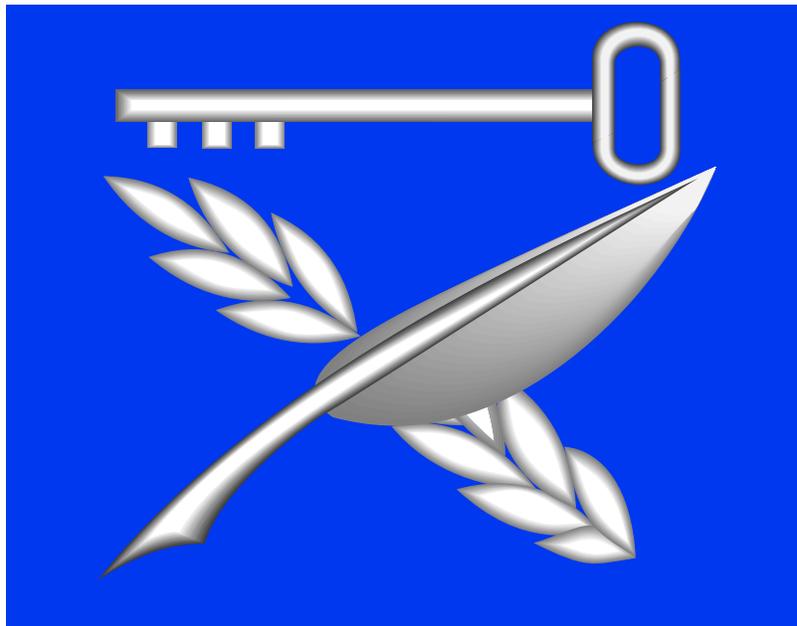


Department of  
Homeland Security

United States  
Coast Guard

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# Food Service Specialist, Third Class Performance Qualification Guide



## Meat, Poultry, Seafood, and Sauces Student Pamphlet

U.S. Coast Guard  
Pamphlet No. P35106  
(05/05)



# **Meat, Poultry, Seafood, and Sauces**

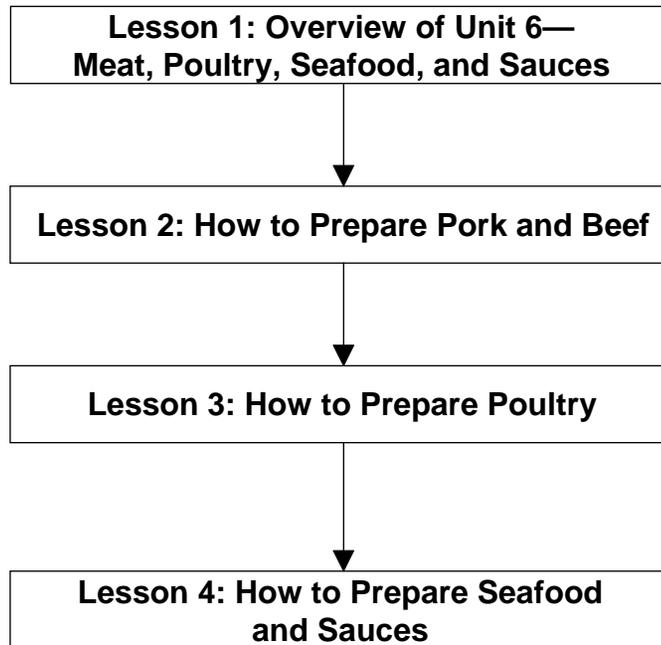
**Creation Date: April 1986**

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**QUESTIONS ABOUT THIS TEXT SHOULD BE  
ADDRESSED TO THE SUBJECT MATTER SPECIALIST  
FOR THE FOOD SERVICE RATING.**

# Unit 6: Meat, Poultry, Fish, Seafood, and Sauces



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# LESSON 1

## Overview of Unit 6—Meat, Poultry, Seafood, and Sauces

### Introduction

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**Overview** Lesson 1 of Unit 6 “sets the stage” for the other lessons of Unit 6. It introduces the references and processes you will use to learn about the preparation of meats, poultry, seafood, and sauces.

This section of the lesson covers:

- Performance qualifications
  - Objectives
  - Performance evaluation
  - Tools and references
  - Topics covered by this lesson
- 

**Performance Qualifications** There are no Enlisted Performance Qualifications (EPQs) for this lesson. Refer to the “Unit Preview” section for the EPQs for this unit.

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**Objectives** Upon completion of this lesson, you will be introduced to the:

- Unit structure
- Lesson contents
- Enlisted performance qualifications that are covered in the unit

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**Performance Evaluations** This lesson does not require a performance evaluation. However, a Performance Evaluation is required for Lessons 2, 3, and 4. Refer to the Unit Preview section for the performance evaluations for this unit.

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## Introduction, continued

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### Tools and References

The following tools and references are required to successfully complete this unit.

- ❑ *Professional Cooking*, by Wayne Gisslen
  - ❑ Armed Forces Recipe Service (AFRS), NAVSUP Publication 7
  - ❑ Unit 1, Appendix C, Glossary of Key Terms
  - ❑ Handouts
- 

### Topics Covered by This Lesson

This lesson covers the following topics:

- ❑ Recipe for learning
  - ❑ Unit preview
    - Unit overview
    - Unit map
    - Enlisted Performance Qualifications
    - Unit matrix
-

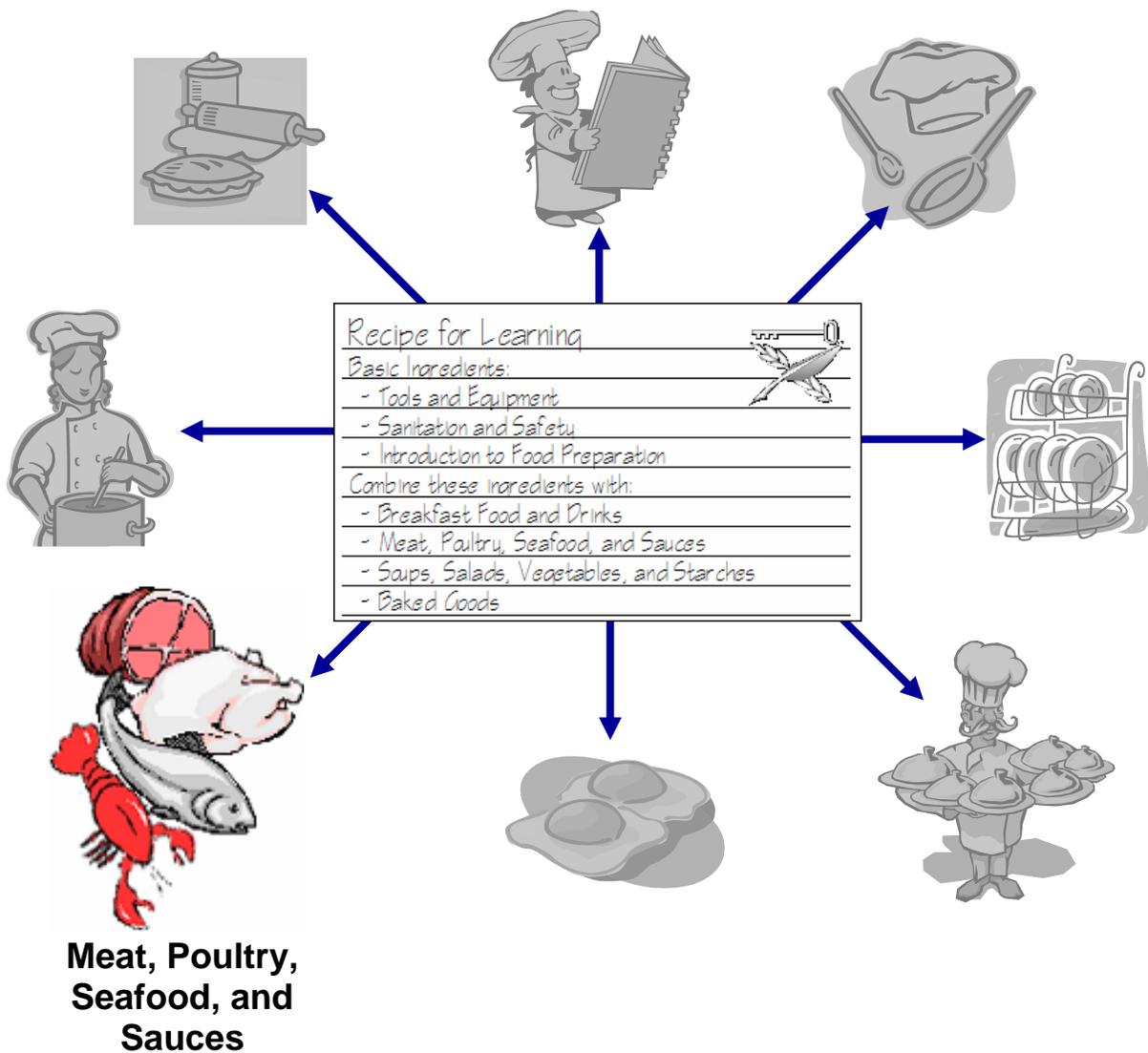
## Recipe for Learning

### Recipe for Learning

This unit is the second of four “how to” units which focus on the practical application of techniques you have learned and the preparation of food items. This unit focuses on the preparation of meats and sauces. In this unit and the other “how to” units, you will be encouraged to spend more of your time in the kitchen, watching demonstrations and preparing foods.

The other “how to” units are:

- ❑ Unit 5—Breakfast Food and Drinks
- ❑ Unit 7—Soups, Salads, Vegetables, and Starches
- ❑ Unit 8—Baked Goods



## Unit Preview

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### Unit Overview

In this unit you will learn:

- ❑ How to prepare pork
- ❑ How to prepare beef
- ❑ How to prepare poultry
- ❑ How to prepare seafood

The lessons of Unit 6 each have two major components: content to read and activities to perform. The content you will read will help you learn about meat (for example, its composition and structure, the basic cuts, quality indicators, etc.). The activities will be recommended activities that you will perform with your supervisor or some other expert assigned by your supervisor. These activities will typically include and/or encourage demonstrations for you to observe, practice for you to perform, and feedback to help you improve your performance.

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### Unit Map

This unit contains four lessons.

<b>THE LESSONS OF UNIT 6</b>		
<b>NO.</b>	<b>TITLE</b>	<b>DESCRIPTION</b>
1.	Overview of Unit 6	This overview of the entire unit provides the “big picture” of preparing meats and sauces.
2.	How to Prepare Pork and Beef	You will learn how to prepare pork and beef using the different cooking methods. The practice in this lesson focuses on the moist- and dry-heat cooking methods.
3.	How to Prepare Poultry	You will learn how to prepare poultry using the different cooking methods. The practice in this lesson focuses on the dry-heat method.
4.	How to Prepare Seafood	You will learn how to prepare seafood using the different cooking methods. The practice in this lesson focuses on the dry-heat fat/fry method.

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## Unit Preview, continued

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### Enlisted Performance Qualifications

The Enlisted Performance Qualifications for this unit are listed below. Following this section is a Unit Matrix, which shows the EPQs and their associated lessons.

**4.A.05 Prepare** at least one of the following meats using dry heat cooking method IAW “Professional Cooking” by Wayne Gisslen and Armed Forces Recipe Service (AFRS), NAVSUP Publication 7:

- Poultry
- Beef
- Pork
- Seafood

**SupGuide:** Supervisor will ensure member selects a different meat for each cooking method listed in EPQ 4.A.05 through EPQ 4.A.07.

**4.A.06 Prepare** at least one of the following meats using moist heat cooking method IAW “Professional Cooking” by Wayne Gisslen and Armed Forces Recipe Service (AFRS), NAVSUP Publication 7:

- Poultry
- Beef
- Pork
- Seafood

**4.A.07 Prepare** at least one of the following meats using dry heat fat/fry cooking method IAW “Professional Cooking” by Wayne Gisslen and Armed Forces Recipe Service (AFRS), NAVSUP Publication 7:

- Poultry
- Beef
- Pork
- Seafood

**4.A.09 Prepare** the following cold sauces IAW “Professional Cooking” by Wayne Gisslen:

- Tartar sauce
- Cocktail sauce

**4.A.12 Carve** the following cooked meats IAW “Professional Cooking” by Wayne Gisslen:

- Whole turkey
  - Roast beef or pork
-

## Unit Preview, continued

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### Unit Matrix

This unit covers five EPQs. For your convenience, the matrix below will help you to identify the lessons in which these EPQs are addressed. Every lesson that introduces an EPQ also contains a Performance Evaluation for that EPQ. Those lessons below that are not marked introduce information that will be used when performing EPQ-related tasks.

EPQS	LESSON 1	LESSON 2	LESSON 3	LESSON 4
4.A.05 (DRY HEAT)		X	X	
4.A.06 (MOIST HEAT)		X		
4.A.07 (FAT/FRY)				X
4.A.09 (COLD SAUCE)				X
4.A.12 (CARVE MEAT)		X	X	

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## LESSON 2

### How to Prepare Pork and Beef

#### Introduction

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##### Overview

In this lesson, you will learn how to prepare pork and beef.

This section of the lesson includes:

- Performance qualifications
  - Objectives
  - Performance evaluation
  - Tools and references
  - Recommended reading
  - Topics covered by this lesson
- 

##### Performance Qualifications

This lesson addresses two Enlisted Performance Qualifications (EPQs):

**4.A.05 Prepare** at least one of the following meats using dry heat cooking method IAW “Professional Cooking” by Wayne Gisslen and Armed Forces Recipe Service (AFRS), NAVSUP Publication 7:

- Poultry
- Beef
- Pork
- Seafood

**4.A.06 Prepare** at least one of the following meats using moist heat cooking method IAW “Professional Cooking” by Wayne Gisslen and Armed Forces Recipe Service (AFRS), NAVSUP Publication 7:

- Poultry
- Beef
- Pork
- Seafood

SupGuide: Supervisor will ensure member selects a different meat for each cooking method listed in EPQ 4.A.05 through EPQ 4.A.07.

**4.A.12 Carve** the following cooked meats IAW “Professional Cooking” by Wayne Gisslen:

- Whole turkey
  - Roast beef or pork
-

## Introduction, continued

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**Objectives**

Upon completion of this lesson, you will:

- Describe meat composition and structure
  - Explain the difference between inspection and meats grading
  - Identify the primal cuts of pork and beef
  - Prepare the cut of pork and beef to be cooked
  - Cook pork or beef using a moist-heat cooking method
  - Cook pork or beef using a dry-heat cooking method
- 

**Performance Evaluation**

There will be a performance evaluation in this lesson. This evaluation will cover EPQs 4.A.05, 4.A.06, and 4.A.12 as listed above.

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**Tools and References**

Tools and references for this lesson include:

- Professional Cooking*, by Wayne Gisslen
  - Armed Forces Recipe Service (AFRS), NAVSUP Publication\_
  - Unit 1, Appendix C, Glossary of Key Terms
- 

**Recommended Reading**

To get the most out of this lesson, be sure to read the following:

- Professional Cooking*:
    - “Understanding Meats and Game” (Chapter 10)
    - “Cooking Meats and Game” (Chapter 11)
  - Armed Forces Recipe Service (AFRS), Section L, “Meat, Fish and Poultry.”
- 

**Topics Covered by This Lesson**

This lesson covers the following topics:

- Sample recipes
  - Introduction to meat preparation
  - How to prepare meat
  - How to carve meat
-

## Sample Recipes

### Overview

In this lesson you will learn about meat—its composition and structure, inspection and grading systems, its forms, bone structure, etc. As you learn these details, be sure to keep in mind the cues and instructions you will find within recipes. Remember that the recipe provides you with guidance, but in order to prepare meat that looks good and tastes good, there is much to know that falls outside of the instructions of a recipe.

