LEVEL TWO

Program Curriculum of the

FOUNDATIONS of restaurant management & culinary arts

LEVEL TWO
FOUNDATIONS of Restaurant Management & Culinary Arts
Level Two
Teacher’s Wraparound Edition
National Restaurant Association
Prentice Hall
Brief Table of Contents

Level 1
This is the first book in a two-book series covering the Foundations of Restaurant Management & Culinary Arts.

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Level 2

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Appendix A – Staying Connected with the National Restaurant Association
Appendix B – Handling a Foodborne-Illness Outbreak
Appendix C – Identifying Pests
Appendix D – Building a Career
Can students using this book receive recognition from the National Restaurant Association?

Yes!

The Foundations of Restaurant Management & Culinary Arts—Levels 1 and 2 curriculum teaches students the fundamental skills they will need to begin a career in the industry. What’s more, after completing each level of this industry-driven curriculum, students can sit for the National Restaurant Association’s exam for that level. Students who pass both the Level 1 and Level 2 exams receive certificates from the National Restaurant Association.
Welcome Teachers!

Dear Teachers:

Thank you for choosing *Foundations of Restaurant Management & Culinary Arts* for your classroom! We at the National Restaurant Association are thrilled to take this journey with you and your students as they learn more about the restaurant and foodservice industry. Restaurant and foodservice operations make up one of the most dynamic industries in the United States today. They are a shining example of the entrepreneurial spirit and a place where employees become owners every day.

 Millions of opportunities: As the nation’s second-largest private-sector employer, the restaurant and foodservice industry creates opportunity for millions of Americans. The industry employs nearly 13 million people today and is expected to add almost 2 million positions over the next decade.

This means there are many opportunities and career paths ahead for your students. Whether it's a quick-service restaurant, a family operation, or a multi-million-dollar company providing on-site foodservice at schools or hospitals, our industry is the place for them to build their career. Please encourage them to explore all that the industry has to offer.

Industry-backed learning materials matter: *Foundations of Restaurant Management & Culinary Arts* was developed with input from industry leaders. We believe that an industry-backed education is the best way to prepare your students to lead the industry into the future. Working with industry and academia, we have identified the management, operational, and culinary skills critical to success in the industry. The skills you teach in Level 1 and Level 2 will give your students a competitive advantage and solid foundation upon which to build their careers or further their educations.

We are proud that you have chosen to partner with the National Restaurant Association to prepare your students for their futures. As the leading business association for the restaurant industry, the Association works to lead America’s restaurant industry into a new era of prosperity, prominence, and participation, enhancing the quality of life for all we serve. Our philanthropic foundation, the National Restaurant Association Educational Foundation, enhances the restaurant industry’s service to the public through education, community engagement, and promotion of career opportunities.

We invite you to learn more about us at www.restaurant.org and www.nraef.org, and be sure to check out Overview of the ProStart® Program on page vi to learn more about the ProStart program and its benefits for students and educators.
Overview of the ProStart® Program

The National Restaurant Association Educational Foundation’s (NRAEF) ProStart® program teaches high school students the management and culinary skills needed for a career in the restaurant and foodservice industry. Throughout an exciting two-year period, they study in the classroom, participate in mentored work experiences, and test their skills in local and national competitions. Whether students are looking to enter the job market directly after graduation or plan to attend college, a ProStart graduate makes a solid candidate for success.

The heart of the ProStart program is the connection with the restaurant and foodservice industry. The career-building program was developed by the National Restaurant Association Educational Foundation and is supported by partnerships with state restaurant associations across the United States. The program is designed to:

- Increase and strengthen industry involvement in high school classrooms
- Set the standard for restaurant and foodservice career education
- Improve the image of restaurant and foodservice management as a career
- Recruit and train students to become the next industry leaders

How the ProStart Program Works

Classroom Experience
The Foundations of Restaurant Management & Culinary Arts—Levels 1 and 2 curriculum teaches students the fundamental skills they will need to begin a career in the industry. After completing each level of the industry-driven curriculum, students sit for the National Restaurant Association’s exam for that level.

Mentored Work Experience
ProStart students put classroom learning to work on the job in qualified industry operations. In their work experience, students receive mentor support, character development, and real-world skills that help launch their careers. Working with industry mentors, they demonstrate that they have mastered a series of competencies defined as critical to success by the industry.

ProStart National Certificate of Achievement
Students who pass both the Level 1 and Level 2 exams and complete the 400-hour mentored work experience are eligible to earn the ProStart National Certificate of Achievement. ProStart graduates who earn this prestigious certificate possess a solid foundation for their future careers, and are eligible to earn special scholarships and college credit from colleges and universities across the country. It also opens the door to our vibrant and growing industry.
National ProStart Invitational
During their two years in the program, students have the opportunity to put their skills to the ultimate test in the National ProStart Invitational. This demanding culinary and management competition invites top students to represent their state, with winning teams competing for scholarships. To compete at the National ProStart Invitational, teams must first win at the state level competition hosted by their state restaurant association.

How the ProStart Program Benefits Students
Students who earn the ProStart National Certificate of Achievement have access to numerous scholarship and articulation opportunities to put them on the fast track to a college degree. The NRAEF offers special scholarships to students who earn the certificate, as well as to winning teams at the National ProStart Invitational. Annually, more than $1.5 million in scholarships are awarded to competition winners at the state and national levels. In addition, many colleges and universities across the country have articulation agreements with ProStart that award students scholarships, class credits, or work hour credits when they enroll.

Students in the ProStart program have access to support and resources from the National Restaurant Association, the NRAEF, and their state restaurant association. They join a network of restaurateurs and chefs who recognize the students as the future of the industry and are committed to helping them succeed. The National Restaurant Association also offers a complimentary student membership to ProStart students.

How the ProStart Program Benefits Educators
ProStart program educators benefit from professional development opportunities, ranging from state-wide training hosted by state restaurant associations to national webinars. The NRAEF also sponsors the Educator Training & Development Awards. Recipients are hosted for a week of management training, alongside the company’s own managers, by ProStart sponsor companies.

Each participating state restaurant association employs a ProStart Coordinator to work with ProStart educators in the state. The coordinator helps connect educators and classrooms with local industry. These connections can aid in securing mentored work experience for students, classroom supplies and equipment, and classroom demonstrations, among others. ProStart educators also have access to support and resources from the National Restaurant Association and NRAEF, including a complimentary Association membership.

How to Get Involved
To learn more about joining the ProStart program, contact your state restaurant association. For more information on the program or to locate your state ProStart Coordinator, visit www.prostart.restaurant.org.
Learning Objectives

Chapter 1: Breakfast Food and Sandwiches

Section 1.1
1.1 List the characteristics of milk and identify ways to keep it safe.
1.2 Identify the different forms of cream and their fat contents.
1.3 Differentiate between butter and butter substitutes and recognize the characteristics of each.
1.4 Identify the different types of cheese and give examples of each.
1.5 List the characteristics of eggs and identify ways to keep them safe.
1.6 Prepare and serve eggs using a variety of cooking methods.

Section 1.2
1.7 Prepare pancakes, crêpes, waffles, and French toast.
1.8 Prepare ham, hash, grits, cold cereals, oatmeal, and sausage.
1.9 Prepare coffee, tea, and cocoa.

Section 1.3
1.10 Give examples of different types of sandwiches, including simple hot, open-faced, hors d’oeuvres, grilled, deep-fried, and simple cold.
1.11 Explain the roles of the three components of a sandwich: bread, spread, and filling.
1.12 Prepare common sandwich spreads and fillings.
1.13 List the necessary tools and equipment to make sandwiches at a sandwich station.
1.14 Demonstrate preparation of several types of sandwiches.

Chapter 2: Nutrition

Section 2.1
2.1 Explain why nutrition is important to the foodservice industry.
2.2 List the six basic types of nutrients found in food.
2.3 Describe how phytochemicals and fiber function in the body.
2.4 Name the types of carbohydrates and fats and describe their function in the body.
2.5 Identify food sources of carbohydrates and fats.
2.6 Describe cholesterol and identify its food sources.
2.7 Describe the makeup of proteins and their function in the body.
2.8 Identify food sources of proteins.
2.9 Describe the three major vegetarian diets.
2.10 List the functions of vitamins, minerals, and water in the body.
2.11 Identify food sources of vitamins, minerals, and water.
2.12 Explain what food additives are and how they function in food.
2.13 Explain the role of digestion in nutrition and health.

Section 2.2
2.14 List and describe techniques for food preparation that preserve nutrients.
2.15 Suggest ways to make menus and recipes more healthful.
2.16 Suggest healthful substitutes for high-fat items.
2.17 List and define recent developments in food production that may affect nutrition.

Chapter 3: Cost Control

Section 3.1
3.1 Identify the types of costs incurred by a foodservice business and give examples of each.
3.2 Explain the purposes of a budget.
3.3 Explain the purpose of a profit-and-loss report.
3.4 Identify methods for analyzing profit-and-loss reports.
3.5 Explain the purpose of invoices in a foodservice business.
3.6 Identify tools to help control costs.

Section 3.2
3.7 Define and calculate food cost and food cost percentage.
3.8 Given a problem, calculate as purchased (AP) and edible portion (EP) amounts.
3.9 Calculate the total cost and portion costs of a standardized recipe.
3.10 Develop a recipe cost card for a standardized recipe.
3.11 Explain the importance of portion control to food cost.
3.12 Give examples of portion-control devices used in foodservice operations.
3.13 List the steps in the process to control food costs.
3.14 Forecast sales by analyzing and evaluating sales histories, popularity indices, and production sheets.
3.15 Calculate a recipe’s yield and the number of portions it will produce.
3.16 Use a conversion factor to calculate a new yield for an existing recipe.
3.17 Explain the importance of standards for controlling production volume.
3.18 List and describe standard procedures used for controlling production volume.
3.19 List and explain the various methods for menu pricing.

Section 3.3
3.20 Explain the importance of standard labor costs to a business’s success.
3.21 List factors that affect labor costs.
3.22 Describe the relationship between sales volume and labor costs.
3.23 Explain the difference between a master schedule and a crew schedule.
3.24 Describe the components and factors to consider when developing labor schedules.

Section 3.4
3.25 List and describe purchasing, receiving, and storage procedures that help to preserve quality and control costs.
3.26 List ways to evaluate a finished product for quality.
3.27 Describe the process for identifying quality problems in the kitchen.
3.28 Determine the dollar value of inventory.
3.29 List and explain the various methods of inventory pricing.

Chapter 4: Salads and Garnishing

Section 4.1
4.1 Identify and describe the various ingredients used to make salads.
4.2 List the four parts of a salad and explain the role of each.
4.3 Identify various types of salad and explain how to prepare them.
4.4 Explain the roles of salads on the menu.
4.5 Design attractive salads.
4.6 Identify proper procedures for cleaning salad greens.
4.7 Identify proper procedures for storing salads.

Section 4.2
4.8 Differentiate among various oils and vinegars.
4.9 Prepare vinaigrettes and other emulsions.
4.10 Match dressings to salad ingredients.
4.11 Give examples of ingredients used to make dips.
4.12 Prepare several dips.

Section 4.3
4.13 Give examples of garnishes.
4.14 Describe and prepare ingredients commonly used as garnishes.
4.15 Garnish various items, including plates, desserts, and soups.

Chapter 5: Purchasing and Inventory

Section 5.1
5.1 Define the terms purchasing, selection, and procurement.
5.2 Outline the objectives of the purchasing function in a foodservice operation.
5.3 Explain the relationship between primary and intermediary sources and retailers.
5.4 Explain the differences between formal and informal buying and the formal bidding process.
5.5 List the types of goods and service that a foodservice operation might buy.
5.6 Describe the buyer’s role in a foodservice operation and explain the importance of ethical behavior to a buyer.
Section 5.2
5.7 List the factors that help to determine an operation’s quality standards.
5.8 Identify ways to communicate quality standards and give examples of standards a foodservice operation might use.
5.9 Describe buyer considerations when conducting a make-or-buy analysis.
5.10 Outline the process for procuring products and services.
5.11 Identify production records used to calculate buying needs.
5.12 Write purchase orders for items to be purchased.
5.13 List ways to verify that supplier services meet an operation’s needs.
5.14 List factors that affect food prices.

Section 5.3
5.15 List proper procedures for receiving deliveries.
5.16 List proper procedures for storing food and supplies.
5.17 Describe perpetual inventory and physical inventory systems.
5.18 Explain the difference between perishable and nonperishable food items.

Chapter 6: Meat, Poultry, and Seafood
Section 6.1
6.1 Outline the federal grading systems for meat.
6.2 Describe the various kinds of meat.
6.3 Identify the proper purchasing and storing procedures for meat.
6.4 List factors that affect purchasing decisions for meat.
6.5 Outline basic techniques for cooking meat.
6.6 Match various cooking methods with different forms of meat.

Section 6.2
6.7 Outline the federal grading systems for poultry.
6.8 Describe the various kinds of poultry.
6.9 Identify the proper purchasing and storing procedures for poultry.
6.10 List factors that affect purchasing decisions for poultry.
6.11 Outline basic techniques for cooking poultry.
6.12 Match various cooking methods with different forms of poultry.

Section 6.3
6.13 Outline the federal grading systems for seafood.
6.14 Describe the various kinds of seafood.
6.15 Identify the proper purchasing and storing procedures for seafood.
6.16 List factors that affect purchasing decisions for seafood.
6.17 Outline basic techniques for cooking seafood.
6.18 Match various cooking methods with different forms of seafood.

Section 6.4
6.19 Identify and describe different types of charcuterie.
6.20 Explain garde manger and how it relates to charcuterie.

Chapter 7: Marketing
Section 7.1
7.1 Define marketing, and list the steps in the marketing process.
7.2 Explain the role that marketing plays in determining products and services.
7.3 List factors that affect a market environment.
7.4 Define target market, and explain why it is important to a business.
7.5 Identify the parts of a SWOT analysis.
7.6 List ways to attract and keep customers.

Section 7.2
7.7 List reasons why promotions are important.
7.8 Identify the steps in developing a promotion mix and a promotion plan.
7.9 Explain the importance of training to promotions.
7.10 Recognize different types of sales promotions.
Section 7.3
7.13 Explain the importance of the menu to a foodservice operation.
7.14 Describe à la carte, table d’hôte, California, limited, du jour, and cycle menus.
7.15 Organize the information on a menu.
7.16 Explain principles of menu layout and design.
7.17 Identify ways to test new menu items.
7.18 Explain the purposes of a menu sales mix analysis.
7.19 Define profitability and target margin.
7.20 Classify menu items according to their popularity.
7.21 List and compare basic pricing methods.

Chapter 8: Desserts and Baked Goods

Section 8.1
8.1 Identify and use common ingredients in baking.
8.2 Calculate ingredient weights using baker’s percentages.
8.3 Convert baking recipes to a new yield.

Section 8.2
8.4 Differentiate between lean doughs, rich doughs, sponge doughs, and sourdoughs, and give examples.
8.5 Mix yeast dough using the straight-mix method.
8.6 Proof bake shop items.
8.7 Prepare yeast breads.

Section 8.3
8.8 Prepare different types of quick breads and cake batters.
8.9 Identify the functions of icings and determine which are best suited for different baked goods.
8.10 Describe and prepare steamed puddings and dessert soufflés.

Section 8.4
8.11 Prepare pie dough using the 3-2-1 method.
8.12 Describe the procedure for baking blind.
8.13 Describe roll-in dough, phyllo dough, and pâte à choux.
8.14 Prepare cookies using various makeup methods.

Section 8.5
8.15 Explain how chocolate is made, including chocolate liquor, cocoa butter, and cocoa powder.
8.16 Demonstrate how to store chocolate properly.
8.17 Explain how chocolate is tempered.

Section 8.6
8.18 Explain how crème anglaise, pastry creams, and Bavarian creams are made, and how they are used in desserts.
8.19 List the characteristics of ice cream and give examples of other frozen desserts.
8.20 List the steps for preparing poached fruits and tortes.
8.21 List guidelines for plating and presenting desserts.

Chapter 9: Sustainability in the Restaurant and Foodservice Industry

Section 9.1
9.1 Define the terms sustainability and conservation.
9.2 Explain why water conservation is important.
9.3 List ways in which a restaurant or foodservice operation can improve the efficiency of its water usage.

Section 9.2
9.4 Explain the differences between renewable and nonrenewable energy sources.
9.5 Explain why using energy efficiently is important.
9.6 List ways in which a restaurant or foodservice operation can improve the efficiency of its energy usage.
9.7 List ways in which a restaurant or foodservice operation can build or make structural improvements to its facility in a sustainable way.
Section 9.3
9.8 Identify ways to reduce the total amount of waste in a restaurant or foodservice operation.
9.9 List items that a restaurant or foodservice operation can reuse.
9.10 List items that a restaurant or foodservice operation can recycle.

Section 9.4
9.11 Define the term local sourcing.
9.12 Identify the steps a restaurant or foodservice operation should take to purchase and then promote the use of sustainable food products.
9.13 Identify the issues surrounding the global production of seafood, coffee, animals, and organic food.

Chapter 10: Global Cuisine 1: The Americas

Section 10.1
10.1 Identify the major influences, ingredients, flavors, and cooking techniques of Northeastern American cuisine.
10.2 Identify the major influences, ingredients, flavors, and cooking techniques of Midwestern American cuisine.
10.3 Identify the major influences, ingredients, flavors, and cooking techniques of Southern American cuisine.
10.4 Identify the major influences, ingredients, flavors, and cooking techniques of Southwestern American cuisine.
10.5 Identify the major influences, ingredients, flavors, and cooking techniques of Pacific Coast/Rim cuisine.
10.6 Identify the major influences, ingredients, flavors, and cooking techniques of Mexican cuisine.

Section 10.2
10.7 Identify the major influences, ingredients, flavors, and cooking techniques of Central American cuisine.
10.8 Identify the major influences, ingredients, flavors, and cooking techniques of Caribbean cuisine.

Section 10.3
10.9 Identify the major influences, ingredients, flavors, and cooking techniques of Brazilian cuisine.
10.10 Identify the major influences, ingredients, flavors, and cooking techniques of Bolivian cuisine.

Chapter 11: Global Cuisine 2: Europe, the Mediterranean, the Middle East, and Asia

Section 11.1
11.1 Identify the major influences, ingredients, flavors, and cooking techniques of French cuisine.
11.2 Identify the major influences, ingredients, flavors, and cooking techniques of Italian cuisine.
11.3 Identify the major influences, ingredients, flavors, and cooking techniques of Spanish cuisine.

Section 11.2
11.4 Identify the major influences, ingredients, flavors, and cooking techniques of Moroccan cuisine.
11.5 Identify the major influences, ingredients, flavors, and cooking techniques of Greek cuisine.
11.6 Identify the major influences, ingredients, flavors, and cooking techniques of Tunisian cuisine.

Section 11.3
11.7 Identify the major influences, ingredients, flavors, and cooking techniques of Egyptian cuisine.
11.8 Identify the major influences, ingredients, flavors, and cooking techniques of Iranian cuisine.
11.9 Identify the major influences, ingredients, flavors, and cooking techniques of Saudi Arabian cuisine.

Section 11.4
11.10 Identify the major influences, ingredients, flavors, and cooking techniques of Chinese cuisine.
11.11 Identify the major influences, ingredients, flavors, and cooking techniques of Japanese cuisine.
11.12 Identify the major influences, ingredients, flavors, and cooking techniques of Indian cuisine.
Preface

Our objective with this program is simple yet significant:

*Provide an industry-driven curriculum that prepares students for a career in restaurant and foodservice management.*

To achieve that objective, *Foundations of Restaurant Management & Culinary Arts* was meticulously developed by the National Restaurant Association with input and contributions from countless representatives from both industry and education. That balanced perspective is important in helping students make the connection between classrooms and careers.

The visual tour that follows summarizes many of this textbook’s most distinguishing and remarkable features. *Foundations of Restaurant Management & Culinary Arts,* Level 1 and Level 2, provide the following benefits:

- Comprehensive coverage of culinary and management topics
- An industry-infused approach
- Pedagogy that supports 21st Century Learning
- Relevant and timely topics from global cuisines to sustainability
- Content aligned to certificates and ProStart program opportunities
- Certificate opportunities that meet Carl Perkins funding requirements
- Supplements and technologies that help educators do more in less time

We offer a pedagogy that is fortified by 21st Century Learning themes and objectives:

- Critical thinking and problem solving
- Communication and collaboration
- Creativity and innovation
- Global awareness
- Health literacy

Thank you for considering *Foundations of Restaurant Management & Culinary Arts!*
Features of the Teacher’s Wraparound Edition Include:

**Chapter Overview**—This includes summary information on the sections in each chapter. Teachers can use this material as an introduction to what students are about to learn.

**Advance Preparation**—A table is included on the opening page of each chapter, with suggestions for steps instructors may take to prepare for the class.

**Customized Instruction Options**—These list the pages where teachers can look for instructional materials customized for different levels of learning.

**Chapter Tools**—Directs teachers to activities that include 21st-Century Skills, Mathematics, Science, or Literacy.

**ServSafe Connection**—This points teachers to where this content is covered.

**Focus and Engage**—Introductory text helps teachers get the students introduced in what they are about to learn.

**Introduce the Section**—This includes a list of important facts covered in the chapter that can be used to introduce content to come.

**Vocabulary Terms**—Key terms and definitions introduced on the current page are supplied.

**Discuss**—These discussion topics relate directly and indirectly to the content on the current page.

**Reinforce and Review**—Topics covered in the previous section, or in previous chapters, that instructors may want to review before continuing are provided.

**Teaching Tips**—These items help explain the content and provide additional information for instructors to use in the classroom.
Customized Instruction Boxes—These include accommodations and additional activities for More Advanced, Less Advanced, ESOL, Special Needs, and At-Risk Students.

Figure Focus—Every figure in the student edition has a corresponding Figure Focus feature in the Teacher’s Wraparound Edition, to provide additional information for discussion and instruction.

In-Class and Homework Activity Boxes—These original activities are not in the student edition textbook. They are designed to encourage students to use critical-thinking skill and to promote teamwork, cooperation, and leadership skills.

Feature Focuses—Every feature and box in the student edition has a corresponding feature in the Teacher’s Wraparound Edition, to provide answers, discussion prompts, and additional teaching tips.

End-of-Section and Chapter Activities—Answers, additional teaching tips, discussion points, and supplemental activities relating to the end of chapter activities are provided.
Supplements:

Activity Guide

The Activity Guide contains a wealth of additional lab and classroom activities to supplement the activities in the Student Edition. It includes critical-thinking activities that review and enhance the text learning, as well as hands-on application activities that give students more opportunities to experience the course content interactively. Separate books for Level 1 and Level 2.

Printed Test Bank with ExamView® CD

The comprehensive test bank includes objective and short answer questions for both levels of the Student Text. Questions are provided in print format for duplication with separate answer keys, as well as on CD in ExamView® software for creating randomized and customized exams. Separate books for Level 1 and Level 2.

Teacher’s Resource DVD

A complete media DVD supports the teaching package. It includes PowerPoint® presentations, videos, and interactive media for each chapter, as well as point-of-use teaching notes and tips, answers, and class/lab set-up information for the activities in the student Activity Guide. Separate DVDs for Level 1 and Level 2.

CourseSmart Textbooks Online

The CourseSmart Textbooks Online enable students to access the textbook they use in class from home or anywhere with an Internet connection. CourseSmart eTextbooks give schools an affordable alternative to providing students with the essential learning resources they need to succeed. And, with a CourseSmart eTextbook, students can search the text, make notes online, print out reading assignments that incorporate lecture notes, and bookmark important passages for later review. For more information, visit www.coursesmart.com.

Additional Supplements

The Companion Web site includes student resources and additional activities such as crossword puzzles, essay questions, and self-grading quizzes. To access the Companion Web site, please visit http://www.pearsonhighered.com/frmca. Recipe Cards are printed on laminated cards for durability and ease of use.
Acknowledgements

The development of Level 1 and Level 2 of Foundations of Restaurant Management & Culinary Arts would not have been possible without the expertise and guidance of our many advisors, contributors, and reviewers. We would like to thank the thousands of educators who have been involved in the ProStart program and given us invaluable support and feedback as they have taught the National Restaurant Association’s curriculum. Additionally, we offer our thanks to the following individuals and organizations for their time, effort, and dedication in creating these first editions.

Curt Archambault
Jack in the Box, Inc.

Linda Bacin and the staff
of Bella Bacinos, Chicago, IL

Allen Bild
Hammond Area Career Center
Hammond, IN

Brian Bergquist
University of Wisconsin-Stout

Scott Brecher
Long Beach High School
Long Beach, NY

Barbara Jean Bruin
The Collins College of Hospitality Management

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Concept Associates, Inc.

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Sugar Land, TX

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Hospitality Education Foundation of Georgia

Elizabeth Hales
Compass Group North America

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Lithia Springs High School
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Tri-County Regional Vocational High School
Medfield, MA

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The Ohio State University

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McHenry County College

Lauren Krzystofiak
Lake Park High School
Roselle, IL

Terri Kuebler
Eureka CUSD #140 High School
Goodfield, IL

Lettuce Entertain You Enterprises
and the staff of Wildfire, Chicago, IL

Michael Levin
Peabody Veterans Memorial High School
Peabody, MA

Paul Malcolm
Johnson & Wales University Charlotte

Edward Manville
Apex High School
Apex, NC

Victor Martinez
Hospitality Industry Education Foundation

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Culinary Institute of America

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Compass Group North America

Karl Titz
University of Houston

Laura Walsh
Walsh Nutrition Group, Inc.

Anthony Wietek
The Cooking and Hospitality Institute of Chicago

LaDeana Wentzel
Restaurant Association of Maryland Education Foundation

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Tulsa Technology Center
Tulsa, OK

Michael Zema
Elgin Community College, Emeritus
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Guy “Guido” Fieri

Restaurateur, Celebrity Chef, Food Network Host.

Johnny Garlic’s California Italian Restaurants (3 locations), Tex Wasabi’s Restaurant (2 Locations), Knuckle Sandwich, LLC

Three years ago, I won the second season of The Next Food Network Star. Today, as the “Bad Boy” of the Food Network, I host three popular shows—Guy’s Big Bite, Ultimate Recipe Showdown, and Diners, Drive-ins, and Dives.

The Story Behind the Man

I actively chose this career. I started cooking at about ten. In my house, the rule was that "whenever cooks make the decision (on what to have),..." I was such a pest that mom made a rule that you couldn’t ask "what’s for dinner?" until after lunch.

I began my love affair with food at the age of ten, selling soft pretzels from a three-wheeled bicycle cart I built with my father. I named the cart "The Awesome Pretzel." Through selling pretzels and washing dishes, I earned enough money in six years to study abroad as an exchange student in Chantilly, France. While there, I gained a true appreciation not only for international cuisine, but the culture and lifestyle associated with it. I also realized that if you go to the point of origin and eat a food there, that’s where you get the best experience. So, for example, go to France to have a baguette, go to Philly to have a cheesesteak.

I learned the way I recommend everyone should learn…you need to try lots of things, even if you aren’t crazy about them. I’d rather have ten two-bite meals than one big one.

After graduating from the University of Nevada-Las Vegas with a bachelor’s degree in hospitality management, I went to work for Stouffer's, managing its flagship restaurant in Long Beach, California. After three years, I became district manager of Louise’s Trattoria, overseeing six restaurants and responsible for recruiting and training for the growing chain.

In 1996, my business partner Steve Gruber and I opened Johnny Garlic’s, an Italian restaurant in Santa Rosa. We soon had two more sites for that concept, and then moved on to develop Tex Wasabi’s, a Southern BBQ and California sushi restaurant. (See what I mean about trying things?)
Although he is busy with so many enterprises, Guy believes in using his celebrity to help others. In the fall of 2007, the Navy flew him to the Persian Gulf to entertain and cook for the troops.

Keys to Success

I believe that to succeed in this industry you need to take calculated risks. You can’t be hesitant to try things. Food is the common denominator of all people from all walks of life. So experience everything, eat everything you can. Listen to anybody that cooks. Challenge yourself to enjoy food that is not normal to you. Try everything! And then “Own it! Do you own it?”

In all aspects of this industry, food is an emotional experience. Whether you’re in the kitchen or out in front, on the restaurant floor or the management floor. And we all need to understand it.

We’ve skipped a few generations of food at home...ever since the advent of the two-person working family in the 1970s. We’ve not learning pass downs from grandma and mom anymore. Instead, we’ve moved to home replacement meals. There’s been a huge influx of midmarket family restaurants.

We’re also waking up. We eat for different reasons...palate and health. But we all want better food. Remember, we are what we eat, and we’re moving back to basics. That will be the focus of the industry in years to come.

It’s a smarter chef’s game. We need to be creative, we need to take risks. But we also have to be supremely aware of food safety and cost management.

So, to be successful, experiment and apply. Study hard and use this program. If you want a broad awareness of food, this is your program. If you want to be a professional, this is where you start. If you want to be a legend, this is a great foundation.
Chapter 1 Overview

Chapter 1 presents dairy products and eggs; breakfast food and drinks; and sandwiches.

Section 1: This section reviews milk and milk products, cream, butter and butter substitutes, cheese, and eggs.

Section 2: This section covers pancakes, waffles, crépes, and French toast; preparing breakfast meats and starches; hot breakfast beverages; and matching sauces to foods.

Section 3: This section covers the types of sandwiches, primary sandwich components, and sandwich stations.

Advance Preparation

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<td>Contact</td>
<td>Grocer, deli, or cheese shop</td>
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<tr>
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<td>Reference book, software, or Web site for caloric values of common foods (USDA Web site offers this)</td>
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<tr>
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ServSafe Connection

| Pages 7, 15, 19, 44, 47, 56, 59 |
Case Study
Following a Hunch for Brunch

- Miguel sees the potential to increase revenue by offering weekend brunch.
- Chef Kate understands the complicated logistics, which are the realities of serving brunch.
- The logistics will have an impact on the profitability of the tactic.
- Note that there are follow-up questions about the case study at the end of the chapter.
- This activity could be done in groups, as a class, or as a homework assignment.

In-Class Activity:
KWL Chart

Literacy Connection, 21st-Century Skills—Be Self-Directed Learners

Students might feel that there is not much to learn about breakfast foods and sandwiches. Most students have had some experience with these topics, and they might seem straightforward.

However, the students might have a few questions that arise as they consider the various aspects of the case study and their own experiences.

Have the students fold a piece of paper in thirds, lengthwise, making three columns. Label the columns, from left to right, “Know,” “Want to Know,” and “Learned.”

In the Know column, have the students list all the facts they feel confident about concerning breakfast foods and sandwiches. In the Want to Know column, have the students list all the questions they have concerning this topic.

At the end of the chapter, after the students have learned the material, have them fill in the Learned column. They will write the answers to their questions. They will also write the facts they learned that are new, plus any facts that were mistaken from the Know column that are now correct.

Perhaps students will be surprised at how much new information they learned.

Discuss these results as a class.

Students can keep this chart in their notebooks for later review.
Professional Profile

Discuss
Chef Nims encourages experience and training. Discuss the importance of both. Do any of the students work in the restaurant and foodservice industry, or have they?

Reinforce and Review
Chef Nims has a creative take on Eggs Benedict. Are the students familiar with Eggs Benedict? Many will be: toasted English muffin half, Canadian bacon slice, and a poached egg, topped with hollandaise sauce.
Are the students familiar with a grilled Reuben sandwich? How does it differ from a regular corned beef sandwich? Perhaps the students are aware that a Reuben is corned beef, Swiss cheese, and sauerkraut on rye bread, grilled.

Teaching Tips
Do not assume that all the students have experience with even classic cuisine.
Be sure that the students can express their need to learn in a nonthreatening atmosphere.
Focus and Engage

Discuss
- The information in this section is visual and hands-on.
- The emphasis is “how-to” for useful culinary skills.

Section 1.1 Dairy Products and Eggs

Introduce the Section
a. This section will specifically teach techniques for cooking eggs.
b. The students will learn about dairy processes that affect culinary decisions.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation aloud.
c. Discuss the definition of each word.

Teach

Discuss
- Ask the students collectively if they eat breakfast before school.
- Breakfast is essential to good health and well-being. It should be part of a daily routine.
Discuss

- Not too many people die of undulant fever (Brucellosis) in the United States today because dairy products are pasteurized.
- Although undulant fever is no longer a threat due to the advances in food science and food safety, if pasteurization practices were abandoned, the disease could become a threat again.
- Homogenization is not done for safety, but for convenience and mouthfeel.

Vocabulary Terms

- **Pasteurization**: Heat processing to kill microbes.
- **Homogenization**: Blending fat uniformly throughout milk.
Figure Focus

**Figure 1.1:** A pasteurization machinery line this efficient and intricate would probably have been beyond Louis Pasteur’s imagination in the 1860s.

---

ServSafe Connection: The Pasteurization Process

Sophisticated and complex dairy machinery can handle very large quantities of milk.

**Discuss**

- Lactose is the sugar found in milk.
- Lactose intolerance is often a genetic condition.
- Casein allergy is unrelated to lactose intolerance. It is an allergy triggered by a milk protein called casein.
Table 1.1: Types of Milk

- Some fat-free milks have additional milk solids added.
- Some fat-free milks are modified with texturizing agent to more closely match the mouth-feel of milk with butterfat.
- If milk is not homogenized, the fat will float to the top as cream, and the remaining milk will be low in fat.
- Fat-free milk is sometimes called skim milk because it was the milk that remained after all the cream was skimmed off the top of nonhomogenized milk.
- Buttermilk is a fermented product that lactose-intolerant people can use.
- Evaporated milk was used for homemade infant formula before commercial formulas were developed.
- Condensed milk is often marketed as “sweetened condensed milk.”
- UHT milk has a distinctive flavor that not everyone appreciates.
- Reconstituted powdered milk must be carefully mixed to avoid lumps.
- Lactose-free milk is often called “acidophilus milk.”
- The mineral calcium needs to be added to soy milk to make it a nutritional substitute for fresh milk.
Like soy milk, rice milk needs calcium to be a nutritional substitute for fresh milk. Soy milk provides protein, but rice milk does not provide much of it, so rice milk also needs added protein to be a good substitute. If someone has a casein allergy, he or she should make sure that the protein added to rice milk is not casein.

Discuss

- Ask, “If you drink milk, can you tell the difference between whole milk and skim without seeing the label?”
- If the students respond positively, ask them how they can tell.
- They are probably referring to mouthfeel.
- The mouth can perceive a slight difference in viscosity (thickness of flow) between the two types.
- There is a subtle difference in aroma from butterfat in whole milk as well.

Nutrition: Lactose Intolerance

Only fermented dairy products are lactose free. Nondairy calcium sources include dark green, leafy vegetables that are gently cooked and fish canned with the bones (such as sardines).
Vocabulary Terms

- **Cream**: The high-fat fraction of milk before homogenization, usually skimmed from the top and processed separately.

**Figure Focus**

**Figure 1.2**: Even with a FIFO system, it is important to pay careful attention to expiration dates.
Table 1.2: Types of Cream

- “Culturing” means adding bacteria to ferment the lactose. This gives a tangy flavor to sour cream, yogurt, and buttermilk.

**Discuss**

- Ask the students if they can taste the difference between butter and margarine.
- Have the students read and compare the labels of butter, whipped butter, and spreadable butter.

---

**Butter and Butter Substitutes**

Different types of butter are chosen based on their flavor and consistency. The best grades of butter are either Grade AA or Grade A. Butter is most commonly used to add flavor, richness, or smoothness to a dish.

Butter is made by mixing cream containing between 30 percent and 45 percent milkfat at a high speed. The finished butter must contain at least 80 percent butterfat content. The remaining 20 percent of the butter is milk solids and water:

- **Sweet butter** is butter made only from pasteurized fresh cream. It is typically pale yellow and may be salted or unsalted.
- **Cultured butter** (European butter) is made from fermented cream and has a higher butterfat content and lower salt content than regular butter.

While butter has traditionally been produced in sticks or blocks, spreadable butter and whipped butter are now available. Both have been chemically formulated to spread more easily.
Fast Fact: Did You Know . . .?
Please note that a European-style butter and cheese Alfredo sauce can be higher in fat than a cream-based Alfredo sauce.

Discuss
- Butter’s appealing flavor comes from milk fat and milk solids.
- Margarine does not contain milk fat, so it has a different flavor.
- Some margarine has milk solids or even some butterfat added for flavor, but then it is no longer true margarine.
- Margarine and butter have the same amount of fat and calories.
- The fat in margarine might be more heart-healthy than the fat in butter.
- Butter is usually more expensive than margarine.

Vocabulary Terms
- Clarified: To make butter or fat clear by gently heating it and removing any impurities.
- Smoke point: The temperature at which the decomposition products of frying oils become visible as bluish smoke.
- Butter substitute: Any of a variety of alternate ingredients that can be used instead of oil or butter in the preparation of foods, such as fruit oils, nut oils, vegetable oils, and oils from grains. These products are available as reduced fat, no fat, and in different forms such as spreadable and liquid oils.
- Margarine: A butter substitute often consisting of a blend of hydrogenated vegetable oils mixed with emulsifiers, vitamins, coloring matter, and other ingredients.
Fast Fact: Did You Know . . . ?
Many food science innovations have come from military pursuits, including canned food, margarine (both for the French military), and even instant orange breakfast drink (from NASA).

Nutrition: Trans Fat
Trans fats have become an increased problem in the years since manufacturers have replaced saturated animal fats in food processing and cooking operations with hydrogenated vegetable fats.

Essential Skills: Clarifying Butter
The product that remains after clarifying butter is pure butterfat. When melted, it is clear.
Discuss

- Many cheeses are begun by curdling milk with an enzyme called rennet. The whey remains unfermented.
- Other cheeses are begun by curdling milk by friendly bacterial fermentation, which makes the whey sour.

Vocabulary Terms

- Parmigiano: A hard cheese made near Parma and other places in Italy, sometimes called Parmigiano-Reggiano, sometimes called Parmesan.
- Curdling: Enzyme or bacterial separation of milk proteins (curds) from liquid, other protein, and carbohydrate fractions (whey).

Figure Focus

**Figure 1.3a:** The foam contains the nonfat fraction.

**Figure 1.3b:** The butterfat will be clear when melted, but will not remain liquid when chilled. It will return to a solid because butterfat is a saturated fat.

**Figure 1.4:** Each type of cheese has a distinctive flavor, yet each one starts with milk or cream. If possible, have a cheese tasting in class.
ServSafe Connection: Receiving Cheese

Cheese is not “spoiled” unless it is rotten. Rotten cheese grows microorganisms that are not desirable or typical of the variety of cheese. Friendly microorganisms are often part of the manufacturing process for cheese.

Did You Know . . . ?
The cream that holds the curds together is fresh, not fermented. Creamed cottage cheese is actually a cheese “dish” made of cheese, salt, and a cream or milk liquid.

Discuss

- Each type of cheese has a flavor and texture that is unique.
- Bacterial cultures usually are responsible for the particular characteristics of a cheese.
- Cultures might grow best in certain locales, which is why certain cheeses are made only in certain regions.
- Other cheeses could be made elsewhere, but the cultures are carefully guarded as trade secrets.

Vocabulary Terms

- Unripened cheese: Fresh cheeses that are not aged, and can be made with bacteria, rennet, or both.
- Ripened cheese: Cheeses that are aged or ripened by bacteria.
ESOL Students

ESOL students can do either of the activities listed at left.
Another option would be to have ESOL students introduce a cheese or cheese dish from his or her native culture to the class.
The teacher’s discretion should be used as to whether or not ESOL students like to be featured for their native culture or would rather learn the local culture.

More Advanced Students

Students should research the number of cheese varieties produced in France.
Why is France known for its cheese industry?
Are there characteristics that make French cheese superior to other cheeses?
Have students learn the names and characteristics of five new cheeses they have not yet tasted.
If possible, in cooperation with a local grocer or deli, have the students taste these five cheeses and describe them.
Help the special needs students present their findings to the class at the same time the more advanced students present their findings.
Discuss

- Perhaps the students have had “grilled cheese sandwiches” or “macaroni and cheese” made with processed cheese-food products.
- Do they have opinions about how processed cheeses taste as compared to natural cheeses?
- Can the students identify different melting or mouthfeel characteristics of processed cheese products and natural cheeses?

Essential Skills: Considerations in Storing Cheese

The seventeenth-century composer J. S. Bach used a parchment-type paper for writing his music. Before his music was fully appreciated, some of his original written compositions were used as cheese wrappers.

In-Class Activity: Poetry Corner

Literacy Connection, 21st-Century Skills—Think Creatively, Access and Evaluate Information

In 1987 a large slab of ancient cheese was found in a peat bog in Ireland. It was 1,400 years old and brave people tasted it. They did not get ill, but it didn’t taste very good. It probably tasted like a peat bog. Have the students do some quick online research about this story. Do not give them the details.

This cheese was not found in the Irish county of Limerick. However, have the students compose a limerick-style poem about it (G-rated). Have the students share their poems with one another in a lighthearted poetry reading format.

Vocabulary Terms

- **Albumen**: Egg white.
- **Yolk**: The cell nucleus of an egg; contains protein, emulsifier, cholesterol, and fat.
- **Chalazae**: Tissue that suspends the yolk within the egg.

Figure Focus

**Figure 1.5**: If cheese wrapping is completely airtight, pathogens can grow.

**Figure 1.6**: Eggs have an anatomy. They are large single cells.
**Discuss**

- Most commercially sold eggs are white chicken eggs.
- Chicken eggs are also available in brown, green, blue, and pink.
- White eggs come from white chickens, and brown eggs come from brownish chickens.
- Auracana chickens lay green eggs because they possess the pigment oocyanin, which causes the green/blue eggs.
- The color of the shell has nothing to do with egg quality, nutritional value, or flavor.
- Most of the eggs in your supermarket come from the following breeds of chickens: the White Leghorn, the Rhode Island Red, the New Hampshire, and the Plymouth Rock.

---

**Figure Focus**

**Figure 1.7:** Use the best-looking eggs for sunny-side up and over-easy fried eggs.
Figure Focus

Figure 1.8: Chicken eggs come in various sizes and colors. If possible, bring a variety of eggs to class for the students to examine.

ServSafe Connection: Cooking with Eggs

Pasteurized raw eggs have been treated to eliminate *Salmonella* spp.

In-Class Activity: Put Humpty Dumpty Together Again—Low-Cholesterol Eggs Jigsaw

Science Connection, 21st-Century Skills—Financial, Economic, Business, and Entrepreneurial Literacy

As individuals or in groups, have the students research and become “expert answerers” for one of these questions. When each student or group presents findings to the class, the entire topic will have been covered.

Why do eggs have a reputation for being high in cholesterol? Are they a high-cholesterol food?

Have there been efforts to develop a low-cholesterol egg? Have they been successful?

How are these eggs produced? Are they a product of genetic engineering? Or are they solely a product of the type of feed given to hens? Are they from a particular breed of chicken?

What are their ideas about the business marketing potential for this type of egg?

Do the students think that low-cholesterol eggs would sell well in a restaurant? Would this type of egg provide a business opportunity for a restaurant?

Write or rework questions as desired to suit your classroom.

Have students present their findings to one another.
There are many choices of market forms of eggs, depending on the end product.

Powdered eggs are fully dried eggs. They were used in World War II because they are convenient for military use and camping and have an extended shelf life.

Ask students what types of eggs they use at home.

Table 1.4: Market Forms of Eggs

<table>
<thead>
<tr>
<th>Form</th>
<th>Usage</th>
</tr>
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<tbody>
<tr>
<td>Fresh (shell) eggs</td>
<td>These are most often used for breakfast cooking or in recipes in which a whole shell egg is required. Use pasteurized shell eggs if the operation mainly serves high-risk populations, such as those in hospitals or mental health facilities.</td>
</tr>
<tr>
<td>Frozen eggs</td>
<td>Frozen eggs are usually made from high-quality fresh eggs and are excellent for use in scrambled eggs, omelets, French toast, and baking. They are pasteurized and are usually purchased in 30 lb. cans or milk carton-style containers. Frozen eggs take at least 2 days to thaw at refrigerated temperatures.</td>
</tr>
<tr>
<td>Dried eggs</td>
<td>Use dried eggs primarily for baking. They are not good for breakfast cooking. Dried eggs do not store well, so keep them refrigerated or frozen and tightly sealed.</td>
</tr>
<tr>
<td>Egg substitutes</td>
<td>Egg substitutes may be entirely egg-free or made from egg whites, with dairy or vegetable products substituted for the yolks. These substitutes are important for people with cholesterol-free diet requirements.</td>
</tr>
<tr>
<td>Organic and other alternatives</td>
<td>Many customers now look for organic products and/or products that indicate humane treatment of the animals that produced the item. Organic eggs come from chickens that have been raised without the use of antibiotics, pesticides, or hormones. Some organic eggs taste better. Many people are using the USDA's National Organic Program, which certifies the process used by the producer. Customers may also look for the use of cage-free and free-range eggs. These descriptions refer to the way the chickens were treated on the farm and are related to how much space and outdoor access they have; however, the term is not regulated legally and their definitions vary by farm. An operation that wants to purchase these types of eggs should research the producer before doing so.</td>
</tr>
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</table>

Eggs come in a variety of forms, as shown in Table 1.4.
Like all purchased items, evaluate and order eggs based on characteristics such as their color, form, packaging, intended use, and preservation method. Figure 1.9 depicts uses of fresh, frozen, or dried eggs.

Figure Focus

**Figure 1.9:** Cooked eggs should look good, but eggs used in baked goods and other products don’t show.

**Nutrition: Good Egg or Bad Egg?**

Like all foods, there is a place for the egg in most healthy diet plans.
Discuss

- Eggs are checked at the farm processing plant for slight cracks and problems.
- This process used to be done one egg at a time by a farmer looking at each egg in front of a candle.
- This old technique is no longer used, but the process is still called “candling.”

Essential Skills: Cracking and Opening an Egg

Practice cracking an egg.
It is not necessary to be fast at first.
Keep shells out.
One-handed egg cracking is not necessary.
**Figure Focus**

**Figure 1.10a:** A flat surface will dent and flatten a small area of the shell.

**Figure 1.10b:** Make sure your hands are always clean.

**Figure 1.10c:** The separate bowl is very important, in case shell falls into it.

**Figure 1.10d:** Even expert egg crackers can get a tiny bit of shell into the egg.

**Figure 1.10e:** If you add the egg after inspection, there won’t be any surprises.

---

**Essential Skills:**

**Separating Egg Whites and Yolks**

Do this process over a bowl.

Any yolk that gets into the egg white will prevent whites from foaming properly.

Have students practice separating eggs.
**Essential Skills:**

**Separating Egg Whites and Yolks (cont.)**

Separated yolks are also used for their particular characteristics.

The yolk’s have fat in them and the whites do not, so when the whites are whipped they produce air bubbles, which help the cake or whatever you’re making to rise. If there are any yolks in the whites when they are whipped, the fat separates between the bubbles, causing it to stay flat.

**Vocabulary Terms**

- **Hard-cooked eggs:** Eggs cooked in the shell, in simmering water, until the white and yolk are both set and cooked through but not overcooked and discolored.

- **Shocking:** Placing hard-cooked eggs into cold water to stop the cooking process.

---

**Figure Focus**

**Figure 1.11a:** Moving the yolk from one shell half to the other is a delicate process.

**Figure 1.11b:** Separated yolks should be whole and unbroken.
Discuss
- Eggs are part of many favorite and famous restaurant menu items.
- Some guests will come to a restaurant simply to have eggs that are cooked to order.
- Guests might be very particular and specific with their instructions for how they want their eggs prepared.
- Skillful preparation of eggs will be a valuable career asset.

Teaching Tips
- The following pages involve egg skills.
- The skills require practice, and students should attempt them in the classroom, at home, or both.
- The instructions are simple.

Essential Skills:
Simmering or Hard Cooking an Egg in Shell
Please note that the eggs are not involved in a rolling boil.

Vocabulary Terms
- Coddled: Eggs cooked slowly and gently just below the boiling point.
- Ramekins: Small, individual, ceramic, oven-proof dishes.

Figure Focus
**Figure 1.12a:** Be careful not to drop the eggs as the shell might crack.

**Figure 1.12b:** Boiling eggs makes them tough and rubbery. Eggs should be cooked in simmering or hot water.
**Essential Skills: Baking an Egg**

Baked eggs are often served in the ramekins in which they are baked.
Consider this when plating the egg: The ramekin will still be too hot for the guest to touch.

**Essential Skills: Cooking a Shirred Egg**

Hot fat helps cook a shirred egg.

**Vocabulary Terms**

- **Shirred eggs**: Eggs baked in ramekins, perhaps in butter or cream.

---

**Figure Focus**

**Figure 1.13**: Garnishes can add visual appeal, texture, and flavor to egg dishes.
Figure Focus

Figure 1.14a: Breaking the eggs in a separate dish and then sliding them into the browned butter helps to ensure that they will cook evenly.

Figure 1.14b: Shirred eggs taste best when served hot, as they congeal when they cool.

Figure 1.15a: Breaking the eggs into a clean cup and carefully sliding them into boiling water helps to prevent the yolks from breaking. This also can prevent you from using a “bad” egg.

Figure 1.15b: To ensure the best flavor and maintain the consistency of the yolk, serve poached eggs hot.

Essential Skills: Poaching an Egg

A hard boil is not recommended for poaching eggs.
The egg albumen can foam and stack, obscuring the view of the egg in the boiling water.
Keep the water at a simmer.

Vocabulary Terms

- Poached eggs: Eggs simmered in water without the shell.
Essential Skills:
Scrambling Eggs
Eggs may be scrambled alone, with milk, or with water.
Experiment to determine your preferred method.

Vocabulary Terms
- Scrambled eggs: Eggs that are shelled and have the yolks and whites mixed together before cooking.
- Fried eggs: Raw eggs cracked onto a hot cooking surface and cooked until the white is set.
- Up or sunny-side up: Eggs fried without flipping.
- Over or over-easy: Fried eggs flipped over briefly to slightly cook the top before serving.
- Basted eggs: Fried eggs that are also slightly steamed to barely cook the albumin over the yolk.

Figure Focus
Figure 1.16a: Beating or whisking the eggs ensures that they will be light and fluffy.

Figure 1.16b: Gently stir the eggs to prevent separating and clumping.

Figure 1.16c: Serve hot for best flavor and consistency.
Figure Focus

Figure 1.17: An egg white is thoroughly cooked and set when it solidifies from transparency into snow-white cream.

Essential Skills: Making a Fried Egg

Yolks should remain intact.

Only break the yolk if the guest specifically requests it.
Essential Skills: Rolled Omelet

Rolling an omelet requires practice.
If the omelet sticks to the pan, it will break.
If the omelet has too much filling, it will ooze out of the ends and not plate properly.

Vocabulary Terms

- Omelets: Eggs that are beaten and set in a pan, but not scrambled. They are filled with cheese or other items and folded in half before serving.

- Frittata: An omelet that might have the cheese or other items with the eggs, or added to the top after the eggs have set, and not folded.

Figure Focus

**Figure 1.18a:** Stirring the eggs helps to prevent clumping.

**Figure 1.18b:** Serving omelets on heated plates keeps the food flavorful and warm for a longer period of time.
**Figure Focus**

**Figure 1.19a:** Sautéing garnishes brings out the full flavor.

**Figure 1.19b:** Finishing the omelet in a hot oven helps it to set evenly.

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**Essential Skills:**

**Flat Omelet (Frittata)**

Ingredients can be added to the top as garnish, after the omelet is set.

Ingredients can also be added to the egg mixture and cooked into the omelet, as in a Spanish omelet.
Essential Skills: Souffléed Omelet

Beaten egg whites make this omelet very light and fluffy.

Vocabulary Terms

- **Quiche**: A savory egg custard pie.
- **Soufflés**: Sweet or savory egg dishes made with beaten egg whites.

**Figure Focus**

**Figure 1.20a**: Whipping the eggs helps to make the omelet light and fluffy.

**Figure 1.20b**: When the edges are set, they will pull away from the side of the pan.
Figure Focus

**Figure 1.21a:** Whipping the egg whites is like blowing air into a balloon. Egg whites are mostly protein and can whip up to seven times the original volume.

**Figure 1.21b:** Container or mold size is important. The soufflé can increase two to three times in volume. If the mold is too big, the mixture will not rise above the rim. If it is too small, it will overflow.

**Figure 1.21c:** Serve the soufflé immediately, so that you can watch it “fall.”

**Essential Skills: Making Soufflés**

These are very basic directions for making a soufflé.

More specific instructions can be found in Chapter 8.

**Fast Fact: Did You Know . . . ?**

Ostrich egg shells are very thick, heavy, and strong. They are often used for artwork.
**In-Class Activity: Egg Demonstration Stations**

21st-Century Skills—Produce Results

Have individuals or groups of students each learn how to make a particular kind of egg.

Use the Essential Skills boxes in this chapter for the instructions.

Allow each student or group to practice cooking their assigned type of egg.

When the students are proficient, have each one demonstrate his or her method to the class.

If possible, have students set up in separate kitchen stations in the classroom so that they can display their entire preparation and process, start to finish.

Students can learn how to demonstrate clearly as they learn how to cook their eggs.

**Vocabulary Terms**

- **Pooled eggs**: Opened, shelled eggs in a container.

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**Figure Focus**

**Figure 1.22a**: There should be no green showing around a hard-cooked yolk.

**Figure 1.22b**: The eggs are both baked and served in the ramekin.

**Figure 1.22c**: Poached eggs require expert handling to be perfectly prepared.

**Figure 1.22d**: Scrambled eggs should not leak fluid.
Figure Focus

**Figure 1.22e:** High-grade eggs should be used for frying.

**Figure 1.22f:** Omelets require skill to plate properly.

**Figure 1.22g:** Quiche is an excellent menu item for brunch, lunch, or a buffet.

**Figure 1.22h:** Soufflés are also covered in Chapter 8.

Summary

- Remind students to review the following:
  1. Milk and milk products
  2. Receiving and storing milk
  3. Creams
  4. Butter and butter substitutes
  5. Cheese
  6. Eggs
Eggs are chosen by their grade (AA, A, or B) and size (ranging from pee wee, the smallest, to jumbo, the largest).

Eggs can be cooked using many different methods, including simmering, frying, poaching, and baking.
Section 1.1
Review Questions

1. Definitions:
   a. Blending fat uniformly throughout milk.
   b. 30 ounces per dozen eggs.
   c. Heat processing to kill microbes.
   d. For butter, removing milk solids and water.
      The butter appears clear and pale yellow when melted.
   e. 15 ounces per dozen eggs.
   f. Aged, matured with bacteria.

2. Water, fat, and protein.

3. Keep the milk at 41°F or colder, follow the FIFO method of stock rotation, and be sure to use the product before its expiration date.

4. Cream will be stable after being whipped as long as its fat content is greater than 30 percent.

5. Each student will have a unique answer. Make sure students understand what Eggs Benedict is.

6. Each student will have different ideas about this.

7. This requires some outside research by the students. Milk from Guernsey cows is sometimes called “golden Guernsey” because it has a slightly yellowish color from the presence of the antioxidant beta-carotene (a precursor to vitamin A). It also has a high protein and fat content (5 percent), so it tastes rich. Jersey milk has a white color and an even higher fat content (6 percent) and protein content and tastes very rich. The students might find that there are differences in the cream, ice cream, and cheeses made from these types of cows’ milk as well.

8. Each student will have an opinion about this. Encourage the students to cite their resources.
Section 1.1
Activities

1. Encourage the students to look at fairly recent centuries first, when better records were kept. It might also be of interest to examine ancient historical uses of dairy foods, and information might be available for this area of study as well, especially in frequently studied ancient civilizations. Hint: Not all milk and milk products have always come from cows.

2. Milk is a colloidal suspension, so, in theory, in time it would eventually settle out of suspension. However, it doesn’t happen easily in the time frame before the milk spoils and curdles on its own. Curdling and falling out of suspension are not the same thing. Curdling is a coagulation of the milk protein. Cheese making is an ancient art form and craft. Understanding it, at least a little bit, can add to a chef’s appreciation of cheese and its role in cuisine.

3. A graphic will provide a picture that can help the students mentally organize the information for further understanding. Each student will have an idea of how to do this.
Section 1.2
Breakfast Foods and Drinks

Introduce the Section
a. Eggs and milk are main ingredients in many batter-based breakfast foods.
b. This section covers a variety of dishes that have similar batters and features.
c. The food items in this section are most often served for breakfast or brunch.
d. This section encourages hands-on practice of the skills.
e. Many of the foods in the section are often served with syrup, but the students can think of other accompaniments.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
• Ask students if they have a favorite special breakfast food.
• Breakfast foods made with batter (e.g., pancakes, waffles, and French toast) are very popular restaurant items.
• These foods are inexpensive to make, yet guests will often come to a restaurant just to order them.
• These breakfast foods can also be combined for service with breakfast meat, eggs, potatoes, and other selections.

Vocabulary Terms
• Pancakes: A milk-egg batter food that is poured and cooked on a griddle in round cakes, usually served in stacks.
• Crêpes: Made with a milk-egg batter with a high egg content that cooks into a thin pancake; usually cooked one at a time in a specialized pan with curved sides. They can be rolled around fillings, both sweet and savory.
• Swedish pancakes: Similar to crêpes, but the batter is a bit sweeter and heavier.
Essential Skills: Making Pancakes, Crêpes, Waffles, and French Toast

A common element of all of these batter items is their golden brown color when they are perfectly ready to eat.

In-Class Activity: Zen Venn, or Thinking Outside the Box about Pancakes

Math Connection, 21st-Century Skills—Global Awareness

Pancakes or some sort of egg-batter griddle cakes are found in many, many cuisines of the world.
The students will make a modified Venn diagram, with the common elements of the cakes written inside a square box.

Outside the box, the students will write the various differences and names for these cakes: blintzes, crêpes, hotcakes, flapjacks, pancakes, pannkuchen, and any other name or dish they can learn about.

Each of these names should include a brief description, such as “rolled around a fruit filling” or “topped with sour cream.” These differences will be “floating” around the central box.

Vocabulary Terms

- **Waffles**: Made with batter similar to a pancake batter, with added egg and oil; cooked on a special iron grid, both sides at the same time, until golden.

Figure Focus

**Figure 1.23**: A grill or griddle is the best method of cooking pancakes. They can be easily flipped at just the correct time without an awkward wrist movement.

**Figure 1.24a**: All breakfast batters should be smooth and light, without lumps.

**Figure 1.24b**: Another common element when preparing breakfast batters is that the cooking surface should be preheated and nonstick, ready to cook.
Figure Focus

Figure 1.25a: Make sure that the thickest sections of fat cook through.

Figure 1.25b: When baking bacon, watch for it curling up and make sure the thickest sections of fat cook through.

Fast Fact:
Did You Know . . . ?

It is good to remember that people in the United States currently have a long life expectancy and grow to a large stature when compared with people in the past. A healthy diet is certainly available.

Discuss

- Bacon and sausage are both usually made from pork. They are salty and high in fat, so they are usually served in small portions.
- Ask students if they prefer bacon crispy, crunchy, or oily.
- Cooked properly, bacon should be crisp and brown, not raw in thick sections or crunchy in thin sections.
- What ideas do the students have about bacon thickness?

Essential Skills:
Cooking Bacon or Sausage

Undercooked bacon or sausage is unappealing and perhaps even unsafe.

Although most pork products today are safe, complete cooking is key to ensuring the safety of your guests.
Discuss

- Canadian bacon is used for breakfast as a meat with eggs and hash browns. It is also the meat element of Eggs Benedict and is popular as a pizza topping, often paired with fresh tomatoes.
- Fish is an essential part of a breakfast buffet in many parts of Asia, Europe, and Scandinavia. The fish is sometimes smoked, brined, or pickled, and served cold.
- Hash is a dish that originated by using leftovers before there were microwaves. It was a “second-day” dish.
- “Scrapple” is another name for breakfast hash. It might have apples mixed in with the meat, potatoes, and onions.

Vocabulary Terms

- **Hashed brown potatoes**: Two-stage potato dish made by steaming or simmering potatoes, shredding them, and pan-frying them.

**Figure Focus**

**Figure 1.26**: Lox are a form of brined or smoked salmon, usually kosher. If the lox are from Nova Scotia, they may be called “Nova.”
Chapter 1 | Breakfast Food and Sandwiches

Figure Focus

Figure 1.27: Hot cereal, such as oatmeal, should be available on any breakfast menu for guests who prefer it to heavier breakfasts. Cold cereal assortments will also satisfy some guests.

Discuss

- Students might not understand why someone would go out to breakfast and order hot oatmeal. Help the students understand that many breakfast guests are eating “on the road” for business reasons. This is especially true at hotels. Guests who travel for business often have menu preferences that are different than those of people who eat out for social reasons or celebration.

- Guests who eat many breakfasts in the same place on consecutive days might have specific requests of the kitchen. It is nice to accommodate the guest when possible.

Vocabulary Terms

- **Home fries**: Similar to hashed brown potatoes, but made from raw potatoes.
Discuss

- Guests might also have specific requests for toast, including type of bread, light toast or dark, and butter, spread, or dry. Accommodate the guest if possible.
- The same is true of fruit. Guests might request specific fruits with their breakfast.
- Breakfast is perhaps the most individualized meal a restaurant will serve.
- Offerings might or might not be creative, unusual, or exotic, but many guests will have very specific requests. These are often due to health or well-being concerns. The food a guest eats first thing in the morning could affect how he or she feels throughout the day.

ServSafe Connection: Breakfast Buffet: Considerations When Presenting Cold Fish and Meat

Keeping cold foods away from hot foods on a buffet prevents heat transfer from hot foods that could warm cold foods to temperatures within the danger zone.

Fast Fact: Did You Know . . . ?

The temperature danger zone was thoroughly covered in Level 1, Chapter 2: Food Safety.

It is important to maintain proper temperature controls on all TCS foods.

In-Class Activity: Granny’s Advice for a Happy Life

Literacy Connection, 21st-Century Skills—Work Creatively with Others

“Remember to butter the toast all the way to the edges.” Some people find great meaning in this expression.

What could it possibly mean? Is it a metaphor for living? Is it culinary advice?

Divide the students into two groups. Have each group prepare and present a skit based on this expression. After the performances, discuss how this might apply to a philosophy of cooking for and serving guests.

Figure Focus

Figure 1.28: Fish can look spectacular and beautiful presented on trays of ice.
Figure Focus

**Figure 1.29:** There are several different beverages served hot at breakfast. Ask the students which hot beverages they enjoy.

**Trends: Coffee in Schools**

Coffee drinks consumed by teens are often “dessert”-type beverages, hot or cold, that are high in sugar and fat in addition to being an addictive stimulant. Make sure that students understand that.

**Discuss**

- Ask the students how they feel about coffee being sold in schools to minors.
- Are the students aware that caffeine is an addictive stimulant? Perhaps they are not aware that caffeine does not create any energy for the person who drinks coffee. Caffeine can also make a person very jittery.
- Caffeine stimulates the body to burn energy more rapidly, in a feeling of awake energy. The feeling lasts until the person becomes even more tired and sleepy than he or she would normally be.
- Do the students realize that a lack of caffeine in an addicted person can cause headaches?
- Do students think that caffeine makes them better students?
- Many guests like to have a cup of black coffee in the morning.
- Sugar and cream are the usual coffee enhancers, and can be offered at the table for guests to add for themselves.
- Some guests like to have coffee with dessert after a nice dinner.
- Coffee bars with barista service are a unique type of foodservice operation. Some are drive-thrus.
- Coffee shops can be gathering places for social interaction and relaxation.

**Vocabulary Terms**

- **Caffeine:** The active stimulant in coffee and tea. It gets its name from the word coffee.
Discuss

- Encourage the students to understand coffee service. If they work as servers, they might need to know how to serve a tray full of hot coffee cups and saucers.
- Coffee cups are often monitored by servers to keep them full and warm.
- Coffee should be well made and fresh in urns and insulated pitchers. Coffee urns need to be properly cleaned.
- Some guests will want decaffeinated coffee.

Vocabulary Terms

- **Tea:** A caffeinated drink made from steeping tea leaves. Herbal teas that have no caffeine are made from herbs such as mint.
- **Black tea:** Made from fermented tea leaves.
- **Green tea:** Made from nonfermented tea leaves.

**Figure Focus**

**Figure 1.30:** Most guests steep their own tea in a small pitcher or a cup. They will also add their sweetener, cream, or lemon themselves.
Fast Fact: Did You Know . . . ?
The fermentation of tea means the leaves have been oxidized.

ServSafe Connection: Tea, Anyone?
Chill tea for iced tea soon after steeping.

Discuss
- Hot cocoa does not have as much caffeine as a coffee drink.
- Hot cocoa does have theobromine, a substance similar to caffeine that is found in chocolate. Theobromine might have mildly stimulating properties, but it is not as strong as caffeine.

Vocabulary Terms
- Hot cocoa: A beverage made from cocoa powder, milk, and sugar.
**Nutrition:**

**Caffeine**

A caffeine “crash” or fatigue can occur after the dose wears off.

Also, withdrawal symptoms may begin to occur between doses.

High school students can experience difficulty concentrating and insomnia from caffeine, so this should be considered when offering caffeine drinks on campus.

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**What’s New:**

**Honey Straws**

Originally, a honey salesman thought of filling straws with honey for convenience, then invented a machine for this and filled the straws as a home industry.

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**Figure Focus**

**Figure 1.31:** Honey straws come in various flavors and colors, which are added to regular honey.
Figure Focus

**Figure 1.32a:** Be careful of burns.

**Figure 1.32b:** Serve tea before it becomes stale or bitter.

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**Essential Skills:**

**Making Hot Tea with Tea Leaves**

Tea made from leaves that are not bagged needs to be strained.

Another option would be to use a tea ball or a tea infuser spoon.

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**On The Job:**

**Being a Barista**

Baristas have specific skills, talents, and training. Ask students what skills they think are necessary to be a good barista.
**Summary**

- Remind students to review the following:
  1. Pancakes, waffles, crêpes, and French toast
  2. Preparing breakfast meats and starches
  3. Hot breakfast beverages—coffee, tea, and cocoa
Section 1.2 Review Questions

1. A crêpe is made from a thinner batter with more eggs than pancakes.

2. Bacon and sausage hold better than Canadian bacon and ham.

3. The two basic forms are granular and whole, cracked, or flaked.

4. Coffee should be served within an hour of brewing. Tea should be served immediately.

5. Each student will have his or her own ideas about this.

6. Each student will come up with ideas for this. They should avoid options very high in fat and calories, like Eggs Benedict, and very sweet and rich fried items.

7. Each student will have an opinion about this.

8. Each student will have an opinion about this, and it will depend on the type of operation the student considers. A hotel self-service breakfast operation would have a completely different requirement than a luxury brunch buffet, for example.
Section 1.2 Activities

1. This will require some outside research by the students. Encourage them to research a food they have never heard of or considered for breakfast.

2. Perhaps the finest way to serve cocoa is in a small pot given with a cup and saucer, as is done in Europe. However, a mug of hot chocolate garnished with whipped cream is also a popular mode of service. Giving a guest an envelope of dry mix and some hot water is not especially nice, and could be messy and result in lumpy cocoa.

3. Each student will have original ideas for this activity. The wedding menus should be created with both the guests and the celebration of the event in mind.
Section 1.3
Sandwiches

Introduce the Section
a. Help the students understand how important sandwiches are to the lunch trade.
b. There are classic and basic rules about sandwiches.
c. There are traditional main ingredients that serve functional purposes beyond just flavor.
d. Sandwiches can be built efficiently at a station equipped with necessary equipment and foods, like a mise en place.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
• Sandwiches are usually handheld, but not always.
• Some hot sandwiches, such as an open-faced hot turkey sandwich, are eaten with a fork and knife.
• Some bread, flat bread, or crust component is universal to a sandwich-type item.
• Hamburgers and hot dogs are hot sandwiches, and pizza is a hot open-faced sandwich.
Teaching Tips

- Help the students to see sandwiches as a category, and not a single item.
- It might challenge the students’ food beliefs to think of pizza as a sandwich item.
- This sort of challenge can help students experiment and be imaginative with creating sandwiches.

Vocabulary Terms

- **Open-faced hot sandwiches**: Open-faced means that the filling does not have a second piece of bread or crust over it. When grilled, heated, or covered with melted cheese or gravy, these sandwiches can be served hot.
- **Hors d’oeuvres**: Often based on sandwich concepts, these are bite-sized hot or cold finger foods served as appetizers.
- **Grilled (or toasted) sandwiches**: Sandwiches with buttered bread cooked on a grill or heated in the oven. The filling heats and any cheese in it melts.
- **Panini**: A grilled sandwich that is not buttered and is heated in a panini press, or a two-sided grill.
- **Deep-fried sandwich**: A sandwich dipped in egg and deep-fried.
- **Pizza**: A yeast pie crust topped with a pizza sauce, mozzarella cheese, and a variety of other items; served open-faced.

Figure Focus

**Figure 1.33**: A panini press not only heats the sandwich through while toasting the bread, but it also compresses the filling a bit, making the sandwich easier to eat.
Discuss
- Ask the students what they had for lunch yesterday. Chances are a few will say “sandwich.” Help the students to see that many of their favorite handheld food items are really based on the sandwich concept.

Vocabulary Terms
- Cold sandwich: Made up of cold sandwich components, handheld.
- Submarine sandwich: Sometimes called a poor boy or a hoagie; a roll filled with mixed sandwich fillings, hot or cold, handheld.
- Wrap sandwich: A sandwich rolled into a flat bread like a tortilla.
- Multi-decker sandwich: Several slices of bread or toast layered with filling.
- Club sandwich: A layered meat sandwich sliced into triangles and secured with a pick.
- Canapé: Small hors d’oeuvres sandwiches that are visually attractive, open-faced, and often cut into decorative shapes.

Figure Focus
**Figure 1.34:** Very small cookie cutters can also be used to prepare canapé bread. The canapés are bite-sized.
Discuss

- Tea sandwiches are not made with tea, of course. They are served with tea, traditionally at afternoon “tea time” in Great Britain, which is served as a refreshing afternoon restorative, not a full meal.
- Tea sandwiches have a light filling such as cucumbers, watercress, egg salad, or a light ham salad with celery.

**Fast Fact: Did You Know . . . ?**

Although all burgers can be wholesome, the quality of burgers varies. Some might be from a mixed beef product with a small patty, whereas others could be ground Angus sirloin loaded with condiments.

**ServSafe Connection: Tips for Salads and Sandwiches Containing TCS Food**

Ongoing sandwich prep stations should have refrigerated containers or ingredients packed in ice.

Discuss

- Preparing sandwiches to order ensures a good texture of the bread. Advance preparation of sandwiches can result in soggy or stale bread, unless precautions are taken to avoid these problems.

Vocabulary Terms

- **Tea sandwiches**: Always served cold on bread without crusts, usually small. Fillings are usually light, fresh, and delicate.
Mayonnaise-type salad dressing spreads are usually thickened with starch rather than emulsified by an egg, which changes the performance and the flavor a little bit. They can make bread a bit soggier than mayonnaise if sandwiches need to be held refrigerated for a long period of time. However, they are still oil based and can serve as a barrier. Some individuals prefer these spreads to mayonnaise.

Because sandwiches are considered handheld and easy to eat, the accompaniments are often easy to eat as well. French fries are handheld. Potato salad and cole slaw can be eaten easily with a plastic fork for a picnic or take-out lunch. Although definitely not handheld, soup is often paired with sandwiches for a lunch menu.

Vocabulary Terms

- **Bread**: Allows sandwiches to be edible as handheld items.
- **Pullman loaves**: Square bread slices, ideal for simple sandwiches.
- **Spread**: Usually fat based, serves as a barrier between the filling and the bread to prevent soggy bread. Also adds moisture, texture, and appealing mouthfeel to the sandwich.
- **Filling**: The main ingredient that identifies the sandwich, often protein.
Table 1.5: Primary Sandwich Components

- Sandwich fillings are often classics that appeal to many people. New ideas are always arriving on the scene as well.
- Have students invent their own sandwiches.

Discuss

- Pizza is such a ubiquitous food item in the United States today that it almost is a food category unto itself. Ask the students to discuss their favorite type of pizza. Many of the students will have strong opinions about this topic. Limit the discussion to fit the time allowed.

In-Class Activity: The Name Game

21st-Century Skills—Work Creatively with Others

Students will learn the names of classic sandwiches.

Find a soft ball or beanbag for the students to toss.

Have each student in the room adopt the name of a classic sandwich: Monte Cristo, club, Reuben, BLT, patty melt, grilled cheese, hamburger, hot dog, pizza, calzone, PB&J, egg salad, Philly cheesesteak, French dip, and any other classic names you can think of.

Once a student has a name, have that student compose a one-line description of that sandwich.

Arrange students in a circle. The student with the ball introduces himself by saying the name of the sandwich and the description: "Hello! My name is ___________ (name the sandwich), and I am a ___________ (description)."

The student then tosses the ball to another student who must reply: "Hello ______ (whichever the last sandwich was). It's nice to meet a (describe the last sandwich). My name is ___________ (his or her sandwich name), and I am a ___________ (description)."

Continue around the room until each person has caught the ball. After each has been introduced, keep going as the game goes faster and faster. At the end, quiz the students to see if they remember the descriptions that go with the names.
**Figure Focus**

**Figure 1.35:** Any TCS food in the station should be held at safe temperatures, hot or cold.

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**ServSafe Connection: Sandwiches and Ready-to-Eat Foods**

Have students practice handwashing skills and putting on gloves. Emphasize to students how important these things are in the restaurant and foodservice industry.

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**Fast Fact: Did You Know . . . ?**

In parts of Great Britain, “jelly” means “Jell-o®.” Imagine a peanut butter and Jell-o sandwich!

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**In-Class Activity: Peanut Allergies in the United States**

**Science Connection, Math Connection, 21st-Century Skills—Health Literacy**

Students should look up “peanut allergy” on MayoClinic.com or another reliable medical information site.

Have them research statistics for the increase in peanut allergies in the last 20 (or so) years using data from the U.S. Centers for Disease Control or another reliable source.

What do the statistics mean? Have the students describe verbally what the percentage increases are.

Evaluate students’ understanding of statistical percentages and their math literacy about percentages. If they do not understand percentages, encourage them to improve their math skills before they advance to further chapters in this text that will require such math skills.

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**Discuss**

- Ask students if any of them have worked in a sandwich shop, pizza parlor, or quick-service restaurant. Ask them to describe the sandwich stations and the *mise en place* for sandwich making. Discuss with them the need for speed in such operations. How are food safety, speed, and accuracy achieved in these work settings?
Nutrition: Why Do Sandwiches Get a Bad Rep?

To keep sandwiches lower in calories, reduce the use of fat-based spreads and high-fat deli meats and deli cheeses.

Some types of breads, like croissants, also are very calorie rich.

Pay attention to ingredients, because a sandwich is the sum total of its ingredients.

In-Class Activity: Totaling Sandwich Calories

Math Connection, 21st-Century Skills—Use Systems Thinking

Choose two sandwiches from the list of classic sandwiches the students learned for the Name Game activity earlier in this chapter.

Have the students research the calorie content of each ingredient in the sandwich. Using this data, have the students add the calories together for a total calorie content of the sandwich.

Please keep in mind that calories must be added for oil or butter if a sandwich is buttered before grilling (like a grilled cheese), or if it is deep-fried (like a Monte Cristo).

Vocabulary Terms

- Mise en place: Prepared ingredients and assembled equipment, ready for preparing and cooking a dish.
- Work table: A dedicated work space with enough room for mise en place and preparations.
Discuss

- Portion controls are a house concern, not a guest concern.
- Measure meat or cheese by weight before guests are involved. Do not allow guests to see the house removing meat or cheese from a portion, as this does not appear generous.
- Specific-sized scoops can portion salad fillings like tuna.

Vocabulary Terms

- Storage facilities: The proper storage for any sandwich component, protecting flavor, quality, and safety.
- Storage materials: Items that can wrap or cover sandwiches or their components.
- Hand tools: Sandwich-making equipment.
- Portion-control equipment: Tools that help measure correct portions for quality control.
- Cooking equipment for hot sandwiches: Various cooking surfaces and grills or ovens that can cook or toast a sandwich, its bread, or its fillings, including a panini press.

