

Poultry Cookery

SECTIONS

22.1 Poultry Basics

22.2 Cooking Poultry

WRITING ACTIVITY

Descriptive Writing

Many things affect whether customers enjoy a dish. Write a descriptive paragraph about a special meal where poultry is served. Include specific details about the setting and atmosphere.

Writing Tips

- 1 Decide what atmosphere or feeling you want to create.
- 2 Write a strong topic sentence.
- 3 Present details in a logical order.

EXPLORE THE PHOTO

Poultry can be cooked using a variety of methods. *Why do you think poultry is a popular choice to serve at restaurants?*



Poultry Basics

Discover the basics of this popular, versatile food.

Reading Guide

Before You Read

Preview Scan the section and choose a Content or Academic Vocabulary word that is new to you. When you find it in the text, write down the definition.

Read To Learn

Key Concepts

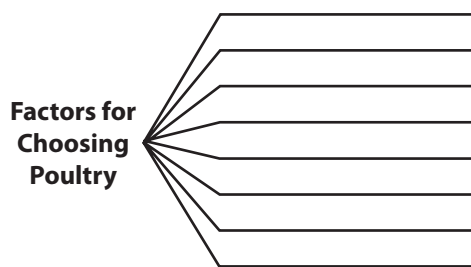
- **Identify** different kinds, classes, and market forms of poultry.
- **Explain** how poultry is inspected and graded.
- **Describe** how to handle, store, and prepare poultry for cooking.

Main Idea

Poultry products are available in a variety of forms and classes. They must be handled and stored properly to stay fresh.

Graphic Organizer

As you read, you will find eight factors you must consider when choosing a poultry product. Use a diagram like this one to help organize your information.



Content Vocabulary

- poultry
- kind
- maturity
- connective tissue
- light meat
- dark meat
- giblets
- market form
- ready-to-cook
- trussing

Academic Vocabulary

- acceptable
- indicate

ACADEMIC STANDARDS



Science

NSES C Develop an understanding of the behavior of organisms.

NSES F Develop an understanding of community health, and natural and human-induced hazards.



Mathematics

NCTM Data Analysis and Probability Select and use appropriate statistical methods to analyze data.

NCTE National Council of Teachers of English

NCTM National Council of Teachers of Mathematics

NSES National Science Education Standards

NCSS National Council for the Social Studies



Graphic Organizer

Go to this book's Online Learning Center at glencoe.com for a printable Graphic Organizer.

What Is Poultry?







Birds that are raised for human consumption are called **poultry**. Poultry products are usually less expensive than many meat products and may be adapted to a wide variety of dishes. You may also use a wide variety of cooking techniques to cook poultry. Before you cook poultry, you will need to understand the eight factors for making the right choice: kind, market form, class, style, color, odor, inspection, and grading. You will also need to know how to safely handle and store poultry.

The United States Department of Agriculture (USDA) categorizes poultry according to species, or **kind**. The kinds of poultry include chicken, turkey, goose, duck, pigeon, and guinea. Each kind of poultry is divided into different classes based on the age and gender of the bird. (See **Figure 22.1**.)

Poultry is similar to meat in structure. Both poultry and meat are made up of muscle, connective tissue, fat, and bone. Poultry flesh is made up of protein, water, and fat. The fat in all types of poultry is found just underneath the skin.

FIGURE 22.1 Poultry Classifications

Poultry Choices There are many different kinds of poultry available. *What kinds of poultry would you choose for customers who prefer tender or very tender poultry?*

Type of Poultry	Description	
	Chicken	
	Cornish hen	Young (5–6 weeks); very tender
	Fryer or broiler	Young (9–12 weeks), male or female; tender
	Roaster	Young (3–5 months), male or female; tender
	Capon	Male, under 10 months; very tender
Stewer	Mature female, over 10 months; tough	
	Turkey	
	Fryer-roaster	Young bird, male (tom) or female (hen); tender
	Young turkey	Hen or tom, with tender flesh but firmer cartilage
	Yearling turkey	Fully mature, but tender
Mature or old turkey	Hen or tom with tough flesh and coarse skin	
	Goose	
	Young goose	Under 6 months; tender
Mature goose	Over 6 months; tough	
	Duck	
	Broiler or fryer duckling	Young, with soft windpipe; tender
	Roasting duckling	Young, with hardening windpipe; tender
Mature duck	Old, with tough flesh	
	Pigeon	
	Squab	3–4 weeks; light, tender meat
Pigeon	Over 4 weeks; dark, tough meat	
	Guinea	
	Young guinea	Under 6 months; tender
Old guinea	Up to 12 months; tough	