### Pork Recipe

Consider the two recipes below. They are recipes you may soon be asked to prepare, recipes whose primary ingredient is pork or beef. Note the details and differences between how these items are prepared.

#### Braised Pork Loin

Braided Pork Loin				Recipe # 145							
Serves:	100			Serving Size	6 oz.						
Prep Time:	15 MINUTES			Cooking Temp	250° Convection Oven						
Cooking Time:	2-3 Hours			Serving Pans	FULL SHALLOW						
Cooking Equipment:	BBQ/OVEN			Pan Used	Roasting Pan						
Ingredients	Weight		Ea	Measure							Preparation
	LB	OZ		GL	QT	PT	CP	TBSP	TSP		
Pork Loin	40										
Malt Vinegar					1	1	1	8			
Worcestershire Sauce							1	4			
Onions	2	8									Large Dice
Chipolte peppers		10					1	4			
Dry Mustard								10			
Garlic		10									Fine Brunoise
Peppercorns, cracked								6	2		
<b>Braising liquid:</b>											
Onions	2	8									Fine Brunoise
Oil, vegetable							1	4			
Tomato Paste							1	4			
Brown Stock					3	1	1				
Step 1: Make marinade and marinate pork loin overnight.											
Step 2: Sear pork loin on all sides until lightly browned											
Step 3: Sautee onions in oil add tomato paste and beef stock. Bring to a simmer.											
Step 4: Place pork loins to a roasting pan and add braising liquid.											
Step 5: Cover and braise in a 250° F convection oven; until internal temperature is 145° F.											
Step 6: Remove meat and reduce braising liquid to a sauce like consistency. Taste for salt and											
Step 7: Nap porkloins with sauce for service.											

Some questions to answer as you study this recipe:

- What cooking method does it require, is that moist-heat or dry-heat, and how is that cooking method performed?
- What cut of pork does it require?
- What kind of pre-preparation is required and how long does it take?



## Introduction to Meat Preparation

### Overview

This section covers the following:

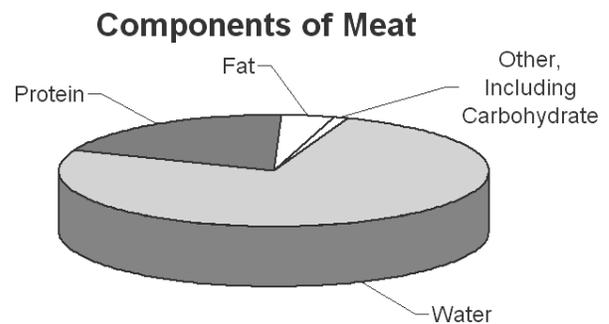
- Composition
- Structure
- Inspection and grading
- Forms
- Bone structure
- Basic cuts

### Composition

Meat is muscle tissue and muscle tissue is composed of three major things:

- Water
- Protein
- Fat

The table below addresses each of these, plus a minor but important component: carbohydrate.



THE COMPONENTS OF MEAT	
COMPONENT	EXPLANATION
Water	About 75% of muscle tissue is water. As you cook meat, this water evaporates, causing shrinkage. Too much moisture loss results in dry meat, loss of weight, and increased cost.
Protein	Roughly 20% of meat is protein. It is the largest solid component of meat. Protein is an important nutrient. Protein coagulates as we heat it, which means it becomes firmer and loses moisture. Heat that is too high toughens protein.
Fat	Fat accounts for about 5% of muscle tissue. A certain amount of fat is desirable for three reasons: juiciness, tenderness, and flavor.
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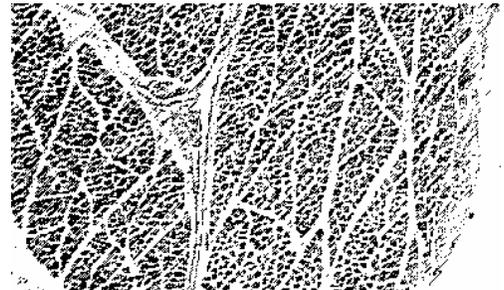
## Introduction to Meat Preparation, continued

Composition, contd.	COMPONENT	EXPLANATION
	Carbohydrate	Nutritionally, meat contains an insignificant amount of carbohydrate. This carbohydrate is important, however, because without it the desirable flavor and appearance of meat would not be achieved.

### Structure

Lean meat is composed of long, thin *muscle fibers*. These muscle fibers are bound together in bundles. These fibers determine the texture and grain of the meat. Different cuts of meat have different fiber structures.

Muscle fibers are bound together and covered by a network of proteins called *connective tissue*. It's important to understand connective tissue because it is tough. To cook meats successfully, you must know:



- ❑ Which meats are tough
- ❑ How to make tough meats tender

Meats are highest in connective tissue if they come from:

- ❑ Muscles that are more exercised
- ❑ Older animals

Meats high in connective tissue can be made tenderer by cooking, marinating, aging, and seasoning.

## Introduction to Meat Preparation, continued

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### Inspection

As a part of your duties, you will be expected to pay attention to the quality of meat you prepare. You are assisted in your evaluation of meats by a federal inspection and grading system.

Inspected meat contains mandatory inspection stamps on packaging and on inspected carcasses. Inspection stamps are the consumer’s assurance that a product is wholesome—that the meat is clean and fit for human consumption. The fact that meat passed inspection is indicated by a round stamp such as the one on the right.



### Grading

Grading serves to separate products into standardized groups of common characteristics to aid in the marketing of these products.

Meat grading is a procedure by which carcasses are segregated on the basis of their expected palatability (how it will taste with respect to tenderness, juiciness, and flavor) and yield attributes (closely trimmed edible cuts from the carcass).



THE GRADING OF MEAT	
TYPE	DESCRIPTION
Quality	A grade based on the texture, firmness, and color of the lean meat, the age or maturity of the animal, and the marbling (the fat within the lean).
Yield	A grade based on how much usable meat exists in proportion to fat.

Quality grade codes from highest quality to lowest quality are as follows: prime, choice, good, standard, commercial, and utility.

When beef is graded and stamped for quality, it must also be graded and stamped for yield or quantity of edible meat cuts.

Beef yield grades are 1, 2, 3, 4, and 5. Yield grade 1 is the leanest and highest in yield or cut ability and yield 5 is the fattest and lowest in yield or cut ability.

Pork is yield graded from 1 to 4, but most pork is sold already cut and trimmed.

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## **Introduction to Meat Preparation, continued**

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### **Forms**

Meat cuts are based on two factors:

- The muscle and bone structure of the meat
- The uses and appropriate cooking methods of various parts of the animal.

Beef and pork are available in each of the following forms:

- Carcasses
- Sides, quarters, foresaddles, hindsaddles
- Primal (wholesale) cuts
- Fabricated cuts

Use *Professional Cooking*, Chapter 10, to help you complete the table below with brief descriptions of each form.

<b>AVAILABLE FORMS OF BEEF AND PORK</b>	
<b>FORM</b>	<b>BRIEF DESCRIPTION</b>
Carcasses	
Sides, Quarters, Foresaddles, Hindsaddles	
Continued next page	

## Introduction to Meat Preparation, continued

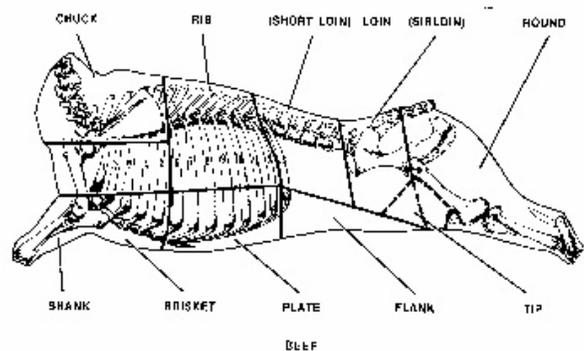
Forms,  
contd.

FORM	BRIEF DESCRIPTION
Primal Cuts	
Fabricated Cuts	

### Bone Structure and the Basic Cuts

Knowing the bone structure of the animal is essential for identifying meat cuts, boning and cutting meats, and carving cooked meats.

In *Professional Cooking*, Chapter 10, you will find drawings of beef and pork skeletons. Study the skeletons and compare the beef and pork cuts found in the chapter. Note how similar the bone structures are.



Continued next page

## Introduction to Meat Preparation, continued

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### **Bone Structure and the Basic Cuts, contd.**

Be sure to locate the following primal cuts for pork and beef:

The primal pork cuts:

- Full pork loin
- Pork butt
- Pork loin chop
- Pork rib half and loin half roasts
- Pork tenderloin



The primal beef cuts:

- Beef boneless strip loin
- Beef chuck, boneless, separated into blade, clod, and arm
- Beef flank steak
- Beef inside (top) round
- Beef knuckle, untrimmed
- Beef loin
- Beef outside (bottom) round
- Beef porterhouse steak
- Beef rib
- Beef rib steak
- Beef round steak
- Beef shank, cross cuts
- Beef short loin
- Beef T-bone steak
- Beef tenderloin, trimmed



## How to Prepare Meat

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### Overview

This section covers cooking methods used in the preparation of meat. It outlines several common methods and points to details for other methods. More specifically, in this section you will find:

- Doneness
  - Roasting
  - Broiling or grilling
  - Braising
  - Other cooking methods
- 

### Doneness

When cooking meats, it will be important to know when the meat is “done”—and the meaning of the term doneness is different depending on the cooking method used. See the table below for the definitions.

<b>DONENESS DEFINED</b>	
<b>COOKING METHOD</b>	<b>DEFINITION</b>
Dry Heat	Meat is “done” when the proteins have reached the desired degree of coagulation as indicated by internal temperature.
Moist Heat	Meat is “done” when connective tissues have broken down enough for the meat to be palatable. With a few exceptions, meat cooked by moist heat is always well done.

As meat cooks, its pigments change color. These color changes indicate degrees of doneness. See the table on the next page for degrees of doneness in red and white meats using the dry heat cooking method.

Continued next page

## How to Prepare Meat, continued

Doneness,  
contd.

DEGREES OF DONENESS									
TYPE OF MEAT	DEFINITION								
Red (beef or lamb)	Changes from red to pink to gray or gray-brown.								
	<table border="1"> <thead> <tr> <th>DEGREE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>Rare</td> <td>Browned surface; thin layer of cooked (gray) meat; red interior</td> </tr> <tr> <td>Medium</td> <td>Thicker layer of gray; pink interior</td> </tr> <tr> <td>Well done</td> <td>Gray throughout</td> </tr> </tbody> </table>	DEGREE	DESCRIPTION	Rare	Browned surface; thin layer of cooked (gray) meat; red interior	Medium	Thicker layer of gray; pink interior	Well done	Gray throughout
	DEGREE	DESCRIPTION							
	Rare	Browned surface; thin layer of cooked (gray) meat; red interior							
Medium	Thicker layer of gray; pink interior								
Well done	Gray throughout								
White (pork or veal)	<p>Changes from pink or gray-pink to white or off-white. It is generally cooked well done, although some cuts of veal may be considered done when still slightly pink in the center.</p> <p><b>Note:</b> Pork should be cooked to an internal temperature of 160 °F in order to eliminate the danger of trichinosis—a disease caused by a parasite that lives in the muscle tissue of hogs.</p>								

### Roasting

Roasting, sautéing, pan-frying, deep-frying, and simmering are some of the methods that you will use to cook beef and pork. While recipes guide you in the preparation of food items, there are some key points that you should have in mind when preparing meats using any of these methods.

The tables on the following pages will help you learn these important points.

Continued next page

## How to Prepare Meat, continued

### Roasting, contd.

Follow the steps in the table below to prepare roast pork or beef.

HOW TO ROAST MEATS	
STEP	ACTION
1.	Collect all ingredients and food supplies. Select roasting pans that have low sides (so moisture vapor does not collect around the roast) and that are just large enough to hold the roast. If a pan is too large, drippings will spread out too thin and burn.
2.	Prepare or trim meat for roasting. Heavy fat coverings should be trimmed to about $\frac{1}{2}$ inch thick.
3.	If desired, season the meat several hours ahead or the day before.
4.	Place the meat fat side up on a rack in the roasting pan. Meat is often roasted on a rack (or, if it is a rib roast, on its own natural rack of bones). The rack prevents the meat from simmering in its own juices and fat. It also allows hot air to circulate all around the product.
5.	Insert a meat thermometer (clean and sanitary) so that the bulb is in the center of the meat, not touching bone or fat. (Omit this step if you are using an instant read thermometer.)
6.	Do not cover or add water to the pan; roasting is a dry-heat cooking method.
7.	Place the meat in an oven that has been preheated to the desired temperature.
8.	If desired, add mirepoix to the pan during the last half of the cooking period.
9.	Roast to desired doneness, allowing for carry-over cooking.
10.	Remove the roast from the oven and let it stand in a warm place for 15–30 minutes. This allows the juices to be reabsorbed through the meat, so that less juice is lost when the meat is sliced. Also, resting the meat makes slicing easier.
11.	If the meat must be held, place it in an oven or warmer set no higher than the desired internal temperature of the roast.
Continued next page	

## How to Prepare Meat, continued

Roasting, contd.	STEP	ACTION
	12.	While the roast is resting, prepare jus or pan gravy from the drippings. Mirepoix may be added to the drippings now if it was not added in step 8.
	13.	Slice the roast as closely as possible to serving time. In almost all cases, slice the meat against the grain for tenderness.

Key points:

- ❑ Basic principle: the prepared cut of meat is placed in an oven at a selected temperature and removed when done.
- ❑ Cooking uncovered is essential to roasting. Covering holds in steam, changing the process from dry-heat to moist-heat cooking, such as braising or steaming.
- ❑ Use low temperatures for large items.
- ❑ Use of mirepoix is more important with white meats like pork, which because they are usually cooked well done, lose more juices and need a good gravy or jus to give them moistness and flavor.

## Broiling and Grilling

In a broiler the heat source is above the food. In a grill, the heat is below the food. Except for this difference, the basic procedure is the same for both. Use the table below to guide you when broiling or grilling meats.

HOW TO BROIL OR GRILL MEATS	
STEP	ACTION
1.	Collect and prepare all equipment and food supplies. If necessary, score the fatty edges of meats to prevent curling.
2.	Preheat the broiler or grill.
3.	Brush the meat with oil, or dip it in oil and let the excess drip off. Place the item on the broiler or grill. The oil helps prevent sticking and keeps the product moist. It may be unnecessary for meats high in fat. Using too much oil can cause grease fires.
4.	When one side is brown and the meat is cooked halfway, turn it over with a fork (piercing only the fat, never the meat, or juices will be lost) or with tongs.
Continued next page	

## How to Prepare Meat, continued

### Broiling and Grilling, contd.

STEP	ACTION
5.	Cook the second side until the meat is cooked to the desired doneness.
6.	Remove the meat from the broiler or grill, and serve immediately.

### Braising

Braising is a combination of dry-heat and moist-heat cooking methods. Meats are first browned or seared in fat or in a hot oven, then simmered in a flavorful liquid until tender.