Figure Focus

**Figure 1.36:** It is not called a “pizza paddle” or a “slider.” It is called a “pizza peel” and is often sprinkled with cornmeal to help the crusts slide.
**Essential Skills: Sandwich Presentation**

Very tall sandwiches are cut with sharp angles so the guest has a corner that will fit in his or her mouth.

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**Essential Skills: Making a Sandwich (The Basics)**

Tomatoes can make bread soggy. Protect the bread with avocado, cheese, mayonnaise, or other fat. Place the tomato between the filling and the fat, never right against the bread.
Essential Skills: Making a Sandwich (cont.)
Slicing a sandwich properly helps create a pleasing presentation.

Discuss
- There are several traditional layering condiments that can be included with a sandwich, and each can serve a purpose. Ask the students to discuss the function of onion slices, tomato slices, pickle slices, and lettuce leaves.

Teaching Tip
- Students should be encouraged to brainstorm. Even something that might seem funny, like “Lettuce helps keep the bread from sticking in your teeth” might actually be correct (guests probably don’t want bread stuck in their teeth).

Essential Skills: Cutting a Club Sandwich
Decorative toothpicks go into the sandwich before it is cut.

Figure Focus
Figure 1.37a: The type of bread will determine much about the flavor and texture of the sandwich.

Figure 1.37b: Spreads should complement the bread and the filling.

Figure 1.37c: Keep in mind the importance and function of different layering options.

Figure 1.37d: A sliced sandwich should display the filling.

Figure 1.38a: Use a good knife. Don’t saw the sandwich.

Figure 1.38b: The fillings are displayed.
Essential Skills: Some Guidelines for Making Canapés

Canapés are served as much to invoke a feeling of lavishness as to satisfy hunger.
They should look beautiful and taste fresh and interesting.

Essential Skills: Tips for Keeping Bread Fresh

Bread can become stale long before it becomes unsafe to eat.

Homework Activity: Stale Bread—When Does It Become Unsafe?

Science Connection, 21st-Century Skills—Make Judgments and Decisions

When bread is stale, it is beginning to lose quality but is still safe. At some point, bread will begin to grow mold.

What does stale mean? Is it a quantifiable word, or just a description?
What day does mold begin to form? Is mold visible as soon as it has begun to grow?
Should day-old bread be eaten? How about week-old bread? When should it be discarded?
Students can perform their research online or by contacting a bakery.
Students can draw a time line of the quality and safety of one type of bread (brand specific is fine).
Specifically tell the students not to sample a taste of moldy bread. Moldy bread should be discarded, wrapped, in an outside garbage container. Do not handle moldy bread with bare hands.
Mold spores are thought to be potentially carcinogenic or in other ways harmful to humans.

Figure Focus

Figure 1.39: Canapés on trays can be a beautiful work of art, much like a mosaic.
Essential Skills:
Tips for Keeping Bread Fresh (cont.)

Use day-old bread for suitable purposes, like toast, poultry dressing, or bread pudding.

Summary
• Remind students to review the following:
  1. Basic kinds of sandwiches
  2. Primary sandwich components—bread, spread, and filling
  3. Sandwich stations

Figure Focus
Figure 1.40a: Operations can have relationships with local bakers.

Figure 1.40b: Air will cause bread to dry out.

Figure 1.40c: The crust is part of the appeal. As the bread’s moisture redistributes in storage, the crust softens.

Figure 1.40d: Day-old bread is still safe.
Section 1.3
Review Questions

1. The spread prevents bread from soaking up the filling, adds flavor, and adds moisture.

2. Any of the following would be correct: work table, storage facilities, storage materials, hand tools (students could specify by name), portion-control equipment (students could specify by name), and cooking equipment (students could specify by name).

3. Students could discuss efficiency, portion control, and service-to-order.

4. Flour is used in the pizza station, which can contaminate other sandwich fillings.

5. This will involve the students’ creativity.

6. Students should keep in mind Kabob’s healthy-menu philosophy in answering this question.

7. Students should see that certain sandwiches become classics because they work well and taste good. Not all ingredients combine well, but some combinations are excellent.

8. The student should make a solid case for choices here. There could be several good answers, but each one must be supportable.
Section 1.3 Activities

1. This creates a “mix-and-match” format for innovation.

2. Because the requirements of this assignment are detailed, each student should do only one sandwich. However, in a real operation, every sandwich on the menu would require all of these considerations.

3. Because no help is available in the hypothetical sandwich shop, the student will have to consider logistics.
Case Study Follow-Up

1. Each student will have ideas on this. They could include using fresh fruits, whole grains, and low-fat options.

2. Each student will have an opinion about this. Issues such as personnel, logistics, temperature controls, and selection could be included.

3. There is a case for each. Optimism comes from the idea of the exciting new tactic. Skepticism comes from the reality of the logistics. Every good idea requires logistics to enact.

4. Using eggs cuts costs because they are a relatively inexpensive protein. Using local fresh produce in season is usually more cost-effective than off-season selections that must be shipped. The students will also have ideas for this problem.

5. Miguel and Chef Kate will need to use marketing strategies locally, including publicity, to inform and motivate the public to come and eat. Perhaps an introductory campaign or special event could help get it started. Students might have more creative ideas for an opening.
Apply Your Learning

**Pricing a Sandwich**
The student should consider factors like the overhead of the sandwich shop or deli. Space in the middle of a successful urban high-rent financial district will be more expensive than a more remote location.

Each ingredient must be priced and added to the total. The various modes of service must be considered and priced. Will the sandwiches be served on washable dishes or disposable plates? How will this affect the cost?

If the operation has a larger sit-down lunch menu and wait staff, does that affect the price of a simple sandwich?

**The Many Faces of Pizza**
Students should start their research with Italy, or at least mention Italy. They should also mention New York and Chicago-style pizzas, if they are talking about pizza in the United States.

**Green Eggs and Chem**
The egg cooked exactly right using the correct method is called the “control.” The other eggs are the “test” eggs, and are evaluated as compared to the control.

If there is access to camera equipment, photograph each of the different egg cooking methods and the eggs that result.
Critical Thinking  Restaurants and Consumer Health

Each student will have a different opinion. This is a complex and real issue. Is the operation responsible for the guest’s food choices?

Are there good foods and bad foods? Or can any food fit into a healthy diet?

Teenagers need a lot of calories if they are active and growing. Is it the place of an operation to determine that certain menu items are too high in calories for a "reference guest"?

Would nutrition information be accurate and consistent? Why or why not? Some of these ideas might help students consider this problem.
Exam Prep Answers

1. A
2. A
3. A
4. C
5. C
6. A
7. A
8. C
9. C
10. C
Chapter 1 | Foundations of Restaurant Management & Culinary Arts

7 What is the optimal water temperature for brewing coffee?
A. 175°F to 180°F
B. 185°F to 190°F
C. 195°F to 200°F
D. 210°F to 215°F

10 The two basic components of an efficient sandwich station are
A. bread and meat.
B. condiments and containers.
C. ingredients and equipment.
D. a refrigerator and a microwave.
Recipe

Farmer-Style Omelet with Asparagus and Mushrooms

- Note that this item is much lower in calories than the French Toast on the next page, but not a lot lower in fat.
Recipe

French Toast

• Note that even though this is a sweet, rich breakfast item, it actually has less cholesterol than the omelet with asparagus and mushrooms. It is lower in fat, but has twice the calories.
Recipe

Open-Faced Turkey Sandwich with Sweet and Sour Onions

- It might interest the students to compare the calories and fat of this item to that in a hamburger or hot dog.
Chapter 2 Overview

Food provides the body with essential nutrients. Proper nutrition helps the body and mind work effectively and efficiently, so it’s important for students to learn how to create more nutritious menus.

Section 1: This section reviews the basics of nutrition, including nutrients, the digestive system, and the problems associated with a poor diet.

Section 2: This section reviews food preparation, making menus more healthful, reducing excessive fats, and types of produce (from a grower’s point of view).

### Advance Preparation

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<tr>
<td>Prepare</td>
<td>Baking soda</td>
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<td>Red cabbage</td>
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<td>Various types of salt to taste</td>
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<td>Raw eggs</td>
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<td>Petri dishes</td>
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<td>Pipettes</td>
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<td></td>
<td>Hydrochloric acid</td>
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<td></td>
<td>Sulfuric acid</td>
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<tr>
<td></td>
<td>Acetic acid (vinegar)</td>
</tr>
<tr>
<td></td>
<td>Ascorbic acid (vitamin C)</td>
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### CUSTOMIZED INSTRUCTION OPTIONS

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### CHAPTER TOOLS

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### ServSafe Connection

Pages 84, 87, 111
Case Study
Eating Right

- What is the difference between “vegetarian” and “vegan”?
- Does this make a difference in the restaurant and foodservice industry?
- How would a chef modify recipes for various nutritional modifications?
- Is this the responsibility of the restaurant? Why or why not?
- This is a topic of much debate lately.
- Note that there are follow-up questions about the case study at the end of the chapter.
- This activity could be done in groups, as a class, or as a homework assignment.
Chapter 2 | Nutrition

Professional Profile

Discuss
How the experiences of Laura Walsh differ from those of a traditional chef.

Reinforce and Review
Dietetics is a science career, based around nutrients. It integrates food science with foodservice, all within the framework of human physiology and biochemistry.

Teaching Tips
Help students to understand how specialized, yet how broad, the field of nutrition is. Are any of them interested in this field? Find out why. If students are interested in dietetics or food science, they should work hard in their high school math and science courses.

In-Class Activity: Dietetics Careers

21st-Century Skills—Financial, Economic, Business, and Entrepreneurial Literacy

Visit the Web site of the American Dietetic Association at www.eatright.org.
Click the For Health Professionals tab.
Click RD = Nutrition Experts, and then click Qualifications of a Registered Dietitian and read the text.
Click What Services Do RD’s Provide and read the text.
Next, click Collaborating for Success, then click ADA Groups and Networks, and then click Dietetic Practice Groups.
Have the students select three practice groups that interest them. Click the group name and visit the Web site for that group.
Have the students write a paragraph about each dietetic area of practice they explored.
If the URL for the Web site has changed since the publication of this book, use a search engine to find The American Dietetic Association, Chicago, Illinois.
Focus and Engage

Discuss
- Nutrition is for everyone, because everyone eats and has a body.
- Nutrition can seem tedious to learn and teach.
- Help the students to see it as exciting.
- Discuss real food that tastes good.

Section 2.1
The Basics of Nutrition

Introduce the Section
a. Nutrition is important to understand.
b. There are essential nutrient categories.
c. The digestion of food by the human body is part of the nutrition process.
d. Poor nutrition choices can lead to poor health.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
- Nourishing your guests is part of the enriching experience of feeding them good food.
Discuss
- The several categories of chemicals that are the major nutrients are outlined in this section.
- What is the difference between diet and nutrition? The students might have opinions about this.

Teaching Tips
- Students might need a bit of support if the science concepts are new to them.
- Students require only an awareness and exposure to the molecular nature of nutrition in this lesson.
- Students should always be brought back around to the practical nature of the food itself.
- Food is the beginning and end of the nutrition story. Keep the food as the focus for this class.

Vocabulary Terms
- Nutrition: The study of nutrients in food and how they nourish the body.
- Nutrients: Molecules from food that are used to maintain the human body.
Fast Fact: Did You Know . . . ?

Metabolism means “running the engine.” Everything that happens in a living body is part of metabolism.

Discuss

• In the United States and much of the developed world, the problems of overnutrition are the greatest malnutrition risk. Malnutrition just means “bad nutrition.” Ask the students if they know what overnutrition causes.

• They will probably be aware that overweight or even obesity are caused by eating more than the body needs and uses.

• The students might be aware that overweight and obesity can cause serious and life-threatening health problems.

• With increasingly more families and individuals eating meals from restaurant and foodservice operations, is it the responsibility of the operations to protect their guests from overnutrition? How would this be done?

• What sells well in a restaurant or foodservice operation? Let the students discuss and explore this area for awhile.

Nutrition: Nutrients Provide Energy

Make sure the students understand that vitamins do not provide energy, and neither do minerals. Vitamins and minerals aren’t “fuel,” they are regulators.
Discuss

- Perhaps the students realize that some of these nutrition claim phrases have criteria established by the U.S. government.
- This area changes, so a restaurant or foodservice operator would be advised to work with a consulting nutritionist before making claims.
- Laura Walsh is this type of nutritionist. There are both national and local nutritionists (dietitians) in this field.

What’s New: Heart-Healthy Menu Symbols

An item’s recipe is analyzed for the criteria. The chef must be faithful to the recipe and not increase the fat, sodium, or cholesterol content during preparation.

Reinforce and Review

- No matter how good a food is for the body, if it doesn’t taste good, no one will want to eat it.
- Humans develop a palate for nutritious, health-promoting food if it tastes good.
- Help your guests to truly enjoy what is going to be good for them.

Figure Focus

Figure 2.1: The act of sharing food together is a bonding experience for a family.
Discuss

- How can students keep up with changes in nutrition?
- Are there any fundamental themes that never change? Perhaps the students can think of some.

Reinforce and Review

- Each group is related by chemistry and by function.
- Carbohydrates all have similar types of molecules. The same is true for lipids and proteins.
- Vitamins have very different types of molecules. There are many different shapes and structures.
- Vitamins are all in the same category because they help regulate the body but cannot be made by the body.
- Minerals are all elements on the periodic table of the elements.
- Water is used for lubrication, transport, temperature control, chemical reactions, and structure.

Figure Focus

Figure 2.2: A person cannot live without all of the nutrient categories in the diet.
ServSafe Connection: Keeping Purple Food Purple

Although the color alterations described are not harmful, they are distasteful.

If they are distasteful, the food won’t be eaten and the nourishment from it will be lost.

The red cabbage demonstration described is very simple and easy to do.

Vocabulary Terms

- **Fiber**: Nondigestible carbohydrate that provides bulk and roughage to the diet.
- **Phytochemicals**: Nutrients from colorful fruits and vegetables that as yet do not have established nutrient requirements.

Figure Focus

**Figure 2.3**: The main pigments in fruits and vegetables act as nutrients in the body.
Figure Focus

**Figure 2.4:** Starch is a polymer, which means it is a continuous chain of molecules.

Teaching Tips

- There might be some confusion between “calories” and “kilocalories.” In nutrition, “calorie” means a kilocalorie, which is really 1,000 calories. Dietitians sometimes call them “kaycalz,” meaning the plural of “kcal,” which is the abbreviation for kilocalorie. Nutrition Facts panels and nutrient labels use the term calorie and kilocalorie interchangeably. When speaking about the kcal. content of food, use the term calorie. Only nutrition lab chemists need to worry about the difference.

Vocabulary Terms

- **Kilocalorie:** 1,000 calories. In food, it is called simply a “calorie.”
- **Calorie:** Energy needed to heat 1 kilogram (about 2.2 pounds) of water by approximately 1°C. In nutrition, the unit of measurement for energy is the kilocalorie, but it is more commonly called a calorie.
Figure Focus

**Figure 2.5a:** Fruits contain the monomers glucose, fructose (which is a little different with five carbons), or both. Soft drinks contain sucrose, which is a dimer that tastes sweet (table sugar), or high-fructose corn syrup.

**Figure 2.5b:** Starches are made of the same sugar molecule building blocks, but they are assembled into long chains.
Figure Focus

**Figure 2.6a:** This is a flat drawing of a three-dimensional molecule that has an interesting shape. Most molecules do.

**Figure 2.6b:** Note that the ring on the left is like the glucose in Figure 2.6a. It is linked to a five-member ring of fructose.

**Teaching Tips**
- Although students might not need to know the exact chemistry of these sugars, the rings are important.
- Each ring of glucose is three-dimensional and has almost a zig-zag appearance around the line of carbons.
- Just like bigger things in life, tiny molecules have shape and take up space accordingly, similar to items in the kitchen that have to fit someplace, but still be useful.
- Students might realize that this is part of understanding food.
- For example, many, many sucrose dimer molecules shown in Figure 2.6b can arrange themselves into crystals, which is why table sugar is crystalline.
- There are many examples of how molecular shape influences ingredients in foods. Shape also influences nutrition, digestion, absorption, and physiology.
- This might help students further understand how foods and ingredients perform.

**ServSafe Connection:**

**Everyone Likes Sugar!**

Members of the animal kingdom all need glucose and oxygen. Waste products are carbon dioxide and water.

Species in the plant kingdom provide glucose and oxygen and need water and carbon dioxide to make glucose.

This is called the carbon cycle. If it stops, humans will not survive.

**Vocabulary Terms**
- **Glucose:** A six-carbon ring molecule of simple sugar. This is the sugar that is found in human blood and used by humans for fuel.
- **Hormones:** Chemical regulators of metabolism.
- **Insulin:** A hormone made by the pancreas that moves glucose molecules from the bloodstream into individual cells to be used as fuel.
- **Complex carbohydrates:** Long-chain polymers of glucose molecules.
Reinforce and Review

- Fiber is a very similar molecule to starch.
- If fiber is boiled long enough, much of it will turn into starch. For example, a raw carrot is high in fiber and doesn’t have much starch. A cooked carrot is lower in fiber and now has more starch.
- Too much cooking or boiling can break down the fiber.
- Bran fiber does not break down under cooking or baking conditions.

In-Class Activity: Recipes for Nutrition

21st-Century Skills—Collaborate with Others

Oatmeal is a source of soluble fiber, which can help reduce cholesterol levels. Adding more oats to the diet is recommended for individuals at risk.

Have the class work together to collect five recipes that are based on oats or oatmeal.

If possible, try one recipe in class.

Vocabulary Terms

- **Fiber**: A nondigestible type of plant starch that provides bulk and cleansing to the gut.
- **Soluble fiber**: Fiber that dissolves in water, usually forming a gel, like pectin. Oatmeal has soluble fiber.
- **Insoluble fiber**: Fiber that does not dissolve in water, like grain husks and the cell walls of vegetables and fruits. Bran is an insoluble fiber. Celery is an example of a food with insoluble fiber from cell walls.

Figure Focus

Figure 2.7: Plant foods are the sources of fiber.
Reinforce and Review

- Fats are extremely important in both cooking and nutrition.
- Fats provide lots of energy (calories) and can be stored as body fat.
- Too much fat in the diet can make a person fat.
- Too much sugar in the diet can also be stored as fat.
- Overweight individuals should thus be careful of their fat and sugar intake.
- The melting point determines when a fat will become liquid (oil). It determines whether a fat will be liquid at room temperature (an oil) or will be solid at room temperature (a solid fat, also called a “plastic” fat in food science, because it can be shaped).
- Saturated fats have a higher melting point than monounsaturated and polyunsaturated fats.

Vocabulary Terms

- **Lipids**: Fats, oils, and other compounds that repel water.
- **Fat**: Molecules made from glycerol and fatty acids, both solid fats and oils.
Reinforce and Review

- There are three fatty acids on a typical molecule of dietary fat. These are long chains connected to a backbone, sort of in the shape of an E.
- The fatty acids determine the type of fat: saturated, monounsaturated, or polyunsaturated.
- They are either saturated with hydrogen or not.
- Fats can oxidize, or go rancid, during storage, especially without refrigeration. Sunlight accelerates the process, and polyunsaturated fats are prone to this. Saturated fats can also oxidize, but not as quickly.
- Oxidation destroys the fat and its flavor. In some cases, oxidation can make the fat unsafe to use and consume.
- Cholesterol is a lipid, but not a fat.
- Cholesterol is a sterol, which is a complex molecule with several carbon rings.
- Sex hormones, bile, and vitamin D are all made from cholesterol.
- Too much cholesterol can form a harmful waxy substance in the arteries.

Vocabulary Terms

- **Essential fatty acids**: Specific fatty acids that are required for human health but not made by the body.
- **Oxidation**: The destruction of a molecule, or combustion, by oxygen. This process can be fast and hot (fire) or slow and barely noticeable over time (rust).
- **Cholesterol**: A sterol lipid, naturally occurring in the body to make other steroids.
- **Trans fatty acids**: Unsaturated fats with a trans configuration.
- **Hydrogenation**: Further saturating a polyunsaturated fatty acid with hydrogen to make it more solid at room temperature.

Figure Focus

**Figure 2.8**: Fatty acids are part of fats and oils.
Table 2.1: Food Sources of Fats and Cholesterol

- There are fats in many foods. Most animal fats are saturated.

Nutrition: Saturated Fat and Unsaturated Fat

Hydrocarbons are chain polymer molecules that get their name from hydrogen ("hydro-") and carbon.

All fats, whether they are food fats or petroleum, are hydrocarbon chains.

Discuss

- Point out to the students the double bond on the unsaturated fatty acid molecular drawing. The double bond is a site where two additional hydrogens could bond.
- This unsaturated fatty acid is a cis configuration.
- The trans configuration would look like this:

  - Note that the double bond has the hydrogens on either side of the chain.
Fats that tend to be solid also tend to be solid in the bloodstream. They form clumps of fat that must be transported in the blood. Liquid oils are easier for the body to process.

Teaching Tips
- Students might have studied amino acids in a biology course.
- DNA codes for the assembly of amino acids into specific proteins.
- This is called protein synthesis.
- Formally or informally assess the students for prior knowledge of protein synthesis.

Fast Fact: Did You Know . . . ?
Americans tend to eat more protein than they need.
Typical restaurant or foodservice operation servings of beef, chicken, or fish often contain more protein than a guest needs in the entire day.

Discuss
- “Protein is expensive.” Have the students discuss what this means. There are many global, economic, agricultural, environmental, and other reasons why protein is expensive.
- Remind the students that excess protein that is eaten is stored as fat or burned instead of cheaper carbohydrates.

Vocabulary Terms
- **Proteins**: The polymer molecule nutrients that build and repair the body.
- **Amino acids**: The specific nitrogen-containing molecules that link together to make protein.
- **Essential amino acids**: Amino acids that are needed for life, but are not made by the body. They must be eaten.
Figure Focus

Figure 2.9: Soybeans are also protein rich.

**Fast Fact:**
Did You Know . . . ?

The tissues that are made of protein are your protein stores.

**In-Class Activity:**
Protein and Acid Demonstration

**Science Connection**
Acids will denature protein. Denature means to change or alter the nature of something.

Using raw egg white (albumen), show the effect of various strengths of acid.

Contact the chemistry department for assistance with this.

Rehearse this lab.

Determine with the help of the chemistry teacher how to transport and dispense the acid.

Be especially careful and use eye, hand, and clothing protection when working with the acids.

Needed:
- 4 Petri dishes
- Pipettes
- 4 raw eggs
- Samples of acids:
  - Hydrochloric acid
  - Sulfuric acid
  - Acetic acid (vinegar)
  - Ascorbic acid (dissolved vitamin C tablet in ¼ cup water)

Crack an egg into each Petri dish.

Drop a pipette of acid onto an egg. Observe the results.

This is not a quantified experiment. It is merely a demonstration that acids will coagulate protein as effectively as heat.

Inform the students that human stomach acid is the same as hydrochloric acid.

**Vocabulary Terms**
- **Complete protein**: A food that contains all the essential amino acids.
- **Incomplete protein**: A food that contains some essential amino acids, but not all of them.
- **Complementary proteins**: Two or more incomplete proteins that are eaten together to provide all essential amino acids.
It is interesting that cultures discovered the principle long before the science was understood. Their survival depended on it.

Reinforce and Review

- Vitamins were discovered because people without a certain vitamin got sick. This is called deficiency. When the vitamin was added they got better.
- The requirements for the vitamin were based on the amount required to prevent sickness.
- Too much of a vitamin can also make you sick, which is called toxicity.
- Lately we realize that there might be optimal levels of vitamins, somewhere between deficiency and toxicity.

Discuss

- “Vitamin B” is actually a misnomer.
- Vitamins were discovered and got their names early in the twentieth century. At the time, they thought there was one that they called B. Now we realize that there are as many as 17 B vitamins, now called the B complex. They include thiamin, niacin, riboflavin, pyridoxine, B12, and others.
- There are still other vitamins that are not included in this text.

Vocabulary Terms

- Vitamins: Necessary molecules that are catalysts and regulators the body needs, but are not made by the body.
- Water-soluble vitamins: Vitamin C and the B complex vitamins can dissolve in water and should be eaten daily.
- Fat-soluble vitamins: Vitamins A, D, E, and K do not dissolve in water and can be stored in the body in reserve.
Figure Focus

Figure 2.10: There are many B vitamins. There are actually more water-soluble vitamins than fat-soluble ones.

Discuss

- Where can you get advice on nutrition?
- Who can tell you what vitamins or minerals you might need?
- Students should mention the dietitian and the physician.
- The term “nutritionist” usually refers to a dietitian.
- There are no such terms as “nutritionalist” or “dietologist.” Please gently correct the use of these.

Fast Fact: Did You Know . . . ?

Scurvy is sometimes referenced in pirate or seafarer books and movies. A bad case of scurvy can make your teeth fall out.

CUSTOMIZED INSTRUCTION

21st-Century Skills—Health Literacy

More Advanced Students

Choose one of the following diseases: pellagra, beriberi, or ariboflavinosis.

Ask students to look up the nature of the disease, the symptoms, the occurrence (when, where, who), and the treatment.

What foods would help prevent the disease?

Have students write a one-page report.

Less Advanced Students and ESOL Students

Learn the names of vitamins B1, B2, and B3 (thiamin, riboflavin, and niacin).

Learn two food sources of each vitamin.

Learn to correctly spell the names of the vitamins.

Special Needs Students

Prepare three cards: B1, B2, and B3.

Prepare three more cards: Thiamin, Riboflavin, and Niacin.

Play a matching game with the cards.

Vocabulary Terms

- Minerals: Elements found on the periodic table, and naturally occurring in the earth.
Discuss

- Help the students to recognize water as a nutrient.
- Some beverages, like those including caffeine and sugar, actually cause the body to lose water rather than increase it.
- Plain water is a good beverage throughout the day.

Fast Fact:
Did You Know . . . ?
Plan for ways to include fresh water during the day.

Figure Focus

**Figure 2.11:** Think of the human body as you would a plant. You can see the plant wilt without water. People are mostly water, too.
Nutrition: Calories in Beverages

Even fruit juices are a concentrated source of energy and can contribute a lot of extra calories to the diet.

Trends: Caffeinated Beverages

There are many problems associated with the drug caffeine, which is so readily available in hot and cold beverages.

One of the problems is water loss. It does not “quench” thirst, but does the opposite.
Reinforce and Review

- The body is actually like a giant doughnut with a hole in the middle. The alimentary canal (mouth to anus) is like the doughnut hole.
- Food doesn't actually enter the body until it crosses over from the alimentary canal into the bloodstream and on to the cells. So food in the stomach and intestines hasn’t yet been digested or absorbed.
- The process of digestion begins in the mouth and ends in the small intestine. Absorption of water and alcohol begin in the stomach; the rest happens in the small intestine.
- The large intestine is for absorbing more water, and collecting and passing solid wastes.
- There are several organs involved in the entire process.

Discuss

- What are students’ perceptions of food additives? How did they form those opinions?
- Flavorings, colorings, and seasonings are all additives.
- Encourage students to discuss the roles of various types of additives.

Vocabulary Terms

- **Food additive**: A chemical added to a food for a purpose.
- **Additive**: Any chemical that might be added for any purpose.

Figure Focus

**Figure 2.12**: This is the human alimentary canal and accessory organs that make up the digestive system.
Fast Fact: Did You Know . . . ?
The U.S. food supply is the safest, most varied, and most available in the history of the world.

Vocabulary Terms
- Dietary Reference Intakes (DRIs): Recommended daily intakes of nutrients.
Discuss

- It seems that RDAs, DRIs, and AIs are all the same thing. These guides have developed over years of trying to determine several things:
  - How much of a nutrient is required to prevent a deficiency disease?
  - How much of a nutrient will cause a toxicity reaction?
  - How much do people of different sizes, shapes, genders, and ages differ in their nutrient needs?
  - How much of a nutrient is truly optimal?
- All these assessment systems attempt to answer these questions with research data that can be easily used.
- Help students understand the effect that veganism has recently had on cuisine.
- These are some examples of food products that a strict vegan would avoid:
  - Soup or sauce thickened with a butter roux
  - Any foods that have lard in them, or those that are fried in lard
  - Any food that is colored with carmine, because it is made from beetles
  - Any food that contains gelatin
  - Honey
- Some vegans reject foods that have animal products used in their cultivation, such as bone meal or whey proteins.
- Vegans must be very careful with their dietary planning to consume adequate protein, calories, fats, iron, and vitamin B12.
- In a foodservice operation setting, do not position a menu item as vegan unless it is completely compliant with veganism.

Vocabulary Terms

- **Recommended Dietary Allowances (RDAs)**: Recommended daily allowances of nutrients.
- **Adequate intakes (AIs)**: Nutrient daily intake levels for healthy people.
- **Vegetarian**: An individual who chooses to consume only vegetable and plant foods.
- **Lacto-vegetarian**: A vegetarian who will include milk and dairy foods.
- **Lacto-ovo-vegetarian**: A vegetarian who will include dairy foods and eggs.
- **Vegan**: A vegetarian who will use no animal products.
- **The Dietary Guidelines for Americans 2005**: Government dietary advice.
Reinforce and Review

- Obesity is one of the greatest health risks in the world right now.
- Obesity in the United States contributes to many deaths every year.
- Obesity in children is becoming an epidemic and reduces a child's life expectancy.
- Excluding obesity, the United States has the population with the longest life expectancy of any other in recorded history.

Discuss

- What do you think about childhood obesity? What can be done about it?
- Why is childhood obesity becoming an epidemic? What can you do to prevent it in your own family?
- How can you protect yourself from becoming obese?
- What can obese people do to become healthier?
- Let the students discuss these and other issues related to obesity.

Vocabulary Terms

- Malnutrition: Poor nutrition for any reason.
- Overweight: A person who weighs more than is recommended for health (BMI > 25).
- Obese: A person who has too much body fat to be healthy (BMI > 30).
- Osteoporosis: A disease that causes bones to lose their calcium deposits and become brittle.

Figure Focus

Figure 2.13: It is easy to see that there is too much obesity in the United States. Colorado is the most successful state in the United States in terms of residents with appropriate body weights.
Nutrition: Bone Density
For strong bones, drink milk and exercise. Ask students what foods are high in calcium.

Reinforce and Review
- Women are especially vulnerable to osteoporosis as they age and their estrogen production decreases.
- Women are also especially vulnerable to iron-deficiency anemia due to menstrual blood loss.
- Women can first get anemia, and then after menopause they can get osteoporosis.
- Women can also have very high nutrient demands during pregnancy and lactation.
- Women need to build stores of nutrients during their childhood and teenage years.
- Women need to eat well and exercise from their childhood and teen years onward.

In-Class Activity: BMI Calculation
Math Connection, 21st-Century Skills—Solve Problems

This equation is used to calculate body mass index (BMI), an evaluation of weight for height. Have students use this equation to determine their own BMIs.

A BMI over 25 (approximately) is considered overweight.
A BMI over 30 (approximately) is considered obese.

Have the students evaluate their status. There are more sophisticated and accurate measures and calculations, but these will be useful for this course.

Vocabulary Terms
- Iron-deficiency anemia: Not enough iron to make enough red blood cells to carry oxygen, causing fatigue.

Figure Focus
Figure 2.14: This is a microscopic image of bone tissue that has become porous due to osteoporosis.
Reinforce and Review

- Children and teens might be more affected by dental cavities than by other nutritional illnesses that show up in middle age.
- Proper diet, along with good dental hygiene, helps protect the teeth.
- Untreated dental problems can create illness and problems elsewhere in the body, including the heart.
- Students might not be serious about preventing cardiovascular diseases while in high school.
- American Heart Association studies have reported a rise in arterial plaque formation in obese children and teenagers, which until recently was seen only in people in their middle age (40+).
- Help students to understand that fatal heart attacks can occur without any outward physical warning.
- Strokes might not be fatal to the entire body, but can permanently damage areas of the brain.
- It is best to live a healthy lifestyle all the time, from childhood.

Vocabulary Terms

- **Cardiovascular diseases**: Diseases that involve the circulatory system.
Cholesterol must be moved through the body via the blood. It is packaged for this, in either low-density complexes (which can be gooey), or high-density complexes (which are hard and move more easily).

Discuss

- It would be a disservice to imply that cardiovascular disease, diabetes mellitus, and cancer can be completely avoided with proper lifestyle choices. Genetics can be a factor.
- Research helps us understand what might put us at risk for the disease.
- If we reduce the risk factors over which we have control, we reduce our risk.
- Even so, some of us can develop cardiovascular disease, diabetes mellitus, and cancer.
- Lifestyle can definitely improve the management of diabetes.
- Poorly managed diabetes can cause the loss of feet and legs.

Teaching Tips

- Encourage students to consider reducing their intake of soda, energy drinks, candy, and other foods that are high in sugar and/or fat.
- Encourage the students to be physically active and to exercise.

Vocabulary Terms

- Diabetes mellitus: A disease caused by problems with the regulation of insulin and blood sugar; it affects every system of the body and must be managed every day.
Summary

- Remind students to review the following:
  1. The importance of nutrition
  2. Nutrients
  3. The digestive system
  4. Food additives
  5. A healthy diet
  6. Diseases caused by malnutrition

Summary

In this section, you learned the following:
- Nutrition is the study of nutrients in food and how they nourish the body. Nutrition is important to the restaurant and foodservice industry because people depend on restaurant and foodservice operations for some of their meals. Operations should strive to provide menu items that make balanced, nutritious choices possible.
- The six basic nutrients found in food are carbohydrates, proteins, lipids, vitamins, minerals, and water.
- Phytochemicals aid the body in fighting or preventing diseases.
- Fiber promotes digestive health and regularity.
- Carbohydrates provide the body with energy. They help the body use protein and fat efficiently.
- Fat carries vitamins A, D, E, and K through the body, cushions the body’s vital organs, protects the body from extreme temperatures, provides a reserve supply of energy when the body stores it, and supplies chemicals called essential fatty acids.
- Proteins supply energy to the body and provide the building blocks the body uses for muscles, tissues, enzymes, and hormones.
- Vitamins and minerals help in growth, reproduction, and the operations and maintenance of the body.
- Water is essential to the body. It helps with digestion, absorption, and transportation of nutrients; helps with elimination of waste through the kidneys, colon, and lungs; distributes heat throughout the body and allows heat to be released through the skin by evaporation; and lubricates joints and cushions body tissues.
Food additives improve flavor, color, and texture; retain nutritional value; prevent spoilage; and extend shelf life.

Digestion breaks down food into its simplest parts.

A healthy diet emphasizes fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products. It includes lean meats, poultry, fish, beans, eggs, and nuts. And, it is low in saturated fats, trans fats, cholesterol, salt, and added sugars.

Malnutrition is the condition that occurs when your body does not get enough nutrients. The major diseases caused by malnutrition include the following:

- **Obesity**: Can be prevented by eating a healthy diet, exercising, and eating fewer calories.
- **Osteoporosis**: Can be prevented by building strong bones and reaching peak bone density by getting adequate sources of calcium and vitamin D and exercising daily.
- **Iron-deficiency anemia**: Can be prevented by eating a healthy diet of iron-rich foods.
- **Dental cavities**: Can be prevented by avoiding high-sugar foods and using fluoride.
- **Diabetes mellitus**: Can be prevented by eating a healthy diet and exercising.
- **Cancer**: May be partially prevented by eating a healthy diet and exercising.
Section 2.1 Review Questions

1. The students should realize that they will receive inquiries about nutrition.

2. Water is the major component of the body and gives structure, provides lubrication, and helps with reactions and transport.

3. (1) Proteins: structure of tissues, repair, other molecules used by the body like enzymes and some hormones, and energy; (2) Carbohydrates: energy for the body to function; (3) Fats: energy storage, storage of vitamins A, D, E, and K, cushioning and insulation of the body, some transport, essential fatty acids, satiety; (4) Vitamins: molecules that work as catalysts or regulators in body processes; (5) Minerals: earth elements that are used in making molecules in the body, and also are involved in some reactions; (6) Water: the main component of the body (see answer to Question 2). The students might also include fiber and phytochemicals.

4. Carbohydrates provide energy for the body in the form of glucose that is carried in the bloodstream to the individual cells of the body.

5. Laura Walsh is correct in believing that consumers are becoming more interested in nutrition. Any restaurant or foodservice operation should be able to answer questions about the nutrient content of the foods served. It will also be a marketing tool. The students might also glean other information from the Professional Profile.

6. Each student will have his or her own ideas and creation for this assignment.

7. Amino acids are the nitrogen-containing building blocks of proteins. Proteins are polymer molecules made of amino acids. The students might know from prior learning that proteins are made by assembling amino acids according to a genetic DNA code.

8. Students might realize that fat contributes to satiety, which is the feeling of being full and satisfied with a meal.
Section 2.1 Activities

1. The information in the chapter might be enough to create this presentation. If not, have students use the American Dietetic Association Web site, the USDA Web site, or other reliable sources. Have students cite the sources they use.

2. Keeping an accurate food journal is an enlightening experience. Students might actually alter and improve their eating habits because they are writing them down. Instruct them to include everything, including water, breath mints, gum, and so on.

3. This will generate some interesting arguments. Help students to remember the various aspects, such as the high price of lifestyle illnesses. Whose right is it to tell you how to care for your own body? Whose right is it to rely on others for assistance?
Section 2.2
Making Menu Items
More Nutritious

Introduce the Section
a. Some food-preparation techniques can preserve nutrient content.
b. Healthful choices can be delicious and well planned.
c. Fats in foods can be reduced.
d. Follow current trends in food and nutrition to remain aware of new techniques.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
- The choice to improve nutrition begins with planning.
- Menu planning, recipe selection, and purchasing decisions all grow out of a commitment to good nutrition choices.
- Follow all food safety guidelines for receiving and storing foods.
- Nutrition is protected while safety is maintained.
- If safety and quality are overlooked, nutrition will suffer as well.
Teaching Tips

• Help the students to see the positive correlation between food safety and nutrient protection.
• It will be a negative correlation if food safety principles are neglected.

Figure Focus

Figure 2.15: FIFO only works if you use the “first in” products before they spoil.
Reinforce and Review

- Water and oil can dissolve vitamins and minerals out of foods.
- Soaking foods in water for long periods and then discarding the water can result in lost nutrients.

ServSafe Connection: Dry Storage, Refrigerated Storage, and Frozen Storage

Help the students note that these recommendations are not limited to nutrition. They are the same as recommendations for food safety.

Could concern for safety and concern for health be related?
Discuss

- Help students understand that the goal is still delicious, beautiful food.
- If food doesn't taste good, people won't choose to eat it.
- Nutritious food should never be boring or bland.

Nutrition: Nutrients and Heat

“Bioavailable” means the body can absorb food and use it as a nutrient.

Sometimes a nutrient is found in food, but cannot be absorbed by a human, or it is not in a usable form. These nutrients are not bioavailable.

Nutrients should be served in a bioavailable form to be considered in the nutritional intake.

Fast Fact: Did You Know . . . ?

The best solution is to eat a widely varied and well-prepared diet.

Discuss

- Is the goal to eat for sensory experience, or to eat for nutrition? Are the two mutually exclusive?
- Have students debate, give ideas, make suggestions, share experiences, and so on.
Discuss
- Protein isn’t easily destroyed by cooking.
- Meat, fish, and poultry are usually consumed for protein nutrition.
- These foods contain other vitamins and minerals as well, which might be lost in overcooking.
- Is overcooking ever a desirable culinary strategy?
- Proper cooking benefits both taste and nutrition.

Vocabulary Terms
- **Coagulates**: Denatures and becomes thick, firm, and opaque.

---

**Figure Focus**

**Figure 2.16**: This spinach is ready to serve very soon after it is heated through. It still has its bright color.
Teaching Tips
- Help students to understand that adding baking soda isn’t a good strategy.

Reinforce and Review
- Baking soda is good for baking, but not for produce.
- The ideal pH range for foods is slightly acidic, or below 7.
- This enhances acceptability for flavor and absorptibility for nutrition.
- Baking soda can raise the pH above 7, into the alkaline range.
- Alkaline foods taste soapy.
- Vitamin C is best obtained from fresh, raw fruits and vegetables.
- Citrus fruits are the best source of vitamin C, but other fruits and vegetables have vitamin C.
- Cooked foods shouldn’t be relied on for vitamin C. Include raw produce for this purpose.

Figure Focus
Figure 2.17: This plate of food is loaded with many desirable nutrients.
Discuss

- Vitamin B is actually several vitamins with numerical subscripts (B1, B2, B3, etc.).
- The most common ones also have other names: thiamin is B1, riboflavin is B2, niacin is B3, pantothenic acid is B5, pyridoxine is B6, biotin is B7, folic acid is B9, and cobalamin is B12.
- Each has a different role in maintaining metabolism, but the specifics are beyond the scope of this chapter.
- Not all B vitamins are found in the same foods.
- A wide variety of foods ensures good B vitamin nutrition.
- There are other B vitamins as well, but over time some of them have not turned out to be necessary nutrients.
- Originally there was one for each number, in order, up to 17.

Reinforce and Review

- Color is a good indication of what is happening with cooked foods.
- If the color is going dull, nutrients are probably being lost as well.
- Hold foods only for short periods of time, while quality can be maintained.

**Figure Focus**

**Figure 2.18:** A quick stir-fry can keep vegetables appealing and colorful.
**Essential Skills:**
**Batch Cooking for Vegetables**
Batch cooking can be efficient if it is well planned and carefully prepped.

**Vocabulary Terms**
- **Batch cooking:** Cooking amounts as they are needed, rather than large amounts for holding.

**Figure Focus**

**Figure 2.19:** Smaller batches can help preserve fresh nutrients.

**Figure 2.20a:** Careful handling of a raw carrot.

**Figure 2.20b:** Shocking blanched vegetables stops the cooking process.

**Figure 2.20c:** Drain the water so the vegetables don’t soak.
Figure Focus

**Figure 2.21:** A small bite can be more satisfying than a large helping of a substitute.

**Discuss**
- What difference does portion size make?
- Help the students to see that portion control is key to good nutrition.
- In the current civilized world, overnutrition is a major problem, but it could be solved with appropriate portion choices.

**Fast Fact: Did You Know . . . ?**
Give tabouleh a try. It’s very fresh tasting and very good. If possible, find a recipe to make in class.

**Teaching Tip**
- Note that the plate shown in Figure 2.21 has a plate garnish that gives volume to the menu item. It makes the item fill the plate better, giving the illusion of a larger portion. The visual appeal can increase customer satisfaction with the portion size.

**Vocabulary Terms**
- **Portion control:** Keeping serving sizes appropriate and consistent.
**Essential Skills: Modifications in Baking**

Experiment with various modifications to see which ones you like.

Try new things in the quest for a more nutritious menu.

**Reinforce and Review**

- Fat is not always visible in a soup, sauce, or gravy. In fact, if properly made, the fat will be invisible.
- Fats and oils will pool on the top of sauces, soups, and gravies if they are poorly made with roux.
- Cream is very high in fat, so when used as an ingredient, fat is added to a dish.
- Some alternatives can reduce fat while maintaining the character of the dish.
- Experiment with different thickeners to see the result. If this is not possible, smaller portions can help reduce the total fat of the meal.

---

**Figure Focus**

**Figure 2.22:** Applesauce or other puréed fruit can provide moisture for a baked product with reduced fat or oil.
Discuss

• Each of these modifications is used throughout the culinary world.
• Some famous chefs specialize in health-conscious cuisine adaptations.
• Their food does not taste “substituted,” but tastes delicious in its own right.

Nutrition: Sauce Bourguignon

Red wine and red grape juice do not lose their pigments under fermentation or cooking. Fermentation does not make the grape more red. Red grape juice provides the same advantages without alcohol.

CUSTOMIZED INSTRUCTION

Literacy Connection, 21st-Century Skills—Analyze Media

Special Needs Students
Have students act the part of a TV chef making a modification to a recipe to make it more healthful. Choose one in the text. Rehearse as needed.

ESOL Students
In English, have student(s) explain and demonstrate how to make a modification that is listed in the text. Rehearse as needed.

Less Advanced Students
Research a TV chef, past or present, who taught an example of how to modify a recipe for health purposes. If possible, show a clip of this chef making the modification in a demonstration. If not, describe the event and show a still photo of the chef.

More Advanced Students
Research at least two famous chefs who have created healthful recipes using classic culinary principles. One chef to consider is Graham Kerr, who began early as a TV chef with a popular show, and eventually devoted his time to health-promoting modifications of cuisine. Create a PowerPoint presentation and show it to the class.
**Essential Skills: Modifications for Meat**
Lean meat should be cooked for tenderness. Some lean cuts can be tough if improperly cooked.

**Essential Skills: Modifications for Seafood**
Omega-3 fatty acids are a type of monounsaturated fat that is especially good for the heart and cardiovascular system.

**Figure Focus**
**Figure 2.23a:** Remove visible fat.

**Figure 2.23b:** Protect the chicken meat, but remove the excess fat before serving.
Figure Focus

**Figure 2.24a:** Some fish is too dry or delicate for dry cooking. It does work well with salmon and halibut.

**Figure 2.24b:** Presentation maintains the beautiful quality of the food.

**Figure 2.24c:** A mix of vegetables, grains, and seafood can be low in fat and nutritious.

**Figure 2.25a:** Sweating brings out the flavor. Use fat-free, low-sodium stock.

**Figure 2.25b:** Rather than cooking with butter, simply garnish dishes with a little butter.

---

**Essential Skills:**

**Modifications for Vegetables**

Try to find an alternative for fat-dependent cooking methods.

The flavor of a small amount of fat can be added in limited quantity as a garnish.
Essential Skills: Modifications for Desserts
The goal is for dessert to be a delicious finish to a meal.
A dessert can be delicious without undermining nutrition efforts and good health.

Essential Skills: Modifications for Garnishes
Microgreens are an excellent trend in garnishes. They are not only edible, but they add further nutrients to the item.

Figure Focus
Figure 2.26a: Low-fat dairy foods can still taste very full and rich.

Figure 2.26b: There is not as much pastry in a strudel or cobbler.
Figure Focus

Figure 2.27a: Microgreens, mint leaves, lavender, and other herbs are beautiful garnishes.

Figure 2.27b: Make sure the aerated sauce does not look like soap bubbles.

Fast Fact: Did You Know . . . ?

Sea salt is a very light finish for vegetables, and a bit lower in sodium than table salt.

Nutrition: Types of Salt

Kosher salt is often in tiny flakes rather than crystals.
The shape of the salt particle affects the flavor somewhat.
Ultimately, all salts are NaCl, which is the same chemical salt, called sodium chloride.

In-Class Activity: Salt Tasting

Science Connection

Present students with an opportunity to taste several different varieties of salt.
Kosher salt, sea salt, rock salt, and table salt are both easy to find and inexpensive.
Have students rate the taste on "saltiness."
Which salt seems the most "salty"?
Could using a "saltier" tasting salt help reduce the sodium content of a dish?
Reinforce and Review

- This is a very important topic, given the overnutrition and obesity problem in our society.
- Too many calories from fats and simple sugars are a serious problem.
- Not everyone understands, or cares about, what they are eating.
- Long-term consequences might not be immediately motivating when someone is hungry and wants something to eat.

Discuss

- Do you contemplate the implications of long-term nutrition decisions when you are looking in the refrigerator for a snack?
- Encourage students to discuss tactics to improve nutritional decisions and choices for wellness and improved health.

Figure Focus

Figure 2.28: Baked goods and fried foods often have a lot of fat in them or are fried in fat.
Table 2.2: Recipe Substitutions

<table>
<thead>
<tr>
<th>Instead of</th>
<th>Use:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat milk</td>
<td>2% 1% or half and half</td>
</tr>
<tr>
<td>Eggs, whole or yolks</td>
<td>Egg whites or a commercial egg substitute, fruit or vegetable puree</td>
</tr>
<tr>
<td>Butternut</td>
<td>Tallow/butter substitute (some of these are not appropriate for baking, olive oil, not suitable)</td>
</tr>
<tr>
<td>Coconut and palm oil</td>
<td>Canola oil, soybean oil, safflower oil, grape seed oil, appleseeds, low-fat plain yogurt</td>
</tr>
<tr>
<td>Cheese</td>
<td>Parmesan, mozzarella, cheddar, Swiss, provolone</td>
</tr>
<tr>
<td>Yogurt</td>
<td>Low or nonfat</td>
</tr>
<tr>
<td>Bacon</td>
<td>Turkey bacon, Canadian bacon, lean ham</td>
</tr>
<tr>
<td>Sausage</td>
<td>Turkey sausage, seasoned ground turkey, sausage, chicken</td>
</tr>
<tr>
<td>Ground beef</td>
<td>Ground beef, ground beef, ground turkey breast, ground turkey</td>
</tr>
<tr>
<td>Chocolate</td>
<td>Cocoa</td>
</tr>
<tr>
<td>Heavy cream</td>
<td>Equal portions of half and half or evaporated skim milk</td>
</tr>
</tbody>
</table>

Teaching Tips

- Help students to understand that substitutions will not taste the same as the original recipe.
- The new item will vary in flavor, mouthfeel, smoothness, or other sensory qualities.
- However, help students consider that the new item can be just as delicious, and perhaps even more so.

Nutrition: Saturated Fats

Unintended consequences can create interesting problems. Mr. Sokolof was trying to help the American people by increasing the heart-healthy quality of the diet by reducing saturated fat in processed foods. However, his campaign was based upon faulty and incomplete knowledge of food science and nutrition, and the way fats work in processing. Unintentionally, the problem with fat actually worsened.

In the 1980s, businessman Phil Sokolof was concerned about the levels of high-cholesterol and saturated fats in the US food supply. He launched a media campaign about it, stating that these fats in foods were destroying the heart health of the American public. Through his efforts, saturated tropical oils and beef tallow (lard) were removed from many popular food preparations, like snack crackers and French fries. They were replaced with vegetable oils that were hydrogenated for processing. Unfortunately, processing foods with hydrogenated vegetable oils can create trans fats, which were not healthy for the heart. The answer? Reduce total dietary fat, increase heart-healthy foods, and get some exercise.
Discuss

- Do students understand the nature of scientific studies, like the Alar studies?
- Rat studies deal with experimentation and trials. The results deal with risks and probabilities. The results of rat research are published, and the connection between rats and humans is suggested by the research.
- Remind students that research is not absolute, but trends can be seen over time in most cases.

Vocabulary Terms

- **Pesticides**: Chemicals that kill insects.
- **Herbicides**: Chemicals that kill plants.
- **Hormones**: Proteins or steroids that regulate and control metabolism.
- **Antibiotics**: Chemicals that kill bacteria.
- **GMOs (genetically modified organisms)**: Plant or animal whose genetic makeup has been altered.

**Figure Focus**

**Figure 2.29**: This apple is grown in an orchard. Is the orchard safe? Most farmers want their food to be safe and are careful.
Discuss

• “Organic” means many things.
• Have the students discuss the various marketing terms and why they are used.

Teaching Tips

• Some of the terms on this page are descriptors of production standards. Some are marketing terms. Help the students to see the difference.

In-Class Activity: KIM Chart

Literacy Connection, 21st-Century Skills—Use and Manage Information

Help the students learn the concepts behind the vocabulary words/concepts on pp. 126 and 127. Help the students to understand the information and develop a memory cue to remember the information so it will be useful.

Have the students fold a piece of paper length-wise in thirds.

Label the columns “K” for Key Term, “I” for Information, and “M” for Memory Cue.

Write the term in the K column and the definition and textbook information in the I column.

In the M column, invent a memory cue. This could be a little picture, a key word, a rhyme, a sound-alike, or a mnemonic device of some sort.

Give the students a period of time to use their KIM chart: 10 minutes, overnight, a week, or whatever is appropriate for your classroom.

Without the help of the chart, quiz the students on the terms.

Have students keep the KIM chart in their notes for future reference.

Vocabulary Terms

• Conventional: A food product available for purchase with no special modifications or claims.
• Organic: A food product without added chemicals.
• Certified organic: A specific set of standards for organic food production.
• Local: Made within a relatively close radius.
• Natural: Anything occurring in nature, but not a specific food term.
**Discuss**

- The NOP develops and administers national production, handling, and labeling standards for organic agriculture products.
- There are many reasons to make philosophical choices about foods and processes.
- Help students realize that investigation is a personal responsibility.

**Vocabulary Terms**

- **Genetically modified organisms (GMOs):** Organisms with altered DNA to emphasize certain desirable traits; genetic engineering.

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**Figure Focus**

**Figure 2.30:** Ask students if they prefer products that have this logo.
Discuss

- Do students have ideas about where they can obtain information about nutrition decisions?
- Help students find reliable scientific information that they can understand.
- Encourage students to look beyond popular culture for word-of-mouth information about their important choices.

Summary

- Remind students to review the following:
  1. Food preparation techniques
  2. Making menus more helpful
  3. Reducing excessive fats
  4. Types of produce (from a grower’s point of view)
Chapter 2 | Nutrition

- When cooking seafood, do not overcook fish, and use dry-sautéeing, grilling, and poaching methods.
- When cooking vegetables, sweat vegetables in a little stock, and add a small amount of butter or flavored nut oil to finish vegetables. Use fat at the end (if necessary).
- When cooking desserts, use low-fat and fat-free cottage cheese, ricotta cheese, yogurt, or cream cheese.
- When using garnishes, use thinly sliced pieces of vegetables.
- When using salt, decrease salt and increase the use of herbs and spices.
- When making salad dressings, use less oil.

- Organic foods and genetically modified food are recent developments in food production that affect nutrition in different ways.
Section 2.2 Review Questions

1. You retain nutrients when cooking by doing the following:
   a. Do not overrinse or cook grains and legumes too long; however, cook enough to soften. Use yeast in leavening whole grain flours. The students might not be aware of all of these options from the chapter.
   b. Use local, ripe, colorful, fresh produce, and prepare it raw or gently cooked.
   c. Cook meat, fish, and poultry according to directions; do not overcook.

2. This answer would include a debate about organic versus certified organic or conventional farming techniques, GMOs, and so on. Encourage students to be thoughtful.

3. The DNA sequence has been changed to provide for improved features.

4. Students will find these in the chapter. Answers include cooking in stock, substituting applesauce for oil, reducing butter in sauces, substituting a starch slurry for a roux, and other strategies found on pp. 118 and 119.

5. The students can determine the most healthful technique for each from the information in the chapter: Legumes—cook thoroughly but do not overcook; fish—grill, steam, or poach; vegetables—eat raw or quickly steam or sauté in stock.

6. Each student will have an opinion about this. There are pros and cons to each program. The best option would be a software solution that provides all three applications.

7. Batch cooking prevents the food from being held too long and losing nutrients.

8. Each student will have a feeling about this, based partly in philosophy and partly in science. The nutrient content of conventional and organic foods is about the same.
Section 2.2 Activities

1. This will be a unique result for each group.

2. Students should visit www.eatright.org to locate information.

3. Students might get a feeling for the wide variety of reliable and unreliable information available on the Web.
Case Study Follow-Up

1. Each student will have ideas on this. They could include using fresh fruits, whole grains, and lower fat options.

2. Each student will have ideas on this. For example, they could substitute vegetables for meat in lasagna. The American Dietetic Association Web site, the National Restaurant Association Web site, or Laura Walsh’s Web site might also give the students some ideas they could use.

3. There is a case for each. You might want to check the American Heart Association Web site.
Apply Your Learning

Fat Budget

1. Assume the calorie requirement is 2,000 kcal per day.

2. Assume 30 percent, which would be 667 (approx. 2,000 × .3 = 600).

3. 600 ÷ 9 = 67 grams of fat; 6.7 grams of saturated fat is 10 percent.

4. There are approximately 5 grams per teaspoon, so this is less than 2 teaspoons of saturated fat per day.

For the next aspect of the activity, students will need to use information about foods available in tables that are online (USDA.gov) or in published books. Encourage students to plan a very simple menu without too many ingredients, or they might be overwhelmed.

Please be aware that this assignment is rather time-consuming, but is very educational.

This is how the work is done in this field of dietetics.
Mercury in the Water

This case is real. There are not many such cases in the world, fortunately.

Students should not broaden the scope of this to fear seafood from other sources. Seafood in the United States is a safe food.

Bone Density

MyPyramid.gov is useful for students who know their own height and weight and other data. It says that height and weight data are optional, but students should provide it.

Help them to navigate this Web site. There is no right answer to this problem. The purpose is for students to become familiar with the site.

They can view the dietary guidelines link and recommendations.

There are aspects of the site that require a log-in. This should be optional.
Students will each have different feelings and opinions about this.

Personal health issues help motivate individuals. For example, if a young person is sick with Type I diabetes mellitus, certain dietary modifications might be more motivating than they would be for another young person.
Exam Prep Questions

1. A class of nutrients that includes starches, sugar, and dietary fiber is
   A. lipids.
   B. proteins.
   C. vitamins.
   D. carbohydrates.

2. The building blocks of protein are
   A. calories.
   B. vitamins.
   C. amino acids.
   D. carbohydrates.

3. What type of vitamin is vitamin C?
   A. Fat-soluble
   B. Fiber-soluble
   C. Water-soluble
   D. Phytochemical-soluble

4. What typically makes up 55 to 65 percent of the human body?
   A. Fat
   B. Water
   C. Vitamins
   D. Cholesterol

5. A vegetarian is best described as someone who does not eat
   A. dairy products.
   B. red meat and eggs.
   C. any animal products.
   D. meat, poultry, and fish.

6. What condition causes bones to gradually lose their minerals and become weak and fragile?
   A. Obesity
   B. Osteoporosis
   C. Diabetes mellitus
   D. Iron-deficiency anemia

7. What is the most common nutritional deficiency in the world?
   A. Vitamin C
   B. Vitamin D
   C. Diabetes mellitus
   D. Iron-deficiency anemia

8. At what temperature should cold, fresh food be received?
   A. 0°F with signs of freezing
   B. 32°F with signs of freezing
   C. 41°F with no signs of freezing
   D. 50°F with no signs of freezing

Exam Prep Answers
1. D
2. C
3. C
4. B
5. D
6. B
7. D
8. C
9. D
10. C
Chapter 2 | Nutrition

7. Which products have been produced without pesticides or synthetic fertilizers?
   A. Local
   B. Natural
   C. Conventional
   D. Certified organic

10. To function, the human body turns carbohydrates into
    A. fat
    B. fiber
    C. glucose
    D. protein

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# Nutrition Appendix

## Table 2.3: Vitamins and Minerals

This table is for use during this chapter and for future reference.

<table>
<thead>
<tr>
<th>Vitamin</th>
<th>Vegetable Sources</th>
<th>Animal Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Dark orange and green vegetables, sweet potatoes, tomatoes</td>
<td>Fortified milk or dairy products, liver, eggs</td>
</tr>
<tr>
<td>B</td>
<td>Whole grains, enriched products, fortified products, nuts, legumes</td>
<td>Pork</td>
</tr>
<tr>
<td>C</td>
<td>Whole grains or enriched grains</td>
<td>Milk and milk products</td>
</tr>
<tr>
<td>D</td>
<td>Whole grains, enriched products, nuts</td>
<td>Milk, eggs, meat, poultry, and fish</td>
</tr>
<tr>
<td>E</td>
<td>Most</td>
<td>Most</td>
</tr>
<tr>
<td>F</td>
<td>Green vegetables, green leafy vegetables, fruit, whole grains</td>
<td>Meat, fish, poultry</td>
</tr>
<tr>
<td>G</td>
<td>Most vegetable sources, people made small amounts in their cereals</td>
<td>Most animal sources</td>
</tr>
<tr>
<td>H</td>
<td>Green leafy vegetables, legumes, seeds, enriched products</td>
<td>Liver</td>
</tr>
<tr>
<td>I</td>
<td>Nuts naturally; may be fortified in cereal</td>
<td>All</td>
</tr>
<tr>
<td>J</td>
<td>Citrus fruit, peppers, strawberries, tomatoes, potatoes</td>
<td>None</td>
</tr>
<tr>
<td>K</td>
<td>Nuts, but made with the help of sunlight</td>
<td>Fortified milk, hens, eggs, some fortified eggs, eggs</td>
</tr>
<tr>
<td>L</td>
<td>Green leafy vegetables, mayonnaise made with vegetable oil, nuts, peanut butter,</td>
<td>Fish, only small amounts in some, not a good source</td>
</tr>
<tr>
<td></td>
<td>sunflower seeds, sea buckthorn berries, seeds, vegetables oils (pale, sunflower,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>corn oil, soybean oil and olive), wheat germ, whole grains</td>
<td></td>
</tr>
<tr>
<td></td>
<td>K Green leafy leafy vegetables, collards, spinach, also made by bacteria in the</td>
<td>Mineral amounts in fruits and eggs</td>
</tr>
<tr>
<td></td>
<td>intestine</td>
<td></td>
</tr>
</tbody>
</table>
Table 2.3 (cont.)
- Minerals are also very important nutrients.

Table 2.4: Food Additives and Their Functions
- These are all added to food for a reason.
- Each additive solves a problem.
Table 2.4 (cont.)

- Some additives have drawbacks. Help students understand that there are trade-offs to consider in many instances.

<table>
<thead>
<tr>
<th>Food Additive</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gums</td>
<td>Gums are substances that form a sticky mass in water. Gums help to keep emulsions from separating into constituent parts and are widely used in salad dressings, processed cheese, and confections.</td>
</tr>
<tr>
<td>Monosodium glutamate (MSG)</td>
<td>MSG is probably one of the best known and widely used flavor enhancers. MSG occurs naturally in food items and is often added to canned soups and meats. MSG gives some people headaches and a bloated feeling.</td>
</tr>
<tr>
<td>Nitrates</td>
<td>Nitrates are natural constituents of plants and, together with nitrates, are used in the pickling of meats. Nitrate is converted into nitrite in the process.</td>
</tr>
<tr>
<td>Nitrites</td>
<td>Used in canned meats, nitrite is the essential agent in preserving meat by pickling. They slow the growth of Clostridium botulinum and prevent botulism. Nitrites also preserve the desirable color and flavor of canned meat products.</td>
</tr>
<tr>
<td>Phosphates</td>
<td>Phosphates are used widely within food processing and have several applications. For baked goods, phosphates are used as leavening agents. Phosphates are also used in the tenderizing of meats and in the processing of meats and seafood to improve texture.</td>
</tr>
<tr>
<td>Stabilizers</td>
<td>Stabilizers help maintain the structure of emulsions. They are often used in margarines and marshmallows to produce body and mouthfeel.</td>
</tr>
<tr>
<td>Thickeners</td>
<td>Thickeners add body to a food product without imparting flavor. Modified starches are used as thickeners in commercial baking, as they work well with acidic ingredients, tolerate high temperatures, and do not cause pie fillings to “weep” during storage.</td>
</tr>
</tbody>
</table>
Chapter 3 Overview

Chapter 3 introduces the student to basic notions of foodservice costing mechanisms, explaining basic economic and financial concepts that are critical to understanding business in the restaurant and foodservice industry.

Section 1: The first section explains some basic costs that are incurred by restaurant and foodservice operations as well as some common tools used to track and control these expenses.

Section 2: Next, this section discusses how to control foodservice costs in greater detail, such as by correctly determining food costs and menu pricing.

Section 3: This section addresses labor costs and how these can be scheduled and controlled.

Section 4: This section describes some quality standards used throughout the restaurant and foodservice industry.

Advance Preparation

<table>
<thead>
<tr>
<th>Review</th>
<th>Sections 3.1–3.4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Chapter 5</td>
</tr>
<tr>
<td></td>
<td>Level 1, Chapters 2, 4, 5, 7, 8, 10, 12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact</th>
<th>A guest speaker from a local restaurant who can discuss how his or her operation controls costs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A guest speaker from the campus foodservice staff</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prepare</th>
<th>Sample menus from a variety of restaurants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sample purchase orders and invoices</td>
</tr>
</tbody>
</table>

CUSTOMIZED INSTRUCTION OPTIONS

<table>
<thead>
<tr>
<th>Less Advanced Students</th>
<th>More Advanced Students</th>
<th>ESOL Students</th>
<th>Special Needs Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pages 144, 149, 187</td>
<td>Pages 145, 191</td>
<td>Pages 144, 193</td>
<td>Pages 149, 189</td>
</tr>
</tbody>
</table>

CHAPTER TOOLS

<table>
<thead>
<tr>
<th>21st-Century Skills</th>
<th>Mathematics</th>
<th>Science</th>
<th>Literacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pages 143, 144, 145, 147, 149, 154, 155, 165, 166, 169, 172, 173, 174, 175, 180, 181, 185, 186, 187, 188, 189, 191, 192, 193, 199, 200, 204</td>
<td>Pages 169, 172, 173, 174, 181</td>
<td>Pages 172, 175, 200</td>
<td>Pages 143, 144, 145, 147, 149, 154, 155, 165, 166, 169, 172, 173, 174, 175, 180, 181, 185, 186, 187, 188, 189, 191, 192, 193, 199, 200, 204</td>
</tr>
</tbody>
</table>
Case Study
Costly Costs

• What additional steps should Miguel and Chef Kate have taken before deciding to expand by adding brunch service? Why might a successful dinner operation have determined to offer brunch in the first place? In what other ways could the co-owners have chosen to expand?

• What role does labor cost play in Kabob’s difficulties? Encourage students to consider all costs involved with the interviewing, hiring, and training process, as discussed in Level 1.

• What do students perceive as the biggest reason why sales have increased but profits have not?

• Note that there are follow-up questions about the case study at the end of the chapter.

• This activity could be done in groups, as a class, or as a homework assignment.

Homework Activity:
Delicious Dish

Literacy Connection, 21st-Century Skills—Work Independently, Solve Problems, Reason Effectively, Communicate Clearly

Kabob’s most popular brunch item is its French Toast Napoleon, made with brioche and layered with orange-scented pastry cream and fresh strawberries. This substantial portion—many guests can’t eat the entire portion, although an equal number praise the generous serving—sells for $11.95, which is not quite enough to cover all the costs associated with producing the dish and operating the restaurant.

Before reading the chapter, answer the following questions:

What changes can Chef Kate and Miguel make that might make this popular item more profitable?

What advantages and disadvantages are associated with each of those proposed changes?

Consider the problem-solving model described in Level 1, Chapter 8. How can it help Miguel and Chef Kate decide what to do?

Answer these questions in a one-page essay.
### Professional Profile

**Discuss**

Encourage students to discuss how successful recruitment is an important component of running any business. How does the recruiting process affect a business’s costs?

Why is it important to understand a company’s culture? What are some ways to learn about this culture? Ask students to relate this to the material on vision and mission statements learned from Level 1.

In addition to the questions that Sherie Valderrama suggests asking current employees about their companies, what other questions do students consider important?

**Reinforce and Review**

To succeed in the restaurant and foodservice industry, you must have a passion for service and a commitment to excellence.

Each company has a distinct culture that can play a key role in professional satisfaction.

Students should research potential employers as thoroughly as possible, opening their minds to unexplored career opportunities.

**Teaching Tips**

Point out that almost every professional profile has described the importance of passion. Encourage students to consider their own professional and personal passions and how these can help them identify appropriate career choices.

Refer to Level 1, Chapter 12 for more information on helping students identify and prepare for potential careers.

### CUSTOMIZED INSTRUCTION

**Literacy Connection, 21st-Century Skills—Work Independently, Think Creatively, Reason Effectively, Communicate Clearly, Create Media Products**

**ESOL Students and Less Advanced Students**

What are you passionate about? How can you translate your passions into a career that can help you thrive?

List three potential career paths that interest you and involve your passions. What must you do to prepare for each career? What qualifications will you need?

Prepare a poster or slide show describing each career path and present it to the class.
### CUSTOMIZED INSTRUCTION

**Literacy Connection, 21st-Century Skills—Work Independently, Think Creatively, Reason Effectively, Communicate Clearly**

<table>
<thead>
<tr>
<th>More Advanced Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you ever considered an internship? Paid or unpaid, these opportunities can provide invaluable experience in the professional world. You can make excellent contacts while assessing various career paths from the inside.</td>
</tr>
<tr>
<td>Identify three companies where you would be like to work as an intern. Research each company and prepare cover letters, résumés, and portfolio materials. Use the material in Level 1, Chapter 12 for assistance, or consult your campus's career counselor.</td>
</tr>
<tr>
<td>Whether or not you choose to apply for these internship positions, prepare yourself and your application materials as though you want the job. Submit the finished products to your teacher.</td>
</tr>
</tbody>
</table>

### Professional Profile (cont.)

<table>
<thead>
<tr>
<th>Discuss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sherie Valderrama quotes Winston Churchill in her profile. How is this quote applicable to employees in the restaurant and foodservice industry?</td>
</tr>
<tr>
<td>Sherie Valderrama also quotes Oprah Winfrey. How is this quote applicable to employees in the restaurant and foodservice industry? Ask students to identify the similarities and differences between these two quotes.</td>
</tr>
<tr>
<td>Building from Sodexo’s example, what are some other ways that controlling foodservice costs can increase efficiency and decrease wastefulness?</td>
</tr>
<tr>
<td>What is the relationship between controlling costs and maintaining quality?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reinforce and Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>A corporate internship can provide invaluable industry experience and position a student for postgraduation employment opportunities.</td>
</tr>
<tr>
<td>The key to effective cost control is to organize and use all of a company’s resources efficiently, directing efforts toward a common goal.</td>
</tr>
<tr>
<td>Maintaining quality and operating responsibly and sustainably are not incompatible with controlling costs.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Teaching Tips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encourage students to learn more about contract management. If campus foodservices are provided by a contractor, consider asking a representative of that company to address the class.</td>
</tr>
<tr>
<td>Make sure students understand the roles played by both human and technological resources in controlling costs.</td>
</tr>
<tr>
<td>Suggest that interested students speak with the school’s guidance or career counselors to learn about internship opportunities.</td>
</tr>
</tbody>
</table>
Focus and Engage

Discuss
- Why is it essential for a manager or owner in the restaurant and foodservice industry to understand how to control and plan for necessary costs?
- In what ways are kitchen or dining-room team members responsible for controlling costs?
- Why is it important to maintain appropriate quality standards in all steps of the food flow process?

Teaching Tips
- Students without any background classes in economics or accounting might find some of the material covered in this chapter challenging. This could prove especially difficult for those students who struggled with the mathematics concepts presented in Level 1, Chapter 4. To the extent possible, the text has been simplified to prevent confusion, but the Teachers’ Wrap addresses these concepts in greater detail.

Section 3.1 Introduction to Cost Control

Introduce the Section
- Review the difference between sales and profit.
- Identify some common tools for assessing a company’s financial picture.
- Discuss the objectives for the section.

Vocabulary Review
- Direct students to the key terms.
- Pronounce each word, and have the students repeat the pronunciation out loud.
- Discuss the definition of each word.

Teach

Discuss
- What is cost control? How is it relevant to all industries, not just the restaurant and foodservice industry?
- “Every action that takes place in a restaurant costs money.” Do students agree with this statement? Encourage a debate between those who support and those who oppose this assertion.

Reinforce and Review
- In the restaurant and foodservice industry, efficiency often translates as cost control.
- A successful operation must control costs to stay in business. High sales volume alone is no guarantee of a profit.

Teaching Tips
- If students are concerned about their mathematics skills as they prepare to study this chapter, encourage them to seek any outside help that might be available on campus.
Discuss
- What are some reasons that a popular, well-regarded restaurant might be losing money?
- Is there a point at which a restaurant or foodservice operation might have cut too many costs? How can the management identify this point? What about the employees? What about the guests? What changes might each group notice when costs are cut?

Reinforce and Review
- Each business must obey the same basic principle: Make more money than it spends.
- When costs (expenses) are higher than sales (income), the business is losing money.
- The four main categories of costs are food costs, beverage costs, labor costs, and overhead costs.

Vocabulary Terms
- Revenue: The income from sales before expenses, or costs, are subtracted.
- Cost: The price an operation pays out in the purchasing and preparation of its products or the providing of its service.
- Cost control: A business’s efforts to manage how much it spends.

Homework Activity: Spending and Saving

Literacy Connection, 21st-Century Skills—Work Independently, Think Creatively, Reason Effectively, Communicate Clearly

In one’s personal life, costs don’t only involve money; they often involve time. But we still use the same terms: We talk about “spending” time or “wasting” time. The first suggests that time has been used in a positive way, whereas the second suggests that time has been used in a negative way. We also talk about “saving” time, “free” time, and “paying” attention. How does this language affect the way we think about time?

Students should identify some ways in which they can control their use of both money and time in their own lives. What unnecessary expenses can they identify in either category? How does wastefulness play a role?

Over the next week, students should consider how they use their “free” time and money. How does simply being aware of how time and money are spent affect their perspectives on how these resources are used?

Students should write a brief essay describing how their behaviors and emotions were affected by this week-long process.
Discuss

- What is the difference between controllable and noncontrollable costs? What examples of each do students experience in their own lives?
- Which of the four categories of costs do students think is the most important for a restaurant or foodservice operation to control? Why?

Reinforce and Review

- Food costs, beverage costs, and labor costs each have components related to sales levels and are subject to change based on sales; therefore, they are considered controllable costs.
- Overhead costs do not change based on an operation’s sales and are therefore considered noncontrollable costs.
- Two methods by which operations monitor, assess, and try to control costs are the operating budget and the profit-and-loss report.

Teaching Tips

- Overhead costs also include items such as new carpets or artwork for a restaurant’s dining room. These expenses are not “fixed” in the same way that rent is set at the same amount each month, regardless of sales; however, they are considered fixed costs in that they do not relate to sales. In fact, a restaurant that has experienced low sales might choose to change its menu, service style, and ambiance, in which case new floor coverings or artwork might be important components of the restaurant’s new “look.”
- Similarly, utility bills do not always stay the same from month to month: Figure 3.1 uses the example of rising heating costs during winter. However, because the increased heating bill is not affected by the sales volume, it is considered a “fixed” cost even though it does change.

Vocabulary Terms

- **Food cost**: The total cost of food purchased by an operation.
- **Beverage cost**: The total cost of beverages purchased by an operation.
- **Labor cost**: The total cost associated with staff members employed by an operation.
- **Variable cost**: A cost that changes, depending on sales.
- **Semivariable cost**: A cost with some components that change depending on sales and some that do not.
- **Controllable cost**: A cost that is subject to change based on an operation’s financial performance; in other words, the operation has some control over these costs and can adjust spending based on its changing needs.
- **Overhead costs**: Ongoing expenses, such as rent and utilities, that are necessary to continued operation but do not directly relate to sales or profits.
- **Fixed costs**: Costs that must be paid regardless of actual business performance and cannot be controlled or altered based on changing needs.
- **Noncontrollable cost**: Fixed cost.

Figure Focus

**Figure 3.2**: Which of these four components do students think accounts for the greatest part of an operation’s expenses?
Figure Focus

**Figure 3.3:** In this figure, sales volume stays the same over a two-week period although labor cost declines over that same period, so the labor cost falls as a percentage of sales. What if labor cost had increased and sales had remained the same?

---

**Table 3.1:**

<table>
<thead>
<tr>
<th>Controllable versus Noncontrollable Costs (See previous page)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• What are some specific examples of food, beverage, and labor costs that an operation might face?</td>
</tr>
<tr>
<td>• Are there any ways to control “noncontrollable” costs, like rent or insurance? (Note: For example, operations can choose to move to another facility or switch insurance companies.)</td>
</tr>
<tr>
<td>• What other noncontrollable costs, besides those listed in Table 3.1, can students identify?</td>
</tr>
</tbody>
</table>

---

**CUSTOMIZED INSTRUCTION**

**Literacy Connection, 21st-Century Skills—Solve Problems, Reason Effectively, Communicate Clearly**

**Special Needs Students**

Provide some examples of noncontrollable costs in your own life. What costs can you control? What are some differences between these types of costs?

---

**CUSTOMIZED INSTRUCTION**

**Literacy Connection, 21st-Century Skills—Work Independently, Think Creatively, Reason Effectively, Communicate Clearly**

**Less Advanced Students**

List as many fixed and controllable costs as you can. How can each one affect an operation’s profit margin? Which costs do you think are the most important and why?
Discuss

- Variable costs increase or decrease in proportion to sales, but it is not always a one-to-one relationship. That is, sometimes when sales increase by $5,000, a particular variable cost might only increase by $1,000; conversely, when sales decrease by $5,000, a different variable cost might only decrease by $2,000.