❖ Nutrition Notes ❖

Poultry Nutrition

Poultry is packed with protein. A 3½-ounce roasted chicken breast with skin has about 197 calories, 30 grams of protein, 84 milligrams of cholesterol, and 7.8 grams of fat.

CRITICAL THINKING How does poultry fit into a well-rounded diet?

Maturity and Tenderness

A bird's age is commonly called its **maturity**. Older poultry is tough. If you want tender poultry, select a younger bird. Tenderness is also affected by the amount of exercise a bird gets. The more a bird exercises, the more connective tissue is created. **Connective tissue** holds muscle fiber together. A bird with more connective tissue will have tougher flesh.

Birds that rarely fly, such as turkeys and chickens, have lighter-colored wing and breast meat, commonly called **light meat**. The parts of a bird that have more muscle and connective tissue, such as the thighs and legs, are darker in color. This is commonly called **dark meat**. Light meat has less fat and cooks faster than dark meat. Dark meat has more fat and generally takes a longer time to cook. Duck and goose are composed of mostly dark meat. All poultry has **giblets**, the edible internal organs of the bird.

Reading Check **Summarize** What effect does exercise have on poultry's toughness?

Evaluating Poultry

Poultry is available in many market forms, classes, and styles. **Market form** is the form poultry is in when it is purchased. Fresh poultry works well when the poultry is to be cooked within one to two days. Frozen poultry may be kept for up to six months.

Many establishments find fully cooked poultry convenient to use in recipes for soups, salads, and casserole dishes. It can be purchased frozen and canned.

The two classes of poultry are maturity and gender, or whether a bird is male or female. Old birds are tougher than young birds and male birds are tougher than female birds.

Style refers to the state of the bird when it is received at a foodservice operation. It will also reflect, or demonstrate, the amount of processing that was done. Poultry is sold whole or in parts, bone-in or boneless, or ground.

Foodservice operations purchase poultry either whole or in parts. Poultry that has been prepared and packaged is called **ready-to-cook**, or RTC poultry. Whole, fresh poultry is usually less expensive than cut poultry and can be cut into pieces by foodservice professionals.



Light and Dark Different parts of poultry can be divided into light and dark meat. *Which parts pictured here are light meat, and which are dark meat?*

Judging Quality

As a foodservice professional, you need to be familiar with what makes a poultry product **acceptable**, or of good quality. There are two main ways to judge quality in poultry:

- **Color** Poultry color should vary from cream to yellow. It should not be purple or green from bruising or spoiling. Dark wing tips are also a sign of spoilage. Do not use poultry that is spoiled.
- **Odor** Poultry should not have a strong odor, or feel sticky under the wings or around the joints. A strong odor and sticky feel **indicate**, or show, that the poultry is spoiled. Discard any spoiled poultry immediately.

Inspection and Grading

All poultry must be federally inspected by the USDA to see that it is processed in sanitary conditions and is safe to eat. The poultry should also be free from visible signs of disease. Poultry that passes inspection earns the USDA Inspection Stamp of Approval. However, poultry must be properly handled and stored to stay fresh and safe.

Small Bites

Find the Label Grading and inspection stamps are attached to the wing of the bird by a tag. If the bird is processed and shipped in packaging, you will find the stamp on the product packaging.

HOW TO

Cut Up Poultry

- 1 Place the bird on the cutting board, breast side down, and remove the wings at the joint.
- 2 Turn the bird on its side, grasp the breast, and begin cutting between the breast and the leg. Turn the bird over and repeat.
- 3 Pull the leg back and cut along the backbone to remove the leg. Turn the bird over and repeat. Set the legs aside.