Follow these guidelines when braising meats:

GUIDELINES FOR BRAISING	
NO.	GUIDELINE
1.	Braised meats are usually browned first using a dry-heat method such as pan-frying. This gives a desirable appearance and flavor to the product and to the sauce.
2.	Foods being braised are usually not completely covered by the cooking liquid. The top of the product is actually cooked by the steam held in the covered pot. Pot roasts, for example, are cooked in liquid that covers the item by one-third to two-thirds. The exact amount depends on how much sauce is needed for service. This method yields a flavorful, concentrated sauce.
3.	Braising may be done on the range or in the oven. Oven-braising has three major advantages: <ul style="list-style-type: none"> <li>■ Uniform cooking. The heat strikes the braising pot on all sides, not just the bottom.</li> <li>■ Less attention required. Foods braise at a low, steady temperature without having to be checked constantly.</li> <li>■ Range space is free for other purposes.</li> </ul>

Continued next page

## How to Prepare Meat, continued

### Braising, contd.

Key points:

- ❑ The basic principle of braising is a combination of searing or browning and then simmering—this cooks the meat and produces a sauce.
- ❑ Cut or trim the meat as required. Dry it thoroughly. For stews, the meat may be dredged with flour.
- ❑ Brown the meat thoroughly on all sides in a heavy pan with a small amount of fat, or in an oven.
- ❑ Bring the liquid to a simmer, cover the pot tightly, and simmer in the oven or on top of the range until the meat is tender.
- ❑ Oven braising provides more uniform heat. Temperatures of 250–300 °F (120–150 °C) are sufficient to maintain a simmer. Do not allow the liquid to boil.

### Other Cooking Methods

Follow these guidelines when preparing meats using other cooking methods.

<b>SUMMARY OF GUIDELINES FOR USING OTHER COOKING METHODS</b>	
<b>METHOD</b>	<b>GUIDELINE</b>
Sautéing	<ul style="list-style-type: none"> <li>■ Use only tender cuts.</li> <li>■ If larger or thick items are browned over high heat, it may be necessary to finish them at lower heat to avoid burning them.</li> <li>■ Do not overload the pan when sautéing small pieces of meat.</li> <li>■ Do not flip or toss the food more than necessary.</li> <li>■ Use clarified butter, oil, or a mixture; whole butter burns easily.</li> </ul>
Continued next page	

## How to Prepare Meat, continued

Other Cooking Methods, contd.	METHOD	GUIDELINE
	Pan-Frying	<ul style="list-style-type: none"> <li>■ Meats to be pan-fried are usually breaded.</li> <li>■ Dredging meats in flour promotes even browning and helps prevent sticking. Flour meats immediately before cooking, not in advance, or the flour will get pasty. Also, shake off excess flour before adding meat to the pan.</li> <li>■ When pan-frying several batches, strain or skin the fat between batches.</li> </ul>
	Deep Frying	<ul style="list-style-type: none"> <li>■ This procedure is similar to pan-frying, but the item is submerged in the hot fat.</li> <li>■ Small pieces are best for this cooking method.</li> </ul>
	Simmering	<ul style="list-style-type: none"> <li>■ Simmering means to cook in a liquid that is bubbling very gently. Temperature is about 185–205 °F (85–96 °C).</li> <li>■ Most foods cooked in a liquid are simmered. The higher temperatures and intense agitation of boiling are detrimental to most foods. The word boiled is sometimes used as a menu term, as when simmered fresh beef is called “boiled beef.”</li> <li>■ A rule of thumb: Whether a food is to be simmered or boiled, the liquid is often brought to a full boil at first. This compensates for the lowering of the temperature when the food items are added. The heat is then adjusted to maintain a steady temperature.</li> </ul>





## How to Carve Meat

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### Carving Procedure

To carve meat, follow the steps below:

<b>HOW TO CARVE MEAT</b>	
<b>STEP</b>	<b>ACTION</b>
1.	Gather the equipment needed.
2.	Place the cooked meat on a clean, sanitary cutting board.
3.	Hold the knife at a sharp angle and use a kitchen fork to hold the meat steady.
4.	Slice the meat in very thin slices across the grain, working around any bones.
5.	When the slices become too large, change the angle of the knife.
6.	Take alternating slices from different sides of the roast.
7.	If there are bones running through the roast, turn the roast over and repeat the procedure on the bottom.
8.	Place the slices in a pan, placing the best looking ones on top.
9.	Serve the item according to the order.
End of procedure	

---

## Lesson Review

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**Purpose** The intention of this exercise is to help you confirm what you have learned about how to prepare pork and beef using moist-heat cooking methods and how to carve cooked beef or pork.

---

**Directions** Test your knowledge of the concepts and principles of this lesson by choosing the best, most correct answer to each question below. Some questions require you to create answers or fill in blanks. Use the lesson material and references to assist you as necessary.

When you have finished answering the questions, compare your answers to the correct answers in the “Lesson Review Feedback” section at the end of this lesson. Note any differences between your answers and the correct ones so you can learn from them, and discuss them when you meet with your supervisor.

---

**Questions** Read each statement below, determine whether it is true or false, and then write ‘true’ or ‘false’ in the space provided.

1. \_\_\_\_\_ Muscle tissues consist of water, protein, fat, and carbohydrates.
2. \_\_\_\_\_ Muscle fibers are covered by connective tissue.
3. \_\_\_\_\_ Inspection is mandatory on meat products.
4. \_\_\_\_\_ Green meat is an indication that the meat is unwholesome
5. Chief Smythe asked the following four students to give him a reason why it is important to know the bone structure of meat animals. Which of them had the right answer?
  - a. Catherine: “If you know bone structure, then you will be able to identify cuts of meat more accurately.”
  - b. Kevin: “Knowing where the bones are in a piece of cooked meat helps you to carve it more skillfully.”
  - c. Lawrence: “It is much easier to bone and cut meat if you are aware of the bone structure of the animal you are processing.”
  - d. Alistair: “Knowing the location of the bones in a cut of meat will help you determine whether you should cook it with moist or dry heat.”

Continued next page

**Lesson Review, continued**

---

**Questions,  
contd.**

6–9. Match the beef cuts with the primal cuts below:

	<b>BEEF CUTS</b>	<b>PRIMAL CUTS</b>
_____	6. Tenderloin	a. Rib
_____	7. Short Ribs	b. Full Loin
_____	8. Prime rib roast	c. Round
_____	9. Hamburger (ground beef)	d. Flank
		e. Brisket

---

## Practicing What You Have Learned

---

### Overview

This lesson covers material associated with three EPQs, so there are three performance evaluations for you to complete. Before you attempt to pass the performance evaluations, however, we recommend that you practice the core tasks of the lesson:

- ❑ Preparing pork or beef using a *moist heat* cooking method (ex. Braised Pork Loin)
  - ❑ Preparing pork or beef using the *dry heat* cooking method (ex. Prime Rib)
  - ❑ Carving roast pork or beef
- 

### Practicing the Core Tasks

Once you have finished reading the lesson and have completed the lesson review, you should meet with your supervisor and observe a demonstration of the core tasks listed above.

Once you have observed each of these tasks, you should, under supervision, perform the tasks yourself and receive corrective feedback about your performance from your supervisor.

In addition to practicing the core tasks, you should also discuss with your supervisor the important points of this lesson and how they may apply to your role as a FS3. This includes:

- ❑ The composition and structure of meat
  - ❑ Inspection and grading
  - ❑ The primal cuts
-

## Performance Evaluation

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Once you have completed this lesson—meaning you have read the material, completed the lesson review, observed demonstrations of the core tasks, and then practiced the core tasks enough to be moderately competent in them—you are ready to demonstrate the tasks for sign-off.

Your supervisor will discuss this sign-off process with you. It will involve your demonstrating the core tasks under the supervisor's observation, so that he or she can determine whether or not you are able to perform the tasks in a satisfactory manner. Using the Performance Evaluation sheets as a guide, he or she will mark "go" for tasks you perform well and "no go" for tasks where you need improvement. Performing the core tasks well enough to receive a "go" from your supervisor will mean that you met the Enlisted Performance Qualifications (EPQs) associated with the lesson. If you receive a "no go," you must practice the core tasks, receive feedback, and practice again until you are able to perform the tasks well enough for sign-off.

The EPQs/core tasks for this lesson are:

- 4.A.05—Prepare pork or beef using a moist-heat cooking method
  - 4.A.06—Prepare pork or beef using a dry-heat cooking method
  - 4.A.12—Carve roast pork or beef
-

## Lesson Summary

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### Summary

This lesson has introduced basic cooking methods for preparing meat.

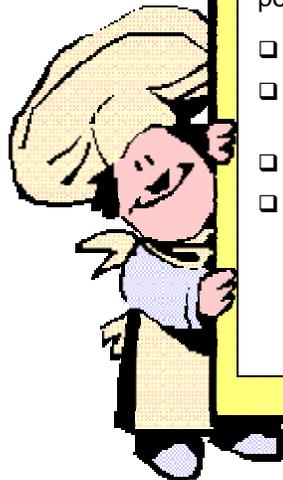
Having completed this lesson, you can:

- Describe meat composition and structure
  - Explain the difference between inspection and meats grading
  - Identify primal cuts of pork and beef
  - Prepare pork and beef to be cooked
  - Cook pork or beef using a moist-heat cooking method
  - Cook pork or beef using a dry-heat cooking method
- 

### Next in this Unit

In the next lesson, you will learn how to prepare poultry. You will learn:

- Describe the composition and structure.
- Explain the difference between inspection and meats grading.
- Determine doneness in cooked meats.
- Cook beef using a moist-heat method.



## Lesson Review Feedback

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### Directions

Compare your answers in the Lesson Review to the answers below (correct answers are in **bold**). Note any differences between your answers and the text so you can learn from them and discuss them with your supervisor.

---

### Answers

Read each statement below, determine whether it is true or false, and then write 'true' or 'false' in the space provided.

1.    **True**            Muscle tissues consist of water, protein, fat, and carbohydrates.  
      \_\_\_\_\_
2.    **True**            Muscle fibers are covered by connective tissue.  
      \_\_\_\_\_
3.    **True**            Inspection is mandatory on meat products.  
      \_\_\_\_\_
4.    **False**           Green meat is an indication that the meat is unwholesome  
      \_\_\_\_\_
5. Chief Smythe asked the following four students to give him a reason why it is important to know the bone structure of meat animals. Which of them had the right answer?
  - a. **Catherine: "If you know bone structure, then you will be able to identify cuts of meat more accurately."**
  - b. **Kevin: "Knowing where the bones are in a piece of cooked meat helps you to carve it more skillfully."**
  - c. **Lawrence: "It is much easier to bone and cut meat if you are aware of the bone structure of the animal you are processing."**
  - d. Alistair: "Knowing the location of the bones in a cut of meat will help you determine whether you should cook it with moist or dry heat."

Continued next page

**Lesson Review Feedback, continued**

---

**Answers,  
contd.**

6–9. Match the beef cuts with the primal cuts below:

- |               |                            |              |
|---------------|----------------------------|--------------|
| <b>C</b>      | 6. Tenderloin              | A. Rib       |
| <b>A or B</b> | 7. Short Ribs              | B. Full Loin |
| <b>B</b>      | 8. Prime rib roast         | C. Round     |
| <b>All</b>    | 9. Hamburger (ground beef) | D. Flank     |
|               |                            | E. Brisket   |
-

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## PERFORMANCE EVALUATION 6.2.1

### Prepare Pork and Beef

---

<b>Goal</b>	<p>The student will perform the following:</p> <ul style="list-style-type: none"> <li>• Prepare pork or beef using the moist heat method</li> <li>• Prepare pork or beef using the dry heat method</li> <li>• Carve pork or beef</li> </ul>
<hr/>	
<b>Process</b>	<ol style="list-style-type: none"> <li>1. Given a recipe calling for carved pork, you will prepare and carve pork as called for in the recipe.</li> <li>2. Given a recipe calling for carved beef, you will prepare and carve beef as called for in the recipe.</li> </ol> <p>One of these meats must be cooked using a moist heat method and the other using a dry heat method.</p>
<hr/>	
<b>Directions</b>	For each meat, using a recipe as a guideline and reference material as needed, you will:
<b>Hands-On Practice</b>	<ol style="list-style-type: none"> <li>1. Interpret the recipe.</li> <li>2. Collect all the equipment and food items.</li> <li>3. Prepare the equipment and food items.</li> <li>4. Prepare the meat according to the recipe.</li> <li>5. Carve the meat, holding and using the knife properly when carving.</li> </ol> <p>When you have completed the practice, see your supervisor for further instructions.</p>
<hr/>	
<b>Checklist</b>	Fill in your name on the Unit 6, Lesson 2, Performance Evaluation checklists and hand them to your supervisor prior to completing the hands-on exercise.
<hr/>	
<b>Feedback</b>	Your supervisor will review your performance for accuracy and completeness and provide any comments directly to you.
<hr/>	

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## PERFORMANCE EVALUATION 6.2.1

### Prepare Pork or Beef Using the Moist Heat Cooking Method

<b>Location</b> FS "A" School TRACEN Petaluma	<b>Completed by:</b> _____ (Enter your name)		<b>Reviewed by:</b> _____ (Obtain Supervisor's signature)						
<b>EPQ</b> <b>4.A.06</b> PREPARE at least one of the following meats using moist heat cooking method IAW "Professional Cooking" by Wayne Gisslen and Armed Forces Recipe Service (AFRS), NAVSUP Publication 7: <ul style="list-style-type: none"> <li>• Poultry</li> <li>• Beef</li> <li>• Pork</li> <li>• Seafood</li> </ul> SupGuide: Supervisor will ensure member selects a different meat for each cooking method listed in EPQ 4.A.05 through EPQ 4.A.07.									
<b>Criteria</b> <b>Accuracy:</b> <ul style="list-style-type: none"> <li>• Product prepared properly 100% of the time, following the recipe guideline.</li> </ul>			<b>Safety:</b> <ul style="list-style-type: none"> <li>• Proper equipment selected 100% of the time.</li> <li>• Equipment used correctly 100% of the time.</li> </ul>						
<b>TASK</b>	<b>COMMENTS</b>								
	Y	N	<b>1<sup>st</sup> Attempt</b> _____/_____/_____ <b>Date</b>	Y	N	<b>2<sup>nd</sup> Attempt</b> _____/_____/_____ <b>Date</b>	Y	N	<b>3<sup>rd</sup> Attempt</b> _____/_____/_____ <b>Date</b>
1. The performer used the proper temperature to be cooked: <ul style="list-style-type: none"> <li><input type="checkbox"/> To simmer, the performer used very gently bubbling water at 185 °F to 205 °F.</li> <li><input type="checkbox"/> To steam, the performer wrapped the item tightly or placed in a covered pan at about 212 °F.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The performer removed the product at 10–15 °F below the desired temperature.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The performer let the product rest 15–30 minutes before carving.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Go <input type="checkbox"/> No Go			<input type="checkbox"/> Go <input type="checkbox"/> No Go			<input type="checkbox"/> Go <input type="checkbox"/> No Go			

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## PERFORMANCE EVALUATION 6.2.2

### Prepare Pork or Beef Using the Dry Heat Cooking Method

<b>Location</b> <hr style="border: 0; border-top: 1px solid black; margin: 2px 0;"/> <hr style="border: 0; border-top: 1px solid black; margin: 2px 0;"/>	<b>Completed by:</b> _____ <b>Reviewed by:</b> _____ <div style="display: flex; justify-content: space-around; font-size: small;"> <span>(Enter your name)</span> <span>(Obtain Supervisor's signature)</span> </div>
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**EPQ**  
**4.A.05** Prepare at least one of the following meats using dry heat cooking method IAW "Professional Cooking" by Wayne Gisslen and Armed Forces Recipe Service (AFRS), NAVSUP Publication 7:

- Poultry
- Beef
- Pork
- Seafood

SupGuide: Supervisor will ensure member selects a different meat for each cooking method listed in EPQ 4.A.05 through EPQ 4.A.07.