- The student text (Figure 3.4) has been simplified to facilitate understanding. It assumes that variable costs rise and fall in direct proportion to sales, suggesting that sales and costs are fixed in a one-to-one relationship.

- Semivariable costs contain one or more variable components, which means that they also increase or decrease when sales increase or decrease. However, semivariable costs also contain one or more fixed components, which are not affected by sales. In the following example, each increase of $5,000 in sales corresponds to a $2,000 increase in hourly wages; management salaries are fixed at $2,000, regardless of sales. The horizontal axis represents sales volume, and the vertical axis represents labor cost. Because management costs are fixed, every $5,000 increase in sales corresponds to a $2,000 increase in labor cost, as represented by the blue diagonal.

Figure Focus

Figure 3.4: This graph represents an ideal environment, without food waste or theft. How might waste, theft, poor cooking skills, mismanagement, or other factors affect the environment? How would that new environment be graphed?
Fast Fact: Did You Know . . . ?

Encourage students to discuss the following:

• If a restaurant operates on a profit margin of 5 percent, and its annual sales volume is $100,000, how much profit has it earned?
• What steps can an operation take to increase its profit margins without sacrificing quality?
• Does it surprise students to learn that combined food and beverage costs can equal payroll costs? Why or why not?

Discuss

• How can an operating budget help a business anticipate future expenses? What are some other steps a business can take to predict upcoming costs?
• Encourage students to discuss the differences between actual and anticipated performance. Why do differences between the two exist at all? How can actual performance improve to match anticipated performance?

Reinforce and Review

• An operating budget lists an operation’s anticipated sales revenue and projected costs and gives an estimate of the profit or loss expected for the period.
• Operating budgets have three major roles: They analyze controllable cost needs, outline operating goals and managerial responsibilities, and measure actual performance against anticipated performance.

Vocabulary Terms

• Operating budget: A financial plan for a specific period of time.
Discuss

- Encourage students to discuss the role of forecasts in budgeting. What is the difference between a forecast and a guess?
- What types of historical data are used to plan restaurant operations? How are historical data relevant in students’ lives?

Reinforce and Review

- An operating budget takes into account all aspects of an operation’s finances, including all sales, controllable and noncontrollable costs, employee benefits, and depreciation.
- Most operating budgets are based on forecasts.
- Budgets and P & L statements are very similar; however, budgets project what managers expect to happen, whereas P & L statements record what has actually happened.

Teaching Tips

- Explain the operating budget shown in Figure 3.5.

Vocabulary Terms

- **Forecast**: A prediction of sales levels or costs that will occur during a specific time period.
- **Historical data**: Past information about a restaurant and its operations, used to predict future needs.
- **Average sales per customer**: The total dollar sales divided by the total number of customers, used to help calculate revenue forecasts.

Figure Focus

**Figure 3.5**: Do students think this operating budget puts enough money toward promotional expenses? Why or why not?
Figure Focus

Figure 3.6: The menu items and number of portions to be made of each is recorded on a production sheet, which is based on manager forecasts.

Discuss

• How is a sales history related to a production sheet? Which do students think is the more important document?
• Encourage students to identify factors that could affect an operation’s sales.

Reinforce and Review

• Operational records, such as sales histories and production sheets, are used to determine what happened in the past and to predict future needs.
• It’s important to be careful when forecasting needs. Sales one week do not necessarily translate into the same sales next week.
• The moving average technique averages together sales information for two or three recent and similar sales period to determine a more accurate prediction of future sales.

Teaching Tips

• Relate the moving average technique to student academic performance. For instance, an illness or family emergency might have prevented a student from performing as well as usual on an exam; using this smoothing technique balances out that incident with other, more typical grades.

Vocabulary Terms

• Sales history: A record of the number of portions of every item sold on a menu.
• Production sheet: A list of all menu items that are going to be prepared for a given date, based on forecasts.
• Point-of-sale (POS) system: Computer software that helps managers track sales, employee activity, and other information, as well as facilitating guest orders.
• Moving average technique: A forecasting technique that averages together sales information for two or three recent and similar periods to predict future sales.
Trends: Beverage Boon!

Encourage students to discuss the following:

- Pairing specific menu items with certain alcoholic beverages is common at many operations. It is less common to pair nonalcoholic beverages with particular dishes, but many consumers enjoy these drinks as well. What are some nonalcoholic beverages that could be paired with the following dishes, and why would each drink be an appropriate complement?
  - Hamburger with sweet potato fries
  - Chicken parmigiana with egg noodles
  - Green salad with blue cheese and candied pecans
- Are operations that don’t serve alcoholic beverages at a disadvantage against those that do? Consider some examples in your community.
- In what ways can an operation’s beverage program help maintain and reinforce its image? How might the beverage program attract certain guests?

Essential Skills: How to Develop an Operating Budget

Encourage students to discuss the following:

- Making a budget is the first step in planning a company’s financial future. What are some other steps in this process?
- What type of operation might succeed in each of the following areas?
  - A quiet suburb, near schools and away from major shopping malls
  - Downtown in a large city, near a mix of high-rise offices and apartment buildings
  - A peaceful rural environment, away from large towns and surrounded by farmland
- Does Kabob’s operating budget in Figure 3.5 seem realistic? Why or why not? What information would help you make a better assessment?

In-Class Activity: Advertising Age

Literacy Connection, 21st-Century Skills—Work Creatively with Others, Create Media Products, Reason Effectively, Communicate Clearly, Work Effectively in Diverse Teams

Working in groups of three or four, design an advertising campaign for a special offer at an imaginary foodservice operation. You will need to write up a plan describing your campaign and create at least two media products to advertise the special program; these could include table tents, flyers, audio or visual “commercials,” and so forth.

Your plan should clearly describe the program or event you are advertising, why you have chosen to design these specific media products, the group of people you wish to attract, and why you think that group of people will be attracted to your advertising and to the operation’s special offer.
Essential Skills: How to Develop an Operating Budget (cont.)

Encourage students to discuss the following:

- What other demographic information should a prospective restaurateur research? Where would he or she collect this information?
- What type of operation would do well near your high school? What type might do poorly? In each case, explain your answer.
- Many new operations fail because they overestimate potential revenues and underestimate potential costs. Why do these errors occur?

Essential Skills: How to Forecast Sales Volume

Encourage students to discuss the following:

- Which type of forecast do you think is easier to “get right”: a short-term prediction or a long-term prediction? Why?
- Are any problems associated with underestimating sales? Why might this be an issue for an operation and its staff?

In-Class Activity: Student Selections

Literacy Connection, 21st-Century Skills—Social and Cultural Skills, Work Creatively with Others, Reason Effectively, Communicate Clearly

Working with two or three other students, design a restaurant or foodservice operation that you think would appeal to other students and become a financial success. Describe the menu choices, service style, and ambiance. What in particular would attract students?

Present your design to the class, using any visual aids you think appropriate. After all the groups have given their presentations, vote as a class on which operation would be the biggest success.
Discuss

• Encourage students to discuss what categories a profit-and-loss report for a typical household might have.
• What does it mean when the profit-and-loss report provides information that is significantly different from the budget’s original predictions? How can the situation be remedied?

Reinforce and Review

• A profit-and-loss report, or income statement, helps managers gauge an operation’s profitability as well as compare actual results to expected goals.
• A profit-and-loss report reflects what actually happened during a particular time period, whereas a budget predicts what is expected to happen during that period.
• For an operation to be profitable, sales must exceed costs.

Teaching Tips

• Relate the profit-and-loss report to household budgeting.

Vocabulary Terms

• **Profit-and-loss report**: A compilation of sales and cost information for a specific period of time.
Discuss

- Managers look for variances when assessing an operation’s performance. Are all variances significant? Why or why not?
- How do managers know which variances need to be addressed and which do not? What potential variances can students identify that probably don’t need correcting?

Reinforce and Review

- Looking for variances can indicate how the operation is running and can prevent future problems by catching them early.
- When variances are detected, managers can analyze the situation and develop a plan for corrective action.
- Some approaches to analyzing a profit-and-loss report include comparing it to the operating budget, comparing it to company or industry standards, and comparing it to the operation’s own historical trends.

Teaching Tips

- Discuss various common evaluation techniques. For instance, report cards, progress reports, and daily grades are used in schools, and businesses often use performance reviews and self-evaluation forms to track progress. What elements do all these share? How do they differ?

Vocabulary Terms

- **Variance**: A change that has occurred, reflecting a difference between actual performance and the standards against which performance is being measured.

**Figure Focus**

**Figure 3.8**: This profit-and-loss report shows what actually happened at Kabob Restaurant during a particular month. What does it tell you about the restaurant? (Note: The categories on the operating budget shown in Figure 3.5 and the profit-and-loss report shown in Figure 3.8 are intentionally different, to give students some idea of how different managers operate.)
Discuss

- The National Restaurant Association represents more than 380,000 businesses in the United States, so their member surveys can provide detailed information about various segments of the restaurant and foodservice industry.
- How can portioning and measuring equipment help control costs? What can happen if the equipment is being used incorrectly?
- How can the proper use of schedules both control labor costs and improve employee relations?
- How can managers make sure that all employees are following house policies that have been installed to control costs?

Reinforce and Review

- In the kitchen, measuring, monitoring, portioning, and weighing equipment can be used to help control costs.
- Time clocks and POS systems can help control labor costs throughout the operation.
- POS systems also help track sales, as do cash registers.

Teaching Tips

- Refer students to the discussions of measuring equipment in Level 1, Chapter 4 and Chapter 5.
- Refer students to Level 1, Chapter 7, on the importance of communication, and to Level 1, Chapter 8, on key management responsibilities.

Vocabulary Terms

- **Full-line supplier**: A one-stop shop that provides equipment, food, and supplies to the restaurant and foodservice industry.
Discuss

- Advances in computer software can help managers obtain accurate, timely information, but only if the data have been entered correctly into the program. What are some other potential flaws?
- How can managers select the technology that is most appropriate for their operation? Do all operations need computer software to run their business? Why or why not?
- In what ways can using technological advances increase revenues and decrease costs?

Reinforce and Review

- Email, the Internet, and numerous software programs all aid managers in closely monitoring sales.
- Programs can be used to complete the calculations required in cost planning, controlling sales and inventory, and focusing on the menu.
- When choosing technology, managers should ask the following: Will it help enhance guest satisfaction? Will it help increase revenue? Will it help reduce costs? Will it increase employee or management productivity? Will it improve communications?
- If used effectively, technology can help control costs, increasing an operation’s efficiency.

Figure Focus

**Figure 3.9**: A variety of computer programs can help managers organize and track income and expenses.
Summary

• Remind students to review the following:
  1. Cost control
  2. Operating budgets
  3. Profit-and-loss reports
  4. Cost-control tools
Many tools are available to restaurant and foodservice managers to help them control foodservice costs. For example, the kitchen offers portioning equipment, such as ladles and scoops, to ensure consistent quality and portion sizes. Receiving and portion scales serve the same purpose but for larger-volume items. To help control staffing and labor costs, use time clocks and POS (point-of-sale) systems. Cash registers and POS systems keep track of sales during the day, and equipment-monitoring systems can help ensure that an operation's equipment is functioning properly to keep efficiency high. Email, the Internet, and numerous software programs all aid managers in closely monitoring sales. Programs can be used to complete the calculations required in cost planning, controlling sales, controlling inventory, and focusing on the menu.
Section 3.1
Review Questions

1. Cost control is a business’s efforts to manage how much it spends.

2. Controllable costs include food costs, beverage costs, and labor costs.

3. Examples of noncontrollable costs include insurance, utilities, and an operation’s lease or mortgage on its building.

4. An operating budget helps manage an operation by analyzing controllable cost needs, outlining operating goals and managers’ performance responsibilities, and measuring actual performance against anticipated performance.

5. Sherie Valderrama believes that the key consideration when looking at cost control is to have the commitment to maintain quality and operate in a responsible and sustainable manner.

6. Student responses may vary, as long as they defend their answers in a clear and logical manner.

7. Students should be creative in their list-making; their answers should not come solely from the examples provided in the text.

8. Student responses may vary, as long as they defend their answers in a clear and logical manner. However, they should include portioning tools, staffing tools, and POS systems in their responses, as these are all common in quick-service operations.
Section 3.1 Activities

1. Students should identify a local quick-service restaurant and determine some of its expense categories. The factors they highlight could include such elements as staffing, food costs, or insurance, so long as they give solid reasons why these are among the top five elements.

2. Students should describe the foodservice operation they run and which method of analyzing profit-and-loss reports is preferable. Student responses may vary so long as they are convincingly argued.

3. Students will need to research demographic and economic information for the community they select. They should be sure to describe why they believe a particular type of restaurant would succeed and defend their expense allocations.
Section 3.2
Controlling Food Costs

Introduce the Section
a. Explain the importance of determining food cost and food cost percentage as a step in controlling costs.
b. Reiterate the need to calculate portion costs, AP versus EP costs, and recipe yields when determining menu pricing.
c. Discuss the objectives for the section.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
• When guests patronize an operation, what are they really buying? Is it “worth it” to pay more for a different atmosphere, level of service, quality of ingredients, convenience, and so forth? In what sense is the customer really buying an experience, not a meal?
• How do customer expectations of a meal vary depending on where it is purchased? Is a glass of soda “always” a glass of soda?

Reinforce and Review
• The quality of ingredients, care of preparation, expertise in cooking, and quality of service can all add up to a higher, and just, price point on a menu.
• Not all extra expenses are legitimate. Some operations might try to compensate for other inefficiencies when pricing their dishes, or they might not understand the pricing process.
• Essential skills in controlling food costs include calculating the price of food, assessing the cost of recipes, and valuing food appropriately on the menu.

Teaching Tips
• Provide sample menus from two restaurants that serve dishes with similar titles, but at different price points. For instance, the menu from a quick-service hamburger restaurant could be compared with the menu from a full-service hamburger restaurant. Encourage students to discuss why the prices might differ.

Vocabulary Terms
• Price point: The selling price of a menu item.
Figure Focus

**Figure 3.10:** The flow of food is as important in controlling food costs as it is in controlling food safety.

**Discuss**

- How can following proper food safety principles help control food costs? How can kitchen staff help control food costs before they have even begun to prepare the food?

**Reinforce and Review**

- The seven stages in the food flow process are purchasing, receiving, storing, issuing, preparing, cooking, and serving.
- Establishing quality standards in purchasing is essential in acquiring and producing consistent, top-quality product.
- Receiving only those products that meet quality standards and accurately fulfill an order is an important component of controlling costs.

**Teaching Tips**

- Encourage students to review the material in Level 1, Chapter 2 about proper food safety and the flow of food.

**Homework Activity:**

**Family Food Finances**

*Literacy Connection, 21st-Century Skills—Work Independently, Collaborate with Others, Reason Effectively, Think Creatively, Implement Innovations*

Controlling costs isn’t only an issue in the workplace: it’s equally important at home.

Consider your family’s food spending. Identify five ways in which spending can be controlled and food purchases can be made more efficiently. You might wish to consult with the person in your household who purchases the bulk of the family’s food to gain some insights.

Write a brief report describing your findings and how they can help your household finances.
Discuss

- Close attention to the flow of food is helpful in controlling food costs. At what steps in this process are costs most vulnerable; that is, at what points is the operation most likely to spend money on food that will not earn money?
- Consider how food is prepared in the classroom kitchen. What examples of waste and inefficiency have you noticed? How could these be eliminated?

Reinforce and Review

- Proper storage prevents loss of food through spoilage and waste.
- Efficient issuing systems, or inventory controls, record what product is being used when, by whom, and for what purpose, thereby tracking sales and reducing opportunities for pilferage.
- Accurate preparation, production, and portioning of food all help to prevent inefficiency and waste.
- Mistakes made at the service level can both directly and indirectly contribute to increased food costs.

Teaching Tips

- Encourage students to review Level 1, Chapter 10 on the importance of providing good customer service.

Fast Fact: Did You Know . . . ?

Encourage students to discuss the following:

- How can restaurant and foodservice operations reduce waste? How can food be repurposed for internal or external consumption?
- In what ways can inefficiencies in the flow of food be eliminated in households, as they can be in restaurant and foodservice operations? How can this keep consumers from wasting food as well as lower their costs?
- What do you think is the single biggest step operations can take to prevent wasting food?

Vocabulary Terms

- Pilfering: Theft of food, usually in reference to staff members.

Homework Activity: Shaker Your Plate

Literacy Connection, 21st-Century Skills—Reason Effectively, Work Independently, Communicate Clearly

There is an old saying, “Shaker your plate,” which means to eat every crumb of what is served to you. The spirit of this adage goes further: To “shaker your plate” means to use all your resources as effectively as possible, wasting nothing and utilizing everything.

How can restaurant and foodservice operations use this proverb to inspire employees and managers to reduce waste and cut costs in the kitchen and dining room? Is this a useful approach, or could it backfire?

Write a brief essay describing how and why restaurant and foodservice operations might use “shaker your plate” to motivate their employees.
Discuss
- Is it really possible for managers and employees to keep track of every mouthful of food, when opportunities for waste are so abundant in many kitchens? How accurate is the food cost?
- Why do students think that inventory is rarely taken on a daily, quarterly, or annual basis?

Reinforce and Review
- Food cost includes the cost of food sold, given away, wasted, spoiled, incorrectly prepped, overportioned, overproduced, or pilfered.
- Opening and closing inventory data are used to determine the value of the food cost.
- The total food available for sale includes the opening inventory and the purchases made during that period.
- The total food available for sale, minus the closing inventory, equals the total food cost.
- Some operations include staff meals, complimentary items, and transfers of food when calculating the total food cost.
- Total food cost percentage is often the standard against which food cost is judged and is usually a target determined by management.

Teaching Tips
- Encourage students to practice calculating total food cost.

Vocabulary Terms
- **Food cost**: The actual dollar value of the food used by an operation during a certain period.
- **Inventory**: The dollar value of a food product in storage; it can be expressed in terms of units, values, or both.
- **Opening inventory**: The physical inventory at the beginning of a given period.
- **Closing inventory**: The physical inventory at the end of a given period.
- **Total food cost percentage**: The relationship between sales and the cost of food used to achieve those sales.
Discuss

• Each time the purchasing price of an ingredient increases, the standard portion costs of all the standardized recipes using that ingredient also increase. What techniques can managers use to track changes in purchasing prices and production costs?

• How can managers ensure that employees are following the standardized recipes at all times, even when preparing dishes they have made multiple times?

Reinforce and Review

• To determine the food cost percentage, divide total food cost by sales.

• Food cost is a variable cost, which means it should increase or decrease in direct proportion to an increase or decrease in sales, all other things being equal.

• When all cost controls are followed properly, food cost and sales will be proportionate.

• If an operation does not cost out its standardized recipes, then the selling price will be only a guess.

Teaching Tips

• Encourage students to practice calculating total food cost percentage.

Vocabulary Terms

• **Standardized recipe**: A recipe followed every time that menu item is prepared.

• **Standard portion cost**: The exact amount that one serving of a food item should cost when prepared according to its standardized recipe.

• **Recipe cost card**: A table of ingredient costs for each item in the standardized recipe.
**Figure Focus**

**Figure 3.11:** What is the easiest way to determine how large each portion should be?

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**Essential Skills: How to Determine Standard Portion Cost**

Encourage students to discuss the following:

- Why is it important to record every ingredient used in a standardized recipe, even inexpensive items like salt?
- Calculating a recipe’s cost involves understanding how to convert measurements. In this case, only 1 cup of tomato paste is needed, and tomato paste is sold in quarts, so the cook or manager calculating the costs must know that there are 4 cups in a quart. What are the pitfalls of not knowing common units of measurement?
- If necessary, students should review units of measurement, using the material in Level 1, Chapter 4. The examples provided in the Teachers’ Wrap for Level 1, Chapter 4 might also be helpful.

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**Homework Activity: Recipe Cost Cards**

Mathematics Connection, Literacy Connection, 21st-Century Skills—Work Independently, Reason Effectively, Communicate Clearly, Use Systems Thinking

Select a recipe from this textbook and create a recipe cost card for it. Identify the portion cost, portion size, and total recipe cost. Make sure your math is accurate.
Encourage students to discuss the following:

- Why is it important for all culinary professionals to understand basic mathematical operations, such as the calculations needed to determine standard portion cost?
- In what ways might knowing the standard portion and standard portion cost of a given item affect the cook preparing the dish?
- This tomato sauce recipe costs $2.785 per person to produce. Do students think this is too high, too low, or just right? How much does a can of store-bought tomato sauce cost per portion?

Discuss

- The “Essential Skills: How to Determine Standard Portion Cost” box above uses the example of a tomato sauce recipe. Does this example use the AP method or the EP method? How can you tell? Why might one be a better choice than the other?

Reinforce and Review

- Standard portion cost is the exact amount that one serving of a food item should cost when prepared according to the item’s standardized recipe.
- The AP or “as-purchased” method and the EP or “edible portion” method are the two techniques used to determine the cost of ingredients in a standardized recipe.
- In the AP method, all ingredient quantities are listed on the standardized recipe in the form in which they are purchased.

Teaching Tips

- Encourage students to review the basic math operations in Level 1, Chapter 4. The examples provided in the Teachers’ Wrap for Level 1, Chapter 4 might also be helpful.

Vocabulary Terms

- As-purchased method: A method used to determine the cost of ingredients in a standardized recipe at the purchase price, before any time or waste is taken into account.
Figure Focus

**Figure 3.12:** Can students tell which product is in AP form and which is in EP form? Why must culinary professionals understand the difference between products in AP form and products in EP form?

**Discuss**

- The EP method assumes that the item has been trimmed, so only the usable portion remains. However, a usable portion for one recipe is not necessarily a usable portion for another recipe. For instance, one recipe might call for peeling and trimming the tops from whole carrots before roasting them; another recipe might call for peeling and trimming the tops from the whole carrots, but then cutting the carrots into batonnets. In this case, all the scrap carrot produced when cutting the carrots into shape is considered waste. Why is this important when figuring out how many pounds of carrots to order?

- Sometimes, the waste produced from one application can be used in another. For instance, the carrot scraps produced from cutting batonnets in the previous discussion can be used to make chicken stock. How can this help to control costs?

**Reinforce and Review**

- The EP method of costing assumes that some preparation has taken place after the ingredient arrived in the kitchen.

- To obtain the true cost of an ingredient using the EP method, use the original weight of the ingredient that was needed to produce the necessary amount for the recipe.

**Teaching Tips**

- Discuss how recipes are often written with an eye to either AP or EP costing. For example, a recipe calling for “10 pounds of celery, diced” will require less celery than a recipe calling for “10 pounds of diced celery.”

**Vocabulary Terms**

- **Edible-portion method:** A method used to determine the cost of ingredients in a standardized recipe after trimming and removing waste, so that only the usable portion of the item is reflected.

- **Recipe yield:** The process of determining the number of portions that a recipe produces.
Discuss
• Encourage students to suggest other recipes that will be affected either by cooking loss or by cooking gain. Why is it important to understand how different ingredients behave when cooked? How can this affect recipe cost?

Reinforce and Review
• To determine how many portions a recipe yields, calculate the total yield of the recipe either by weight or by volume.
• Weigh or measure only the major ingredients in a recipe, and remember to factor in cooking loss as well as cooking gain.

Teaching Tips
• Students should divide into groups to make this recipe, weighing the raw ingredients (including those used to make the white sauce) as well as the final product. How do student results vary from the text’s example? Why might this be the case?

Homework Activity: The Weight of Things
Mathematics Connection, Science Connection, Literacy Connection, 21st-Century Skills—Work Independently, Reason Effectively, Communicate Clearly

Weigh a whole apple; this provides its AP, or as-purchased, weight. Now peel the apple, remove its core, and cut it into wedges. Weigh the wedges. What is the EP weight of the prepared raw apple? What is the apple’s yield percentage?
Place the apple wedges in a pan with 2 fluid ounces of water. Cook the apples until they can be easily pierced with a fork. Now weigh the cooked apples. Compare the weight of the cooked apple to that of the raw apple. What is the ratio between the cooked apple’s weight and its AP weight? What is the ratio between the cooked apple’s weight and its EP weight?
Research the scientific explanation for these changes between the apple’s raw and cooked weight. Describe your results and findings in a one-page report.

Figure Focus
Figure 3.13: The weight of a finished product is not always the same as the weight of the raw ingredients used to produce the recipe. In this example, cooked macaroni will weigh more than raw macaroni, because the pasta absorbs water while cooking.
Homework Activity:
Converting Recipes

Mathematics Connection, Literacy Connection, 21st-Century Skills—Work Independently, Reason Effectively, Communicate Clearly

Select two different recipes in this textbook. Convert each recipe to serve 12 people, 40 people, and 150 people.

Submit copies of the standardized recipes you have used along with your conversions.

Discuss

- The text notes that negligible ingredients, such as salt and seasonings, are not typically included when calculating recipe yields. Why not? How does a cook or manager determine what ingredients are negligible and which are not?
- If negligible ingredients are not important enough to factor into a recipe’s yield, why are they used to calculate a recipe’s cost?

Reinforce and Review

- Negligible ingredients, like salt, are not typically used to calculate recipe yields, although they are important in calculating recipe costs.
- Employees at successful restaurant and food-service operations must know how to properly calculate recipe yields. This helps an operation effectively manage its inventory, revenues, and costs.
- Once a yield is known and properly followed, it’s easier to increase or decrease the size of the recipe, based on operational needs.

Teaching Tips

- Review the differences between weight and volume measurements with students, as in Level 1, Chapter 4.

Table 3.2: Converting Recipe Yields

- Cooks and managers often increase or decrease recipe yields to meet an operation’s needs. What are some ways in which this can affect costs? For instance, might there be discounts for ordering in bulk, or penalties for ordering too little of a particular product? Encourage students to think broadly about cost structures. Chapter 5 addresses purchasing in greater detail.
- Using the recipe for macaroni and cheese presented on the previous page, calculate the following recipe yields:
  - 18 servings
  - 100 servings
  - 200 servings
On the Job: Recipe Tester

Encourage students to discuss the following:

- Why is it important for recipe testers to take notes while preparing recipes? What information should he or she write down?
- Why is there a need for recipe testers? If the instructions are written clearly, shouldn’t all cooks follow the recipe in the same way?
- What types of recipes do students think require the most testing? What audiences might need the most information about recipes?

In-Class Activity: The Perils of Improper Portioning

Mathematics Connection, Literacy Connection, 21st-Century Skills—Work Independently, Reason Effectively, Communicate Clearly, Solve Problems

Haiya’s Place recently added a beef tenderloin dish to its menu. The dish, which includes a 5-ounce portion of beef, sells for $21.

On the first day this item was offered, the butcher looked at the food production chart to see how many portions of beef she needed to prepare for service. The manager who had completed the form had been in a hurry, and her handwriting had smeared: the “5-oz portion” looked like “8-oz portion.” So the butcher proceeded to cut 8-ounce portions of beef.

The fifteenth and final 8-ounce portion of beef tenderloin was being plated for a guest before the sous chef realized that the portion size was incorrect.

How many 5-ounce portions of tenderloin could have been obtained from the fifteen 8-ounce portions served? How much revenue did the restaurant lose by not selling those additional portions?

How could this problem have been prevented? What aftereffects might this situation have on staff and guests?

Discuss

- How can failing to control portion size jeopardize an operation’s entire financial status?
- How can failing to control portion size affect customers and their expectations?
- What are some examples of portions typically controlled by weight? By volume? By count?

Reinforce and Review

- Although some employees might believe they “know” exact portion sizes, it’s critical to use portioning devices to ensure that dishes are consistently prepared and that cost structures are being followed.
- Inconsistent portioning can lead to inconsistent products.
- Portions can be controlled by weight, volume, or count.

Teaching Tips

- Review the information on portioning equipment, referring to the material in Level 1, Chapter 4.
Figure Focus

Figure 3.14: How are each of these portioning tools used? Give examples of some foods that would be portioned using each device.

Discuss

- What are some foods that could and should be preportioned? What are some foods that should not be preportioned? What are the differences between the two categories?
- How can leftover mashed potatoes be reused? What about raw chicken breasts? Cooked carrots?

Reinforce and Review

- When possible, preportion items before service; however, this should only be done in cases when quality will not be diminished.
- In general, the more preportioning that can be done, the more control the kitchen will have over its food costs.
- Every operation should strive to produce quantities as close to the quantity actually needed to maintain standard food costs and sales.
- Although leftovers often represent a waste in terms of food cost, running out of products during service can be equally dangerous for an operation’s finances.
- Correctly using a food production chart can help prevent producing too much or too little food.

Teaching Tips

- Discuss the food safety issues that could be involved in reusing food, such as cross-contamination and time–temperature abuse.

Homework Activity:
The Purpose of Repurposing

Select three raw or cooked foods—a protein, a starch, and a vegetable—that might be left over from an operation’s service period. For each, identify appropriate ways that they can be repurposed.

What are some food safety issues that could be involved with these repurposed foods? How can they be avoided?

Write a one-page report discussing your ideas for repurposing the selected foods and the relevant food safety issues.
Discuss
• Besides sales history, what other tools do managers have to help forecast sales volume?
• Why is it important to estimate what sales will be for a given service period? How can this estimate affect an operation’s food costs?

Reinforce and Review
• A well-structured food production chart can ensure product quality, avoid product shortages, and minimize waste, spoilage, theft, energy costs, and administrative costs.
• Sales history is critical in helping management forecast how many portions of each menu item to produce on a given day, but it is a prediction, not a guarantee.

Teaching Tips
• Ask a member of the campus foodservice staff to talk with the class about how they determine how many portions of each dish to provide on a given day.

Vocabulary Terms
• Food production chart: A form that shows how much product should be produced by the kitchen during a given meal period.

Figure Focus
Figure 3.15: How can busy operations keep accurate records of what was made and what was sold?
Discuss

• If the chicken dish usually represents 22 percent of sales, and 180 guests are expected, how many orders of chicken should the staff prepare to avoid running out of the item? Why? Explain how many orders of each of the other dishes should be prepared as well.

• Explain how and why the menu is an operation’s primary sales tool.

Reinforce and Review

• A sales history is generated by tracking sales of a particular item over time.

• The menu is the primary sales tool in most restaurant and foodservice operations and should reflect the overall cost of running the operation.

• The price of an item should include all of the costs associated with purchasing, preparing, and serving the item, as well as costs such as utilities, labor, and rent.

• The success of an operation hinges on proper menu pricing.

Teaching Tips

• Display a number of menus from various restaurants. Encourage students to predict how much each would spend on food, labor, rent, and other costs, based on the information they glean from the menus.
Discuss
• Which of the four methods of pricing a menu seems to be the easiest? Which seems to be most difficult? Which is most likely to yield accurate results? Why?
• How would a manager using the straight markup method decide what fraction to use in determining menu prices? Discuss the various costs an operation incurs and what fractions might be realistic to cover costs without overcharging customers.

Reinforce and Review
• The four methods commonly used to determine menu prices are the contribution margin pricing method, the straight markup pricing method, the average check pricing method, and the food cost percentage pricing method.
• To use the contribution margin method, an operation must know the portion costs for each item sold; this is why using standardized recipes, recipe cost cards, and correct portioning techniques is so important to an operation’s finances.
• The food cost percentage is equal to the food cost divided by food sales.

Teaching Tips
• Practice these calculations with students to make sure they understand how each works.

Vocabulary Terms
• Contribution margin: The portion of dollars that a particular menu item contributes to overall profits.
• Contribution margin pricing method: This pricing method uses the portion costs for each item sold to determine how much money the average customer contributes to overhead and profit; this dollar amount is then added to each menu item.
• Straight markup pricing method: This pricing method multiplies raw food cost by a predetermined fraction to determine the dollar amount to be added to each food item.
• Average check pricing method: This pricing method divides the operation’s total revenue by the number of seats, average seat turnover, and number of days open each year; this yields the average check amount, which is then used with the approximate food cost amount to determine menu prices.
Summary

• Remind students to review the following:
  1. Steps in controlling food costs
  2. Determining food cost
  3. Determining food cost percentage
  4. Establishing standard portion cost
  5. AP (as purchased) and EP (edible portion) costs
  6. Recipe yields
  7. Controlling portion sizes
  8. Monitoring production volume and cost
  9. Menu pricing
Homework Activity:
It’s Gonna Cost Ya!

Literacy Connection, 21st-Century Skills—Work Independently, Reason Effectively, Communicate Clearly

Sometimes, when criticizing restaurants for perceived overcharges, people say, “I could buy this cheaper somewhere else.” To what extent might this be a true statement—for instance, when comparing menus at family-style restaurants and fine-dining restaurants? What factors besides the actual food cost are involved in establishing menu prices?

Write a brief essay assessing this statement, both positively and negatively.
Homework Activity: Charting a Course

Mathematics Connection, Literacy Connection, 21st-Century Skills—Work Independently, Reason Effectively, Communicate Clearly, Create Media Products

You are the kitchen manager for a 90-seat operation that expects to serve 215 guests during service this evening. The menu has seven entrées, with the percentage each typically contributes to the sales history in parentheses: rockfish (12 percent), salmon (15 percent), venison (19 percent), pork (13 percent), beef (22 percent), duck (9 percent), and rabbit (10 percent).

Standard practice is to prepare 10 percent more of each dish than the sales history suggests, to avoid running out of food during service.

Draw up a food production chart, using the example in Figure 3.16 as a template. How many of each entrée should be prepared?
**Section 3.2 Review Questions**

1. The formula for determining actual food cost is
   \[(\text{Opening inventory} + \text{Purchases} = \text{Total food available}) – \text{Closing inventory} = \text{Total food cost}].\]

2. Determining food cost percentage is important because it is often the standard against which food cost is judged. Controlling the food cost percentage is the most important priority for an operation to be profitable.

3. Controlling portion sizes is important for an operation to meet its standard food cost and to ensure product consistency.

4. \[0.50 \times \frac{2}{3} = 0.33\]; \[0.33 + 0.50 = 0.83\].

5. Efficient purchasing involves identifying suppliers with an appropriate quality and consistency of product at the most appropriate price (for instance, if high-quality customer service is important to a manager, he or she might choose to pay slightly higher prices). Purchasing from these companies helps ensure consistency and maintain costs.

6. Students will need to research these dishes to determine the ingredients used to make them, as well as the typical costs for each ingredient. The format should follow the example given in Figure 3.11.

7. Using a standard portion size ensures that a restaurant’s actual practices accurately reflect the standardized recipes and recipe cost cards used to predict food cost and food cost percentages. If an operation serves portions that are too large or too small, then the food cost will increase or decrease accordingly; consistency will suffer, as could patronage.

8. Student answers will vary but should be well defended.
Section 3.2 Activities

1. Students should include all steps of the food flow process in their posters and clearly identify cost-controlling measures at each.

2. Students should clearly identify the pros and cons of using either the EP or the AP methods of recipe writing. They should demonstrate understanding of the different writing styles required by each method, using the examples on p. 171 for assistance. Also, they should attach a copy of the recipe to their work before submission.

3. Students can use any recipe in the text so long as their mathematic operations are correct.
Section 3.3
Controlling Labor Costs

Introduce the Section
a. Describe the concept of labor cost and the various factors affecting it.
b. Consider the role of scheduling in determining labor cost, relating this material to the content in Level 1, Chapter 8.
c. Discuss the objectives for the section.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
• In what ways can inappropriate employee behavior cost the employer money?
• How can employees be part of a successful operation without sacrificing their personal and professional goals and needs?
• How can controlling labor costs be compatible with a positive work environment, as discussed in Level 1, Chapter 8?

Reinforce and Review
• Employees need guidance and training to make significant contributions to the operation; any deviation from established policies can cost the employer.
• Businesses must be vigilant in establishing goals, keeping lines of communication open, and being flexible to the needs of staff members.
• Foodservice managers typically have less control over their labor cost and their employees than over other aspects of the business.

Teaching Tips
• Relate this material to the content in Level 1, Chapter 8.
Homework Activity: Hard Times, Hard Talks

Literacy Connection, 21st-Century Skills—Work Independently, Think Creatively, Reason Effectively, Communicate Clearly

You manage a local restaurant that is undergoing tough times. Although your operation has consistently provided excellent service and food, the city has a high unemployment rate, so sales volume has slowed dramatically. To avoid laying employees off, you have decided to reduce everyone's hours so as to share the burden as evenly as possible.

You need to explain to your staff why you will have to reduce their working hours, due to the low volume. What is the best way of doing this so that staff morale suffers as little as possible and service quality remains high? Create an action plan for talking with your employees about the upcoming changes.

Consider referring to the material In Level 1, Chapters 7 and 8 for assistance.

Discuss

- It’s often said that people are the most important resources a company has. In what ways do students agree and disagree with this statement? Why?
- How can managers staff appropriately while maintaining a harmonious workplace, even when times are hard and sales are down?

Reinforce and Review

- Labor is a semivariable, controllable cost. Labor costs are tied to sales, but not directly.
- Operations are staffed based on their needs. They must have enough staff working to meet customer needs in an efficient and appropriate manner, but having unnecessary staff members working is inefficient.
- Inefficient and inconsistent staffing impedes staff morale. Staff members are likely to feel mistreated and are more likely to engage in behaviors like turnover and poor performance.
- For an operation to achieve the profit it expects, it must meet its sales projections and control costs.

Teaching Tips

- Encourage students to share their experiences with scheduling, either at work or at school. What happens when people don’t get the schedules they desire? How can that affect their relationship with employers and coworkers or teachers and students?
- Make sure students understand that managers are not being malicious when they cut employee hours or change shifts; in virtually all cases, they are trying to save the company money to help it remain profitable during a slow period.
**Discuss**

- How do managers determine the ideal labor cost for a new operation? What factors might they use in their predictions?
- What are some ways that managers can work with employees to reduce labor costs without creating a negative work environment?

**Reinforce and Review**

- An operation’s standards are the budgeted dollar amount of percentage for each type of cost incurred.
- When labor cost falls below the standard, quality of food or service might suffer; when labor cost exceeds the standard, the profit might suffer.
- Actual labor cost is rarely the same as ideal labor cost. Ideal labor cost is what management predicts, whereas actual labor cost is the true cost of the workforce.

**Homework Activity: Standards and Practices**

**Literacy Connection, 21st-Century Skills—Work Independently, Reason Effectively, Communicate Clearly**

Some restaurateurs claim that the secret to a successful operation is to have 30 percent food cost, 30 percent labor cost, 30 percent operational and administrative costs, and a 10 percent profit. Do you think that these standards are achievable and/or desirable for all operations? Why or why not?

Write a brief report, defending your position.

**Figure Focus**

**Figure 3.17:** Can students envision a situation in which actual labor cost matches ideal labor cost for a period of time? What elements would be involved?
Figure Focus

**Figure 3.18:** Fixed labor costs, like salaries, do not change when business volume changes.

**Discuss**

- Why might a business owner expect more hours of work from salaried staff than from hourly staff? In what ways can this be a positive or a negative development?
- Besides working fewer hours, how are hourly employees affected by business slowdowns? How do rapid increases in business affect hourly employees?

**Reinforce and Review**

- Four main factors that contribute to labor cost are business volume, employee turnover, quality standards, and operational standards.
- The variable elements of labor cost generally increase and decrease in direct relation to sales volume.
- The fixed elements of labor cost vary as a percentage of business volume. Generally, when sales increase, fixed labor costs as a percentage of sales decrease.
- Staffing must correspond to the operation’s needs to be efficient and cost-effective.

**Teaching Tips**

- These concepts can be difficult for students to understand, so consider spending additional time on this section until students are confident.

**Vocabulary Terms**

- **Business volume:** The amount of sales an operation is doing for a given time period.

**CUSTOMIZED INSTRUCTION**

Literacy Connection, 21st-Century Skills—Work Independently, Make Judgments and Decisions, Reason Effectively, Communicate Clearly

Less Advanced Students

Which restaurant jobs are typically salaried positions, and which are typically hourly? Why might this be the case?
Discuss

- Consider the discussion of employee hiring and training in Level 1, Chapter 8. What expenses are involved with employee turnover that can increase labor costs? Are these expenses “lost,” or are they investments in a successful business model?
- How might the labor costs of a quick-service restaurant be similar to and different from those of a full-service, fine-dining restaurant?

Reinforce and Review

- Typically, the higher an operation’s turnover rate, the higher its labor costs.
- The type of operation and its menu determine the number and skill level of its employees.
- New staff members require time and training before they can meet the employer’s quality standards.

Homework Activity:

**Turnover Tactics**

**Literacy Connection, 21st-Century Skills—Work Independently, Think Creatively, Reason Effectively, Communicate Clearly**

As discussed in Level 1, Chapter 8, turnover can be very expensive to an operation. Hiring and effectively training new employees is often costly. What can an operation do to keep its best employees, maintaining a loyal, enthusiastic, and well-trained staff?

Write an essay on how you would maintain a positive work establishment in your operation, keeping a high-quality staff.

**Figure Focus**

**Figure 3.19:** How can variable labor costs affect a business’s profit margin?
**Vocabulary Terms**
- **Employee turnover**: The number of employees hired to fill one position in a year's time.
- **Quality standards**: The specifications of the operation with regard to products and services.
- **Operational standards**: Specifications of an operation with regard to products. If an item must be redone to meet standards, this costs money, not only in terms of wasted product that increases food cost, but also in terms of productivity that increases labor cost.

**Discuss**
- In what ways are employees who continually fail to meet operational standards expensive? How can such situations be resolved?
- How do operational standards help to define a restaurant's image?

**Reinforce and Review**
- When an operation's requirements for employee skill levels increase, its costs also increase.
- When an employee performs a task that does not meet operational standards, the task must be redone, costing the operation in wasted labor, wasted product, and wasted potential revenue.

**Teaching Tips**
- Review the differences between quality standards and operational standards to ensure students clearly understand these concepts.

**Fast Facts: Did You Know . . . ?**
Encourage students to discuss the following:
- How might adding so many jobs to a single industry within a relatively short span of time affect the U.S. economy as a whole?
- What factors have combined to make the restaurant and foodservice industry the nation's largest employer?
- Does the restaurant and foodservice industry's status as the largest private employer give it any particular influence or opportunities? What might be some examples?

**CUSTOMIZED INSTRUCTION**
**Literacy Connection, 21st-Century Skills—Think Creatively, Reason Effectively, Communicate Clearly**
**Special Needs Students**
The restaurant and foodservice industry is projected to add millions of jobs during this decade. What types of jobs do you think will be most in demand? Why? Which jobs do you find appealing?
Discuss

• What are some factors that could radically change an operation’s projection of its future sales? What effects would these have on staffing levels and labor costs?
• How can a properly constructed master schedule help to control labor costs and contribute to a positive work environment?

Reinforce and Review

• Scheduling depends both on how much revenue an operation is bringing in and how much revenue the same operation is expected to bring in.
• An operation should consider both historical data and current trends when predicting sales.
• Generally, as projected sales increase, the number of employees will increase, and vice versa.

Teaching Tips

• Compare an operation’s master schedule to the school’s schedule in terms of what classes are available at what times, in what classrooms, and for how many students having completed what prerequisites.
• Consider inviting a restaurant or foodservice manager to discuss the role of scheduling with the class.

Vocabulary Terms

• Master schedule: A template showing the number of people needed in each position to run the restaurant or foodservice operation for a given time period.

Figure Focus

Figure 3.20: Based on the number of employees needed, their work schedules, and their job titles, how would students characterize this restaurant?
Figure Focus

**Figure 3.21:** Based on this crew schedule, when do you think this restaurant is busiest?

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**Discuss**

- How can restaurant and foodservice operations maintain or increase sales during periods of local, national, or international uncertainty? How can these uncertainties affect employees?
- Managers and staff are all part of the same team, but sometimes conflicts can arise, making it seem that each “side” has its own interests. How can everyone work together to overcome these conflicts?

**Reinforce and Review**

- The economy, unemployment, and other national and international trends all affect a person’s ability or desire to dine out, which can cause restaurant and foodservice operations to suffer.
- A crew schedule should be developed with the master schedule in mind but should also account for individual employee needs to the extent possible.
- Scheduling conflicts can often be avoided or mitigated by having clear policies, making schedules far in advance, and maintaining open communication between management and staff.
- Contingency plans help operations remain efficient and productive even during adverse conditions.

**Teaching Tips**

- Review Level 1, Chapter 8 with students and discuss appropriate resolution of workplace conflicts.

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**CUSTOMIZED INSTRUCTION**

**Literacy Connection, 21st-Century Skills—**

- Work Independently, Think Creatively, Reason Effectively, Communicate Clearly

**More Advanced Students**

Can managers create crew schedules that meet operational needs while also meeting staff needs, or are the two incompatible?

Write a one-page report, defending one of these two positions.

**Vocabulary Terms**

- **Crew schedule:** A chart that shows employees’ names and the days and times they are to work.
Discuss
- What are some examples of situations that might require contingency plans?
- Why would an experienced, qualified individual choose to work as an on-call employee for Restaurant A as opposed to working full-time for Restaurant B?
- Do properly staffed workplaces always result in “happy crews and contented management”? What other factors might play a role?

Reinforce and Review
- A good contingency plan should include cross-training employees, identifying shift leaders, and having on-call employees.
- Properly staffed operations generally result in lower labor costs and increased productivity.

Teaching Tips
- Refer students to Level 1, Chapter 3 for more information on contingency plans in the workplace.

Homework Activity: Pros and Cons
Literacy Connection, 21st-Century Skills—Work Independently, Think Creatively, Reason Effectively, Communicate Clearly

During periods in which business volume is slow, managers are often faced with a difficult decision: Should they lay off employees, which will cause a few to suffer but keep the rest fully employed; or should they simply reduce everyone’s hours, so everyone suffers a little but everyone keeps his or her job?

As an employee, which situation would you rather face, and why? Consider all the potential ramifications of either path. For instance, would you rather be laid off so you can have the free time to look for another job, or would you rather work fewer hours at your original job?

Write an essay stating and defending your position.

Figure Focus
Figure 3.22: How can an operation develop and maintain a list of on-call employees who are both qualified and available on short notice?
**Figure Focus**

**Figure 3.23:** How can telephone trees be effective means of communication? What are the potential flaws?

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**Essential Skills: How to Develop a Contingency Plan**

Encourage students to discuss the following:

- How is a contingency plan related to an emergency plan?
- How can proper communication result in a stronger, better organized workplace? How can it help mitigate emergencies and other unusual situations?
- Why are cross-training employees and developing leaders important components of a workplace contingency plan?

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**CUSTOMIZED INSTRUCTION**

**Literacy Connection, 21st-Century Skills—Work Independently, Reason Effectively, Communicate Clearly**

**ESOL Students**

Imagine that you own or manage a restaurant or foodservice operation. Write a contingency plan for some emergency situation that the establishment might face, addressing the criteria stated on pp. 192–193.

Present your plan to the class, first by describing your operation and then by discussing how you would address each piece of contingency planning.

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**On the Job: Scheduling Staff and Calling “Audibles”**

Encourage students to discuss the following:

- What factors can prevent an employee from being as flexible as his or her manager might want or need him or her to be?
- How can a manager’s use of the “audible” to call workers in or cancel their shifts affect the company’s labor costs? How can it affect the workers’ personal lives, especially their finances?
- Both managers and staff must be flexible enough to adapt to rapidly changing needs; how can this flexibility result in a stronger, more efficient workplace?
Summary

• Remind students to review the following:
  1. Budgeting labor costs
  2. Scheduling

In this section, you learned the following:

- Operations must be aware of the fluctuations in their sales so as to have just the right amount of staff on hand to handle customers efficiently. Having too few staff results in poor-quality product and service. Having too many staff results in money wasted. Inefficient and/or inconsistent staffing on the part of management will likely lead to disgruntled employees. This could then result in even more cost-controlled problems such as increased employee turnover.

- For an operation to achieve its budgeted profit, the sales projections listed in its budget must be met. Additionally, the operation’s costs must be held to its standards, which is the budgeted dollar amount or percentage for each type of cost. It is an important part of the management function to make sure that payroll cost is in line with the budgeted standard. If the cost goes below the standard, the quality of food or service could suffer, resulting in lost sales. If the cost is above the standard, the profit will suffer.

- Four primary factors affect labor costs:
  - Business volume, or the amount of sales an operation is doing for a given time period, impacts labor costs. The variable elements of labor cost go up and down in direct relation to sales volume (increase in sales means more hours needed; a decrease in sales needs fewer hours).
  - Employee turnover is the number of employees hired to fill one position in a year’s time. It directly impacts labor costs. Typically, the higher the turnover rate of a given operation, the higher the labor costs. This results primarily from the training costs involved in bringing on new staff.
  - Quality standards also affect labor costs. Quality standards are the specifications of the operation with regard to products and service. The type of operation and the type of menu it has determines the number of staff and the skill level required of that staff to meet the operation’s needs.
  - Operational standards also need to be met. If an employee does not prepare a product that meets the operation’s standards, the employee must redo that item. This costs money, not only in terms of wasted product that increases food cost, but also in terms of productivity and increasing labor cost.
Scheduling depends greatly on how much revenue an operation is bringing in and how much revenue an operation expects to bring in. Such sales projections are an estimate of future sales based largely on historical sales records. The historical sales records are used as a baseline. This baseline is either increased or decreased based on current, local, and national trends. As projected sales increase, the number of employees will increase; and as projected sales decrease, the number of employees will decrease. Therefore, a master schedule is based on a norm. It is a template, usually a spreadsheet, showing the number of people needed in each position to run the restaurant or foodservice operation for a given time period. List no names on the master schedule, simply the positions and the number of employees in those positions. It is created with the idea that a certain sales level will likely be reached. After determining the anticipated sales, management must determine the payroll dollars, which are the number of dollars available for payroll for a scheduling period. After the dollars available for labor scheduling are known, management can begin to create a crew schedule. A crew schedule is a chart that shows employees’ names and the days and times they are to work. The crew schedule is created by using the master schedule as a template. Develop it with flexibility in mind.
Section 3.3
Review Questions

1. If payroll costs fall below the budgeted standard, the quality of food or service could suffer, resulting in lost sales. If payroll costs exceed the standard, the profit suffers.

2. The four factors that influence labor cost are business volume, employee turnover, quality standards, and operational standards.

3. A master schedule represents the ideal staffing situation and is used as a template; the crew schedule is based on the master schedule and represents the actual labor schedule for a period of time.

4. Strategies that can be included in a contingency plan include making a telephone tree, cross-training employees, creating and testing an emergency plan, identifying and training leaders among different shifts or kitchens, developing an employee handbook to codify emergency and contingency plans, and communicating with staff to ensure everyone understands his or her role when problems arise.

5. Having the right talent at the right levels means that employees have the appropriate skills for their positions and that the appropriate number of them are working at any given time, thereby helping to control labor costs.

6. Students can answer in a variety of ways, as long as they present clear and relevant ideas for controlling labor costs.

7. Students can respond with any of the four major factors affecting labor costs, as long as they defend their answer appropriately.

8. Students should explain the advantages and disadvantages of cross-training; answers may vary when discussing why they might or might not cross-train their own employees.
Section 3.3 Activities

1. Students can use the sample crew schedule on p. 191 or any other format they find appropriate, so long as they schedule staff to meet the restaurant’s needs.

2. Students should research two different restaurant or foodservice operations and accurately summarize their employee policies. Their rationales for supporting one over the other may vary as long as they adequately defend their positions.

3. Students can answer in a variety of ways so long as they effectively explain the effect of turnover on labor cost and how it can be controlled.
Section 3.4
Controlling Quality Standards

Introduce the Section
a. Explain the importance of establishing and meeting quality standards throughout the food flow process.
b. Introduce the basic principles of appropriate purchasing, to be discussed more fully in Chapter 5.
c. Discuss the objectives for the section.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
• In what part of the food flow process is controlling costs the most important? In what part is it easiest?
• How is controlling food costs similar to controlling labor costs? What are the significant differences?

Reinforce and Review
• To control costs throughout the food flow process, appropriate quality standards must be developed and maintained.
• An operation’s demand for high-quality standards is the surest way to reduce costs across all facets of foodservice delivery.

Teaching Tips
• Review Level 1, Chapter 2 with students to refresh understanding of the food flow process.
Discuss
- Many suppliers can provide similar products. What are the qualities that a manager should look for when choosing suppliers?
- Should operations always purchase the highest quality ingredients, regardless of the items' intended uses? What are some situations in which the “best” might not be the best choice?

Reinforce and Review
- Choosing a credible supplier is key to obtaining high-quality products.
- Before ordering a product, managers should identify its intended use, or how it will be used, developed, or consumed; this is the product’s most important characteristic.
- Specification sheets describing the criteria a given product must meet should be developed in accordance with the product’s intended use.
- Products should be received in the most efficient, safe, and effective way possible.
- Deliveries should be scheduled for times when the operation is slow, so employees do not have to choose between caring for food and serving guests.
- The frequency of deliveries can help preserve food quality.

Teaching Tips
- Consider asking a representative from the campus foodservice department to discuss the department’s purchasing standards and practices.
- If possible, enable students to observe the receiving process in the campus foodservice department.

Homework Activity: Special Specs

<table>
<thead>
<tr>
<th>Literacy Connection, 21st-Century Skills—Work Independently, Information Literacy, Reason Effectively, Communicate Clearly</th>
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<tbody>
<tr>
<td>Select three ingredients commonly used in a restaurant kitchen. Draw up product specification sheets for each, describing the qualities and characteristics you want each product to have. For instance, if you select butter, you would need to specify salted or unsalted, frozen or fresh, clarified or whole, package size, and name of the dairy. You might need to research the ingredients you select to make sure you include all the relevant characteristics.</td>
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**Discuss**

- Employees should be trained on proper receiving practices. What should this training involve?
- Some guidelines for delivery specifications are listed on p. 200. What is the rationale for each specification? Why should some items be ordered more frequently than others?

**Reinforce and Review**

- The operation’s menu and service style affect the frequency of deliveries. Freshness is important, but so is the cost of the labor used to receive products.
- Well-defined receiving procedures ensure that an operation receives only the products that meet its established standards for quality and quantity and rejects products that do not meet these standards.
- Implementing appropriate receiving practices helps prevent product deterioration, which can lead to spoilage and higher food costs.

**Teaching Tips**

- Encourage students to draw up guidelines for receiving products for the classroom kitchen.

### Homework Activity: Food Safety and the Food Flow Process

*Science Connection, Literacy Connection, 21st-Century Skills—Work Independently, Use Systems Thinking, Information Literacy, Communicate Clearly*

An important component of controlling costs is keeping a close eye on anything that could become a potential problem, because problems cost money. From a food safety perspective, what problems could arise during the food flow process? In particular, what illnesses can spread to customers and employees as a result of errors made?

Write a two-page report on food safety issues in the flow of food and how these can increase a restaurant’s costs. Consider the costs of waste, spoilage, negative publicity, lost customers, and legal fees, as well as any other relevant costs, in your answer.
Figure Focus

**Figure 3.25:** How might the information provided on an invoice differ from the information provided on a purchase order?

**Discuss**

- Why is it important to examine all deliveries carefully? What are the potential ramifications of accepting products that should have been rejected?
- Unfortunately, sometimes deliveries arrive when all staff members are busy with service. Which should take precedence, proper receiving practices or quality guest service? Why?

**Reinforce and Review**

- Receiving staff should check deliveries against both the original purchase order and the invoice before accepting products.
- All deliveries should be inspected for accuracy and quality, and prices should be double-checked.

**Teaching Tips**

- Display sample invoices and purchase orders so that students can learn more about these documents.

**Vocabulary Terms**

- **Invoice:** A document from a supplier that lists such details as items purchased, date of order, purchaser, and sales price.
Discuss

- Which is more important to a restaurant or foodservice operation’s food cost: receiving or storing?
- Explain the FIFO system. How does it help control food cost?

Reinforce and Review

- Even if the delivery person is in a hurry, employees should not speed through the receiving process.
- The goal of proper receiving is to ensure the correct product, quality, and quantity at the correct price.
- Perishable foods should be monitored daily to ensure freshness; schedules should be followed regularly to ensure that every product is being used safely and efficiently.
- Storage facilities should also be monitored regularly to ensure that they are clean and functioning properly.

Teaching Tips

- Encourage students to examine storage procedures in the classroom kitchen.
Discuss

• What are some examples of foods that should be checked or freshly made periodically throughout service?

• Managers sometimes identify problems with dishes just before they are served. What are their options at this stage of service? Why might one option be chosen over another?

• Are dishes with quality problems ever served? Why? How can this affect a restaurant’s reputation? What effect can this have on employee morale?

Reinforce and Review

• Moisture and heat are the biggest dangers to dry and canned foods.

• Standard portion sizes, standardized recipes, and standard portion costs are all food production standards, but they also ensure consistent quality standards.

• Prior to service, managers should taste each item to ensure that it meets the operation’s standards; certain fragile items should be checked throughout service as well.

• Visual evaluation before serving a dish allows management to correct minor problems and identify larger ones.

Teaching Tips

• Review Level 1, Chapter 2 with reference to safe storage procedures.

• Review Level 1, Chapter 4 with reference to professionalism.
Discuss

• If all staff members are actively engaged in providing quality service in all its forms, how do problems occur in the first place?

Reinforce and Review

• The key to identifying deviations from standard recipes and presentations is regular monitoring and the understanding by the staff that it is the responsibility of everyone in the operation to ensure quality.

• When a problem’s cause or causes are diagnosed, the manager must work with the entire staff to implement the correction.

• Failure to find the root cause of a problem will lead to increased cost through food waste, lower staff productivity, and possibly loss of customer base.

• The faster a problem is identified and a correction is made, the more costs will be kept under control.

Teaching Tips

• Refer students to the problem-solving model described in Level 1, Chapter 8.

Homework Activity: Problem-Solving Skills

Literacy Connection, 21st-Century Skills—Work Independently, Solve Problems, Reason Effectively, Communicate Clearly

A local operation has recently experienced a significant increase in the number of dishes being returned to the kitchen by irate guests. Due to financial troubles, many of the kitchen and dining-room staff members are new, and the managers are overworked and stressed by the situation. Morale is low, and sales volume has fallen.

The operation has hired you as a consultant. Using the seven-step problem-solving model, help identify the root cause of the operation’s troubles and find workable solutions. Describe your process in a one-page essay.

Vocabulary Terms

• Physical inventory: Counting and recording the number of each item in the dry-storage area.
Figure Focus

Figure 3.27: Monitoring inventory not only guards against pilferage, but ensures that all products are being used in an appropriate and timely manner.

Discuss

- What are the advantages and disadvantages of using each method of calculating closing inventory? Which technique seems most accurate?

Reinforce and Review

- Closely monitor inventory to ensure that products are ordered as they are needed.
- Operations that know what products have been purchased, when they were purchased, and how long they’ve been in-house are more likely to effectively use the FIFO system.
- Minimizing waste keeps costs down as the use of only the freshest products keeps sales high.
- Determining food costs relies on knowledge of the opening and closing inventory figures for each period.
- There are four methods to calculate closing inventory: latest purchase price, actual purchase price, weighted average purchase price, and last in, first out.
- Depending on the technique used to calculate closing inventory, values will vary slightly.

Teaching Tips

- Students should understand the relationship between monitoring inventories and determining actual food cost.
- Each method of calculating closing inventory is valid, but establishments should use the same technique each time inventory is taken to avoid confusion.

Vocabulary Terms

- Latest purchase price: A method of calculating closing inventory by multiplying the number of units of each item by the most recent price paid for the item.
- Actual purchase price: A method of calculating closing inventory by multiplying the number of units of each item by the price actually paid for each unit.
- Weighted average purchase price: A method of calculating closing inventory by multiplying the number of units of each item in the opening inventory and later purchases by the price actually paid for each item, adding all the prices together, and dividing by the total number of items.
- Last in, first out: A method of calculating closing inventory by multiplying the number of units of each item by the earliest price paid for the item.
On the Job: Cost of Food Sold Does Not Equal “Sold” Food

Encourage students to discuss the following:

• What percentage of the food that a restaurant orders and receives is actually prepared and served to guests? Consider all the variables that could be involved.

• How does a restaurant determine which guests will receive special items, either complimentary or not?

• What are some ways a restaurant can prevent pilferage?

Fast Fact: Did You Know . . . ?

Encourage students to discuss the following:

• Nearly 75 percent of all inventory shortages are due to employee theft. Why do some employees and managers steal? How might they try to justify their actions?

• How can improved training and communication reduce pilferage?

• Why might some establishments have far lower rates of employee theft than others?
Summary

- Remind students to review the following:
  1. Quality standards for purchasing, receiving, and storing
  2. Quality standards for food production and service
  3. Quality standards for inventory
Closely monitor inventory to ensure that products will be ordered more efficiently as they are needed. This means that operations are less likely to run out of product, which could disrupt food production and, ultimately, the satisfaction of the guests’ experience. Closely monitoring inventory also helps ensure that no product goes to waste. Operations that know what products have been purchased, when they were purchased, and how long they’ve been in-house, are more likely to effectively use the FIFO system. Minimizing waste keeps costs down just as the use of only the freshest products helps keep sales up—this is a recipe for a successful operation.
Section 3.4
Review Questions

1. **Purchasing**: Choosing a credible supplier; carefully defining each product’s intended use.
   **Receiving**: Receiving deliveries when it is convenient for the operation; ordering items as needed to maintain quality; rejecting food that does not meet the operation’s criteria or was not actually ordered.
   **Storing**: Storing all accepted goods promptly and appropriately; monitoring perishable items regularly; inspecting storage facilities regularly.

2. The delivery should be checked against the purchase order and the invoice to ensure that all the items ordered were actually delivered, with no additions or substitutions, and that the prices are correct.

3. Standardizing food production is a good quality control measure because it ensures that guests will receive meals that are of a consistently high quality and that food costs will not be affected by over- or underportioning.

4. Students may describe any of the four ways of calculating closing inventory, as long as their responses are accurate.

5. Sherie Valderrama would probably agree that closely monitoring inventory is essential, as it plays an important role in controlling overall costs and determining actual food cost.

6. Students may suggest any of the four ways of calculating closing inventory, so long as they defend their answers appropriately.

7. Student answers may vary but should reflect the material found in the text.

8. Students may discuss either receiving or storing so long as their answers are accurate and well-reasoned.
Section 3.4 Activities

1. Students may suggest a variety of answers so long as they are properly defended, accurately described, and correctly represented on the flow chart.

2. FIFO method: 20 pounds of all-purpose flour multiplied by $4.50 per pound equals $90.00. LIFO method: 20 pounds of all-purpose flour multiplied by $4.00 per pound equals $80.00. The two answers differ because they are based on different prices for the same item, purchased at different times.

3. Student answers will vary widely but should include all the information requested by the activity. This information might most easily be recorded in a spreadsheet.
Case Study Follow-Up

1. Students should develop and cost out an original recipe.

2. Student answers may vary so long as they are properly supported.

3. Student answers may vary so long as they are properly supported. Students might wish to review the information in Level 1, Chapter 8 for assistance.
Apply Your Learning

**Converting Marinara Sauce**
Students should perform the mathematic and measuring operations accurately to demonstrate that they understand this process.

**Research the Expenses of a National Chain**
Students may use a variety of research materials, including the National Restaurant Association’s Web site, www.restaurant.org. They should be sure to include all the requested information in their report.
The Weight of Food

The measurement and cooking of these ingredients should be done in class to maintain consistency of products, but students should each write their own reports and make their own predictions.

AP versus EP

Students should demonstrate understanding of the differences between AP and EP ingredients as they explain how using one or the other can affect the outcome of each of the three recipes.

Critical Thinking

AP versus EP

It is critical to understand whether a recipe calls for as-purchased (AP) or edible-portion (EP) ingredients. Listed here are an AP and an EP version of each of three ingredients. How could using one or the other option change a recipe?

- 10 pounds white onion versus 10 pounds diced white onion—for a chili recipe
- 8 pounds watermelon versus 8 pounds watermelon balls—for a fruit salad
- 4 pounds apples versus 4 pounds apple purée—for a cake

Write one paragraph on each variation, explaining how the finished dishes could differ, based on the AP or EP ingredient.
Exam Prep Answers

1. D
2. D
3. D
4. D
5. B
6. C
7. D
8. B
9. A
10. A
1. At what temperature should foodservice freezer units be held?
   A. 0°F
   B. 15°F
   C. 25°F
   D. 32°F

2. A document that a receiving employee uses to verify a delivery is called a
   A. vendor invoice
   B. production sheet
   C. recipe cost card
   D. food production chart


Chapter 4 Overview
Chapter 4 presents salads, dressings and dips, and garnishes.

Section 1: This section reviews the ingredients and types of salads, as well as how to clean, serve, and store them.

Section 2: This section covers various dressings and dips.

Section 3: This section covers the how and why of garnishes, as well as garnishes for desserts and soups.

Advance Preparation

<table>
<thead>
<tr>
<th>Review</th>
<th>Sections 4.1–4.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact</td>
<td>Chemistry or physics teacher for a laser beam or pointer</td>
</tr>
<tr>
<td>Computer lab</td>
<td></td>
</tr>
<tr>
<td>Prepare</td>
<td>Blank cards for memory game</td>
</tr>
<tr>
<td>Pictures of greens and salad dressings and ingredients</td>
<td></td>
</tr>
<tr>
<td>Pictures of garnishes</td>
<td></td>
</tr>
<tr>
<td>Paper</td>
<td></td>
</tr>
<tr>
<td>Egg yolks, oil, and vinegar</td>
<td></td>
</tr>
<tr>
<td>Greens or vegetables from a field, still dirty</td>
<td></td>
</tr>
<tr>
<td>Various types of greens to see and taste</td>
<td></td>
</tr>
<tr>
<td>Various types of oils and vinegars to see and taste</td>
<td></td>
</tr>
<tr>
<td>Ingredients for practicing garnishes:</td>
<td></td>
</tr>
<tr>
<td>Cucumbers</td>
<td></td>
</tr>
<tr>
<td>Carrots</td>
<td></td>
</tr>
<tr>
<td>Scallions</td>
<td></td>
</tr>
<tr>
<td>Leeks</td>
<td></td>
</tr>
<tr>
<td>Radishes</td>
<td></td>
</tr>
<tr>
<td>Chocolate</td>
<td></td>
</tr>
<tr>
<td>Mint leaves</td>
<td></td>
</tr>
<tr>
<td>Equipment for practicing garnishes</td>
<td></td>
</tr>
</tbody>
</table>

CUSTOMIZED INSTRUCTION OPTIONS

<table>
<thead>
<tr>
<th>Less Advanced Students</th>
<th>More Advanced Students</th>
<th>ESOL Students</th>
<th>Special Needs Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Page 235</td>
<td>Page 235</td>
<td>Page 235</td>
<td>Page 235</td>
</tr>
</tbody>
</table>

CHAPTER TOOLS

<table>
<thead>
<tr>
<th>21st-Century Skills</th>
<th>Mathematics</th>
<th>Science</th>
<th>Literacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pages 218, 222, 228, 249, 270</td>
<td>Page 234</td>
<td>Pages 238, 245</td>
<td>Pages 221, 223, 235</td>
</tr>
</tbody>
</table>

ServSafe Connection

Pages 237, 248, 268
Case Study
Looks Can Be Appealing

- Miguel and Chef Kate are looking at "the bottom line."
- They want to please their guests even more than they have been.
- Their ultimate goal is to improve the profitability of Kabob.
- A business must be successful to continue.
- Miguel and Chef Kate have a vision for Kabob, and a desire to serve outstanding food.
- It is in the best interests of the guests and employees of Kabob for it to be profitable.
- Note that there are follow-up questions about the case study at the end of the chapter.
- This activity could be done in groups, as a class, or as a homework assignment.
**Professional Profile**

<table>
<thead>
<tr>
<th>Discuss</th>
<th>Debra Olson comes to a culinary career through the portals of science and engineering.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reinforce and Review</td>
<td>Review the areas of study including food science, food packaging, nutrition, and menu development.</td>
</tr>
<tr>
<td>Teaching Tips</td>
<td>Perhaps the students are not aware that R&amp;D means research and development. R&amp;D is usually the first part of new product development, and it starts with an idea.</td>
</tr>
</tbody>
</table>

**In-Class Activity: Debra Olson’s Education and Career**

**21st-Century Skills—Financial, Economic, Business, and Entrepreneurial Literacy**

The students might be interested in culinary arts and food science careers.

There are more careers in the field than they might realize.

Have the students investigate the college majors mentioned in this profile:

- Food science
- Food packaging
- Nutrition
- Menu development

What sorts of classes are required for these areas? What types of jobs are available? What colleges offer these programs? Which college is the closest to your high school?
Professional Profile (cont.)

Discuss
Debra Olson says, "I think salads offer versatility and healthy options." What options? How are they versatile? Have the students discuss these concepts.

Reinforce and Review
Discuss the various uses and roles of salads.

Teaching Tips
What do students think of when they first think of salads?

Focus and Engage
- This section involves lots of practical instruction.
- The more practice with the “Essential Skills” the better.
- Most of the teaching support for this section should be hands-on.
- If funds are too limited to purchase food for every skill, paper replicas or food models can be used for some tasks.

Discuss
- Not all cuisine is cooked.
- Some of the finest menu items are artistically assembled from fresh, raw ingredients.
- Salads are a category of fresh food creations.

Section 4.1 Salads

Introduce the Section
a. Salads have quality expectations.
b. Freshness is expected.
c. Lack of freshness will be detected immediately by most guests.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.
Encourage students to discuss the following:

- Greens are leaf vegetables.
- Some can also be eaten cooked.
- They are used raw in most salads.

### Teaching Tips

- The best way for the students to learn about greens is to see and taste them.
- If at all possible, have samples for the classroom.
- Perhaps the students would like to raise some of these greens in their own gardens or containers over the summer. Many are easy to cultivate.

<table>
<thead>
<tr>
<th>Table 4.1: Kinds of Salad Greens</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Encourage students to discuss the following:</strong></td>
</tr>
<tr>
<td>- Greens are leaf vegetables.</td>
</tr>
<tr>
<td>- Some can also be eaten cooked.</td>
</tr>
<tr>
<td>- They are used raw in most salads.</td>
</tr>
</tbody>
</table>

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### Ingredients and Parts of a Salad

Most salads consist of a lettuce base, but a wide variety of ingredients can go into a salad. Meat, fish, vegetables, fruits, and starchy items, such as potatoes or pasta, can all go into a salad. A salad is defined as a single food or a mix of different foods accompanied by or held together with a dressing.

The three keys to ensuring a quality salad, regardless of the ingredients used, are as follows:

- The freshness of ingredients
- Having all the ingredients blend together in harmony
- Making sure the salad is appealing to the eye

Always consider freshness, flavor, and eye appeal when making any type of salad. See Table 4.1 for examples of salad green types.

<table>
<thead>
<tr>
<th>Table 4.1: Kinds of Salad Greens</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Salad Green</strong></td>
</tr>
<tr>
<td>Arugula</td>
</tr>
<tr>
<td>Belgian endive</td>
</tr>
<tr>
<td>Butterhead lettuce</td>
</tr>
<tr>
<td>Cos (Crisphead) lettuce</td>
</tr>
<tr>
<td>Curly endive</td>
</tr>
<tr>
<td>Escarole</td>
</tr>
<tr>
<td>Green cabbage</td>
</tr>
<tr>
<td>Leaf lettuce</td>
</tr>
<tr>
<td>Mixed greens</td>
</tr>
</tbody>
</table>

---
Table 4.1 (cont.)

- More information is provided, with photos of some of the greens.

In-Class Activity: Tossed Salad Memory Game

Literacy Connection

There might be many types of salad "greens" (some are red) that are new to the students. Not every teenager is familiar with raddichio, arugula, or other greens.

Help the students to create a memory game of the greens.

Divide the number of greens by the number of students (or vice versa, depending on the size of your class). Have each student or team work on the same number of greens.

Have the student or team make a card for each green. It should be plain on the back. On the front it should have a picture of the green and a brief description of the green from Table 4.1. Use every example from Table 4.1.

Make a second identical set. There will be two cards for each green.

Combine the sets of cards. Shuffle them and spread them out face-down in a grid. This is like a memory game or Concentration.

Have students turn over two cards, attempting to find a match.

If the two do not match, turn them face-down again. It is now another student's turn.

If the two match, the student takes the pair and shows the card picture to the class. The student then reads the description aloud to the class. Successful pairing gives the student another turn.

The game gets easier as it progresses. Score it however you choose. If the students are divided into two teams, the teams can compete against each other and the students can receive team points for pairs.

Vocabulary Terms

- Base: The bottom foundation layer of a salad service.
In-Class Activity: Analysis of Salad Recipes

21st-Century Skills—Make Judgments and Decisions

Have the students analyze several salad recipes. They should be able to identify the four components:

- Base
- Body
- Garnish
- Dressing

Using the following chart, write the recipe component in the appropriate section.

Reinforce and Review

- Garnishes may be a signature part of the salad. For example, a Crab Louis seafood salad is often garnished with a sliced beet cut into the shape of a flower or a star.
- Crumbled hard-cooked egg yolk is often used to garnish a spinach salad.

Discuss

- Can the students think of any other examples of garnishes?
- Are there any classic and popular restaurant salads that are always garnished the same way?

Vocabulary Terms

- Body: Main ingredients of a salad.
- Garnish: An element that enhances a salad’s appearance.
- Salad dressings: Viscous liquids used to flavor and bind a salad.
Encourage students to discuss the following:

- Lettuce and greens aren’t the only vegetables (or fruit) in classic salads. Have students discuss some of their favorite salad elements.

**Table 4.2: Other Traditional Salad Vegetables**

<table>
<thead>
<tr>
<th>Salad Vegetable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bulbs</strong></td>
<td></td>
</tr>
<tr>
<td>Cabbage</td>
<td>Tightly packed leaves that are round to oval; crisp, tender; sweet, pungent flavor; a vegetarian staple; eat it raw or cooked.</td>
</tr>
<tr>
<td><strong>Cucumber</strong></td>
<td>Botanically a berry, more than 20 different species: mild, slightly sweet; flavors vary with variety and ripeness. European or English cucumbers: Seedless, lighter green in color; 3 to 6 inches in diameter. Japanese cucumber: Mild flavor, slender, deep green color, bumpy, ridged skin.</td>
</tr>
<tr>
<td><strong>Fruits</strong></td>
<td></td>
</tr>
<tr>
<td>Berries and citrus fruits</td>
<td>White variety includes many citrus fruits: oranges, lemons, grapefruit, limes, and tangerines. The flesh is sweet and juicy.</td>
</tr>
</tbody>
</table>
Fast Fact:
Did You Know . . . ?

Once the students have tasted arugula, they will be able to identify it in a mixture of field greens. It has a slightly savory quality.

Nutrition:
Greens and Oxalic Acid

Because oxalate (or oxalic acid) is a ligand (or binder) for divalent metal (mineral) cations (cat-ions, not kayshuns), it is considered an antinutrient.

It even starts working on the calcium in a glass of milk, which is why teeth feel a little funny after eating high-oxalate foods like spinach, rhubarb, or chard accompanied with a glass of milk.

Discuss

- Have the students discuss examples of each type of salad.
- Perhaps they can contribute salads from the recipe analysis assignment.
Figure Focus

Figure 4.2: Various examples of salads. Ask students what their favorite salads are.

Discuss
- Can students think of an example of each type of salad?
  - Tossed: Caesar
  - Composed: Cobb
  - Bound: Potato
  - Vegetable: Coleslaw
  - Fruit salad: Tropical fruit cocktail
  - Combination: Tomato salad with a scoop of tuna salad
  - Students might be able to think of several examples.
  - Ask them to describe salads that can be used for a main dish.
  - After discussing this, ask them to mention some salads that are best for a side salad or first course.

Vocabulary Terms
- **Tossed**: A salad that is mixed together with large utensils before serving.
- **Composed**: A salad with the ingredients carefully arranged in a display.
- **Bound salad**: A salad made from ingredients and dressings that can stick together.
- **Vegetable salad**: A nonlettuce raw vegetable salad.
- **Fruit salad**: A salad made of a mixture of fresh or canned fruits. Usually sweet, but not a dessert.
Essential Skills: Designing an Attractive Salad

Freshness, color, composition, dimension, and presentation are all factors in the attractiveness of a salad. An attractive salad is appetizing.

Vocabulary Terms

- **Combination salad**: A salad made of two or more of the basic types of salads.