Most poultry should also be graded. USDA inspection is required for poultry, but grading is optional. The poultry grading system uses letters to show the level of quality. The highest grade poultry can receive is an A. Grade A poultry is higher quality and is a more consistent product. For a bird to earn Grade A, it must:

- Be plump and meaty.
- Have clean skin with no blemishes, tears, cuts, or bruises.
- Have no broken bones.
- Have all feathers plucked and removed, including pinfeathers.

Birds that do not meet these standards receive grades B or C. Lower-quality birds that receive these grades are used to make processed poultry products where the presen-

tation is not as important, such as chicken fingers or turkey pot pies.

Reading Check Evaluate What are the differences between USDA inspection and USDA grading?

Safety Check

✓ Thawing Poultry

Never defrost any poultry product at room temperature. Always thaw poultry in the refrigerator. Allow 24 hours of defrosting time for every 5 pounds of poultry. Once raw poultry thaws, it should be used within two to three days.

CRITICAL THINKING What could happen if you defrost poultry at room temperature?

- 4** Cut along each side of the backbone toward the front of the breast. Then, remove the entire backbone.



- 5** Use the tip of the knife to expose the breast-bones and ribs.



- 6** Grasp the back of the breast and remove the breast and keel bones.



- 7** Lay the boneless breast on the cutting board and split into two pieces.



- 8** To separate the drumstick from the thigh, cut between the joints.



Truss Whole Birds

- 1 Cut a piece of butcher's twine about three times the bird's length.
- 2 Tuck the wings behind the back.
- 3 Tie the twine loosely around the tail of the bird. Wrap the twine around the legs, and cross in front.



- 4 Flip the bird over, and tie a knot in the twine.



- 5 Tie a slip knot in the twine to secure.

Sanitation Check

✓ Giblets

Giblets are the edible internal organs of poultry. They include the liver, gizzard (stomach), and heart. Giblets are usually found in a package stuffed inside a whole, cleaned bird. The neck is usually packed with the giblets. Chicken livers and gizzards are also sold separately. Giblets are often used to flavor other dishes.

Giblets packaged separately from poultry should be kept cold to prevent bacteria from growing. Store giblets at 41°F (5°C) or below, and use within one to two days. You can also freeze them at 0°F (-18°C) or below. For the best quality, use giblets within three to four months of freezing.

CRITICAL THINKING *What dishes do you think might use giblets?*

Handling and Storage

Fresh and frozen poultry must be handled very carefully to avoid illness or spoilage. Fresh poultry is highly perishable, which means that it can quickly spoil if not handled properly. Once you receive fresh poultry, place it in cold storage or pack it in ice until you are ready to use it. If the poultry will not be used within two to three days, it should be frozen immediately.

You can store frozen poultry for up to six months at or below 0°F (-18°C). Make sure to keep frozen poultry in its original packaging. When you remove it from the freezer to thaw, keep it in its packaging until it is completely defrosted. Never refreeze poultry.

If you will be preparing and serving a whole bird, you will want to truss it. **Trussing** involves tying the legs and wings against the bird's body. It allows for even cooking and creates an attractive final product.



Reading Check

Explain What should you do once you receive fresh poultry?

Science à la Carte

Salmonella Bacteria

Salmonella bacteria cause much of the food poisoning in the world. They can cause diarrhea, fever, and abdominal cramps. The illness usually lasts 5–7 days. It can require treatment if severe dehydration occurs or the infection spreads from the intestines. Hands, cutting boards, counters, knives, and other utensils should be cleaned and sanitized after contact with uncooked foods.

Procedure

Research three different materials used to make cutting boards (for example, wood, plastic, and composite material). Which cutting boards are easily contaminated?

Analysis

Discuss how to thoroughly clean different types of cutting boards. Create a chart to show the safety of and sanitation for each type of cutting board.

NSES C Develop an understanding of the behavior of organisms.

SECTION 22.1



After You Read

Review Key Concepts

1. **Identify** the different market forms, classes, and styles of poultry.
2. **List** the characteristics of Grade A poultry.
3. **Explain** how fresh and frozen poultry should be safely stored and used.

Practice Culinary Academics



Science

4. **Procedure** Imagine that your restaurant receives a shipment of whole chickens a week early.

Analysis Describe the procedures you would follow to check the chickens for quality. Explain how you would store them to keep them fresh.

NSES F Develop an understanding of community health, and natural and human-induced hazards.