<b>Criteria</b> <u>Accuracy:</u> <ul style="list-style-type: none"> <li>• Product prepared properly 100% of the time, following the recipe guideline.</li> </ul>	<b>Safety:</b> <ul style="list-style-type: none"> <li>• Proper equipment selected 100% of the time.</li> <li>• Equipment used correctly 100% of the time.</li> </ul>
---	--

TASK	COMMENTS													
			1 <sup>st</sup> Attempt				2 <sup>nd</sup> Attempt				3 <sup>rd</sup> Attempt			
	Y	N	____/____/____ Date		Y	N	____/____/____ Date		Y	N	____/____/____ Date			
1. The performer cooked the product at a temperature between 250 and 325 °F.	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>				
2. The performer removed the product at 10–15 °F below the desired temperature.	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>				
3. The performer let the product rest 15–30 minutes before carving.	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>				
			<input type="checkbox"/> Go <input type="checkbox"/> No Go					<input type="checkbox"/> Go <input type="checkbox"/> No Go					<input type="checkbox"/> Go <input type="checkbox"/> No Go	

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## PERFORMANCE EVALUATION 6.2.3

### Hand-Carve Pork or Beef

<b>Location</b> <hr style="border: 0; border-top: 1px solid black; margin: 2px 0;"/> <hr style="border: 0; border-top: 1px solid black; margin: 2px 0;"/>	<b>Completed by:</b> _____ <b>Reviewed by:</b> _____ <small style="display: block; text-align: center;">(Enter your name) <span style="margin-left: 150px;">(Obtain Supervisor's signature)</span></small>											
<b>EPQ</b> <b>4.A.12</b> CARVE the following cooked meats IAW "Professional Cooking" by Wayne Gisslen: <ul style="list-style-type: none"> <li>Whole turkey</li> <li>Roast beef or pork</li> </ul>												
<b>Criteria</b> <u><b>Accuracy:</b></u> <ul style="list-style-type: none"> <li>Proper knife selected 100% of the time</li> </ul>				<u><b>Safety:</b></u> <ul style="list-style-type: none"> <li>Proper equipment selected 100% of the time.</li> <li>Equipment used correctly 100% of the time</li> </ul>								
<b>TASK</b>	<b>COMMENTS</b>											
	<b>Y</b>	<b>N</b>	<b>1<sup>st</sup> Attempt</b> ____/____/____ <b>Date</b>	<b>Y</b>	<b>N</b>	<b>2<sup>nd</sup> Attempt</b> ____/____/____ <b>Date</b>	<b>Y</b>	<b>N</b>	<b>3<sup>rd</sup> Attempt</b> ____/____/____ <b>Date</b>			
1. The performer placed the roast on a clean, sanitary cutting board.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>				
2. The performer held the knife at a 90° angle and used a fork to hold the meat steady.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>				
3. The performer sliced the meat to the desired thickness across the grain.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>				
4. The performer arranged the slice shingle-style in a pan, using the best looking for the tops.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>				
	<input type="checkbox"/> Go <input type="checkbox"/> No Go						<input type="checkbox"/> Go <input type="checkbox"/> No Go			<input type="checkbox"/> Go <input type="checkbox"/> No Go		

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## LESSON 3

### How to Prepare Poultry

#### Introduction

---

##### Overview

In this lesson, you will learn how to prepare poultry.

This section of the lesson includes:

- Performance qualifications
  - Lesson objectives
  - Performance evaluation
  - Tools and references
  - Recommended reading
  - Topics covered by this lesson
- 

##### Performance Qualifications

**4.A.05 Prepare** at least one of the following meats using dry heat cooking method. IAW “Professional Cooking” by Wayne Gisslen and Armed Forces Recipe Service (AFRS), NAVSUP Publication 7:

- Poultry
- Beef
- Pork
- Seafood

SupGuide: Supervisor will ensure member selects a different meat for each cooking method listed in EPQ 4.A.05 through EPQ 4.A.07.

**4.A.12 Carve** the following cooked meats IAW “Professional Cooking” by Wayne Gisslen:

- Whole turkey
  - Roast beef or pork
- 

##### Lesson Objectives

Upon completion of this lesson, you will:

- Describe the composition and structure of poultry
  - Describe the types of poultry
  - Prepare a turkey to be cooked
  - Cook a turkey using a dry-heat cooking method
  - Carve a turkey
-

## Introduction, continued

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**Performance Evaluation**

There will be a performance evaluation in this lesson. This evaluation will cover EPQs 4.A.05 and 4.A.12 as listed above.

---

**Tools and References**

Tools and references for this lesson include:

- Professional Cooking*, by Wayne Gisslen
  - Armed Forces Recipe Service (AFRS), NAVSUP Publication
  - Unit 1, Appendix C, Glossary of Key Terms
  - Cookware/cooking equipment
  - Food products (turkey, seasoning ingredients, etc.)
- 

**Recommended Reading**

To get the most out of this lesson, be sure to read the following:

- Professional Cooking*:
    - “Understanding Poultry and Game Birds” (Chapter 12)
    - “Cooking Poultry and Game Birds” (Chapter 13)
  - Armed Forces Recipe Service (AFRS), Section L, Meat, Fish and Poultry.
- 

**Topics Covered by This Lesson**

This lesson covers the following topics:

- Sample recipe
  - Introduction to poultry preparation
  - How to prepare poultry
  - How to carve poultry
-

## Sample Recipe

### Overview

In this lesson you will learn about poultry—its composition and structure, inspection and grading systems, its classifications, etc.—and how to prepare it. As you learn these details, be sure to keep in mind the cues and instructions you will find within recipes. Remember also that though the recipe provides you with guidance, in order to prepare poultry that looks good and tastes good, there is much to know that falls outside of the instructions of a recipe.

### Poultry Recipe

Consider the recipe below. This is a recipe you may soon be asked to prepare, one whose primary ingredient is poultry.

ROAST TURKEY			Recipe #							
Serves:	100		Serving Size	6 OZ						
Prep Time:	1 HOUR		Cooking Temp	325 DEGREES						
Cooking Time:	5 HOURS		Serving Pans	FULL SHALLOW						
Cooking Equipment:	ROTISSERIE		Pan Used	ROASTING						
Ingredients	Weight		Ea Measure							Preparation
TURKEY WHOLE	LB	OZ	GL	QT	PT	CP	TBSP	TSP	GIBLETS/NECK REMOVED	
SALAD OIL					1					
SPICE RUB										
BLACK PEPPER							3			
KOSHER SALT							2			
THYME							1			
SAGE								2		
GARLIC POWDER							3			
STEP 1: MIX ALL SPICES TOGETHER. SET ASIDE.										
STEP 2: RINSE TURKEY. PLACE IN ROASTING PAN, ON A RACK. RUB WITH OIL AND THEN SPICE MIXTURE INCLUDING INSIDE CAVITY. COVER REFRIGERATE OVERNIGHT.										
STEP 3: UNCOVER TURKEY, ROAST FOR 4-5 HOURS, BASTING EVERY 45 MINUTES UNTIL INTERNAL TEMPERATURE REACHES 170 DEGREES. LET TURKEY REST FOR 30 MINUTES BEFORE CARVING.										

Some questions to answer as you study this recipe:

- What cooking method does it require; is it moist-heat or dry-heat, and how is that cooking method performed?
- What type of poultry does it require?
- What kind of pre-preparation is required and how long is it likely to take?

Keep this recipe in mind as you learn about the preparation of poultry.

## Introduction to Poultry Preparation

---

### Overview

This section covers the following:

- Composition and structure
  - Grading and inspection
  - Poultry classification
  - Trussing
- 

### Composition and Structure

Poultry is defined as domestic fowl and generally includes chickens, turkeys, ducks, and geese. As with beef and pork, the flesh of poultry is muscle tissue. Remember that muscle tissue is made up of roughly 75% water, 20% protein, and up to 5% fat with other elements, such as carbohydrate, in small quantities.

Poultry parts are usually divided into two types: light meat and dark meat. Use *Professional Cooking*, Chapter 12, to complete the table below:

<b>“LIGHT MEAT” AND “DARK MEAT”</b>		
	<b>LIGHT MEAT</b>	<b>DARK MEAT</b>
<b>PARTS</b>	<i>Breast and wings</i>	
<b>FAT CONTENT</b>		
<b>AMOUNT OF CONNECTIVE TISSUE</b>		
<b>COOKING TIMES</b>		<i>Takes longer</i>

Edible poultry is made up of muscle surrounded by connective tissue and fat deposits. Poultry fat is deposited on the muscle and under the skin (it aids tenderness, makes the meat juicier, and enhances flavor of the cooked product). Leg muscles in poultry have more connective tissue than the breast meat does.

---

## Introduction to Poultry Preparation, continued

### Grading and Inspection

Inspection and grading stamps are a guarantee of wholesomeness.



- All poultry is inspected by the U.S. Department of Agriculture (USDA) or by the state under USDA guidelines.
- Poultry is also graded for quality. Grading is done according to overall appearance, meatiness, amount of fat, and the presence or absence of defects.
- USDA grades A, B, and C are used to indicate poultry has been officially graded.

### Poultry Classification

Poultry is classified using the following terms:

CLASSIFICATION OF POULTRY		
TERM	BRIEF DEFINITION	EXAMPLES
Kind	The species.	<ul style="list-style-type: none"> <li>■ Chicken</li> <li>■ Turkey</li> <li>■ Duck</li> <li>■ Goose</li> </ul>
Class	The subdivision of kind, depending on age and sex.	<ul style="list-style-type: none"> <li>■ Chicken: Rock Cornish game hen, broiler or fryer, rooster</li> <li>■ Turkey: Fryer-roaster, young turkey, yearling</li> </ul>
Continued next page		

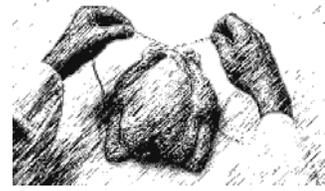


## Introduction to Poultry Preparation, continued

### Trussing, contd.

Follow the steps below to truss chicken.

Be sure to talk with your supervisor about trussing, including variations on this procedure as well as how to use it with other types of poultry.



<b>TRUSSING PROCEDURE</b>	
<b>STEP</b>	<b>ACTION</b>
1.	Place the chicken breast up with the neck end toward you.
2.	Tuck the first joint of the wings behind the back.
3.	Press the legs forward and down against the body.
4.	Pass the center of a length of twine under the hipbone just ahead of the tail.
5.	Bring the twine up and across the ends of the legs.
6.	Pass the twine under the ends of the legs, and pull tight.
7.	Bring the ends of the twine toward the neck end of the bird.
8.	Pull firmly on the twine while pressing on the breast portion with the thumbs.
9.	Tie the twine tightly.
End of procedure	

## How to Prepare Poultry

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### Overview

This section reviews the cooking methods as they apply to poultry. It covers:

- ❑ Doneness
  - ❑ Cooking methods
  - ❑ Revisiting the poultry recipe
- 

### Doneness

Before heading down the path of cooking poultry, you should know where you are going, that is you should know how to tell when poultry is “done.” Most poultry is almost always cooked well-done. There is a fine line, however, between “well-done” and overcooked. The guidelines below will help you to know the difference between these.

In order to avoid overcooking poultry, use the following table to help you determine when poultry is done.

DETERMINING DONENESS IN POULTRY		
TYPE	COOKING METHOD	CLUES TO DONENESS
Large Birds	Roasted	<ul style="list-style-type: none"> <li>■ The internal temperature, as tested with a thermometer, is 180 °F. (Test the thickest part of the thigh because the thigh is the last part to become fully cooked.)</li> </ul>
Small Birds	Any	<ul style="list-style-type: none"> <li>■ The joints are loose and move freely in their sockets.</li> <li>■ The juices are clear, not cloudy and red or pink.</li> <li>■ The flesh separates easily from the bone. (Excessively shrunken flesh means it's overcooked.)</li> <li>■ Firm to touch.</li> </ul> <p><b>Note:</b> Avoid piercing the bird deeply with a fork and twisting the flesh. This results in a loss of valuable juices.</p>

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## How to Prepare Poultry, continued

### Cooking Methods

The recipe guides you with the preparation of the food item. However, there are some key points that you should have in mind when preparing poultry using any of these methods. See the table below for guidelines.

GUIDELINES FOR COOKING POULTRY	
METHOD	GUIDELINES
Roasting	<ul style="list-style-type: none"> <li>■ Oil the skin to help in browning.</li> <li>■ Baste the skin with fat only during roasting (the recipe tells you the time increments).</li> <li>■ Use low temperatures for large items.</li> <li>■ See <i>Professional Cooking</i>, Chapters 11 &amp; 12, for tips on basting.</li> </ul>
Broiling	<ul style="list-style-type: none"> <li>■ Start poultry pieces skin side down.</li> <li>■ Marinate the poultry, or rub it with seasoning before cooking.</li> <li>■ Brush with melted butter or some other fat before and during broiling.</li> </ul>
Sautéing	<ul style="list-style-type: none"> <li>■ The ideal items to use for sautéing are: boneless chicken breasts, thin slices of turkey breast, and any other quick-cooking item.</li> </ul>
Pan-Frying	<ul style="list-style-type: none"> <li>■ Items are usually breaded or floured beforehand.</li> <li>■ About <math>\frac{1}{4}</math> inch or more of fat in the pan is needed.</li> <li>■ The side that will face up at serving time should be browned first for best appearance.</li> </ul>
Deep-Frying	<ul style="list-style-type: none"> <li>■ This procedure is similar to pan-frying, but the item is submerged in the hot fat.</li> <li>■ Small pieces are best for this cooking method.</li> </ul>
Continued next page	

## How to Prepare Poultry, continued

Cooking Methods, contd.	METHOD	KEY POINTS
	Simmering	<ul style="list-style-type: none"> <li>■ This method is used to cook fowl and other tough items.</li> <li>■ The cooking liquid is usually water, seasoned with salt, mirepoix, and herbs.</li> <li>■ The meat can be used for soups, creamed dishes, casseroles, and salads.</li> </ul>
	Poaching	<ul style="list-style-type: none"> <li>■ This method is used to gently cook tender poultry in order to retain moisture.</li> <li>■ Cooking time is usually short.</li> <li>■ Cooking liquid usually is stock with the addition of wine and other flavorings.</li> </ul>

## How to Prepare Poultry, continued

### Revisiting the Poultry Recipe

If you have not already done so, revisit the turkey recipe and mentally walk through the cooking method used in the recipes. Go ahead and do this now, referring to the guidelines above and *Professional Cooking* to help you think through how you would prepare this recipe. Later, you will meet with your supervisor to observe the preparation of poultry, and begin practicing preparing poultry yourself.

