all fish** it is important that you check to make sure that, apart from the **spine**, you also remove the **pin bones and rib bones**. The rib bones usually come away from the flesh with the spine, but the pin bones can be more difficult to remove. Sometimes there may be an opportunity to remove them after cooking when the cooked flesh may yield them with greater ease.

Basic preparation of shellfish

Different types of shellfish require different basic preparation as follows:

Mussels - scrub the shells with a stiff brush and rinse well under cold running water. Pull off the stringy thread on the outside of the shell (the 'beards' or byssus thread) using a small knife. Discard any mussels which look damaged or do not close on tapping.

Scallops - hold the scallop with the flat shell uppermost, push a short knife into the crack between the shells, run the blade across the roof of the shell and pull the shell apart. Pull off the membrane, or frill, and the black stomach parts and discard them. Wash the remaining white meat under cold water and dry. Remove and discard the thick white muscle around the outer edge of the scallop. Depending on the recipe you may wish to separate the orange coral (roe) from the white meat.

Oysters - wrap the oyster in a clean cloth and put it on the work surface with the flatter shell facing upwards and the join towards you. Hold it with one hand and insert the tip of an oyster knife into the gap in the join. Twist the blade to prise open the shell, then slide the blade along to cut the muscle. You should then be able to remove and discard the top shell. Remove any bits of shell and handle carefully to avoid spilling the liquid. Hold the lower shell and run the blade under the oyster to free it from the lower shell.

Prawns - peel the shell away from the body with your fingers. The tail can be left on depending on the recipe. If you wish to remove the tail, hold the body and pull at the tail. It should come away. To remove the veins, cut down the centre back of the prawn and pull out the black vein with a cocktail stick or your fingers. You can also use a cocktail stick to de-vein a prawn in its shell, by inserting it where the shell overlaps to lift out the vein. Rinse the prawns under cold water and dry on absorbent kitchen paper before use.

Storage of prepared fish and shellfish

You already know that when fish and shellfish come into the kitchen, they need to be used as quickly as possible, or stored correctly. Fish and shellfish are best purchased daily. As with all perishable items, they should be stored under the correct conditions and at the right temperature to prevent the risk of possible contamination.

Fish should be **washed, dried and stored in the fridge at a** temperature of as close to 0 °C as possible. Higher temperatures mean the fish deteriorate quicker. In the fridge, fish and seafood should be covered with clingfilm and labelled with a prepared date and a use-by date. Raw fish should be washed each day and checked for signs of deterioration.

All fresh seafood should be eaten as soon as possible. Most seafood will be fine if it is only stored for a day or two at the most! unless it is suitable for freezing.

If you are going to freeze fish, make sure that it is stored at the right temperature (minus 18 °C).

As a guide the recommended storage periods for frozen fish is as follows:

- White fish: 4 months.
- Oil-rich fish: 3 months.
- Smoked fish: 3 months.
- Shellfish: 3 months.

Activity 12

Fill in the missing gaps in the copy by choosing the correct words from the list given below.

- Deterioration
- wet cloths
- fridge
- use-by
- °C

Fish and shellfish are best purchased daily and once prepared it should be kept as close to _____ °C as possible. Storing on ice is common, or in a special fish fridge.

If shellfish are kept they should be stored in the refrigerator covered with _____ .

Once they are prepared they can be stored in placed on draining trays covered in the _____ .

All fish and shellfish which have been prepared, should be stored in trays in the refrigerator, covered and labelled with the date prepared and the _____ date.

Raw fish if, stored, should be washed daily and if any sign of _____ is seen it should be discarded.

Check your answer on page 40.

Summary

In this section you have learned about:

- The different **types of fish and shellfish** and how to identify them.
- **The tools and equipment** you might use to prepare, cook and store fish.
- How to prepare fish for **cooking**.
- **Portion sizes** and the portion yield of different fish.
- **How to store** prepared fish and shellfish.

Please spend a short time reviewing what you have learned in section before moving on to Section 2. When you have completed both sections and are happy that you fully understand what you have covered, go on to undertake the assessment.

Section 2

Cook and finish fish and shellfish

Section Introduction

This section looks at the cooking and finishing of fish and shellfish. It will look at a range of cooking methods suitable for different fish and how to finish or present fish dishes for serving.