Mathematics

5. Supply prices can vary. You call three different wholesale poultry suppliers and are quoted the following prices for chicken breasts in bulk: \$72, \$85, and \$93. What is the average price?

Math Concept

The mean, median, and mode are all measures of central tendency because they provide a summary of numerical data in one number. The mean is the same as the average.

Starting Hint To find the mean, first add all of the values (\$72, \$85, and \$93) together. Divide the total of the values by the number of values in the set of data (3).

NCTM Data Analysis and Probability Select and use appropriate statistical methods to analyze data.



Check your answers at this book's Online Learning Center at glencoe.com.

Cooking Poultry

Reading Guide

Before You Read

Preview Scan the section and choose a Key Concept that is new to you. Write it on a piece of paper. When you find it in the text, write one or two sentences explaining the concept.

Read To Learn

Key Concepts

- **List** various dry and moist poultry cooking techniques.
- **Explain** the problems that can occur when stuffing poultry.
- **List** side dishes commonly served with poultry.

Main Idea

You can use a variety of dry and moist techniques to cook tender, well-done poultry.

Graphic Organizer

As you read, check off whether each cooking technique is a dry or moist method. Use a chart like the one shown to help organize your information.

Technique	Dry	Moist
Roasting/Baking		
Broiling/Grilling		
Frying		
Sautéing		
Simmering		
Poaching		
Braising		



Graphic Organizer

Go to this book's Online Learning Center at glencoe.com for a printable graphic organizer.

Content Vocabulary

- render
- baste
- dredging
- crosshatch
- smoking point
- pressure-frying
- stuffing
- cavity

Academic Vocabulary

- process
- principle

How many appealing poultry dishes can you create?

ACADEMIC STANDARDS



English Language Arts

NCTE 8 Use information resources to gather information and create and communicate knowledge.



Mathematics

NCTM Algebra Represent and analyze mathematical situations and structures using algebraic symbols.



Social Studies

NCSS V B Individuals, Groups, and Institutions Analyze group and institutional influences on people, events, and elements of culture.

NCTE National Council of Teachers of English

NCTM National Council of Teachers of Mathematics

NSES National Science Education Standards

NCSS National Council for the Social Studies

Poultry Cooking Principles

A variety of moist and dry methods can be used to prepare poultry. This makes poultry one of the most versatile food products served. Most poultry products are low in fat and can quickly become dry and overcooked. Learning how to best apply proper cooking methods will help you create a moist final product.

Using lower temperatures and longer cooking times can produce moist results. Cooking with low heat, however, has disadvantages. It does not brown the surface of poultry well. Cooking at high temperatures causes the fat in skin to **render**, or melt. This creates a well-browned and crispy skin that seals in juices.

The presence or absence of bones affects moisture and flavor during the cooking **process**, or series of actions. Bones actually help the bird retain some of its moisture.

Roasting and Baking

Roasting and baking poultry are essentially the same process. Many chefs use the term “roasting” when cooking whole birds and “baking” when cooking parts of a bird. Roasted or baked poultry should be golden brown on the outside and tender and juicy on the inside. Using the proper cooking temperature makes all the difference. (See **Figure 22.2**.) The goal is to make the skin crispy and brown without drying out the meat.

FIGURE 22.2 Variable Heat Different kinds of poultry require different roasting temperatures. *Why do you think this is?*

Poultry	Roasting Temperature
Chicken	375°F–400°F (191°C–204°C)
Turkey	Start at 400°F–425°F (204°C–218°C) to brown skin; reduce to 325°F (163°C) to finish.
Duck/Goose	375°F–425°F (191°C–218°C)
Squab	400°F (204°C)
Game Hen	375°F–400°F (191°C–204°C)



Cook Whole Birds Cooking whole birds using dry heat is called roasting. *How can you make sure a bird comes out juicy and flavorful?*

Often, a poultry recipe will direct you to start cooking using a high temperature. Then, you will be directed to lower the temperature to finish cooking. This technique promotes even cooking and seals in juices to prevent the meat from drying out.

To help whole poultry retain moisture during roasting, you should baste it during the last stage of the cooking process. To **baste**, spoon the fat drippings that have collected in the pan over the bird every 15 to 20 minutes. Baste only larger birds, like turkeys.