Figure Focus

**Figure 4.3a**: The pasta and scallop salad looks small in the dish.

**Figure 4.3b**: This salad is more colorful and ample.

**Figure 4.3c**: This composed salad is colorful and abundant.
Figure Focus

**Figure 4.4a:** Look inside the head of lettuce in case some wilted leaves are hidden.

**Figure 4.4b:** Some ribs are “woody,” so discard them.

**Figure 4.4c:** Keep guests in mind and don’t make bites too big or too small.

**Fast Fact:**

**Did You Know . . . ?**

More oil results in more calories. More vinegar doesn’t add more calories. Vegetables add very few calories.

**Essential Skills:**

**Preparing a Green Salad**

Always keep in mind that a salad should be easy to eat with a fork and not require a knife if at all possible. Also, each leaf should look fresh.
**Essential Skills:**
**Preparing a Green Salad (cont.)**
Very delicate items, like tomato or avocado slices, should be added after tossing to prevent them from falling apart.

---

**In-Class Activity:**
**Nontraditional Salads**

**21st-Century Skills—Flexibility and Adaptability**

**Meat salads?**
In Germany, a dish called *Fleischsalat* (meat salad) is made of strips of cold sausages similar to bologna, mixed together with pickles and bound with mayonnaise. It is served cold with bread and sliced cheese.

**Wilting salads?**
Bacon, sugar, and vinegar recipes can make a glaze “dressing” in a sauté pan. While the glaze is warm, some spinach leaves can be very quickly tossed in it and then plated with the bacon, warm goat cheese, nuts, or other ingredients for a wilted salad.

**Warm salads?**
Retired basketball great Karl Malone is famous for having sensitive teeth, but a taste for green salads. He always had his salad and salad plate briefly microwaved as part of his pregame restaurant dinner order.

Divide students into two groups. Have each group discuss and brainstorm about different types of nontraditional salads.

- What is actually defined as a salad?
- What are the limits of the definition?
- How can salads be altered slightly to accommodate guests?

---

**Figure Focus**

**Figure 4.5a:** Tossing is usually a two-handed job, but can be done one-handed with tongs.

**Figure 4.5b:** Warm plates will wilt the leaves. Cold plates help keep them crisp, and are delightful for the presentation.

**Figure 4.5c:** Do not try to hold leaves too long or they will wilt or discolor.
Figure Focus

Figure 4.6a: The base should be completely edible and appear fresh.

Figure 4.6b: Layer upon layer, a composed salad is a work of art.

Essential Skills: Preparing Vegetable Salads

Cooked or raw, color and texture are very important to vegetable salads.
**Essential Skills: Preparing Vegetable Salads (cont.)**

Endive can be used as a base for plating many cold foods. It is especially nice on serving platters. In large pieces, it is not as desirable to eat as other milder greens.

On a guest’s plate, iceberg or romaine are good choices.

---

**Essential Skills: Preparing Bound Salads**

Have all ingredients salad-ready before beginning to assemble the salad.

Pasta or potatoes should be cooked and chilled before assembling the salad.

Plan timing accordingly.

---

**Figure Focus**

**Figure 4.7a:** Grating raw vegetables keeps them uniform in size.

**Figure 4.7b:** Toss salad in a bowl with high sides.

**Figure 4.7c:** Transfer the salad to another bowl, platter, or plate for service.
Figure Focus

Figure 4.8a: Keep potatoes of uniform size so they cook uniformly.

Figure 4.8b: Have the appropriate serving utensils for the type of salad.

Essential Skills: Preparing Bound Salads (cont.)

Carefully fold dressing into ingredients.
A bound salad should not appear mashed or gluey.

Essential Skills: Prepping Gelatin Salads

Just a little too much or too little water will doom a set salad.
Dissolve the gelatin in a different container than it is set in.
**Essential Skills: Prepping Gelatin Salads (cont.)**

The enzymes in pineapple and papaya “digest” the gelatin protein, preventing the structure from forming.

Because the enzyme is also a protein, cooking the fruit denatures or alters the protein so it is no longer an active enzyme.

---

**Figure Focus**

*Figure 4.9:* Temperature control is essential. Do not place a set salad near a hot food.
**Essential Skills:**

**Preparing Fruit Salads**

Keep color mixtures in mind.

For example, orange-yellow fruit and purple fruit might not mix to form a nice color.

Sometimes fruit juices mix to look gray or brown.

To include them in the same salad, mix right before serving.

---

**Reinforce and Review**

- Creativity with salads is popular.
- A great salad can set a restaurant apart from the competition.
- Salads require skill in the kitchen.

---

**Figure Focus**

**Figure 4.10a:** Fruit can be an ingredient and a self-garnish.

**Figure 4.10b:** Be careful of color combinations.
Chapter 4 | Salads and Garnishing

Homework Activity: Salad Limiting Factor

Mathematics Connection
Students will come to understand that fresh ingredients are important for salads. Freshness varies from ingredient to ingredient. So does shelf life.
The most delicate ingredient is the “limiting factor” in the timeline of salad ingredient receiving and storage. The salad must be made while the most delicate ingredient is still fresh.
Have the students consider the limiting factor. What is it? What does it mean?
Assign students to each choose a salad recipe. Have them identify the most delicate ingredient, the limiting factor.
Have them specify the receiving, storage, and handling guidelines of their limiting factor ingredient.

Vocabulary Terms
- **Starter salad**: A salad given as the beginning course of a meal.

Figure Focus

**Figure 4.11**: Each type of salad serves a different purpose in the presentation of the entire meal. Ask students what type of salads they enjoy.
**Figure Focus**

**Figure 4.12:** The *mise en place* for making salad includes preparing the fresh vegetables for the peak of ripeness and freshness.

---

**Chapter 4 | Salads and Garnishing**

**Vocabulary Terms**

- **Accompaniment salad:** A side salad.
- **Main course salad:** A large salad that is filling and satisfying for a meal.
- **Intermezzo salad:** A light salad to cleanse the palate between courses.
- **Dessert salad:** A sweet salad that can be a finale to a meal.

---

**CUSTOMIZED INSTRUCTION**

**Literacy Connection**

**ESOL Students**

“Intermezzo” is an Italian word. It is a common term in music.

How does it apply to food and menu planning?

Can students think of other culinary terms that are not translated into English for restaurants in North America? Have them list three.

**More Advanced Students**

Have the students list the term “intermezzo,” plus at least five other culinary terms that are not translated into English for restaurants in North America, for a total of six terms.

Using these terms correctly spelled, have students construct a crossword puzzle.

**Less Advanced Students**

List “intermezzo” and four other culinary terms that are not translated into English for restaurants in North America.

Each term should be correctly spelled.

Learn and demonstrate the correct pronunciation of each of these words.

**Special Needs Students**

With the help of another student or helper, have students solve the crossword puzzle designed by one of the more advanced students.

If this is not possible, assist the student in reading and pronouncing “intermezzo” and three other culinary terms that are not translated into English for restaurants in North America.
**Essential Skills: Plating Salads**

“Road-test” menu items when considering the plating.

Sit down and eat it, paying close attention to how easy it is to eat gracefully.

The last thing you want to do is make a guest feel overwhelmed and frustrated.

Also, take a “bird’s-eye” view of the salad plate, as if you were a guest looking down on it.

It should be beautiful and inviting.

**Teaching Tips**

- If possible, have students gather together to clean spinach or chard fresh from the field.
- The best way to understand the need to clean greens is to clean mud off of them.
- Students should all get their hands dirty.

---

**Figure Focus**

**Figure 4.13:** Note how the garnish and ingredients are part of the complete picture.
Salad greens need careful handling. They might come with dirt, insects, and even compost on them. It is important to completely clean greens without wilting them with too much water. Properly storing them actually improves their crispness.
Reinforce and Review

- Prepackaged greens might seem ready-to-serve, but even these need rinsing before serving.
- They are flushed and gassed with chemicals that preserve them a bit longer than otherwise.
- Some produce is irradiated to extend its shelf life.
- Be aware of these treatments in case customers inquire.
- These processes are considered safe, but some guests might be philosophically opposed to the treatments.

**Homework Activity:**
**Research MAP**

**Science Connection**
Modified atmosphere packaging (MAP) is a process of preparing foods, including salad greens, for shipment and storage. Have students investigate this process.

Why is it important?
Is it a widespread practice in the United States?
Have them write two paragraphs about the process, to the extent of their science understanding.

The process inhibits spoilage and increases storage life.
Airtight bags are filled with a special mix of gases to surround the produce. These gases, which might include carbon dioxide and nitrogen, reduce oxidation and decrease the growth of microbes. Both actions delay spoilage and prolong the shelf life of the produce until the bag is opened.

Nitrogen gas (N₂) is inert, and inhibits oxidation, which requires oxygen.
Carbon dioxide gas (CO₂) creates an acidic environment that can inhibit bacterial growth. Carbon dioxide can form carbonic acid with the water in the produce, which can slightly lower the pH.

**What's New:**
**Drying Greens on Spin Cycle:**
**The Salad Spinner**

Do the students understand centrifugal force?
This should have been part of their middle school science curriculum.
Assess for prior knowledge and understanding.
A salad spinner might improve their understanding.

**Figure Focus**
**Figure 4.16:** This lettuce is packaged for improved storage life.

**Figure 4.17:** The water is spun off into the outer container of the salad spinner and discarded.
Essential Skills: Cleaning Greens

Follow these instructions specifically to assure safety.

Drying the greens is as important as washing them, as it helps prevent wilting.

Use tap water to clean only if the tap water in your area is safe (e.g., the United States).

Local authorities announce any temporary problems with a water supply.

Figure Focus

Figure 4.18a: Even tiny leaves and spaces need to be clean.

Figure 4.18b: Allow for personnel to spend the time required to clean the greens properly.
Summary

- Remind students to review the following:
  1. Ingredients and parts of a salad
  2. Types of salad
  3. Salads and service
  4. Cleaning and storing salads

In this section, you learned the following:

- Lettuce is frequently used as a salad base, but any number of ingredients can be used in a salad, including meat, fish, starches (such as pasta or potatoes), vegetables, cheeses, and fruit. The basic parts of a salad are the base, the body, the garnish, and the dressing.

- The five basic types of salad are green salads (tossed or composed), bound, vegetable, fruit, and combination.

- The five basic salads that can be served throughout the course of a meal are starter, accompaniment, main course, intermezzo, and dessert. Starter salads are small, light salads that stir the appetite for the main meal. Accompaniment, or side, salads are small salads served along with the main meal. These salads balance and complement the main ingredients of the meal. Main course salads are larger salads that can be main meals in themselves. Main course salads often have a protein along with a variety of vegetables, cheeses, greens, and even sometimes fruit. Intermezzo salads are small salads used to clear the palate for the next course. Dessert salads are sweeter than the others and often consist of fruit as the primary ingredient.

- To clean salads, remove the outer leaves of greens, pull apart the remaining leaves, and rinse them thoroughly to remove any and all dirt, grit, and insects. Rinsing is preferred to soaking because leaves can absorb water, making the lettuce soggy. Store loose greens with dampened paper towels at a temperature between 36°F and 41°F. Store prepared salads in a tightly sealed container that is shallow enough to allow for rapid chilling. Properly label and rotate the greens for service using the FIFO method for all salad ingredients.
Section 4.1
Review Questions

1. The four parts are base, body, garnish, and dressing.

2. The five basic types are green, bound, vegetable, fruit, and combination.

3. The kinds of salad are starter, accompaniment, main course, intermezzo, and dessert.

4. See the Essential Skills box on p. 239.

5. Each student will have a unique set of discoveries.

6. Students will use their creativity.

7. Freshness and limiting factors will influence when food can be served. The nutritional differences involve some loss of vitamin C and other water-soluble vitamins. Colors that stay fresh and bright maintain their phytochemical qualities. Minerals tend to be stable. Some minerals are better used from canned or cooked produce than from raw.

8. If produce freezes, the water in cells expands. That makes the cell walls burst, resulting in wilting or mushiness.
Section 4.1 Activities
1. Each group will learn new salads. The more the students learn about various salads, the better.

2. This will result in more information and thinking about salads. Creativity should prevail.

3. The students will have their own opinions about this.
Section 4.2
Salad Dressings and Dips

Introduce the Section
a. There are many different types of dressings.
b. Emulsions and suspensions are the chemical aspects of dressings and dips.
c. Dips and salad dressings are chemically similar, but not quite the same.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
• Dressings can identify a salad.
• Asian chicken salad has a very specific, ginger-laced dressing.
• Crab Louis has Louis dressing, which is a mayonnaise dressing to which red chili sauce, minced green onion, and minced green chili peppers have been added. There are slight variations on the sauce.
• Caesar salad is only a regular green salad without the dressing. Caesar dressing has parmesan cheese, lemon juice, olive oil, egg, anchovy, Worcestershire sauce, and black pepper. It may be prepared tableside.
• Ranch dressing and ranch dip are essentially the same thing, but differ in viscosity. Both consist of buttermilk or sour cream, mayonnaise, minced green onion, garlic powder, and other seasonings.
**Teaching Tips**

- Demonstrate mixing oil and vinegar.
- Use a stopwatch to time how long it takes for the oil and vinegar to separate again.
- Help students understand that dressing should be shaken right before it is poured on the salad.
- Help students understand that nonemulsified dressing should be added right before serving.
- The dressing will separate even after it is on the lettuce.

**Vocabulary Terms**

- **Vinaigrette dressing**: Oil and vinegar dressing.
- **Suspension**: The phase mixture between two or more nonmixing liquids, usually achieved by agitating.

**Figure Focus**

**Figure 4.19**: The flavor of the oil and the flavor of the vinegar should be considered when choosing which ones to use.
Table 4.3: Types of Oil and Vinegar

- Oils and vinegars have distinctive flavors. They lend character to salads and other dishes. They should be carefully chosen for their purpose.

Teaching Tips
- Be aware of any student peanut or walnut allergies before tasting any oils.

In-Class Activity: Emulsifiers

Science Connection
Oil (lipid) doesn’t mix with water. It is called “hydrophobic,” or afraid of water. Vinegar is a water solution of an acid. Acid mixes just fine with water. It’s called “hydrophilic,” or water-loving.

There are molecules that have a lipophilic or lipid-loving end that can mix just fine with oil. The other end of the same molecule is hydrophilic, and can mix with water. These molecules are emulsifiers. They can emulsify, or mix, lipid and water—oil and vinegar. Think of them as helping hands or negotiators.

One such emulsifier is soap. No one wants to eat soap, or make salad dressing from it. But it cleans grease off skin by connecting its lipophilic end with grease and making it water soluble with the hydrophilic end. Grease is removed with all the bubbles and water.

An edible emulsifier is lecithin, found in egg yolk. Lecithin has far more culinary potential than soap!

Later in this chapter there are Essential Skills boxes for making emulsified vinaigrette and for making mayonnaise. They are emulsified with egg yolks.

Teach this lesson about emulsifiers. Then have the class or groups make emulsified vinaigrette, mayonnaise, or both.

Assess their success in the kitchen lab as you usually do.

Vocabulary Terms
- Emulsified vinaigrette: An oil and vinegar mixture that remains blended due to the addition of a chemical that can keep them mixed and stable.
- Emulsion: A stable mixture of two or more non-mixing phases with the help of an emulsifier.
**Essential Skills:**

**How To Make a Vinaigrette**

This dressing is not emulsified.

As suggested previously, time how long it takes for the mixture to separate.

**Vocabulary Terms**

- **Emulsifier:** A chemical that can bind nonmixable ingredients.

**Figure Focus**

**Figure 4.20:** A whisk will mix the dressing. A shaker bottle works as well.
Figure Focus

Figure 4.21a: Mix the oil in slowly.

Figure 4.21b: Because of the egg yolks, refrigerate the dressing.

Essential Skills: How To Make Emulsified Vinaigrette Dressing

The egg yolk proteins are denatured by the acid (vinegar or lemon juice). Therefore, they are not quite “raw,” even though they are not cooked.

Reinforce and Review

- Viscosity is the thickness of a liquid, which affects the flow of that liquid.
- The viscosity of a dressing should match the needs of the salad.
- A very thick dressing does not work for a very light, tender green like Bibb lettuce.
- The mouthfeel of a thick dressing is different than that of a thin dressing.

Vocabulary Terms

- Mayonnaise-based: Salad dressings made from mayonnaise.
**ServSafe Connection:**
**Mayonnaise and TCS Food**
Most mayonnaise foods are safe, but keep them refrigerated to avoid possible problems.

**Reinforce and Review**
- Mayonnaise is as safe as its ingredients. However, because pathogens can grow in mayonnaise, proper handling is crucial.
- The weight of the dressing determines the weight of the ingredients it can dress.
- A thick, stable dressing can bind potatoes, chicken, or other foods.
- If bound properly, a bound salad can be scooped.

**Vocabulary Terms**
- **Mayonnaise:** An emulsified and stable thick oil, vinegar, and egg yolk dressing.
The combination of the proper greens and dressings makes a delicious salad.

Ask students to consider combinations that they enjoy.

In-Class Activity: Matching Game

21st-Century Skills—Use Systems Thinking

Make a handout with the list of dressings on one side, but not in the order in which they are listed in Table 4.4.

Make a longer list of the greens in Table 4.4 in mixed-up order.

Have the students draw lines from the dressing side to the matching greens.

A lettuce can pair with more than one type of dressing.

<table>
<thead>
<tr>
<th>Dressing on the Side?</th>
<th>Nutrition: Dressing on the Side?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butterhead lettuce</td>
<td>One technique that some weight loss specialists recommend is dipping the tines of the fork into the dressing, and then using the fork to pick up the salad.</td>
</tr>
<tr>
<td>Iceberg lettuce</td>
<td>A pile of thick dressing ladled on top of salad greens might be too much, and dressing on the side might be preferable in this case.</td>
</tr>
<tr>
<td>Sorrel</td>
<td>However, a properly dressed salad is not overly heavy with dressing.</td>
</tr>
<tr>
<td>Baby lettuces</td>
<td></td>
</tr>
<tr>
<td>Radicchio</td>
<td></td>
</tr>
<tr>
<td>Escarole</td>
<td></td>
</tr>
<tr>
<td>Leaf lettuce</td>
<td></td>
</tr>
<tr>
<td>Romaine</td>
<td></td>
</tr>
<tr>
<td>Dandelion greens</td>
<td></td>
</tr>
<tr>
<td>Arugula</td>
<td></td>
</tr>
<tr>
<td>Belgian endive</td>
<td></td>
</tr>
<tr>
<td>Watercress</td>
<td></td>
</tr>
<tr>
<td>Bibb lettuce</td>
<td></td>
</tr>
<tr>
<td>Curly endive</td>
<td></td>
</tr>
</tbody>
</table>

Mayonnaise is considered a high-fat food.
Discuss

- When the students think of Famous Dave’s Barbeque and pulled pork, they probably don’t envision a salad.
- Yet there is just such a salad available at the outlets of this chain. They feature salads with barbequed pulled pork, beef brisket, and fried chicken.
- Perhaps the students can think of other unusual salads they have tried or heard of at restaurants.

Figure Focus

**Figure 4.22a:** The bowl for beating yolks should be large enough to hold all of the mayonnaise that is made.

**Figure 4.22b:** If mayonnaise is to be used warm or at room temperature, serve it freshly made.
Figure Focus

**Figure 4.23:** Eggs must be separated.

**Figure 4.24:** Vinaigrette will mix by suspension, but only for a little while.

**Figure 4.25:** Air is suspended within marshmallows, but it is so fine that it is a colloid that will not fall out of suspension.

**Figure 4.26:** Salt crystals will dissolve in water, which is actually a chemical change rather than a mixture.

**Fast Fact: Did You Know . . . ?**

A colloid can be two phase liquids, or two states like air and liquid.

**Discuss**

- Dips usually have increased viscosity for being carried on chips, vegetables, or crackers.
- Students might be familiar with salsa as a dip for tortilla chips.
- A dip should not be gluey, gloppy, or runny.
Reinforce and Review

- Dips, like soups, sauces, and other classics, appear in ancient cuisines from around the world.
- Tahini is a sesame seed paste.

Discuss

- Chips and dip have historically been a popular party food.
- Potato chips and onion dip or clam dip are typically found on a snack buffet.
- Discuss chips and dips with the students. Do they see them at social functions they attend?

Vocabulary Terms

- Guacamole: A dip made of mashed avocados.
- Salsa: A fresh relish-type sauce or dip.
- Hummus: A Middle Eastern dip of mashed legumes.

Figure Focus

**Figure 4.27:** These are completely different types of dips, from different parts of the world. If possible, have students create some of the dips discussed.
Essential Skills: Making a Simple Cold Dip

Believe it or not, sour cream is not as high in fat as mayonnaise.

Summary

- Remind students to review the following:
  1. Types of dressing
  2. Types of dips

Figure Focus

Figure 4.28: Cold dip should be cold, but not frigid.
emulsifiers and are often used in emulsified vinaigrettes to permanently bind oil and vinegar together. A suspension is a temporary blending of unlike ingredients, such as oil and vinegar. In a suspension, the ingredients will eventually come apart and separate. Vinaigrette is a suspension mixture, and mayonnaise is a classic emulsion.

- Vinaigrettes are lighter dressings used on more delicate ingredients, like salad greens. Emulsified vinaigrettes tend to be thicker and can be used on increasingly sturdier ingredients. Mayonnaise-based dressings are often thicker and creamy and can be used on heartier lettuces, proteins, and pastas. Finally, mayonnaise is the sturdiest emulsion and is used to bind ingredients, such as meat, fish, and starches together.

- A dip is a mixture served as an accompaniment to certain food items. Like salad dressings, dips are meant to complement or enhance the food items they are served with, not hide the flavor of the food.

- Salsa, guacamole, and hummus are examples of popular ethnic dips.
Section 4.2 Review Questions

1. The primary types of salad dressing are vinaigrette, emulsified vinaigrette, mayonnaise-based, and mayonnaise.

2. An emulsion is made by chemically bonding nonmixable liquids by means of an emulsifier, which forms a link between separate ingredients.

3. See Table 4.3 on p. 245.

4. Oil, vinegar, and egg yolk are the three main ingredients in mayonnaise.

5. The students might have interesting answers to this. If a restaurant has a delicate emulsion, they might want to make it on-site. Perhaps they have a proprietary recipe that they want to protect.

6. The students can find purchased dressings with published nutritionals. They could also analyze a recipe by ingredients. The USDA Web site can help with the analysis.

7. The students will probably mention various crunchy raw vegetables, crisp fruit, whole grain breads, toasts, crusts, and crackers.

8. Even fruit, pastas, potatoes, or fish can pair with vinaigrettes.
Section 4.2 Activities

1. Be sure to use distilled water first; it will seem like the beam goes straight through. Second, use distilled water with one drop of milk; it will look clear, but will deflect the beam off of the milk molecules. Third, tap water will appear clear but will deflect the light off of particles even without adding milk. A chemistry or physics teacher might have a laser beam or pointer. Students can write a paragraph of observations.

2. Hummus is actually a source of legume protein. There is some oil added with the tahini or any added oil, but the chickpeas are fat-free. The information can be found online, but each recipe will be slightly different.

3. Low-fat dressings are usually thickened with starch, gums, or other additive gel formers. Perhaps the students will discover other low-fat dressing processes in their research.
Section 4.3 Garnishes

Introduce the Section
a. Garnishes are used to add a final appetizing finish to a plate.
b. A garnish should be edible and enhance the flavor and style of the item.
c. Soups have their own rules for garnishing.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
• Perhaps the best way to teach garnishes is to get students excited about discussing it.
• Ask students for bad examples; they will probably come up with several.
• When they have gotten creative and outlandish describing ridiculous garnishes, bring them around again.
• Have them describe beautiful and creative garnishes.
• Be prepared with examples or pictures of nicely garnished plates.

Vocabulary Terms
• Brunoise: Cutting technique—julienne cut, quarter turn, then cross-cut into small cubes.
**Essential Skills:**
*Garnish as an Important Part of the Complete Dish*

The garnish goes on last, right before service. It should never look stale or wilted.

**Reinforce and Review**

- When planning menus and recipes, plan the garnishes as well.
- The perfect garnish might require some work and prior planning, but could set the restaurant apart as distinctive.
- Rehearse the garnish when you rehearse the menu item.

---

**Figure Focus**

*Figure 4.29a:* Beautiful broccoli, without a garnish.

*Figure 4.29b:* Garnished broccoli ready for service.
Figure Focus

**Figure 4.30:** Beautiful garnishes can be made with inexpensive vegetables. Have students practice creating garnishes.

**Discuss**
- “Keep it simple” is a good rule of thumb.
- However, a garnish that is too simple (e.g., a sprig of parsley) might not be quite enough.
- Encourage the students to think of garnishes by discussing techniques that can be used.
- Creativity and simplicity can go hand-in-hand.

**Table 4.5: The Basics of Plate Presentation**
- This table is a useful primer for garnishing skills.
- Have students practice creating garnishes.

**Teaching Tips**
- Use Table 4.5 for lesson planning and practice.
- The more students practice and try preparing garnishes themselves, the better their skills will be.
- The most important skill students can develop is an eye for what looks good.
- Even a simple, easy garnish needs to look right.
- Looks are very important where garnishing a plate is concerned.
Discuss

- Discuss dimension in presentation and garnishing.
- Perhaps students have seen (or seen pictures of) osso bucco, lamp chops on the bone, lobster Newberg in a puff pastry cup, or other dimensional items.
- Whether or not the dish or the garnish is dimensional, it should be easy and inviting to eat. It should not look like a fortress of food.

Vocabulary Terms

- **Timbale**: An elaborate dish of vegetables baked in a springform pan or timbale mold.
- **Dauphinoise**: Baked au gratin potato.
- **Duchesse**: Mashed, seasoned, piped, and baked potatoes.
Figure Focus

**Figure 4.31:** A sauce can be part of the presentation. It must be exactly where the chef wants it to be, and should not be messy.

**Figure 4.32:** A bone is not edible and is very bold. It must be roasted to look and smell good. When it is, it can add a delicious aroma and visual dimension.

---

**Table 4.5 (cont.)**

<table>
<thead>
<tr>
<th>Table 4.5: The Basics of Plate Presentation continued</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tip</td>
</tr>
<tr>
<td>Date</td>
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<tr>
<td>Date</td>
</tr>
</tbody>
</table>

Food is beautiful to the human eye, and is even more beautiful when it is garnished.

The table says “Respect the food.”

The entire goal of a garnish is to invite the guest to eat.

---

**Essential Skills: Preparing Common Garnishes**

Parsley is the classic plate garnish.

Always remember that parsley is edible and has a distinct flavor.

Does the flavor work with the menu item?

---

**Vocabulary Terms**

- **Tourner:** An oblong or football-shaped cut for a vegetable.
Essential Skills:
Preparing Common Garnishes (cont.)

Leeks add an earthy, grassy, onion flavor and aroma, so keep that in mind.
The aroma will be delightful with the right dish.

Figure Focus

**Figure 4.33:** Parsley sprigs should be very fresh and perky.

**Figure 4.34a:** Hold the layers of the leek together as you julienne.

**Figure 4.34b:** The crisp fried leek will become soft if left to sit too long.
**Figure Focus**

**Figure 4.35a:** The outside of the cucumber must be completely clean.

**Figure 4.35b:** Do not cut all the way through.

**Figure 4.35c:** A cucumber cup can be filled with something else, like a dollop of a seasoned dip.

**Figure 4.36:** Mushrooms should be completely clean.

**Figure 4.37:** Use radishes that are not too big. Make sure they are completely clean and not stained.

---

**Teaching Tips**

- Have students practice making garnishes with radishes.
- Radishes are a good place to begin.
- Radishes can be split, blemished, or stained in the field. Choose radishes that will clean up nicely.
Essential Skills: Preparing Common Garnishes (cont.)

Cold water can keep vegetables fresh and crisp. It will also curl the ends of the scallions, which makes a fancy garnish.

Figure Focus

**Figure 4.38:** Get all the field dirt and outer layers off of the scallion.

**Figure 4.39:** Pickle fans are good with dishes that need a pickle, like a hamburger or sandwich platter.
**Figure Focus**

**Figure 4.40:** Red grapes can also be used.

**Figure 4.41a:** Make sure the outside of the lemon is completely clean.

**Figure 4.41b:** Making ties is labor intensive, but might be just the right look.

**Figure 4.41c:** A sawtooth pattern can be used to cut a lemon in half, leaving two decorated halves to use as garnish.

**Essential Skills:**

**Preparing Common Garnishes (cont.)**

Lemon garnish accompanies seafood dishes.
The lemon is part of the expected condiments for the dish.
If the lemon is wrapped in cheesecloth, or has the pips removed, it will be more user-friendly.
**Essential Skills:**

**Garnishing Platters**

Even the photo stimulates the appetite, because the presentation of the platter is so nice.

---

**Figure Focus**

**Figure 4.42:** The vegetables serve as both side dish and garnish.
Figure Focus

**Figure 4.43:** Notice the even, consistent size of each slice.

**Nutrition:**
**Coloring the Appetite**
Humans are attracted to the appearance of good food.

**Essential Skills:**
**Cucumber Fans**
This is further instruction from the information on p. 262.
Have the students practice this skill.
ServSafe Connection: Allergy Disclosures

Major allergens include peanuts, tree nuts, shellfish, and berries.

If these are included in a garnish, they should be disclosed in the menu description.

The server should be aware of this as well, in case he or she is asked.

Fast Fact: Did You Know . . . ?

If the menu uses the traditional term, make sure the server knows what it means, to be able to inform guests who inquire.
Reinforce and Review

- Garnishes can become elaborate with desserts.
- The garnishes for desserts can be part of the dessert itself.
- For example, a berry coulis with a slice of cheesecake will make it berry cheesecake.

Vocabulary Terms

- **String work**: Chocolate piped into a bead in a design that hardens and can be lifted and used upright as a garnish.
- **Napping**: To expertly dress or pour a sauce over an item.
In-Class Activity: Designs for String Work and Sauces

21st-Century Skills—Think Creatively

On paper, have the students draw designs that they could execute with sauce, coulis, chocolate string work, stencil dustings of confectioner’s sugar or cocoa, piping, and so on.

Let them invent and create whatever shapes and designs they would consider beautiful, within the limits of propriety.

They might even like to try making creative letters.

Fast Fact: Did You Know . . . ?

After infants are about least six months old, when given a little taste of ice cream, they usually make a happy face and want more.

Figure Focus

Figure 4.44: Creating garnishes requires a careful and steady hand.
Reinforce and Review

- Soups have their own traditional garnishes.
- They might actually be ingredients in the soup.
- They can be traditional for the specific soup, or creative. For example, borscht is usually garnished with sour cream. Seafood chowders are often garnished with small oyster crackers, but these are offered on the side.

Teaching Tips

- Toasted, sliced almonds are allergens and should be disclosed.

Vocabulary Terms

- **Consommés**: Clarified broths eaten as soup.
- **Dollop**: A spoonful, usually dropped on.
- **Gougères**: Small pastries with savory fillings, often including cheese.
**Trends: Fresh Flowers: On the Table and Now in the Plate**

Nasturtiums taste peppery, almost like a radish.
Taste any edible flower before you use it as a garnish.
Also, check the inside of the flowers for tiny insects.

**On The Job: Squirt Bottles and Scoops: Not Just for Ketchup and Ice Cream Anymore**

Students will need practice with the squirt bottle.
They will need to have just the right size hole in the tip for whatever they are dispensing, dependent on the viscosity of the liquid.
Scoops add dimension and a pretty half-globe shape to a “plastic” (or moldable) item.

---

**Figure Focus**

**Figure 4.45:** Various types of soup garnishes. More than one type can be used for a soup serving.
Summary

• Remind students to review the following:
  1. The why and how of garnishing
  2. Garnishing desserts
  3. Garnishing soups
Section 4.3
Review Questions

1. Garnishes are used to enhance the visual appeal of a food and to enhance the flavor of a food.

2. Students could list any five of the many listed in this chapter, plus others they might think of. Hopefully they will get beyond parsley sprigs, parsley leaves, and other more common garnishes.

3. There are several items listed on p. 269, plus they can add other items like candy, crushed candy, sprinkled candy bits, piped icing, stencils, and so on.

4. Soups are garnished with ingredients in the broth, a garnish added to the top of the soup in the bowl, or something added alongside on the plate.

5. Garnish draws the guest into the food and makes it look inviting.

6. Each student will have ideas about this. They might include inexpensive garnish ingredients like carrots, cucumbers, and onions, plus other more creative ones. They could also include labor-intensive choices like chocolate string work or delicate cocoa stencils.

7. Students will express an opinion, and hopefully support it. One additional note: The fried tortilla adds a lot of fat and calories to the salad, making it a very high-calorie menu item if the bowl is eaten.

8. It will be interesting to see what the students choose, perhaps something red.
Section 4.3 Activities

1. The students might be tempted to be hasty or silly. Each garnish item should look good and be something that could be used.

2. This activity will require equipment for each student, or another activity that could be done while waiting to share.

3. Adding fat through buttered toast points, croutons, fried vegetables, and the like will help a garnish to float because fat floats (hydrophobic). Also, items light in weight for a large surface area, like croutons or oyster crackers, are buoyant and will float until saturated. Items so lightweight that they do not break the surface tension of the soup, like tiny microgreens, will also float. Grated cheese will float cold or melted until it is stirred in because of its high fat content. Sour cream will float for a while, but will melt and disperse out of a dollop.
Case Study Follow-Up

1. Each student will have his or her own answer to this problem.

2. Students will have their own ideas about this. French onion should, by definition, have the crust of bread and melted cheese. It could also use a little bit of scallion for a touch of green. The cream of broccoli might benefit from some crumbled bacon or shredded cheese. Perhaps the students might try microgreens on the cream of broccoli. They could also look nice on the chicken noodle. They would have to be added right before service so they wouldn’t wilt. The possibilities are many, but should include something that pairs well with the flavor of the soup.

3. The important aspect of this is for students to understand the process and support their decisions. They should have more reasons for proposing an item for sale than a heartfelt desire for it. There should be some real justification for it.
Apply Your Learning

Pricing Cobb Salad
The students need to know all the ingredients in a Cobb salad and their portion sizes. Classic ingredients are lettuce, bacon, blue or Roquefort cheese, tomatoes, chicken, hard-cooked eggs, avocado, and chives with a vinaigrette dressing.

Visiting Florentine
“Florentine” often means something is made with spinach or arugula. However, there is an entire Italian country cuisine from the region of Florence, which is in Tuscany. The students can research and learn something about this region and its local foods and dishes.

Oil Salesperson
The students might want to refer back to Chapter 2 when considering the type of fatty acids that are provided by canola oil. The name “canola” means “Canada oil.” It is made from the rapeseed crop, but rapeseed is not a good marketing name, even though the oil is good. It is raised in the farmlands of Alberta and other regions in the Canadian plains and the United States and Australia.

The Main Event
Each student will have unique choices of salad ideas. Encourage students to support and defend their selections.
### Exam Prep Questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>The part of a bound salad that holds everything together is the</td>
<td></td>
</tr>
<tr>
<td>A. Body</td>
<td>D</td>
</tr>
<tr>
<td>B. Base</td>
<td></td>
</tr>
<tr>
<td>C. Garnish</td>
<td></td>
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<tr>
<td>D. Dressing</td>
<td></td>
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<tr>
<td>Which part of a salad is the main ingredient?</td>
<td></td>
</tr>
<tr>
<td>A. Body</td>
<td></td>
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<tr>
<td>B. Base</td>
<td></td>
</tr>
<tr>
<td>C. Garnish</td>
<td></td>
</tr>
<tr>
<td>D. Dressing</td>
<td></td>
</tr>
<tr>
<td>Which type of food typically makes up the base of a salad?</td>
<td></td>
</tr>
<tr>
<td>A. Unleavened bread</td>
<td></td>
</tr>
<tr>
<td>B. A creamy dressing</td>
<td></td>
</tr>
<tr>
<td>C. Leafy or heartier greens</td>
<td></td>
</tr>
<tr>
<td>D. A protein, such as chicken</td>
<td></td>
</tr>
<tr>
<td>The three keys to a quality salad are</td>
<td></td>
</tr>
<tr>
<td>A. texture, taste, and cost</td>
<td></td>
</tr>
<tr>
<td>B. sweet, bitter, and tart flavors</td>
<td></td>
</tr>
<tr>
<td>C. eye appeal, cost, and heartiness</td>
<td></td>
</tr>
<tr>
<td>D. freshness, flavor, and eye appeal</td>
<td></td>
</tr>
<tr>
<td>Which salad most often uses slightly sweeter or sweet/sour dressing to</td>
<td></td>
</tr>
<tr>
<td>enhance its flavor?</td>
<td></td>
</tr>
<tr>
<td>A. Fruit</td>
<td></td>
</tr>
<tr>
<td>B. Bound</td>
<td></td>
</tr>
<tr>
<td>C. Starter</td>
<td></td>
</tr>
<tr>
<td>D. Tossed</td>
<td></td>
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<tr>
<td>Which salad is served after dinner and before dessert?</td>
<td></td>
</tr>
<tr>
<td>A. Intermezzo</td>
<td></td>
</tr>
<tr>
<td>B. After dinner</td>
<td></td>
</tr>
<tr>
<td>C. Intermediate</td>
<td></td>
</tr>
<tr>
<td>D. Accompaniment</td>
<td></td>
</tr>
<tr>
<td>Salads are best stored between</td>
<td></td>
</tr>
<tr>
<td>A. 33°F–38°F</td>
<td></td>
</tr>
<tr>
<td>B. 36°F–41°F</td>
<td></td>
</tr>
<tr>
<td>C. 39°F–44°F</td>
<td></td>
</tr>
<tr>
<td>D. 41°F–46°F</td>
<td></td>
</tr>
<tr>
<td>The four basic types of salad dressing are</td>
<td></td>
</tr>
<tr>
<td>A. mayonnaise, mayonnaise-based, vinaigrette, and cheese vinaigrette.</td>
<td></td>
</tr>
<tr>
<td>B. braised vinaigrette, vinaigrette, mayonnaise, and emulsified vinaigrette.</td>
<td></td>
</tr>
<tr>
<td>C. vinaigrette, emulsified vinaigrette, mayonnaise-based, and mayonnaise.</td>
<td></td>
</tr>
<tr>
<td>D. emulsified vinaigrette, braised vinaigrette, vinaigrette, and cheese vinaigrette.</td>
<td></td>
</tr>
<tr>
<td>What is most likely to happen to a dip the longer it is held in a</td>
<td></td>
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<tr>
<td>refrigerator?</td>
<td></td>
</tr>
<tr>
<td>A. It will curdle</td>
<td></td>
</tr>
<tr>
<td>B. It will get runny</td>
<td></td>
</tr>
<tr>
<td>C. It will evaporate</td>
<td></td>
</tr>
<tr>
<td>D. It will get thicker</td>
<td></td>
</tr>
<tr>
<td>The purpose of garnishing is to</td>
<td></td>
</tr>
<tr>
<td>A. mask bland-tasting food</td>
<td></td>
</tr>
<tr>
<td>B. increase the price of a meal</td>
<td></td>
</tr>
<tr>
<td>C. show off a chef’s culinary skills</td>
<td></td>
</tr>
<tr>
<td>D. enhance food’s taste and eye appeal</td>
<td></td>
</tr>
</tbody>
</table>
Recipe

Creamy Coleslaw

- Tell students that the word coleslaw is a rough translation from the Dutch term koolsla (short for koolsalade), which means cabbage salad.

- Do students just think of coleslaw as a side dish? Do any of them eat coleslaw in other ways, such as putting it on a sandwich?
Recipe

Basic Vinaigrette Dressing

- Time how long this dressing remains in suspension after it is agitated.
Recipe

Raspberry Sauce

- If time and money allow, it might be nice to make another dish that could be garnished with this sauce.
- There is a flourless chocolate cake recipe in Chapter 8.
- Vanilla ice cream would be another good way to taste the sauce as part of a dessert.
Chapter 5 Overview

Chapter 5 follows from the material addressed in Chapter 3, focusing on purchasing and inventory management as a means of controlling costs.

Section 1: The first section covers basic purchasing concepts, such as distribution, and encourages students to consider the broad range of goods and services purchased in the restaurant and foodservice industry.

Section 2: This section focuses on purchasing decisions: how an operation determines what it needs to provide a certain level of service.

Section 3: Finally, this section looks at caring for purchases: receiving, storing, and inventory practices.

Advance Preparation

Review  
Sections 5.1–5.3  
Chapters 3, 9  
Level 1, Chapters 2, 7, 8, 10

Contact  
A representative from a food distributor  
A purchaser with responsibilities for multiple foodservice outlets  
A member of the campus foodservice team

Prepare  
Samples of nonfood items, such as linens, candles, and paper goods  
A copy of any ethical code of conduct governing campus behavior

ServSafe Connection

Pages 329, 333

CUSTOMIZED INSTRUCTION OPTIONS

<table>
<thead>
<tr>
<th>Less Advanced Students</th>
<th>More Advanced Students</th>
<th>ESOL Students</th>
<th>Special Needs Students</th>
</tr>
</thead>
</table>

CHAPTER TOOLS

<table>
<thead>
<tr>
<th>21st-Century Skills</th>
<th>Mathematics</th>
<th>Science</th>
<th>Literacy</th>
</tr>
</thead>
</table>
Reinforce and Review

To succeed in the restaurant and foodservice industry, stay abreast of evolving consumer food trends while remaining focused on the specific population you serve.

Always be sure to offer value for money, so customers and potential customers feel that doing business with you is worthwhile.

Don't enter the restaurant and foodservice industry for the wrong reasons.

Purchasing is a key driver in successfully operating a profitable operation.

Teaching Tips

Does Al Gaylor seem passionate about his career? Why or why not?

Relate this material to Level 1, Chapter 7 to explain the importance of good communication skills to the purchasing process.

Case Study

Purchasing More Profit

- What did students learn in Chapter 3 that might help Chef Kate and Miguel succeed in cutting their operational costs?
- What risks might Chef Kate and Miguel need to manage by changing their purchasing practices?
- What role does employee training play in cutting purchasing costs?
- What other tactics could Chef Kate and Miguel try? Why might these succeed?
- Note that there are follow-up questions about the case study at the end of the chapter.
- This activity could be done in groups, as a class, or as a homework assignment.

Professional Profile

Discuss

Why do only 20 percent of dissatisfied customers complain about the problems they have experienced? Based on the material students have learned throughout this program, what are some ways to increase customer feedback?

What are some common complaints customers have about an operation? How can these problems be resolved?

How is purchasing a component of quality guest service?

In what ways is purchasing related to professionalism?

Think about your most recent foodservice purchases. How did they make you feel? What was the business doing correctly or incorrectly?

Explain the role of communication in the purchasing process. What are some effects poor communication can have on a restaurant?
Focus and Engage

Discuss

• What are the key components to purchasing? Why is it essential in controlling an operation’s costs?
• How are student purchases from a restaurant or foodservice operation related to the operation’s purchasing decisions?

Teaching Tips

• Encourage students to see the relationship between their purchases from a restaurant or foodservice operation and that operation’s purchases from its suppliers and distributors.
Section 5.1
Introduction to Purchasing

Introduce the Section
a. Review the purchasing function with students, addressing the various channels of distribution.
b. Note the wide range of goods and services required in the restaurant and foodservice industry.
c. Explain the role of the buyer and what the position requires.
d. Discuss the objectives for the section.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach
Discuss
• How does an operation's chosen identity affect its purchasing decisions?

Reinforce and Review
• The successful operation must fully understand its budget, identity, standards, storage capacity, and customers' wants and needs, among other things.
• An operation must also be able to develop and maintain strong supplier relationships.
Discuss

- Which of the five parts of the purchasing process is most important? Why?
- Human error can affect each stage of the purchasing process. Encourage students to give examples of how things can go wrong.

Reinforce and Review

- The purchasing process is everything involved in buying products and services for an operation.
- The five parts of the purchasing process are determining what the operation wants and needs to buy, identifying quality standards, ordering products and services, receiving deliveries, and storing and issuing products.
- Buyers and managers usually work together to determine what should be ordered and in what quantities.
- Product specifications, or specs, are the standards for the quality of the products and services necessary to meet operational goals; suppliers use these specs to meet the operation's needs.
- Employees must check the quality, as well as the price and the amount, of all goods being received.
- Once received, products should be stored swiftly and appropriately to prevent food safety problems and spoilage.

Teaching Tips

- Divide students into five groups and assign each group one of the five components of the purchasing process to defend in a class debate. Students should develop arguments to support why their component is the most important one of the five.
- Relate this material to Chapter 3, Section 4.

Homework Activity: Special Specs

<table>
<thead>
<tr>
<th>Literacy Connection, 21st-Century Skills—Think Creatively, Critical Thinking and Problem Solving, Communicate Clearly, Work Independently</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop a spec sheet for something you purchase regularly, such as a cup of coffee or school supplies. What information do you need to provide to make sure that, if someone else were buying the product for you, you would receive the correct item?</td>
</tr>
<tr>
<td>Make out a spec sheet that presents this information in a clear, logical fashion.</td>
</tr>
</tbody>
</table>
Figure Focus

**Figure 5.1:** In what ways does the purchasing process shape other aspects of an operation’s business?

**Figure 5.2:** Achieving the four purchasing goals is a buyer’s primary objective; however, they are broad overviews. What specific goals might a buyer also bear in mind?

**Discuss**
- Which of the four purchasing goals is most important to an operation’s success? Why?
- What challenges might a buyer face when making purchasing decisions? How can relying on these goals help?

**Reinforce and Review**
- An operation’s success is directly affected by the efficiency and effectiveness of its purchasing process.
- The four purchasing goals can help clarify the overall process for the buyer by limiting distractions.
- The purchasing goals are to maintain the right supply of products and services, maintain the quality standards of the operation, minimize the amount of money the operation spends, and stay competitive with similar operations.

**CUSTOMIZED INSTRUCTION**

**Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Interact Effectively with Others**

**Special Needs Students**
What is your favorite food? What are some qualities you expect it to have? Why?

**Homework Activity: Quality Standards**

**Literacy Connection, 21st-Century Skills—Use Systems Thinking, Communicate Clearly, Work Independently**

Select one of the following items: a cheeseburger, a black-bean burrito, or a cupcake. Now develop quality standards for the selected item. Explain why each quality standard is important.
Discuss

- Encourage students to share experiences in which a restaurant or foodservice operation has run out of the dish or product they had hoped to purchase. How did the operation respond?
- Identify some examples of an outside influence that can affect an operation’s sales.
- What is the relationship between the popularity index and the food production chart? In what ways are both used to forecast sales?
- Ralph Waldo Emerson once said that, “A foolish consistency is the hobgoblin of little minds.” What does this quote mean? In what cases is consistency essential, and in what cases are variations acceptable?

Reinforce and Review

- The first goal of purchasing is to make sure that the operation has enough product to sell.
- Some tools to help buyers purchase appropriate quantities include customer-count histories, popularity indexes, vendor delivery schedules, availability of items, and awareness of outside influences that can affect an operation.
- A customer-count history tracks how many customers have been served during specific time periods.
- The popularity of a particular menu item is a determining factor in how frequently its ingredients must be ordered.
- Every item an operation produces must meet its quality standards.
- Consistency is the key to drawing repeat business, and it often begins with consistently purchasing high-quality products.
- Specifications are simple to follow in some cases, but fresh food can pose challenges: Freshness, seasonality, and availability often change.

Vocabulary Terms

- Quality standards: An operation’s expectations about the quality of the goods and services it plans to purchase.
- Specifications/specs: An operation’s purchasing requirements for a particular good or service.

More Advanced Students

You operate an independent foodservice operation that specializes in local produce. From late spring until mid-autumn, you have abundant produce opportunities; the rest of the year, your options are severely limited. As a result, purchasing produce is a more complicated process for your operation than for some of your competitors.

How can the challenges you face when specifying and ordering particular fresh ingredients be turned into a marketable asset?

Write a one-page essay on the marketing opportunities available to you and how you would capitalize on them.
Homework Activity: Competitive Advantage

Literacy Connection, 21st-Century Skills—Think Creatively, Make Judgments and Decisions, Communicate Clearly, Be Self-Directed Learners

What attracts you to a particular restaurant or store? Is it the service, the aromas, the products, the prices, or something else? The elements that draw you to Operation A rather than Operation B are Operation A's competitive advantages. Explain how these advantages can affect all aspects of Operation A—its profits, its sales, its identity, and so on—in a one-page report.

Discuss

- How can a restaurant or foodservice operation improve its competitive position?
- In what cases might a purchaser choose to pay a higher price for an item from a particular supplier?
- What are some examples of products that have fluctuating prices?

Reinforce and Review

- Tying up large amounts of money in products that will make a profit at a date too far in the future can cripple an operation's ability to function in the present.
- Buying too much of a product can be as damaging to an operation as buying too little.
- Buyers can minimize spending by considering the customer-count forecast, the available storage capacity, and forecasts of future product costs.
- In a successful operation, all costs must be controlled and the operation must be able to attract customers.
- Larger, higher volume clients typically have an advantage in pricing and added services, as they purchase more goods.
- To stay competitive, an operation must shop around, get the lowest possible EP or AS price, and obtain total utilization from products purchased.

Teaching Tips

- Relate these four purchasing goals to the material on controlling costs in Chapter 3.

Vocabulary Terms

- **Cash position**: The amount of funds available to an operation at any given time.
- **Customer-count forecast**: The number of customers expected for a given time period.
- **Competitive position**: An operation's ability to attract customers, relative to another operation's ability to attract customers.
Discuss

- What are some food safety concerns that could arise during the distribution flow? How can they be prevented?

Reinforce and Review

- Getting the lowest possible EP (edible-portion) or AS (as-served) price for a given item can help an operation obtain its competitive advantage.
- Distribution refers to the journey products make as they move from where they were grown or made to their final destination in a restaurant or foodservice operation.
- The three main layers in the channel of distribution are the primary source, the intermediary source, and the retailer.

Teaching Tips

- Review the difference among AP, EP, and AS products and prices, referring to the material in Chapter 3 and in Level 1, Chapter 4 as necessary.

Vocabulary Terms

- Channel of distribution: The particular businesses that buy and sell a product as it makes its way from its original source to a retailer.

Homework Activity: Go with the Flow

Select a product that a restaurant or foodservice operation might use, such as frozen chicken thighs or large white onions. Identify the channels of distribution through which it must pass before it reaches the public.

Develop a flow chart demonstrating how the product moves from source to source.
Figure Focus

Figure 5.3: Storing goods can be expensive, so most intermediary sources resell goods as quickly as possible.

Discuss
- Name some other examples of foodservice retailers, besides the ones listed in the text.

Reinforce and Review
- Primary sources include farmers, ranchers, distillers, and manufacturers.
- Intermediary sources include wholesalers, distributors, and suppliers; they are often known as middlemen because they do not alter the products in any way.
- Retailers include restaurants, school cafeterias, and caterers; all restaurants are retail businesses.
- Most restaurant and foodservice operations deal directly with primary sources only when buying new equipment or locally grown specialty foods.

Teaching Tips
- Make sure students understand that multiple primary sources can be involved in the distribution of a single product. For instance, the farmer who grows carrots is a primary source, as is the company that peels, trims, and packages the carrots.
- Ask students why cooperative purchasing result in lower prices? How is this related to the concept of competitive advantage?
- What are some advantages and disadvantages of family businesses?
- In what ways can cooperative purchasing help or hurt small businesses?

Vocabulary Terms
- **Primary source:** The origin of raw materials, such as ingredients, or of items made from raw materials, such as kitchen equipment.
- **Intermediary source:** A business that purchases products from primary sources and resells them to retail sources.
- **Retailer:** A business that sells products directly to the public.
Discuss

- What other examples of “economies of scale” can students identify? How can they help obtain or maintain a competitive advantage?
- In what ways can the use of a central commissary lower a chain’s costs and improve efficiency?
- In what other ways can chains work together to save costs and improve customer service?
- Ask students what is the difference between a franchise and a chain? With a franchise, people are granted a license to market a company’s goods or services in a certain area. A chain is a set of related restaurants with the same name in many different locations that are either under shared corporate ownership (e.g., In-N-Out Burgers in the United States) or franchising agreements.
- What costs might arise from maintaining a central commissary?
- Why might a franchisee choose to purchase from a central commissary or from an independent supplier?

Trends: Farm-to-Chef Programs

Encourage students to discuss the following:

- How can “farm-to-chef” programs benefit both farmers and retailers?
- “Farm-to-chef” programs replace traditional intermediary sources. How might this affect how intermediary sources operate? Why?
- Are these programs more than a passing trend? Why or why not?

CUSTOMIZED INSTRUCTION

Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Information Literacy, Work Independently

ESOL Students

Are there any notable restaurant chains or franchises in your country of origin? If so, research and present a brief oral report to the class on one example. If not, select a restaurant chain or franchise in another country for your report.

CUSTOMIZED INSTRUCTION

Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Work Independently

Less Advanced Students

In some cases, retailers can also be primary sources. What are some examples of this practice? Are there any such suppliers in your community?
Fast Fact: Did You Know . . . ?

Encourage students to discuss the following:
- Why do so many restaurants fail within the first three years?
- How can understanding the purchasing process save a business from failure?
- What are some hallmarks of a successful business model?

Discuss
- Identify at least one good or service in each category that the typical restaurant or foodservice operation must purchase.
- Why do restaurant and foodservice operations purchase so many goods and services that they cannot directly sell?

Reinforce and Review
- Food is only one of the goods and services that a successful operation needs to function.
- The major categories of foodservice purchases include food and beverages; nonfood items; smallwares and equipment; technology; furniture, fixtures, and equipment; business supplies and services; support services; maintenance services; and utilities.
- Quality and consistency are absolutely key to delivering a desirable product that will attract repeat customers.
- Purchasing food items that are of inconsistent or lower quality than consumers expect can cause a restaurant or foodservice operation to fail.

Teaching Tips
- Remind students that the costs of purchasing all these goods and services must be covered by food and beverage sales, so menu prices must be high enough to cover these costs.
Table 5.2: Food and Beverages that Restaurant and Foodservice Operations Purchase

- Is this list of food and beverages comprehensive? What items might be missing?
- In what ways does an operation’s style of service, its cuisine, or its guests affect its food and beverage purchases?
- Identify food items from each category that the campus foodservice operations might purchase.

Discuss

- Describe how an operation’s service style affects its purchase of nonfood items.
- What nonfood items might be purchased by what types of restaurant and foodservice operations?

Reinforce and Review

- Nonfood items are directly tied to the sale of food and beverages.
- Purchasers should identify how best to support the operation’s theme and style of service when making decisions about their purchases of nonfood items.
- Nonfood items include linens, uniforms, candles, music, and other goods that support an operation’s atmosphere and style of service, thereby affecting its sales of food and beverages.

Teaching Tips

- Provide examples of nonfood items and encourage students to identify service styles for which they would be appropriate.
Discuss
- What smallwares and small equipment are available in the classroom kitchen?
- Under what circumstances should operations purchase inexpensive and lower quality equipment instead of expensive and higher quality equipment?
- How might an operation’s style of service or menu dictate its purchases of smallwares and small equipment?

Reinforce and Review
- Smallwares and small equipment are items that an individual can generally move from location to location easily and that require replacement fairly often.
- To determine whether to purchase inexpensive or expensive equipment, an operation must consider how often the equipment will be in use, how important the product is to the operation, and what the long-term and up-front costs will be.
- Smallwares and small equipment include china, silverware, and food processors.

CUSTOMIZED INSTRUCTION
Literacy Connection, 21st-Century Skills—Solve Problems, Communicate Clearly, Use and Manage Information

Special Needs Students
What are some smallwares and small equipment that you have in your household? How are they used?

Figure Focus
Figure 5.4: What nonfood items can students identify in this photograph?
Discuss

- What technologies are found in most restaurant and foodservice operations? What do these technologies have in common?
- How can an operation’s style of service affect its purchase or lease of FFE?
- How can a new operation reduce its start-up costs?

Reinforce and Review

- Managers and employees use technology throughout many restaurant and foodservice operations.
- An important consideration for purchasers is whether implementing new technology will improve the operation’s bottom line.
- Technology includes computers, POS systems, and credit-card processing systems.
- The category of furniture, fixtures, and equipment is also known as capital expenditures or FFE.
- FFE items are often leased and not purchased, as they are expensive and can require expensive maintenance and repair.
- FFE includes dining-room tables, cooking equipment, and plumbing fixtures.

Teaching Tips

- Make sure that students understand the distinction between FFE and technology, despite the proliferation of “smart” equipment.
Figure Focus

**Figure 5.5:** What are the advantages and disadvantages to purchasing rather than leasing FFE?

**Discuss**

- How are business supplies and technology related? How do managers decide where to put items that appear to belong in both categories?
- Explain the role of capital in opening and operating a restaurant.
- Generally speaking, are restaurant and foodservice operations good investments? Why or why not? What types of operations might be less risky than others?

**Reinforce and Review**

- Business supplies and services support an operation's management or marketing.
- An operation's size is often a factor in determining what supplies and services it requires.
- Purchasers must carefully weigh the potential profits of any investment against its costs.
- Business supplies and services include office supplies and equipment, professional services, and insurance.
- Support services are tied to the operational aspect of the business; they often are related to the operation's chosen service style.

**Teaching Tips**

- Make sure students understand how capital and investment are related.

**Vocabulary Terms**

- **Capital:** Assets.
- **Investment:** The use of money for future profit.
Discuss

- What factors are involved in an operation’s decision to manage certain responsibilities itself, rather than employing an outside service?
- Consider the typical restaurant. What maintenance services need to be performed?

Reinforce and Review

- Relying on support services to perform some work that would otherwise have to be done by an operation’s staff might cost more, but it could also free employees to focus on more important aspects of their work.
- Examples of support services include garbage removal, pest control, and parking services.
- Maintenance services help keep the facility in good shape and are essential to efficient operations.
- Managers must plan for both short- and long-term maintenance costs.
- Maintenance services include security system support, groundskeeping, and equipment repair.

Teaching Tips

- Encourage students to identify examples of each category of goods and services covered in this chapter that the school or school district purchases.
Figure Focus

Figure 5.6: How can restaurant and foodservice operations lower their utility costs? How might these efforts affect guest service?

Discuss

- In what ways are a restaurant or foodservice operation's utility needs similar to that of a typical household?
- How do an operation's utility costs affect its overall business plan?

Reinforce and Review

- When operations can choose among competing utility providers, they can often negotiate cost savings.
- Cutting utility costs frees up money that might be better spent on other aspects of an operation.
- Most operations use gas, heat, electricity, telephone, and Internet services.

Teaching Tips

- Utility costs and ways to contain them will be discussed in greater detail in Chapter 9.

**Essential Skills: Vendor Shopping**

Encourage students to discuss the following:

- Under what circumstances might an operation choose to spend more money for a particular good or service?
- How do an operation's quality standards determine its choice of suppliers?
- Explain how the availability of skilled labor can affect an operation's choice of suppliers.
Encourage students to discuss the following:

- What other questions should restaurant and foodservice managers ask prospective suppliers?
- How can restaurant and foodservice managers research the suppliers that they are considering?
- What is the most important aspect of building positive relationships with suppliers? Why?

Discuss

- Why do some operations use the formal purchasing method, whereas others use the informal method? How do operations determine which method is appropriate for their needs?
- How do bids differ from quotes?

Reinforce and Review

- The buyer for an independent or single-unit operation might be its owner or manager; in larger operations, purchasing responsibilities might be overseen by a purchasing vice president, agent, or director.
- The head of the purchasing chain might perform all purchasing tasks or might review purchasing decisions and assist with purchasing for multiple units or franchises.
- Buyers use either formal or informal purchasing methods to obtain goods and services.

Vocabulary Terms

- **Buyer**: The employee responsible for an operation's purchasing activities.
- **Franchisees**: Those people granted a franchise to market a company's goods or services in a given area.
- **Formal purchasing method**: A process through which buyers prepare purchase specifications for the items they wish to buy; these specifications are then sent to various suppliers, who prepare bids.
- **Bids**: Specialized, written priced lists created for an operation by a supplier.
- **Informal purchasing method**: A process through which managers or owners request verbal price quotes from a variety of suppliers.
- **Quote**: Notice of a price that a supplier gives to a buyer during the purchasing process.
Figure Focus

**Figure 5.7:** In what ways does the use of either formal or informal purchasing methods require professionalism?

**Discuss**

- How can poor communication affect the buyer’s ability to obtain the correct products? How can this affect the operation’s reputation?
- Why is it important for purchasers to understand all applicable laws and regulations governing food-related issues?
- Explain the concept of integrity. How is it related to the concept of professionalism?
- What are some opportunities for students to demonstrate integrity?

**Reinforce and Review**

- A buyer must know everything about the establishment as well as understand relevant federal and state regulations.
- Buyers must also fully understand the purchasing process and be familiar with available technology that can assist in the process.
- Anyone responsible for purchasing must cooperate and communicate with other employees to be sure he or she buys the right goods and services.
- Many restaurant and foodservice operations have a written code of ethics that help guide a purchaser’s behavior.
- Buyers are sometimes faced with situations that threaten their honesty.

**Teaching Tips**

- Reiterate the importance of integrity throughout the professional world.

**Vocabulary Terms**

- **Kickback:** Money or other goods received by a person in exchange for purchasing from a specific supplier.
Discuss

- How does an operation or a person determine an ethical code of conduct? What considerations are involved?
- What are some opportunities for people to engage in ethical behavior in their personal lives?

Reinforce and Review

- Some suppliers may offer gifts to buyers that are not expressly linked to an order, but these gifts can cause feelings of obligation.
- Buyers should always follow the operation’s code of conduct and avoid anything that might cause a personal conflict.
- Ethical behavior is not an option: It is necessary for any operation to run successfully.

Teaching Tips

- If there is an ethical code of conduct in place on campus, review and discuss it with students.

On the Job:
Buyers: Responsibilities, Education, and Skills

Encourage students to discuss the following:
- What aspects of the buyer’s job appear particularly interesting or especially challenging? Why?
- Explain why buyers must have excellent communication skills.
- Is it important for a foodservice buyer to have a foodservice background? Why or why not?

Homework Activity: The Right Stuff

Literacy Connection, 21st-Century Skills—Make Judgments and Decisions, Communicate Clearly, Be Self-Directed Learners

Describe a situation in which you felt pressured to do what you knew was wrong. What did you do? Were you able to maintain your integrity? What was the outcome? Discuss the situation in a one-page report.

Figure Focus

Figure 5.8: What are some more discreet ways of offering or accepting a kickback? Why is it important for owners and managers to know about these techniques?
Summary

• Remind students to review the following:
  1. The overview of purchasing
  2. Channels of distribution flow
  3. What goods and service are being purchased
  4. Who’s doing the purchasing
Section 5.1
Review Questions

1. Student responses may vary so long as they provide clear and logical answers.

2. Primary sources include farmers, ranchers, manufacturers, and distillers. Intermediary sources include wholesalers, suppliers, and distributors. Retail sources include restaurants, school cafeterias, and caterers.

3. Student responses may vary so long as the examples they identify are appropriate.

4. Student responses may vary so long as they explain both a potential situation and how it could be avoided.

5. Students should explain why they do or do not agree with this statement.

6. Students may identify any of a number of methods to maintain the restaurant’s ambiance; they should select at least three methods.

7. Students should identify the objective they consider most important and provide a logical explanation.

8. Students should identify and defend their choice.
Section 5.1 Activities
1. Students can research codes of ethics and refer to Level 1, Chapter 8 in developing their code of ethics.

2. Students should research planning and purchasing tools online to determine which might be most effective.

3. Students should identify and research an intermediary source and how it operates.
Section 5.2
Making Purchasing Decisions

Introduce the Section
a. Explain how a restaurant or foodservice operation determines its quality standards and product specifications.

b. Describe the ordering process and how restaurant and foodservice operations decide how and what to order.

c. Discuss the objectives for the section.

Vocabulary Review
a. Direct students to the key terms.

b. Pronounce each word, and have the students repeat the pronunciation out loud.

c. Discuss the definition of each word.

Teach

Discuss
• Encourage students to explain some purchasing decisions they face or have faced in their own lives. What information is helpful in making these decisions?

• Why might people make poor decisions?

Reinforce and Review
• An operation’s purchasing decisions affect whether or not the operation will be successful or even viable.

• The major elements of foodservice purchasing decisions are quality standards, product specifications, and the ordering process.

CUSTOMIZED INSTRUCTION

Science Connection, Literacy Connection, 21st-Century Skills—Think Creatively, Reason Effectively, Communicate Clearly, Create Media Products, Work Independently

Less Advanced Students
Imagine a restaurant as a body, in which purchasing is the brain and service is the heart. Identify some other important restaurant concepts. What body parts would these be and why?
How does perception affect value? Research this topic and write a one-page report discussing this relationship.

Discuss
- Why are employee skill levels a factor in establishing quality standards?
- The "best product available" and the "most appropriate product" are both important purchasing concepts. How do they differ? How might they overlap?

Reinforce and Review
- In terms of purchasing, "quality" refers to the value or worth that customers place on a product or service.
- Establishing quality standard specifications helps an operation maintain the consistency that its guests expect.
- Successful operations determine the quality standards for every item that they purchase and use.
- Some factors that should be considered when determining an operation’s quality standards include the item’s intended use, the menu, and customers’ wants and needs.
- Knowing how an item will be prepared and served is the most influential factor in determining quality standards.

Teaching Tips
- Refer students back to the “Quality Standards” activity on p. 287. If they had to repeat that task now, what additional information would they consider?

Vocabulary Terms
- Quality standards: An operation’s expectations about the quality of the goods and services it plans to purchase.

CUSTOMIZED INSTRUCTION

Literacy Connection, 21st-Century Skills—Think Creatively, Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently

More Advanced Students

Have you ever heard the phrase "value for your money"? It relates to the purchasing process: A good or service with a perceived level of value is exchanged for an amount of money. If the amount of money given is greater than the perceived value of the good or service, then the purchaser received poor value (at least in his or her eyes). On the other hand, if the amount of money given is less than the perceived value of the good or service, then the purchaser received good value, or a bargain.

How does perception affect value? Research this topic and write a one-page report discussing this relationship.
Discuss

- A quick-service restaurant’s need for bread (for instance, frozen heat-and-serve hamburger buns) might differ from a fine-dining restaurant’s need for bread (for instance, freshly baked baguettes from a local bakery). Give some other examples of how an operation’s concept can affect its purchases.
- How is an item’s intended use related to the concept of total utilization?

Reinforce and Review

- The overall concept and goals of the operation guide all decisions.
- Operations with different concepts have different equipment—and therefore different purchasing needs—in their kitchens.
- An operation’s purchases must accurately reflect its menu; otherwise, the operation could be committing fraud.

Teaching Tips

- Students should be aware from previous discussions that operations with different concepts will also have different equipment and therefore different purchasing needs.

Homework Activity: Eggs Not-So-Easy

Literacy Connection, 21st-Century Skills—Think Creatively, Solve Problems, Communicate Clearly, Flexibility and Adaptability, Work Independently, Guide and Lead Others

Your operation always serves eggs from nearby Albina Farms, which has such a sterling reputation that you list “Albina Farms eggs” on your menu. However, your purchaser has forgotten to specify “Albina Farms eggs,” and eggs from another source were mistakenly purchased, received, stored, and used.

As the owner, what is your obligation to the guests? Do you exchange eggs? Do you change your menu? Do you ask your servers to explain that the operation is temporarily substituting eggs from another source? What other options might you have?

In a one-page paper, explain how you would handle this situation and what you would do to prevent a similar occurrence in the future.

Homework Activity: Conceptual Concerns

Literacy Connection, 21st-Century Skills—Think Creatively, Reason Effectively, Communicate Clearly, Work Independently

You plan to open your own restaurant. What is its concept, and what are its goals? How will these affect what and from whom you will purchase?

Describe your concept, goals, and purchasing plan in a one-page paper.

Figure Focus

Figure 5.9: What information can students deduce about each operation concept from looking at these photographs?
Homework Activity: Value

Literacy Connection, 21st-Century Skills—Reason Effectively, Make Judgments and Decisions, Communicate Clearly, Work Independently

What constitutes a “good value” to you? Why? How do you determine what is and is not a good value? Why do some people find certain goods or services to be more valuable than other people do?

Discuss your responses to these questions in a brief essay.

Discuss

- As an owner, under what circumstances would you choose to have an operation that employs low-skilled employees and relies on easy-to-prepare convenience items? Under what circumstances would you choose to have highly skilled employees and rely on raw products?
- Why do some foodservice goods experience significant price fluctuations? Give some examples.
- What are some restaurant and foodservice trends? How do they affect consumer demands?
- When dealing with seasonal produce that may become more expensive or lower in quality at certain times of the year, is it better to keep the items on the menu but change their quality standards, or to remove the items from the menu altogether? Under what circumstances might either solution be correct?

Reinforce and Review

- If an operation offers items that require extensive preparation, the operation will need highly skilled employees, so labor costs will increase; alternatively, the operation can save on labor by employing less skilled workers and relying on convenience products, but these are more expensive and will increase food costs.
- Operations in highly competitive markets might need to include cost limits in their quality standards; although prices for goods may fluctuate, restaurant menu prices must remain fairly consistent.
- Drastic changes in an item’s price can cut into the operation’s profit and make budgets difficult to project.
- Smart operations respond to their customers’ needs and wants by providing goods and services that meet those needs and produce a profit.
- The seasonal nature of produce and other items can affect their price, availability, and quality.
Discuss
- What problems can arise if purchasers do not thoroughly research their potential suppliers?
- What are some reasons that operations often have relatively limited storage space?

Reinforce and Review
- An operation’s storage space—both the amount of space and the type of space—limits the amount of product it can purchase.
- Product specifications are based on quality standards and include the details that will help a product or service meet the operation’s quality standards.
- Smaller companies might use informal specifications, giving few details about the desired product, whereas larger companies often develop formal, precise specifications.
- Buyers should always work with approved, reputable suppliers.

Teaching Tips
- Relate this material to Chapter 3.

Fast Fact: Did You Know . . . ?
Encourage students to discuss the following:
- What are some ways in which a restaurant or foodservice operation can consistently reinforce and execute its concept?
- Describe the relationship between good communication and good business.
- What local restaurants participate in community events in your area? In what ways is this a good business practice?

Vocabulary Terms
- **Product specifications/specs**: An operation’s purchasing requirements for a particular good or service.
Discuss

- How can an operation write a comprehensive product specification without being too rigid?
- What role does employee training play in the purchasing and receiving process?

Reinforce and Review

- Buyers must be very familiar with the operation’s quality standards and product specifications when speaking with suppliers or purchasing goods and services.
- Managers and receiving employees must be trained to make sure that suppliers have followed product specifications, so that the operation’s quality standards are met.
- Well-written specifications prevent purchasers from obtaining low-quality or wrong items.
- Sometimes a buyer must make substitutions to obtain quality products at an appropriate price, but customers should not suffer because of these decisions.
- Using a product code number, which relates to particular quality standards and name brands, can help both suppliers and purchasers ensure that the right product is being provided.

Teaching Tips

- Students should clearly understand the differences between quality standards and product specification sheets.

Homework Activity: Specs Revisited

Literacy Connection, 21st-Century Skills—Make Judgments and Decisions, Communicate Clearly, Flexibility and Adaptability, Work Independently

Compare the information provided in the product specification sheet shown in Figure 5.11 with the specs you developed for earlier assignments in this chapter and in Chapter 3. Looking back, what would you change about your previous work and why?

Discuss your reaction in a one-paragraph report.
Table 5.3: Possible Specifications

- Explain why a product’s intended use is the primary factor involved in selection decisions.
- Why is it important to specify the desired “market form” of an item?
- In an increasingly globalized society, why is specifying an item’s place of origin relevant?
- Why is it important for the buyer, the chef, and other management personnel to communicate and collaborate when developing purchasing specifications?

Homework Activity: Caesar Dressing

Mathematics Connection, Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Work Independently

Convert the recipe for Caesar dressing on p. 344 to make 1-quart, 1-gallon, and 2.5-gallon batches. What is the recipe cost for each?

Write a brief report discussing how labor and equipment needs might be affected by the increased production and how this could increase costs.

Homework Activity: Food Safety Around the World

Science Connection, Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently

Select another country and research its food safety policies. How do they differ from regulations in your community? Why might this be the case?
Table 5.3 (cont.)

- What factors must a buyer consider when specifying a purchase price for a particular item?
- Why is specifying size important? How can ordering the correct amount, but the wrong size, affect a menu?
- How can correct specifications help avoid some concerns about food safety?
- What other product specifications can students envision? Why would each be a helpful addition?

Discuss

- Under what circumstances should products be made in-house or purchased ready-made? Why do many operations combine the two methods?

Reinforce and Review

- Before placing orders, purchasers must determine what items will be purchased or made in-house by conducting a make-or-buy analysis.
- Make-or-buy analyses help balance how much food a kitchen produces with the operation’s quality standards.
- Purchasing ready-made products can be advantageous in terms of consistency, reducing prep time and labor costs, and reducing or eliminating certain pieces of equipment or storage space.

Teaching Tips

- Relate the make-or-buy analysis to recipe costing to demonstrate the importance of knowing how much it costs to make each item on the menu.

Vocabulary Terms

- **Make-or-buy analysis**: The process through which a purchaser, often with the assistance of the chef or sous chef, determines whether an operation should make certain items from scratch or purchase ready-made versions.

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**Homework Activity: Make-or-Buy Analyses**

Mathematics Connection, Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Be Self-Directed Learners

Select a recipe from this textbook or from Level 1 and determine its cost, based on prices at a local grocer. How much does it cost to purchase the same amount of a similar item from a retail establishment, such as a deli or takeout restaurant? Which is financially a better deal?

Describe your findings in a brief report.
Discuss

- Describe the relationship between production sheets and the food cost percentage.
- Is cost the primary factor in determining whether to make or buy a given product? What role does taste play? Can a great-tasting product be made inexpensively?

Reinforce and Review

- Ready-made products are typically more expensive than raw goods; moreover, many operations pride themselves on their house-made recipes and prefer to serve fresh foods.
- To decide whether to make or buy an item, a buyer must first determine the total cost of making the item in-house and then compare this to the cost of purchasing the item ready-made.
- Knowing exactly what and when to order is at the heart of purchasing.
- Because many operations do not order every day, managers and purchasers rely on quality forecasting to predict future needs as accurately as possible.
- Buyers combine the establishment’s production records with their own knowledge and experience to plan purchasing needs.
- Production sheets not only provide an accurate snapshot of predicted and actual production for a given day, but enable buyers to see signs of both stockouts and overproduction.

Teaching Tips

- Chapter 3 introduced students to this material, presented here in greater detail.

Vocabulary Terms

- Production records: Documents that provide information about past production and utilization; these include production sheets, daily food cost sheets, and sales mix records.
- Production sheet: A list of all menu items that a kitchen will prepare on a given day.
- Stockout: Running out of a particular menu item.
- Overproduction: Making too much food.
**Discuss**
- Is it realistic to expect all restaurant and foodservice operations to keep track of this information? Why or why not?
- Why do most restaurant and foodservice managers try to keep food costs at or below 33 percent?

**Reinforce and Review**
- Keeping accurate daily food cost sheets can help managers limit food waste.
- Daily food cost is determined by adding up the requisitions from the dry-storage area and the daily purchases.
- Daily food cost percentage is determined by dividing daily food cost by the daily sales figure.
- Significant changes in the daily food cost can help managers identify problems, such as overproduction, waste, or theft.
- Accurate sales mix records can help buyers identify leaders and losers, enabling them to purchase more effectively.

**Teaching Tips**
- Review important math skills with students as needed.

**Vocabulary Terms**
- **Daily food cost sheets**: Ongoing records of an operation’s daily and monthly food costs.
- **Sales mix records**: Documents that track each menu item sold.
- **Leaders**: Menu items that sell strongly.
- **Losers**: Menu items that sell poorly.

**Figure Focus**
**Figure 5.12**: How can both stockouts and overproduction affect an operation’s food cost percentage? How can each affect an operation’s reputation?
Discuss

• How can using the par stock approach to ordering, a reorder point, or both help control foodservice costs?