You will look at three main areas:

- **Cooking methods for fish and shellfish**
- **Finishing fish and shellfish dishes**
- **Evaluation of finished dishes**

Learning Required

When you have worked your way through this section you should know how to:

- Tell when fish is cooked.
- The different methods of cooking fish and shellfish and the types of fish and shellfish they can be used for.
- Why it is important to present dishes properly.
- How to finish different fish dishes for serving.
- How to evaluate dishes prior to serving.

Fish can be an economical choice to cook in recipes, as it cooks quickly and can save on fuel costs. It is also extremely versatile and can be cooked by many different methods.

When fish is cooked, it loses its translucent appearance and, in the case of white fish, takes on an opaque white colour. Round, dark fish becomes firm to the touch when pressed lightly. Shellfish often change colour when cooked. For example, prawns may turn from greyish to pink.

Activity 13

Describe another method to tell you when the fish is cooked.

Check your answer on page 40.

If you are cooking fish **ahead of time to serve cold**, the skin can be removed much more easily while the fish is still warm than after it is chilled. Remember your food safety and do so in a hygienic way. Tweezers can be used to remove fine pin bones from fish after it is cooked.

Fish can become dry and lose flavour if allowed to overcook, so this should be avoided. Make sure you cook fish for the right length of time at the right temperature and use a **recipe suitable to the type of fish** to ensure maximum flavour and moist texture. Fish cools rapidly, so have the serving plates or utensils heated and serve immediately.

Poaching

This method is suitable for most types and cuts of fish. Poaching involves cooking fish in a liquid which can be stock, milk, wine, water or cider. All or some of this liquid is used to make a sauce that is served with the fish.

Activity 14

List six different types of fish and shellfish that can be poached.

Check your answer on page 40.

You should take note of the following when poaching fish:

- **Whole fish** should be put into cold liquid, brought to boiling point, and allowed to barely simmer. It should never boil.
- **Cuts of fish** should be put into simmering liquid, as this will stop a white scum forming on the cut surface of the fish.
- The **temperature** of the cooking liquor should be no more than 95 °C. Overcooking will dry the fish out and destroy the little connective tissue there is, causing the fish to break up.
- **Cooking time will vary** depending on the thickness of the fish.
- Poaching is most successful if carried out in a **wide, shallow pan**.
- Fish should be poached in a **single layer** to ensure even cooking.
- If you are poaching fish to be served cold on the menu, let it cool safely in the liquid to retain flavour and keep moist.

Deep poaching (boiling)

This is usually applied to large whole fish and shellfish. The liquor used to deep poach fish is called 'court bouillon'.

Activity 15**Can you list the ingredients used to make court bouillon?**

Check your answer on page 40.

The process is the same as poaching; the liquor is never allowed to boil. Fish kettles are used to poach large types of fish, such as salmon and turbot.

Grilling

This is one of the most popular methods of cooking, as it is healthy and quick. It is suitable for most types of fish: whole fish, steaks and fillets.

Tips for grilling fish:

- All fish must be seasoned and brushed with oil to begin with.
- Fillets or steaks should not be much more than one inch thick, as thicker pieces can char before the interior is cooked.
- They are then either placed over heat on grill bars, or under heat using the salamander and a tray.
- Brushing the salamander or grill with a light covering of oil beforehand will also stop the fish from sticking.
- The grill must be very hot and the fish must be brushed with oil frequently to prevent it drying out.
- Overcooking will cause the fish to dry out and shrink. /
- Be safe and use tongs to turn fish over whilst it is cooking.
- Large pieces of fish must be scored through the thickest part to ensure even cooking.

Shallow frying

Shallow frying fish is another popular method of cooking fish. Shallow frying is suitable for small whole fish, supremes, goujons, scampi and scallops.

The term usually applied to this method is '*meuniere*'.

Tips for shallow frying fish include:

- Always pass the fish through seasoned flour to help keep it moist, stop it from charring and seal in the flavour.
- Clarified butter and oil are usually the two most popular mediums for shallow frying or a combination of the two.
- Frying pans are often used for this method with a fish slice to turn and lift the fish.
- Oil must be hot to prevent the fish becoming soggy and fat laden.
- The fish is turned half way through cooking and served with nut-brown butter, lemon and chopped parsley.
- Frying the presentation side first allows the finished dish to look appealing to the customer.