ROAST TURKEY			Recipe #							
Serves:	<b>100</b>		Serving Size	<b>6 OZ</b>						
Prep Time:	<b>1 HOUR</b>		Cooking Temp	<b>325 DEGREES</b>						
Cooking Time:	<b>5 HOURS</b>		Serving Pans	<b>FULL SHALLOW</b>						
Cooking Equipment:	<b>ROTISSERIE</b>		Pan Used	<b>ROASTING</b>						
Ingredients	Weight		Ea	Measure						Preparation
	LB	OZ		GL	QT	PT	CP	TBSP	TSP	
<b>TURKEY WHOLE</b>	<b>65</b>									<b>GIBLETS/NECK REMOVED</b>
<b>SALAD OIL</b>						<b>1</b>				
<b>SPICE RUB</b>										
<b>BLACK PEPPER</b>								<b>3</b>		
<b>KOSHER SALT</b>								<b>2</b>		
<b>THYME</b>								<b>1</b>		
<b>SAGE</b>									<b>2</b>	
<b>GARLIC POWDER</b>								<b>3</b>		
<b>STEP 1: MIX ALL SPICES TOGETHER. SET ASIDE.</b>										
<b>STEP 2: RINSE TURKEY, PLACE IN ROASTING PAN, ON A RACK, RUB WITH OIL AND THEN SPICE MIXTURE INCLUDING INSIDE CAVITY. COVER REFRIGERATE OVERNIGHT.</b>										
<b>STEP 3: UNCOVER TURKEY, ROAST FOR 4-5 HOURS, BASTING EVERY 45 MINUTES UNTIL INTERNAL TEMPERATURE REACHES 170 DEGREES. LET TURKEY REST FOR 30 MINUTES BEFORE CARVING.</b>										

## How to Carve Poultry

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### How to Carve a Roast Turkey

Follow the steps in the table below to carve a roast turkey.

STEP	ACTION
1.	Place the cooked turkey on a clean, sanitary cutting board.
2.	Cut through the skin, using a knife between the breastbone and legs. This separates the white meat from the dark meat.
3.	Cut the drumstick and thigh apart at the joint. Repeat with the other leg. Set the drumsticks and thighs aside.
4.	Using a utility knife, carefully remove the breast meat from the body cavity. Set the breast meat aside.
5.	Place the breast section on a cutting board, and carefully remove the skin. Slice the breast across the grain.
6.	Carefully place the sliced breast meat in a serving dish and cover it with skin.
7.	Using gloved hands, remove the dark meat from the legs and thighs, and place in a hotel pan.
8.	Remove the remaining white meat from the body cavity and wings. Place the white meat in another hotel pan.
End of procedure	

---

## Lesson Review

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**Purpose** The intention of this exercise is to help you confirm what you have learned about how to prepare poultry using dry heat cooking methods and how to carve a roasted turkey.

---

**Directions** Test your knowledge of the concepts and principles of this lesson by choosing the best, most correct answer to each question below. Use the lesson material and references to assist you as necessary.

When you have finished answering the questions, compare your answers to the correct answers in the “Lesson Review Feedback” section at the end of this lesson. Note any differences between your answers and the correct ones so you can learn from them, and discuss them when you meet with your supervisor.

---

- Questions**
1. Because chicken and turkey are lean and tender meats, it is appropriate to cook them in fat by \_\_\_\_\_ them.
    - a. Sautéing
    - b. Pan-frying
    - c. Deep-frying
    - d. All the above
  2. Coralia answered “true” to all of the following true-false questions. Which one did she miss?
    - a. Roasting and baking are the same process.
    - b. Poultry items are almost always cooked well-done.
    - c. Simmering temperature is lower than poaching temperature.
    - d. The presentation side of a piece of poultry is usually the skin side.
  3. The internal temperature of roast turkey that is cooked to doneness is:
    - a. 145 °F.
    - b. 165 °F.
    - c. 180 °F.
    - d. None of the above.
  4. The least preferable way to determine the doneness of a small bird is to \_\_\_\_\_.
    - a. test for looseness of joints
    - b. observe the juices inside the cavity
    - c. check for flesh separating from the bone
    - d. pierce deeply with a fork and twist the flesh

Continued next page

## Lesson Review, continued

---

### Questions, contd.

5. On the basis of the following statements, which of the following students would be most likely to prepare a turkey whose breast was dry and overcooked?
    - a. Michael: "I place my turkeys breast-side down when I roast them so that the fat from the rest of the bird is drawn by gravity to the breast."
    - b. Nicole: "I like to bard a turkey breast with a thin layer of pork fat to keep it moist."
    - c. Bryan: "I prefer to baste my turkey with water or stock (instead of fat) in order to avoid the excess calories and cholesterol that the fat would add."
    - d. Gabe: "I know they require different cooking times to reach correct doneness."
  6. Chief Boeuf asked his students to describe a major problem that occurs during the process of roasting poultry. Which of his students gave the best answer?
    - a. Jim: "Making sure that the breast is not undercooked."
    - b. Susan: "Cooking the legs to doneness without overcooking the breast."
    - c. Russell: "Overcooking the dark meat and undercooking the white meat."
    - d. Diane: "Finding a cooking method that will tenderize free-range poultry."
  7. A basic difference between "light meat" and "dark meat" in poultry is that "dark meat" \_\_\_\_\_.
    - a. has less fat
    - b. takes longer to cook
    - c. has less connective tissue
    - d. all of the above
  8. To check roast chicken for doneness, you would:
    - a. pour out the juices from the body cavity to see if they are no longer pink or red.
    - b. feel the leg joints to see if they are loose.
    - c. test the temperature of the inner part of the thigh with a meat thermometer.
    - d. all of the above.
  9. When carving a turkey, what is the main reason you cut through the skin of the bird between the breastbone and the legs?
    - a. To separate the white meat from the dark meat.
    - b. To make the removal of skin easier.
    - c. To provide better access to the breast meat.
    - d. All of the above.
-

## Practicing What You Have Learned

---

### Overview

This lesson covers material associated with two EPQs, so there are two performance evaluations for you to complete. Before you attempt to pass the performance evaluations, however, we recommend that you practice the core tasks of the lesson:

- Prepare poultry using a dry heat cooking method
  - Carve a whole turkey
- 

### Practicing the Core Tasks

Once you have finished reading the lesson and have completed the lesson review, you should meet with your supervisor and observe a demonstration of the core tasks listed above.

Once you have observed each of these tasks, you should, under supervision, perform the tasks yourself and receive corrective feedback about your performance from your supervisor.

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## Performance Evaluation

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Once you have completed this lesson—meaning you have read the material, completed the lesson review, observed demonstrations of the core tasks, and then practiced the core tasks enough to be moderately competent in them—you are ready to demonstrate the tasks for sign-off.

Your supervisor will discuss this sign-off process with you. It will involve your demonstrating the core tasks under the supervisor's observation, so that he or she can determine whether or not you are able to perform the tasks in a satisfactory manner. Using the Performance Evaluation sheets as a guide, he or she will mark "go" for tasks you perform well and "no go" for tasks where you need improvement. Performing the core tasks well enough to receive a "go" from your supervisor will mean that you met the Enlisted Performance Qualifications (EPQs) associated with the lesson. If you receive a "no go," you must practice the core tasks, receive feedback, and practice again until you are able to perform the tasks well enough for sign-off.

The EPQs/core tasks for this lesson are:

- 4.A.05—Prepare poultry using a dry heat cooking method.
  - 4.A.12—Carve a roast turkey.
-

## Lesson Summary

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### Summary

In this lesson you learned how to prepare poultry.

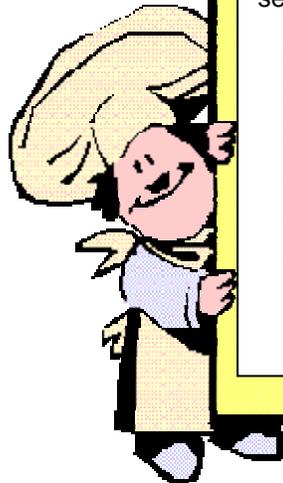
Having completed this lesson, you can:

- Describe the composition and structure of poultry
  - Describe the types of poultry
  - Prepare a turkey to be cooked
  - Cook a turkey using a dry-heat cooking method
  - Carve a turkey
- 

### Next in this Unit

In the next lesson you will learn how to prepare seafood. More specifically, you will learn:

- The composition and structure of fin fish
- Federal inspection and grading
- Cuts of fish
- Fish classifications
- Shellfish classifications
- How to cook seafood



## Composition and Structure Activity Feedback

Answers

<b>“LIGHT MEAT” AND “DARK MEAT”</b>		
	<b>LIGHT MEAT</b>	<b>DARK MEAT</b>
<b>PARTS</b>	<i>Breast and wings</i>	<b>Legs (drumsticks and thighs)</b>
<b>FAT CONTENT</b>	<b>Less/low</b>	<b>More/high</b>
<b>AMOUNT OF CONNECTIVE TISSUE</b>	<b>Less</b>	<b>More</b>
<b>COOKING TIMES</b>	<b>Faster</b>	<i>Takes longer</i>

## Lesson Review Feedback

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### Directions

Compare your answers in the Lesson Review to the answers below (correct answers are in **bold**). Note any differences between your answers and the text so you can learn from them and discuss them with your supervisor.

---

### Answers

1. Because chicken and turkey are lean and tender meats, it is appropriate to cook them in fat by \_\_\_\_\_ them.
  - a. Sautéing
  - b. Pan-frying
  - c. Deep-frying
  - d. All the above**
2. Coralia answered “true” to all of the following true-false questions. Which one did she miss?
  - a. Roasting and baking are the same process.
  - b. Poultry items are almost always cooked well-done.
  - c. Simmering temperature is lower than poaching temperature.**
  - d. The presentation side of a piece of poultry is usually the skin side.
3. The internal temperature of roast turkey that is cooked to doneness is:
  - a. 145 °F.
  - b. 165 °F.
  - c. 180 °F.**
  - d. None of the above.
4. The least preferable way to determine the doneness of a small bird is to \_\_\_\_\_.
  - a. test for looseness of joints
  - b. observe the juices inside the cavity
  - c. check for flesh separating from the bone
  - d. pierce deeply with a fork and twist the flesh**

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## Lesson Review Feedback, continued

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### Answers, contd.

5. On the basis of the following statements, which of the following students would be most likely to prepare a turkey whose breast was dry and overcooked?
    - a. Michael: "I place my turkeys breast-side down when I roast them so that the fat from the rest of the bird is drawn by gravity to the breast."
    - b. Nicole: "I like to bard a turkey breast with a thin layer of pork fat to keep it moist."
    - c. **Bryan: "I prefer to baste my turkey with water or stock (instead of fat) in order to avoid the excess calories and cholesterol that the fat would add."**
    - d. Gabe: "I know they require different cooking times to reach correct doneness."
  6. Chief Boeuf asked his students to describe a major problem that occurs during the process of roasting poultry. Which of his students gave the best answer?
    - a. Jim: "Making sure that the breast is not undercooked."
    - b. **Susan: "Cooking the legs to doneness without overcooking the breast."**
    - c. Russell: "Overcooking the dark meat and undercooking the white meat."
    - d. Diane: "Finding a cooking method that will tenderize free-range poultry."
  7. A basic difference between "light meat" and "dark meat" in poultry is that "dark meat" \_\_\_\_\_.
    - a. has less fat
    - b. **takes longer to cook**
    - c. has less connective tissue
    - d. all of the above
  8. To check roast chicken for doneness, you would:
    - a. pour out the juices from the body cavity to see if they are no longer pink or red.
    - b. feel the leg joints to see if they are loose.
    - c. test the temperature of the inner part of the thigh with a meat thermometer.
    - d. **all of the above.**
  9. When carving a turkey, what is the main reason you cut through the skin of the bird between the breastbone and the legs?
    - a. **To separate the white meat from the dark meat.**
    - b. To make the removal of skin easier.
    - c. To provide better access to the breast meat.
    - d. All of the above.
-

## PERFORMANCE EVALUATION 6.3.1

### Prepare Poultry

---

**Goal** The student will perform the following:

- Prepare poultry
  - Carve poultry
- 

**Process** Given a recipe calling for carved poultry, you will prepare poultry and carve it as called for in the recipe.

---

**Directions** Using the recipe as a guideline, and reference material and job aids, you will:

**Hands-On Practice**

1. Interpret the recipe.
2. Collect all the equipment and food items.
3. Prepare the equipment and food items.
4. Prepare the poultry according to the recipe.
5. Hold and use the knife properly when carving.

When you have completed the practice, see your supervisor for further instructions.

---

**Checklist** Fill in your name on the Unit 6 Performance Evaluation checklists and hand them to your supervisor prior to completing the hands-on exercise.

---

**Feedback** Your supervisor will review your performance for accuracy and completeness and provide any comments directly to you.

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### PERFORMANCE EVALUATION 6.3.1a

#### Prepare Poultry Using the Dry Heat Cooking Method

<b>Location</b> <hr/> <hr/>	<b>Completed by:</b> _____ (Enter your name)	<b>Reviewed by:</b> _____ (Obtain Supervisor's signature)
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**EPQ**  
**4.A.05** Prepare at least one of the following meats using dry heat cooking method IAW "Professional Cooking" by Wayne Gisslen and Armed Forces Recipe Service (AFRS), NAVSUP Publication 7:

- Poultry
- Beef
- Pork
- Seafood

SupGuide: Supervisor will ensure member selects a different meat for each cooking method listed in EPQ 4.A.05 through EPQ 4.A.07.