Reinforce and Review

• Sales mix records help managers determine and track changes in an item’s popularity.
• Over time, operations learn their customers’ demands and can predict par stock levels so that they never run out of anything.
• To use the par stock approach to ordering, operations must agree to the supplier’s ordering process and delivery schedule, determine a par stock level for each inventory item, and calculate what to order by subtracting the amount of an item in hand from its par stock level.
• Using either the par stock approach or an established reorder point can help maintain the proper level of inventory at all times.
• Whichever inventory tracking method managers select should be followed closely to prevent purchasing errors.
• Purchase orders are legally binding documents and should be carefully planned.

Teaching Tips

• Describe the ordering process used in the classroom kitchen.
• Consider asking a member of the campus foodservice team to describe the purchasing process it uses.

Vocabulary Terms

• **Par stock**: The ideal amounts of inventory items that an operation should have at all times.
• **Reorder point (ROP)**: The point at which an item’s inventory has fallen low enough to trigger a reorder.
• **Purchase order**: A legally binding written document that details exactly what the buyer is ordering from the supplier.
Figure Focus

**Figure 5.13:** Purchase orders can be used when receiving goods to confirm that no errors were made in the process.

Discuss

- Why is it important to know that purchase orders are legally binding?

Reinforce and Review

- Every purchase order should contain contact information for both parties; the date of the order as well as either the desired date of receipt or an expiration date; the shipping method used to transport the items; the item's name and description, the quantity desired, and both the unit and total price; the price of the order; and any special information about the order.

Homework Activity: Purchasing Power

**Literacy Connection, 21st-Century Skills—**
Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently

Write a purchase order for some good, using either an imaginary or an actual supplier. Be sure to include all the necessary information, using Figure 5.13 for assistance.

CUSTOMIZED INSTRUCTION

**ESOL Students**

How is the American legal system similar to or different from that of your country of origin? How can this affect the restaurant and foodservice industry?

Write a brief report discussing your findings.
**Discuss**
- What are some examples of goods that might be cheaper purchased in bulk?
- Why might an operation choose to pay a higher price to a supplier in exchange for the ability to receive deliveries at a convenient time?
- In your area, which goods do you think might have a high or low place value? Why?

**Reinforce and Review**
- Purchase orders are generally less detailed than product specifications, which suppliers should already have on file.
- In larger restaurant and foodservice operations, upper management must approve certain purchases before the buyer can make them; typically, a requisition form is used in these circumstances.
- Purchasers must understand the various factors that cause an item’s price to fluctuate.
- The channels of distribution, time, form, place, transportation, and service all affect a product’s value and therefore its price.

**Vocabulary Terms**
- **Requisition form:** In larger operations, a document describing a good or service that would constitute a major and atypical expense that must be approved by upper management before the buyer can purchase it.
- **Time value:** The price retailers pay for the convenience of selecting the time when suppliers will deliver goods.
- **Form value:** The price savings created when a buyer purchases an item in bulk instead of portions.
- **Place value:** The differences in a product’s price, depending on where it must be shipped.
Figure Focus

Figure 5.14: When supplies of coffee beans increase, their price typically decreases, and more are sold. When supplies decrease, their price typically increases, so fewer are sold.

Discuss

- When might it be a good idea to pay a higher price for faster transportation? Why?
- Is it always a good idea to pay higher prices in exchange for more and better service? Why or why not?
- Why might federal laws in various countries ban or restrict the import of certain goods?

Reinforce and Review

- Faster transportation and increased convenience are often available in exchange for a premium.
- Other factors that can affect food prices include political activities and weather.

Teaching Tips

- Work with students to help them understand the basic principles of supply and demand.

Homework Activity: Food Politics

Literacy Connection, 21st-Century Skills—Make Judgments and Decisions, Communicate Clearly, Information Literacy, Work Independently

Identify a food item that cannot be imported into the United States due to a federal ban. Explain the history and rationale for the policy. Do you think the ban is justified? Why or why not? Discuss your findings in a one-page report, defending your opinion.

Vocabulary Terms

- Transportation value: The cost of choosing a quick but expensive form of transportation.
- Service value: Additional convenience services that a supplier provides to its customers.
Discuss

- What are some examples of how supply and demand can affect an item’s price?

Reinforce and Review

- When supply falls, prices typically increase and fewer items are sold; when supply increases, prices typically decrease and more items are sold.
- When demand falls, prices typically decrease and fewer items are sold; when demand increases, prices typically increase and more items are sold.

Teaching Tips

- Suggest goods and conditions, such as “frozen treats in summer” or “pumpkins in October,” and ask students to identify whether either supply or demand for the item would rise or fall under those conditions.

What’s New: Ordering Software Systems

Encourage students to discuss the following:

- Why do many establishments choose to pay increased prices for the “service value” their suppliers provide?
- How can the availability of ordering software make a purchaser’s work more efficient? What other benefits does it offer?
- Explain how using a single buyer to make purchases for all a company’s outlets can serve as a competitive advantage.

Essential Skills: Conducting a Make-or-Buy Analysis

Encourage students to discuss the following:

- Why is it important for chefs and buyers to understand labor costs when determining whether to make or buy an item?
- In what ways could a chef’s aspirations or goals affect the make-or-buy analysis?
- What tools might a chef use when conducting a make-or-buy analysis?
Essential Skills: Conducting a Make-or-Buy Analysis (cont.)

Encourage students to discuss the following:

- How might the make-or-buy analysis yield different results, depending on which employee is making the product?
- Why does the frequency at which the item would need to be purchased or made play a role in the make-or-buy analysis?
- Is it better to purchase a ready-made product or to train employees to make the product more efficiently? Why?

Homework Activity: Make vs. Buy

Literacy Connection, 21st-Century Skills—Use Systems Thinking, Communicate Clearly, Information Literacy, Create Media Products, Work Independently

Consider the process of conducting a make-or-buy analysis. What are the critical steps in this process?

Develop a flow chart of the make-or-buy process, demonstrating the steps you have identified.

Summary

In this section, you learned the following:

- Quality standards refer to the value or worth that customers place on a product or service. Establishing solid quality standard specifications helps an operation to create consistency. Successful operations select the best products early on by determining the quality standards for every product purchased and used at the operation. Putting together quality standards is a complex process. Managers and buyers usually work together to create them, along with input from vendors and other employees. The following are some of the factors to consider when establishing quality standards: item's intended use, operation's concept and goals, the menu, employee skill level, budgetary constraints, customers' wants and needs, seasonal availability, and storage capacity.

- Product specifications describe the requirements for a particular product or service that an operation wants to buy. They include the details that help a product or service to meet the operation's quality standards. Buyers should always document product specifications. Smaller operations may use informal specifications that include only a few details. Specifications in larger companies are usually formal and precise. It's also important to remember to purchase products from approved, reputable suppliers.

- Buyers conduct a make-or-buy analysis to decide if an operation should make an item from scratch or buy a ready-made version. This analysis helps to balance how much food a kitchen produces with the quality standards of the operation. There are advantages to buying a ready-made product, such as consistency, reduced prep time and labor costs, and reduced needs for certain types of equipment and storage space. But ready-made products cost more money than items that must be prepared, and such items may
Summary

- Remind students to review the following:
  1. Determining quality standards
  2. Writing product specifications
  3. Ordering and ordering forms
  4. The factors that impact food prices
Section 5.2
Review Questions

1. Product specifications are based on quality standards.

2. Advantages to purchasing ready-made food include consistency, reducing prep time and labor costs, and reducing or eliminating certain pieces of equipment or storage space. Disadvantages include increased food cost, less nutritional or tasty food, and limits on specializing in particular dishes.

3. Three tools used in making purchasing decisions are production sheets, daily food cost sheets, and sales mix records. Production sheets provide predicted and actual sales information for each service period and can help identify stockouts and overproduction. Daily food cost sheets record actual food costs, allowing for comparisons and helping to eliminate waste or theft. Sales mix records help determine and track the popularity of each menu item.

4. Factors that influence food pricing include time, form, place, transportation, service, political issues, and weather.

5. Students should explain how this statement affects purchasing and supplier relations.

6. Students should use the factors that influence food prices to determine logical methods by which Kabob can cut its food costs.

7. Student responses should focus on the quality that the particular operation demands.

8. Student responses may vary but should clearly and logically address how they would obtain ideal prices when purchasing produce, using the five primary factors affecting food prices (omitting political issues and weather).
Section 5.2 Activities

1. Students should research meat substitutes, such as gluten or seitan products, and how they are commonly used in recipes. They should develop appropriate product specifications for each ingredient in the recipe they select.

2. Students do not actually need to make each item on their menu to conduct the make-or-buy analysis. They should use their best judgment of their employees’ skills and their customer base to determine which ingredients to make and which to purchase.

3. Students should refer to the list of items to include in a purchase order, as shown on pp. 317–318.
Section 5.3
Managing Purchases

Introduce the Section
a. Review the correct processes for receiving and storing goods.
b. Describe common methods for taking inventory.
c. Discuss the objectives for the section.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
• Encourage students to share examples of incidents involving poor receiving or storage practices.

Reinforce and Review
• Making smart purchases is critical, but proper receiving, storage, and inventory practices are equally important.
• Failing to manage purchases appropriately can cause a restaurant or foodservice operation to close.

Teaching Tips
• Relate the material covered in this section to the content of Chapter 3.
Discuss
• What staff members should be trained to receive deliveries? Why?
• Why is it important to check the delivered goods against both the invoice and the original purchase order?

Reinforce and Review
• The first step in establishing good receiving procedures is to make sure that only employees who have been trained in proper receiving do the job.
• Any savings generated by careful purchasing can be erased if an operation’s receiving and storage practices are sloppy or inconsistent.
• Successful operations establish receiving procedures and strictly follow them before accepting any product.
• Written invoices should accompany all deliveries.
• When receiving items, staff members should use the original purchase order, the supplier’s invoice, and the product specifications to ensure that only the correct items are received.

Vocabulary Terms
• Receiving: Inspecting, accepting, and sometimes rejecting deliveries of goods and services.
• Invoice: The supplier’s bill listing the exact goods delivered by the supplier.

Figure Focus
Figure 5.15: Staff members responsible for receiving goods must check the contents of each package to be sure that the proper items have arrived in the desired condition.
Chapter 5 | Purchasing and Inventory

Discuss
• Is it a good idea to provide a receiving area away from kitchen workspace, to limit dirt, infestation, and other concerns, or would that prevent the timely storing of food?
• Under what circumstances should deliveries be refused due to food safety issues?

Reinforce and Review
• Guidelines for good receiving include planning ahead, inspecting and storing each delivery before receiving the next, inspecting deliveries immediately, recording deliveries on receiving sheets, correcting all mistakes immediately, storing products as quickly as possible, and maintaining the receiving area.
• All deliveries must be checked thoroughly to ensure that the appropriate food arrives in the appropriate condition.
• Products that are damaged, at the wrong temperature, or of the wrong quality should be rejected immediately.
• Receivers have the right to refuse any deliveries that do not meet the operation's quality standards.
• To reject an item, set it aside, tell the delivery person exactly why the item is being refused, get a signed adjustment or credit memo from the delivery person, and log the incident on the supplier’s invoice.

Teaching Tips
• Relate this to the material in Level 1, Chapter 2.

Figure Focus
Figure 5.16: Receiving sheets provide a record of deliveries and when they arrive.
Discuss

• What are terms of service? How do they help protect both purchasers and suppliers?

Reinforce and Review

• The purchaser must identify the terms of service with the supplier before placing an initial order.
• The buyer must keep track of the supplier’s behavior to ensure that the operation is receiving the appropriate level of service.
• Buyers should always insist on good service from suppliers and should speak up when problems arise.

Fast Fact: Did You Know . . . ?

Encourage students to discuss the following:

• How can proper receiving and storage practices help prevent the spread of foodborne illness?
• What role can purchasing play in preventing the spread of foodborne illness?
• What effects can foodborne illnesses have on restaurant and foodservice operations implicated in an outbreak?

Vocabulary Terms

• Credit memo: A written record that ensures that the vendor will credit the operation for the rejected item.

Figure Focus

Figure 5.17: What are some health hazards associated with moldy strawberries and water-damaged flour?
ServSafe Connection: Receiving: Rules and Guidelines

Encourage students to discuss the following:

- Why should frozen items be rejected if they demonstrate signs of having thawed and refrozen?
- Why is it important to check the temperature of packaged food?
- Why should nonfood items with dirty wrappers be rejected?

Discuss

- What are some storage limitations in the classroom kitchen? How might they affect purchasing decisions?
- What common techniques for preventing time-temperature abuse or cross-contamination are appropriate in the classroom kitchen?
- What tools can help purchasers use the JIT format most effectively?

Reinforce and Review

- Proper storage management requires good planning and begins with an understanding of what needs to go where.
- Health requirements for storing food items are very exact, and cleanliness is essential at all times.
- Perishable items can readily be damaged by bacteria, light, or air, and they are time-sensitive. As a result, they are typically purchased more frequently than nonperishable items.
- Ordering goods with a JIT goal requires the buyer to predict as accurately as possible the point at which a new delivery of each good will be required.

Teaching Tips

- Make sure students understand the possible hazards of the JIT format as well as its benefits.

Vocabulary Terms

- **Perishable products**: Food products sold or distributed in a form that will spoil or decay within a limited period of time.
- **“Just in time” (JIT) format**: Products should be ordered so that their delivery will coincide with the point at which most of the previous delivery will have been used.
Discuss

- Why are nonperishable items generally purchased in bulk?

Reinforce and Review

- To use the JIT format, buyers must keep very good records and make accurate predictions, so that operations almost run out of food instead of actually running out of food.
- Buyers generally purchase nonperishable items in large quantities and with less frequency than they do perishable foods.
- Most operations have refrigerated storage, frozen storage, and dry storage on site.
- Refrigerated storage space should always maintain appropriate temperatures and should be checked regularly.
- All refrigerated devices must be maintained regularly; Ensuring proper air flow is critical to efficiency.
- All refrigerated foods should be properly wrapped or covered to prevent cross-contamination.

Teaching Tips

- Review with students the proper procedure for calibrating a thermometer.

Vocabulary Terms

- **Nonperishable products**: Items that do not readily support the growth of bacteria, generally due to their packaging or processing.
- **Refrigerated storage**: Storage areas for perishable food items, kept at 41°F or below.
- **Frozen storage**: Storage areas for frozen items.
- **Dry storage**: Storage areas for nonperishable items, such as dry and canned foods.
Table 5.5: Food Storage Temperatures and Humidity Levels

<table>
<thead>
<tr>
<th>Item</th>
<th>Temperature</th>
<th>Humidity Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat and poultry</td>
<td>41°F or lower</td>
<td>75% to 85%</td>
</tr>
<tr>
<td>Fish</td>
<td>41°F or lower</td>
<td>75% to 85%</td>
</tr>
<tr>
<td>Live shellfish</td>
<td>41°F</td>
<td>75% to 85%</td>
</tr>
<tr>
<td>Eggs in shell</td>
<td>41°F or lower</td>
<td>75% to 85%</td>
</tr>
<tr>
<td>Dairy products</td>
<td>41°F or lower</td>
<td>75% to 85%</td>
</tr>
<tr>
<td>Most fruits and vegetables</td>
<td>41°F or lower</td>
<td>65% to 95%</td>
</tr>
</tbody>
</table>

- Why do most fruit and vegetables require a higher humidity level than most animal proteins?
- How can live, unshucked shellfish and shell eggs tolerate warmer temperatures than the other items in this table?
- Why should live shellfish not be stored below an air temperature of 45°F? What is the best way to maintain their quality?

Discuss

- Why might some foods deteriorate in the freezer, especially if stored over a long period of time?
- What are the only safe ways to thaw frozen foods?

Reinforce and Review

- Freezer temperatures should be checked regularly to maintain consistently frozen products.
- If necessary, freezers should be defrosted regularly to maintain efficiency.
- Carefully label all foods prepared in-house before freezing.

Homework Activity: Home Storage

Science Connection, Literacy Connection, 21st-Century Skills—Use Systems Thinking, Communicate Clearly, Information Literacy, Work Independently

Evaluate your household refrigerator, based on the guidelines for professionally maintained refrigerated storage. For instance, at what temperature is it kept? Are the shelves overloaded, or can cool air circulate freely? Are open shelves used? How might these conditions affect the quality of the food stored there? Discuss your answers in a brief report.
Discuss
- What are some other steps that restaurant and foodservice operators can take to prevent pest infestation?
- Why is it important to maintain proper air circulation in all storage areas?

Reinforce and Review
- Dry-storage areas should be kept clean and dry, with the temperature maintained between 50°F and 70°F and proper ventilation.
- Food should be stored in containers that are clean, durable, leakproof, sealable, and airtight.
- All storage areas should be cleaned daily.
- Proper steps should be taken to prevent infestation by pests and vermin, with professional pest control scheduled regularly.
- Different areas of a cooler have different levels of humidity.

Teaching Tips
- Review the material covered in Level 1, Chapter 2 on proper food storage.

Homework Activity: Pest Prevention
Science Connection, Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Information Literacy, Work Independently
Identify one pest that is associated with the restaurant and foodservice industry. Describe its habits, its habitats, and why it poses a threat to food safety. Discuss your findings in a one-page report.

Vocabulary Terms
- Staples: Items for which demand is constant.
- Vermin: Small, disease-carrying animals that are difficult to control.
- Humidity: The amount of water moisture in the air or in a contained space, such as within a refrigerator.
Figure Focus

Figure 5.18: Proper storage of perishable items is essential to controlling costs.

ServSafe Connection: Preventing Spoilage and Cross-Contamination

Encourage students to discuss the following:

- How does training employees in proper storage techniques help restaurant and food-service operations save money?
- In what ways can outbreaks of foodborne illness cost restaurants money?
- Why is it acceptable to store ground meat and ground fish on the same shelf?

Discuss

- What are some ways a restaurant or foodservice operation can keep from having excessive inventory?
- How can having too little inventory increase an operation’s costs?

Reinforce and Review

- Ideally, a restaurant or foodservice operation will have on hand only those goods it needs to meet guest demands.
- Having too little inventory means guests might not receive the items they would like to have.
- Having too much inventory means that food could spoil before use and storage costs will increase.
- The two common methods for purchasing nonperishable food are the physical inventory method and the perpetual inventory method.

Teaching Tips

- Remind students of the earlier discussion of par stock and reorder points.

Vocabulary Terms

- Inventory: A record of all products an operation has in storage and in the kitchen.
Discuss
- How does the FIFO system of stock rotation help to control an operation’s costs?
- Should all restaurant and foodservice operations follow formal issuing procedures? Why or why not?

Reinforce and Review
- A physical inventory is an actual count of all items in stock, whereas a perpetual inventory is an estimate of stock on hand.
- Formal issuing procedures record all items when they are removed from the dry-storage area for use in the kitchen.
- Formal issuing procedures both keep accurate inventory records and reduce pilfering.
- Pilfering is both a serious problem and a serious offense; it typically results in termination of employment and could end in conviction for theft.

Teaching Tips
- Reiterate the gravity of pilfering. Relate it to the earlier discussion of integrity.

Homework Activity: Requisition Forms
Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Create Media Products, Work Independently
Create your own version of a product requisition form, including all information that you think a restaurant or foodservice operation might typically include.

Vocabulary Terms
- Physical inventory method: The entire stock is physically reviewed on a regular basis.
- Perpetual inventory method: Employees record items when they are received and when they are used.
- Issuing: The official procedures employees use when taking an item out of the dry-storage area and putting it into production.
- Pilfering: Stealing; the illegal removal of inventory items for personal use.

Figure Focus
Figure 5.19: What might have caused the variance in canned crushed tomatoes?
**Discuss**

- Why should all restaurant and foodservice operations, regardless of size or style, determine and follow good practices for inventory control?

**Reinforce and Review**

- Using an inventory system helps a buyer calculate product usage, food cost, and losses.
- Tracking the amount of product used during a given period of time helps the buyer determine when and how much of an item to order.
- Calculating an item’s usage requires knowing both the opening and closing inventories.

**Teaching Tips**

- Relate the information in this section to the material in Chapter 3.

---

**In-Class Activity: Pilfer Problems**

<table>
<thead>
<tr>
<th>Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Work Independently</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discuss the relationship between pilfering and professionalism. Under what circumstances is it acceptable to pilfer? Why? Have the class discuss these issues.</td>
</tr>
</tbody>
</table>

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**Homework Activity: Do You Have Issues?**

<table>
<thead>
<tr>
<th>Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Create Media Products, Work Independently, Interact Effectively with Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a document that you think would help a restaurant or foodservice operation keep better track of the goods it issues. Include any information that you think would help the business cut costs while reducing waste and pilferage.</td>
</tr>
<tr>
<td>In class, compare the document you have created with those from the rest of the class and discuss what features all agree are important.</td>
</tr>
</tbody>
</table>
Discuss

• If a restaurant operates at a gross profit, does that mean that it is a success? Why or why not?
• Explain the importance of formal issuing procedures to the accurate calculation of potential losses.

Reinforce and Review

• Buyers calculate the total cost of food for the restaurant or foodservice operation the same way they calculate usage, only instead of looking at single items, they look at the operation’s entire inventory.
• The food cost for a given period is determined by dividing the percentage of food by the food sales.
• If sales of food for a given period are less than the cost of food sold, the operation is operating at a loss.
• If sales of food for a given period are greater than the cost of food sold, the operation is operating at a gross profit.
• Managers determine the value of goods issued by auditing the issuing records; if the total cost of food is more than the total cost of food issued, inventory shrinkage has occurred.

Teaching Tips

• Relate this material to the discussion in Chapter 3.
• Encourage students to practice their math skills by calculating food costs, usage, and loss.

Vocabulary Terms

• Gross profit: Total sales minus the total cost of sales.
• Inventory shrinkage: The difference between the total cost of food and the cost of goods issued during a given period.
Discuss

- What procedures could restaurant and foodservice operations establish that would help account for inventory shrinkage?
- Why does inventory shrinkage occur?
- What is the relationship between inventory shrinkage and controlling costs?

Reinforce and Review

- Managers must determine the reasons for inventory shrinkage.

<table>
<thead>
<tr>
<th>Table 5.6: Summarizing the Ten Steps of Purchasing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Begin the purchasing process:</td>
</tr>
<tr>
<td>- Review or plan all menus.</td>
</tr>
<tr>
<td>- Determine the quality and quantity needed to produce menus.</td>
</tr>
<tr>
<td>- Determine purchase amounts needed to maintain par stock levels.</td>
</tr>
<tr>
<td>- Review, approve, or write specifications.</td>
</tr>
<tr>
<td>2. Check inventory records to determine supplies on hand and supplies that need to be reordered.</td>
</tr>
<tr>
<td>3. Request written price bids or verbal quotes from suppliers.</td>
</tr>
<tr>
<td>4. Select the supplier based on three factors:</td>
</tr>
<tr>
<td>- Supplier service.</td>
</tr>
<tr>
<td>- Optimal price.</td>
</tr>
<tr>
<td>- Product quality.</td>
</tr>
<tr>
<td>5. Prepare purchase order(s) and place the order(s).</td>
</tr>
<tr>
<td>6. Use proper receiving procedures when an order is delivered:</td>
</tr>
<tr>
<td>- Review the invoice to check quantity, quality, and price of items delivered.</td>
</tr>
<tr>
<td>- Accept delivery and sign or initial the invoice, or reject items and get a request for a credit memo.</td>
</tr>
<tr>
<td>- Record each item in the receiving log. Can be preventative. Remember to store indexed tags in case of a foodborne illness.</td>
</tr>
<tr>
<td>7. Store items properly, observing all sanitation guidelines.</td>
</tr>
<tr>
<td>8. Store items properly, using the FIFO principle for stock rotation.</td>
</tr>
<tr>
<td>9. Have employees fill out requisition forms as they need supplies.</td>
</tr>
<tr>
<td>10. Following par stock guidelines, reorder supplies and begin the process again.</td>
</tr>
</tbody>
</table>

- How does the purchasing process help to determine the success or failure of a restaurant or foodservice operation?
- Is purchasing a full-time job? Why or why not? How can employing a buyer function as a competitive advantage?
- Why is so much documentation required by the purchasing process? Is it realistic to expect that all restaurant and foodservice operations will follow all these guidelines? Why or why not?
On the Job: Preventing Pilfering Before It Starts

Encourage students to discuss the following:

• Explain how a positive work environment can reduce pilfering, referring to Level 1, Chapters 7 and 8 as needed.
• What are some other reasons employees might pilfer? How can these be handled proactively?
• When employees notice other employees pilfering, what actions should they take? Why?

Essential Skills: Formal Issuing Procedures

Encourage students to discuss the following:

• In a busy operation, should there be a single employee who gathers requisitioned items? What are the advantages and disadvantages of this policy?
• How can managers keep emergency requisitions from becoming everyday affairs?
• What problems can arise if managers and employees do not follow established issuing procedures? How can this affect an operation’s costs?

Homework Activity: Issues

Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Work Independently

What formal issuing procedures would you establish for your operation? Why are these steps appropriate for your business model?

Discuss your conclusions in a one-page report.
Summary

Remind students to review the following:
1. Receiving orders
2. Storing orders
3. Taking inventory
goods. Nonperishable food is generally purchased in large quantities and less often than perishable food.

- Food should be stored according to whether it's perishable or nonperishable. There are three types of storage available in most foodservice establishments: refrigeration, freezer, and dry storage. Other guidelines for storage include the following:
  - Store food in containers intended for food.
  - Create proper air circulation around goods by keeping shelves about six inches from the floor, ceiling, and walls.
  - Keep food stored far away from soaps, pesticides, chemicals, etc.
  - Try to purchase staples (items for which the demand is constant) in airtight containers.
  - Transfer items purchased in an opened container into airtight containers to protect them against insects and vermin.
  - Use strong shelving for all nonperishables.
  - Clean and sweep storage areas daily to eliminate spoiled food and to discourage insects and vermin.
  - Have a professional pest control operator come in and spray regularly.
  - Store perishable food, such as meat and produce, at its proper temperature and humidity level.

- An inventory is a record of all products an operation has in storage and in the kitchen. Ideally, a foodservice operation will have only the needed amounts of food and nonfood items it needs to meet customer demand. Having too little inventory means customers don't get what they want. Having too much inventory means food spoils and storage costs go up. The two most common methods for purchasing nonperishable food are the physical inventory method and the perpetual inventory method. In the physical inventory method, the entire stock is physically reviewed on a regular basis. From this review, the operation determines the reorder point for each inventory item. The perpetual inventory method is the recording of items when received and again when issued.
Section 5.3
Review Questions

1. Receivers check invoices against purchasing orders to ensure that the quantity and cost of the purchased goods have not changed.

2. Perishable items are food products sold or distributed in a form that will spoil or decay within a limited period of time, so they typically must be stored under refrigeration or frozen. Non-perishable items are items that do not readily support bacterial growth, usually as a result of processing or packaging; they are typically stored in dry-storage areas.

3. Students should select any of the three guidelines for refrigerated, frozen, or dry storage and explain why each guideline is important.

4. The physical inventory method counts actual items that the establishment possesses, whereas the perpetual inventory estimates the items that the establishment possesses.

5. Students should identify ways in which full-service suppliers can assist their customers.

6. Students should clearly identify appropriate guidelines for the receiving process.

7. Student responses will vary but should clearly explain why they have selected these particular receiving guidelines.

8. Students should rely on good communication skills but should also identify ways in which they could obtain acceptable products quickly to avoid interruptions in service.
Section 5.3 Activities

1. Students should develop a clear and logical flow chart describing the purchasing process.

2. Students should clearly explain how each category of people is affected by pilfering.

3. Students should identify factors that could produce inventory shortages, including excessive waste, poor forecasting, incorrect ordering, and pilferage. Their policies should directly address the causes they identified.
Case Study Follow-Up

1. Students should defend their positions in a clear, reasoned manner.

2. Students should identify one step in the purchasing process and explain how focusing on it can help Kabob lower its costs.

3. Students should select three aspects of purchasing and explain why some restaurants might neglect them.
Apply Your Learning

Make or Buy Caesar Dressing?

Students should accurately calculate the total cost of making the dressing, including labor cost. They should identify which product is financially a better deal as well as explain why they would choose one dressing over the other.
2008 Food Shortages
Students should identify and research a food that was expected to be in short supply, explaining what happened in 2008 and describing current supplies and prices.

The Science of Rejection
Students should select a reason to reject a damaged food item and describe why it is valid, both in terms of food safety and of physical changes to the product.

Finding Time in the Day
Students should write one paragraph on chefs and one on managers, both identifying ways in which these individuals can make time to develop standards and write specifications.
Exam Prep Answers

1. D
2. B
3. A
4. A
5. A
6. A
7. C
8. D
9. B
10. A
The temperature of the dry-storage area should be between:
A. 40°F and 60°F.
B. 50°F and 70°F.
C. 60°F and 80°F.
D. 70°F and 90°F.

The official procedures employees use when taking an item out of the storeroom and putting it into production is called:
A. issuing.
B. receiving.
C. invoicing.
D. expediting.
Chapter 6 Overview
This chapter covers meat, poultry, and seafood.

Section 1: This section covers the grades and cuts of meat, as well as purchasing, storing, and cooking meat.

Section 2: This section covers the grades and forms of poultry, as well as purchasing, fabricating, storing, and cooking poultry.

Section 3: This section covers seafood inspection and the grades and forms of seafood, as well as purchasing, fabricating, storing, and cooking seafood.

Section 4: This section covers the definitions of charcuterie and garde manger as well as the types of charcuterie.

Advance Preparation

<table>
<thead>
<tr>
<th>Review</th>
<th>Sections 6.1–6.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact</td>
<td>Computer lab</td>
</tr>
<tr>
<td></td>
<td>Contact library</td>
</tr>
<tr>
<td>Prepare</td>
<td>Paper (large, like butcher paper)</td>
</tr>
<tr>
<td></td>
<td>Egg white</td>
</tr>
<tr>
<td></td>
<td>White fish</td>
</tr>
<tr>
<td></td>
<td>Lime juice</td>
</tr>
<tr>
<td></td>
<td>One or more whole chickens</td>
</tr>
<tr>
<td></td>
<td>Cards or card stock</td>
</tr>
<tr>
<td></td>
<td>Pictures of foods,</td>
</tr>
<tr>
<td></td>
<td>Cooking equipment (if needed)</td>
</tr>
</tbody>
</table>

ServSafe Connection

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CUSTOMIZED INSTRUCTION OPTIONS

<table>
<thead>
<tr>
<th>Less Advanced Students</th>
<th>More Advanced Students</th>
<th>ESOL Students</th>
<th>Special Needs Students</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Pages 361, 411</td>
<td>Pages 361, 411</td>
<td>Pages 361, 411</td>
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</tbody>
</table>

CHAPTER TOOLS

<table>
<thead>
<tr>
<th>21st-Century Skills</th>
<th>Mathematics</th>
<th>Science</th>
<th>Literacy</th>
</tr>
</thead>
</table>
Case Study
Let’s Be Different

Miguel and Chef Kate of Kabob are worried about the number of restaurants that have been opening in their area lately. Many offer similar menu items to Kabob, and these new establishments seem to have more start-up money for marketing and advertising. In short, Miguel and Chef Kate are worried that the new competition will take away their customers if they don’t find a way to differentiate themselves.

One suggestion is to become a specialty restaurant, focusing on one particular protein—meat, poultry, or seafood. Miguel finds the higher menu prices that come with high-quality meat or seafood very appealing. But Chef Kate is worried about storage space and high initial purchasing costs, so she likes the idea of specializing in poultry. Miguel, on the other hand, doesn’t feel that poultry carries the same status or profitability. He worries this focus will not help them stand out enough to accomplish their goals.

As you read this chapter, think about the following questions:
1. In what ways do you feel Miguel is right?
2. In what ways do you side with Chef Kate?
3. Do you think this is a good idea or a bad idea? Why?
4. How would you help these two resolve this issue?

• The protein foods are often the most expensive part of the menu.
• This aspect of a restaurant requires serious consideration.
• The students should discuss and formulate a preliminary opinion upon first reading the case study.
• Encourage the students to write down their first ideas.
• After they have read the chapter, have them compare their first opinion to their current one.
• Do the students have an idea of how these two could resolve their feelings?
• Note that there are follow-up questions about the case study at the end of the chapter.
• This activity could be done in groups, as a class, or as a homework assignment.
Professional Profile

Discuss  How could a restaurant owner have the time to circulate the floor and chat with guests?

Reinforce and Review  Ask the students, “Would this be a priority for you in your restaurant?”

Teaching Tips  Talk to students about the importance of arranging their busy schedules for this. How does that concept apply to their current learning?
Charleen Obal thinks that, in any endeavor, you begin by selling yourself. "If your customers trust and believe in you, all the rest is easy."

What do students think about this philosophy?

### Reinforce and Review
Review the versatility of these products—meat, poultry, and seafood.

### Teaching Tips
Perhaps some research into shrimp and grits would help the students be familiar with this dish. It's a low-country Southern dish. This cuisine will be introduced in Chapter 10.
Focus and Engage

Discuss
- Cuts of meat, pieces of poultry, and seafood are often the focal point of a meal.
- What do meat, poultry, and seafood have in common?
- They are all significant protein sources.
- They are referred to simply as “protein” in the professional kitchen.
- They are not referred to that way by nutritionists, but that doesn’t make it wrong; it just signifies two different nomenclatures.

Section 6.1
Meat

Introduce the Section
a. It helps to be educated about how to purchase meat.
b. Meat comes in various grades and cuts.
c. Each cut and type of meat has recommended cooking methods.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Reinforce and Review
- Meat grades are determined by the USDA standards.
- Inspection stamps are only awarded to safe, wholesome meat.
- The grades help determine the quality of the tenderness and flavor.
- Cooking methods are often suggested by the grade as well.

Vocabulary Terms
- Meat: Muscle flesh of edible mammals.

Figure Focus
Figure 6.1: Look for this stamp for meat sold in the United States.
Teaching Tips

- Have a cut of meat or label with an inspection stamp and a grade stamp on it for the students to see.
- Help students understand the concept of “yield” and how it impacts pricing and portioning.

Table 6.1: Quality Grades for Beef, Lamb, and Veal

- The various grades only indicate uses and cooking methods.
- All inspected meat is safe to use.

Vocabulary Terms

- Graded: Evaluation of meat against established standards.
- Quality grades: The standards for flavor and texture of meat.
- Yield grades: The amount of edible meat after trimming.
Table 6.1 (cont.)

- There is a reason why canned meat does not have the same quality as fresh, select cuts, but it is still safe and nutritious.

What’s New: Lower-Fat Pork

Pork can be a nice alternative to other low-fat proteins.

Teaching Tips

- For this chapter, you should find out if any of the students keep kosher or are religiously vegetarian.
- This could be a difficult section, and consulting with parents might be helpful.

Figure Focus

Figure 6.2: You can often visually see the difference between cuts of meat.
Cuts of Meat

Before a chef can determine the right cooking method for a cut of meat, he or she needs to understand the various cuts of meat, the physical composition of the muscle tissue, and how it is affected by heat. Muscle tissue consists of about 75 percent water, 20 percent protein, and 5 percent fat and is made up of a network of muscle fibers bound together in bundles. Each of the fibers is surrounded by connective tissue. The amount of connective tissue in a muscle increases as the animal ages and with the amount the animal is exercised. This tissue makes the meat tougher but also more flavorful.

Cuts of meat taken from the shoulder and flanks are examples of cuts that have a lot of connective tissue. Figure 6.3 shows a cut of meat that tends to be tougher. The two types of connective tissue are collagen and elastin. Collagen breaks down during long, slow, moist-heat cooking. Elastin connects the meat to the bone and will not break down during cooking; trim it away by hand before cooking.

Figure 6.3: Tough connective tissue is cut from meat using a sharp knife.

The tenderest cuts of meat come from those muscle groups that receive the least amount of exercise. These cuts also have more marbling, or fat, which builds up between the muscle fibers. Tenderloins and roasts from the sirloin are naturally juicier because they contain more marbling. Figure 6.4 on the following page shows beef primal cuts.

**Figure Focus**

**Figure 6.3:** A good knife is essential for trimming tough tissues from cuts of meat.

---

**Reinforce and Review**

- Collagen is a type of protein molecule.
- It is found in fascia, the thin covering over a muscle.
- It is also found between muscle fiber bundles.
- Elastin is found in ligaments and tendons and is fibrous and tough.
- It is a protein molecule that is cross-linked and insoluble in water.
- Elastin is sometimes called “gristle.” It is inedible. It is not poisonous, but it is unchewable.
**Reinforce and Review**

- Cuts of meat come from various places on the carcass.
- An animal carcass has primal cuts that work well for flavor and cooking.
- The psoas major muscle is long and can be sliced into various sizes and cuts, all tender.
- The muscles that receive the most use, like the legs, are the toughest.

**In-Class Activity: Pin the Sirloin on the Bovine**

*21st-Century Skills—Use Systems Thinking*

- Make large paper cutouts of the various primal cuts of beef.
- Divide the students into two groups.
- Play a game to assemble the entire carcass.
- Each team gets a chance to put a cut on the board in the correct place.
- If they do this incorrectly, the other team has a turn.
- When the students are done, there should be a reconstructed bovine carcass model on the board.

**Vocabulary Terms**

- **Primal cuts**: The initial butchering cuts of an animal carcass.
- **Aging**: A chance for meat to overcome postmortem rigor. Muscle fibers lengthen and relax.

**Figure Focus**

*Figure 6.4*: Ask the students which cuts of meat are the most tender. A tenderloin is the psoas major muscle that resides along the back. It is tender.
Reinforce and Review

- Meat is aged under refrigeration to prevent the growth of pathogens.
- Under proper refrigeration, meat can be aged up to six weeks.
- The longer the aging process, the more flavorful the meat.
- The longer the aging process, the greater the moisture loss and shrinkage.
- If the meat shrinks, it decreases the yield, and decreased yield means increased price.
- The price for aged meat must also reflect the price of the aging facility, the refrigeration, and other expenses to prepare the meat.
- The psoas major muscle is not very large in comparison to the rest of the carcass.
- An aged piece of tenderloin, therefore, is very flavorful and quite expensive.

Vocabulary Terms

- **Fabrication**: Butchering operation, cutting primal cuts into market cuts.
- **Retail cuts**: Market cuts with established names and criteria.

Figure Focus

**Figure 6.5**: The aging and hanging process is done under refrigeration to protect the meat.

**Figure 6.6**: Primal cuts are large portions of the carcass.
Reinforce and Review

- A butterfly cut opens like a book, or like the wings of a butterfly.
- This cut can make a small, tender cut have more surface area.
- Various cuts of meat are sometimes tied together because they can fall apart during cooking.
- The connective tissue holding muscle fibers together can disconnect during cooking.
- Tying solves this problem. Use cotton string.
- Silverskin (the tough elastin connective tissue fascia of muscles of a carcass) and gristle (the tough elastin connective tissue cartilage) should be sliced off, as it is tough.

**Essential Skills: Trimming and Butterflying a Tenderloin**

A tenderloin must be properly butchered for the most profitable yield.

Vocabulary Terms

- **Butterflying**: Slicing a cut of meat crossways, not all the way through, and opening it up.
- **Medallions**: A small, bound, and cut circular fillet.

**Figure Focus**

**Figure 6.7a**: Gristle and silverskin are tough and inedible. Fat is unappealing to eat.

**Figure 6.7b**: Fat should be removed from the collar, but not marbled fat.

**Figure 6.7c**: Butterfly after the entire cut is prepared.
Figure Focus

**Figure 6.8:** Medallions are tender and make a very nice main dish.

**Figure 6.9:** These are turkey scallops, hence the name “scaloppini.”

**Figure 6.10a:** Liver can be delicious if cut and cooked properly.

**Figure 6.10b:** Sweetbreads are the thymus and pancreas from lamb or calf.

**Figure 6.10c:** Onions complement liver quite nicely.

**Discuss**
- Students might not be used to eating organ meat.
- Some students might eat them often.
- Some cultures eat various organs and tripe.
- Most students will be unfamiliar with them, and may find the idea difficult.
- Support the students by discussing this meat with sensitivity.
- Explain that organ meat is flavorful and very nutritious.

**Vocabulary Terms**
- **Noisettes:** Small round pieces of boneless meat.
- **Scallops:** Small cuts of boneless meat slightly pounded for tenderness.
- **Emincé:** Thin strips of meat.
- **Offal meat:** Organ meat from large animals.
Reinforce and Review

- Deer meat is called “venison.”
- When game meat is taken from the wild, the meat is from an active animal. Therefore, the muscles are used, and the fat content is low.
- Game meat might not be as tender as beef from a feedlot.
- Slow cooking is usually recommended.
- Game meat can have very strongly flavored offal, so be careful to taste-test before using.
- The psoas major muscle of elk, moose, and deer is more tender than the leg muscles, just as in other animals.

Trends: Home on the Range

Venison is deer. Ask if any of the students have tried deer meat.

Trends: Is This Kosher?

Kosher guidelines should be respected. Being familiar with kosher principles is important in the restaurant and foodservice industry, especially in areas with a large Jewish population.

Vocabulary Terms

- **Game meat:** Meat from undomesticated animals.

Figure Focus

**Figure 6.10d:** Steak and kidney pie, a favorite in the United Kingdom.

**Figure 6.10e:** Tripe is stomach. Menudo, a Mexican dish, is also tripe soup.

**Figure 6.10f:** Veal heart is a very useful piece of meat, and does not have as strong a flavor as liver.
**Figure Focus**

**Figure 6.11:** Many different products are kosher certified. The Hebrew alphabet K and the circle U are also commonly used to indicate that a product is kosher.

**On the Job: Butchering**

A butcher is a professional who specializes in meat. Butcher shops used to be a common feature in most towns, but now many supermarkets have full-service butchers. Ask students if they’ve ever been to a butcher shop.

**CUSTOMIZED INSTRUCTION**

**Literacy Connection, 21st Century Skills—Be Self-Directed Learners**

**More Advanced Students**

Have students create a game, puzzle, or other group activity based on the names of various cuts of meat and their descriptions. Once they have created the game, try it out!

**Less Advanced Students**

Have students invent a game called “Name That Meat.” The goal is to have names of different cuts of meat in the game, to help students learn the names.

**ESOL Students**

Compare the names of different cuts to the names used in the primary language, using words and pictures. Are the names the same? Connecting the new language to the familiar primary language can help students to learn. Students should create a translation tool that uses pictures to connect the two languages.

**Special Needs Students**

Encourage students to learn the names and spelling of various cuts of meat. Have students create—or create for them if necessary—a spelling worksheet for the names of various cuts.
Essential Skills: Tenderizing Meat
All tenderizing involves breaking down tough proteins. Cutting them works.

Reinforce and Review
- Students might realize that ground meat is tender because the pieces of muscle fiber are very short.
- A little fat helps bind ground meat together.
- Ground meat is often made from tough cuts and scraps, but it is just as nutritious as larger cuts.

Figure Focus
**Figure 6.12a:** Pounding will break connective tissues and sinuous muscle fibers.

**Figure 6.12b:** Scoring cuts shorten the fibrous strands.

**Figure 6.12c:** Grinding chops the fibers into very small pieces.
Essential Skills: Chemical Tenderizing

Enzymes and acids can break down and denature protein molecules.

Reinforce and Review

- pH is the measure of acidity.
- The lower the pH value, the more acidic a substance is.
- Water is neutral at pH 7.
- Lemon juice and lime juice are about pH 2 and will denature protein.
- Lime juice is the juice of the lime fruit.
- This is not to be confused with limewater, which does not include lime juice.
- “Lime” is another name for calcium hydroxide, an alkaline substance rather than an acid.
- Limewater is alkaline, about pH 12.
- It is used to break down corn for tortillas, a process discussed in Chapter 10.

Figure Focus

**Figure 6.13a:** All tenderizing marinades have an acid component.

**Figure 6.13b:** Lemon juice and vinegar are both about pH 3 or lower, strong enough to tenderize.

**Figure 6.13c:** Chemical tenderizers only tenderize by contact.
Essential Skills: Cooking, Stewing, or Braising

Water is the universal solvent, and heat can accelerate in dissolving tough tissues that are water soluble, as it denatures and flavorfully cooks meat.

Discuss

- What is meant by “Time is money”?
- How would this relate to serving meat at a restaurant or foodservice operation?
- Help students realize that paying personnel to prepare meat is a cost to consider when comparing the prices of various methods of butchering and purchasing.

Vocabulary Terms

- **Contribution margin**: The amount of profit actually realized by the sale of an item, after all expenses are considered.

Figure Focus

**Figure 6.14**: If moist cooking is too fast, the meat won’t tenderize as well, and won’t be as flavorful.
Reinforce and Review

- There are many cost considerations when purchasing and preparing meat.
- Meat is one of the most expensive food purchases a foodservice operation will make.
- Meat purchasing strategies—the right cuts and the right amount—have an impact on an operation’s profitability.

In-Class Activity: Denaturing Protein Demonstration

Science Connection

Protein is made of assembled amino acid molecules. These types of chemical assemblies are called polymers. If the protein is exposed to heat or acid, the amino acid polymer chains unravel. This is called denaturing, which means the nature has changed. Another word for it is cooked.

Using egg white and white fish, demonstrate denaturing of protein. Use heat in a frying pan and show the cooking process.

Next, use acid to denature protein. Lime juice is strongly acidic and will demonstrate the principle. Demonstrate the changes that occur by mixing egg white in lime juice.

Put the fish in lime juice. If the denaturing process is not visible during the class period, refrigerate it overnight and observe it during the next class meeting.

Teaching Tips

- If the students have taken biology, they have studied DNA replication and protein synthesis.
- This will build on their prior knowledge of proteins.

Vocabulary Terms

- **Marbling**: Lines of fat within the lean flesh portion of the meat.
Reinforce and Review

- Do not accept delivery or purchase of meat that is not excellent and fresh.
- Food safety is at risk if the storage temperature has ever been too high.
- Even if the meat is safe, it should be flavorful and high quality for serving guests.
- The cut should fit within the price point of the menu item for which the meat is intended.

Figure Focus

**Figure 6.16a:** Freezer burn desiccates protein fibers by crystallizing the water as it freezes.

**Figure 6.16b:** Meat should look appetizing when raw so that it will look even more so when cooked.
Figure Focus

**Figure 6.17**: Brown color is not necessarily caused by freezer burn, but the grayish color is.

**Figure 6.18**: Meat can express juices that can run into foods stored below the meat.

**Reinforce and Review**

- Freezer burn does not necessarily make meat unsafe, just unappealing.
- The water contained in the meat crystallizes and separates from the meat protein.
- Then, the water evaporates, leaving the meat “burned” and dehydrated.
- However, if meat was frozen, then thawed, and entered the temperature danger zone, then re-frozen, it can harbor pathogens.
- Thawing and refreezing can cause the water to crystallize and cause freezer burn as well.
- Properly wrapped meat that displays freezer burn might be evidence of thawing during freezing.
- Keep frozen foods solid during frozen storage.
- When thawing, keep meat under refrigeration until cooked.


**Discuss**

- Can you “ruin” a filet mignon?
- What if you boiled it?
- The meat would still be wholesome and nutritious, but it would be wasted for the uniquely flavorful and tender qualities of the cut.
- The price of the meat would not be worth the finished product.
- Some meat should be cooked using a dry method. Very hot (high BTUs) is usually the best way to cook a tender cut. The idea is to stay out of the way of the meat.

**Figure Focus**

*Figure 6.19:* Let the tender cuts “speak for themselves.”
Figure Focus

Figure 6.20: Searing is best done in the same pan a roast will be cooked in, to fully develop the flavor.

Reinforce and Review

• High heat and fast cooking maintains the moisture of the meat.
• Meats with a high fat content can add calories to the dish.
• Stir-fry meat should be in pieces small enough to cook quickly in the wok.
• Searing creates a flavorful crust that helps develop the flavor and texture of a piece of meat.

In-Class Activity: “Time Is Money” and Other Profit Considerations

Mathematics Connection, 21st-Century Skills—Manage Goals and Time

In pairs, have the students strategize the most profitable way to use an entire beef carcass.

Your restaurant has been able to purchase an entire beef carcass at a very good price of $100.

There will be 50 guests in the restaurant over the weekend.

Using the entire carcass, feed the 50 guests. Develop a strategy for maximizing the profitability of the carcass.

Which pair can generate the most income from the carcass?

They must consider meat cost, cost of other ingredients, time, and personnel.

Have students present their strategies to one another. Which pair of students made the most money from their carcass?

Vocabulary Terms

• Mirepoix: A combination of chopped aromatic vegetables added to the roasting pan during the final half-hour of roasting time to add flavor to the gravy.
**Reinforce and Review**

- Moist heat methods can use a lot of water or broth, or just a little.
- Water or broth cooking methods should enhance the flavor, not dilute it.

**Figure Focus**

**Figure 6.21**: Wok cooking is quick and hot in either oil or water.

**Figure 6.22**: Veal and pork can be delicate and prone to drying out.

**Figure 6.23**: Ham can become stringy if it dries out.
Discuss

- Is dry meat ever a good thing?
- Most ideal cooking methods are chosen to protect moisture content, tenderness, and texture.
- Barding meat or adding fat can protect delicate meat.
- Have the students ever used a dry rub for flavoring meat?
- Perhaps they have used barbeque sauce. If so, have they discovered that barbeque sauce burns during cooking?
- Barbeque sauce is not a marinade or basting sauce; it is a condiment.

Vocabulary Terms

- **Bard**: Add a layer of fat for roasting to maintain moisture.

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**Figure Focus**

**Figure 6.24**: More than one method might be the best for certain cuts.

**Figure 6.25**: Basting means bathing the meat in moisture as it cooks.
Discuss
- If you went to a restaurant and ordered a steak well done, what would you expect?
- What if it were served pink in the middle?
- What should a guest do if the meat is not cooked as he or she ordered it?
- What impact will refused or redone food have on the bottom line?
- Cooking meat orders correctly helps improve profitability.
- Always keep carryover cooking in mind when determining doneness.
- Gain experience cooking meat to be accurate.

Table 6.2: Determining Doneness
- The standards for doneness are well established. They need to be consistently understood by guests.

Vocabulary Terms
- Carryover cooking: Meat continues to cook with retained heat even after being removed from a heat source.

Note that the heat absorbed during the cooking process continues to cook the meat even after it is removed from the oven. This is called carryover cooking. The larger the item, the greater the amount of heat it retains, and the more carryover cooking takes place. For example, the temperature of a top round of beef may increase as much as 15°F degrees after being taken out of the oven. For this reason, it is a good idea to take the meat out of the oven just before it reaches the desired temperature.
Reinforce and Review

- Overcooking white meat can make it dry.
- Veal is a delicate meat that must not be overcooked.

Table 6.3: Meat Cuts and Cooking Method

- Each cut of meat has recommended, time-tested cooking methods.

Fast Fact: Did You Know . . . ?

Jus is the sauce used for a French dip sandwich.
Nutrition: Marbling
Students might find it interesting to realize that their muscles “marble,” too.

Essential Skills: Rendering Fat
Rendered fat is melted to liquid and runs out. It can then be saved separately.

Figure Focus
Figure 6.26a: Cutting away visible fat.

Figure 6.26b: Melt away the remaining fat.
Summary

- Remind students to review the following:
  1. Grades of meat
  2. Cuts of meat
  3. Purchasing and storing meat
  4. Cooking techniques for meat
  5. Determining doneness
• **Equipment:** Deciding what types of meat products to purchase is often determined by the types of equipment an operation has. Refrigeration and freezer space are also critical in determining what type of meat to purchase.

• **Vendors:** Check out the equipment, storage capabilities, labor costs, and transportation costs of competing vendors. It is important that an operation is paying for the quality of the product rather than the overhead of the vendor from which it is buying.

Before a chef can determine the right cooking method for a cut of meat, he or she must understand the physical composition of the muscle tissue and how it is affected by heat. A good cook must also be aware of the numerous flavorings that he or she can add when cooking meat. The chef’s goal while cooking meat is to maximize flavor and tenderness while minimizing the loss of moisture. Do this in a number of ways, such as by using marinades, dry rubs, and barding. The main cooking methods are moist heat, dry heat, dry heat with oil or fat, and combination cooking. Carryover cooking is the heat that continues to cook the meat even after the chef pulls it from the heat source.
Section 6.1
Review Questions

1. Prime is the highest grade available, often only to restaurants. Choice is the next grade, still excellent, and available to all foodservice and grocery store customers.

2. This is the primal cut, which is further butchered into retail cuts.

3. There are several factors that can be used. They are found on pp. 365 and 366.

4. Less tender cuts are best cooked by moist-heat cooking.

5. Ribs from the chuck primal plate are used for short ribs that are braised. They are cooked using moist heat.

6. Each student will have his or her own opinion on this. They can use the issues on pp. 365 and 366 to help determine real pricing of beef for their restaurant.

7. Let students decide why they feel the way they do. Help them to thoughtfully consider another point of view.

8. The students will each have an opinion about this. The items are on pp. 365 and 366.
Section 6.1
Activities
1. The various groups’ contributions will make a complete lesson.

2. Searing does not “seal in juices,” but it does carame-
  elize and develop flavor both on the outside of
   the meat and in the pan for flavoring the water
   or broth.

3. The students should develop an understanding of
   the material with this project.
Section 6.2
Poultry

Introduce the Section
a. Poultry is more than chicken, turkey, and game birds.
b. Poultry is graded.
c. Poultry must be handled properly for safety.
d. Poultry has recommended cooking techniques.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
- Poultry of all grades is wholesome and safe.
- Physical characteristics are considered when grading poultry.

Vocabulary Terms
- Poultry: Domesticated birds raised for food.
**Discuss**
- Ask the students, “Would you eat grade B or C poultry?” They probably already do.
- Grade A is more attractive poultry for plating.

**Reinforce and Review**
- Poultry should be thoroughly cooked until the juices run clear.
- Poultry should not be overcooked or dried out.

**Figure Focus**
**Figure 6.27:** All the grades of poultry are wholesome and safe.
Figure Focus

Figure 6.28a: White meat is from the breast, which does not carry the weight of the bird.

Figure 6.28b: Dark meat is from muscle that is used more during the bird’s life.

Reinforce and Review

- There are several types of poultry besides chicken.
- Game birds are quite popular.
- Free range poultry can have a delicious flavor.
- Ratite birds, such as emu, ostrich, and rhea, have red meat.

Trends:
Want More Chicken?

Chicken is nutritious and tends to be lower in fat than most red meat.
Reinforce and Review

- The purchasing considerations are the same for poultry as for other meat.
- Birds can be purchased whole and fabricated in house.
- Birds can also be roasted whole.
- Sometimes it is cost effective to purchase poultry already fabricated.

Vocabulary Terms

- Boning: Removing the bones.
Essential Skills:
Cutting a Whole Bird into Pieces

It might be cost effective for an establishment to fabricate whole fowl.

Figure Focus
Figures 6.29a–6.29f: Review the steps used to cut a whole bird into pieces.
Essential Skills: Fabricating Boneless Chicken Breasts

Chicken breast meat is useful in many recipes. It is often helpful to have it boneless.

Reinforce and Review

- There are standards for wholesomeness for poultry delivery.
- Refuse poultry that does not meet safety standards.

In-Class Activity: Cutting a Whole Bird into Pieces

21st-Century Skills—Produce Results

Use the instructions in the Essential Skills box to cut at least one chicken in the classroom.
Good: A demonstration by the teacher.
Better: Students, in groups, each make a cut or two on a chicken.
Best: Students each have a small chicken to fabricate.

Figure Focus

Figures 6.30a–6.30b: Review the steps taken to fabricate chicken breasts.
Teaching Tips

- FIFO might need to be reviewed with students.
- Remind the students that FIFO only works for poultry if the first in is still fresh.
- Always treat poultry as a TCS food.

### Table 6.4: Bird Types

- There are many types of birds besides chicken with many flavors.
- Ask students what types of poultry they have tasted. How were they different from the taste and texture of chicken?
Figure Focus

**Figure 6.31:** Ask students if they agree that butcher-block cutting surfaces should be banned.
What’s New: Exotic Birds

Ratites are considered exotic birds, and are eaten throughout the world.

Reinforce and Review

• Most poultry does not carry Salmonella spp. but some does.
• Handle all poultry with food safety in mind.
• Poultry should be cooked until there is no pink and the juices run clear.
• A roasting bird should smell very good and appetizing.

Vocabulary Terms

• À point: Correct cooking for poultry.
• Truss: To tie a bird’s body for cooking.
Discuss

- Make sure students understand the difference between opaque, translucent, and transparent.
- Raw chicken is translucent, whereas cooked chicken is opaque. When chicken is undercooked, there is still a translucence in the thicker parts.

Figure Focus

Figure 6.32: The beautiful roasted skin of the turkey is part of the delicacy.

Figure 6.33: Dry heat can be excellent for a stir-fry preparation.
Reinforce and Review

- Nearly any cooking technique can be successful for chicken and other poultry.
- Combination techniques are often used with poultry dishes.
- It is wise to learn tried-and-true techniques before attempting experimentation with poultry cooking.

Table 6.5: Cooking Poultry

- There are different cooking methods that work well for various types of poultry.

Vocabulary Terms

- **Opaque**: Does not allow any light to be seen through it.
- **Mole poblano**: A popular Mexican sauce.

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Figure Focus

**Figure 6.34**: Chicken can also be cooked with moist methods without losing flavor.
Essential Skills: Stuffing Poultry
Stuffing can be served as a side dish even without being cooked inside the bird.

In-Class Activity: How Do I Cook Thee? Let Me Count the Ways
Literacy Connection, 21st-Century Skills—Work Independently, Think Creatively, Reason Effectively, Communicate Clearly

Chicken is one of the most versatile of all proteins.

It can be cooked with dry heat, moist heat, pan fried, deep fried, grilled, stir fried, stewed, boiled, barbequed, scalloped, pressure-cooked, and cooked other ways as well.

Challenge students to come up with a long list of different cooking methods that will work for chicken. See if they can name ten methods. Maybe they can name twenty.

Have them write the methods down on paper and then award a point for each method named.
**Summary**

- Remind students to review the following:
  1. Grades of poultry
  2. Differences between white and dark meat
  3. Purchasing, fabricating, and storing poultry
  4. Cooking techniques for poultry

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**Figure Focus**

**Figure 6.35a:** Stuffing ingredients usually start with cubed bread.

**Figure 6.35b:** Clean the cavity and then stuff the bird.

**Figure 6.35c:** Trussing keeps the stuffing in the cavity.
In-Class Activity: Chicken Match Game

21st-Century Skills—Global Awareness

Chicken dishes are found the world over, in nearly every nonvegan cuisine. The following table lists the name of a few chicken dishes next to their countries of origin. Using this table, play a match game with the students in class, or make a worksheet. Have students try to match the chicken dish to its country of origin. Students could also name a country and try to think of a chicken dish from that country. Or they could learn the name of the dish and the country and try to locate it on a world map. There are many games to play with this information.

More information about this is given in Chapters 10 and 11. This is meant as a fun introduction rather than a definitive assignment.

<table>
<thead>
<tr>
<th>Chicken Paprikash</th>
<th>Hungary</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Tso’s chicken</td>
<td>China</td>
</tr>
<tr>
<td>Chicken cacciatore</td>
<td>Italy</td>
</tr>
<tr>
<td>Chicken enchilada</td>
<td>Mexico</td>
</tr>
<tr>
<td>Chicken Kiev</td>
<td>Russia</td>
</tr>
<tr>
<td>Chicken cordon bleu</td>
<td>United States</td>
</tr>
<tr>
<td>Chicken fajitas</td>
<td>Texas (Tex-Mex)</td>
</tr>
<tr>
<td>Chicken Marsala</td>
<td>Italy</td>
</tr>
<tr>
<td>Chicken Tandoori</td>
<td>India</td>
</tr>
<tr>
<td>Chicken sate (satay)</td>
<td>Indonesia</td>
</tr>
<tr>
<td>Chicken rice (Khao man kai)</td>
<td>Thailand</td>
</tr>
<tr>
<td>Southern fried chicken</td>
<td>United States</td>
</tr>
<tr>
<td>Chicken fricassee</td>
<td>France</td>
</tr>
<tr>
<td>Chicken soup</td>
<td>Nearly every cuisine of the world</td>
</tr>
</tbody>
</table>
Section 6.2 Review Questions

1. The grades are A, B, and C. They represent variations and quality in conformation and flesh.

2. White meat and dark meat are the two forms. White meat is lower in fat than dark meat.

3. Poultry can be fabricated in the kitchen. It only requires a knife, rather than bone-cutting saws.

4. Poultry can be cooked in a variety of ways, both dry and moist. Also, combination methods will work.

5. Each student will have different findings.

6. Poultry is versatile and can be used in many dishes. It can be cooked a variety of ways. It is moderately priced, and can be more affordable for guests. Poultry is also nutritious and can be lower in fat.

7. Students should be able to come up with 20. They might need to refer to a cookbook or do some research.

8. Each student’s opinion will be unique.
Section 6.2 Activities

1. As students practice, their trussing skills will improve and they will become faster at it.

2. Students should consider various options inspired by other cuisines; for example, turkey in Italian dishes or Asian dishes.

3. Such a menu would allow an operation to completely use the chicken they purchase.
Section 6.3
Seafood

Introduce the Section
a. Seafood is subject to strict safety and quality standards.
b. Seafood all falls into established categories.
c. Seafood should be purchased according to well-established standards.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach
Discuss
• Help the students to appreciate seafood as a menu selection.
• Are there seafood specialties from your geographic area?

Reinforce and Review
• The term “seafood” usually refers to protein foods that come from salt or fresh water sources.
• Although seafood is very popular in restaurants, there are folks who have an aversion to a “fishy” taste.
• Seafood is not regulated by the USDA, like meat and poultry are. It is monitored by the FDA.
• Processing inspections are done by the USDC.
• Sanitary handling and packing guidelines are from the NMFS.
• Clearly, fish is carefully monitored for safety and quality in the United States.
Reinforce and Review

- When seafood is evaluated for odor, it is for a strong fish smell as opposed to a sweeter, fresher ocean or lake smell.
- A spoiled or rancid smell is never acceptable.
- The flesh of fine fish is tight-grained and plump.
- If the flesh divides or appears mushy, it is not as appealing.
- The flesh should never be slimy or gooey.

Figure Focus

Figure 6.36: Grade A fish will look attractive as a featured item on a plate.
Discuss

- Informally survey students to see if they eat shellfish.
- What experience do they have with various types of shellfish?
- Are shellfish available regionally in your area?
- Do shellfish only grow in the ocean salt water?

**Table 6.6: Fat and Lean Classifications for Varieties of Fin Fish**

<table>
<thead>
<tr>
<th>Flatfish</th>
<th>Round Fish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flounder</td>
<td>Black sea bass</td>
</tr>
<tr>
<td>Halibut</td>
<td>Catfish</td>
</tr>
<tr>
<td>Sole</td>
<td>Cod</td>
</tr>
<tr>
<td>Grouper</td>
<td>Haddock</td>
</tr>
<tr>
<td>Haddock</td>
<td>Mackerel</td>
</tr>
<tr>
<td>Monkfish</td>
<td>Ocean perch</td>
</tr>
<tr>
<td>Perch</td>
<td>Pike</td>
</tr>
<tr>
<td>Pike</td>
<td>Pompano</td>
</tr>
<tr>
<td>Red snapper</td>
<td>Salmon</td>
</tr>
<tr>
<td>Shrimp</td>
<td>Shark</td>
</tr>
<tr>
<td>Striped bass</td>
<td>Sardine</td>
</tr>
<tr>
<td>Striped bass</td>
<td>Sardine</td>
</tr>
<tr>
<td>Trumpet</td>
<td>Tuna</td>
</tr>
<tr>
<td>Tuna</td>
<td>Whiting</td>
</tr>
<tr>
<td>Whiting</td>
<td>Whitefish</td>
</tr>
</tbody>
</table>

- Flat fish are lean, but the fat they do have is also health-promoting omega-3 fatty acids.

**Vocabulary Terms**

- **Fin fish**: Fish species with an internal skeleton and fins.
- **Round fish**: Fish with an eye on each side of the head and a tube-shaped body.
- **Flatfish**: Fish with both eyes on the same side of the head and a flat body.
- **Shellfish**: Fish with an outer shell and meaty flesh inside.
- **Crustaceans**: Shellfish with an exoskeleton made of chitin.
- **Mollusks**: Hard single or double shell.
- **Cephalopods**: Tentacles and an interior shell.
**Nutrition: Is Seafood Really “Brain Food”?**

The nutritional benefits of seafood would make it important to eat, even if it wasn’t delicious.

**Teaching Tips**

- Note that these are essentially the same considerations as for meat and poultry.
- The students will realize that savvy shopping considers not just price, but profitability.

---

**Purchasing, Fabricating, and Storing Seafood**

The most important step in purchasing seafood is deciding on the type and quality of seafood that is needed for particular menu items—the intended use of the seafood. If an operation does not market itself as serving fresh seafood, then it could purchase processed items. But being well-versed in all types of seafood is always ideal. Following are guidelines for purchasing fresh seafood. Many of these guidelines are similar to that of purchasing meat and poultry:

- **Market form:** Vendors can supply seafood to an operation in a number of ways. Purchase fresh seafood in the market form that best suits the operation’s needs. For example, buy some types of fish already portioned, saving preparation time and ensuring uniform dishes. On the other hand, if the kitchen staff has the skills to cut up whole fish, consider whether the operation could use the trimmings and bones.

- **Storage capabilities:** Fresh seafood is highly perishable; therefore, adequate storage facilities are a must for seafood items to ensure as long a shelf life as possible. Temperature control is particularly important since fresh fish should be received packed in ice and maintained that way in storage. Careless storage of seafood leads to poor appearance, texture, and odor, as well as food safety issues, all of which ultimately result in wasted product.

- **Vendor selection:** Considering the vast variety of seafood available, a reliable, reputable supplier is crucial. Verify that your supplier is an approved food source that has been inspected and is in compliance with all applicable laws. Doing this helps ensure that seafood is safe and of consistent good quality.
**Figure Focus**

**Figure 6.37:** Market forms of fish should be chosen for the best menu item option.

---

**Reinforce and Review**

- Fish bones are a problem for both guests and chefs.
- Choose fish market forms for the least amount of bone interference.
- Servers can become expert in boning whole round fish.
- Some canned fishes have the bones in; for example, sardines are too small to bone and salmon is canned with large bones that need to be pulled out.
- Fish bones, like other bones, are full of calcium.
- Fish canned with bones provides calcium, whereas other fish is not especially high in calcium.
- Help provide guests with graceful ways to remove and discard bones.
- Crusty bread can help guests swallow small fish bones that they might accidentally eat.
- Stomach acid will digest the fish bones.

**Vocabulary Terms**

- **Drawn:** Internal organs removed.
- **Dressed:** Internal and external structures removed.
- **Butterfly fillet:** Bone removed from flesh, open.
- **Fish fillet:** Boneless side pieces.
- **Steak:** Cut across the spine, cross-section.
Reinforce and Review

- Crustaceans should be served with the guest in mind.
- It is difficult to eat them without making a mess, but tools, bibs, and washing supplies can make it easier.
- Raw crustaceans should be purchased and cooked while alive. When they die first, they can develop toxic substances.
- Lobsters don’t “yell” when dropped in boiling water, but trapped air inside the shell can whistle and squeal.

Vocabulary Terms

- IQF (individually quick frozen): Each piece is frozen or ice glazed separately.
Reinforce and Review

- Careful fabrication of fish fillets will maintain the integrity of the delicate flesh.
- There are many varieties of menu items that can be made from fish fillets. Fried fillets include regional favorites such as fiddlers (catfish fillets) and seared Alaskan halibut; rolled fillets include stuffed salmon; Asian techniques, such as Japanese tempura, can be used for fish fillets; and Jamaican jerk-spice or Southern blackened fish begin with a fillet.
- Mollusks need very little fabrication, but require careful cleaning. The meat comes out of the mollusk whole, so trimming and cutting are not required. However, bacterial contamination is possible with mollusks so they must be handled and recorded properly.
- Abalone might need to be pounded. Abalone is a barnacle “foot” meat that is a very strong muscle. It can be thick, tough, and chewy. Pounding it tenderizes the meat.
- Lobster can become tough if overcooked, and it is far too valuable a food to risk overcooking. Careful attention should be paid to making sure it is cooked properly.
- Lobster shells can be used for the presentation. Lobster shells turn a glorious coral color as they are cooked. The entire “bug” makes an impressive display on a platter, with the claws ominously reaching toward the guest. If only the lobster tail is served, it can be loosened for the guest, but then replaced in the shell for an attractive presentation.

Vocabulary Terms

- **Goujonettes**: Finger-sized slices of fillet.
- **Paupiettes**: Thin slices of fillet wrapped around a filling.
- **Shucking**: Opening a shell, like an oyster.
Discuss
- If you were receiving a delivery of fish, what would you look for?
- How could you tell if it was good or bad?
- The eyes are a good way to identify freshness. Look for bright, clear eyes. Dull-eyed fish may be safe to eat, but they are past their prime.
- Fish is very good food, and should look and smell inviting, even when raw.
- When high-quality raw fish is cooked, the smell is appetizing.

Vocabulary Terms
- Deveining: Removing a shrimp vein along the outer edge.

Figure Focus
Figure 6.39: Have students learn to identify the criteria for fresh fish. The skin should look metallic and clean, and the fish should smell like fresh water or a little briny.
Reinforce and Review

- Help students understand that foodborne pathogens or biological toxins can be present in shellfish.
- Knowing where and when the shellfish were harvested can prevent any further problem with that batch.
- Also, if someone becomes ill, knowing the origin of the shellfish can help with treatment.
- As always, handle shellfish as a TCS food.
- Odor is a main indicator of freshness.
- Serve any cold fish or shellfish on ice beds that can drain away the water.
- Do not let fish dry out.
- For raw fish, such as sushi, only use fresh sushi-grade fish.
- Sushi fish tastes fresh and almost sweet and mild.

Figure Focus

Figure 6.40: Shellfish are tracked and identified.
**Reinforce and Review**

- Shellfish is always stored in the original container.
- The identification information should remain on the container.

**Essential Skills: Shucking Clams**

Working with bivalve shellfish can result in cut hands. It requires strength, skill, and protection for hands.

**Discuss**

- Author Ian Fleming created the character of James Bond. One of Fleming’s favorite dishes was potted shrimp.
- Potted shrimp is made of shrimp spiced with mace and cayenne pepper and set in a little clarified butter, chilled in a ramekin.
- To serve, it is inverted and unmolded, or served in the ramekin, on a plate with slices of crusty bread.
- Fleming also described this dish in his books as a favorite of James Bond.

**Figure Focus**

**Figure 6.41:** Ice beds serve a food safety function, in addition to making fish appear fresh and appealing.
Figure Focus

Figure 6.42a: Be sure to remove all sand from the outside.

Figure 6.42b: The wire mesh protects the hand from scratches and cuts.

Figure 6.42c: There is a little prying action required to open the shell.

Figure 6.43a: Start at the head, not the tail.

Figure 6.43b: On the second side, slice from tail to head.

Essential Skills: Filleting a Round Fish

Use a very sharp fillet knife to avoid using a sawing action on the meat that could damage the flesh.
**Essential Skills: Peeling and Deveining Shrimp**
Shrimp are sort of like water bugs, so remove the bug-like portions and the dark vein. Shrimp should be plump, pink, and appealing.

**Fast Fact: Did You Know . . . ?**
Lobster is quite expensive, and quite delicious. They are typically harvested from the ocean, rather than farmed, which is another factor contributing to their price.

**Figure Focus**
Figure 6.43c: When removing bones, take care not to break them.

Figure 6.43d: A sawing motion can aid in removing the skin without tearing the flesh.

Figure 6.44a: This step can make your hands sticky.

Figure 6.44b: Take care not to cut too far into the shrimp.

Figure 6.44c: Pull out the vein gently so it doesn’t break.
Reinforce and Review

- All cooking methods for fish should help retain moisture and texture.
- Fragile fish can dry out easily.
- Fish that are more sturdy and meaty can be cooked over an open flame or other dry heat.
- Very tender lean fish can be simmered gently in court bouillon or fumet.

Homework Activity: Making Protein Decisions

Mathematics Connection, Literacy Connection, 21st-Century Skills—Financial, Business, Economic and Entrepreneurial Literacy

A successful business executive for a large foods company once said, “It’s easy to make a million dollars. The trick is to not spend a million dollars doing it.”

Have students consider this statement. How might this relate to protein decisions for a restaurant?

Have students write at least two paragraphs of their thoughts and strategies for profitability, with specific consideration of the protein foods that could be featured at a restaurant.

Their writing should include real-world profitability topics, and not just general concepts about good ideas for menu items.

Vocabulary Terms

- Court bouillon: An acid and vegetable stock.
- Fumet: Fish stock.
Teaching Tips

- Students might enjoy wrapping fish in some parchment and cooking it.
- Help students realize that the delicate fish is not only protected by the parchment, but can be seasoned by steaming it with aromatics.

Vocabulary Terms

- *En papillote*: Steaming fish in a parchment wrap.
- *Bouillabaisse*: French seafood stew.

Figure Focus

**Figure 6.45:** The parchment is discarded and not eaten with the fish.

**Figure 6.46:** Jambalaya is a Cajun fish stew that is served with rice.
**Teaching Tips**

- The very best way to teach about doneness is to demonstrate it.
- Students should see a piece of fish cooked in the classroom to the proper doneness.
- Students can assess the translucency or opacity of the fish.
- Perhaps students can touch the fish before and after cooking.
- Flaking properly cooked fish can be demonstrated with a fork.

**On the Job: The Pressure-Cooking Cook**

A pressure cooker can keep chicken or fish very moist inside a crispy skin.
On the Job: The Pressure-Cooking Cook (cont.)

There are safety considerations when pressure cooking. Equipment must be properly made, used, and maintained so that it holds together.

Summary

- Remind students to review the following:
  1. Seafood inspections and grades
  2. Forms of seafood
  3. Purchasing, fabricating, and storing seafood
  4. Cooking techniques for seafood
  5. Determining doneness
In-Class Activity: Speedy Responses

21st-Century Skills—Flexibility and Adaptability

There are many ways to cook meat, poultry, sausages, and seafood. There are also inappropriate ways to cook things. For example, boiling pork loin chops would not be correct, but boiling would be appropriate for crab.

Play a quiz game. Divide the class into two teams.

There will be two types of cards, each with one word on each card.

Make a stack of cards with these cooking techniques: boil, roast, grill, broil, stew, bake, sauté, pan-fry, deep-fry, stir-fry, poach, en papillote, pressure-cook, denature with acid, braise, steam, simmer, consume raw (this would be sushi and tartare, and can be left out if you prefer).

Make another stack of cards with cuts of meat, types of poultry, seafood, and sausages. Use anything from this chapter, including items from Table 6.3, Table 6.4, Table 6.5, and Table 6.6; and other lists from the text, such as crab, shrimp, lobster, clams, scallops, crayfish, sausage, pâté, terrine, and galantine.

Place both stacks of cards face down.

Taking turns, the MC, or teacher, picks up the top card of each stack and reads them. For example: “Shrimp” and “Grill.” The student must quickly say “Yes” or “No,” indicating whether or not this cooking technique would be appropriate for this protein item. If the answer is correct, the student wins a point for his or her team, and it is the other team’s turn. If the answer is wrong, the other team gets a point, and then still gets the next turn.

This game will put students “on the spot” to answer in the heat of the moment.

CUSTOMIZED INSTRUCTION

More Advanced Students
Give the student the name of a protein. He or she must think of an appropriate cooking technique for it.

Less Advanced Students
Students can confer with team members before answering. This can be done only for a limited number of turns during the game. For example, each team can confer twice.

Special Needs Students
Depending on the disability, the student might need to see pictures of the foods and the cooking equipment. Or perhaps the student will need the support of team members to answer the questions. Adapt as needed.

ESOL Students
Include pictures of the meat cuts and the cooking equipment on the cards. Show the student the pictures while he or she reads the card as you say the word aloud.
Fish items are highly perishable and so proper storage is very important. Store fresh fish at an internal temperature of 41°F or lower. Pack fresh, whole fish in beds of flaked or crushed ice. Ice beds must be self-draining. Clean and sanitize the containers regularly. Change the ice regularly. Store frozen fish and shellfish at a temperature that will keep it frozen. Store live shellfish in its original container at an air temperature of 45°F or lower. Keep the shellstock identification tags on file for 90 days from the date the last shellfish was sold or served.