You do not have to baste a duck or a goose. Because these birds have a high fat content, basting will make them too juicy and may make them taste greasy. Roast them on a rack so the fat will drip into the pan, away from the bird. Some kinds of poultry, such as guineas and squabs, have very little fat. They can benefit from barding, or wrapping poultry in a layer of fat before cooking. This helps the bird retain moisture while it cooks.

Another way to keep poultry juicy during cooking is to oil the skin prior to the cooking process. This helps prevent the skin from drying out and locks in moisture.

Carve Roasted Turkey

1 Place the cooked turkey on a clean, sanitary cutting surface. Allow the turkey to stand for 20 minutes.

2 Remove the legs and thighs by pulling each leg away from the body with a fork. Use a boning knife to cut through the joint.



3 Separate the thigh from the leg and cut through the joint.



4 Slice the meat off the thigh parallel to the bone.



5 Carve the bird along one side of its breast-bone to remove a breast.



6 Cut the breast meat into slices at an angle across the grain, or direction of muscle fibers, of the flesh.



7 The breast can also be carved without removing it from the bird. Make a horizontal cut just above the wing toward the rib bones.



8 Slice the breast meat at an angle.

Searing

Your recipe may call for you to sear poultry before it is roasted or baked. Searing means to brown the poultry's surface quickly over high heat, usually in a hot pan. Searing is also done by **dredging**, or coating poultry parts in seasoned flour and then browning them in a skillet. Searing helps seal in juices. This is commonly done with chicken parts. For example, chicken is first cooked at 450°F (232°C) for 15 minutes. This allows the surface to brown. The heat is then reduced to 325°F (163°C). Then, the chicken finishes cooking in a 325°F to 350°F (163°C to 177°C) oven.

Broiling and Grilling

Broiled or grilled poultry can make a very attractive dinner plate. The food should have a well-browned surface and **crosshatch** grill marks, set at a 90-degree angle. Smaller birds or poultry pieces are ideal for broiling or grilling.

Frying Poultry

There are three ways to fry poultry: pan-frying, deep-frying, and pressure-frying. All three usually require that the food first be coated with a seasoned flour mixture or batter.

HOW TO

Broil or Grill Poultry

- 1 Preheat the broiler or grill.
- 2 Prepare the poultry. It can be marinated, seasoned, or simply brushed lightly with oil.



- 3 Place the poultry with its presentation side down on a grid or rack in a broiler.



- 4 Turn the poultry 90 degrees midway through cooking to create crosshatch grill marks.



- 5 Periodically brush the poultry with oil or marinade to help keep it moist.
- 6 Carefully turn over the poultry using tongs so it can cook on the opposite side. If the poultry has skin, use a spatula and tongs to avoid breaking the skin while turning.
- 7 Poultry is done when it reaches an internal temperature of 165°F (74°C) or higher for 15 seconds.

Pan-Frying

In pan-frying, the poultry is dipped in a batter or seasoned flour mixture that will turn golden brown and crispy when the food is done. Poultry should be juicy and flavorful, not oily or greasy. When pan-frying, the temperature of the fat or oil should be below the 400°F (204°C) **smoking point**, when the oil is so hot that it smokes. Cooking at the proper temperature will help avoid an oily taste. Always brown the presentation side first.

Deep-Frying

Poultry, especially chicken, is often deep-fried in fat. The poultry pieces are coated prior to frying. Common coatings include batter, flour, egg, and cracker or cereal crumbs.

Deep-fried chicken should be cooked at 325°F to 350°F (163°C to 177°C). The cooking time will depend on the size of the chicken pieces and the meat color. Dark meat takes longer to fry than light meat, and should be cooked separately. There should never be more than one layer of chicken in a frying basket. Otherwise, the oil will cool and the product will be greasy.

A TASTE OF HISTORY

2000

The human genome is deciphered

2006

New York bans trans fats from restaurants

Cutting the Fat

Trans fats are a health concern for restaurant customers. Trans fats are created when oils are turned into solids, or hydrogenated.

This concern has not gone unnoticed. In December 2006, New York City banned the use of artificial trans fats at restaurants. Several fast-food restaurants also changed their recipes to remove trans fats from some fried foods, including fried chicken, French fries, and baked goods.