<b>Criteria Accuracy:</b> <ul style="list-style-type: none"> <li>• Product prepared properly 100% of the time, following the recipe guideline.</li> </ul>	<b>Safety:</b> <ul style="list-style-type: none"> <li>• Proper equipment selected 100% of the time.</li> <li>• Equipment used correctly 100% of the time.</li> </ul>
---	--

<b>TASK</b>	<b>COMMENTS</b>									
	1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt		3 <sup>rd</sup> Attempt					
	Y	N	Date	Y	N	Date	Y	N	Date	Date
1. The performer determined poultry preparation: <ul style="list-style-type: none"> <li><input type="checkbox"/> For mixed light and dark poultry parts, the performer arranged the pieces separately on a sheet pan or in baking pans, skin side up, and continued with step 8.</li> <li><input type="checkbox"/> For a whole bird, the performer followed steps 2 through 8.</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		

Continued next page

<b>Location</b> _____ _____	<b>Completed by:</b> _____ <b>Reviewed by:</b> _____ (Enter your name) (Obtain Supervisor's signature)								
2. The performer removed the giblets from the cavity.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
3. The performer checked inside of the poultry to make sure it had been well cleaned.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
4. The performer seasoned the poultry as desired, following the recipe guideline.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
5. The performer placed the poultry breast up with the neck toward him or her.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
6. The performer tucked and locked the wings behind the back.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
7. The performer placed the poultry on one side in a roasting pan, on a rack.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
8. The performer determined the proper temperature: <input type="checkbox"/> For large poultry, the performer placed it in an oven preheated at 250 to 325 °F, and basted it with fat during the roasting every 20 to 30 minutes. <input type="checkbox"/> For small poultry, the performer placed it in an oven preheated at 325 to 375 °F, and basted it with fat during the roasting every 20 to 30 minutes. <input type="checkbox"/> For poultry parts (or < 4 to 5 pounds), the performer placed it in an oven preheated at 450 °F for 15 minutes, then reduced it to 250 to 325 °F. <input type="checkbox"/> For a duck or goose, the performer placed it in an oven preheated at 400 to 425 °F.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/> Go <input type="checkbox"/> No Go			<input type="checkbox"/> Go <input type="checkbox"/> No Go			<input type="checkbox"/> Go <input type="checkbox"/> No Go		

## PERFORMANCE EVALUATION 6.3.1b

### Hand-Carve Turkey

<b>Location</b> <hr/> <hr/>	<b>Completed by:</b> _____ <b>Reviewed by:</b> _____ (Enter your name) (Obtain Supervisor's signature)
--------------------------------	---

**EPQ**  
**4.A.12 Carve** the following cooked meats IAW "Professional Cooking" by Wayne Gisslen:

- Whole turkey
- Roast beef or pork

<b>Criteria</b> <u><b>Accuracy:</b></u> <ul style="list-style-type: none"> <li>• Proper knife selected 100% of the time.</li> </ul>	<u><b>Safety:</b></u> <ul style="list-style-type: none"> <li>• Proper equipment selected 100% of the time.</li> <li>• Equipment used correctly 100% of the time.</li> </ul>
--	---

TASK	COMMENTS											
	1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt		3 <sup>rd</sup> Attempt		1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt		3 <sup>rd</sup> Attempt	
	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
1. The performer placed the cooked turkey on a clean, sanitary cutting board.	<input type="checkbox"/>											
2. Using a knife, the performer cut through the skin between the breastbone and legs separating the white meat from the dark.	<input type="checkbox"/>											
3. The performer cut the drumsticks and thighs apart at the joints, and set them aside.	<input type="checkbox"/>											
4. Using a utility knife, the performer carefully removed the breast meat from the body cavity and set the breast meat aside.	<input type="checkbox"/>											
5. The performer placed the breast section on a cutting board, carefully removing the skin, and sliced the breast across the grain.	<input type="checkbox"/>											

continued next page

<b>Location</b> _____ _____	<b>Completed by:</b> _____ <b>Reviewed by:</b> _____ (Enter your name) (Obtain Supervisor's signature)								
6. The performer carefully placed the sliced breast meat in a serving dish and covered it with skin.	□	□		□	□		□	□	
7. Using gloved hands, the performer removed the dark meat from the legs and thighs, and placed it in a hotel pan.	□	□		□	□		□	□	
8. The performer removed the remaining white meat from the body cavity and wings and placed it in the hotel pan.	□	□		□	□		□	□	
	<input type="checkbox"/> Go <input type="checkbox"/> No Go			<input type="checkbox"/> Go <input type="checkbox"/> No Go			<input type="checkbox"/> Go <input type="checkbox"/> No Go		

## LESSON 4

### How to Prepare Seafood and Sauces

#### Introduction

---

##### Overview

In this lesson, you will learn how to prepare seafood and some sauces. This section of the lesson covers:

- Performance qualifications
  - Objectives
  - Performance evaluation
  - Tools and references
  - Recommended reading
  - Topics covered by this lesson
- 

##### Performance Qualifications

This lesson addresses two Enlisted Performance Qualifications (EPQs):

**4.A.07 Prepare** at least one of the following meats using dry heat fat/frying cooking method IAW “Professional Cooking” by Wayne Gisslen and Armed Forces Recipe Service (AFRS), NAVSUP Publication 7:

- Poultry
- Beef
- Pork
- Seafood

**SupGuide:** Supervisor will ensure member selects a different meat for each cooking method listed in EPQ 4.A.05 through EPQ 4.A.07.

**4.A.09 Prepare** the following cold sauces IAW “Professional Cooking” by Wayne Gisslen:

- Tartar sauce
  - Cocktail sauce
-

## Introduction, continued

---

### Objectives

Upon completion of this lesson, you will:

- Determine doneness in cooked fish
  - Identify the basic market forms of fish
  - Identify the popular varieties of shellfish and discuss their characteristics
  - Prepare fish using the dry-heat fat/frying method
  - Prepare tartar and cocktail sauces
- 

### Performance Evaluation

There will be a performance evaluation in this lesson. This evaluation will cover EPQs 4.A.07 and 4.A.09.

---

### Tools and References

Tools and references for this lesson include:

- Professional Cooking*, by Wayne Gisslen
  - Armed Forces Recipe Service (AFRS), NAVSUP Publication
  - Unit 1, Appendix C, Glossary of Key Terms
  - Cookware/cooking equipment
  - Food products (seafood, seasoning ingredients, etc.)
- 

### Recommended Reading

To get the most out of this lesson, be sure to read the following:

- Professional Cooking*:
    - “Understanding Fish and Shellfish” (Chapter 14)
    - “Cooking Fish and Shellfish” (Chapter 15)
  - Armed Forces Recipe Service (AFRS), Section L, Meat, Fish and Poultry.
- 

### Topics Covered by This Lesson

This lesson covers the following topics:

- Sample recipe
  - Introduction to seafood preparation
  - How to prepare fish
  - How to prepare shellfish
  - How to prepare sauces that accompany seafood
-

## Sample Recipe

### Overview

In this lesson you will learn about seafood—its composition and structure, inspection systems, its market forms, etc.—and how to prepare it. As you learn these details, be sure to keep in mind the cues and instructions you will find within recipes. Remember also that, though the recipe provides you with guidance, in order to prepare seafood that looks good and tastes good, there is much to know that falls outside of the instructions of a recipe.

### Seafood Recipe

Consider the recipe below. This is a recipe you may soon be asked to prepare, one whose primary ingredient is fish.

BREADED MAHI MAHI			Recipe #							
Serves:	100		Serving Size	6 OUNCES						
Prep Time:	1 HOUR		Cooking Temp	400° F						
Cooking Time:	10 MINUTES		Serving Pans	FULL SHALLOW						
Cooking Equipment:	SAUTE PAN		Pans Used	7						
Ingredients	Weight		Ea	Measure						Preparation
MAHI FILETS	37	5		GL	QT	PT	CP	TBSP	TSP	
<b>COATING</b>										
FLOUR, G. P.	2									
SALT		2								
BLACK PEPPER, GROUND		1								
GARLIC, GRANULATED		1								
<b>SAUCE</b>										
PERNOD LIQUOR					1					
BUTTER, CLARIFIED	4									
SHALLOTS, DICED	2									
BASIL CHIFFONADE						1				
STEP 1: SAUTE THE SHALLOTS IN 1 CUP MELTED BUTTER AND SET ASIDE.										
STEP 2: ADD 2 CUPS OF MELTED BUTTER AND BROWN BOTH SIDES OF THE MAHI MAHI UNTIL GOLDEN BROWN. ARRANGE IN SERVING PANS AND PLACE IN WARMER. DO NOT COVER.										
STEP 3: DEGLAZE PAN WITH REMAINING BUTTER AND ADD THE PERNOD LIQUOR TO MAKE THE BUTTER SAUCE.										
STEP 4: STRAIN BUTTER AND PERNOD MIXTURE THROUGH A CHEESE CLOTH.										
STEP 5: ADD THE SHALLOTS TO THE SAUCE AND DRIZZLE OVER THE FISH.										
STEP 6: GARNISH WITH CHIFFONADE BASIL										

Some questions to answer as you study this recipe:

- What cooking method does it require, is that moist-heat, dry-heat, or dry-heat fat/frying, and how is that cooking method performed?
- What type of fish does it require?
- What kind of pre-preparation is required and how long is it likely to take?

Keep this recipe in mind as you learn about the preparation of fish and shellfish.

## Introduction to Seafood Preparation

---

### Overview

Fish products are divided into two categories: *fin fish* (fish with fins and internal skeletons) and *shellfish* (fish with external shells but no internal bone structure). This lesson will address both. In some ways, learning about how to prepare fish is the opposite of learning about meat. Whereas meat has only a few varieties and many different cuts, fish come in hundreds of different varieties and there are only a few basic cuts.

This section covers:

- Composition and structure
  - Inspection
  - Market forms
  - Fish classifications
  - Shellfish classifications
- 

### Composition and Structure

Fish, like meat and poultry, consists of water, protein, fat, minerals, vitamins, and other substances. The most important difference between fish and meat is that fish has very little connective tissue.

Having little connective tissue means that:

- Fish cooks very quickly, even at low heat.
  - Fish is naturally tender.
  - Moist-heat cooking methods are used not to create tenderness but to preserve moistness and provide variety.
  - Cooked fish must be handled very carefully or it will fall apart.
- 

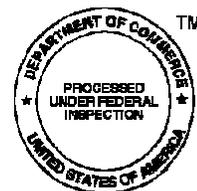
### Inspection

The National Oceanic and Atmospheric Administration (NOAA) and the Department of Commerce conduct voluntary seafood inspection programs in the United States.

The product packaging has the official seals or marks, including the PUFU seal (Processed Under Federal Inspection) and the U.S. Grade A shield.

The PUFU seal, above, indicates that the product is packed under federal inspection and is safe and wholesome.

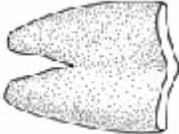
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## Introduction to Seafood Preparation, continued

### Market Forms

Fish are available in several forms. Use *Professional Cooking*, Chapter 14 to help you complete the table below and learn the market forms of fish.

MARKET FORMS OF FISH		
FORM	BRIEF DESCRIPTION	IMAGE
Whole or round		
Drawn		
	Viscera, scales, head, tail, and fins removed.	
	Cross-section slices, each containing a section of backbone.	
Fillets		
Sticks		
	Both sides of a fish still joined, but with bones removed.	

## Introduction to Seafood Preparation, continued

### Fish Classifications

Some of the most common varieties of fish are listed in the table below. Use *Professional Cooking*, Chapter 14 to help you add more names of these common fish in the examples column.

VARIETIES AND CHARACTERISTICS OF FISH		
VARIETY	DESCRIPTION	EXAMPLES
Saltwater Fish— Flat fish	Have lean, white flesh and a mild, delicate flavor. Flat, oval shape, both eyes on one side of the head.	 Flounder, English Sole, <hr/>
Saltwater Fish— Round Fish	Varies a great deal, see <i>Professional Cooking</i> , Chapter 14.	 Salmon, Mackerel, <hr/> <hr/> <hr/> <hr/>
Freshwater Fish	Varies a great deal, see <i>Professional Cooking</i> , Chapter 14.	 Trout, Northern Pike, <hr/> <hr/> <hr/>

## Introduction to Seafood Preparation, continued

### Shellfish Classifications

Shellfish are distinguished from fin fish by their hard outer shells and their lack of backbones or internal skeletons. There are two classifications of shellfish:

- Crustaceans
- Mollusks

TYPES OF SHELLFISH		
TYPE	BRIEF DESCRIPTION	EXAMPLES
Mollusks	<p>Soft sea animals that fall into three main categories:</p> <ul style="list-style-type: none"> <li>■ Bivalves – have one pair of hinged shells.</li> <li>■ Univalves – have a single shell.</li> <li>■ Cephalopods – have soft bodies with no shell.</li> </ul>	<p>Bivalves:</p> <ul style="list-style-type: none"> <li>■ Oysters</li> <li>■ Clams</li> <li>■ Scallops</li> </ul> <p>Univalves:</p> <ul style="list-style-type: none"> <li>■ Abalone</li> <li>■ Conch</li> </ul> <p>Cephalopods:</p> <ul style="list-style-type: none"> <li>■ Octopus</li> <li>■ Squid</li> </ul>
Crustaceans	Sea animals with segmented shells and jointed legs.	Lobsters, Shrimp, Crabs, Crawfish

## How to Prepare Fish

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### Overview

This section reviews the cooking methods as they apply to fish. It covers:

- ❑ Doneness
  - ❑ Cooking methods
- 

### Doneness

Fish is very delicate and is easily overcooked. So, before you start preparing fish, you should know how to tell when fish is “done.”

If you have cooked fish in the past you have probably heard or seen a recipe line that says something like, “The fish is done when it flakes easily”. While technically this is correct, it does not mean that the fish should be nearly falling apart. Fish continues to cook in its retained heat once it has been removed from the heat source. If, when preparing fish, you are not paying attention to this, you are likely to be serving overcooked fish to disappointed patrons.

The guidelines below will help you avoid overcooking your fish.

<b>TESTING FOR DONENESS IN FISH</b>	
<b>NO.</b>	<b>GUIDELINE</b>
1.	Fish is done if it just separates into flakes; that is, it is beginning to flake but does not yet fall apart easily.
2.	If bone is present, the flesh separates from the bone, and the bone is no longer pink.
3.	The flesh has turned from translucent to opaque (usually white, depending on the kind of fish).

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## How to Prepare Fish, continued

### Cooking Methods

The table on the next several pages offers guidelines for preparing fish using many of the cooking methods discussed in this course.

These include:

- Sautéing and pan-frying
- Baking
- Broiling
- Poaching
- Simmering

<b>COOKING METHODS FOR FISH</b>	
<b>METHOD</b>	<b>GUIDELINES</b>
Sautéing and Pan-Frying	<ul style="list-style-type: none"> <li>■ Lean fish are especially well-suited to sautéing because the cooking method supplies fat that the fish lack.</li> <li>■ Fat fish may also be sautéed, as long as you take care not to get the fish too greasy.</li> <li>■ Sautéed fish is usually given a coating of flour, breading, or other starchy product before sautéing. This forms a crust that browns attractively, enhances the flavor, and helps hold the fish together and prevents sticking.</li> <li>■ Fish may be soaked in milk briefly before dredging in flour, to form a better crust.</li> <li>■ Clarified butter and oil are the preferred fats for sautéing and pan-frying.</li> <li>■ Use a minimum amount of fat, enough to cover the bottom of the pan.</li> <li>■ Small items, such as shrimp and scallops, are sautéed over high heat.</li> </ul>
Continued next page	

## How to Prepare Fish, continued

Cooking Methods, contd.	METHOD	GUIDELINES
	Sautéing and Pan-Frying, contd.	<ul style="list-style-type: none"> <li>■ Large items require lower heat to cook evenly. Very large fish may be browned in fat, and then finished in the oven.</li> <li>■ Brown the most attractive side (the presentation side) first.</li> <li>■ Handle fish carefully during and after cooking to avoid breaking the fish or the crisp crust.</li> <li>■ Sauté or fry to order and serve immediately.</li> </ul>
	Baking	<ul style="list-style-type: none"> <li>■ Fat fish are best for baking because they are less likely to dry out.</li> <li>■ Lean fish may be baked successfully if great care is taken not to overcook them.</li> <li>■ Basting with butter or oil helps prevent drying.</li> <li>■ In most cases, baking temperatures are from 350 to 400 °F (175 to 200 °C).</li> <li>■ Large fish are best baked at the lower end of this range so that they will bake more evenly.</li> <li>■ With great care, it is possible to bake thin fillets or slices of fillets (cut like scaloppini) at very high temperatures.</li> <li>■ There are no specific baking times because fish vary so much in shape and composition.</li> <li>■ Different ingredients and types of baking pans also affect the baking time.</li> </ul>
Continued next page		

## How to Prepare Fish, continued

Cooking Methods, contd.	METHOD	GUIDELINES
	Broiling	<ul style="list-style-type: none"> <li>■ Use small slices or fillets for broiling.</li> <li>■ Fat fish is best for broiling because it doesn't get as dry as lean fish.</li> <li>■ All fish should be coated with a fat before broiling to reduce drying.</li> <li>■ Lean fish may be dredged in flour before dipping in oil or melted butter.</li> <li>■ Thick cuts should be turned once during broiling in order to cook evenly.</li> <li>■ Thin pieces may be arranged on an oiled pan and broiled on one side only.</li> <li>■ Lobster is also broiled without turning.</li> </ul>
	Poaching	<ul style="list-style-type: none"> <li>■ Both fat and lean fish may be cooked by this method.</li> <li>■ Seasoned liquid for cooking fish may be as simple as salted water.</li> <li>■ Cook flavoring ingredients in court bouillon to extract the flavors before cooking the fish.</li> <li>■ Cooking temperature is 160–180 °F (70–80 °C), well below boiling.</li> <li>■ Start shellfish, small fish, and portion cuts in hot liquid to preserve flavors.</li> <li>■ Start large fish in cold liquid to cook more evenly and to avoid sudden contractions that would split the skin and spoil the appearance.</li> </ul>
Continued next page		

**How to Prepare Fish, continued**

<b>Cooking Methods, contd.</b>	<b>METHOD</b>	<b>GUIDELINES</b>
	Poaching, contd.	<ul style="list-style-type: none"><li>■ If poaching utensils are not available, wrap fish in cheesecloth so it can be lifted out easily.</li><li>■ Serve poached fish with an appropriate sauce.</li></ul>
	Simmering	<ul style="list-style-type: none"><li>■ Lobster, crabs, and shrimp may be cooked at a simmer because their textures are less fragile.</li></ul>

## How to Prepare Fish, continued

### Revisiting the Seafood Recipe

If you have not already done so, revisit the Mahi Mahi recipe and mentally walk through the cooking method used in the recipe. Go ahead and do this now, referring to the guidelines above and *Professional Cooking* to help you think through how you would prepare this recipe. Later, you will meet with your supervisor to observe the preparation of fish, and begin practicing preparing fish yourself.