Deep-frying

Deep-frying is similar to shallow frying. The fish is placed into the hot deep fat, which should be at a temperature of 180 °C to 190 °C. Always make sure that the fat is hot enough before you start frying by testing with a thermometer. Fillets, scampi, scallops, mussels and whole whitebait can all be deep-fried.

Activity 16

Which of the following would usually be deep-fried?

Tick answer

White fish

Oily fish

Check your answer on page 40.

Tips for deep frying:

- Deep-fat fryers are the most suitable pieces of equipment for this method, but large saucepans can also be used. Use a fish slice, wire basket or tongs for removing cooked fish from fat.
- Fish for deep-frying must be protected from the hot fat, usually with a coating around the fish. This prevents too much fat being absorbed by the fish.
- The fish is cooked until it floats and is golden brown, overcooking will make the batter very dark and dry out the fish.
- The fish must be drained on absorbent kitchen paper before service.

Activity 17

Describe the three main preparation methods for deep-frying and give their French menu terms.

1
2
3

Check your answers on page 41.

Baking

All kinds of fish can be baked in an oven. Whole fish and large fillets are usually most suitable. When baking fish, it is usual to place it in a dish with chopped mushrooms, onions, shallots, and parsley.

Activity 18

List the fish you can think of that are commonly baked in an oven.

Explain what a duxelles is.

Check your answers on page 41.

Tips for baking fish:

- Fish can be baked in earthenware or other ovenproof dishes in the oven.
- The fish can be basted in its own juices and a sauce made from this at the end of cooking. These dishes are usually covered with foil or a lid during cooking.
- Fish can be covered in a sauce and baked. This style of baking is called a gratin and can be finished with cheese or crumbs and glazed.
- Fish is generally baked at a temperature of 190 °C/gas mark 5.

En papillate (paper bag)

This is a French technique of enclosing fish in parchment paper or foil and keeps fish really moist. The fish is placed on thinly sliced vegetables and herbs, seasoned and sprinkled with lemon juice or wine and placed on buttered parchment paper or foil. The envelope is sealed by folding and placed in a hot oven for 15 minutes. It can then be served or, to greater effect, opened by the customer at the table.

Braising

Some cuts of fish, like darnes, can be braised. Braising entails the fish being placed on a mirepoix of carrot, onion, celery and leek, covered in wine or stock and cooked in the oven. A sauce is made from the cooking liquor.

Steaming

There are different methods of steaming:

- Low pressure in a steamer or between two plates over a pan of boiling water.
- High pressure in a special pressure cooker.
- Vacuum cooking in a sealed pouch which is heated in boiling water or in a steamer - known as *sous vide*.

There are four different types of steamer:

- Atmospheric.
- Pressure,
- High compression.
- Pressureless convection.

Steamers can be dangerous and should be used with care. The pressure must be reduced before opening and the instructions for use should be followed carefully.

Cuts and whole fish can be steamed, Steaming makes fish more digestible and retains nutrients, so is a healthy option. This is a quick method of cooking fish.

Activity 19

List any other methods of cooking fish that you can think of.

Check your answers on page 41.

Finishing fish and shellfish dishes

All fish dishes should be finished at the last minute before presentation. We 'eat with our eyes' and the finished dish should satisfy the customer. It also prevents any deterioration of the fish itself, both in appearance and in temperature.

You will look at the finishing and garnishing of different fish dishes. A garnish is an edible decoration, applied to a dish as part of presentation and finishing. The decoration can be as the individual chef decides. It must enhance the dish, not detract from the flavours or the look of the product. Simplicity is best. Serving fish with a simple garnish and fresh vegetables or salad makes a healthy meal.

Shallow fried fish

The fish is drained and placed on a plate, covered with nut-brown butter and garnished with sliced lemon and chopped parsley.

Poached fish

Drain and keep the fish hot. Make a sauce from the cooking liquor or serve with hollandaise sauce and a sprig of parsley. The sauce may be glazed using egg yolks and cream or just finished with butter.

Deep poached fish

Drain the fish and garnish with some of the court bouillon garnish (carrot and onion). Some of the cooking liquor or hollandaise sauce may be served.

Braised fish

Drain and keep the fish hot. Make a sauce from the braising liquor and pour over the fish. Garnish with herbs.

Grilled fish

Brush the fish with butter and served with a suitable hard butter sauce. Garnish with a sprig of parsley.