History Application

Research New York City's ban on trans fats at restaurants. Write a paragraph that describes how this ban will affect the health of New York City's residents.

NCSSVB Individuals, Groups, and Institutions Analyze group and institutional influences on people, events, and elements of culture.

Pressure-Frying

Pressure-frying uses the same frying **principle**, or rule, as other frying methods but uses a commercial pressure fryer. A pressure fryer cooks foods more quickly and at lower temperatures than other frying methods. Foods that are pressure-fried are extra crispy on the outside and juicy on the inside. This makes them less greasy than other fried foods. You can pressure-fry any food that you would deep-fry.

Sautéing

Sautéing is a method of cooking poultry in an open pan until it is brown and juicy. Sautéing requires little fat.

Simmering and Poaching

Poaching is commonly used to cook whole, young, tender birds. Simmering is used for older, tougher birds. For simmering, poultry is cut into pieces.

Because these two cooking methods do not create strong flavors, it is important that the poultry be seasoned when it is cooked. Use flavorful stock as the cooking liquid or add a mirepoix or bouquet garni.

In both simmering and poaching, the liquid should completely cover the poultry. The broth created during cooking can be especially flavorful. You can reserve some of the liquid for later use with other recipes such as gravies or sauces.

Braising

Braising is a cooking method that starts with dry-heat cooking and ends with moist-heat cooking. Braised poultry should always be accompanied by the liquid in which it was prepared.

Like poultry that is simmered or poached, braised poultry gets a boost of flavor during cooking from its cooking liquid. Seasonings can be added to the liquid during cooking. The liquid may be reserved for use in sauces.

HOW TO

Sauté Poultry

- 1 Prepare the poultry by cutting it into thin slices. You may also flatten the poultry with a meat mallet prior to cooking.
- 2 Heat a small amount of fat in a pan. The fat must be hot before adding the poultry.
- 3 Dredge the poultry in seasoned flour if desired and lay it into the hot fat, presentation side down.



- 4 Cook until the presentation side is golden brown. Then, turn the poultry over and cook until the product is well done. Check the internal temperature.



- 5 You can finish some sautéed dishes by deglazing the pan with liquid to make a flavorful pan juice or sauce.

HOW TO

Braise Poultry

- 1 Brown and sear the poultry in a small amount of fat in a rondeau, or braising pan.



- 2 Add liquid, and bring to a simmer. The liquid should cover two-thirds of the poultry.

- 3 Cover the pan and continue to simmer on the rangetop or in the oven until the poultry is done. To test for doneness, use a fork to see that the meat is tender and cuts easily without falling apart. The meat must hold an internal temperature of 165°F (74°C) for at least 15 seconds.



Determining Doneness

No matter how poultry is cooked, the meat must be well done to be safe. Any kind of poultry should be cooked to a minimum internal temperature of 165°F (74°C). The cooked poultry should hold this temperature for at least 15 seconds. To properly measure temperature, place a meat thermometer in the thigh of the bird at its thickest part, away from the bone.

Stuffings

A **stuffing**, or seasoned food mixture often made with bread, can be an excellent addition to a poultry dish. However, the FDA Model Food Code says that all parts of stuffed food must be cooked to 165°F (74°C), including the stuffing. Although the flesh of the bird may reach a safe temperature, the stuffing may not. Bacteria can quickly multiply in the stuffing inside the bird's **cavity**, or hollow interior. By the time the stuffing fully cooks, the poultry is often dry. To be safe, prepare the stuffing for whole poultry separately.

SECTION 22.2

After You Read

Review Key Concepts

1. **Identify** the various methods that can be used to cook poultry.
2. **Explain** when you should use a dry or moist technique for cooking poultry.
3. **Describe** a typical stuffing.

Practice Culinary Academics

English Language Arts

4. You have been asked to select side dishes for the poultry dishes on a new menu. Use the Internet, library, and other resources to research appropriate side dishes for the following: roasted turkey, fried chicken, grilled chicken breast. Create a one-paragraph summary about the side dishes you chose, and why you chose them.

NCTE 8 Use information resources to gather information and create and communicate knowledge.