Cooking methods for seafood include dry-heat, dry-heat cooking with oil or fat, moist-heat, and combination techniques using both dry and moist-heat methods.
Section 6.3
Review Questions

1. Students should note that the USDA is not involved with seafood as it is for meat and poultry. They should also note that seafood inspection is voluntary, whereas meat inspection is mandatory. Also, there are many more agencies involved in fish regulation than in meat and poultry regulation.

2. There are fin fish and shellfish. Fin fish have the skeleton on the inside, and shellfish have it on the outside.

3. A round fish should have the guts removed and then be filleted. A mollusk should be opened and the meat removed.

4. It should be stored at or below 41°F.

5. Students might not be familiar with seafood for breakfast, but there are several examples. Kippers, lox, sardines, or even cold, whole, cooked fin fishes on ice can be used for breakfast. This is not unusual in England, Europe, Scandinavia, and Asia. Students might have other ideas as well.

6. Food safety and quality of seafood are strongly determined by the storage of the seafood. It must be adequate and appropriate.

7. Students will have opinions, but the voluntary program works well because it is a marketing tool for fish vendors. Compliance will help maintain business.

8. Students' ideas will be interesting, and could be influenced by their personal prior experiences eating seafood.
Section 6.3 Activities

1. Experience is the best teacher here, and students might discover keys to success that they can share.

2. Shellfish like shrimp, crab, and lobster are most typically involved in food allergies. Scallops can also trigger food allergies. All such ingredients or menu items should be fully disclosed on the menu. The serving staff should be aware of their presence in all dishes, even a new item or a special.

3. Local research is valuable. Fresh seafood is especially nice when it is brought to the table very soon after the catch. Local fish makes this possible.
Section 6.4
Charcuterie and Garde Manger

Introduce the Section
a. Charcuterie involves the production of mixed or smoked meat dishes.
b. Garde manger is the department that manages cold foods, not just meat.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
• There are many types of sausages and foods that can be used in sausages.
• Smoked meat is popular, and not just for breakfast.
• The meat of the charcuterie can be used for many different dishes at any meal.

Vocabulary Terms
• Charcuterie: “Cooked flesh” and meat-based foods.

Figure Focus
Figure 6.47: Ask students if they can identify the meats in the photo.
Discuss

- Ask if students are aware that sausages are made inside a thin layer of pig intestines.
- Every usable part of a hog can be made into food.
- Small scraps of meat, ground meat, fat, and spices are used in making sausage.
- What types of sausages can students name?

Fast Fact:
Did You Know . . . ?

The word “chef” means chief or military leader.

On the Job:
The Guardian of the Garde Manger

Some of the foods of this department are very artistically produced and presented.

Vocabulary Terms

- **Garde manger**: Kitchen brigade department that deals with cold foods and charcuterie.
- **Sausages**: Ground and spiced meat in a tube casing.
Discuss

- Students might not be familiar with charcuterie.
- However, many students have eaten pepperoni, bacon, and sausage.
- Discuss and describe the various meat dishes described in this section.
- If at all possible, have a sample of a forcemeat or sausage for them to taste.

Vocabulary Terms

- **Forcemeat**: A meat paste made of meat and fat.
- **Farce**: Stuffing.
- **Pâté**: A meat paste baked in a mold.
- **Terrine**: Earthenware mold.
- **Pâté de campagne**: A slightly coarse, country-style forcemeat.
- **Pâté en croûte**: Forcemeat wrapped in a dough and baked.

Figure Focus

**Figure 6.48a**: Sausage made of a meat mixture that isn’t smoked.

**Figure 6.48b**: Sausage that has been cured with smoke.

**Figure 6.48c**: Sausage that has been aged and dried.
Teaching Tips

- A vegetable mixture can also be created and used, meat-free.

Nutrition:
Benefits of Liver
Liver should be prepared very fresh to reduce graininess.

ServSafe Connection:
Food Safety Reminders for This Chapter
Be sure to follow internal temperature guidelines for cooking.

Vocabulary Terms

- **Mousseline**: A white meat forcemeat mixed with egg whites and cream.
Summary

• Remind students to review the following:
  1. Definitions of charcuterie and garde manger
  2. The types of charcuterie
Section 6.4 Review Questions

1. Charcuterie is meat mixture foods and force-meat, and includes sausage.

2. Garde manger is the kitchen brigade responsible for cold foods, buffets, and charcuterie.

3. Sausages can be fresh, smoked, or dried.

4. Country style forcemeat is not ground as fine; it is more coarse and cured.

5. Each student will have an interpretation of the professional profile.

6. Perhaps there would be an advantage to making menu items ahead of time. There could be a signature flavor or recipe for a fresh sausage that would be special.

7. The students will have their own treatments of the concept. They might mention the popularity of sausages and sausage dishes.

8. The three types are fresh sausage, smoked sausage, or dried sausage. Students answers will vary.
Section 6.4 Activities

1. The best way for students to understand these concepts is to try making and tasting them.

2. Cruise ships are famous for having fancy and elaborate food displays. Students can consider elaborate displays of carved watermelons and other fruit and vegetables, ice sculpture, beautiful fish on beds of ice, sausages, pâtés, and so on.

3. The students only need two or three circles in their Venn diagrams. Each diagram might be different because the students might choose different types of sausages.
Case Study Follow-Up

- All three questions will have answers based on the student’s opinions and feelings after studying the chapter. Each will be different.
- The results of this follow-up could make for some very interesting classroom discussions.

Case Study Follow-Up  Let's Be Different

At the beginning of the chapter, you found out that Miguel and Chef Kate were thinking about specializing in one type of protein, but they couldn’t agree on which one to specialize in.

1. After having read this chapter on meat, poultry, and seafood, which type of protein would you choose to specialize in if you had the choice? Why?

2. Do you feel that Miguel and Chef Kate are making the right decision to focus on a specialty? Why or why not?

3. Let’s say Miguel and Chef Kate approached you as an independent consultant and asked you to briefly explain the major points they should consider about each category. What would you say? Make a list highlighting the main factors they should be aware of for each.
Figuring Out Profit Margins

The profit on the chicken is $20 – $4 = $16, and the profit margin is $16 ÷ $20 = 0.8 or 80 percent. The profit margin for the chicken (80 percent) is greater than that for the lobster (50 percent). However, the lobster makes more profit ($25) than the chicken ($16).

Crayfish in Literature

Encourage the students to check literature from the Southern or Midwestern United States. However, crayfish are found in the Pacific Northwest and other regions as well.
Chapter 6 | Meat, Poultry, and Seafood

A Selling Script

Wild game birds were served at the inaugural luncheon of President Barack Obama: duck breast with cherry chutney and herb-roasted pheasant with wild rice stuffing. Abraham Lincoln also had game birds at his inauguration. Ronald Reagan had chicken breast in white wine and caper sauce. George W. Bush’s menu featured quail. Franklin D. Roosevelt served a chicken salad.

Examining Water Molecules

When water is solid it is an ordered lattice like this:

Liquid water molecules have a shape that allows them to flow freely. When they freeze, they form a rigid structure that actually has more space between the molecules than when the water is liquid. This makes ice less dense than water, so ice cubes float in water. Most solids sink in the liquid medium of the same compound, because most solids are more dense than the liquid forms.

When water temperature drops below 32°F, the ice forms and it feels very cold and is solid. The molecules still vibrate, but they do not move out of the lattice until the temperature rises above 32°F; the pressure on the ice increases, or there is friction on it. However, the incomplete lattice at the edge of the structure remains nearly liquid and slippery. Ice is slippery.

When heat is applied, the molecules start to move around. When the water molecules are boiling and releasing as steam, they move apart and fly away from each other. Steam feels very hot because it is made of little water droplets moving away from boiling water. Keep in mind, however, that these little visible water droplets in steam are not actually water vapor, but still liquid water. The molecules get further apart and become invisible as steam vaporizes.

However, as they further separate into water vapor in the air they are not necessarily hot. They can cool down until they reach the dew point and condense again. There is water vapor in the air all around us.
Exam Prep Questions

1. A
2. C
3. B
4. D
5. D
6. D
7. B
8. A
9. B
10. C
7. Live shellfish must be received on ice or at an air temperature of ________ or lower.
   A. 30°F
   B. 45°F
   C. 50°F
   D. 60°F

10. Garde manger is the department in the kitchen that is typically in charge of
    A. desserts.
    B. hot foods.
    C. cold foods.
    D. expediting food service.
Recipe

Minute Steak Dijonaise

- This recipe is cooked with dry heat with fat. A sauce is made as an accompaniment.
Recipe

Braised Chicken with Apple Cider and Cashew Butter

- This recipe uses a moist cooking process.
Recipe

Sautéed Trout Meunière

- This recipe uses dry heat with fat.
Chapter 7 Overview

Chapter 7 builds on the other management principles addressed throughout the program, explaining how to create and manage a marketing plan and conduct a market analysis. It also discusses the role of the menu in marketing a restaurant or foodservice operation.

Section 1: This section introduces students to basic marketing concepts and explains how to create a marketing plan.

Section 2: This section focuses on the specifics of marketing: analyzing markets, building an identity, and communicating that identity to the community.

Section 3: Finally, this section looks at the menu. After describing the various types of menus, it discusses how to build and analyze a menu as part of the greater marketing scheme.

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430  Chapter 7 | Marketing
**Case Study**

**Marketing 101**

- Discuss the implications of opening a second location. For instance, how can Miguel and Chef Kate be sure that the level of guest service and the quality of food will not suffer if their attention is divided between two locations?
- What are some advantages and disadvantages to opening multiple locations?
- What role does communication play in opening a new operation, both within the business and within the community it will serve?
- How can employee training and staff development help mitigate some of the worries associated with opening a new operation?
- Note that there are follow-up questions about the case study at the end of the chapter.
- This activity could be done in groups, as a class, or as a homework assignment.
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Section 7.1
Introduction to Marketing

Introduce the Section
a. Provide a general overview of the marketing function and identify specific marketing concepts.
b. Explain why a thorough marketing plan is essential to the success of a restaurant or foodservice operation.
c. Note that before a company moves forward, it must understand its strengths and weaknesses so it can capitalize on the former and minimize the damage caused by the latter.
d. Discuss the objectives for the section.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Focus and Engage

Discuss
- Why is marketing an important part of the restaurant and foodservice industry?
- How do marketing campaigns target specific demograghic groups? What examples are particularly directed toward teenagers?

Teaching Tips
- Throughout this chapter, students should consider the importance of a defined public image to the success of a restaurant or foodservice operation.
Teach

Discuss
- In what ways does marketing involve communication?
- How do you engage in marketing in your daily life?

Reinforce and Review
- For a business to profitably provide a product or service, there must first be a market for that product or service.
- Marketing and advertising are not the same thing; rather, advertising is a component of a successful marketing strategy.
- Marketing includes determining what products and services to offer, how to position them in the marketplace, how to promote them to potential buyers, how to price them so people will buy them, and how to deliver the products and services to the purchasers.

Teaching Tips
- Encourage students to share opportunities in which they have successfully or unsuccessfully marketed themselves.

Homework Activity: To Market, To Market
Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Work Independently
Consider the five parts of the marketing function. How can you use each to gain a positive outcome in your daily life? Identify a goal you wish to attain and explain how you would use each component of marketing to succeed.

Vocabulary Terms
- Market: A group of people who desire a particular product or service; also known as customers.
- Marketing: The process of communicating a business's message to its market.
Figure Focus

**Figure 7.1:** Although advertising and promotion are often the only components of marketing that consumers notice, they represent only a fraction of the overall marketing function.

Discuss
- What does it mean to say that “Marketing drives the operation”?
- Identify some advantages and disadvantages to the marketing concept approach to business.

Reinforce and Review
- Determining customer wants and needs is the first step a business must take.
- Before production can begin, management must determine the costs, prices, and profitability of the goods and services it plans to provide.
- The marketing concept puts marketing into, and sometimes in charge of, areas of the company and the product development process that used to belong exclusively to other specialties.

Teaching Tips
- Encourage students to explore ways in which a business could change, based on which department is prioritized. For instance, if the production department is in charge of the business, how might that affect the marketing department, or the sales department?

CUSTOMIZED INSTRUCTION

**Literacy Connection, 21st-Century Skills—Think Creatively, Reason Effectively, Communicate Clearly, Work Independently**

**ESOL Students**

Are there any goods and services offered in your country of origin that are less available here? Could any of these be profitably marketed in your current community? Why or why not?

Write a brief essay outlining your thoughts.
Discuss

- Identify a current marketing campaign. What are its four Ps? Do they provide all the information that potential consumers need when deciding whether to purchase the good or service? Why or why not?

- Is the contemporary marketing mix only relevant to the restaurant and foodservice industry? Why or why not?

Reinforce and Review

- All businesses need to engage in vigorous marketing activity.

- The conventional marketing mix involves the four Ps: place, product, price, and promotion.

- The contemporary marketing mix expands the four Ps to include other elements that help distinguish a product or service in an era of fierce competition.

Teaching Tips

- Relate the contemporary marketing mix to the concept of quality guest service.

Vocabulary Terms

- Marketing mix: The combination of all the factors that go into creating, developing, and selling a product.

- Contemporary marketing mix: A model of business operations that relies on the product-service mix, the presentation mix, and the communication mix.

Figure Focus

Figure 7.2: What does each photograph suggest to you about the products and services being offered?
CUSTOMIZED INSTRUCTION

Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently

More Advanced Students

A branch of philosophy known as aesthetics considers the nature and meaning of beauty; similarly, the science of aesthetics works to uncover why and how humans perceive beauty and make value-driven judgments.

Research aesthetics, from a scientific or a philosophical standpoint. Explain this concept, its origins, current trends of thought, and any other material you find relevant in a two-page report.

Discuss

- What products and services are important to you as a consumer? How do you make decisions about what to purchase and from whom to purchase it?
- What types of aesthetic appeal to you? Does your choice depend on what goods and services you intend to purchase?
- What are the most effective ways in which a restaurant or foodservice operation could communicate its message to you? Why?
- How can smaller operations stay abreast of changing market trends and thereby stay competitive with larger operations?

Reinforce and Review

- Restaurant and foodservice operations can often gain a competitive edge by offering a greater variety of services provided with better efficiency.
- Operations selling similar items at similar prices must differentiate themselves from their competitors.
- The ways in which an operation chooses to present itself are critical parts of its marketing strategy.
- Employing an effective communication mix is crucial to monitoring, maintaining, and improving an operation’s relationship with the market it serves.
- Restaurant and foodservice operations need to keep up with market trends and be aware of changing consumer needs.

Teaching Tips

- Relate this discussion to the concept of competitive advantage, as discussed in Chapter 5 and in Level 1, Chapter 10.

Vocabulary Terms

- Product-service mix: All the food and services offered to customers.
- Presentation mix: All the elements that make a restaurant appears to be unique.
- Aesthetic: The way a particular operation looks and feels to customers.
- Communication mix: All the ways an operation actively tries to communicate with its desired customers.
- Market trends: Changing consumer habits.
Discuss
- What local restaurant or foodservice operations successfully observe changing trends? Does this make these operations more or less attractive to students? Why?

Reinforce and Review
- To manage the contemporary marketing mix and stay current with changing trends, restaurant and foodservice operations need to develop marketing plans.
- The five components of the marketing plan are researching the market, establishing objectives, developing a market strategy, implementing an action plan, and evaluating and modifying the action plan as needed.

Teaching Tips
- Consider inviting a restaurant or foodservice professional who specializes in marketing to speak with the class.

Homework Activity: Trends
Literacy Connection, 21st-Century Skills—Use Systems Thinking, Communicate Clearly, Initiative and Self-Direction
Identify a particular market trend that you think is important. What promotions or menu items do local restaurant and foodservice operations offer as part of this trend?
Write a brief essay on this trend, local participation, and why you think this trend is currently popular.

CUSTOMIZED INSTRUCTION
Literacy Connection, 21st-Century Skills—Use Systems Thinking, Communicate Clearly, Work Independently
Less Advanced Students
Is it always in a restaurant or foodservice operation’s best interests to follow changing customer trends? Why or why not?
Write a brief essay defending your position.

Vocabulary Terms
- Marketing plan: A list of steps an operation must take to sell a product or service to a specific market.

Figure Focus
Figure 7.3: How does offering reserved parking for takeout customers become a competitive advantage?
Figure Focus

**Figure 7.4**: In what ways does the marketing plan model resemble the problem-solving model introduced in Level 1, Chapter 8? How are the two related?

### Discuss
- How frequently should a business conduct market research? Why?
- In what ways are an organization’s goals related to its vision and mission statements?

### Reinforce and Review
- Gathering information must always be the first step in developing a marketing plan.
- Research can not only provide information about local and regional characteristics and competitors, but can help a company determine its own strengths and weaknesses.
- Market research forms the foundation on which management will make all subsequent decisions.
- Organizational goals should clearly state what it is the operation wishes to accomplish within a set time frame.
- Both organizational goals and the timelines for achieving these goals help to shape the operation’s marketing strategy.

### Teaching Tips
- Vision statements, mission statements, and organizational goals are discussed in Level 1, Chapter 8.
Discuss

• How can the development of a market strategy be used to strengthen employee relationships and enhance career skills?

• How frequently should the action plan be modified? Should managers always respond quickly to customer feedback? Why or why not?

Reinforce and Review

• An open-ended, collaborative approach to developing a market strategy will likely result in a better exchange of ideas and allow for more creativity.

• The best strategy is often a hybrid of the various strategies proposed.

• The action plan is the way in which the market strategy is implemented and is guided by the three prior steps.

• Finally, continuous monitoring is necessary to determine the success of an operation's marketing plan and to identify ways to modify the plan to meet evolving consumer demands.

Teaching Tips

• Relate this to the discussion of customer feedback in Level 1, Chapter 10.

Essential Skills: Monitoring a Promotion Scheme

Encourage students to discuss the following:

• What are some promotions that would attract you to a particular restaurant or foodservice operation? Are these promotions that the operation could reasonably take? Why or why not?

• How are particular promotions part of the greater action plan?

• What are some reasons that a promotion might fail? How can these be avoided in future promotions?
Encourage students to discuss the following:

- Once a successful promotion has ended, how can a restaurant or foodservice operation retain the new customers it attracted?
- How can planning, executing, and evaluating promotions be built into daily management operations without sacrificing other tasks or objectives?
- What are the best ways to obtain customer feedback about the promotion? Why is this important?

Teaching Tips

- Work with the class to plan an event to highlight the achievements they have made during this course. Students should work together to develop and execute a marketing plan.

CUSTOMIZED INSTRUCTION

Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly

Special Needs Students

Have you ever received a promotional item from a local business, such as a restaurant, retail store, or sports team? What do you think the business’s motives for distributing that item were?
Fast Fact: Did You Know . . . ?

Encourage students to discuss the following:

- Why do successful operations still engage in expensive marketing campaigns? Do they advertise because they are successful, or are they successful because they advertise?
- How can restaurant and foodservice operations with small marketing budgets successfully attract customers?
- What current advertising campaigns do students perceive as successful? Why?

Discuss

- Should companies perform their own SWOT analyses or hire outside contractors? Why?
- When should a SWOT analysis be performed? How frequently should these analyses be conducted?

Reinforce and Review

- A SWOT analysis can help management better understand and respond to its current situation.
- Performing a SWOT analysis enables management and marketers to focus on the key issues affecting an operation.
- Management must be realistic about an operation’s strengths and weaknesses to respond appropriately to the changing environment.

Homework Activity: SWOT

Literacy Connection, 21st-Century Skills—Think Creatively, Make Judgments and Decisions, Communicate Clearly, Work Independently

Perform a SWOT analysis of yourself. Be realistic about each group of factors. How can this self-knowledge help you to achieve your goals?

Describe your analysis in a one-page report.

Vocabulary Terms

- **SWOT analysis**: An assessment of an operation’s strengths, weaknesses, opportunities, and threats; also known as a situation assessment.
- **Strength**: An area in which an operation excels.
Discuss

• What are some weaknesses that students have identified in restaurant and foodservice operations? How could they be eliminated?

• Suggest examples of threats that could face a restaurant or foodservice operation. What are some ways to control these threats?

Reinforce and Review

• Identifying weaknesses can help an operation eliminate them or even turn them into strengths.

• Identifying opportunities can help an operation increase its revenues or decrease its costs.

• Identifying threats can help an operation control them.

• Evaluations can help management identify appropriate areas for future investment and improvement.

Vocabulary Terms

• Weakness: An area in which an operation performs poorly.

• Opportunity: An area in which an operation could either increase revenues or decrease costs.

• Threat: An external factor that could either decrease revenues or increase costs.
Summary

- Remind students to review the following:
  1. The overview of marketing
  2. Basic marketing concepts
  3. The marketing plan
  4. SWOT
Section 7.1
Review Questions

1. The primary purpose of marketing is communicating a business’s message to its market.

2. The three primary elements of the contemporary marketing mix are the product-service mix, the presentation mix, and the communication mix.

3. The five components of a marketing plan are researching the market, establishing objectives, developing a market strategy, implementing an action plan, and evaluating or modifying the action plan as needed.

4. SWOT stands for strengths, weaknesses, opportunities, threats.

5. Tania Haigh identifies always putting the customer first as the most important aspect of marketing.

6. Student responses will vary but should be clear and logical.

7. Advertising is a component of a successful marketing strategy.

8. Student responses will vary but should clearly defend one of the three elements of the contemporary marketing mix.
Section 7.1
Activities

1. Students should develop a cohesive and coherent marketing plan for the chosen restaurant category, taking care to follow the five steps of a marketing plan.

2. Students should logically explain the advantages and disadvantages of the communication methods they select.

3. Students should use any resources available to them to determine what type of restaurant would be a successful addition to the community and to make a sound case for their opinions.
Section 7.2
Market Analysis, Identity, and Communication

Introduce the Section
a. Identify and explain the four basic methods of market research.
b. Relate the concept of market segmentation to the concept of market identity.
c. Demonstrate how businesses communicate and engage with their markets.
d. Discuss the objectives for the section.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
• How can marketing make the difference between success and failure? How is this related to competitive advantage?

Reinforce and Review
• The difference between success and failure in the restaurant and foodservice industry is often determined by how well an operation markets itself.
• To launch a successful marketing campaign, an operation must know how to conduct accurate and productive research, be able to create a market identity based on that research, and then communicate that identity through effective use of the various methods of market communication.
Discuss

- What are some advantages and disadvantages to each method of research?
- How are these research methods related to customer feedback, as discussed in Level 1, Chapter 10?
- In what situations would each method of research be most useful? Why?

Reinforce and Review

- The experimental method allows operations to test a new product in limited amounts before deciding whether or not to expand its offerings.
- The observational method lets staff members directly observe guest responses to new products.
- Questionnaires can be administered in a variety of ways, depending on the information that management requires.

Vocabulary Terms

- **Experimental method**: An operation offers a product or promotion for a limited time or with a limited group of people.
- **Observational method**: An operation observes how customers react toward a product in a natural setting.
- **Survey method**: An operation gathers information using questionnaires.

Homework Activity: Survey Success

Literacy Connection, 21st-Century Skills—Think Creatively, Use Systems Thinking, Communicate Clearly, Work Independently

Develop a survey on some restaurant- or foodservice-related topic. It should contain at least five questions, and you should administer it to at least ten people.

What information did you obtain? How can it be useful to you or to someone else? Write a short report on your findings, attaching your survey and its results.

Figure Focus

**Figure 7.7**: What are some benefits of the observational method of research?
Figure Focus

Figure 7.8: How can this survey help Kabob learn more about its customer needs? What other questions would students ask and why?

Discuss

- How does the sampling method differ from the experimental method?
- How does the sampling method resemble the observational method?

Reinforce and Review

- Incentives offered during the survey process can increase customer participation.
- The market strategy should always be guided by the research results.
- The sampling method usually involves a focus group.

Vocabulary Terms

- Sampling: The operation tests a product with a small, specific group of people.
- Focus group: A small, specific group of people on whom a particular product is tested.

In-Class Activity: Focus on Foodstuffs

Literacy Connection, 21st-Century Skills—Creativity and Innovation, Use Systems Thinking, Communication and Collaboration, Social and Cross-Cultural Skills

Working in small groups, develop an idea for a new food or beverage product and describe its characteristics. If you were to assemble a focus group to test this product, who would you enlist and why?

Prepare an oral report to describe your new product and the group you would bring together to test it.
Discuss

- Why is it important for operations to be customer-driven?
- In students’ experiences, which operations tend to be customer-driven and which do not? Why?
- Does a customer-driven model mean that the customer is always right? Why or why not?
- How is a target market different from a market segment?

Reinforce and Review

- The selection of the target market is an important element of an operation’s marketing strategy.
- Identifying a target market enables an operation to avoid mass marketing and instead focus on target marketing.
- Understanding the target market enables an operation to provide the products and services that are needed by a particular group of people and to focus its marketing resources toward that group of people.
- An operation chooses to focus on a particular market segment based on its plans.

Vocabulary Terms

- **Target market**: The people an operation intends to pursue as customers.
- **Customer driven**: An operation’s market strategy is determined by its customers’ wants and needs.
- **Mass marketing**: A marketing strategy that treats everyone in the market as having the same wants and needs.
- **Target marketing**: A marketing strategy that makes a focused appeal to a distinct group of customers.
- **Market segmentation**: The process of breaking down a large market into smaller groups of similar individuals.
- **Demographics**: The ways in which researchers categorize or group people.

Figure Focus

**Figure 7.9**: What are some disadvantages of using a focus group to test a new product?
Figure Focus

Figure 7.10: How do these market segmentations overlap?

Discuss

• Consider the discussion of stereotyping in Level 1, Chapter 8. Why is demographic segmentation acceptable, when stereotyping is not?

• How can understanding geographic segmentation help operations determine where to open new locations?

Reinforce and Review

• Market segmentation helps identify target markets.

• The four basic types of market segmentation are demographic, geographic, product usage, and lifestyle.

• Different types of people have different preferences; understanding these differences can help an operation better serve its potential customers.

Teaching Tips

• Students should understand that a given individual can be part of multiple overlapping market segments at any given time.

Homework Activity: Segmentation

Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Work Independently

Each person has thousands of characteristics that make him or her unique: Hair color, hobbies, and favorite foods are just a few of these. Many of these characteristics can be used by marketers to sell specific goods and services. They identify market segments to help them make focused appeals to specific groups of consumers and potential consumers.

Think about where you live and what you like to do. If a marketer were to look at you, what market segments might he or she put you into? Why?

Vocabulary Terms

• Demographic segmentation: Market segmentation based on the personal makeup of individuals in a given location.

• Geographic segmentation: Market segmentation based on where customers are located at particular times of day as well as how they arrive at those locations.

• Product usage segmentation: Market segmentation based on what products and services are popular in a particular area.
Discuss
- How do students decide whether the benefits are worth the cost of the purchases they make in their daily lives?

Reinforce and Review
- Product usage segmentation helps managers make informed decisions about future operational plans.
- Marketers can combine data from different categories to enhance an operation’s knowledge of its marketplace.
- The more an operation knows about its potential customers, the more successful it will likely be in satisfying their needs.
- The question that the value proposition must answer for its target market is this: “Are the benefits worth the cost?”
- Each target market values different things, so operations must tailor different value propositions for each group.

Teaching Tips
- Relate this information to the discussion of how individuals make purchasing decisions in Chapter 5.

Essential Skills: Target Marketing
Encourage students to discuss the following:
- Why do restaurant and foodservice operations determine target markets?
- How might a restaurant’s target market differ from its actual customers? In these situations, how should the restaurant respond and why?

Vocabulary Terms
- Lifestyle segmentation: Market segmentation based on the activities, hobbies, interests, and opinions of a given target market.
- Value proposition: A statement of the value an operation’s target market will experience when they purchase its products and services.
Figure Focus

**Figure 7.11:** Compare this comment card to the customer survey in Figure 7.8.

**Essential Skills: Target Marketing (cont.)**

Encourage students to discuss the following:

- How can a SWOT analysis help businesses identify their target markets?
- Why is it important for a business to be flexible? Can a business be too flexible?
- Restaurant and foodservice operations provide some of the most basic human needs: food, water, and human contact. However, these operations generally target their offerings to particular groups of people, based on their wants and needs. Is there a contradiction here? Why or why not?

**Reinforce and Review**

- Once the target market has been identified, restaurant and foodservice managers must determine how to position their operation within that market.

**Vocabulary Terms**

- **Positioning:** Creating within the marketplace a clear, specific identity for both a product and the operation that offers that product.
Discuss

- What are some ways in which students' favorite restaurants “stand out in a crowd”? How does this relate to the restaurants' identities?
- What non-foodservice examples of positioning can students identify?

Reinforce and Review

- Positioning consists of three steps: identifying ways to create a unique identity, selecting the right mix of differentiating aspects, and communicating the chosen identity to a specific target market.
- An operation's differentiating aspects include its product, physical appearance and aesthetics, service, location, and image.
- An operation's ability to position itself in a competitive market is essential to its long-term success.

Table 7.1: Ways to Attract Customers

- Innovation and creativity are essential to attracting guests to a restaurant or foodservice operation. However, the quality of the food and service is often what turns a one-time customer into a regular guest. How can successful operations integrate these different elements?
- How can special events and themes enhance an operation's identity?
- What steps must restaurant and foodservice operations take to ensure that they do not lose money on successful or unsuccessful promotions?
- What are some other tactics operations can use to differentiate themselves from the competition and attract more customers?

Teaching Tips

- Level 1, Chapter 1 describes the breadth of the restaurant and foodservice industry. Encourage students to relate this discussion of positioning to that material.
Discuss

- Chapter 5 discussed the prominent role of purchasing in the success of any restaurant or foodservice operation. Which is more important: purchasing or marketing? Why?
- Explain the relationship between purchasing and marketing. How can smart purchasing help an establishment create and reinforce its identity?

Reinforce and Review

- Unique menu items or preparation techniques can help to create an operation’s market identity; generally, however, this differentiation tactic is used in conjunction with other methods.
- A restaurant or foodservice operation’s physical space helps to create its identity.
- The level and quality of service available in a restaurant or foodservice operation helps to determine its identity.
- Restaurants and foodservice operations should first decide on the image they wish to present and then make product and service decisions based on achieving and maintaining that image.

Teaching Tips

- An activity in Chapter 5 encouraged students to consider purchasing as the “head” and service as the “heart” of a restaurant or foodservice operation. What role do students believe marketing plays? Why?

Figure Focus

**Figure 7.12:** Pho, a beef noodle soup of Vietnamese origin, is increasingly popular in certain market segments.
Discuss
• How can restaurant and foodservice operations determine which differentiation points to use in developing their identities?

Reinforce and Review
• Once managers have determined which differentiating aspects are available to them, they have to decide how best to utilize these aspects.
• Focusing on a single differentiation point might not be enough for an operation to establish a unique identity, but focusing on too many points can dilute the overall message.
• The way an operation communicates its position in the market is as important as how the position is initially determined.
• Restaurant and foodservice operations must send clear messages to their target markets.

Trends: Marketing and Celebrity Chefs
Encourage students to discuss the following:
• What do students consider to be the primary characteristics of a celebrity chef?
• What food-related media sources do students use? What attracts them to each?
• How is technology related to marketing? How can the restaurant and foodservice industry use emerging technologies to enhance its marketing techniques?

Homework Activity: Celebrity Chefs
Literacy Connection, 21st-Century Skills—Use Systems Thinking, Communicate Clearly, Information Literacy, Create Media Products, Work Independently
Research someone you consider to be a celebrity chef and create a poster noting the highlights of his or her career.
Discuss

- What types of market communications are appropriate for what target markets? Why?
- What are some popular sales promotions? What makes them successful?

Reinforce and Review

- The promotional mix can consist of any or all of the following: advertising, sales promotions, personal selling, public relations, and direct marketing.
- Advertising can be conducted through multiple media and, if effective, can be a powerful communication tool.
- An operation’s identity might be tied to specific sales promotions.

Teaching Tips

- Provide samples of communication material from a variety of restaurant and foodservice operations.

Vocabulary Terms

- **Promotional mix**: The ways in which an operation communicates with its market.
- **Advertising**: Paying to present or promote an operation’s products, services, or identity. Advertising can be conducted through multiple mediums. Television, radio, newspapers, storefront, and Internet are all viable options for advertising. Though there are costs involved with advertising, effective ads can be a powerful communication tool for any operation.
- **Sales promotions**: Limited or short-term, incentives to entice customers to patronize an operation. For example, offering two-for-one entries is a sales promotion.

**Figure Focus**

**Figure 7.13**: What elements of the promotional mix are represented here?
**Discuss**

- What local restaurant and foodservice operations do a good job of building community relations? How do they do this?
- Which of the five components of the promotional mix do students think is most important? Why?

**Reinforce and Review**

- Well-trained service staff should be able to communicate an operation’s message to its guests.
- Personal selling might be the best way to solidify an operation’s credibility and identity in a competitive market.
- Building good relations with the community can help an operation gain favorable publicity and enhance its image.
- Successful direct marketing both elicits immediate responses from customers and builds long-term relationships.

**Teaching Tips**

- Relate personal selling to the discussion of suggestive selling in Level 1, Chapter 10.

**On the Job:**

**Restaurant PR Specialists (RPRSs)**

Encourage students to discuss the following:

- In what ways does the increased number of restaurant PR specialists benefit the entire restaurant and foodservice industry?
- Why is it important for restaurant PR specialists to have excellent communication skills? With whom do they need to communicate?
- As a restaurateur, would you choose to work with a restaurant PR specialist? Why or why not?

**Vocabulary Terms**

- **Personal selling:** Face-to-face interactions between staff members and guests.
- **Public relations (PR):** The process by which an operation interacts with the community at large.
- **Direct marketing:** Making a concerted effort to connect directly with a certain segment of the market.
Did You Know . . . ?

Encourage students to discuss the following:

• Is 3 to 6 percent too much or too little to spend on marketing? Why?

• Do all restaurant and foodservice operations have the same types of marketing expenses? Why or why not?

• Explain how marketing costs can create revenue, making them an investment.

Discuss

• What makes a sales promotion effective?

Reinforce and Review

• Sales promotions provide special incentives for customers to patronize an establishment.

• Promotions are designed to give customers an additional incentive to enter an operation or to purchase certain items.

Homework Activity: Steak-ing a Claim

Literacy Connection, 21st-Century Skills—Think Creatively, Critical Thinking and Problem Solving, Communicate Clearly, Work Independently

You own a steakhouse in a large city, where there is a great deal of competition. Identify and describe a sales promotion that you think would attract more customers. To whom would this promotion primarily appeal? Why do you think it would be a success? Describe your promotion and why it would succeed.

Vocabulary Terms

• Special pricing: Limited-time reduced prices offered through specials, deals, coupons, or other programs.

• Frequent shopper program: Provides a benefit in exchange for continuing patronage.

• Premiums: Free or reduced-price merchandise.

• Special events: One-time or periodic occasions that provide a special incentive for customers to patronize an operation.
Discuss

• What sales promotions are appropriate for what types of restaurant and foodservice operations? Why?
• How do take-home promotional items, such as carryout menus or branded merchandise, help reinforce an operation’s identity?
• What types of promotional materials are commonly used by local restaurant and foodservice operations? Why?

Reinforce and Review

• Promotional materials can be designed either to enhance a particular program or to promote the operation whether or not an active promotion program is being offered.
• Promotional materials increase public awareness of an operation without necessarily offering incentives to patronize it.
• Typical promotional items include signage, branded merchandise, and email.

Teaching Tips

• Provide samples of promotional materials from a variety of restaurant and foodservice operations.

Homework Activity: See Food

Literture Connection, 21st-Century Skills—Think Creatively, Critical Thinking and Problem Solving, Communicate Clearly, Work Independently

The management of a local seafood restaurant has asked you to develop a sales promotion based on the upcoming wild salmon season. Develop a sales promotion and identify at least three types of promotional materials you will use to promote the event.

Vocabulary Terms

• Samples: Small, free tastes of food items.
• Contests and sweepstakes: Games and other programs that involve the customer and provide prizes.
Figure Focus

**Figure 7.15:** How does each promotional item reinforce the establishment’s brand identity?

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**Discuss**

- What examples of cooperative sales promotions can students identify? How is each successful?
- Is it true that, “There is no such thing as bad publicity”? Why or why not?
- How can community support help a restaurant or foodservice operation thrive? Can operations without such support succeed?

**Reinforce and Review**

- Cooperative sales promotions involve at least two sponsors, who work in tandem to increase patronage and revenues.
- The purpose of public relations is to generate publicity.
- A major benefit of engaging in local affairs is that people respond positively to local support.
- Media relations and community relations should be an important part of the promotional mix.
- Community relations provide an opportunity to “give back” to the local area.
- The benefits of positive community relations include creating a positive image within the community, building credibility within the community, building relationships with community leaders, creating a network with other restaurant and foodservice professionals, generating positive publicity, and promoting the operation.

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**Homework Activity: Community Communications**

**Literacy Connection, 21st-Century Skills—Use Systems Thinking, Communicate Clearly, Work Independently**

Select one of the benefits of community relations and discuss its importance to restaurant and foodservice operations in a one-page essay. Be sure to consider how positive community relations can increase a business’s revenues.

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**Vocabulary Terms**

- **Cooperative sales promotions:** An opportunity in which two or more sponsors develop complementary promotions or offer complementary promotional materials.
- **Publicity:** The attention an operation receives.
- **Community relations:** The ways in which an operation interacts with the people in the local area to create awareness of and trust in an operation.
Discuss

• What community relations opportunities might be appropriate for what types of restaurant and foodservice operations to participate in? Why?

• Explain the importance of good communication skills and thorough employee training in developing a public relations program.

Reinforce and Review

• The cost of being involved in organizations and events can vary but should be viewed as an investment in the community and in the business.

• Once marketers have identified community relations opportunities that align with their marketing plans, they can determine how to become involved in a way that generates good publicity.

• Proactive community engagement helps shape an operation’s identity within the community and can affect people’s likelihood of patronizing the operation.

• Marketers can directly generate media publicity by sending out press releases or media kits.

• Well-written press releases present marketing information as news.

Teaching Tips

• Refer students to the content on communication skills and employee training in Level 1, Chapters 7 and 8.

Homework Activity:

Full-Court Press

Literacy Connection, 21st-Century Skills—Use Systems Thinking, Communicate Clearly, Create Media Products, Work Independently

Write a press release about a real or imaginary event in which a restaurant or foodservice operation participates. Pose as the marketer for that establishment. The press release should be at least one-page long and should answer the “Five Ws and How” questions.

Vocabulary Terms

• Media relations: The relationships that marketers maintain with media outlets.

• Press release: A brief presentation of promotional information written to sound like a news article.
Discuss

- What media vehicles might be appropriate to reach what target markets? Why?
- How do restaurant and foodservice operations determine what information to include in their press kits?

Reinforce and Review

- Typically, a restaurant press kit contains a wide variety of information about the operation, including menus, current promotional materials, and contact information for the restaurant’s spokesperson.
- With any form of marketing communications, marketers need to focus their efforts on reaching their target markets.

Homework Activity: Im-PRESS-ive!

Literacy Connection, 21st-Century Skills—Think Creatively, Reason Effectively, Communicate Clearly, Create Media Products, Work Independently

Your restaurant has an important public-relations event next week. Develop two items that you will include in the media kit that you distribute to members of the press.

Vocabulary Terms

- Press kit/media kit: A packet of information given to media representatives to answer questions they might have about a business or organization.
- Media vehicle: A particular media outlet.
Summary

- Remind students to review the following:
  1. Market research techniques
  2. Market segmentation
  3. Creating a market identity
  4. Market communications
  5. Types of sales promotions
  6. Public relations and engaging the community

In this section, you learned the following:

- There are four basic methods marketers use to gather research:
  - Experimental method, where an operation might try out a product for a limited time or to a limited group of people
  - Observational method, which involves observing how customers react in a natural setting towards a product
  - Survey method, which gathers information using questionnaires that can be administered in different ways such as telephone, email, or feedback cards
  - Sampling method, which involves testing a product with a specific, small group of people, sometimes called a focus group

- Market segmentation is breaking down a larger market into smaller groups of similar individuals to help identify target demographics in any given location. Demographics refer to the ways in which people are categorised or grouped. What segments of the market marketers and managers choose to focus on depends largely on what kind of operation they have and/or what kind of operation they want to be. Marketers can start segmenting the market in four basic ways: demographic segmentation, geographic segmentation, product usage segmentation, and lifestyle segmentation.

- Positioning means creating within the marketplace a clear, specific identity for both a product and the operation that offers that product. In the restaurant and foodservice industry, it's all about standing out in a crowd. Positioning consists of three steps: 1) Identify possible ways to differentiate the operation within the market and create a unique identity; 2) Select the right mix of differentiating aspects; and 3) Communicate the chosen identity to a specific target market. There are a number of ways that an operation can differentiate itself from its competitors to create its own identity, including product, physical appearance/aesthetics, service, location, and image.
There are many ways for marketers and managers to communicate with their market. The various ways they go about this process of communication is called the promotional mix. The promotional mix can consist of any or all of the following: advertising, sales promotions, personal selling, public relations, and direct marketing.

Sales promotions provide special incentives for customers to patronize an operation. There are many types of sales promotions and different tools or materials that can be used in a sales promotion. However, sales promotions are only useful when customers know about them, which is why they are often the focus of advertising. Some sales promotion methods use materials such as coupons for special pricing programs or toys for premiums. However, other promotion materials, such as a menu board placed outside an operation, support a marketing plan by continuously promoting an operation even when it is not running an active promotion program by increasing awareness of an establishment.

The purpose of public relations is to generate positive publicity. Publicity is the attention an operation receives; one way to get good publicity is by engaging in the affairs of the community. A major benefit of this kind of publicity is that people respond positively to local support. Marketers and managers should focus on two types of relationships as they incorporate public relations in their promotion mix: media relations and community relations. Community relations involve interacting with the people in a local area to create awareness of and trust for an operation. Activities such as hosting charity events, giving tours, and sponsoring sports teams are examples of community relations. A press kit, also called a media kit, is a packet of information given to media representatives to answer questions they might have about a business or organization. Press kits are a great help in building and maintaining strong media relations.
Section 7.2
Review Questions

1. The four basic research methods are experimental, observational, survey, and sampling.

2. Four general ways to segment a market are by demographics, by geography, by product usage, and by lifestyle.

3. Five ways to differentiate within a market are by product, by physical appearance or aesthetics, by service, by location, and by image.

4. The five elements of a promotional mix are advertising, sales promotions, personal selling, public relations, and direct marketing.

5. Student answers will vary but should clearly state why students are attracted to particular promotions.

6. Students should identify ways in which Miguel and Chef Kate can communicate with appropriate markets.

7. Students should logically explain why the criteria they have selected is the most important.

8. Students should clearly defend their chosen research method.
Section 7.2 Activities

1. Student posters and presentations should emphasize the role of nutritional and health issues in their operations.

2. Student reports should detail the advantages and disadvantages of serving the chosen target market.

3. Students should research a local business and its community relations. This might involve interviewing a staff member of that business.
Section 7.3
The Menu as Marketing Tool

Introduce the Section
a. Explain the importance of the menu as a marketing tool.
b. Describe the various types of menus and how menus can be organized.
c. Discuss how menus are created and priced, as well as the role of menu analysis.
d. Discuss the objectives for the section.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
• What restaurant or foodservice operations have menus that are particularly attractive to students? What elements are especially appealing?
• What would make a menu unappealing? Why?

Reinforce and Review
• The menu helps plan an operation’s goals and helps communicate those goals to the operation’s target market.
• Menus are sales tools that help managers assess the operation’s strengths and weaknesses.
• The most important interaction consumers have with a given operation is through the menu.
• If a potential customer isn’t influenced enough by the menu to order something, then the quality of the food and service becomes irrelevant.
Discuss
• How does a menu address the needs of the operation’s target market?
• How does the menu communicate both with potential customers and staff members?
• How can managers ensure that an operation’s menu will help it fulfill its objectives?
• In what ways does a menu provide a competitive advantage?

Reinforce and Review
• The menu facilitates planning by giving an operation an end goal around which purchasing, staffing, and training can be organized.
• The menu also informs customers about what the operation offers, sells products, and creates an identity for the operation.

Teaching Tips
• Provide sample menus from a variety of restaurants that display a range of menu types. Encourage students to identify the message that each communicates.

CUSTOMIZED INSTRUCTION
Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Work Independently
ESOL Students
Obtain menus from restaurant or foodservice establishments in your country of origin. How are these similar to or different from the menus discussed in this section? Why?

Figure Focus
Figure 7.16: When serving staff have been properly trained, they can increase the menu’s effectiveness.
Discuss

- How might the message communicated by a multiple-page menu be different from the message communicated by a single-page menu? Why?
- Why is it important to have both an informative menu and a well-informed staff?

Reinforce and Review

- The most basic function of a menu is to tell customers what an operation has to offer, but it also presents an opportunity to distinguish an operation’s items from those of the competition.
- The menu informs customers about potential health concerns and provides details about how different items are prepared.
- The description and placement of each menu item helps determine a customer’s impression of each dish and therefore what he or she will order.
- The more visual attention certain items attract, the more likely customers are to order them.
- The menu’s presentation—the choice and color of font, the quality of paper, and the number of items offered—communicates information about the operation’s identity.
Figure Focus
Figure 7.17: What can you tell about Kabob just by examining its lunch menu?

Discuss
• For guests, what are the advantages and disadvantages of an à la carte menu? Why?
• For restaurant employees, what are the advantages and disadvantages of an à la carte menu? Why?

Reinforce and Review
• Identifying the type of menu an operation uses can help identify the operation’s goals.
• Common menu types include à la carte, cyclical, and limited.

Teaching Tips
• Students should decide on three terms they would use to describe Kabob, based on the menu depicted in Figure 7.17.

In-Class Activity:
Menu Mania
Literacy Connection, 21st-Century Skills—Work Creatively with Others, Critical Thinking and Problem Solving, Communication and Collaboration, Social and Cultural Skills

Working in small groups, consider Kabob’s lunch menu, shown in Figure 7.17. Does it give you a clear picture of the restaurant’s identity? Why or why not?

Building on the current menu, eliminate some lunch items and replace them with others of your choice. How have your choices either strengthened the restaurant’s identity or changed it altogether? If your choices have changed the identity, what is the restaurant’s new image?

Each group should share its work with the class to discuss the importance of the menu in shaping a restaurant’s public face.

Vocabulary Term
• À la carte menu: A menu that prices each item separately.
Discuss
- How can the use of either a du jour menu or a cyclical menu reinforce the message that a particular operation serves the freshest seafood in the community?
- How can the use of a cyclical menu be tied to seasonality? What other characteristics might you expect restaurants offering this message to have?

Reinforce and Review
- In the United States, du jour menus are commonly used to offer daily specials and might be presented verbally by staff members.
- Cyclical menus give chefs and managers the flexibility to offer new dishes, ingredients, and cooking techniques at certain intervals throughout the year.

Teaching Tips
- Students should decide on three terms they would use to describe the restaurant offering the menu depicted in Figure 7.18.

Vocabulary Terms
- **Du jour menu**: A menu listing the menu items that are available on a particular day.
- **Cyclical menu**: A menu that is changed after a certain period of time.

Figure Focus
**Figure 7.18**: What types of restaurant or foodservice operations might offer du jour menus? Why?
Discuss

- Why might an operation choose to combine menu types or offer multiple menus? How would this work?
- How can offering a limited menu help a restaurant or foodservice operation become more efficient in all of its activities?
- How can the consistency offered by a fixed menu help reinforce the operation’s identity?
- What types of restaurants are most likely to offer California menus? Why?
- What message does a prix fixe menu send? Why?

Reinforce and Review

- Quick-service restaurants commonly offer limited menus, which facilitate cost control, purchasing, preparation, and service.
- Fixed menus are often coupled with du jour menus to offer both variety and consistency.
- California menus enable operations to serve multiple market segments simultaneously.
- Prix fixe menus offer multiple courses for a set price.

Teaching Tips

- Students should decide on three terms they would use to describe the restaurant offering the menu depicted in Figure 7.19.

Vocabulary Terms

- **Limited menu**: A menu that offers only a few items.
- **Fixed menu**: A menu that offers the same items every day.
- **California menu**: A menu that lists all meals and items available at all times of day.
- **Prix fixe menu**: A menu that offers multiple items at one price.

**Figure Focus**

**Figure 7.19:** What are some advantages and disadvantages of offering a cyclical menu? Why?
Discuss
- Explain how prix fixe and table d’hôte menus are similar and different.
- Why might a restaurant or foodservice operation choose to offer a table d’hôte menu? What benefits does it offer to guests and to staff?

Reinforce and Review
- Prix fixe menus increase the check total while providing a discount on the food items ordered, benefiting both operation and guest.
- Table d’hôte menus offer a variety of options and multiple courses for a fixed price.

Teaching Tips
- Students should decide on three terms they would use to describe the restaurants offering the menus depicted in Figures 7.20 and 7.21.
- Students should compare the descriptive terms they have selected for the restaurants whose menus appear in Figures 7.17-7.21. Is there any overlap? Why or why not?

Vocabulary Terms
- Table d’hôte menu: A menu offering multiple courses, with multiple choices within each course, for a set price.

CUSTOMIZED INSTRUCTION
Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Work Independently
Less Advanced Students
Of the eight menu types discussed, which is the “best”? Explain your answer.

Figure Focus
**Figure 7.20:** What are some advantages and disadvantages of offering a prix fixe menu?

**Figure 7.21:** How do the menu offerings enhance the “steakhouse” message?
Figure Focus

**Figure 7.22:** What information does the Kabob Restaurant dinner menu provide? Is the message conveyed by the dinner menu different from that conveyed by the lunch menu in Figure 7.17?

**Discuss**
- Which of the courses could be grouped into a single category? Why?
- What other categories might a menu include that could help an operation differentiate itself from the competition?

**Reinforce and Review**
- Most menus organize foods according to the order in which they are usually eaten.

- Variations in these categories depend on what an operation offers and the image it wishes to promote.
Discuss

• Why should foods within a major classification, such as appetizers or entrées, be prepared using a variety of cooking methods?

• How many different entrées should a fine-dining restaurant offer? How many should a family-style restaurant offer? Why?

Reinforce and Review

• Menus should vary tastes, textures, and seasoning methods to attract as many potential customers as possible.

• Menus, no matter how many or how few dishes they offer, should be characterized by balance and variety.

• Dessert choices should be based on customers’ tastes and on past sales.

• A menu should reflect the operation’s character and goals, but it should also reflect a realistic understanding of what the kitchen can produce in an efficient and cost-effective way.

• The two main steps in menu creation are planning and design.
Discuss

• How might an operation’s physical layout make some proposed menu items “off limits”? Here are some examples: Operations with little space between guest tables probably will not be able to perform flambéing or other tableside cooking tasks; kitchens with a single, small deep-fryer probably will not be able to handle a menu that relies heavily on fried seafood and chicken; kitchens without freezers that are accessible during service probably cannot offer ice creams, sorbets, and other frozen desserts.

• Why might some restaurant or foodservice operations choose to purchase fresh, seasonal ingredients, whereas other similar operations do not?

Reinforce and Review

• In the planning phase of menu creation, managers and chefs must consider the physical layout of the facility, staff skills, ingredient availability, the target market’s wants and needs, the target market’s expectations, and the profit margin.

• An operation’s physical layout often determines the kind of menu that the chefs will be most capable of producing efficiently.

• Staff skills should be in line with the menu demands: skilled enough to do the work, but not too skilled to do it.

• Planners must consider both what items the operation can produce well and how cost-effectively those items can be produced.

• When planning a menu, availability of the desired ingredients at an appropriate price should be considered.

• Management and staff should place the target market’s wants and needs above their own desires when planning a menu.

Teaching Tips

• Relate this material to the discussion of purchasing in Chapter 5.
Discuss

- Why do the target market’s expectations become especially important after the restaurant or foodservice operation has been established?
- What information do planners need to develop a profitable menu?
- Why is menu design so important to an operation’s image and success?

Reinforce and Review

- Not meeting expectations becomes more dangerous the longer an operation exists.
- A deviation from or loss of quality in the menu items or identity that originally attracted customers can cause an operation to fail.
- When operations become inconsistent, customers no longer know what to expect from them and stop patronizing them.
- Chefs and managers must plan the menu with profitability in mind.
- Once the menu items have been determined, the menu itself can be designed.
- Well-designed menus are pleasing to read, easy to understand, and clearly express the identity and character of the operation as a whole.
- Five elements to consider when designing a menu include medium, layout, color, font, and art.

- Most menus are presented on some form of paper. Lightweight papers are more often used by casual operations, whereas more formal operations commonly use heavier paper.

Figure Focus

**Figure 7.23:** What types of media are most appropriate for menus in what types of restaurant or foodservice establishments? Why?
Discuss
- What are some advantages and disadvantages of relying on a spoken menu? How can a spoken menu be used in tandem with a printed menu?
- How are these elements of menu design also used on other promotional materials? How can these other materials reinforce the identity presented by the menu?
- What colors do students associate with which restaurant or foodservice operations? Why? How does this connect to the operations’ images?

Reinforce and Review
- Menu boards and spoken menus are also important ways of communicating an operation’s offerings to its guests.
- The layout of a menu can help emphasize particular dishes that the management wants guests to order most frequently.
- A proper layout can both reinforce the operation’s identity and work to sell particular menu items.
- The colors selected for a menu should reflect the image that the operation wishes to present.

CUSTOMIZED INSTRUCTION
Science Connection, Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently

More Advanced Students
How can color affect human behavior? The study of color psychology seeks to answer this question, looking into the ways in which preferences, behavior, and choices are affected by the colors we see. Because marketers know that color plays a role in perception, they use different colors for different purposes and to project different images.

Research the ways in which color can affect preferences and write a one-page report discussing your findings and explaining how marketing can capitalize on this information.

Vocabulary Terms
- **Menu board**: A menu presented on blackboards, whiteboards, or directly on the walls or fixtures of an operation.
- **Spoken menu**: A menu that is verbally presented to guests by staff members.
Discuss

- What are some other ways in which an operation can use art to reinforce its identity?

Reinforce and Review

- Fonts can both highlight particular menu items or categories and signal the operation’s “personality.”
- The choice of art selected for a menu—as well as the absence of art—can reinforce the operation’s identity.

Homework Activity: Negative Space

Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Work Independently

Negative space is the empty space left around artwork or text. It helps emphasize the image, drawing the eye to a particular place.

How is negative space used in menu design? Explain how negative space can be used to highlight a particular menu item or category, increasing its sales. Discuss your findings in a one-page paper.

Homework Activity: Competition

Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Work Independently

In what ways can small operations gain a competitive advantage over larger ones through their menu planning and design, and vice versa? Explain your answers in a two-paragraph report.

Figure Focus

Figure 7.25: Which of these fonts is appropriate for what types of restaurant or foodservice operations? Why?
Figure Focus

Figure 7.26: Restaurant and foodservice operations must carefully prune their menus so that the remaining dishes reinforce the operation’s image and can be consistently prepared under prevailing conditions.

Essential Skills: Planning a Menu

Encourage students to discuss the following:

- How can chefs and managers ensure balance and variety in the menu?
- What might result if the New Italian restaurant did choose to offer the chef’s award-winning chili?
- If the operation itself is still in the planning stage, how can chefs and managers accurately predict labor costs that might affect the ability to serve certain items?

Homework Activity: Designing Menus

Literacy Connection, 21st-Century Skills—Think Creatively, Reason Effectively, Communicate Clearly, Work Independently

If you were to open a restaurant, how would you design your menu? Explain your choices of medium, layout, color, font, and art. How would these reinforce your identity and attract your target market?

Write a one-page essay describing your menu design and discussing how it fits your overall marketing plan.

Reinforce and Review

- A menu’s borders can also reinforce the operation’s identity.

Teaching Tips

- Present students with the sample menus they examined and discussed earlier in this section. How have their impressions of each menu changed? What new information can they extract from each?
Essential Skills: Planning a Menu (cont.)

Encourage students to discuss the following:

- Is it cost-effective and efficient to train staff members to prepare new dishes, or should chefs and managers stick with the “old standards”? Why?

- What role can service staff play in the menu-planning process? How can their input strengthen a menu’s appeal to its target market?

- How can the process of menu planning help chefs and managers to think more deeply about the image that the operation presents?

Essential Skills Testing New Menu Items

Encourage students to discuss the following:

- Relate this material to the discussion of customer feedback in Level 1, Chapter 10.

- Which of these feedback methods might be most productive? Why?

- Which feedback methods are appropriate for use with which target markets? Why?

Homework Activity: Feeding Back

Science Connection, Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Work Independently

Feedback is the use of information about some past event to influence similar events in the future. Feedback is an important concept in the restaurant and foodservice industry, but it is also relevant throughout the natural and social sciences.

Select a branch of science that interests you, such as biology or economics. Explain how feedback plays a role in this field in a one-page report.

Figure Focus

**Figure 7.27:** What image does this promotional item reinforce? How do its layout, color scheme, font, and artwork all combine to present a uniform message?
• **Contribution margin method:** This pricing method uses the portion costs for each item sold to determine how much money the average customer contributes to overhead and profit; this dollar amount is then added to each menu item.

### Discuss

- How do student expectations of a restaurant or foodservice operation vary according to the operation’s menu prices? Is this reasonable? Why or why not?
- What role does the operation’s target market play in its menu pricing?

### Reinforce and Review

- Menu prices have two main roles: They provide information to customers and they determine profitability.
- Menu prices not only tell customers how much particular items cost, but also indicate important information about quality levels, ambiance, and other characteristics of the operation.
- Customer expectations increase with price; therefore, higher menu prices place greater pressure on all staff members to perform at their best.
- Management should ensure that menu prices are aligned with both operational goals and staff skills.
- Price determines profitability by ensuring that revenues are greater than costs.
- The price of a menu item must account for all the costs involved in producing and serving that item, including food, labor, and overhead.
- Overpriced items will usually not sell enough to be profitable, whereas underpriced items might sell too well and lose money.
- The four most common methods of pricing a menu are the food cost percentage method, contribution margin method, straight markup method, and average check method.

### Teaching Tips

- Encourage students to review Chapter 3.

### Vocabulary Terms

- **Profitability:** The amount of money remaining for an operation after expenses have been paid.
- **Margin:** The difference between the amount of revenue remaining after the cost of food and beverage sales and overhead has been subtracted; another way of indicating “profitability.”
- **Food percentage method:** This pricing method sets the percentage of menu price that the food cost must be and then divides the item’s food cost by that percentage to develop the menu price.
Discuss

- How will menu prices vary, depending on the method management uses to determine the prices?
- What is the most appropriate method for determining menu prices? Why?
- What factors are involved in the decision to use one method of pricing a menu and not another?

Reinforce and Review

- Because food cost percentage is dependent on the cost of food and preparation, it will vary for each menu category.
- The contribution margin method uses operation-wide data to determine a dollar amount that must be added to the food cost of each major item to establish the menu price.
- The straight markup pricing method allows managers to mark up the costs of an item by some predetermined amount to establish the selling price; an underlying assumption of this method is that each customer will help pay for labor, operating costs, food costs, and some portion of the profit.
- The average check pricing method uses the average check amount to determine the price range of menu items, which is then used in tandem with the food cost percentage to determine the menu price for each item.
- Two other menu pricing methods that operations can use, but only for major menu items, are the set dollar amount markup and the set percentage increase markup.

Vocabulary Terms

- **Straight markup pricing method**: This pricing method multiplies raw food cost by a predetermined fraction to determine the dollar amount to be added to each food item.
- **Average check method**: This pricing method divides the operation’s total revenue by the number of seats, average seat turnover, and number of days open each year; this yields the average check amount, which is then used with the approximate food cost amount to determine menu prices.
- **Set dollar amount markup**: This pricing method adds a fixed dollar amount to the food cost of an item to determine menu prices.
- **Set percentage increase method**: This pricing method enables managers to add a fixed percentage to the food cost of each item to determine menu prices.

### Homework Activity: Lunch Is Served

**Mathematics Connection, Literacy Connection, 21st-Century Skills—Solve Problems, Communicate Clearly, Work Independently**

During today’s lunch service at Jimmy’s Café, the three most popular dishes were chicken-fried steak (25 orders at $10 apiece), cheeseburger (20 orders at $8 apiece), and Reuben sandwich (18 orders at $7.50 apiece). 100 guests were served, and the restaurant took in $900 on the sale of food alone.

- How much does the average guest spend on food? ($9.00)
- What percentage of revenue was earned on each of the three bestselling items? (Steak, 27.78 percent; cheeseburger, 17.78 percent; Reuben, 15 percent)
- What was the average menu price of the other items on the menu? ($9.60)
Homework Activity: Q-ing up for Breakfast

Mathematics Connection, Literacy Connection, 21st-Century Skills—Solve Problems, Communicate Clearly, Work Independently

In a given week, your breakfast restaurant provides the following items for “free”: 40 lemons ($0.20 apiece), 300 ramekins of homemade jam ($0.12 apiece), and 8 oz of homemade hot chili paste ($0.95). During this time, 400 entrees are served.

What is the average portion of each item? (Lemon, 1/10 of a lemon; jam, 75 percent of a ramekin; hot chili paste, 0.02 oz)

What is the cost per average portion of each item? (Lemon, $0.02; jam, $0.09; hot chili paste, $0.02)

What is the Q factor? ($0.13)

Discuss
- Why might managers choose to use the set dollar amount markup or the set percentage increase method instead of one of the four more common methods of menu pricing?

Reinforce and Review
- The set percentage increase method marks up each menu item by a percentage, based on the information provided by the set dollar amount markup.
- For example, if an item’s food cost is $5 and the markup is $1, then the percentage of the markup is 20 percent; therefore, the food costs of other major menu items should be increased by 20 percent to determine the appropriate menu prices.

Teaching Tips
- Work with students to review math skills as needed.

Essential Skills Pricing the Extras

Encourage students to discuss the following:
- Why is it important to consider the Q factor when determining food costs?
- Guests usually pay indirectly for items like condiments, bread, and butter. What difference might charging directly for these items make to customers? How might this affect the operation’s image?
- Which types of operations would probably benefit most from using the Q factor? Why?
- Why is the Q factor only included when calculating the food costs of entrées?
- Can the Q factor be estimated, or should it be accurately determined? What are the advantages and disadvantages to either strategy?
- If an operation begins to incorporate the Q factor into its costing and pricing procedures, are prices likely to change enough that regular guests will notice? Why or why not?
Discuss

- Do all menu items that have a high sales volume earn money for the restaurant or foodservice operation? Why or why not?
- Conversely, can menu items with relatively low sales volume earn money for the operation? Why or why not?

Reinforce and Review

- One way management can gauge performance is by examining sales volume and sales volume percentage.
- The sales mix analysis compares menu items in terms of sales and profitability, determining which are most frequently ordered and which earn the most money.
- Menu engineering can help managers make decisions about which menu items to leave alone, which to increase or decrease in selling price, which to promote, and which to eliminate.

Homework Activity: Voluminous Volume

Mathematics Connection, Literacy Connection, 21st-Century Skills—Solve Problems, Communicate Clearly, Work Independently

Mako’s restaurant is open five days per week and offers a cyclical menu that currently offers six entrées. This week, she sold 80 portions of lamb, 60 of chicken, 57 of pork, 28 of mushroom, 74 of beef, and 36 of shrimp. Entrée revenues were $5,025.

For each entrée, what was the average sales volume per day? (Lamb, 16; chicken, 12; pork, 11.4; mushroom, 5.6; beef, 14.8; shrimp, 7.2)

For each entrée, what percentage of the week’s sales volume did it represent? (Lamb, 23.9 percent; chicken, 17.9 percent; pork, 17 percent; mushroom, 8.4 percent; beef, 22.1 percent; shrimp, 10.8 percent)

What is the average price per entrée? ($15)

Vocabulary Terms

- Sales volume: The number of times a given item is sold during a particular time period.
- Sales volume percentage: The expression of each item’s sales as a percentage of total sales.
- Sales mix analysis: An analysis of the popularity and profitability of a group of menu items.
- Menu engineering: The systematic breakdown of a menu’s components to analyze which items are making money and which are selling well.
Figure Focus
Figure 7.28: Using a computerized spreadsheet will simplify the process of menu engineering.

Discuss
- Why is it important to understand how menu engineering works? Can similar results be obtained simply by observing how many portions of each item are sold during a given period of time? Why or why not?

Reinforce and Review
- To conduct a menu analysis by menu engineering, first list all of the menu items in a given category and the number of purchases of each.
- The menu mix percentage is the percentage of total sales accounted for by each item.
Discuss

• Why is it essential to know the true cost of a given item before calculating its menu price?

• Why is 70 percent the cutoff point for determining an item’s popularity? Is this reasonable? Why or why not?

Reinforce and Review

• In menu engineering, a menu item is considered popular if it sells at least 70 percent of the menu mix average.

• Each menu item is classified as “high” or “low” based on whether it sells at least 70 percent of the menu mix average.

• The contribution margin is calculated by subtracting the item’s standard food cost from its selling price.

• A target margin is a planned price based on how much money the business wants to make on each item sold.

• Total menu revenue is determined by multiplying the number of each item sold by its selling price and then summing the results for each item.

Homework Activity:
Menu Engineering

Science Connection, Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Work Independently

The concept of menu engineering isn’t strictly limited to the restaurant and foodservice industry. Any industry that offers a range of goods or services to its clients can use menu engineering to increase profitability.

First, research the concept of menu engineering to learn more about its applications in the non-foodservice world. Then identify an industry or a company that you think would benefit from the use of menu engineering and explain why. Write a one-page report discussing your findings.

Vocabulary Terms

• Menu mix percentage: The number of the menu items sold divided by the total number of purchases.

• Mix percent rate: The menu mix percentage multiplied by 70 percent.
Reinforce and Review

- Obtain the total item food cost by multiplying each item’s food cost by the number of that item sold.
- Determine the total item contribution margin by multiplying each item’s contribution margin by the number of that item sold.
- Any item that has a contribution margin greater than the average contribution margin is considered “high”; the remaining items are considered “low.”
- Classify each menu item as a star, plow horse, puzzle, or dog.

Vocabulary Terms

- **Average contribution margin**: The average amount that each menu item contributes to gross profit.
Discuss

• How does an item’s location on the menu affect its popularity?

Reinforce and Review

• Stars should be located in a highly visible area of the menu to increase orders.

• Stars should be tested occasionally for price rigidity, because they are likely to be less price sensitive than other menu items.

• Plow horses may be highly price-sensitive, so increasing the price might lead to a significant drop in orders; if only slightly profitable, these items should be removed from the menu, despite their popularity.

• If a particular menu item is an image maker or signature dish, hold its current price as long as possible to avoid alienating customers.

Vocabulary Terms

• **Star**: A menu item that is both popular and profitable.

• **Plow horse**: A menu item that is popular, but less profitable than a star.

• **Puzzle**: A menu item that is unpopular but very profitable.
Discuss

- How many items are “too many”? How can a restaurant decide whether to abbreviate or lengthen its menu?
- Is it possible to have a menu that is all stars? Why or why not?

Reinforce and Review

- Two ways to reduce demand for a plow horse are moving the item to a lower profile position on the menu and slightly reducing its portion size.
- Plow horses can be packaged with side items to increase their contribution margins and therefore their profitability.
- One solution to a puzzle is decreasing its price. Another tactic is to place it in a more favorable position on the menu.
- Even though a puzzle is unpopular, it makes a lot of money; take steps to increase sales and turn the item into a star.
- Dogs should be eliminated where possible, although the key ingredients can be kept in inventory for special requests.
- Dogs can often be turned into puzzles with price increases.

Vocabulary Terms

- Dog: A menu item that is both unpopular and unprofitable.
What’s New: Menu Engineering

Encourage students to discuss the following:

- Which is more important, the food cost percentage or the dollars earned per order? Why?
- How can training service staff help to change a dish’s status? Why?
- Menu engineering is a fairly recent phenomenon, and restaurants have existed for hundreds of years. Does this mean that menu engineering is not important to the success or failure of an operation, or that the conditions under which contemporary restaurants operate are different? Why?

Fast Fact: Did You Know . . . ?

Encourage students to discuss the following:

- What are some advantages and disadvantages to serving carbonated soft drinks in a restaurant or foodservice operation?
- How can maximizing the use of star menu items help subsidize items that don’t sell as well?
- What are some other popular nonalcoholic beverages? Into which of the four menu engineering categories would you place them?
Summary

- Remind students to review the following:
  1. The overview of a menu
  2. Menu types
  3. Organizing a menu
  4. Creating a menu
  5. Pricing the menu
  6. Analyzing the menu

Most menus organize foods according to the order in which they are eaten: appetizers, soups, salads, sandwiches (which can be offered before or after salads), entrées, vegetables, desserts, and beverages.

A menu should reflect the operation's character and goals and a realistic understanding of what the operation is capable of producing in a cost-effective way. There are two steps in menu creation: planning and design. In the planning phase, keep the following elements in mind: physical layout of the facility, skill of personnel, availability of ingredients, target market's wants and needs, target market's expectations, and profit margin. Consider the following elements when designing a menu: medium, layout, color, font, and art.

Pricing the menu is a critical process for any operation. Price serves two main roles: it provides information to customers, and it determines profitability. Price provides information to customers not only about the price of the menu item, but it also speaks to the market category in which the restaurant falls. Price determines profitability by bringing in more dollars than the sum of all the costs for the product or service. The food cost percentage method, contribution margin method, straight markup method, average check method, set dollar amount markup, and set percentage increase method are all ways to price menu items.

It is crucial to the success of an operation that management have the knowledge and means to analyze how well items on its menu are performing. While there are several methods available to do menu analysis, one of the most popular is menu engineering. It systematically breaks down a menu's components to analyze which items are making money and which items are selling. This analysis then helps management make decisions as to which menu items to leave alone, which to increase or decrease in selling price, which ones to promote, and which ones to eliminate. The classifications that come from menu engineering are star, plow horse, puzzle, and dog.
Section 7.3
Review Questions

1. The two primary functions of the menu are to plan and to communicate.

2. Types of menus include à la carte, du jour, cyclical, limited, fixed, California, prix fixe, and table d’hôte.

3. The two steps in creating a menu are planning and design.

4. The four main menu categories derived from menu engineering are star, plow horse, puzzle, and dog.

5. Quick-service restaurants might offer a number of menus, including limited, fixed, à la carte, and prix fixe.

6. Student responses will vary but should accurately discuss menu analysis and engineering and the ways in which use of these techniques can increase profitability.

7. Student answers will vary but should defend their answers clearly and logically.

8. Student responses will vary but should demonstrate an understanding of the menu engineering process.
**Section 7.3 Activities**

1. Students should be able to explain and defend their menu selections and prices.

2. Students should respond to each question, building on the material addressed in Section 7.3.

3. Students should identify one of the six techniques of pricing menus discussed in Section 7.3 and explain why it is the best way to determine selling prices.
Case Study Follow-Up

1. Students should identify and describe techniques for improving community relations.

2. Students should select and justify the use of two media choices to advertise Kabob’s new location.

3. Students should write at least one page addressing menu function and design.

At the beginning of the chapter, Chef Kate and Miguel of Kabob were thinking about opening a new place. They had scouted out a few places, but were getting cold feet about choosing a place and all the work that would be required by opening in a new community.

- Discuss three ways they could build ties with the new community through public relations efforts.
- What ways would you suggest that Chef Kate and Miguel advertise in their new location? Pick two types of media and explain why you would choose them.
- Explain to Chef Kate and Miguel the ways their menu can serve as a marketing tool. Be sure to include the following in your explanation:
  - Planning function
  - Communication function
  - Design elements
  - Sales influence
Apply Your Learning

Menu Creation and Pricing
Students should describe the selected menu items, develop and cost appropriate recipes, and determine an appropriate selling price based on one of the six menu pricing methods discussed in the chapter.

Beating the Local Competition
Students will need to explain some ways in which their proposed restaurants can establish competitive advantages. Researching other local restaurants, as well as relevant community factors, is an important part of determining the ways in which a new restaurant can stand out from the competition.

The Science of Marketing
Students should research links between science and publicity and the relationship between science and consumer opinion. They should justify their responses.

Choosing the Menu
Students should select a menu type (or types) and a pricing formula that they consider appropriate, and explain their choices.
Exam Prep Answers

1. B
2. C
3. C
4. B
5. B
6. B
7. C
8. D
9. A
10. C

Exam Prep Questions

1. The comprehensive process of communicating an operation's message to potential customers is
   A. selling.
   B. marketing.
   C. fashioning.
   D. advertising.
2. What is a marketing plan?
   A. The way marketers research a market
   B. The way marketers execute their market strategy
   C. The steps marketers must take to sell a product or service
   D. The way marketers advertise an operation's product or service
3. What are the four research methods used to gather market information?
   A. Survey, sampling, experimental, informal
   B. Experimental, formal, informal, mathematical
   C. Experimental, observational, survey, sampling
   D. Formal, observational, mathematical, sampling
4. Creating within the marketplace a clear, specific identity for both a product and the operation that offers that product is called
   A. elbowing.
   B. positioning.
   C. identification.
   D. market carving.
5. Advertising, sales promotions, personal selling, public relations, and direct marketing are all elements of what's called the
   A. product mix.
   B. promotional mix.
   C. experimental method.
   D. lifestyle segmentation.
6. Informing customers, selling products, and creating identity are all functions performed simultaneously by
   A. greeters.
   B. the menu.
   C. Web sites.
   D. direct marketing.
7. A menu that prices all items separately is called
   A. limited.
   B. prix fixe.
   C. à la carte.
   D. California.
3 A menu that lists all meals available at any time of day is called
   A. fixed.
   B. du jour.
   C. à la carte.
   D. California.

4 The difference between revenue minus preparation and service costs is known as the
   A. margin.
   B. wage factor.
   C. lost revenue.
   D. money gap.

5 Add a fixed dollar amount to the food cost of an item to calculate the
   A. average cover.
   B. set dollar markup.
   C. contribution margin.
   D. set percentage increase.
Chapter 8 Overview
Chapter 8 introduces the principles and skills needed to successfully produce quality desserts and baked goods for guests.

Section 1: This section covers bakeshop basics, including baker’s ingredients and measurements.

Section 2: This section covers yeast breads—the types of dough and yeast bread preparation.

Section 3: This section covers quick breads and cakes, including batters, icing, steamed puddings, and soufflés.

Section 4: This section covers pies, pastries, and cookies.

Section 5: This section reviews chocolate—preparation and products, storage, and tempering chocolate.

Section 6: This section covers specialty desserts, including frozen desserts, poached fruit and tortes, dessert sauces and creams, and plating and presenting desserts.

Advance Preparation

| Review              | Sections 8.1–8.6  
|---------------------|-------------------
|                     | Level 1, Chapter 11: Potatoes and Grains |
| Contact             | Math teacher, if needed  
|                     | Chemistry teacher, if needed  
|                     | Chocolatier to visit, if possible, or a field trip |
| Prepare             | Paper strips for display  
|                     | Flour and sugar for teaching  
|                     | Scale for weighing flour and sugar  
|                     | 1 lb flour  
|                     | 3 bowls  
|                     | Scales (sensitive, or gram scales from the science department)  
|                     | 1 cup dry measuring cups  
|                     | Paper towel  
|                     | Blade spatula for leveling flour  
|                     | Sifter  
|                     | Chocolate samples  
|                     | Muffin batter for examples |

CUSTOMIZED INSTRUCTION OPTIONS

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<th>More Advanced Students</th>
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CHAPTER TOOLS

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ServSafe Connection

Pages 509, 517, 529, 538, 546
Case Study
Dessert Dilemma

- By not giving full attention to dessert-menu offerings, Kabob could be losing money. Guests who might otherwise purchase dessert after a meal might be skipping it.
- The students might not know the various ways available to restaurateurs to find new dessert ideas.
- Without a pastry chef, they will also need to consider the different sources of dessert items.
- The questions listed can help direct preliminary discussion in the classroom.
- Use the Chapter 5 make-or-buy analysis as a way to demonstrate the usefulness of the skills the students are learning and building on.
- Note that there are follow-up questions about the case study at the end of the chapter.
- This activity could be done in groups, as a class, or as a homework assignment.
<table>
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<th><strong>Professional Profile</strong></th>
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<td>Discuss</td>
<td>Chef Gale Gand has very positive messages for the students. Help them to identify the various positive messages and approaches.</td>
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<tr>
<td>Reinforce and Review</td>
<td>What helps students decide to become pastry chefs?</td>
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<tr>
<td>Teaching Tips</td>
<td>Focus on the role of pastries and desserts in a variety of restaurant and foodservice operations.</td>
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**In-Class Activity: Case Study Affirmations**

21st-Century Skills—Guide and Lead Others, Create Media Products

Choose one or two of Chef Gale Gand’s positive statements as a motto.