Deep fried fish

Drain the fish well and garnish and serve according to coating:

- If the coating is breadcrumbs it should be served with tartar sauce, a wedge of lemon and fried parsley.
- If coated in a batter it should be served with tomato sauce, a wedge of lemon and fried parsley.
- If coated in milk and flour it should be served with sauce remoulade or tartare and fried parsley.

Evaluation of finished dishes

Each dish must be individually evaluated. They must have eye appeal, have a pleasant aroma and taste good. The only way to evaluate a dish is to have it presented and study it, taste it and get other people's opinions.

To evaluate a dish, you need to look at the following.

The fish: must be moist and not shrunken or dry if cooked by moist methods. Crisp and golden brown if deep or shallow fried. Golden brown and moist if grilled.

The sauce: should be of the correct consistency, well seasoned and a good colour. If glazed, it should be even and not split.

The glaze: should be even and not over browned. If covered in cheese or crumbs these should be golden, not speckled and burned.

The presentation: should be simple and pleasing to the eye, it should look fresh and not over handled.

The taste: flavours should be clean and easily identified, the dish must be a blend of flavour with no single ingredient overpowering the dish.

The temperature: if it supposed to be hot it should be hot, though not too hot as the sauce and fish could end up overcooked.

Activity 21

Evaluate a dish that you have prepared giving a short description using the list on the previous page as guidance.



Customer feedback: this is always the best evaluation of a dish. Encourage the customers to comment on specials before putting them on the menu, and accept constructive criticism!

Summary

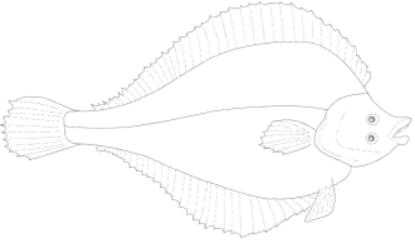
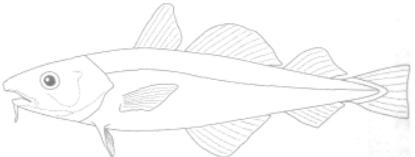
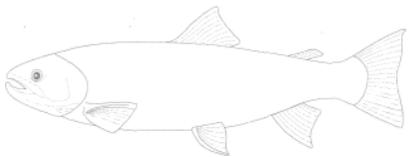
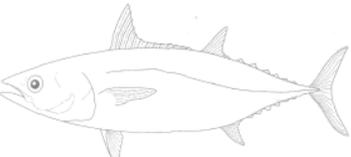
In this section you have learned about:

- The cooking methods suitable for different types of fish and shellfish.
- How to tell when fish is cooked.
- Why it is important to present dishes properly.
- Finishing fish and shellfish dishes.
- How to finish different fish dishes for serving.
- How to evaluate dishes prior to serving.

You have now completed this unit. Please spend a short time reviewing what you have covered for this section before attempting the assessment for the unit.

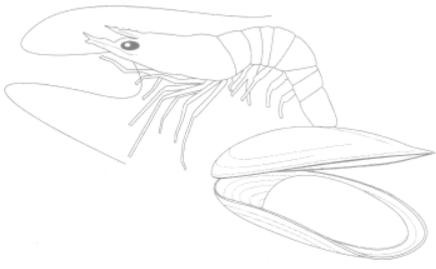
The tables below give examples of fish and shellfish that are commonly used, but there are lots more examples you may come across.

Identifying fish

Flat white fish	Name	Season
	Turbot	All year
	Lemon sole	All year
	Halibut	July to March
	Plaice	All year, but best in May to January
	Skate	All year, except January to March
Round white fish		
	Cod	All year
	Haddock	All year
	John Dory	All year
	Monk fish	August to January
	Hake	All year, but best in June to January
Oily fish		
	Salmon	February to August
	Herring	May to December
	Rainbow trout	All year
Tuna (oily fish)		
	Skipjack	All year, but best May to September
	Albacore	All year, but best May to September
	Yellowfin	All year, but best May to September

Identifying shellfish

Much of the shellfish we buy now is frozen or farmed, which means that it is available year round. If you are looking for fresh shellfish it is seasonal.

Shellfish	Name	Season
	Prawns	All year
	Shrimps	All year (Brown shrimp March to October)
	Mussels	September to March
	Cockles	September to March
	Clams	September to March

Answers to activities

Activity 1, page 3

How many different types of catering establishments can you name that are likely to put fish on the menu?

You might have thought of:

Fish and chip shops.

Restaurants.

Pubs that serve food.