Small Bites

Storing Stuffing If you prepare wet and dry stuffing ingredients ahead of time, they should be kept refrigerated in a shallow baking pan. Never store stuffing in the same container as poultry because bacteria can grow.

Plating Poultry

How poultry is presented on the plate that you serve to a customer is important. Dishes can be garnished in the kitchen area, or poultry can be sliced and served at tableside.

Although many recipes suggest serving stuffing with poultry, there are other choices. Some side dishes include vegetables, casseroles, wild rice, potatoes, and pasta. Common garnishes for poultry include vegetables, fruits, and nuts.



Reading Check

Explain Where can poultry be prepared for presentation?



Mathematics

5. A poultry dinner at your restaurant sells for \$8. The food cost to prepare the dinner is 30% of the selling price. If you prepare 245 poultry dinners for a banquet, what is the total cost of food for the poultry dinners?

Math Concept Variables and Expressions

Translate verbal phrases into algebraic expressions by first defining a variable. In this way, algebraic expressions can be used to represent real-world situations.

Starting Hint Calculate how much money each dish will cost to make by solving for x : $8 \times 30\% = x$. Change 30% into a decimal (0.30), and multiply x by the total number of poultry dishes.

NCTM Algebra Represent and analyze mathematical situations and structures using algebraic symbols.



Check your answers at this book's Online Learning Center at glencoe.com.

Chapter Summary

All poultry must be inspected for safety by the USDA. The USDA first sorts poultry by species. Then, the birds are divided into classes by age and gender. Poultry flesh is made of three main components: water, protein, and fat. Fresh and frozen poultry are highly perishable and must be handled carefully. Fresh poultry should be used or frozen within 72 hours. Truss whole birds before cooking.

Follow cooking instructions for each type of bird so that well done poultry is tender and juicy. Roasting, baking, broiling, grilling, sautéing, pan-frying, deep-frying, and pressure-frying are all ways to cook poultry using dry heat. Simmering, poaching, and braising are moist-heat cooking methods that use liquids. Stuffing must be prepared properly and stored separately from the bird.

Content and Academic Vocabulary Review

1. Use each of these key terms and academic vocabulary words in a sentence.

Content Vocabulary

- poultry (p. 570)
- kind (p. 570)
- maturity (p. 571)
- connective tissue (p. 571)
- light meat (p. 571)
- dark meat (p. 571)
- giblets (p. 571)
- market form (p. 571)
- ready-to-cook (RTC) (p. 571)

- trussing (p. 575)
- render (p. 577)
- baste (p. 577)
- dredging (p. 579)
- crosshatch (p. 579)
- smoking point (p. 580)
- pressure-frying (p. 580)
- stuffing (p. 582)
- cavity (p. 582)

Academic Vocabulary

- acceptable (p. 572)
- indicate (p. 572)
- process (p. 577)
- principle (p. 580)

Review Key Concepts

2. **Identify** different kinds, classes, and market forms of poultry.
3. **Explain** how poultry is inspected and graded.
4. **Describe** how to handle, store, and prepare poultry for cooking.
5. **List** various dry and moist poultry cooking techniques.
6. **Explain** the problems that can occur when stuffing poultry.
7. **List** side dishes commonly served with poultry.

Critical Thinking

8. **Contrast** the differences between light meat and dark meat. What are some of the reasons you might choose one over the other?
9. **Explain** whether you agree that turkey and chicken are two of the most popular poultry choices in American culture. Why do you think this is or is not true?
10. **Analyze** why you think chefs might choose older, tougher birds for recipes if most customers prefer tender poultry meat.

Academic Skills

**Social Studies**

- 11. Research International Cuisine** You will be opening a new restaurant. Use the Internet, the library, or other sources to research the use of poultry in dishes from another culture. What cooking methods are used? What spices and seasonings are used? What side dishes are served? Use presentation software or other visual aids to create a five-minute oral report on your research.

NCSS I A Culture Analyze and explain the way cultures address human needs.

**English Language Arts**

- 12. Design a Flyer** Not long ago, you bought a neighborhood restaurant. The restaurant had been open for a long time but had been losing customers for a few years. The restaurant has been closed for two months while you remodeled it and designed a new menu. Design a flyer to let the neighborhood know the restaurant will reopen soon and that poultry will be a featured item on the new menu.