If computers are available, have each student create an image of his or her motto. Compile all of the students’ results into a classroom PowerPoint presentation.

If computers are not available, make a poster or word strip to display in the classroom.

Have the students present their choices to the class, explaining how they relate to a culinary career.
Professional Profile (cont.)

Discuss What does Chef Gand teach about pastry and desserts in this section of her profile?

Reinforce and Review Ask them to discuss this idea: 
“. . . trying to make each one more perfect than the last, while conserving as much motion as possible so that you can work as efficiently as possible.”

Teaching Tips Review how this would relate to other back-of-the-house positions.

Focus and Engage

Discuss
- What does dessert mean to people?
- What are the range of ingredients that go into the broad category of desserts?
- Can you think of desserts in other ways than “rich and sinful”?

Section 8.1
Bakeshop Basics

Introduce the Section
a. Chef Gand remarks that the pastry kitchen makes the first and last impression of the meal, from bread to dessert.
b. There are essential and classic ingredients and techniques in baking.
c. Baking involves food science in every step.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
- Desserts set operations above the ordinary.
- The chance for a special dessert after a meal is one of the reasons people celebrate at restaurants.
- Life events and holidays are marked with baked goods, often based in tradition.
Vocabulary Terms

- **Strengtheners**: Agents that provide long molecules to give structure to baked goods.
- **Fats/shortenings**: Lipid agents that make baked goods tender by "shortening" long structure molecules.
- **Sweeteners**: Sugar or sugar substitutes added for sweet flavors. Sugars also lend color.
- **Flavorings**: Extracts, alcohols, oils, or other additives for taste and aroma.
- **Chemical, organic, and physical leaveners**: Agents that add air bubbles to lighten the structure.
- **Thickeners**: Agents that can add long molecules to increase the structure to add body to liquids.
- **Liquids**: Water and other water-soluble liquids to dissolve, moisten, and mix.
- **Additives**: Colorings, conditioners, stabilizers, and preservatives.
Part of experiencing bread differences can be gently tearing the bread from the crust.
The bread must be very fresh for the differences to show.

Discuss
- Discuss the explanation of gluten that is found in Table 8.1.
- Help students understand that flour has gluten already in it.
- Kneading bread helps the gluten form into a structure.
- Kneading does not add or create more gluten.

Vocabulary Terms
- Sweeteners: Sugars and artificial sweeteners that add flavor and color and help with blending and structure.
- Carmelization: The browning that results from heating sugar.
A brief review of chemistry principles will help students conceptually understand leavening agents and their actions.

Homework Activity: Leaveners Venn Diagram Graphic Organizer

Mathematics Connection, Literacy Connection, 21st-Century Skills—Use Systems Thinking

Using the information in Table 8.2, have the students create a Venn diagram graphic organizer about leavening agents.

There should be four overlapping circles.

The common traits will be in the overlapping areas and the differences will be in the unique areas.

Here is an example of such a diagram. The students might find even more information to include:

Vocabulary Terms

- **Leaveners**: Biological or chemical agents that create bubbles of carbon dioxide gas. When resisted by a dough or batter structure, these bubbles cause the dough or batter to rise.

- **Thickeners**: Chemical agents that form long chains or a matrix to give structure and thickness to a food product.
Discuss

• Students might have experience with vanilla extract.
• They might realize that vanilla is added to foods that are not only “vanilla” flavored.
• Can students think of examples of foods that have vanilla extract?
• Vanilla and other extracts are often carried in an alcohol medium. Why?
• Alcohol helps extract the essential aromatic compounds from vanilla beans. The flavor is alcohol-soluble.
• The FDA requires a specific alcohol content for vanilla extract.

Teaching Tips

• Be careful telling high school students about the alcohol content of large quantities of vanilla extract that might be stored in the school pantry.
• Any alcohol-containing products in intoxicating quantities should be in locked storage.

Fast Fact:
Did You Know . . . ?

Perhaps the class would enjoy discussing all the various techniques, processes, discoveries, and experiments that had to occur to create a modern loaf of yeast bread.

Nutrition: Gluten Sensitivity

Protein structures are an interesting area of food chemistry. Science-oriented or advanced students might like to research this aspect of food science a bit further.

Vocabulary Terms

• Flavorings: Give taste and sometimes color to baked goods and other foods.
• Extracts: Oils with essential flavorings of a food item, such as almond or lemon.
• Liquids: Moisture added to mix batters and doughs.
**Vocabulary Terms**

- **Formulas**: Recipes with percentages of ingredients.
- **Baker’s percentages**: Baking recipes that can easily have the yield scaled up or down.
- **Yield**: The quantity, or number of servings, a recipe makes.
- **Sifting**: Passing dry powders through a sieve to loosen clumps and add air.

**Discussion**

- “If I have a pound of flour, that would be my 100 percent proportion for a baking formula.” Show students a pound of flour. Assess for understanding.
- “If my formula now calls for 50 percent sugar, how much sugar would this be if 1 pound is 100 percent?” The answer is ½ pound. Assess for understanding:
  - Example: 0.5 lb sugar ÷ (1 lb flour × 100 percent) = 50 percent sugar
  - This can be turned around to calculate the weight of sugar:
  - Example: 50 percent sugar × (1 lb flour × 100 percent) = 0.5 lb sugar
  - 0.5 can be expressed as ½ lb.
- Remind the students that “percent” means “per 100,” or “divided by 100.” Every percentage is actually another way of expressing the decimal “100ths,” or two places to the right of the decimal point.
- Example: 50 percent = 0.50 = 50/100.

**Teaching Tips**

- Use classroom discussion to ascertain the math numeracy and literacy of the students.
- Work with the class according to their math readiness.
- Some students might not understand percentages. The pizza analogy in the text is good for helping them to understand percentages. For formulas, help the students to see that this requires using another pizza in reference (or comparison) to the first.
- Some students might not be able to discuss proportions with clear understanding.
- The concept of relative percentages might need practice.
- If individual students require more assistance, enlist the help of a math teacher.
- Conversions between fractions, decimal expressions, and percentages might also need clarification for students.
- Use as many real-life visuals and manipulatives as possible. Talk might be confusing to some students.
CUSTOMIZED INSTRUCTION

Mathematics Connection

More Advanced Students

Accomplished math or chemistry students might be interested in applying the principles of dimensional analysis to these baker’s percentage equations. Dimensional analysis is a process of unit conversions used in chemistry that places all the operations into one equation. This method is sometimes also known as “reducing” or “factor label” or “unit factor label” or “unit conversions.”

The setup looks like this, with the units of measure labeled:

![Dimensional Analysis Setup]

Keep in mind that the 10 lb is a whole number and not a portion, so it acts as a numerator.

Note that the units lb and % each appear in both numerator and denominator, so they cancel.

Please recall that the vertical line means “divided by.”

The operations can now be performed with or without a calculator in the correct order as follows: \(10 \times \frac{0.45}{100} \times \frac{16}{1} = 7.2\)

The only units that remain after canceling are ounces, so 7.2 indicates the number of ounces: 7.2 ounces.

Although perhaps difficult to grasp at first, dimensional analysis simplifies the operations, eliminates repetitive equations, and keeps the units in order. Practicing this is worth a try.

---

In-Class Activity: Working with Baker’s Percentage Formulas

Mathematics Connection

Using the sample recipe in Table 8.3, scale the recipe several ways for different yields. Use the math examples to perform the required math.

Example: To double the yield, you would multiply each ingredient amount by 2. This is not so difficult. The 2 ounces of dry yeast would become 4 ounces, and so on. Multiply everything by the factor of increased yield.

However, if the desire is to make the dough using 10 pounds of flour, then the conversions need to use the percentages. For dry yeast:

- 4.5 percent = 0.045
- 0.045 dry yeast \(\times\) 10 lb = .45 lb dry yeast

The conversion of pounds to ounces is 16 ounces = 1 pound.

To convert this to ounces, multiply 16 oz \(\times\) .45 = 7.2 oz dry yeast

The recipe can also be decreased.

For example, if the baker would like to use 1 pound of flour:

- 0.045 dry yeast \(\times\) 1 = 0.045 lb dry yeast
- 16 oz \(\times\) 0.045 lb dry yeast = .72 oz dry yeast

ServSafe Connection: Safe Baking

Some bakers like to use gloves for the process.
**Essential Skills:**

**Sifting: Why It Matters**

Sifting breaks up clumps, and baking soda and baking powder tend to clump. They taste very soapy in a clump.

---

**Discussion**

- Sifting used to be required to remove debris from flour and other dry ingredients. Why is it still done? Flour today is clean. What are the advantages of sifting flour?
- What are the advantages of sifting dry ingredients together?
- What if there are still clumps of baking soda or other dry ingredients remaining in the bottom of the sifter? What should be done with those ingredients?

**Teaching Tips**

- Clumps should never be dumped into the dry ingredients.
- If they can be forced through the sifter and broken up, they can join the rest of the dry ingredients.
- If there is a large amount of any ingredient remaining in the sifter that might alter the recipe, break it up and sift it through.
- If there is a negligible amount of any ingredient remaining in the sifter, discard it.

---

**Figure Focus**

**Figure 8.1:** Flour and dry ingredients should be sifted carefully to prevent flying flour landing on surfaces.
Summary

- Remind students to review the following:
  1. Baker’s ingredients
  2. Baker’s measurements

In this section, you learned the following:

- There are eight main categories of ingredients used in baking:
  - Strengtheners provide stability and ensure that the baked item doesn’t collapse once it is removed from the oven. Flour is a main ingredient used in baking.
  - Shortening makes baked goods moist, adds flavor, and keeps the baked item fresh longer. Any fat, such as oil or butter, acts as a shortening in baking.
  - Sweeteners include refined sugars, sugar syrups, molasses, brown sugar, corn syrup, honey, and malt syrup (usually used in yeast breads). Sweeteners add flavor and color to baked goods. They also help the shortening blend with other ingredients, and make the product soft and tender.
  - Leaveners are necessary in baking because they allow the dough or batter to rise. Leaveners fall into three categories: chemical, organic, and physical. Baking soda and baking powder are the main chemical leaveners; yeasts comprise the organic leaveners; the basic physical leaveners are air and steam.
  - Thickeners include gelatin, flour, arrowroot (a powdered starch made from a tropical root), cornstarch, and eggs. Thickeners, combined with the stirring process, determine the consistency of the finished product.
  - Flavorings, such as spices, salt, and extracts, affect a baked item’s taste and color.
  - Liquids are one of the most important elements used in baking. The liquid used in baking can be water, milk, cream, molasses, honey, or butter. Liquid is used in baking to provide moisture to the product and to allow the gluten to properly develop.
  - Additives include substances such as food coloring, which may add to the appearance of baked goods.

- Standardized recipes, or formulas, for bakery products are set up a bit differently than those for other food items. Proportions for each ingredient are given in the form of percentages. In baking, flour always has a proportion of 100 percent, and the percentages of all other ingredients are given in relation to the flour. These are known as baker’s percentages. Understanding baker’s percentages makes it easy to calculate the weight of any ingredient or to convert a formula to a new yield, which is how much a recipe produces.
Section 8.1 Review Questions

1. Leaveners help baked goods to rise.

2. Flour is the most basic strengthen.

3. Thickeners include gelatin, cornstarch, arrowroot, eggs, and flour.

4. The baker’s percentage is based on the weight of flour used, which represents 100 percent.

5. Each student will have a unique opinion about this.

6. Students can list any ten of the ingredients from seven main categories of ingredients, and the list should include at least one from each category:
   - Flour
   - Shortening
   - Butter
   - Oil
   - Lard
   - Sugar
   - Sugar syrup
   - Molasses
   - Brown sugar
   - Corn syrup
   - Honey
   - Malt syrup
   - Artificial sweeteners
   - Baking soda
   - Baking powder
   - Dry yeast
   - Gelatin
   - Arrowroot
   - Corn starch
   - Eggs
   - Milk
   - Cream
   - Salt
   - Spices
   - Vanilla extract
   - Other flavoring extracts

7. Durum flour is made from durum wheat, which is a hard wheat that is high in gluten. It is used for chewy breads, pasta, and other baked goods that benefit from its elasticity, sheen, and fine finish. It is also called semolina flour.

8. Flour is the most abundant ingredient in most baked goods.
Section 8.1 Activities

1. The activity is more specifically described here:

CUSTOMIZED INSTRUCTION

Science Connection

Less Advanced Students, Special Needs Students, ESOL Students

Needed:
1 lb flour
3 bowls
Scales (sensitive, or gram scales from the science department)
1 cup dry measuring cups
Paper towel
Blade spatula for leveling flour
Sifter

Group the students in pairs, partnering a less advanced student with either an ESOL student (of any ability level) or a special needs student (regardless of accommodation required; hearing impaired will require an interpreter).

The less advanced student acts as “lead” and verbally explains the process as they perform the following experiment. The ESOL and special needs students can participate in the hands-on functions.

Place the empty 1 cup dry measure on the scales and zero, or “tare”, the scales.

Divide the 1 pound of flour equally between two bowls, each bowl containing ½ pound of flour.

Sift one of the ½ pound bowls of flour into the empty bowl.

Carefully fill the measuring cup with unsifted flour.

Weigh the flour to the furthest decimal available on the scales (some measure hundredths of grams).

Record exact weight to the furthest decimal.

Return the flour to the unsifted bowl and completely knock out the remaining flour.

Gently remove remaining flour with a dry paper towel.

Carefully fill the measuring cup with sifted flour.

Weigh the flour to the furthest decimal available on the scales.

Record exact weight to the furthest decimal.

Compare the two weights.

Is there a weight difference between the unsifted and the sifted flour?

Each student should express a conclusion about sifting flour.

2. Each student will have a unique answer depending on the sweetener he or she chooses. Have students provide their sources and references that support their work. Check their sources for accurate information.

3. The mise en place would be the same as for other white rolls. The Parker House technique is an off-center fold of the roll before baking. The recipe at the end of the chapter for soft yeast dinner rolls can be used as a guide.
Section 8.2
Yeast Breads

Introduce the Section
a. There are several types of yeast-bread dough that will be introduced in this section.
b. Yeast bread preparation follows time-honored techniques.
c. Yeast bread techniques are ancient, and yet continue to be innovative.
d. Small variations in technique can change a bread.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
• Ask students how many of them have eaten yeast bread in the last 24 hours.
• Yeast breads are one of the most common, and most cross-cultural, foods on the planet.

In-Class Activity:
Cross-Cultural Varieties of Lean and Rich Breads
Literacy Connection, 21st-Century Skills—Global Awareness
Divide the students into groups.
Have each group find five types of yeast breads from any nation or culture.
Have the students identify:
• The name of the bread (for example, challah).
• The nation or culture.
• The use of the bread (daily fare, special celebration, etc.).
• Whether or not the bread is a lean dough or a rich dough.
Present findings to the class.

Vocabulary Terms
• Lean dough: A dough with little or no fat or sugar.
• Rich dough: A dough with shortening or other fat, plus other rich ingredients like eggs or milk.
Figure Focus

**Figure 8.2a:** Kneading dough by hand. This can also be done with a dough hook in a large mixer.

**Figure 8.2b:** A measured and floured portion of kneaded dough resting, awaiting the next step.

**Figure 8.2c:** Dough rising in a pan.

**Teaching Tips**

- The various methods of dough mixing should be demonstrated in the classroom to the students.
- If there is a mirror, perhaps the students can see from where they sit.
- If the school is equipped, an overhead document camera and screen could also make the process visible to the students.
- If there is no mirror or camera, gather the students around so they can see and experience the various methods as much as possible.

**Essential Skills:**

**The Straight-Dough Method**

The size of the "bowl" depends on the size of the operation or bakery. The dough can be made in a bowl for a few servings, up to a large drum for a major bread producer. Regardless of the size of the batch of dough, the straight-dough mixing method remains the same.

**Vocabulary Terms**

- **Straight-dough method**: A bread mixing method that mixes all the ingredients at once.
- **Kneading**: Working bread dough to develop a gluten protein molecular web-like structure.
Reinforce and Review

- The temperature referred to here is the room temperature, or the temperature in the proofing box.
- There is some heat generated by the yeast growth, but dough needs to be in a warm place to rise.
- Large-scale bakeries will have large proofing boxes.

Homework Activity:
Sourdough In Song and Story

Literacy Connection
Sourdough has played a role in American history. Because a crock of sourdough can travel well, Western pioneers often carried sourdough starters. San Francisco has a lush Gold Rush and sourdough history that is influenced by the Bay Area climate. The Alaskan Gold Rush also has a rich sourdough tradition. The Amish of Pennsylvania and Indiana use a sourdough starter as a gift of friendship. Sourdough shows up elsewhere, too. Research and explore an aspect of sourdough in the United States. Write a poem, song, skit, or story about some aspect of sourdough in the United States. Present your creation to the class, either individually or in groups.

Vocabulary Terms

- **Sponge method**: A two-stage method for mixing bread dough, beginning with yeast and a portion of ingredients. This mixture grows and creates a sponge-like curd.
- **Sponge**: The yeast, flour, and liquid curd that is actively growing, ready for the addition of more ingredients.
- **Sourdough**: A sour-tasting dough or batter made with a special fermented yeast culture called a starter.
- **Starter**: The fermented yeast mixture that is portioned out for sourdough baked goods. A portion always remains as starter and is “fed” for future use.
- **Proof**: The second raising of dough, usually done in the baking pan or on the baking stone.

Figure Focus

**Figure 8.3**: The pan on the left has dough that has been kneaded and portioned, and allowed to rest before being put in the pan. The pan on the right is the same dough after the proofing, or second rising, ready to bake.
Fast Fact: Did You Know . . . ?
Sourdough starter, a wet curd, was anciently stored in earthen pots. It still is.

Nutrition: Bran, Phytic Acid, and Yeast
It is clear to see that nutrition is not a simple, nor always intuitive, science. Nutrition advice and guidance can be provided to a restaurant or foodservice operation by a registered dietitian.

ServSafe Connection: Making Bread in the Danger Zone
Keeping all surfaces, bowls, pans, and bread-making equipment clean and sanitized is essential. Everything grows, both good microbes and bad, in the temperature zone needed for bread yeast growth.

Teaching Tips
- If at all possible, take the students on a field trip to a bakery.
- If not, perhaps the students could arrange to visit a bakery operation on their own.
- At the bakery, the students should observe how and where the yeast dough is proofed.
Essential Skills: Making Yeast Breads

Encourage students to discuss the following:

- The ancient science of bread-making has required and time-tested steps.
- Attempting to shortcut the process in the interests of time usually does not work.
- Bread recipes are very specific and sensitive to small changes.
- Additionally, very small differences in ingredients, proportions, and methods produce vast changes in the finished products.
- Bread recipes must be carefully developed and recorded, then faithfully followed.
- Even weather conditions can affect the end result.

Discuss

- Ask students how many shapes of yeast breads there are.
- Discuss and, if possible, show pictures of various shapes.
- There are rounds, baguettes, loaves, braids, twists, rings, rolls, rolls made in muffin tins, and so on.
- Perhaps students can think of other shapes that have not been mentioned.

Figure Focus
Figures 8.4a–8.4h: Review with the students the steps to making yeast bread. If possible, have students make bread in class, or at home.
Reinforce and Review

- Rye bread is made from rye, which is a grain that is darker than wheat and has less gluten.
- Rye bread is made from a mixture of rye flour and wheat flour.
- Rye also has a full-bodied, slightly grassy flavor.
- Caraway seeds are often mixed into rye bread dough.
- The caraway seeds are not the rye. Rye bread does not always have caraway seeds, either.

On the Job:
The Baker’s Corner

Becoming acquainted with the science and art of bread-making requires practice, attention, and mentoring. There are food science principles that can be learned as students gain practical experience.
**Essential Skills:**

**Making Lighter Stone-Ground Whole Wheat Bread**

If dough is put into an oven that is still too cool, the short gluten structure will allow the yeast gases to expel before they do the work of raising the structure.

Too hot an oven will burn the crust while the inside will be too dense to cook entirely.

It’s a delicate balance with a whole-grain dough. Trial and error with the exact conditions of a kitchen’s own ovens and the region’s climate will determine how to ensure success.

**Reinforce and Review**

- Slice warm whole wheat bread carefully with a sharp bread knife to prevent smashing the warm loaf.
- Turn the loaf onto its side and start the sawing motion in the air before making contact with the bread.
- Let the knife blade gently “bite” into the crust and do the work without pressure.

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**Figure Focus**

**Figure 8.5a:** Proper kneading is especially important for whole wheat dough so that it won’t be too heavy.

**Figure 8.5b:** Proofing can make the loaf lighter.

**Figure 8.5c:** An inviting slice of whole wheat bread.
Summary

• Remind students to review the following:
  1. Types of dough
  2. Yeast bread preparation

In this section, you learned the following:

- Yeast is a living organism that acts as a leavening agent, allowing baked goods to rise. Breads that use yeast are called yeast breads. Yeast breads are divided into two categories—lean doughs and rich doughs.
  - Lean doughs are made with flour, yeast, and water. They have very little or no sugar or fat. Breads made from lean dough tend to have a chewy texture and a crisp crust. French bread and hard rolls are examples of lean doughs.
  - Rich doughs are made with the addition of shortening or tenderizing ingredients such as sugars, syrups, butter, eggs, milk, and cream. Introducing these ingredients changes the bread’s overall texture, as well as the way the dough is handled. Rich doughs should have a cake-like texture after baking. Parker House rolls, cloverleaf rolls, soft rolls, and Danish are examples of rich doughs.

- Yeast breads are most often made using two primary methods—the straight-dough method or the sponge method:
  - Bakers use the straight-dough method for all types of dough: lean, rich, and sponge. When using the straight-dough method to mix dough, a baker can combine all ingredients at the same time, or he or she may mix the yeast with warm water first, at a temperature of 138°F. (Some yeasts require a different temperature.) After the dough is mixed, it must be kneaded until it is elastic and smooth.
  - Bakers use the sponge method to mix yeast batters. In the first stage of this method, mix the yeast, liquid, and half of the flour to make a thick batter called a sponge. After the sponge rises and doubles its size, add the remaining fat, salt, sugar, and flour. Knead the dough and leave it to rise. Breads made with the sponge method have a lighter texture and more unique flavor than breads made using the straight dough method.

- There are 10 basic steps in making yeast breads:
  1. Scaling ingredients
  2. Mixing and kneading ingredients
  3. Fermentation
  4. Punching down
  5. Portioning
  6. Rounding
  7. Shaping
  8. Proofing
  9. Baking
  10. Cooling and storing
Section 8.2  
Review Questions

1. Two basic kinds of bread dough are lean and rich.

2. Lean dough does not have oil, butter, or other fat in it.

3. Straight dough is mixed all at once. The sponge method creates a yeast and flour sponge with a portion of the ingredients. The rest are added in the next phase of mixing.

4. These are the ten steps of making yeast breads:
   1. Scaling ingredients
   2. Mixing and kneading ingredients
   3. Fermentation
   4. Punching down
   5. Portioning
   6. Rounding
   7. Shaping
   8. Proofing
   9. Baking
   10. Cooling and storing

5. Each student's answer will be unique.

6. This answer will require information from Chapter 5.

7. This answer will be based on the opinion of each individual student.

8. Students should mention that bread would be flat, tough, and heavy.
Section 8.2 Activities

1. Level 1, Chapter 2 in the teacher’s edition has a formalized yeast colony experiment (“The Growth of Microbes” on p. 82) that can be accessed for this activity, if desired, for more support.

2. Each answer will be a bit different. Note that the students take the process back to historically ancient times. Also check that the timeline is mathematically and visually correct, rather than haphazard or messy. The connection to math is subtle but important as the students calibrate their timeline in a meaningful way.

3. The students might recommend or warn against adding preservatives to bread, depending on their personal leanings and their research. Encourage students to provide their sources of information. Recommend that they check out the Food and Drug Administration list of additives that are generally recommended as safe.
Section 8.3
Quick Breads and Cakes

Introduce the Section
a. Quick breads are batter breads that are not kneaded.
b. Cakes are tender, baked batter desserts.
c. There are mixing methods that produce the best results.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
• Cakes and quick breads are baked chemistry projects.
• Their success depends on properly mixing the correct ingredients.
• There is minimal mixing and no kneading. Even though they are made with flour, gluten is not developed.

Vocabulary Terms
• Quick breads: Chemically leavened breads that are not kneaded.
Homework Activity: Researching Batter Preparation Methods

21st-Century Skills—Information Literacy

Students can research and find at least one recipe for each of the four methods presented in Table 8.4. These four recipes should be something that appeals to the student for future trial, to perhaps add to their recipe collection.

Table 8.4: The Four Methods for Preparing Quick Bread and Cake Batters

- In all methods, the mixing should be the optimal time according to the recipe. Overmixing can make quick breads and cakes tough.

Reinforce and Review

- The “biscuit method” mentioned, which is used for biscuits and scones, bears more similarity to pie crust and pastry mixing than to batter breads.
- The students will have a greater understanding of mixing fat into flour after the section on pie crusts.
- However, biscuits and scones are often chemically leavened like quick breads, which pie crusts are not.
- They also serve a place in cuisine similar to muffins or rolls, rather than desserts.

Vocabulary Terms

- Creaming method: The method that creams fat and sugar first, before liquid and dry ingredients are added.
- Foaming method: A cake made with an egg foam structure.
- Straight-dough method: The method involving mixing all batter ingredients at once.
- Two-stage method: Mixing fat with dry ingredients and a portion of the liquid, then adding the remaining liquid. Makes a fine crumb and is good for high-sugar cakes.
- High-ratio cakes: Cakes with a higher ratio of sugar to flour.

Fast Fact: Did You Know . . . ?

The name “scone” does not always apply to a sweet biscuit-type quick bread. In the mountain states of the United States, a scone is made of squares of deep-fried yeast dough. These types of scones are served with whipped honey butter, or with powdered sugar and jam.
**Nutrition: The Muffin Exposé**

Commercially prepackaged muffins should have a Nutrition Facts panel disclosure. Those made in a bakery might not. Recipe analysis software can calculate the nutrition data, which can make the disclosure available to any guest who might request the information.

**Trends: Flourless Chocolate Cake: A Decadent Dessert Statement**

This dessert is usually baked in a cake-shaped pan in a bain-marie to add moisture to the baking process.

**Discuss**

- The generic term “topping” is sometimes substituted for icing, frosting, glaze, sauce, condiments, garnishes, and even meat and cheese options on a pizza.
- Do you think all these things should be lumped into one term?
- Is it more efficient or less so?
- Does it describe these things accurately or not?
- Is efficient communication that which uses the fewest words, or that which is the most accurate?
- Encourage the students to be specific and accurate when they refer to icings, coatings, and other enhancements.

**Vocabulary Terms**

- **Icings**: Frostings, coatings, or glazes for cakes and pastries.
Table 8.5: Types of Icings

- Icings come in several varieties. Decisions about which icing to use are often visually artistic choices rather than purely flavor or texture choices.

CUSTOMIZED INSTRUCTION

Literacy Connection

ESOL Students and Less Advanced Students

Do you know your ganache from your fondant? Like a spelling bee, have students individually stand to spell and define the various icing terms and vocabulary words in Table 8.5.

For example, if given the word “buttercream,” the student should respond: “Buttercream: b-u-t-t-e-r-c-r-e-a-m. Buttercream. A popular icing made of sugar and fat, usually butter or shortening.”

Determine whether or not you want your students to repeat the information exactly from the table, or just give the gist.

When a student makes an error, he or she is asked to sit down. The last student standing is the winner.

This could be done in teams, if desired.

Vocabulary Terms

- Buttercream: Fat (butter is best) and confectioner’s sugar icing that can be colored, flavored, or both. It is spread with a thin-blade spatula or piped from a bag.
- Foam: Boiled sugar syrup icing.
- Fondant: A corn-syrup based, candy-type sheeting that is cooked, spread, and cooled and can be applied over a cake for a smooth finish that encases that cake.
- Fudge: A cooked chocolate confection that can be spread while warm. A brown-sugar variant without chocolate is called penuche.
- Ganache: A rich mixture of chocolate and cream.
- Glaze: An icing that is drizzled rather than spread or piped. It might harden a bit on the surface, but stays moist underneath.
- Royal icing: A mixture of confectioner’s sugar and egg white that can be colored. It dries hard and smooth.
### Essential Skills: How to Make a Dessert Soufflé

The chimney is actually a vertical extension of the sides of the soufflé dish for support.

### Teaching Tips

- Talking about soufflés is not as effective as making them with the students.
- There might be enough time in a class period to try one.
- This chapter does not have a specific recipe for a soufflé, so find one that works well in your local climate and at your altitude.
- Be sure and have a camera ready to photograph each soufflé as it comes out of the oven.
- Take photos a few moments later, if possible, to show the students the life span of a puffy creation like this.

### Vocabulary Terms

- **Steamed puddings**: A steamed, cake-like batter dessert often served with a sauce or glaze.
- **Soufflés**: A baked egg structure.

### Figure Focus

**Figure 8.6a**: The soufflé base is prepared.

**Figure 8.6b**: The pan has a chimney added to extend the sides upward.

**Figure 8.6c**: Egg whites are whipped until peaks form.

**Figure 8.6d**: Fold egg whites into the base.

**Figure 8.6e**: A soufflé ready for a guest.
ServSafe Connection: Handling Custard-Based Pies

If it appears that leftovers might be a problem, consider making individual tarts. Then the shells can be filled individually as the guests are ready to eat them.

On the Job: Keeping a Soufflé Light and Fluffy: The Life of a Pastry Chef

Try baking a soufflé and see how easy or difficult it is.

Use a recipe that is adapted to your locale.

Discuss

- If you were able to make soufflés with the class, did the students enjoy the experience?
- Have them do a “postmortem” discussion about the experience.
- Debrief them, compare notes, and let their thoughts settle.
- You might find their excitement level high when the beautiful creation comes out of the oven.
- Did they enjoy eating it? That is the ultimate test: Is it good food?
- During the debriefing, students might have “down to earth” opinions and ideas for next time.
- Their attitudes are just like the soufflé itself: Exciting and high, then more stable and settled.
Summary

- Remind students to review the following:
  1. Quick breads and cake batters
  2. Icing
  3. Steamed puddings and soufflés
Section 8.3
Review Questions

1. There are several differences: Chemical leavening vs. yeast leavening; Very light mixing vs. kneading; Immediate baking vs. rising time; Tender crumb vs. elastic texture. Students might have additional ideas.

2. See Table 8.4 for specifics.

3. The primary functions of icing are protection, flavor, and appearance. Students might express these ideas in slightly different language.

4. Steamed puddings have more whole eggs and sugar in the batter. Also, they are not dependent on the delicate mechanical leavening of beaten egg whites.

5. Students might have some creative ideas about this. Most typical would be decorated cakes and cupcakes.

6. Each student will have a unique answer. With the delicate, labor-intensive preparation and need for timely serving, this might not be the best dessert choice for Kabob. However, there might be students who make a strong case in favor of offering soufflé.

7. Buttermilk provides acid to react with baking soda to produce carbon dioxide, which will leaven the bread batter. Milk with a little vinegar or lemon juice will do the same thing. Also, fruit juices or even certain types of puréed fruits might provide enough acid for this reaction to occur. Even cream of tartar could be used. Not all recipes have buttermilk, or even acid. If the recipe uses only baking powder, there doesn’t need to be additional acid. Baking powder has the acid in it, and the reaction is activated by heat and moisture.

8. The students will have various opinions about this. The steamed pudding is more stable, but the soufflé is more spectacular.
Section 8.3 Activities

1. Tunnels are holes or channels made by escaping gas bubbles. When the gluten is overly developed, the batter structure does not allow the gas bubbles to evenly float to the top. They have to “dig their way out.”

2. This is a good, simple activity. It teaches the importance of time planning and remaining on task while baking. It doesn’t work to activate the chemical leavening, and then leave the batter sitting to do something else. This is one reason why the baking pans should be prepared and the oven preheated before the batter is mixed.

3. The scone is a small British quick bread (or cake if recipe includes sugar) of Scottish origin. Scones are especially popular in the United Kingdom, Canada, Australia, New Zealand, Ireland, and the United States, but are eaten in many other countries. British scones are often lightly sweetened, but may also be savory—for instance, cheese scones. In the United States, scones are drier, larger, and typically sweet, sometimes including pieces of fruit or chocolate.
Section 8.4
Pies, Pastries, and Cookies

Introduce the Section
a. Pies are made with a classic pie crust pastry.
b. Pastries have specific types of dough for the type of pastry.
c. Cookies are a very popular and simple dessert option, especially for a quick lunch. Many of the students will have experience with making cookies.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
• “As American as apple pie.” Have students heard this statement before reading it in the textbook?
• Have they eaten apple pie? Do they like apple pie?
• Say to the class, “Isn’t wheat flour a magical thing?” See how the students respond.
• It can develop gluten and be elastic for bread. It can form a cohesive batter and bake into a fine crumb for cakes and quick breads. It can also form a rollable crust that is tender with golden flakes. It all depends on what it’s mixed with and how it’s mixed.

Reinforce and Review
• Pie crusts are a special variety of pastry: tender, not kneaded, and flaky.
• Pie crusts themselves are usually not sweet. They help temper the sweetness of the fillings.
• A good pie crust is flavorful yet mild, flaky and light, and golden brown.

Vocabulary Terms
• 3-2-1 dough: Pie crust with the ratio of 3 parts flour, 2 parts fat, 1 part water.
Essential Skills: Making Pie Dough

The essence of pie crust is light handling and rolling to maintain the flakes, caused by fat preventing the gluten from forming long strands. The fat keeps it “short,” which is why it’s called “shortening.” Overmixing will defeat the purpose and develop the gluten, causing it to be tough.

Reinforce and Review

- The cutting process of mixing solid fat into flour is the same process used when making biscuits and scones, as mentioned earlier.
- The cutting keeps the fat in small pieces.
- During baking the pieces melt, forming tiny divisions or layers, which are perceived as “flakes.”
- Biscuits, scones, and pie crusts should be tender and flaky, not tough or heavy.
- Biscuits and scones are leavened.
- Pie crusts are not leavened, so they remain flat.
- If a pie crust bubbles up during baking, it is because air was trapped underneath it or within it. Good rolling, then weighing down the crust with filling, helps prevent this.
- A few tiny air holes pierced in the crust helps when baking an unfilled pie shell. So do weights (and see the next page for “baking blind” and “docking”).

Figure Focus

**Figure 8.7a:** Cutting the fat into the flour.

**Figure 8.7b:** Gently and barely mixing the dough without kneading.

**Figure 8.7c:** Quickly rolling out the dough without overworking.

**Figure 8.7d:** Placing the crust into the pie pan.

**Figure 8.7e:** Completing the top of the pie before baking.
Figure Focus

Figure 8.8: This type of pan comes apart, so that it comes “off” the cheesecake. This way the cheesecake isn’t disturbed.

Homework Activity: Käsekuchen und Quark

21st-Century Skills—Global Awareness

This means “Cheesecake and cream cheese.” It is pronounced KAY-zeh-KOO-khen oond kwark. Germany is famous for its cheesecake. Have the students investigate why this is true. They can look at ingredients, techniques, equipment, cultural flavor preferences, and so on.

New York City is also famous for its cheesecake. How does New York cheesecake differ from German Käsekuchen?

Vocabulary Terms

- **Baking blind**: Baking a pie shell for filling later. It is covered and can’t be observed during baking.
- **Dock**: Piercing the pie shell before baking.
- **Quark**: A mild, fresh cheese dairy product.
Fast Fact:
Did You Know . . . ?
Keep in mind, however, that most slices of pie are larger than an ounce.

On the Job:
Making Great Pies
It is not uncommon to see guests eat the inside of the pie and leave the crust. The crust should be flavorful, flaky, and a perfect complement to the filling. A well-made pie crust will be happily eaten, down to the last flake.

Reinforce and Review
- Students will note that many of the same ingredients are used in pie crust and pastry dough.
- The differences between the different foods are not in the ingredients.
- Mixing order and method make a difference, as do handling techniques.
- Even temperature, humidity, and equipment make a difference.
- Observe an expert pastry chef make it look easy, and then try it yourself.

Vocabulary Terms
- **Roll-in dough**: A dough that is rolled and folded into layers.
Figure Focus
Figure 8.9: These pastries are each delicate and tender, yet flavorful and rich.

Figure 8.10a: Blend the dough until it is smooth.

Figure 8.10b: Roll out the dough evenly.

Figure 8.10c: Fold the dough.

Figure 8.10d: After it’s folded, cutting the dough makes layered pieces.

Discuss
- Can the students think of any examples of puff pastry used for a savory dish?
- Perhaps they have tasted sweets made with puff pastry or phyllo dough.

Essential Skills: Making Roll-In Dough
In Austria and southern Germany, this type of dough is used for traditional Apfelstrüdel.
Rather than rolling it, it is worked over the fists. It becomes so thin you can read a newspaper through it.
It is rolled over itself to form the layers of crust for the dessert.

Vocabulary Terms
- Puff pastry: A delicate layered pastry crust that can be used for sweet or savory dishes.
- Pâte feuilletée: Another name for puff pastry.
- Phyllo: A type of crispy layered pastry.
- Pâte à choux: An egg batter-type pastry.
- Profiteroles: Ice cream pastry.
ServSafe Connection: How to Care for Cheese Danish

Second-day Danish that has been refrigerated can be gently warmed through, but not warm enough to melt or cook the cheese filling.

Nutrition: Budgeting for Desserts

Beautiful desserts are not generally “snack foods,” nor should they be. They are a complete course of a fine meal. They are a special indulgence for guests to enjoy in a relaxed, unhurried, and congenial way.

Discuss

- Students might realize that cookies are efficient desserts to make.
- See if they understand why they are efficient. (You can make so many of them at a time.)
- Perhaps students will consider that this is cost-effective in many cases.
- Help students realize that there is great skill involved in making fine cookies, even if they seem simple and commonplace to bake.
- However, students probably have enough experience with cookies to be able to describe a truly bad cookie.
- What are the traits of a truly bad cookie? Students might mention these things, among others:
  - Burnt
  - Underdone
  - Tough
  - Boring
  - Too sweet
  - Icing too thick
  - Too crispy and fragile
  - Lump of baking soda
  - Stale
  - Greasy
- As a class, see if students can brainstorm ways to remedy these various problems.
- Assure them that if they don’t understand the remedies yet, they will after studying the textbook.
- Encourage them to bake cookies at home after studying their text.
Table 8.6: Types of Cookies

Encourage students to discuss the following:

- Which cookies are they most familiar with?
- Which are the easiest to make?

Teaching Tips

- Teaching teenagers about cookies doesn’t need much textbook support. Have fun.

Vocabulary Terms

- Bagged: Cookies made from piped dough.
- Bar: Cookies made from a long piece of dough, sliced after baking.
- Dropped: Cookies made by spoonfuls of dough.
- Icebox: Cookies made from chilled dough.
- Molded: Cookies shaped by hand or in a mold.
- Rolled: Cookies made from rolled and cut dough.
- Sheet: Cookies made from spreading dough, baking it, and slicing it into servings.
Summary

- Remind students to review the following:
  1. Pies
  2. Pastries
  3. Cookies

In this section, you learned the following:

- Make pie crusts using a basic pie dough called 3:2:1 dough. It’s called this because it is made of three parts flour, two parts fat, and one part water (by weight). Made properly, the crust is flaky and crisp. It is important to use pastry flour and work the dough as little as possible. Make sure both the fat and liquid are cold when mixed into the dough. The fats used are shortening, butter, or lard, and the liquid is usually water, milk, or cream. Many pies use fruit fillings. Prepare these fillings using sliced and peeled fresh fruit that is either poached with a liquid or allowed to cook as the entire pastry bakes.

- Use the roll-in dough method for Danish, croissant, and puff pastry. Proper mixing methods, rolling techniques, and temperature control are necessary to produce a flaky, quality product. Roll the dough out into a large rectangle. Then, fold the dough over in thirds, roll it out again, and then fold it the appropriate number of times to create the shape the recipe calls for. Pastry chefs also commonly use other doughs, such as phyllo and pâte à choux, for pastries. Use phyllo dough to prepare baklava, a dessert made of thin pastry, nuts, and honey. Make pâte à choux by combining water (or another liquid), butter, flour, and eggs into a smooth batter.

- Pastry chefs make most cookies from rich dough. Typically, rich dough uses the same creaming method as quick breads and cake batters, but with the liquid and the flour added at the same time. The creaming of the dough determines the texture of the cookie and how much it will spread in the pan during baking. Cookies should be colorful and appetizing. Due to their high sugar content, cookies are best when they are baked in convection ovens. There are seven makeup methods for cookies: dropped, bagged, rolled, molded, icebox, bar, and sheet.
Section 8.4
Review Questions

1. Pie crusts are usually made from 3-2-1 dough.

2. By weight, 3-2-1 dough is 3 parts flour, 2 parts fat, and 1 part water.

3. Roll-in dough makes Danish, croissants, and puff pastry.

4. Each method is described in Table 8.6.

5. Each student’s findings will be different.

6. Each student’s answer and opinion will be different.

7. More air is incorporated between the layers.

8. Students might need to research this for more information than is found in the text. The lard fat is saturated and hard at room temperature, but does not have the milk solids of butter (which can burn). Tiny particles of lard melt as the dough is baking in a way perfect for making flaky layers of crust. Shortening is a hydrogenated vegetable fat, so it is saturated but has a lower melting point. It can turn a crust slightly soggy in comparison. However, a shortening crust can still be very good.
Section 8.4 Activities

1. Students might need to do some additional research to learn about emulsified shortening. It is also known as cake, icing, or high-ratio shortening. Emulsifying means that it can mix with water, whereas other fats separate from water. It can mix better with sugar and liquid than regular shortening. It gives a fine and smooth texture to cakes. It can keep cakes and icings moist and stable, resistant to separation. However, it should be used in icings and high-ratio cakes where the recipe contains a large percentage of sugar.

2. Here is some information about Linzer Augen, pronounced LINT-zer OW-gan. Linzer means from the city of Linz (“lintz”). Augen means “eyes.” These cookies look sort of like eyes, as they are a flat butter cookie topped with raspberry or apricot jam, then topped with a ring of cookie dough and baked. They are then dusted with confectioner’s sugar.

There are cookies from all over the world that the students might research.

3. Use the information in Table 8.6 as a starting point for this research.
Section 8.5
Chocolate

Introduce the Section
a. Chocolate is a food that evokes romance, mystery, and even love.
b. Chocolate is usually included on any dessert menu.
c. Knowing how to handle, store, and cook with chocolate is a foundation of dessert craft.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
- Chocolate is actually a South American bean product that has flavorful solids and rich fat.
- Chocolate also has very mild drug properties, due to theobromine and traces of caffeine.
- The “theo” part of theobromine means “gods,” and chocolate is nicknamed the food of the gods.
Figure Focus

**Figure 8.11:** From harvesting cacao beans to finishing fine chocolate, the process is highly specialized.

### Table 8.7: Chocolate and Related Products

- Each aspect of Table 8.7 involves industrial food science know-how.

### Reinforce and Review

- Chocolatiering is a science, skill, craft, art, and entire industry.
- A chef can build an entire career on chocolate.

### Teaching Tips

- If there is any access, a tour of a chocolate factory or processing plant would be valuable.
- Perhaps a local chocolatier would be willing to guest lecture the class.
- A video presentation about chocolate making would also be effective.
- There are also Web sites by chocolatiers that show the process of making chocolate from harvesting and processing of cacao beans and working with chocolate, all the way to manufacture of the finished product. At the time of publication, two such sites of interest are www.demel.at (translate page to English, or choose the English option or the New York location) and www.amanochocolate.com.
- Cocoa powder is shelf-stable, whereas cocoa butter itself is vulnerable to deterioration.

### Vocabulary Terms

- **Nibs:** Pieces of cocoa beans.
- **Chocolate liquor:** Cocoa bean paste.
- **Cocoa butter:** The fat, or lipid, portion of cocoa beans.
- **Cocoa powder:** Ground chocolate solids.
Essential Skills: Tasting Chocolate

Chocolate tasting is a specialized skill. It has a specific vocabulary that is understood in the industry, similar to wine tasting or coffee tasting.

Figure Focus

Figure 8.12a: Chocolate for tasting is in small pieces, but enough for a good evaluation.

Figure 8.12b: Water is a good way to cleanse the flavor of a sample before trying another sample.
### In-Class Activity: A Chocolate Cutting (Tasting)

**Science Connection**

The students can taste samples of various types and brands of chocolate.

Will the chocolate be evaluated for color, flavor, mouthfeel, aroma, finish, depth, sweetness, and other features? Determine evaluation criteria in advance and make a standard form.

Identify the pieces by number only.

Have water available for the students to drink between samples.

Have a really good time!

### ServSafe Connection: Can Chocolate Go Bad?

Cocoa powder does not have the fat or sugar content of chocolate, so it can be stored on a shelf for a long time. The flavor remains stable for at least a year.

### Vocabulary Terms

- **Bloom**: A harmless yet unsightly white coating appearing on chocolate under adverse conditions.

### Figure Focus

**Figure 8.13**: Bloom on chocolate does not look good, but it is not harmful. It can be caused by humid weather, or by freezing and thawing chocolate.
Figure Focus

Figure 8.14: A picture of a double boiler with a large bowl-type top portion.

Fast Fact: Did You Know . . . ?
All chocolate products start with the cocoa tree, which originated in the upper Amazon basin. Have students research the cocoa tree, including pictures.

Reinforce and Review

- A double boiler works to protect the chocolate from overheating.
- Double boilers heat with steam that transfers heat from the stovetop pan to the upper pan or bowl.
- The upper pan or bowl does not come in direct contact with the boiling water or the stovetop.
- The steam rises when the water reaches 212°F (at sea level), gently warming the upper pan to this degree and not beyond.
- The trick to using a double boiler is making sure the lower pan does not boil dry. If this happens, the entire system can overheat.
- In addition to chocolate, double boilers are useful for reheating hollandaise sauce or other things that need gentle warming.

Vocabulary Terms

- **Tempering**: Carefully and slowly melting chocolate over a double boiler.
- **Double boiler**: A bowl or pan that fits over a stovetop pan for simmering water. The steam heat from the water gently transfers heat to the bowl or pan on top without overheating it.
**Reinforce and Review**

- It is important to carefully and closely monitor temperature and warming of chocolate.
- Tempering chocolate is a delicate process that will be worth the effort.

**Nutrition:**

**Is Dark Chocolate Really Nutritious?**

Antioxidants are more abundant in fresh fruits and vegetables than in dark chocolate. Milk chocolate does not have the same antioxidants as dark chocolate. Enjoy it for what it is!
Summary

• Remind students to review the following:
  1. Chocolate preparation and products
  2. Chocolate storage
  3. Tempering chocolate
Section 8.5
Review Questions

1. Cocoa butter is made by extracting the fat from cocoa beans.

2. Nibs are tiny pieces of cocoa beans.

3. Refrigerating chocolate can cause the fat portion to crystallize, which can cause bloom.

4. There are two types of fat in chocolate.

5. The students will each have a different answer for this.

6. Each student will have an opinion on this.

7. The chocolate can become grainy, which ruins the mouthfeel. It can also become scorched, which ruins the flavor.

8. The students can research this information in greater detail than what is offered in the text. The process is very old and began in South America. Europeans did not know about chocolate until after Christopher Columbus and the other early explorers came to the Americas.
Section 8.5 Activities

1. Set up this activity to be done in groups. Have students keep careful records. Have students evaluate the various station results for bloom. Are some bloom station conditions worse for the chocolate than others? Remind students that bloom is not harmful to eat.

2. This activity is best done in the late spring when strawberries are in season. It is possible to purchase strawberries at other times of year, however.

3. Each student’s answers will be different. They should include the basic fact that white chocolate is not really chocolate. Sometimes it is made from cocoa butter; however, most commercially available white chocolate is made of a hardened oil and flavorings.
Section 8.6
Specialty Desserts

Introduce the Section
a. Frozen desserts come in several varieties.
b. Desserts include specialty sauces and creams that are part of dessert creations.
c. There is a growing demand for low-sugar and sugarless desserts for guests with diabetes.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
• Guests enjoy frozen desserts in the summertime.
• Do they only sell in the summertime?
• Do you only eat frozen desserts when the weather is hot?

Reinforce and Review
• There are several types of frozen desserts from various cuisines.
• Some frozen desserts are low in fat, but others are quite high in fat.

Vocabulary Terms
• Ice cream: Frozen and aerated cream custard and flavorings.

CUSTOMIZED INSTRUCTION

ESOL Students
Have students name and correctly spell five flavors of ice cream.
Have them cut out or draw very simple color pictures of what the ice cream would look like.
Have them write a simple description (color, flavor, etc.).
All words should be correctly used and spelled.

Special Needs Students
Have students identify possible flavors for five photos or drawings of ice cream.
For example, a dish of pink ice cream could be strawberry, bubble gum, or another pink flavor.
If appropriate, have students write the name of the ice cream flavor, correctly spelled.

More Advanced Students
Have students create five new flavors of ice cream, sherbet, frozen yogurt, sorbet, or gelato.
Have them name the new flavors.
Have them describe the special ingredients in the frozen dessert.
All words should be correctly spelled.
Figure Focus

**Figure 8.15:** Even lower-calorie frozen desserts can be delicious. Ask students what some of their favorites are.

**Discuss**
- Ask students to discuss and describe their favorite types of frozen desserts.
- Can they verbally describe their own experiences with ice cream, sherbet, and other frozen desserts?
- Do they have the descriptors to meaningfully express the characteristics of the desserts?

**Reinforce and Review**
- Gelato is sold in stores, little shops, carts, and stands in Italy.
- There are usually several flavors laid out in slabs in a temperature-controlled display case.
- Gelato is served with a scoop or a blade-style spoon into cones or cups.
- Gelato is more elastic than ice cream, due to stabilizers.
- The most popular flavors of gelato include chocolate, lemon, pistachio, cherry, and spumoni.

**Fast Fact: Did You Know . . . ?**
The Pacific Northwest beats the rest of the nation in per capita ice cream consumption, so they aren’t just drinking coffee in Portland or Seattle.

**Vocabulary Terms**
- **Sherbet:** A frozen fruit and milk dessert.
- **Sorbet:** A dairy-free frozen fruit ice.
- **Frozen yogurt:** A yogurt-based ice cream-type dessert that substitutes yogurt and perhaps thickeners for cream.
**Nutrition: Sugar-Free Ice Cream**

Legal artificial sweeteners are not considered harmful by the Food and Drug Administration. For a diabetic guest, they are certainly less harmful than regular sugar.

**Reinforce and Review**

- Foods with artificial sweeteners, soy, and other substitutions used to be considered useful for sick people, not for “regular” people.
- Our culture is shifting as people recognize the benefits of new formulations.
- Sometimes they genuinely are improvements for flavor, health, nutrition, price, storage, convenience, religious dietary laws, and even disease accommodation.
- Poached fruit need not be poached only in water.
- Fruit juices, light wines, and liqueurs can be used to simmer fruit.

**What’s New: Cream-Free Ice Cream?**

Kosher dietary guidelines preclude combining meat and milk or their derivatives in the same dish or even meal.

**Vocabulary Terms**

- **Poached fruit**: Fruit that is gently heated or simmered in liquid until tender.
Figure Focus

Figure 8.16: Fruit does not need to be poached in water.

Figure 8.17: A torte is different than a layer cake, and usually has fruit.

Homework Activity: The Legacy of Escoffier: Peach Melba and Pears Belle Hélène

21st-Century Skills—Implement Innovations

Auguste Escoffier, the landmark chef, created peach Melba and pears belle Hélène, two desserts that were designed for popular celebrities of the day. Both feature poached fresh fruit.

Have students create a simple dessert in honor of their favorite person. It does not need to be a celebrity.

They should describe the creation to the class or turn in as written work.

Vocabulary Terms

- **Torte:** A light sponge cake layered with fruit, jam, buttercream, or a combination of these.
- **Crème Anglaise:** Vanilla sauce.
- **Curdle:** Broken or lumpy texture.
- **Fruit sauces:** Raw or cooked sauce made of fresh fruit.
- **Coulis:** A fresh berry or fruit sauce, raw or barely cooked.
- **Fruit syrup:** A cooked, sugar-based fruit juice.
Teaching Tips
- Remind students that they learned about sauce principles in Chapter 6.
- Help students realize that sauces are not always savory or specific to main dish menu items or vegetables.

Reinforce and Review
- Some sauces and creams make ordinary dessert foods divinely extraordinary.
- Many dessert sauces can be purchased ready-made.
- They can be extra special if they are made fresh in house.
- Sabayon sauce is made just before serving.

Vocabulary Terms
- Caramel sauce: Caramelized sugar and butter, sometimes with cream.
- Butterscotch-flavored sauce: Caramel sauce with vanilla and brown sugar added.
- Chocolate sauce: Several different sauces that all are based on chocolate.
- Sabayon (zabaglione): A fragile wine dessert sauce.
- Pastry creams: A thicker version of custard for filling éclairs and other pastries.

Figure Focus
- Figure 8.18: Crème Anglaise is very smooth and can be poured.
- Figure 8.19: Straining and cooling a curdled sauce to remove lumps and save the sauce.
Figure Focus

**Figure 8.20:** Various types of desserts made with creams, pastry, and fruit. They all look appealing.

**Figure 8.21a:** The premeasured ingredients.

**Figure 8.21b:** Gently heating the milk or cream and sugar.

**Figure 8.21c:** Mixing the eggs into the sauce according to the procedure (off heat), then returning to heat.

**Figure 8.21d:** Tending and carefully stirring the sauce.

---

**Essential Skills:**

**Making Crème Anglaise (Vanilla Sauce)**

This sauce has several techniques, including stovetop techniques and even baking with a bain-marie.

**Discuss**

- Fresh fruit can be a delicious dessert alone or as part of an item.
- In the Professional Profile, Chef Gand suggested using ripe, flavorful fruit.
- Ask students if they use and enjoy fresh, ripe, flavorful fruit in season.
- Discuss fruits, what is grown locally, where it is harvested and purchased, and so on.

**Vocabulary Terms**

- **Bavarian cream:** A vanilla sauce that is lightened by whipped cream and stabilized with a little gelatin.
On the Job:
Syneresis vs. Curdling: How to Evaluate the Safety of Egg-Based Desserts

Separation does not always mean spoilage with egg custards.

Reinforce and Review

- When fluid is bound in a protein structure, as in egg custard, it eventually leaks out.
- Improper or impatient baking can increase this process.
- Syneresis is not dangerous, and the liquid that exudes from custard is clear and sweet. However, it is not ideal.

Discuss

- Why should everything on a plate be edible?
- Can the same food be more appetizing or less so by the appearance?
- Do students have examples of things that make a food look less appealing?
- What ideas do students have for improving their plating skills?

Vocabulary Terms

- **Syneresis**: Water loss as it exudes from a baked egg custard or other protein custard.
**Figure Focus**

**Figure 8.22:** All of these photos show the same dessert. The plating lends a different flare and feeling to each.

**Figure 8.23:** Piped chocolate is nearly always a welcome addition to a dessert.

**Reinforce and Review**

- Garnishes are used to make desserts look as pretty as they taste. A beautifully decorated cake is a gift to all who see it and eat it. It adds to any celebration.
- Remind students, however, that dessert garnish can be overdone, and this will distract from the finished product.
Summary

- Remind students to review the following:
  1. Frozen desserts
  2. Poached fruit and tortes
  3. Dessert sauces and creams
  4. Plating and presenting desserts
Section 8.6
Review Questions

1. The students should choose four from among ice cream, sherbet, gelato, sorbet, frozen yogurt, frozen custard, and soy-based frozen desserts.

2. Peaches and pears were mentioned in this chapter. Cherries, berries, and other fruits can be poached as well.

3. Vanilla sauce includes milk, egg yolks, sugar, and vanilla.

4. Everything on the plate should be edible, and it should look appealing and visually please the guest.

5. Each student will have ideas about this.

6. Each student will have an opinion about this.

7. The answer to this is not clearly given in the text. However, vanilla ice cream does not have other flavors to "hide behind," so the creamy mouthfeel and subtle aroma of milkfat contributes to the flavor experience. There might be other reasons the students come up with. They might want to research this further.

8. Each student will have creative ideas, and some might be quite innovative.


Section 8.6 Activities

1. Crème brûlée is "broiled crème," and is a mild and smooth custard that is caramelized on the top to form a crunchy shell. A small culinary blow torch accomplishes the task.

2. Petit fours are small pieces of cake and perhaps a filling covered with smooth fondant and decorated. They are usually bite-sized and pretty, often pastel colored.

3. The students should include “overrun,” which is the introduction of air to the mix during freezing. It is usually expressed as a percentage, based on the increased volume the aerated ice cream has as compared to the original mix. If ice cream is not stored at optimal temperatures it can partially thaw and lose some of the air. If it refreezes, it will crystallize and lose its smoothness and creamy mouthfeel. Students can find more information on this topic.
Case Study Follow-Up

1. Students will have their own ideas. Hopefully, they will have decided that desserts are a vital aspect of menu planning for a successful operation.

2. Students will come up with a unique mix. There should probably be a chocolate offering, and perhaps something frozen.

3. Students’ creativity will be displayed with this assignment.
Apply Your Learning

Converting Measurements
A 6 pound yield, using 3 pounds flour, will yield approximately 10 shells.

Figure this recipe for 5 shells instead of 10. Students should be able to divide the formula by half. They can multiply it by .5, 50 percent, or divide by 2.

Advanced students might want to set up a dimensional analysis equation.

Bread and Culture
Each student’s answer will be unique.

Selling Double-Acting Baking Powder
Double-acting baking powder has an acid-base reaction between baking soda (sodium bicarbonate) and monocalcium phosphate monohydrate (an acid powder) immediately upon contact with liquid. Another powder in the baking powder is called SAS, or sodium aluminum sulfate. When SAS is heated with water, it forms sulfuric acid, which reacts with the remaining sodium bicarbonate, another acid-base reaction. Each acid-base reaction gives off carbon dioxide gas bubbles to leaven the product. Therefore bubbles form when the batter is mixed, and then more bubbles form during baking.

Now, students can come up with a way to explain this information in a creative, informative, and fun way.
Each student should try this either in class or at home. Most commercial crusts are mixed with shortening in a machine, which can make the crust have a crumb texture instead of a flake texture.
Exam Prep Answers

1. A
2. C
3. A
4. A
5. D
6. A
7. A
8. A
9. A
10. C

Exam Prep Questions

1. What allows the dough or batter to rise?
   A. Leaveners
   B. Sweeteners
   C. Shortenings
   D. Strengtheners

2. In baking, ingredients are given percentages in relation to
   A. eggs
   B. milk
   C. flour
   D. sugar

3. What are the two types of dough used for yeast breads?
   A. Rich dough and lean dough
   B. Flaky dough and flat dough
   C. Sweet dough and salty dough
   D. Milk-based dough and water-based dough

4. What is the first step in yeast bread preparation?
   A. Scaling
   B. Proofing
   C. Rounding
   D. Fermentation

5. A sponge is an example of a
   A. cake
   B. soufflé
   C. yeast bread
   D. quick bread

6. Steamed puddings are more stable than soufflés because they have a
   A. greater percentage of eggs and sugar in the batter
   B. smaller percentage of eggs and sugar in the batter
   C. greater percentage of milk and flour in the batter
   D. smaller percentage of milk and flour in the batter

7. What are the ingredients and proportions in 3-2-1 dough?
   A. Three parts flour, two parts fat, one part water
   B. Three parts fat, two parts water, one part flour
   C. Three parts water, two parts flour, one part fat
   D. Three parts flour, two parts water, one part fat

8. What is the basis of all cocoa products?
   A. Cocoa nibs
   B. Cocoa butter
   C. Cocoa liquor
   D. Cocoa powder

9. When tempering chocolate, the chocolate is heated
   A. gently the entire time
   B. rapidly the entire time
   C. rapidly at first and then gently
   D. gently at first and then rapidly
Recipe

Soft Yeast Dinner Rolls

- These rolls can be shaped into Parker House or other shapes.
Recipe

Flourless Chocolate Cake

- Perhaps the students realize that this isn’t actually a cake at all. It is more like firm custard loaded with dark chocolate.
Recipe

Linzer Tart
• This is pronounced LINT-zer tart.

Linzer Tart
Yield: 8-10 Servings

Ingredients
- 8 oz. Unsalted butter (softened)
- 8 oz. Granulated sugar
- 1.3 oz. (2) Egg yolks
- 4 oz. Orange zest (finely grated)
- 2 oz. Lemon zest (finely grated)
- 11 oz. All-purpose flour
- 6 oz. Hazelnuts (ground fine)
- 14 oz. Raspberry preserves
- Total dough weight: 2 pounds 3 ounces

Directions
1. To make dough, cream together the butter and sugar until light and fluffy. Add the egg yolks and the orange and lemon zest. Beat until well combined.
2. In another bowl, mix together the flour, hazelnuts, baking powder, cinnamon, cloves, and salt. Add the dry mixture all at once to the creamed mixture and mix briefly until just combined. (This dough looks more like cookie dough than pastry.) Wrap in plastic and chill until firm, at least 4 hours or overnight.
3. Divide the dough in half. On a generously floured board, briefly knead one piece of dough and flatten it with the palm of your hand. Gently roll the dough and flatten out to ¼ inch thick. Use it to line a 9- or 10-inch tart pan with a removable bottom. This rich dough patches easily. Chill approximately 10 minutes.
4. Roll out the second piece of dough to form a 12-inch × 4-inch rectangle. Using a sharp knife or pastry wheel, cut lengthwise strips in parallel lines, ½ inch wide.
5. Remove the lined tart shell from the refrigerator and spread the raspberry preserves evenly over it. To create the lattice pattern with the pastry strips, first lay some strips in parallel lines, ½ inch apart. Then lay a second row of strips at a 45 degree angle to the first. Press the strips into the edge of the crust to seal.
6. Bake at 350°F until the crust is golden brown and the filling is bubbly in the center, approximately 45 minutes. Set aside to cool.

Nutritional Content
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Nutritional analysis provided by FoodCalc®. www.foodcalc.com
Chapter 9 Overview

Chapter 9 introduces students to sustainable practices in the restaurant and foodservice industry, as well as the challenges and opportunities involved in introducing and following them.

Section 1: The first section describes sustainability and frames a discussion about the importance of water conservation.

Section 2: This section builds on the previous section, introducing energy conservation and efficiency.

Section 3: Section 3 discusses alternate forms of waste management in the restaurant and foodservice industry.

Section 4: This section describes a variety of sustainable food practices and addresses growing consumer demand for sustainably produced menu items.

Advance Preparation

| Review | Sections 9.1–9.4  
|        | Chapter 6  
|        | Book 1, Chapters 3, 7, and 8 |
| Contact | A guest speaker from a local utility company  
|         | A guest speaker from a local "green" building  
|         | A guest speaker from a local building authority  
|         | A guest speaker who is a LEED expert  
|         | A guest speaker from a food rescue program or from a restaurant or foodservice organization that participates in that program  
|         | A guest speaker who is a local food producer, such as a farmer or cheese maker |
| Prepare | Obtain an incandescent lightbulb, an LED lightbulb, and a CFL lightbulb, as well as a lamp with which they can be used  
|         | Obtain images of "green" buildings  
|         | Obtain photographs of open- and closed-system fish farms |

ServSafe Connection

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CUSTOMIZED INSTRUCTION OPTIONS

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CHAPTER TOOLS

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<th>Mathematics</th>
<th>Science</th>
<th>Literacy</th>
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Case Study
Making a Positive Impact

• Encourage students to discuss ways in which the employees might react to the new environmental plan. How will their duties be affected? What about their morale? How can Miguel and Chef Kate achieve employee “buy-in”? Relate this to Chapters 7 and 8 in Level 1.

• What effects might the new plan have on regular and potential guests? How might customers respond, either positively or negatively?

• Does the environmental plan that Miguel and Chef Kate have developed make sense? How do students think it could be improved?

• Encourage students to describe the restaurant’s vision statement, mission statement, and code of ethics under this new way of doing business.

• Note that there are follow-up questions about the case study at the end of the chapter.

• This activity could be done in groups, as a class, or as a homework assignment.
Professional Profile

Discuss

Why do students think that George W. McKerrow, Jr., has posted a plaque reading "Would you eat this?" over the expediting window at his operation? What effect might this have on quality?

What characteristics do students identify in McKerrow that might have contributed to his success in the restaurant and foodservice industry?

When is it time for a poorly performing business to change its operation style or even close for good?

Encourage students to discuss the importance of attitude in the restaurant and foodservice industry and elsewhere. How does it relate to professionalism?

Reinforce and Review

Passion for the work is a fundamental component of success in the restaurant and foodservice industry. Although passion alone does not guarantee success, its absence almost always leads to failure.

Concentrating on the basics and maintaining a positive attitude can help weather the inevitable storms.

Teaching Tips

After retiring from one restaurant group, McKerrow cofounded a second. Encourage students to discuss why he might have made this choice.
Homework Activity: Small Actions, Big Effects

Mathematics Connection, Literacy Connection

George McKerrow notes that making small changes can produce significant results. Each student should identify one small lifestyle change he or she can make that would be considered a sustainable practice: recycling cans and bottles instead of placing them in the garbage, consuming fewer food items that have nonrecyclable packaging, taking shorter showers at slightly cooler temperatures, and so on. Students should then make the change for one week. Students should record the effects of this change on their daily lives. Is the selected change simple to make, or does it require more effort? How does the student feel about making the change? In what ways is making this change a step toward sustainability? Each student should write a brief essay addressing these issues.

Professional Profile (cont.)

Discuss

Why are sustainable practices so important in the restaurant and foodservice industry? How can small changes, if practiced industry-wide, generate huge results?

What does it mean to be a "world citizen"? How might it affect how a company does business?

McKerrow and his colleagues receive positive motivation from their ecological sensitivity and the influence they exert on other businesses. To what extent is this pride related to professionalism? To take it a step further, is following sustainable practices an inherent part of professionalism?

McKerrow notes, "The harder you work, the luckier you get!" Encourage students to discuss this concept. Can people really create their own luck, or is what is commonly called "luck" really just being professional and motivated?

Reinforce and Review

Learn the basics: Simple is always best.

The restaurant and foodservice industry uses about five times more energy than most other industries because of the long hours worked and the resources consumed.

Small efforts, when practiced over time and in sufficient number, can have a significant impact.

Teaching Tips

Engage students in a discussion of simplicity: What does it really entail, and how is it consistent with providing excellent guest services?
Focus and Engage

Discuss

- How can students work independently to promote sustainable habits in the restaurant and foodservice industry? In what ways do individual efforts differ from group efforts?

- Discuss whether it is important for restaurant and foodservice operations to observe sustainable practices. What are the advantages and disadvantages, both in the short term and in the long term?

- What is the relationship between sustainability and finances, both for small restaurants and for the American economy?

Reinforce and Review

- Environmental responsibility for the restaurant and foodservice industry is an ongoing and challenging process.

- Sustainable practices in the restaurant and foodservice industry include using resources more efficiently, reducing waste, and increasing the use of renewable resources.

- Many environmentally sound behaviors can have the added benefits of saving money and attracting customers.

Teaching Tips

- Should the restaurant and foodservice industry—the largest private-sector industry in the United States—lead the way in the conservation and sustainable use of natural resources? Why or why not? Divide the class into two groups, assigning each one side of this argument. The two teams could debate the issue, research and report on specific issue areas, or create multimedia presentations defending their assigned position.

Section 9.1 Introduction and Water Conservation

Introduce the Section

a. Discuss the role that the restaurant and foodservice industry, as a major employer and consumer of resources, can play in conserving natural resources, paying special attention to the importance of water use.

b. Describe the history of the conservation and sustainability movements in the United States and their relevance to contemporary efforts.

c. Discuss the objectives for the section.

Vocabulary Review

a. Direct students to the key terms.

b. Pronounce each word, and have the students repeat the pronunciation out loud.

c. Discuss the definition of each word.

Teach

Discuss

- What does “going green” mean? How can different people interpret it in different ways, and why?

- Are students surprised to learn of the long history of the American conservation movement? Why or why not? How do students think this movement might have evolved over the decades, and why?
**Teaching Tips**

- Do students know their community’s water sources? Does the area rely primarily on groundwater or surface water? Encourage students to discuss why this might matter.

**Vocabulary Terms**

- **Environmental Protection Agency (EPA):** A federal agency, founded in 1970, with the mission of protecting human health and the environment.
- **Sustainability:** Practices that meet current resource needs without compromising the ability to meet future needs.
- **Conservation:** The practice of limiting the use of a resource.

**Reinforce and Review**

- The U.S. Congress began creating national parks in 1864, an early example of the importance of conservation.
- Both the Sierra Club and the Audubon Society were founded in the late nineteenth century.
- Throughout the twentieth century, lawmakers and environmentalists have worked to control pollution and protect endangered species and locales.

**Teaching Tips**

- Encourage students to select an environmental issue from the nineteenth, twentieth, or twenty-first century and research its history and importance. Make sure students identify how concern about these issues reflected popular social needs of the time.
- Ask students what they perceive to be “natural resources.” Why might responses vary?

**Discuss**

- The EPA is a federal agency, part of the executive (presidential) branch of government. Can its mission and agenda be affected by whichever political party holds the presidency, or is it immune to political pressure due to the nature of its work? How might its research and recommendations be changed, if they are based on scientific fact?

**Reinforce and Review**

- The U.S. government founded the EPA in 1970; today, much of its focus has been on finding ways to preserve natural resources, such as water and energy.
- According to principles of sustainability, people should use resources in ways that don’t compromise future abilities to use those same resources.
- Restaurant and foodservice operations rely on a wide variety of natural resources to meet daily operational needs.
- Water resources in the United States are found in surface water (all the water atop the earth’s surface, including snow) and groundwater (all the water that has been absorbed into the earth).
- Only 1 percent of all water can be used by humans; 97 percent of water is stored in the oceans, and much of the rest is stored in polar ice.
- During periods of low rainfall or excessive use, wells and aquifers can “go dry” due to the lack of available water.
Discuss
- Explain how short-term and long-term water shortages can affect schools and communities. What effects might these shortages have on the restaurant and foodservice industry?

Reinforce and Review
- The effects of a disappearing water supply can be devastating: decreased food supply with increased prices; fewer businesses and more unemployment; environmental conditions can change, affecting human and community health; and severe population imbalances can arise, due to environmental immigration.
- By 2013, it is expected that 36 states will experience some form of water shortage, and preventative restrictions are already in place in a number of areas.
- Countries around the world are imposing restrictions on water use to encourage businesses and residents to use water more carefully and thoughtfully.

Teaching Tips
- Relate environmental refugees to economic refugees. Explain that just as economic conditions can force people to move to new areas looking for work, environmental conditions can force people to move as well. Often, economic and environmental issues combine forces, as in the U.S. Great Depression.

Homework Activity: Environmental Refugees
Science Connection, Literacy Connection, 21st-Century Skills—Reason Effectively, Information Literacy, Communicate Clearly, Initiative and Self-Direction
Throughout the centuries, climate and other environmental changes have forced people to leave their homes and travel to new lands in search of food, shelter, and employment. As water shortages become more pervasive, it is expected that the number of environmental refugees will continue to increase.

Research the issue of environmental refugees. Globally, what regions have been most affected, and in what ways? Select a particular state or geographic area that has experienced environmental changes that have resulted in environmental migration and describe the challenges it has faced.

Write a one-page report discussing your findings.

Figure Focus
Figure 9.1: When rain falls on land, it might sink into the surface and seep below the water table, becoming groundwater. Alternately, it can flow downhill and into surface water.

Homework Activity: Economy, Environment
Literacy Connection, 21st-Century Skills—Make Judgments and Decisions, Information Literacy, Communicate Clearly, Work Independently
It often happens that environmental conditions are entwined with economic conditions. Sometimes, one improves as the other declines, and sometimes both rise and fall together.

Research the U.S. Great Depression and the Dust Bowl. How were the two events related? Looking back now, what impact did each experience have on American society? Some examples include changes in agricultural practices and large-scale migration to the West Coast.

Write a one-page report discussing your findings.
Figure Focus

Figure 9.2: Why do students think that North Americans use so much more water than residents of other continents?

Discuss

- How is it possible that Americans use more than 100 gallons of fresh water each day? What might account for all this use?

Reinforce and Review

- The United States uses more than 345,000 million gallons of fresh water every day; on average, Americans and Canadians use over 100 gallons of water per day per person for personal use.
- American public-water supply and treatment facilities use enough electricity each year to power more than 5 million homes for a year.
- Water conservation is a critical principle of sustainability; because restaurant and foodservice operations typically use a great deal of water, it is important for them to identify ways in which they can conserve this resource.

Teaching Tips

- Encourage students to monitor their water use in the classroom: Set up tracking sheets by each sink so students can record how much water they use for each activity.

Fast Fact:

Did You Know . . . ?

Encourage students to discuss the following:

- What are some practical ways to increase the percentage of water available for human use?
- How can fresh water be reused? For instance, what other uses can students think of for soapy dishwater?
- What are some ways students can reduce their use of fresh water without changing their habits too much? For instance, taking a slightly shorter shower or turning off the faucet while brushing teeth or shaving can significantly reduce fresh water consumption over time.

CUSTOMIZED INSTRUCTION

Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Think Creatively, Work Independently, Flexibility and Adaptability

Less Advanced Students

Imagine using only 3 gallons of fresh water each day for all your needs. How might this change your behaviors?
Sustainability in Action: Snappy Salads

Encourage students to discuss the following:

- How might these water conservation techniques affect guests? Do students think that the majority of guests will even notice these efforts?
- Why do students think that the other steps Snappy Salads has taken to conserve resources, such as milk paint and biodegradable containers, might or might not attract guests? What type of guests do you think might be the operation's target market and why?
- Would the same conservation techniques be successful in more traditional operations, where more cooking is done? Why or why not?

Discuss

- What food safety principles could be involved in water conservation? What pathogens can thrive in water?
- How can the restaurant and foodservice industry capitalize on its conservation of resources in its marketing campaigns?

Reinforce and Review

- Although there are many steps an operation can take to conserve water, these should never be taken at the expense of guests or of basic food safety principles. Appropriate conservation techniques can save water, protect food, and satisfy customers.
- To conserve water, food should be thawed under refrigeration, not under running water; this requires planning for future services.
- Scrape or soak dirty equipment before washing it to prevent multiple trips through the dishwashing machine.

Teaching Tips

- Encourage students to implement the suggestions on this page and the next page in the classroom kitchen where appropriate.

Figure Focus

Figure 9.3: Presoaking utensils not only decreases energy and water use, but increases the dishwasher's efficiency, as soaked utensils typically only need to run through the dishwashing machine once instead of two or three times.
Figure Focus

Figure 9.4: Can students readily identify the bottom picture as showing an overstuffed dishwashing rack? Why might overloading be an inefficient use of resources?

Figure 9.5: Most foodservice staff members eventually learn how to make small repairs in different parts of the facility. Why might learning to fix leaks and perform other minor repairs be a step toward conservation?

Discuss

• Which of the tactics described on this page and the previous page do students think will be most effective in conserving water in a restaurant or foodservice operation? Why?
• How can these techniques be adapted for home use?

Reinforce and Review

• Water should be hot, but not hotter than necessary: Handwashing water should be at 110°F, and dishwashing water should be at manufacturer-recommended temperatures.
• Dishwashers should be loaded correctly to ensure that every item is cleaned thoroughly.
• Water should be served to guests upon request.
• Restrict the amount of water used to clean and maintain the exterior of the property.
• Leaks should be promptly reported and repaired; leaked water should be retained for other purposes where appropriate.
• As always, proper training and follow-up are paramount.