Canteens in businesses, colleges, schools, prisons and other establishments.

Hotels.

Hospitals and care homes.

Activity 2, page 5

Classification	Type of fish
Round	Cod, salmon, trout, haddock, mullet, hake
Flat	Plaice, lemon sole, turbot, dover sole
Oily	Mackerel, salmon, trout, herring
White	Plaice, cod, sole, haddock, turbot
Freshwater	Trout, salmon, pike
Sea water	Cod, sole, turbot, halibut, salmon

Activity 3, page 6

Examples of the two classifications of shellfish:

Crustacea:	Mollusca:
Lobster Crab Scampi Prawns Crayfish	Mussels Oysters Clams Scallops

Answers to activities

Activity 4, page 10

Name a type of fish that may have a backbone that needs cutting through.

You may have thought of a **cod** or a piece of **salmon**.

Activity 6, page 12

The most common types of cooking vessel used to cook fish and/or shellfish are:

Type of cooking vessel	Can be used to cook fish	Generally used to cook other foods
Stockpot		√
Sugar boiler		√
Sauté pan	√	
Salmon kettle	√	
Deep-frying vessel	√	
Omelette pan		√
Frying pan	√	
Turbot kettle	√	
Brioche tin		√

Activity 7, page 13

You may have listed any of the following:

- Oval sole dish.
- Pie dish.
- Stainless steel flats.
- Large white or coloured contemporary china serving dishes.
- Casserole dishes.
- Platters for smoked fish or oysters.

Answers to activities

Activity 8, page 15

Common types of cuts used in the preparation of fish	Examples of fish suited to this type of preparation
Steak	Salmon, cod
Fillet	Plaice, sole
Delice	Plaice, sole
Paupiette	Sole, plaice, whiting
Goujon	Sole, plaice
Supreme	Salmon, turbot, brill
Trongon	Salmon, turbot
Plier	Sole, plaice
Plaited	Sole
Darne	Salmon, cod, turbot
Ciseler	Trout, salmon

Activity 9, page 16

You may have thought of some of the following: The fish is the correct type for the recipe. The fish is fresh and safe to use. It has been washed under running cold water.

Activity 10, page 17

Leaving the head and tail on the fish helps to avoid breakage of the flesh. It may also be left on for decorative purposes, for example, a whole salmon cooked for a buffet.

Activity 11, page 18

Four fillets from a flat fish.

Answers to activities

Activity 12, page 21

Fish and shellfish are best purchased daily and once prepared it should be kept as close to 0 °C as possible. Storing on ice is common, or in a special fish fridge.

If shellfish are kept they should be stored in the refrigerator covered with wet cloths.

Once they are prepared they can be placed on draining trays covered in the fridge.

All fish and shellfish which have been prepared should be stored in trays in the refrigerator, covered and labelled with the date prepared and the use-by date.

Raw fish if, stored should be washed daily and if any sign of deterioration is seen it should be discarded.

Activity 13, page 24

The flesh should flake when tested with a knife.

Activity 14, page 25

Poaching is suitable for small whole fish, fillets, paupiettes, darnes, trongons, delices, pliers, supremes, mussels, oysters and scallops.

Activity 15, page 26

Ingredients used to make court bouillon may vary slightly, but generally include: sliced carrot, celery, onion, parsley, peppercorns, salt, lemon, water, vinegar.

Activity 16, page 27

Oily fish would not normally be deep-fried.

Activity 17, page 28

The three main preparation methods for deep-frying and their French menu terms are:

- **The English method** (*poisson frfte a l'anglaise*)
Passed through seasoned flour, egg-wash and breadcrumbs -plaice and sole are often served this way.
- **The French method** (*poisson frite a la francaise*)
Passed through milk and seasoned flour - whitebait is a good example.
- **With a batter** (*poisson frite a l'orly*)
Marinate the fish with lemon juice, parsley stems and a little oil. Pass through the flour, dip in yeast batter and fry.

Answers to activities

Activity 18, page 29

Fish that are commonly baked in an oven are:

Cod, hake, red mullet, haddock, mackerel, salmon, herring, trout and pike.

A duxelles is:

A mixture of finely chopped mushrooms, onions or shallots and herbs softened in butter and used for stuffing or garnish.

Activity 19, page 30

Other methods of cooking fish could be:

Microwaving.

Barbecuing.

Steaming.

Stir-frying.