NCTE 5 Use different writing process elements to communicate effectively.

**Mathematics**

- 13. Calculate a Percentage** You are planning the menu for a large, formal catering event for a local school. The menu will have a number of different choices from which to choose. The school has asked that 30% of the meals have poultry as the main entrée. You and your catering staff will be serving 500 meals. To meet the school's request, how many of the meals will include poultry?

Math Concept Multiply Decimals by Whole

Numbers A percent is a ratio that compares a number to 100. To write a percent as a fraction, drop the percent sign and use the number as the numerator, with a denominator of 100. Convert it to a decimal by dividing the denominator by the numerator.

Starting Hint To calculate this percentage, rewrite the percent (30%) as a fraction with a denominator of 100 ($\frac{30}{100}$); convert the fraction to a decimal (.30). Then, multiply this decimal by the number of meals (500). Remember to put the decimal point in the correct place in your answer.

NCTM Number and Operations Understand meanings of operations and how they relate to one another.

Certification Prep

Directions Read the questions. Then, read the answer choices and choose the best possible answer for each.

- 14.** After using a cutting board to debone a chicken, the same cutting board is used to cut tomatoes. What is the proper procedure?
- wipe the cutting board and flip it to the clean side.
 - use a section of the cutting board that was not previously used.
 - clean and sanitize the cutting board
 - spray the cutting board with sanitizer and wipe it off.
- 15.** What is the most common ingredient in stuffing?
- | | |
|-----------|---------------|
| a. breads | c. seafood |
| b. meats | d. vegetables |

Sharpen your test-taking skills to improve your kitchen certification program score.

Test-Taking Tip

In a multiple choice test, read the questions carefully. Look for negative words (not, never, except, unless) and positive words (always, sometimes), which can affect how you answer the problem.

Real-World Skills and Applications

Teamwork Skills

- 16. Create a Recipe** Follow your teacher's instructions to form into teams. Create a turkey sandwich recipe for a health-focused restaurant. The recipe must be both healthy and flavorful. Once you have created your sandwich, work as a team to create a promotion to market your sandwich to customers.

Critical Thinking

- 17. Get Information** You are being hired to cater poultry dishes for a dinner party for a large company. The company would like three different options. List five questions to ask the company about what kinds of poultry dishes would be appropriate. Then, list at least one possible answer to each question.

Technology Applications

- 18. Create a Spreadsheet** You are in charge of teaching poultry cooking methods to new cooks at your restaurant. Use spreadsheet software to create a chart. List the different methods of cooking poultry, how to perform each method, and what class and style you might choose for each method.

Financial Literacy

- 19. Compare Ingredient Costs** You need to order chicken for your busy chicken restaurant. Whole chicken costs less than chicken parts, but whole chicken must be cut up by a chef. Use the Internet or library resources to find the costs of each market form of chicken. Which form is the most cost-effective to order?

Culinary Lab



Use the culinary skills you have learned in this chapter.

Prepare Poultry

- 20. Cook a Poultry Dish** Choose a cooking method and a recipe to prepare poultry in teams. Each team will judge the others' poultry dishes.

A. Choose from the following list:

- Roasted
- Baked
- Broiled
- Grilled
- Pan-fried
- Deep-fried
- Pressure-fried
- Poached
- Braised

- B. Choose a recipe.** Decide on a recipe that uses the cooking method your team chose.

- C. List your materials.** Make a list of the cooking items you will need to prepare your poultry dish. List oils, coatings, spices, and seasonings as well as equipment.

- D. Prepare your dish.** Prepare your poultry dish using the cooking method your team chose. Plate your poultry dish. The presentation of the dish is important.

- E. Serve your dish.** Serve your poultry dish to another team. Have that team evaluate it based on the following rating scale: 1 = Poor; 2 = Fair; 3 = Good; 4 = Great.

Create Your Evaluation

Write a one-page evaluation of another team's poultry dish. Use these categories for your evaluation:

- **Appearance** Is it cooked to the appropriate doneness? Does it appear burned or undercooked? Is it appropriately plated and garnished?
- **Flavor** Is the flavor consistent with the cooking method and food?
- **Texture** Is the poultry moist, tender, and juicy?