BREADED MAHI MAHI			Recipe #						
Serves:	100		Serving Size 6 OUNCES						
Prep Time:	1 HOUR		Cooking Temp 400° F						
Cooking Time:	10 MINUTES		Serving Pans FULL SHALLOW						
Cooking Equipment:	SAUTE PAN		Pans Used 7						
Ingredients	Weight		Ea	Measure					Preparation
	LB	OZ		GL	QT	PT	CP	TBSP	
MAHI FILETS	37	5							
<b>COATING</b>									
FLOUR, G. P.	2								
SALT		2							
BLACK PEPPER, GROUND		1							
GARLIC, GRANULATED		1							
<b>SAUCE</b>									
PERNOD LIQUOR				1					
BUTTER, CLARIFIED	4								
SHALLOTS, DICED	2								
BASIL CHIFFONADE					1				
STEP 1: SAUTE THE SHALLOTS IN 1 CUP MELTED BUTTER AND SET ASIDE.									
STEP 2: ADD 2 CUPS OF MELTED BUTTER AND BROWN BOTH SIDES OF THE MAHI MAHI UNTIL GOLDEN BROWN. ARRANGE IN SERVING PANS AND PLACE IN WARMER. DO NOT COVER.									
STEP 3: DEGLAZE PAN WITH REMAINING BUTTER AND ADD THE PERNOD LIQUOR TO MAKE THE BUTTER SAUCE.									
STEP 4: STRAIN BUTTER AND PERNOD MIXTURE THROUGH A CHEESE CLOTH.									
STEP 5: ADD THE SHALLOTS TO THE SAUCE AND DRIZZLE OVER THE FISH.									
STEP 6: GARNISH WITH CHIFFONADE BASIL.									

## How to Prepare Shellfish

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### Overview

This section provides guidelines for the preparation of shellfish. It covers:

- Oysters
- Clams
- Mussels
- Scallops
- Squid/calamari
- Lobster/northern lobster
- Rock lobster
- Shrimp
- Crab

Below you will find guidelines for the preparation and cooking of each of these.

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### Oysters

Follow these guidelines to help you prepare to open oysters.

<b>GUIDELINES FOR OPENING OYSTERS</b>	
<b>NO.</b>	<b>GUIDELINE</b>
1.	Scrub shells thoroughly before opening.
2.	Oysters to be served raw must be opened in a way that leaves the bottom shell intact and the tender oyster undamaged.
3.	Oysters to be cooked may be opened by spreading them on a sheet pan and placing them in a hot oven just until the shells open.
4.	Remove from shell and cook immediately.
5.	Discard any that do not open.

Continued next page

## How to Prepare Shellfish, continued

### Oysters, contd.

Use this procedure to open oysters.

<b>PROCEDURE FOR OPENING OYSTERS</b>	
<b>STEP</b>	<b>ACTION</b>
1.	Examine the shell to see that it is tightly closed, indicating a live oyster.
2.	Rinse the shell under cold, running water.
3.	Hold oyster in one hand; hold the oyster knife near the tip.
4.	Insert the knife between the shells near the hinge.
5.	Twist the knife to break the hinge.
6.	Slide the knife under the top shell and cut through the adductor muscle (which closes the shells) near the top shell. Try not to cut the flesh of the oyster, or it will lose plumpness.
7.	Remove the top shell.
8.	Carefully cut the lower end of the muscle from the bottom shell to loosen oyster.
9.	Remove any particles of shell from the oyster before serving.
Continued next page	

Follow these guidelines to help you cook oysters.

<b>GUIDELINES FOR COOKING OYSTERS</b>	
<b>NO.</b>	<b>GUIDELINE</b>
1.	Cook just enough to heat through to keep oysters juicy and plump.
2.	Overcooking makes them shrunken and dry.
3.	Cooking methods: Poaching, deep-frying, baking on the half shell with toppings, and simmering in soups and stews.

## How to Prepare Shellfish, continued

### Clams

Follow these guidelines to help you prepare clams for cooking.

<b>GUIDELINES FOR OPENING CLAMS</b>	
<b>NO.</b>	<b>GUIDELINE</b>
1.	Scrub shells thoroughly before opening.
2.	Hard-shell clams are sometimes sandy inside, and soft-shell clams nearly always are.
3.	Like oysters, clams to be cooked may be opened by spreading on sheet pans and placing in a hot oven just until the shells open.
4.	Discard any that do not open.

Use this procedure to open clams.

<b>PROCEDURE FOR OPENING CLAMS</b>	
<b>STEP</b>	<b>ACTION</b>
1.	Examine the shell to see that it is tightly closed, indicating a live clam.
2.	Rinse the shell under cold, running water.
3.	Avoid jostling the clam too much, or it will “clam up” tighter.
4.	Hold clam in one hand.
5.	Place the sharp edge of the clam knife against the crack between the shells.
6.	Squeeze with the fingers of the holding hand, forcing the knife between the shells.
7.	Change the angle of the blade as shown in the illustration and slide the knife against the top shell to cut the adductor muscles (clams have two; oysters have only one).
8.	Open the clam and finish detaching the meat from the upper shell.
9.	Cut the muscles against the lower shell to loosen the clam completely.
Continued next page	

## How to Prepare Shellfish, continued

### Clams, contd.

STEP	ACTION
10.	Discard the top shell.
11.	Remove any particles of shell from the clam before serving.
End of procedure	

Follow these guidelines to help you cook clams.

GUIDELINES FOR COOKING CLAMS	
NO.	GUIDELINE
1.	Clams become very tough and rubbery if overcooked.
2.	Cook just enough to heat through.
3.	When steaming clams in the shell, steam just until shells open.
4.	Cooking methods: Steaming, poaching, deep-frying, baking on the half shell with toppings, and simmering in soups and stews.

### Mussels

Use this procedure to prepare mussels for cooking.

GUIDELINES FOR PREPARING MUSSELS FOR COOKING	
NO.	GUIDELINE
1.	Clean shells thoroughly.
2.	Scrub well under cold, running water.
3.	Scrape off barnacles, if any, with a clam knife.
4.	Remove the beard—a fibrous appendage protruding from between the shells.
5.	Mussels may be sandy inside if not commercially grown.
6.	They may be soaked in brine and flour or cornmeal like clams to rid them of sand.

Continued next page

## How to Prepare Shellfish, continued

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### Mussels, contd.

Follow these guidelines to help you cook mussels.

<b>GUIDELINES FOR COOKING MUSSELS</b>	
<b>NO.</b>	<b>GUIDELINE</b>
1.	Unlike oysters and clams, mussels are almost never served raw.
2.	They are usually steamed and served in their cooking broth, in soups, or chilled and served with mayonnaise-type sauces.
3.	Cook until shells open and mussels are heated through.
4.	Do not overcook.
5.	Discard any that are not open after cooking.

---

### Scallops

Use this procedure to get scallops ready for cooking.

<b>GUIDELINES FOR PREPARING SCALLOPS FOR COOKING</b>	
<b>NO.</b>	<b>GUIDELINE</b>
1.	Shucked scallops can be cooked without any further preparation.
2.	They are improved, however, if you pull off the small, tough tendon or sinew on the side of each scallop.
3.	Large sea scallops are sometimes cut into smaller pieces before cooking.

Follow these guidelines to help you cook scallops.

<b>GUIDELINES FOR COOKING SCALLOPS</b>	
<b>NO.</b>	<b>GUIDELINE</b>
1.	Scallops are cooked in almost every way that fish are cooked.
2.	The most popular cooking methods are sautéing, deep-frying, broiling, and poaching.

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## How to Prepare Shellfish, continued

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### Squid/ Calamari

Use these guidelines to prepare squid for cooking.

<b>GUIDELINES FOR PREPARING SQUID FOR COOKING</b>	
<b>NO.</b>	<b>GUIDELINE</b>
1.	Squid must be skinned and eviscerated.
2.	The head, beak, and the internal plastic-like quill are discarded.
3.	The hollow body and tentacles are eaten.

Use this procedure to clean squid.

<b>PROCEDURE FOR CLEANING SQUID</b>	
<b>STEP</b>	<b>ACTION</b>
1.	Pull off the head. The interior organs will come out with it.
2.	Pull off the skin and pull out the plastic-like quill from the body sac.
3.	Rinse out the sac to clean it well.
4.	Cut off the tentacles just above the eyes.
5.	Discard the head and organs.
6.	Be sure to remove the hard beak, which is found at the center of the tentacle cluster, as shown by the tip of the knife in this picture.
7.	After cleaning squid, the body sac may be left whole for stuffing or cut into rings for frying, sautéing, or stewing.
End of procedure	

Follow these guidelines to help you cook squid.

<b>GUIDELINES FOR COOKING SQUID</b>	
<b>NO.</b>	<b>GUIDELINE</b>
1.	Chewy squid are usually cut up and fried quickly.
2.	They may also be simmered for about 45 minutes in a seasoned liquid or sauce.

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## How to Prepare Shellfish, continued

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### Lobster

Lobster, one of the most prized among shellfish, is also known as northern lobster.

Use these guidelines to help you prepare lobster for cooking.

<b>GUIDELINES FOR PREPARING LOBSTER FOR COOKING</b>	
<b>NO.</b>	<b>GUIDELINE</b>
1.	Live lobsters are either cooked live or cut up before cooking.
2.	Live lobsters are plunged head first into boiling water to kill them instantly.
3.	Splitting and cutting up live lobsters is necessary for certain preparation.

Follow these guidelines to help you cook lobster.

<b>GUIDELINES FOR COOKING LOBSTER</b>	
<b>NO.</b>	<b>GUIDELINE</b>
1.	Cooking at too high a temperature or for too long makes lobster meat become tough.
2.	Boiling too long will also make the meat dry.
3.	Whole lobster is usually cooked by dropping into boiling water and then simmering for 5 to 6 minutes per pound.
4.	Whole or cut-up lobster can be cooked by simmering in water or court bouillon, simmering in sauce or soup, sautéing, baking, or broiling.

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## How to Prepare Shellfish, continued

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### Rock Lobster

Rock lobsters are also known as *spiny lobsters*. Follow these guidelines to help you handle and cook rock lobsters.

GUIDELINES FOR HANDLING AND COOKING ROCK LOBSTER	
NO.	GUIDELINE
1.	Rock lobsters are handled and cooked much like northern lobsters. Most common cooking methods are steaming, simmering, and broiling.
2.	Tails to be broiled will be moister if poached for 5 minutes before splitting and broiling.
3.	Tails steamed or simmered whole should have the shells split before serving.

---

### Shrimp

Follow these guidelines to help you prepare shrimp for cooking.

GUIDELINES FOR PREPARING SHRIMP FOR COOKING	
NO.	GUIDELINE
1.	Shrimp served hot must normally be peeled and de-veined before cooking.
2.	Shrimp to be served cold may be peeled after cooking to preserve flavor.
3.	Large shrimp are sometimes butterflied.

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Follow these guidelines to help you cook shrimp.

GUIDELINES FOR COOKING SHRIMP	
NO.	GUIDELINE
1.	Cooking at too high a temperature or for too long makes shrimp meat become tough.
2.	Simmering, deep-frying, sautéing, broiling, and baking are the cooking methods used to cook shrimp.

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## How to Prepare Shellfish, continued

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### Crab

Follow these guidelines for cooking crab.

<b>GUIDELINES FOR COOKING CRAB</b>	
<b>TYPE OF CRAB</b>	<b>COOKING METHOD</b>
Hard-shell	Hard-shell crabs are simmered 10 to 15 minutes, and have their meat removed after cooking.
Soft-shell	Soft-shell crabs are dredged in flour for sautéing, or breaded or battered for deep-frying.
Frozen crabmeat	Frozen crabmeat is already cooked. It needs only to be heated through to be prepared for serving.

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## How to Prepare Sauces That Accompany Seafood

### Seafood Sauces

There are two sauces that often accompany seafood: tartar sauce and cocktail sauce. Below you will find recipes for each. To prepare them, follow the instructions in the method columns.

#### Cocktail Sauce

SEAFOOD COCKTAIL SAUCE				
YIELD: 100 Portions (3 <sup>1</sup> / <sub>3</sub> Quarts)			EACH PORTION: 2 Tablespoons	
INGREDIENTS	WEIGHTS	MEASURES		METHOD
Catsup, tomato. . . . .	7 lb 2 oz	3 qt (1-No. 10 cn)	. . . . .	1. Combine catsup, horseradish and hot sauce; blend well. 2. Cover; refrigerate at least 1 hour before serving.
Horseradish, prepared	1 lb. . . . .	1 <sup>1</sup> / <sub>2</sub> cups. . . . .	. . . . .	
Hot sauce. . . . .	. . . . .	1 tbsp. . . . .	. . . . .	

NOTE: 1. In Step 1, 1<sup>1</sup>/<sub>4</sub> oz (5 tbsp) dehydrated horseradish (See Recipe No. A-17) or 1 lb (1<sup>1</sup>/<sub>2</sub> cups) frozen horseradish may be used. Thaw horseradish.  
 2. In Step 1, add 1 or 2 tsp additional hot sauce for a hotter sauce.  
 3. Seafood Cocktail Sauce may be served with French Fried shrimp, shrimp cocktail, fried oysters, scallops, fish fillets, portions or nuggets.  
 4. In Step 1, 7 lb 8 oz (10-12 oz bt) prepared Seafood Cocktail Sauce may be used. Omit Step 2.  
 5. One Size O ladle may be used. See Recipe No. A-4.

Key points about preparing cocktail sauce:

- Note that you can use prepared, dehydrated, or frozen horseradish.
- You can adjust the “heat” of the sauce by using more or less hot sauce.
- Be sure to keep the sauce refrigerated.

Continued next page

## How to Prepare Sauces That Accompany Seafood, continued

### Seafood Sauces, contd.

#### Tartar Sauce

TARTAR SAUCE				
YIELD: 100 Portions (3 <sup>1</sup> / <sub>4</sub> Quarts)			EACH PORTION: 2 Tablespoons (1 Ounce)	
INGREDIENTS	WEIGHTS	MEASURES		METHOD
Salad Dressing. . . .	4 lb. . . . .	2 qt. . . . .	. . . . .	1. Combine Salad Dressing, relish, parsley, pimientos, onions, paprika, and pepper. 2. Cover; refrigerate to chill. Keep refrigerated until ready to serve.
Relish, pickle, sweet	2 lb. . . . .	1 qt. . . . .	. . . . .	
Parsley, fresh, chopped	1/2 oz. . . .	1/4 cup. . . .	. . . . .	
Pimientos, canned, drained, finely chopped	7 oz. . . . .	3/4 cup (1/4- No. 2 1/2 cn)	. . . . .	
Onions, dry, finely chopped	4 oz. . . . .	1/2 cup. . . .	. . . . .	
Paprika, ground. . . .	. . . . .	1/2 tsp. . . .	. . . . .	
Pepper, white or black, ground	. . . . .	1/8 tsp. . . .	. . . . .	

NOTE: 1. In Step 1, 1-7 oz cn canned pimientos may be used.  
2. In Step 1, 1/2 oz (2<sup>2</sup>/<sub>3</sub> tbsp) dehydrated onions may be used. See Recipe No. A-11.  
3. In Step 1, 4 1/2 oz dry onions A.P. will yield 4 oz finely chopped onions.  
4. One Size O ladle may be used. See Recipe No. A-4.

#### Key points about preparing tartar sauce:

- Note that the salad dressing in this recipe is a mayonnaise or egg-based salad dressing, and is a potentially hazardous food. It should be treated as such.
- Be sure to keep the sauce refrigerated.
- [Chief Lemelin: Is there anything you'd like to add or delete from this list of key points?]

## Lesson Review

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**Purpose**

The intention of this exercise is to help you confirm what you have learned about how to prepare seafood using dry-heat fat/fry cooking methods and how to prepare tartar sauce and cocktail sauce.

---

**Directions**

Test your knowledge of the concepts and principles of this lesson by choosing the best, most correct answer to each question below. Some questions require you to create answers or fill in blanks. Use the lesson material and references to assist you as necessary.

When you have finished answering the questions, compare your answers to the correct answers in the “Lesson Review Feedback” section at the end of this lesson. Note any differences between your answers and the correct ones so you can learn from them, and discuss them when you meet with your supervisor.

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**Questions**

1. \_\_\_\_\_ is the major flaw in fish preparation.
  - a. Flaking
  - b. Overcooking
  - c. Undercooking
  - d. Producing translucent flesh
2. A fish is done, but not overcooked, if its \_\_\_\_\_.
  - a. flesh falls apart easily
  - b. bones are only slightly pink
  - c. flesh has just turned from translucent to opaque
  - d. all of the above
3. Which set of words completes the following sentence correctly?  
\_\_\_\_\_ fish is especially well suited to \_\_\_\_\_.
  - a. Lean, poaching
  - b. Fat, broiling and baking
  - c. Both of the above
  - d. None of the above

Continued next page

**Lesson Review, continued**

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**Questions,  
contd.**

Read each statement below, determine whether it is true or false. Write True or False in the space provided.

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- \_\_\_\_\_ 4. A major problem in deep-frying fish is that the fish can become quickly overcooked at the high temperature of the deep fryer.
- \_\_\_\_\_ 5. Lean fish may be cooked by moist-heat methods and by dry-heat methods, but fat fish should be cooked with dry heat only.
- \_\_\_\_\_ 6. Fat fish should never be cooked in fat, or they will be too greasy.
- \_\_\_\_\_ 7. Fresh fish is voluntarily inspected by the Department of Commerce.
- \_\_\_\_\_ 8. Sautéed shrimp should be cooked at high heat to get rid of their strong, fishy taste.
-

## Practicing What You Have Learned

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### Overview

This lesson covers material associated with two EPQs, so there are two performance evaluations for you to complete. Before you attempt to pass the performance evaluations, however, we recommend that you practice the core tasks of the lesson:

- ❑ Prepare seafood using a dry-heat fat/frying cooking method.
  - ❑ Prepare tartar sauce and cocktail sauce.
- 

### Practicing the Core Tasks

Once you have finished reading the lesson and have completed the lesson review, you should meet with your supervisor and observe a demonstration of the core tasks listed above.

Once you have observed each of these tasks, you should, under supervision, perform the tasks yourself and receive corrective feedback about your performance from your supervisor.

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## Performance Evaluation

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Once you have completed this lesson—meaning you have read the material, completed the lesson review, observed demonstrations of the core tasks, and then practiced the core tasks enough to be moderately competent in them—you are ready to demonstrate the tasks for sign-off.

Your supervisor will discuss this sign-off process with you. It will involve your demonstrating the core tasks under the supervisor's observation, so that he or she can determine whether or not you are able to perform the tasks in a satisfactory manner. Using the Performance Evaluation sheets as a guide, he or she will mark "go" for tasks you perform well and "no go" for tasks where you need improvement. Performing the core tasks well enough to receive a "go" from your supervisor will mean that you met the Enlisted Performance Qualifications (EPQs) associated with the lesson. If you receive a "no go," you must practice the core tasks, receive feedback, and practice again until you are able to perform the tasks well enough for sign-off.

The EPQs/core tasks for this lesson are:

- 4.A.07 – Prepare seafood using a dry-heat fat/fry cooking method.
  - 4.A.09 – Prepare tartar sauce and cocktail sauce.
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## Lesson Summary

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### Summary

This lesson has explained how to prepare seafood.

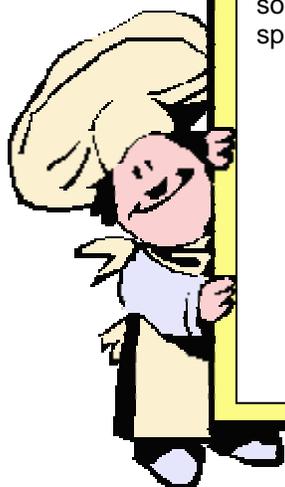
Having completed this lesson, you can:

- ❑ Determine doneness in cooked fish
  - ❑ Identify the basic market forms of fish
  - ❑ Identify the popular varieties of shellfish and discuss their characteristics
  - ❑ Prepare fish using the dry-heat fat/frying method
  - ❑ Prepare tartar and cocktail sauces
- 

### Next in this Course

In the next unit, Unit 7, you will learn how to prepare soups, salads, vegetables, and starches. More specifically, you will learn about:

- How to prepare vegetables, including cooked and uncooked salads
- How to prepare rice
- How to prepare clear and thick soups
- How to prepare pasta
- How to prepare white, tomato, and brown sauces



## Lesson Review Feedback

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### Directions

Compare your answers in the Lesson Review to the answers below (correct answers are in **bold**). Note any differences between your answers and the text so you can learn from them and discuss them with your supervisor.

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### Answers

1. \_\_\_\_\_ is the major flaw in fish preparation.
  - a. Flaking
  - b. Overcooking**
  - c. Undercooking
  - d. Producing translucent flesh
2. A fish is done, but not overcooked, if its \_\_\_\_\_.
  - a. flesh falls apart easily
  - b. bones are only slightly pink
  - c. flesh has just turned from translucent to opaque**
  - d. all of the above
3. Which set of words completes the following sentence correctly?  
\_\_\_\_\_ fish is especially well suited to \_\_\_\_\_.
  - a. Lean, poaching
  - b. Fat, broiling and baking
  - c. both of the above**
  - d. none of the above

Read each statement below and determine whether it is true or false, and then write True or False on the space provided.

- |              |  |
|--------------|--|
| <u>True</u>  | 4. A major problem in deep-frying fish is that the fish can become quickly overcooked at the high temperature of the deep fryer. |
| <u>False</u> | 5. Lean fish may be cooked by moist-heat methods and by dry-heat methods, but fat fish should be cooked with dry heat only.      |
| <u>False</u> | 6. Fat fish should never be cooked in fat, or they will be too greasy.   |
| <u>True</u>  | 7. Fresh fish is voluntarily inspected by the Department of Commerce.  |
| <u>False</u> | 8. Sautéed shrimp should be cooked at high heat to get rid of their strong, fishy taste.   |
-

## PERFORMANCE EVALUATION 6.4.1

### Prepare Seafood

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<b>Goal</b>	The student will perform the following: <ul style="list-style-type: none"><li>• Prepare seafood</li></ul> <hr/>
<b>Process</b>	Given a recipe calling for seafood, you will prepare seafood as called for in the recipe. <hr/>
<b>Directions</b>	Using the recipe as a guideline, as well as reference material and job aids, you will:
<b>Hands-On Practice</b>	<ol style="list-style-type: none"><li>1. Interpret the recipe.</li><li>2. Collect all the equipment and food items.</li><li>3. Prepare the equipment and food items.</li><li>4. Prepare the seafood according to the recipe.</li></ol> <p>When you have completed the practice, see your supervisor for further instructions.</p> <hr/>
<b>Checklist</b>	Fill in your name on the Unit 6 Performance Evaluation checklists and hand them to your supervisor prior to completing the hands-on exercise. <hr/>
<b>Feedback</b>	Your supervisor will review your performance for accuracy and completeness and provide any comments directly to you. <hr/>

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### PERFORMANCE EVALUATION 6.4.1

#### Prepare Seafood Using a Dry-Heat Fat/Fry Cooking Method

<b>Location</b> <hr/> <hr/>	<b>Completed by:</b> _____ <b>Reviewed by:</b> _____ (Enter your name) (Obtain Supervisor's signature)								
<b>EPQ</b> <b>4.A.07</b> Prepare at least one of the following meats using dry heat fat/fry cooking method IAW "Professional Cooking" by Wayne Gisslen and Armed Forces Recipe Service (AFRS), NAVSUP Publication 7: <ul style="list-style-type: none"> <li>• Poultry</li> <li>• Beef</li> <li>• Pork</li> <li>• Seafood</li> </ul> SupGuide: Supervisor will ensure member selects a different meat for each cooking method listed in EPQ 4.A.05 through EPQ 4.A.07.									
<b>Criteria</b> <b>Accuracy:</b> <ul style="list-style-type: none"> <li>• Product prepared properly 100% of the time, following the recipe guideline.</li> </ul>	<b>Safety:</b> <ul style="list-style-type: none"> <li>• Proper equipment selected 100% of the time.</li> <li>• Equipment used correctly 100% of the time.</li> </ul>								
<b>TASK</b>	<b>COMMENTS</b>								
	Y	N	1 <sup>st</sup> Attempt ____/____/____ Date	Y	N	2 <sup>nd</sup> Attempt ____/____/____ Date	Y	N	3 <sup>rd</sup> Attempt ____/____/____ Date
1. The performer preheated a sauté pan on high heat.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
2. The performer added a small amount of fat to the pan.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
3. As soon as the fat was hot, the performer added the product. Did not overcrowd the pan.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
4. The performer flipped or turned the food with a spatula as often as necessary for the food to cook or heat evenly.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	

<b>Location</b> _____ _____	<b>Completed by:</b> _____ <b>Reviewed by:</b> _____ (Enter your name) (Obtain Supervisor's signature)								
Continued next page									
5. The performer removed the food and served it immediately.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/> Go <input type="checkbox"/> No Go			<input type="checkbox"/> Go <input type="checkbox"/> No Go			<input type="checkbox"/> Go <input type="checkbox"/> No Go		

## PERFORMANCE EVALUATION 6.4.2

### Prepare Cold Sauces

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**Goal** The student will prepare the following cold sauces:

- Tartar sauce
  - Cocktail sauce
- 

**Process** Given a recipe calling for tartar sauce and cocktail sauce, you will prepare the sauce as called for in the recipe.

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**Directions** Using the recipe as a guideline, and reference material and job aids provided by the supervisor, you will:

**Hands-On Practice**

1. Interpret the recipe.
2. Collect all the equipment and food items.
3. Prepare the equipment and food items.
4. Prepare the seafood according to the recipe.

When you have completed the practice, see your supervisor for further instructions.

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**Checklist** Fill in your name on the Unit 6 Performance Evaluation checklists and hand them to your supervisor prior to completing the hands-on exercise.

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**Feedback** Your supervisor will review your performance for accuracy and completeness and provide any comments directly to you.

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## PERFORMANCE EVALUATION 6.4.2A

### Prepare Tartar Sauce

<b>Location</b> <hr/> <hr/>	<b>Completed by:</b> _____ (Enter your name)	<b>Reviewed by:</b> _____ (Obtain Supervisor's signature)
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**EPQ**  
**4.A.09** Prepare the following cold sauces IAW "Professional Cooking" by Wayne Gisslen:

- Tartar sauce
- Cocktail sauce

<b>Criteria</b> <u><b>Accuracy:</b></u> <ul style="list-style-type: none"> <li>• Product prepared properly 100% of the time, following the recipe guideline.</li> </ul>	<b>Safety:</b> <ul style="list-style-type: none"> <li>• Proper equipment selected 100% of the time.</li> <li>• Equipment used correctly 100% of the time.</li> </ul>
--	--

<b>TASK</b>	<b>COMMENTS</b>									
	<b>1<sup>st</sup> Attempt</b>		<b>2<sup>nd</sup> Attempt</b>		<b>3<sup>rd</sup> Attempt</b>					
	Y	N	____/____/____ Date	Y	N	____/____/____ Date	Y	N	____/____/____ Date	
1. The performer combined the ingredients according to the recipe.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		
2. The performer covered and refrigerated the mixture.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		
3. The performer kept the sauce refrigerated until serving time.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/> Go <input type="checkbox"/> No Go		<input type="checkbox"/> Go <input type="checkbox"/> No Go		<input type="checkbox"/> Go <input type="checkbox"/> No Go					

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## PERFORMANCE EVALUATION 6.4.2B

### Prepare Cocktail Sauce

<b>Location</b> <hr/> <hr/>	<b>Completed by:</b> _____ (Enter your name)	<b>Reviewed by:</b> _____ (Obtain supervisor's signature)
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**EPQ**  
**4.A.09** Prepare the following cold sauces IAW "Professional Cooking" by Wayne Gisslen:

- Tartar sauce
- Cocktail sauce

<b>Criteria</b> <u>Accuracy:</u> <ul style="list-style-type: none"> <li>• Product prepared properly 100% of the time, following the recipe guideline.</li> </ul>	<b>Safety:</b> <ul style="list-style-type: none"> <li>• Proper equipment selected 100% of the time.</li> <li>• Equipment used correctly 100% of the time.</li> </ul>
---	--

<b>TASK</b>	<b>COMMENTS</b>									
	<b>1<sup>st</sup> Attempt</b>		<b>2<sup>nd</sup> Attempt</b>		<b>3<sup>rd</sup> Attempt</b>					
	Y	N	____/____/____ Date	Y	N	____/____/____ Date	Y	N	____/____/____ Date	
1. The performer combined and blended the ingredients according to the recipe.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		
2. The performer covered and refrigerated the mixture.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		
3. The performer kept the sauce refrigerated at least one hour before serving.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		
4. The performer kept the sauce refrigerated until serving time.	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>		
	<input type="checkbox"/> Go <input type="checkbox"/> No Go		<input type="checkbox"/> Go <input type="checkbox"/> No Go		<input type="checkbox"/> Go <input type="checkbox"/> No Go		<input type="checkbox"/> Go <input type="checkbox"/> No Go			

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