Teaching Tips

• Encourage students to look around the campus for examples of water waste. How can these issues be resolved?

Homework Activity:
Banning the Bottle

Science Connection, Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Information Literacy, Communicate Clearly, Initiative and Self-Direction

Some communities around the world have banned bottled water, arguing that bottling water increases both water waste and overall pollution, as the bottles must be made, filled, and shipped. Research these bans and their effects. Do you support or oppose these bans? Why?

Write a one-page report describing the bans and their effects, as well as why you support or oppose these bans.
Discuss

- What other technologies or tactics can students envision that might also conserve water, besides the ones discussed in the text?

Reinforce and Review

- Some water-saving technologies that restaurant and foodservice operations can use include low-flow spray valves, low-flow toilets, waterless urinals, sink aerators, energy-efficient dishwashers, on-demand water heaters, and connectionless steamers.
- Although many of these items can be expensive to install and maintain, they can be considered an investment in the facility; often, the cost can be repaid in full or in part through lower utility bills, tax incentives, rebates, and business credits.
- On-demand water heaters and connectionless steamers are particularly effective ways of conserving water and energy, as they only require energy when needed.

Teaching Tips

- Encourage students to discuss what types of operations might choose to install such equipment and why.

CUSTOMIZED INSTRUCTION


More Advanced Students

You are the general manager of a local restaurant and have decided your facility needs to conserve more water. Design a training program for your employees addressing some aspect of water conservation, such as water service or loading the dishwasher.

Develop a 5-minute training session on the chosen subject and present it to the class.

Figure Focus

**Figure 9.6:** How does adding air to water help conserve water?

**Figure 9.7:** Tankless water heaters take up less space than conventional water heaters, an important point in a crowded facility.
Encourage students to discuss the following:

- How can low-flow toilets reduce water use? Can they be as efficient as conventional toilets?
- Many toilets in commercial facilities now have a two-part flushing system: The lever is pulled up to eliminate liquid waste and pushed down to eliminate solid waste, with different amounts of water used for each flush. How might these be more or less efficient than conventional toilets?
- Other commercial facilities have installed toilets that use infrared sensors to determine when to flush. How might these be more or less efficient than conventional toilets?

On the Job: Employment Sustainability

Encourage students to discuss the following:

- How is “employment sustainability” related to the concepts of onboarding, training, and professional development, as discussed in Level 1, Chapter 8 and elsewhere?
- Link “employment sustainability” to diversity, as discussed in Level 1, Chapter 8.
- Why is it important for employers to provide coaching, mentoring, and other educational opportunities for their staff? Why might some employers choose not to provide some or all of these options?

Essential Skills: Water Conservation

How can simply knowing a business’s water usage provide incentives to use less water?

Homework Activity: Water, Water

Mathematics Connection, Literacy Connection, 21st-Century Skills—Reason Effectively, Information Literacy, Initiative and Self-Direction

If possible, look at your home water bill. Call the water company to find out the average usage for similar households. Is your household use above or below the average? How do you explain the difference?

Write a one-paragraph report on your findings.
Essential Skills: Water Conservation (cont.)

Encourage students to discuss the following:

- Describe some elements that would be used to train employees on proper water conservation.
- If half of all water use in a restaurant occurs in the kitchen, much of the other half occurs in the dining room. How can the dining room use less water while still providing excellent customer service?
- In what ways can students conserve more water in the classroom kitchen?

CUSTOMIZED INSTRUCTION

Mathematics Connection, Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Adapt to Change

Special Needs Students

How many ways do you use water each day? Which uses would you consider essential and which would you consider inessential? Why?

Figure Focus

Figure 9.8a: This meter indicates that 2,422 gallons of water have been used at this facility. In your community, how much money might this cost?

Figure 9.8b: Labels and signs like this are often posted in facilities that use significant amounts of water to remind employees that they should conserve resources.
Summary

• Remind students to review the following:
  1. The history of sustainability
  2. The need for water conservation
  3. What the restaurant and foodservice industry can do
Section 9.1
Review Questions

1. Conservation is the practice of limiting the use of a resource; sustainability is the group of practices that meet current resource needs without compromising the ability to meet future needs. Conservation is therefore a component of sustainability.

2. Water drought can have several devastating effects on a community, including a limited food supply, increased food prices, business closures, rising unemployment, increased possibility of brushfires and dust storms, and population migration away from the affected area.

3. Back-of-the-house staff can thaw food in the cooler, soak and scrape equipment before washing it, maintain appropriate water temperatures, load dishwashers correctly, sweep outside areas, and train one another to conserve.

4. Students may answer in a variety of ways so long as they appropriately defend their responses.

5. Students may answer in a variety of ways so long as they appropriately defend their responses.

6. Miguel and Chef Kate might consider low-flow spray valves, low-flow toilets and waterless urinals, sink aerators, energy-efficient dishwashers, on-demand water heaters, and connectionless steamers.

7. Students may answer in a variety of ways so long as they appropriately defend their responses.

8. Students may answer in a variety of ways so long as they appropriately defend their responses.
Section 9.1 Activities

1. Students should explain what the water restrictions or guidelines are and why they have been enacted. They should also explain why different regions have developed different plans for dealing with water scarcity.

2. Students should research these costs and determine the best choice for their foodservice operations, describing and defending their selections.

3. Students should develop a plan for reducing water consumption at their restaurants. Answers may vary but should include training as a component of the program.
Section 9.2
Energy Conservation

Introduce the Section
a. Explain why energy efficiency is such a critical issue for the United States in general and for the restaurant and foodservice industry in particular. 
b. Identify some steps that the restaurant and foodservice industry can take to reduce its energy consumption, both in existing and new facilities. 
c. Discuss the objectives for the section.

Vocabulary Review
a. Direct students to the key terms. 
b. Pronounce each word, and have the students repeat the pronunciation out loud. 
c. Discuss the definition of each word.

Teach

Discuss
• What are some historical and cultural reasons that the United States uses the most energy of any country in the world? 
• What examples of renewable energy resources are used in your community? Why are they important?

Reinforce and Review
• Much of the energy used in the United States is nonrenewable, which means that it cannot be renewed and that it could be used up. 
• Americans spend approximately $8 billion each year to cook, store, hold, and serve food. Increasing energy efficiency can reduce these costs. 
• Many nonrenewable energy resources are fossil fuels, such as natural gas, coal, propane, and petroleum.

Vocabulary Terms
• Fossil fuels: Fuels that are formed from plant or animal remains buried deep in the earth.
Figure Focus

**Figure 9.9:** Why do many countries rely on fossil fuels to meet their energy needs? What are some advantages and disadvantages of this?

**Figure 9.10:** How can wind and solar energy reduce dependence on conventional fuels? What are their advantages and disadvantages?

Discuss
- Does an operation’s use of renewable resources change the way in which it actually uses energy to meet its needs? Why or why not?
- What renewable energy resources do students see as the most practical and efficient? Why?

Reinforce and Review
- Burning fossil fuels to provide energy results in both air pollution and greenhouse gas emissions.
- Over time, an increase in the volume of greenhouse gases accumulated in the earth’s atmosphere can increase the planet’s average surface temperature, affecting climate and population.
- Renewable energy sources, such as water (hydro-power) and wind, can be replenished quickly.
- The amount of available energy in moving water is determined by how quickly it moves.
- To produce energy, wind flows over the blades of wind machines, which forces them to turn, thereby generating electricity.

Teaching Tips
- Encourage students to debate whether renewable or nonrenewable resources are more efficient and desirable. Why might a restaurant choose to rely on one or the other, or a combination of the two?

Homework Activity:
**Human and Climate Science**

**Science Connection, Literacy Connection,**
21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Be Self-Directed Learners

Does human activity affect climate change? Despite much study, scientists, politicians, and the public cannot agree. What do you think? Discuss your beliefs on climate change in a one-page essay, defending your position.

Vocabulary Terms
- **Renewable energy sources:** Energy resources that do not rely on finite supplies of particular resources, directly emit greenhouse gases, or contribute to air pollution.
Discuss

• Does the use of renewable resources always mean saving money? In what ways can introducing renewable energy sources increase costs, at least in the short term?
• In what ways can students practice energy conservation at school? What about at home?

Reinforce and Review

• Solar energy can be converted to electricity either through the use of “solar cells” or by converting the energy to steam.
• Geothermal energy is the heat produced within the earth.
• Biomass contains stored energy from the sun through photosynthesis.
• Restaurant and foodservice operations can reduce their energy costs, which can reach five times as much per square foot as energy costs in other types of commercial enterprises, through either conservation or efficient use.
• Americans can reduce pollution and emissions and save money by using renewable energy resources and efficiently using nonrenewable resources.

Teaching Tips

• Encourage students to think of ways to reduce energy consumption in the classroom kitchen.

Fast Fact:
Did You Know . . . ?

Encourage students to discuss the following:

• Why is the United States compared to Qatar, instead of to another country? (Note: Qatar leads the world in per-capita energy consumption.)
• Why is energy consumption here measured by barrels of oil?
• Qatar is in the Middle East. What effect might its geographical situation have on its oil consumption?

Homework Activity:
Barrels of Money

Mathematics Connection, Literacy Connection, 21st-Century Skills—Use Systems Thinking, Information Literacy, Communicate Clearly

What is the current price of a barrel of oil? If the United States consumes 19.6 million barrels of oil per day, how much does it spend on oil consumption in a week? In a year?
Homework Activity:
Black Gold

Mathematics Connection, Literacy Connection, 21st-Century Skills—Reason Effectively, Use Systems Thinking, Communicate Clearly, Information Literacy, Work Independently

Qatar consumes 108,900 barrels of oil each day. Select another country in the Middle East. How much oil does it consume daily?

Calculate the per-capita daily consumption of oil in each country. Which is greater? What factors might explain your findings?

Fast Fact:
Did You Know . . . ?

Encourage students to discuss the following:

- Is it realistic to think that foodservice staff members will pay the close attention to reducing energy consumption that their managers expect? Why or why not?
- In what ways can reducing utility consumption and costs benefit a restaurant or foodservice operation? What disadvantages can students identify?
- How can restaurant or foodservice operations that are open 24 hours a day conserve energy?

Discuss

- Are the percentages demonstrated in Figure 9.11 in line with student expectations? Why or why not? What categories would students have expected to be larger or smaller consumers of energy and why?
- How can tracking utility expenses enable an operation to change both its own bottom line and the environment?

Reinforce and Review

- Energy is among the top expenses in a restaurant’s budget, so conservation and efficient use are critical.
- Every foodservice operation should develop an energy efficiency plan, based on its usage needs.
- ENERGY STAR, a program developed jointly by the EPA and the U.S. Department of Energy, offers free resources to help managers track their energy use.

Teaching Tips

- Encourage students to draw their own pie charts demonstrating what they perceive to be the consumption of energy in the classroom kitchen, using the five categories listed in Figure 9.11.
Discuss

• Many of the suggestions offered here to reduce energy savings require no new technology, just some simple changes in habits. Why might a restaurant or foodservice operation not have taken these steps already?

Reinforce and Review

• Many utility companies can help a restaurant or foodservice operation understand its energy costs and usage by conducting an energy audit.
• Many steps that can increase an operation’s efficiency and save money are commonsense measures, such as turning off unnecessary lights or equipment, cleaning and maintaining equipment regularly, and only operating machinery like dishwashers and ovens when they are fully loaded.
• Operations that can afford to invest in energy-saving equipment can conserve even more resources.

Teaching Tips

• Encourage students to apply these steps for energy conservation to the classroom kitchen.
• Consider inviting a representative from a local utility company to discuss energy conservation.

Homework Activity: Incentives to Change

Literacy Connection, 21st-Century Skills—Solve Problems, Communicate Clearly, Information Literacy, Work Independently

What incentives to install energy-conserving technology are available in your area, either for households or for businesses? Research local utility providers to learn what benefits they offer. Describe your findings in a one-page report.

Homework Activity: Renewing the World

Science Connection, Literacy Connection, 21st-Century Skills—Use Systems Thinking, Communicate Clearly, Create Media Products, Work Independently

Which form of renewable energy do you find most interesting? Research this energy source to learn more about it.
Create a poster or slide-show presentation to share the information you have learned.
Discuss

- Installing CFL lightbulbs throughout the back of the house can be a wise investment for an operation. What arguments might convince a skeptical restaurateur to replace incandescent bulbs with CFLs?
- Similarly, using CFLs or LED lightbulbs might be a wise choice for households. Would the same arguments used to convince the restaurateur work to convince consumers? Why or why not?

Reinforce and Review

- LED and CFL lightbulbs, both of which conserve energy as well as money, are becoming increasingly available for use in restaurant and foodservice operations.
- CFL lightbulbs emit a very bright light that can be very effective in the back of the house, whereas LED lightbulbs produce a light more similar to incandescent light and are therefore suitable for all parts of a restaurant or foodservice operation.
- Energy-efficient equipment, used everywhere from the kitchen to the office, is typically labeled with the ENERGY STAR logo.

Teaching Tips

- Turn off the classroom lights and demonstrate the light produced by incandescent, CFL, and LED lightbulbs in turn so that students can recognize the different effects produced by each.

Homework Activity: Seeing Clearly

Science Connection, Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently

How do CFL and LED lightbulbs work? Explain the science behind each of these forms of alternative technology. What makes these light sources different from standard incandescent lightbulbs?

Discuss your findings in a one-page report.
Discuss

- Following the energy-saving techniques outlined here can help an operation conserve valuable resources, as well as dollars. However, the techniques only work if they are performed correctly. Besides training staff members, what can management do to reinforce correct behaviors?
- Besides the steps listed here, what other suggestions do students have that can help restaurants—or households—save money and energy?

Reinforce and Review

- Restaurant and foodservice operations can save money on energy bills by using a timer on their water heaters and by only heating water to the minimum standards for safety required in their communities.

Sustainability in Action: Solar Power in Florida

Encourage students to discuss the following:

- Potential guests to a restaurant often base their impressions of the operation's menu and service style on their impressions of the restaurant's physical exterior. How might the presence of solar panels affect a guest's impressions of the restaurant?
- Estela's uses wastewater to cool its facility. What other uses can students identify for repurposed waste?
- Half of all electrical power in Florida is used to run air conditioning systems. In what other ways can residents of hot climates cool themselves and their homes?

Homework Activity: Light up Your Life

Science Connection, Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Information Literacy, Work Independently

What is a photovoltaic module, or, as it is more commonly known, a solar panel? How does it work, and under what circumstances is it a valuable tool? In what ways does using solar panels help reduce consumption of nonrenewable energy sources?

Describe your findings in a one-page paper.

Figure Focus

Figure 9.14: How might solar panels be more or less effective, depending on where in the United States they are located?
Essential Skills: Better Lighting

Encourage students to discuss the following:

- Why does the average restaurant or foodservice operation have its lights on during so much of the day? Are there ways in which fewer lights can be used for certain periods?

- Utility companies often offer rebate programs or other incentives to convince business owners to switch to technologies that conserve more energy. Why might these companies operate such programs, when doing so can cut into their own profits by reducing utility consumption?

- The use of motion detectors can conserve wasted energy. What other benefits can installing motion sensors have for a restaurant or foodservice establishment?

Homework Activity: Energy Efficiency

Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Information Literacy, Work Independently

Research the ENERGY STAR program. What benefits does it offer? How can it help restaurant and foodservice operations save money and conserve resources?

Describe your findings in a one-page report.

CUSTOMIZED INSTRUCTION

Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Information Literacy, Work Independently

ESOL Students

What types of renewable and nonrenewable energy resources are most commonly used by households in your community of origin? Are these the same resources that are most commonly used in your current community? To what do you attribute any similarities or differences?

Prepare a brief report describing your findings.
Sustainability in Action: Culver’s Restaurants

Encourage students to discuss the following:

• When it comes to energy conservation, what are the advantages and disadvantages of operating multiple restaurants with high numbers of employees?
• How can other operations incorporate the changes Culver’s has made in its operations? Are all of these suggestions appropriate for all types of restaurants? Why or why not?
• Why might both fire inspectors and health inspectors have been wary of a plan to recycle used cooking oil to heat water? What specific concerns might they have had?

Discuss

• What difficulties might be involved with either designing a green building from scratch or remodeling an existing building to make it green?
• Why do commercial buildings consume so much energy, especially electricity? What are some ways in which even nongreen buildings can conserve resources?

Reinforce and Review

• Commercial buildings consume 36 percent of all energy and 64 percent of all electricity used in the United States.
• Businesses can dramatically increase net income by cutting energy consumption by 30 percent.
• The first step toward a green building, whether a brand new design or a retrofit, is adopting a green strategy that focuses on energy savings.
• Energy rebates, tax incentives, and other financial assistance is available for green building projects from national, state, and local authorities and utility companies.

Teaching Tips

• If there are any notable green buildings in your community, consider inviting a representative from the building’s owners to speak to the class on how the project was developed.
• Consider inviting a speaker from a local building authority to discuss government incentives for green building.

Vocabulary Terms

• “Green” building: A building that has been designed, built, renovated, or reused so that the structure conserves energy, uses resources more efficiently, and reduces the overall impact on the environment.

Figure Focus

Figure 9.15: What visual cues are there in this photograph that suggest that this is a green building? Why?
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Vocabulary Terms
- **Brownfield site**: A previously abandoned industrial site that, once cleaned up, can be repurposed for commercial business use.

**Discuss**
- Why is materials selection an important part of designing a green building?
- “Location, location, location” is a popular saying in real estate. How is it relevant to constructing green buildings?

**Reinforce and Review**
- Designing and constructing a new building offers the best opportunity for making an operation efficient and environmentally friendly.
- LEED-certified architects and contractors have been trained to build facilities that comply with national standards for green construction.
- Site selection is important in green building: Locations near public transportation that are open to natural light are often good options, as might be brownfield sites.

**Teaching Tips**
- Show students some examples of buildings that were built “green,” identifying sustainable or environmentally sound elements.

**Trends: Reflective Roofs**
Encourage students to discuss the following:
- Besides energy conservation, what other benefits might cool roofs have for a restaurant or foodservice establishment?
- Why is roofing a major focus of remodelers looking to incorporate green building principles?
- In designing a new facility or remodeling an existing building, how can restaurateurs incorporate green principles into their operations’ walls? What effects can these efforts have on the business itself as well as on the neighborhood?

**Homework Activity: Building Green**
- **Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently**

What is the U.S. Green Building Council? What does it do, and what are its goals? Who are its members, and why?

Write a brief report on your findings.
Discuss

- What safety issues might be involved with cleaning up and building on brownfield sites? What factors might deter building?
- What challenges and opportunities might restaurant and foodservice operations face when renovating or remodeling their facilities?

Reinforce and Review

- Building on a brownfield site not only protects undeveloped land, but also might qualify an operation for tax incentives and other savings.
- Building renovations are opportunities to improve energy efficiency and reduce costs.
- Sustainable renovations typically involve researching energy savings, working with LEED experts, and budgeting for green improvements.
- Although green building practices might increase the cost of construction, over time much of these costs are recouped through lower operational costs.

Teaching Tips

- Consider inviting a LEED expert to speak to the class.

What's New: LEED Certification

Encourage students to discuss the following:

- What other questions, besides the ones included here, do students think should be asked about building sites and new construction to ensure sustainable building?
- Why might builders and architects choose to earn LEED certification for a building, instead of simply following sustainable construction practices?
- Why are buildings that exhibit innovative design or those that are regional priorities eligible to earn more points toward certification than other new buildings?

Figure Focus

Figure 9.16: Can students identify any brownfield sites in the area? How might these be used commercially?
Table 9.1: Building Green

- What would a restaurant or foodservice operation built according to these standards look like? What patrons would it be likely to attract? What type of food might it offer?
- How might using green building materials, including recycled and repurposed products, affect food safety issues? Is there a relationship between the two?
- How can appropriate landscaping help to lower an operation’s energy costs? How might it affect the operation’s other costs?

Sustainability in Action: Spoons Coffee Café

Encourage students to discuss the following:
- What special challenges might be involved in remodeling a century-old building in a historic location?
- Why might the owners have chosen to take incremental steps when adopting environmental business practices?
- Why might the Kayes have decided to use 100 percent wind power for their operation’s energy needs? What other renewable energy sources might have been more or less appropriate?
Sustainability in Action: Spoons Coffee Café (cont.)

Encourage students to discuss the following:

- Spoons has taken many steps toward becoming a “green” restaurant. What should be its next move?
- How can purchasing locally and organically grown ingredients be part of an overall green business plan?
- Spoons is not just a café, but a coffee roaster. Because Spoons is located in Maryland—not renowned for its coffee plantations—what are some inherent challenges to sustainability that Spoons must face?

Summary

- Remind students to review the following:
  1. The importance of energy efficiency
  2. What the restaurant and foodservice industry can do
  3. Building for efficiency
Section 9.2
Review Questions

1. It is important to reduce the use of fossil fuels to control air pollution and limit the emission of greenhouse gases.

2. Students can choose to describe three of the following energy sources: water, wind, solar, geothermal, or biomass.

3. Student responses may vary but should be clearly related to reductions in foodservice energy usage.

4. Using LED and CFL lightbulbs can help restaurant and foodservice operations cut energy costs.

5. A brownfield site is a previously abandoned industrial site that, once cleaned up, can be repurposed for commercial business use.

6. Students should research Ted’s Montana Grill and report on the ways in which it controls energy use.

7. Students may respond in a variety of ways so long as their answers clearly describe ways in which Kabob can use energy more wisely.

8. Students may answer in a variety of ways so long as they appropriately defend their responses.

9. Students may answer in a variety of ways so long as they appropriately defend their responses.
Section 9.2 Activities
1. Students should clearly describe their lighting strategies for the various parts of the facility, identifying ways in which these strategies are energy efficient.

2. Students should present a cogent assessment of the locally available options for renewable energy. If few or no options are available in this area, students could instead be asked to assess the locally available conventional energy sources.

3. Students should research foodservice energy costs and strategies for reducing energy consumption. The presentation should be made to the entire class and should be both persuasive and informative.
Section 9.3
Waste Management

Introduce the Section
a. Describe the role played by the restaurant and foodservice industry in contributing to and helping manage waste-management issues.
b. Explain the separate yet related roles played by reusing, reducing, and recycling in the workplace.
c. Discuss the objectives for the section.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
- Why is so much commercially prepared food discarded?
- Why do Americans consume and discard so much paper and aluminum annually?

Reinforce and Review
- Up to 20 percent of all commercially prepared food—approximately 100 billion pounds—ends up in American landfills and incinerators each year.
- Processing wasted food costs the United States $1 billion each year.
- Efficient waste management can reduce waste, encourage better operating efficiency, and reduce energy and water costs.
- A good plan for efficient waste management focuses on reducing, reusing, and recycling.

Teaching Tips
- Encourage students to consider how waste management efforts in the classroom kitchen could be improved.
Discuss

• What other ideas do students have for reusing or repurposing food waste? For example, some coffee shops donate used coffee grounds to community gardens; restaurants might compost their food scraps and use the finished product to enrich their own herb and vegetable gardens; and so on.

Reinforce and Review

• One way to manage foodservice waste is to consider reusing or repurposing food that otherwise would be discarded, either for the establishment’s own needs or for donation to another organization.

• If food has been safely held and has maintained its quality, it can be repurposed for another use.

• After food is on a customer’s table, it cannot be reused; once it has left the kitchen, it has left the controlled environment.

• Appropriate methods for reusing food include serving the food in its original format, repurposing the food into another format, or donating the food to a local food rescue program.

• Food rescue programs are nonprofit organizations that receive mainly prepared and perishable food items as donations, and then distribute the food to local organizations, which then redistribute the food to families and individuals.

• Food banks are similar to food rescue programs, except they primarily collect and redistribute nonperishable foods.

Teaching Tips

• If there is a food rescue program in your area, consider inviting a guest speaker from the program or from a restaurant or foodservice operation that participates in the program.

Vocabulary Terms

• Repurposed food: Food that customers did not eat, but that back-of-the-house employees prepared, cooked, cooled, and held safely.

• Controlled environment: An environment in which food has been within the kitchen’s control and has been kept safe from contamination.
Figure Focus

**Figure 9.17:** In what settings is biodegradable dinnerware appropriate?

**Discuss**

- In what ways can students reuse or repurpose items in the classroom kitchen to reduce waste?
- In what ways is waste expensive? Every time a still-useful item is discarded, money is discarded, too. Encourage students to discuss the relationship between waste and costs, both for restaurant and foodservice operations and for households.

**Reinforce and Review**

- Some communities allow restaurant and foodservice operations to donate food scraps to local farms or zoos.
- Opportunities for reuse can include purchasing goods made from recycled items, printing and copying documents using both sides of a sheet of paper, and using reclaimed building materials in new construction and renovations.
- Used but still usable items that might otherwise be discarded can often be donated to charitable organizations; similarly, purchasing used rather than new furniture and equipment for the operation itself can also save money as well as reduce waste.

**Teaching Tips**

- Encourage students to identify steps they can take at home, school, or work to reuse items and reduce waste.
- Consider holding a clothing drive, recycling drive, or other activity to encourage students to think more deeply about how useful items are often wasted.

**Homework Activity:**

**Biodegradable Dishes**

**Science Connection, Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Information Literacy, Initiative and Self-Direction**

Learn more about biodegradable dinnerware. What materials are commonly used to produce it? What types of operations are likely to offer it to their customers? How do the costs of manufacturing or purchasing these items differ from conventional disposable dinnerware?

Write a one-page report answering these questions, adding any other relevant information.
Discuss

• What other steps related to “reducing” can restaurants make that can lower costs?
• How can smart planning be used in other ways throughout a foodservice environment?

Reinforce and Review

• Opportunities for recycling older electronics include rebates or discounts on new purchases or “e-cycling” programs.
• Reclaimed cell phone programs donate phones to a variety of needy populations.
• Used cooking oil can be used as biodiesel fuel to operate vehicles or, as in the case of Culver’s, heat the water needed by the restaurant or foodservice operation.
• Restaurant and foodservice operations can limit the waste they produce by planning smartly.
• Smart planning involves accurate production forecasting and, where appropriate, bulk purchasing.

Teaching Tips

• Encourage students to identify ways in which they can reduce waste in the classroom kitchen.

Fast Fact: Did You Know . . . ?

Encourage students to discuss the following:

• Why do students think that the 1996 Food Donation Act is necessary? Why do donors need to be protected?
• How can “good faith” be established in a court of law?
• Why might states provide tax incentives for companies making food donations?
Figure Focus

**Figure 9.18**: Where is this logo commonly located? What role does it serve?

**Figure 9.19**: What other items commonly used in restaurant and foodservice operations can be easily recycled?

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**Sustainability in Action: The Rockfish**

Encourage students to discuss the following:

- Why might a restaurant or foodservice operation choose to employ an environmental coordinator? What responsibilities might this person hold?
- What do students think motivates The Rockfish to take such proactive steps toward protecting the environment?
- Several of The Rockfish’s initiatives, such as protecting the local bay, are specific to its community. What elements of The Rockfish’s environmental plan might be appropriate for operations in your community?

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**Discuss**

- What items do students commonly put into garbage bins instead of recycling? What are some incentives that would increase recycling?
- What obstacles prevent restaurant and foodservice operations from recycling? What incentives could help them begin or expand recycling efforts?

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**Reinforce and Review**

- Recycling transforms waste into valuable resources.
- A variety of used items, including glass bottles, cloth, and paper, can be recycled into useful products.

---

**Teaching Tips**

- If a recycling program exists on your campus, talk with its coordinator about its efficiency, and talk with students about ways to expand the program.
Discuss

- Which of the items on this list are commonly used in the restaurant and foodservice industry? In schools? In households?
- Why do some communities offer recycling for certain products, such as batteries or even paint, but others do not?

Reinforce and Review

- A wide variety of goods can be recycled, including metal, glass, plastic, and paper waste.
- Some items, such as batteries or cooking grease, can only be recycled in certain communities or by certain companies.
- Recycling prevents pollution, reduces greenhouse gases, and saves energy; it can also generate revenue for the business.

CUSTOMIZED INSTRUCTION

Literacy Connection, 21st-Century Skills—Solve Problems, Use Systems Thinking, Communicate Clearly

Special Needs Students

What items can households recycle in your area? Do you choose to recycle? Why or why not?

CUSTOMIZED INSTRUCTION

Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Interact Effectively with Others

ESOL Students

What recycling opportunities are available in your community of origin? How are these similar to or different from those available in your current home? Why do you think this is the case? Give a brief presentation to the class addressing this topic.

Homework Activity: Recycling Without Borders

Literacy Connection, 21st-Century Skills—Make Judgments and Decisions, Communicate Clearly, Information Literacy, Work Independently, Interact Effectively with Others

Every community has different opportunities for recycling, based on local demand. Select some other city or town in the United States and research the recycling options available there. Prepare a brief oral report on your findings.
Encourage students to discuss the following:

- What particular challenges might exist to recycling in Alaska? What opportunities might there also be?
- The restaurant purchases locally and organically grown foods. How might this affect its menu?
- This restaurant’s guiding principle is “to weigh the impact that every business has on the natural environment.” Is this philosophy a sensible one? How might restaurants in your community apply it?

Encourage students to discuss the following:

- What makes a recyclables container “pest-proof”?
- What are some other ways in which pests can be denied access to an operation?
- Why is it essential to keep pests out of a restaurant?

Discuss

- How can a trash audit save a restaurant or foodservice operation money? How can it help conserve resources?

Reinforce and Review

- A good recycling program, like other business operations, requires a clear and thoughtful plan.
- A trash audit is used to identify materials that are discarded daily, both as waste and as recyclables.
- A recycling manager is responsible for overseeing training and implementation of the recycling program and for tracking and reporting its results.

Teaching Tips

- Consider assigning (or electing) a recycling manager for the classroom kitchen. Encourage students to describe this person’s responsibilities.
Discuss
• Is it always appropriate to have recycling containers visible to guests in the dining room? Under what circumstances might that be a good or bad decision?
• What other components of a good foodservice recycling plan can students identify?

Reinforce and Review
• Always handle recyclables in ways that help to reduce pests and protect equipment and food from contamination.
• In some communities, recycling large amounts of certain commodities can earn money, so collaborating with neighboring businesses in a recycling program can generate income.
• Employee training is a significant component of a successful recycling plan.
• Many people, including young adults, select restaurants in part based on the operation’s sustainability practices, so it is important for restaurants to publicize their efforts.

Teaching Tips
• What components of this recycling plan can be useful in the classroom kitchen?

Figure Focus
Figure 9.21: What colors are your local recycling bins? What items are put into each?
Chapter 9 | Sustainability in the Restaurant and Foodservice Industry

Discuss
- Why might a restaurant or foodservice operation choose not to compost its food waste?
- Compost is often known as “black gold” in the gardening community. Why is this the case?

Reinforce and Review
- Food scraps and certain other kitchen waste can be turned into compost, used to provide nutrients and water to growing plants.
- Compost is created by putting organic wastes in proper ratios and then into piles, rows, or vessels and adding bulking agents to accelerate the breakdown of organic materials.

Teaching Tips
- Encourage students to discuss why composting might or might not be appropriate in the classroom kitchen.

Table 9.2: Composting

<table>
<thead>
<tr>
<th>DO Compost</th>
<th>DON’T Compost (generally)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Cardboard rolls and clean paper</td>
<td>- Dairy products</td>
</tr>
<tr>
<td>- Coffee grounds and hulls</td>
<td>- Fowl, grapes, or oil</td>
</tr>
<tr>
<td>- Food scraps</td>
<td>- Meat, fish bones, or pet feathers</td>
</tr>
<tr>
<td>- Fruits and vegetables</td>
<td>- Paper with wax coatings</td>
</tr>
<tr>
<td>- Kitchen waste</td>
<td>- Wheat bran, paper bags, and paper toy liners</td>
</tr>
<tr>
<td>- Leather trimming</td>
<td>- Wax, egg shells, and nut shells</td>
</tr>
<tr>
<td>- Paper napkins or other paper products soaked with food</td>
<td>- Waxed paper, waxed cardboard</td>
</tr>
</tbody>
</table>

Homework Activity: Break It Down

Science Connection, Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently

How do organic materials—like wood, eggshells, or cotton—break down to become compost? Research and describe the processes involved in biological decomposition. For instance, how long does decomposition take? What conditions does it require? Why must some organic materials be composted in different ways or not at all?

Discuss your findings in a two-page report.

Vocabulary Terms
- **Composting:** A natural form of recycling that takes place when organic material decomposes to form an organic fertilizer; also, a process that can transform wasted food into an environmentally useful commodity.

Figure Focus

**Figure 9.22:** Under the right conditions, almost any type of organic material can be used to make compost.

CUSTOMIZED INSTRUCTION

Science Connection, Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently

More Advanced Students

What is vermicompost? Explain the science of using worms to compost organic material. Under what conditions is this an appropriate way to compost?

Discuss this information in a one-page report.
Discuss

- Why might a company choose to compost rather than recycle certain items, like paper, and vice versa?
- What is the biggest problem with a composting program? What is its biggest benefit?

Reinforce and Review

- A successful composting operation requires time, money, space, and commitment.
- If properly administered, a composting program can help the environment by providing organic materials to farmers and reducing overall waste.
- Operating a composting plan might require certain permits from local authorities, including the health department.

Teaching Tips

- If the campus does not have a “kitchen garden,” perhaps consider talking with campus and district administrators about whether such a program might be successful.

Figure Focus

**Figure 9.23:** Ask students if any of them compost at home. If possible, set up a small compost system at the school.
Sustainability in Action: Composting with Kitchen Waste

Encourage students to discuss the following:

- Why do restaurants choose to compost, given some of the inconveniences associated with it?
- How is composting ultimately a form of providing excellent guest service? For example, farms receive nutrient-rich ingredients for compost, which is then used to grow stronger and more nutritious crops, which are then sold to restaurants and served to guests.
- How is compost different from soil? Why does it help plants thrive?

Summary

- Remind students to review the following:
  1. Reusing
  2. Reducing
  3. Recycling
  4. How to get started on recycling

Homework Activity: Compost Composition

Science Connection, Literacy Connection, 21st-Century Skills—Think Creatively, Reason Effectively, Information Literacy, Create Media Products, Work Independently

What does finished compost look like? Draw a diagram of the finished product, identifying important components like air pockets, bits of leaves or straw, and so on.

Homework Activity: Choices in Composting

Literacy Connection, 21st-Century Skills—Make Judgments and Decisions, Information Literacy, Communicate Clearly, Work Independently

There are many ways to compost organic material, ranging from high-tech commercial facilities to simple piles of leaves in a backyard. Identify and describe two distinct types of composting. What are their similarities and differences? Why might one method be chosen over another?

Discuss your conclusions in a one-page report.
Section 9.3
Review Questions

1. Student answers may vary; many possible items are found on p. 606.

2. Food can be repurposed by serving it in its original format, repurposing it into another format, or donating it to a local food rescue program.

3. Accurate production forecasting helps limit overproduction, which leads to less wasted food. It also helps buyers purchase the right amounts of food, leading to fewer products expiring in storage.

4. Benefits of composting include providing soil enhancements and reducing overall waste.

5. Students should research and report on Ted’s Montana Grill and its recycling efforts.

6. Students may answer in a variety of ways.

7. Students may answer in a variety of ways so long as they defend their responses appropriately.

8. Accurate production forecasting helps a restaurant meet its environmental goals by reducing overproduction, overpurchasing, and overall waste.
Section 9.3 Activities

1. Students should talk with campus foodservice staff about their recycling, reducing, and reusing efforts and report their findings, as well as identify any possible improvements.

2. Students should develop a creative table tent that describes their operations’ repurposing efforts.

3. Students should identify compostable materials that are otherwise wasted (the list does not need to be comprehensive) and research how these items could be appropriately composted in your community. They should develop a composting plan based on these regulations, and then describe some components of appropriate employee training on the new plan.
Section 9.4
Sustainable Food Practices

Introduce the Section
a. Explain the role of purchasing as a component of both sustainable practices and cost-conscious practices.
b. Describe the environmental implications of conventional and sustainable production methods for some common foods.
c. Discuss the objectives for the section.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
• Why might offering locally produced foods, such as vegetables or cheeses, help attract guests to a restaurant or foodservice operation?
• In what ways can offering these items benefit both the operation and the community?

Reinforce and Review
• Over the last 10 years, both chefs and consumers have become increasingly conscious of the issues involved in sustainable food production.
• In a recent National Restaurant Association survey, more than 1,600 chef members of the American Culinary Federation ranked local produce as the top food trend.
• Restaurant and foodservice operations can often attract customers by offering foods produced locally.
• There is no established rule about what makes an item or a source “local.”

Teaching Tips
• Consider inviting a local food producer to speak to the class.

Vocabulary Terms
• Local source: A supplier offering food produced in the surrounding growing region.

Homework Activity: Across the Miles

Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently

What is the “100-mile diet”? Would it be easy or difficult for you to follow these prescriptions? Why or why not?
Share your thoughts in a one-page essay.
Homework Activity: Produce Production

Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Initiative and Self-Direction

Many supermarkets identify the countries in which their fruit and vegetables were grown. Also, many individual fruits and vegetables have stickers on them, identifying their origin. How many different countries are represented in the produce section at your local supermarket? What are some possible explanations for that?

Describe your findings in a one-page report.

Discuss

- What does “local” mean? Does it matter where food is produced, as long as it tastes good?
- How can committing to purchasing only locally grown foods affect a restaurant or foodservice operation’s menu?

Reinforce and Review

- The spirit of local sourcing is to purchase food that comes from a relatively close source and supports the surrounding economy and communities.
- Depending on the situation, local sourcing can also limit the number of food miles required to prepare and serve a meal, thereby reducing the amount of energy and the cost used to provide the food.
- Food miles are not the only standard by which to judge the sustainability of an item; the methods used to produce the item are also important.
- The first step in pursuing a local-sourcing plan is determining what “local” means in that specific instance.
- Purchasing from local suppliers typically involves research and networking to learn who offers what products in what amounts.

Teaching Tips

- Encourage students to discuss the relationship between locally sourced items and healthy eating. For instance, what foods would be excluded from a locally sourced diet in your area?

CUSTOMIZED INSTRUCTION

Mathematics Connection, Literacy Connection, 21st-Century Skills—Solve Problems, Information Literacy, Be Self-Directed Learners

Less Advanced Students

Select three of your favorite foods. Where is each produced? How far does it travel to reach you?

Vocabulary Terms

- Food miles: The amount of travel a specific food item must take from its production site to its consumption site.
Discuss

- Do any restaurant or foodservice operations in the area feature locally grown foods? What types of customers do they attract? What dishes are they known for preparing?

Reinforce and Review

- Nonprofit organizations can help connect restaurants and local purveyors; in communities with farmers’ markets, conversations with the suppliers might be all that is necessary to find new sources.
- Many operations that rely on locally sourced foods change all or part of their menus more frequently than those that do not.
- Many guests and potential guests respond favorably to operations that offer locally sourced foods; using the sources’ names on menus and in promotional materials can help raise the profile of both the operation and the supplier.

Teaching Tips

- If any nearby restaurants serve locally sourced foods, obtain menus and share them with the class as part of a discussion of what foods are produced nearby.

### Trends: Farm to Table

Encourage students to discuss the following:

- Is the growing popularity of the “farm-to-table” movement a trend, or is it here to stay? Why or why not?
- How can farmers’ markets and community-supported agriculture programs link producers with consumers, at both the wholesale and the retail levels?
- Is eating locally produced food healthier than eating globally sourced foods? Is it always better for the environment?
Homework Activity:
Fishy Business

Mathematics Connection, Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Initiative and Self-Direction

Visit a local supermarket. What types of seafood are available fresh, frozen (including processed, such as fish sticks), or canned? How many different fish and shellfish are represented?

Write a brief report describing your findings.

Fast Fact:
Did You Know . . . ?

Encourage students to discuss the following:

- Why might fine-dining restaurants be more likely than other operations to serve locally sourced foods?
- Why might fine-dining restaurants choose not to serve locally sourced foods?
- How can either option—locally sourcing foods or globally sourcing foods—be used as part of a marketing campaign? How can either option be made equally attractive?

Discuss

- Why are Americans more likely to consume fish in restaurants than at home?

Reinforce and Review

- Americans spend nearly $70 billion dollars, or over 7 percent of their food dollars, on seafood, most of which is consumed at restaurants.
- Seventy-five percent of the world’s fish species have been fully fished, overfished, or depleted since 1995.
- Both changing diets and evolving technology have increased global seafood consumption.

Teaching Tips

- If possible, obtain samples of sustainably produced seafood and prepare them for the class.

Table 9.3:
Most Popular Seafood in the United States

<table>
<thead>
<tr>
<th>Seafood</th>
<th>Consumption Rates per Person, 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Shrimp</td>
<td>8.10 pounds</td>
</tr>
<tr>
<td>2. canned tuna</td>
<td>2.80 pounds</td>
</tr>
<tr>
<td>3. salmon</td>
<td>1.84 pounds</td>
</tr>
<tr>
<td>4. Alaskan pollock</td>
<td>1.24 pounds</td>
</tr>
<tr>
<td>5. Tuna</td>
<td>1.19 pounds</td>
</tr>
</tbody>
</table>

Source: National Fisheries Institute

The FAO also reports that 75 percent of the world’s fish species have been fully fished, overfished, or depleted within the last 15 years. The reason for this is not entirely clear but is definitely complex. As the world’s population has increased, so has the demand for food like seafood. Diets continue to change, with some populations more recently focusing on the nutritional value of seafood.

Table 9.3: Most Popular Seafood in the United States

- What types of seafood do students like most? Do these preferences match those listed in Table 9.3?
- Why do students think these fish are so popular?
- Do students commonly see these items listed in restaurant menus or marketing campaigns? What might explain why or why not?
Discuss
• How can the menu choices a restaurant or group of restaurants make affect fishing choices?

Reinforce and Review
• Some factors that contribute to the depletion of fish stocks include overfishing, bycatch, bottom trawling, habitat damage, and pollution.
• Some fishing equipment targets specific species and sizes, whereas other equipment catches everything in the target area.
• Fishermen work to reduce bycatch, which takes time and energy from catching the intended species and injures or kills other species; bycatch accounts for about 40 percent of the global marine catch.
• Farming and development can affect marine environments by polluting and damaging habitats.
• Efforts to divert water, such as by building dams, can also result in the destruction of marine habitats.

Vocabulary Terms
• **Overfishing**: Harvesting yields of fish that outpace the species’ ability to replenish its population.
• **Bycatch**: Fish and seafood that are caught unintentionally.
• **Trawlers**: Fishing boats that pull large nets through the ocean, catching most of what is in their paths regardless of species or size.
• **Bottom trawling**: Scraping along the ocean floor with a net, disturbing or destroying marine life.
• **Habitat damage**: The damage done to specific marine environments, often through development or farming.
• **Dead zone**: An area of water in which the oxygen has been depleted, and the sea life destroyed, by the algae blooms that result from the runoff of nutrients and waste from farming.

Figure Focus
**Figure 9.24**: Besides trawling, in what other ways can fish and seafood be harvested?
Figure Focus
Figure 9.25: Is aquaculture appropriate for all types of seafood? Why or why not?

Discuss
- When designing a menu, which is a more important consideration: a species’ sustainability or consumer demand for it? Why?

Reinforce and Review
- Wild fisheries produce billions of tons of fish per year, but aquaculture now accounts for 50 percent of global seafood consumption.
- The key to choosing seafood from sustainable fisheries is research.
- Some conservation groups report their findings to the public about which species and locations can be fished sustainably, which can help guide purchases.
- Talking with a reputable supplier about its seafood sourcing policies and species diversity is the best process for understanding the sustainable seafood options available to a particular restaurant or foodservice operation.

Table 9.4: Organizations and Publications

<table>
<thead>
<tr>
<th>Organization</th>
<th>Publication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monterey Bay Aquarium</td>
<td>Seafood Watch</td>
</tr>
<tr>
<td>National Oceanic and Atmospheric Administration</td>
<td>FishWatch</td>
</tr>
<tr>
<td>New England Aquarium</td>
<td>Celebrate Seafood</td>
</tr>
<tr>
<td>Seafood Choices Alliance</td>
<td>The Good Catch Manual</td>
</tr>
</tbody>
</table>

- Why are there so many organizations and publications dedicated to seafood sustainability?
- What makes the National Oceanic and Atmospheric Administration (NOAA) different from the other groups in this table? (Note: It is the only member of the list that is a federal agency.)
- How do aquaria play a role in sustaining seafood populations?

Homework Activity: Saving Seafood

Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently

Research one of the seafood conservation groups mentioned in this chapter to learn more about its goals, policies, and assessment standards. Why is this organization’s work important? Describe what you have learned in a brief report.

Vocabulary Terms
- Aquaculture: The production of seafood under controlled conditions.
Discuss

• Why might a given fishery decide to adopt sustainable practices?
• How can a manager determine whether a fishery is in fact following sustainable practices?

Reinforce and Review

• After deciding which species they will purchase, restaurant and foodservice managers must investigate fisheries to ensure that sustainable practices are followed and that populations are appropriately managed.
• Critical information for managers to know about wild fisheries includes whether the fish population is strong and well managed, where the fish are caught, and how the fish are caught.
• Strong, well-managed fisheries following sustainable practices can usually provide enough seafood so that operations can purchase consistently.
• The Marine Stewardship Council researches fisheries to identify and certify those that are sustainable.
• The United States produces 800 million pounds of farmed seafood each year.
Figure Focus

Figure 9.26: What can students determine about this fish from its photograph?

Trends:
The Sustainable Alaskan Pollock

Encourage students to discuss the following:

- Why is Alaskan pollock relatively abundant and inexpensive, given its global popularity?
- Explain the relationship between Alaskan pollock fisheries and local seal and sea lion populations.
- Should the conservation efforts taken by Alaskan pollock fisheries be performed by all fisheries? Why or why not?

Discuss

- What images come to mind when students consider “farmed fish”?
- Should there be globally established rules for aquaculture practices? Why or why not?

Reinforce and Review

- Some scientists believe that certain aquaculture practices can be detrimental to surrounding marine habitats.
- Fish farms produce animals in sea cages or net pens within an open body of natural water, known as an open system.
- A potential downside to farming within an open system is that the animals’ waste and leftover medications can pollute the surrounding ecosystem, which can potentially endanger marine life in the area.

Teaching Tips

- Obtain photographs of open and closed system aquaculture projects to help students understand the differences between the two.

Vocabulary Terms

- Open systems: Natural bodies of water used by a farm to produce fish.
Discuss

• What are some reasons why farmed fish are more desirable than wild-caught fish, and vice versa?

Reinforce and Review

• One benefit to open-system aquaculture is that popular shellfish filter their surrounding water, improving the quality of the marine environment.

• Closed systems recondition and reuse the water used to produce fish and therefore require more management and attention than open systems.

Essential Skills: Following Through on Sustainable Seafood

Encourage students to discuss the following:

• Switching to sustainably harvested seafood is both time-consuming and potentially expensive. Why do some restaurant and foodservice operations choose to make this change? What types of operations are more likely to purchase sustainable seafood?

• How might purchasing sustainable seafood contradict a local sourcing policy? How can the two coexist?

• Why is it important to train servers and other front-of-the-house staff to talk knowledgeably about an operation’s use of sustainable seafood?

Vocabulary Terms

• Closed system: A fish farm that is not in a natural body of water.
Homework Activity:
Coffee Countries

Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently

How many brands of coffee are available at your local supermarket? What countries produce these coffees? What information does that give you about the coffee trade?
Write a brief essay reporting your findings.

Discuss
- How much coffee do class members drink each day? Each week? Encourage students to relate their own habits to the increasing demand for coffee.
- Is there a “good” or “bad” method of coffee production? Why or why not?

Reinforce and Review
- Closed systems often require more energy to operate than open systems.
- Some closed farms use wild-caught fish to feed the growing farmed fish; in some cases, a farm might consume more total fish than it can produce.
- Trade associations, like the Global Aquaculture Alliance, now certify farms as sustainable.
- Americans buy and drink more coffee than any other country in the world.
- Coffee production accounts for 30 million acres of land in 60 countries; rapidly increasing global demand has resulted in new agricultural techniques that can produce more coffee more quickly and on less land.
- Sun coffee plantations require substantial management, including the use of pesticides and fertilizers, to produce abundant crops.
- Shade coffee farms not only provide coffee, but they provide habitat for migratory birds and other species.

Teaching Tips
- Encourage students to relate the demand for coffee to the price of coffee.

Vocabulary Terms
- Sun coffee: Coffee produced on newer, monocultured farms in areas where the forest has been cleared or thinned.
- Shade-grown coffee: Coffee produced on traditional farms within forested areas, so the coffee trees are shaded.
Discuss

- Why has there been such a significant increase in both global food demand and demand for animal foods?
- Why has the debate over industrialized animal farming practices become so prominent in recent years?

Reinforce and Review

- Shade-grown coffee farms usually receive little direct management, owing in large part to the biodiverse environments in which they appear.
- Shade-grown coffee can be an attractive way to preserve biodiversity in tropical rainforests as well as preserve and advance local economies.
- Offering shade-grown coffee is more expensive for a restaurant or foodservice operation than offering sun coffee, but it is an easy way for an operation to differentiate itself from the competition and to explore sustainability.
- As general food demand has increased worldwide, the demand for animal food products has increased as well.
- Industrialized animal farming practices can provide a high volume of meat for a low price, but they can also consume large amounts of energy and water while producing large amounts of waste and carbon dioxide; moreover, these practices are sometimes characterized as inhumane.
- Some restaurant and foodservice operations purchase animal foods that have been produced with more humane and sustainable techniques.

Teaching Tips

- Relate the material on animal products to the material in Chapter 6.

In-Class Activity: Coffee Options

Literacy Connection, 21st-Century Skills—Make Judgments and Decisions, Communicate Clearly, Interact Effectively with Others

If you were a restaurant or foodservice manager, would you serve shade-grown coffee or sun coffee in your establishment? What factors might affect your decision?
Discuss

• Can students identify these chefs? Why are they important? (Note: These individuals are all famous for their leadership and their commitments to sustainably produced foods: Alice Waters/Chez Panisse, Dan Barber/Blue Hill, Rick Bayless/Topolobampo.)

Reinforce and Review

• As when making other decisions about switching to sustainably-produced ingredients, managers must research their options and talk with suppliers when selecting animal foods.
• The key to buying sustainably produced animal foods is asking the right questions.

Teaching Tips

• Encourage students to relate the questions managers should ask when purchasing animal products to the questions managers should ask when purchasing other sustainably produced foods.

Sustainability in Action: Elevation Burger

Encourage students to discuss the following:

• What is grass-fed beef, and why does it matter? Does an animal’s food source affect its level of sustainability? Does it affect its taste?
• What special challenges might a fast-casual operation face when engaging in sustainable practices?
• How can purchasing food from an operation that observes sustainable practices help individuals follow more sustainable practices in their own lives?

Trends: Understanding the Lingo

Encourage students to discuss the following:

• How are terms such as these used to market particular products? How might this mislead consumers?
• What other words or phrases are commonly used to sell foods, for instance, “natural” or “value”? How can terms like these relate to the image that a company wishes to project? How can they relate to the consumer’s self-image?
• How can consumers know for certain what practices are used to produce their foods? Is it important to know this information?
Discuss

- How do consumers decide whether or not to spend more money to purchase organic goods?
- In some cases, restaurant and foodservice organizations must choose between buying locally produced items and organically produced items. Why might they choose one over the other?

Reinforce and Review

- Organic farmers typically conserve soil and water, do not use pesticides or synthetic fertilizers to grow crops, and do not use antibiotics or growth hormones to treat animals.
- The term “organic” is regulated by the USDA.
- In recent years, U.S. sales of organic products have experienced average growth of 15 to 20 percent annually. By 2008, sales approached $25 billion.
- Organic items are often more expensive than conventionally produced foods, although some consumers are willing to pay higher prices for what they consider to be better options.

Table 9.5: Organic and Conventional Farming Methods

<table>
<thead>
<tr>
<th></th>
<th>Organic</th>
<th>Conventional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fertilizing crops</td>
<td>Natural materials, such as compost and manure, are used.</td>
<td>Chemical-based materials are used.</td>
</tr>
<tr>
<td>Managing weeds</td>
<td>Tilling, mulching, and hand weeding are common.</td>
<td>Chemical herbicides help to kill weeds.</td>
</tr>
<tr>
<td>Managing pests</td>
<td>Insects that can help keep the crops healthy are brought into the fields. Pests might utilize crops or prey on other pests.</td>
<td>Pesticides are sprayed to kill pests and manage diseases.</td>
</tr>
<tr>
<td>Managing growth and diseases</td>
<td>Emphasis is on clean surroundings, grazing, and healthy diets to minimize disease and encourage growth.</td>
<td>Have clean surroundings and healthy diets, but both crops and animals can receive antibiotics, hormones, and preventive medications.</td>
</tr>
</tbody>
</table>

Organic Food

Organic food is generally defined according to agricultural practices as products that have been produced without pesticides or synthetic fertilizers. Organic farmers usually conserve soil and water and do not treat animals with antibiotics or growth hormones. The designation of “organic” is regulated by the USDA through the National Organic Program. It can refer to almost any agricultural product, including fruits, vegetables, dairy products, meat, and grains.

Table 9.5 shows some typical differences between organic and conventional farming methods.

Homework Activity: Greasy Goodness

Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Information Literacy, Work Independently

What is biodiesel? How and by whom is it used? How is it made? In what ways does using biodiesel help to conserve nonrenewable resources?

Discuss this information in a brief report.

Vocabulary Terms

- **Organic**: Foods (or other products) that have been produced without pesticides or synthetic fertilizers.
Fast Fact: Did You Know . . . ?

Encourage students to discuss the following:

- Why might a restaurant or foodservice establishment choose to become certified organic?
- Why does the USDA administer the National Organic Program, not the FDA?
- What marketing techniques might the certified operations use to promote their unusual status?

Discuss

- How can members of the restaurant and foodservice industry continue to learn about sustainability issues throughout their careers?
- When it comes to sustainability and conservation, is it better to make sweeping changes all at once or to make small, incremental changes over a period of years? What are the advantages and disadvantages of each approach?

Reinforce and Review

- Independent certifications and government standards can enhance communication, but also cause confusion.
- Making sustainability-related decisions can be difficult, especially as transitional and short-term expenses can be significant.
- The key to understanding sustainability-related decisions and making the right choices is staying involved.
Summary

• Remind students to review the following:
  1. Local sourcing
  2. Sustainable seafood
  3. Coffee
  4. Animal products
  5. Organic food
  6. The emerging landscape
Section 9.4 Review Questions

1. Aquaculture is the production of seafood under controlled conditions. It accounts for 50 percent of the fish consumed globally.

2. Organic food is produced without pesticides or synthetic fertilizers. Some companies prefer to use organic ingredients because of their positive effects on the environment.

3. Advantages of local sourcing include supporting the local economy and communities, limiting the food miles that some ingredients must travel, increasing opportunities for marketing and promotion, and reducing the amount of resources consumed. Disadvantages include limited ingredient options, the need for increased research and networking, and potentially higher ingredient costs. Chef Kate must weigh both advantages and disadvantages to make the correct decision.

4. Conventionally produced products might be less expensive, more consistent, and more readily available than organically produced foods.

5. Students should base their assessments on the menu items available at the time of research.

6. Advantages of local sourcing include supporting the local economy and communities, limiting the food miles that some ingredients must travel, increasing opportunities for marketing and promotion, and reducing the amount of resources consumed. Disadvantages include limited ingredient options, the need for increased research and networking, and potentially higher ingredient costs. Chef Kate must weigh both advantages and disadvantages to make the correct decision.

7. Student answers may vary.

8. Student answers may vary but should be logical and clear.
Section 9.4 Activities

1. Students will need to research prices for conventional and organic products to complete this project.

2. Students will need to research a fish or shellfish of their choice and provide the information that would be necessary to make a decision on the item's sustainability. Many fish and shellfish are found in multiple bodies of water, but students need only focus on a single site.

3. Students may not be able to interview farmers or other individuals, especially if the site they have selected is distant, in which case they should rely on any available resources for information.
Case Study Follow-Up

1. Students should develop a plan to cover at least three elements of conservation or sustainability. They should include employee training in their plans.

2. Students should identify some simple ways to conserve energy and water; they can use methods discussed in the text.

3. Students should point out some waste management techniques that include at least two sustainability-related methods.

4. Student answers may vary but should be related to sustainability issues.

5. Student answers may vary but should include employee training.

6. Student answers may vary but should be clear and logical.
Apply Your Learning

Reducing Utility or Disposal Costs
Students might need to contact local utility companies to determine how much rates might fall, based on changes in behavior. In some instances, this information—either the amount of a typical utility bill or the amount utility rates would fall, depending on the behavioral change made—might not be readily available. In these cases, teachers should assign hypothetical utility costs or percentage savings to students.

For instance, Student A might be assigned an imaginary electricity bill of $250 for a school, whereas Student B might be assigned an imaginary garbage bill of $600 for a restaurant. Student A might choose installing CFL lightbulbs to reduce monthly costs, so the teacher might assign that student a 2 percent drop in electricity rates. Student B might choose composting to reduce monthly costs, so the teacher might assign that student a 5 percent drop in garbage rates.

Going Green
Students should research and report on a restaurant or foodservice company of their choice.

Marine Litter
Students should research and report on this topic.

Sustainability Trade-offs
Student answers may vary so long as they defend their positions appropriately.
Exam Prep Answers

1. B
2. A
3. B
4. B
5. D
6. B
7. D
8. C
9. C
10. D
Chapter 10 Overview

Chapter 10 represents North and South America, which have almost every type of climate, providing vast varieties of foods.

Section 1: This section reviews the cultures and cuisines of North America, which includes the United States and Mexico.

Section 2: This section covers the cultures and cuisines of Central America and the Caribbean.

Section 3: This section reviews the cultures and cuisines of South America.

Advance Preparation

<table>
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<tr>
<th>Advance Preparation</th>
<th>Review</th>
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<td>Computer lab</td>
<td></td>
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<tr>
<td>Prepare</td>
<td>Maps</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Globe of the world</td>
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</tr>
<tr>
<td></td>
<td>Paper</td>
<td></td>
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<tr>
<td></td>
<td>Art supplies (pens, colored pencils, crayons, etc.)</td>
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CUSTOMIZED INSTRUCTION OPTIONS

<table>
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<tr>
<th>CUSTOMIZED INSTRUCTION OPTIONS</th>
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<th>More Advanced Students</th>
<th>ESOL Students</th>
<th>Special Needs Students</th>
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<tr>
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CHAPTER TOOLS

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<th>Science</th>
<th>Literacy</th>
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<td>Page 668</td>
<td>Page 639</td>
<td>Pages 643, 648, 653, 680</td>
<td></td>
</tr>
</tbody>
</table>

ServSafe Connection

Page 641
Case Study
Going Global

- Help students see that “The Americas” includes many completely different areas.
- “America” applies to the entire two continents.
- Note that there are follow-up questions about the case study at the end of the chapter.
- This activity could be done in groups, as a class, or as a homework assignment.

Miguel and Chef Kate are trying to do some community outreach by helping to host an Earth Day party in the town. They are coordinating with local officials, planners, organizations, and police to bring the community together, while also raising awareness for environmental issues and conservation worldwide. Their main contribution, along with other restaurant and food service establishments in the area, will be to supply the food. In the spirit of the day, they want to branch out from their usual menu and present dishes from various cuisines of the world, most notably, the cuisine of the Americas.

They want to have fun and be adventurous while still putting out great food that will represent their restaurant in the very best way possible. Given that they have the whole of the Americas to choose from, they have some tough decisions to make.

As you read this chapter, think about the following questions:

1. What foods are best to serve outside in the spring, which can potentially end up being quite warm?
2. What foods do you think will hold best for a daylong event?
3. Which regions of the Americas would be most representative of the larger whole?
4. Given that Miguel and Chef Kate don’t make these dishes every day, what foods should they stay away from? What foods should they try to work with?
<table>
<thead>
<tr>
<th><strong>Professional Profile</strong></th>
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<tbody>
<tr>
<td><strong>Discuss</strong></td>
</tr>
<tr>
<td><strong>Reinforce and Review</strong></td>
</tr>
<tr>
<td><strong>Teaching Tips</strong></td>
</tr>
</tbody>
</table>
Focus and Engage

Discuss
- Have students ever had a taco? Then they have eaten Mexican food.
- What about corn on the cob? Then they have eaten Native American food.
- There are very few "pure" cuisines left in the world.
- There are still some on the American continents, but most of them have other influences.

Section 10.1 North America

Introduce the Section
a. There are several regions of North American cuisine:
   - The Northeast—New England and Eastern Canada
   - The Midwest—The Great Plains from Oklahoma north to central Canada
   - The South—From Virginia to the border of Texas
   - The Southwest—Texas, New Mexico, and Arizona
   - The Pacific Coast/Rim—California, Oregon, Washington, British Columbia, and north to Alaska
   - Mexico—The entire country with all its regions
b. Each region has its own cultural influences and flavor profiles.
c. Discuss the objectives for the section.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.
Flavor Profile
Although mild, the flavors are full. Think Yankee pot roast, which has a mild yet full spectrum.

Figure Focus
Figure 10.1: Understanding the geography of a region can help understand the agriculture and animal life and the resulting cuisine.
Figure Focus

**Figure 10.2:** One-pot cooking is an ancient method.

Discuss

- The ancient “Three Sisters” technique is important to learn.
- It will appear again in other regions, and binds the Americas together.
- The Three Sisters appears in the Northeast.
- It then appears again much further south where the Mayans and others were settled.
- Hold off discussion of that aspect until it appears again. For now, help the students gain a solid understanding of what it is.
- The students might be able to identify the protein sources in Three Sisters.
- The Three Sisters were cooked in one pot, like a stew.
- One-pot cooking is seen throughout New England cuisine.

In-Class Activity: The Three Sisters

**Science Connection, 21st-Century Skills—Global Awareness**

Science is often taught through artistic illustrations, to the point where science illustrating is a career unto itself.

Using artistic illustration, have the students draw a picture of the Three Sisters, the agricultural technique used by the Native Americans.

Vocabulary Terms

- **New England boiled dinner:** Corned beef and vegetables boiled together in a single pot.
Reinforce and Review

- Maple syrup has chemical characteristics that contribute to its desirability.
- Maple sugar naturally occurs in the sap of the sugar maple tree.
- This maple sugar sap contains sucrose, the disaccharide found in white table sugar.
- However, when the sap sugar is dissolved and heated with water, some of the sugar inverts.
- Invert sugar is hydrolyzed, which means it is broken apart by a chemical reaction with water, and it is cleaved from a disaccharide into the two monosaccharides.
- When sucrose inverts, it becomes free glucose and free fructose in the solution.
- In maple syrup, some of the sugar is inverted.
- The invert sugar in solution tastes sweeter than sucrose.
- Less maple syrup is needed than sucrose to achieve the same level of sweetness.
- In addition, maple syrup has a distinctively delicious flavor!

Techniques:
Northeastern United States Cooking Methods

Sand-pit cooking is also seen in the Polynesian islands.

Nutrition:
Red, White, and Clam Chowder

Similar names and clams are most of what the two chowders really have in common. They are otherwise very different foods.

Vocabulary Terms

- **New England clam chowder**: Cream soup with clams, potatoes, onions, and celery.
- **Bisque**: An opaque creamy soup made from crustacean shells.
Figure Focus

Figure 10.3: Although both soups are made from clams, the two chowders are very different nutritionally.

ServSafe Connection:
The Safety of the Boiled Dinner

Long, slow cooking must still be hot enough to protect the food and the guests from foodborne illness.

Table 10.1: Nutritional Content of Clam Chowder

<table>
<thead>
<tr>
<th></th>
<th>Manhattan Clam Chowder</th>
<th>New England Clam Chowder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serving size</td>
<td>8-ounce bowl</td>
<td>8-ounce bowl</td>
</tr>
<tr>
<td>Calories</td>
<td>134 calories</td>
<td>228 calories</td>
</tr>
<tr>
<td>Total fat</td>
<td>30 calories from fat</td>
<td>116 calories from fat</td>
</tr>
<tr>
<td>Calories from fat</td>
<td>3 grams total fat</td>
<td>13 grams total fat</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>14 milligrams cholesterol</td>
<td>45 milligrams cholesterol</td>
</tr>
</tbody>
</table>

- Have the students compare the nutritional information of the two soups.
- Ask students if they’ve tasted both types of chowder and, if yes, which one do they prefer.
**Flavor Profile**

Pork chops with sage dressing is an example of a classic Midwestern flavor.

**Discuss**

- Ask students why they think so many cultures converged on the Midwest.
- Of the countries listed, what would these settlers find in the Midwest that was familiar to them?
- What differences would they find?
- If students have studied U.S. history, perhaps they have opinions about the Louisiana Purchase and its influence on immigration in the eighteenth century.
- What influence did this immigration have on cuisine?

**Figure Focus**

**Figure 10.4:** There are vast prairies in the Midwest, providing lots of farming and grazing land.
There are many meanings for the word “barbecue.” This word also represents several parts of speech. It can function as a noun, a verb, and an adjective.

Have students write one paragraph of at least three sentences. Each sentence should use the word “barbecue” in a different grammatical role: once as a noun, once as a verb, and once as an adjective.

Can students think of a way to use all three meanings in one sentence?

Perhaps they can think of more examples and uses for the word “barbecue.”

See the Fast Fact box on p. 652.

Vocabulary Terms

- **Pasties**: Traditional British foods including meat pies, bread puddings, and roasts with potatoes.
- **Lefse**: Potato bread.
Chapter 10 | Global Cuisine 1: The Americas

Techniques:
Midwestern United States Cooking Methods

“Chicken fry” doesn’t necessarily have anything to do with chicken.

Trends:
Entertainment Concept Dining

Each of these trends features a concept from the Americas.

Flavor Profile

The flavors of the southern regions of the United States become distinctive favorites for many diners.

In-Class Activity:
Entertainment Concept Dining Ideas

21st-Century Skills—Financial, Economic, Business, and Entrepreneurial Literacy

Divide the students into groups of four or five. Together, have them design an entertainment concept dining restaurant experience. They should have a theme, entertainment ideas, menu ideas, service ideas, costume ideas for the serving staff, and ideas for the restaurant’s décor. They will also need one advertising idea. Have them write the concepts as a business proposal. Each group of students can present its proposal to the class.

Vocabulary Terms

- Tidewater cuisine: From Virginia and North Carolina's Tidewater region, cuisine influenced by the Native Americans who taught European settlers to plant corn and introduced them to native squashes, plums, berries, greens, game, and seafood, including fish and oysters.
Figure Focus

**Figure 10.6:** There are some close neighboring and overlapping areas of the cuisine areas of the South.

### Discuss

- How many different cuisines can you identify in the South?
- How did each one come to be?
- What has influenced the cuisine of Florida?

### Vocabulary Terms

- **Low Country cuisine**: South Carolina, Georgia, and northern Florida Atlantic seaboard cuisine.
Discuss
- Perhaps students are aware of concepts from social studies and history classes.
- Religion has been a major factor in causing large groups of people to move to new places.
- How has this influenced the cuisine of the New Orleans, Louisiana area?

Vocabulary Terms
- **Creole**: A French-African mix of cuisines in the New Orleans area.
- **Cajun**: The cuisine of the French Canadian Acadians who settled in the Mississippi Delta area.

Figure Focus
**Figure 10.7**: The food available in the swamp was used to substitute for foods that were already familiar to the Acadians.
Figure Focus

**Figure 10.8**: Delicacies of the Eastern seaboard area.

**Figure 10.9**: Spicy dishes from the New Orleans area.

**Reinforce and Review**
- Gumbo is often thickened with okra.
- It can also be thickened with filè powder.
- Some gumbos are thickened with roux.

**Teaching Tips**
- Crayfish, crawfish, and crawdads are all the same thing.

**Vocabulary Terms**
- **Low country boil**: Another example of a one-pot meal.
- **Trinity**: New Orleans type of mirepoix.
- **Gumbo**: A sauce-based one-pot meal that is usually served over rice.
- **Jambalaya**: Another one-pot meal, but with several different proteins, which usually includes crayfish and andouille.
- **Andouille**: Cajun sausage.
- **Filè**: A thickener made from dried sassafras leaves.
Chapter 10 | Global Cuisine 1: The Americas

Techniques: Southern United States Cooking Methods

Nearly all the cuisine cooking methods of the world are born of local necessity and innovation. Each region has its own climate and resources. Historically, this has dictated the crops and herds that could thrive in the region. Humans had to determine a way to meet their nutritional needs using what was available. All the populations that survived managed to do this. Humans also like to enjoy food, so spices and flavorings have evolved to meet this desire while meeting the need for life-sustaining nutrition.

What’s New: GMO Food

There are many facets to the conversation about GMO processes.

In-Class Activity: The GMO Debate

Literacy Connection, 21st-Century Skills—Reason Effectively

Divide the class into two teams.

Label one team “Pro” (affirmative) and the other team “Con” (negative).

Have them research and debate this statement: “Resolved: All food crops should be Genetically Modified Organisms.”

Students should research their arguments and present their cases as a persuasive speech with a time limit. Each side will get to cross-examine the other team, also against a time limit. Each side will also have a timed chance for rebuttal.

This might not fit the exact demands of a formal debate, but the students can benefit from teaching each other about the various views.

Figure Focus

Figure 10.10: GMO food crops can be modified for any number of traits; some of these will be readily visible, whereas others will not.
Figure Focus

**Figure 10.11a:** Celery may be dirty at the root. Be sure to clean the celery before dicing it.

**Figure 10.11b:** The horizontal cuts do the dicing so the onion is not just sliced.

**Figure 10.11c:** Remove seeds and pith before chopping green pepper.

**Essential Skills:**

**Making the Trinity**

Green pepper substitutes for carrots. The flavor is quite different.

**Flavor Profile**

Southwestern flavors are influenced by Mexico.

**Discuss**

- If you have ever eaten a taco, you have had a Southwestern-influenced menu item.
- The American-style, Mexican-influenced cuisine of the Southwest can be found all over North America now.
- Tortillas and spices are features of the cuisine.
Discuss

• Perhaps students are fans of salsa.
• Salsa has passed ketchup as the single most popular condiment in the United States.
• Salsas come in many varieties, not just those including tomatoes and peppers.
• Ask students if they eat salsa as part of their regular diet.
• Ask them how they use the salsa.
• Perhaps they would like to know that tomato salsa is nutritious, and is a source of beta carotene and lycopene.

Techniques:
Southwestern United States Cooking Methods
Cooking with fire and smoke is popular in the Southwest.

Vocabulary Terms

• Tex-Mex: Southwestern cuisine featuring ground meats.
• Cal-Mex: Southwestern cuisine featuring shredded meats
• Salsa: A vegetable sauce, usually with tomatoes, peppers, and spices, usually served cold.

Figure Focus

Figure 10.12: Parts of the United States border Mexico in the Southwest. Mexican flavors influence their cuisine.
On the Job:
Spanish in the Americas

There are many opportunities to study a second language in the United States.

Discuss

- Do any students in the class speak a language other than English?
- Are any of them learning a language other than English?
- Help students brainstorm about how valuable this can be to their future.

Vocabulary Terms

- Barbecued: Foods, usually proteins, cooked with fire and smoke.

FigureFocus

Figure 10.13: There are many delicious varieties of salsa.
**Fast Fact:**
**Did You Know . . . ?**

See the activity box for p. 643.

**Flavor Profile**

There are many Asian influences in the Western United States.

**Discuss**

- “Fusion” does not necessarily mean Asian.
- Fusion cuisine means that two different types are brought together into a single menu or dish.
- Perhaps students can give some examples of fusion dishes or menus.
- Mexican pizza or Southwestern-style pizza might be something they have heard of.

**Vocabulary Terms**

- **Fusion cuisine**: A combination of two or more regional cuisines to form new dishes.
Figure Focus

**Figure 10.14:** The western United States has enjoyed Asian influences along the Pacific Coast.

**CUSTOMIZED INSTRUCTION**

**Literacy Connection, 21st-Century Skills—Think Creatively**

Nori is a type of green ocean algae that is rolled into sheets and sun-dried or toasted.

Wakame is an edible seaweed with a dark green, leaf-like frond.

Dulse is red ocean algae with an edible frond.

Traditional in Japanese cuisine, these sea vegetables are finding their way into Asian fusion dishes all along the Pacific coast from British Columbia to Peru. They are especially popular in California.

They taste like the ocean: salty and robust, but not fishy. They can even add a seafood quality to vegetarian cuisine.

**More Advanced Students**

Write a haiku using at least one of the words nori, wakame, or dulse, and describing its flavor.

(Line 1 = 5 syllables; line 2 = 7 syllables; line 3 = 5 syllables.)

**Less Advanced Students**

What are the names and the correct spellings for the three sea vegetables discussed here? Use each one in a sentence or poem.

**Special Needs Students**

Are there words that rhyme with nori, wakame, or dulse? Use one to make a simple two-line rhyming poem.

**ESOL Students**

Write a "roses are red" poem about a sea vegetable. Introduce the "Roses are red, violets are blue . . . " format.
Reinforce and Review

- Berries are full of flavor and very popular.
- Many berries are full of noticeable seeds.
- They are often more acceptable for certain menu items if they are seeded.
- A chinois can be used for this purpose.
- Whole, plump, ripe, sweet berries are beautiful garnishes.

Techniques:
Pacific Coast/Pacific Rim Cooking Methods

Light flavors of fresh fruit and vegetables infuse Pacific cuisine.

Nutrition:
Got SPAM?

Hawaii is a place full of culinary surprises. Ask students if they have ever tried SPAM.

Figure Focus

Figure 10.15: Berries are a wonderful addition to a summer menu.

Figure 10.16: Hormel’s classic canned meat product was especially useful during World War II.
Flavor Profile

Mexican flavors aren’t exactly like the American concept of Mexican food.

Discuss

- Do students recall from social studies and history classes the main Native Americans of Mexico, Central America, and South America?
- The native nations discussed in this chapter include:
  - The Aztec civilization in Mexico
  - The Mayan civilization in Mexico and Central America
  - The Incan civilization in western South America
- These ancient civilizations developed foods that still influence the cuisines of the region, the continent, the hemisphere, and the world.

Figure Focus

**Figure 10.17**: Help students notice the variety of regions and terrains: coastal, mountains, plains, and tropics.
**Discuss**

- Talk with the students about peppers.
- Why do they think that peppers are such an integral part of Mexican cuisine?
- Are there other cuisines that they know of that feature peppers so prominently?
- They will learn more in this chapter and the next one.
- Introduce the pronunciation for comale: “koh-MAHL” or “koh-MAH-lay.”

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**In-Class Activity: Tortilla Brainstorm**

**21st-Century Skills—Work Effectively in Diverse Teams**

Divide the students into four teams.
Have each team think of a completely new way to serve a tortilla.
The students should specify whether or not they have chosen corn or flour tortillas.
Any meal of the day, any course of the meal is fair game.

For example, students might suggest a fried corn tortilla, salted, rolled, and cooled as an ice cream cone. Students will have their own ideas and creations.

---

**Vocabulary Terms**

- **Comale**: A cooking surface for tortillas.
- **Masa**: Corn meal created by chemically treating corn with alkali to remove the husks

---

**Figure Focus**

**Figure 10.18**: Cooking a tortilla.
Reinforce and Review

- “Mole” can be used as a word, or as the ending of a word, as in “guacamole.”
- Guacamole is popular outside of Mexico.
- In the United States, guacamole is often used as a dip or party food.
- In Mexican cuisine, guacamole is used as a condiment.
- Guacamole traditionally added important vitamins and fats to the diet.
- Guacamole is still a rather simple mashed avocado mixture.
- Introduce the pronunciation for mole: “MOH-lay.”

Techniques: Mexican Cooking Methods

The various cooking methods are holdovers from primitive techniques.

Vocabulary Terms

- Mole: A Mexican sauce; there are several varieties.

Figure Focus

**Figure 10.19:** The rich, brown, smoky Mole Negro.
Summary

- Remind students to review the following:
  1. Northeastern United States—culture, ingredients, and dishes
  2. Midwestern United States—culture, ingredients, and dishes
  3. Southern United States—culture, ingredients, and dishes
  4. Southwestern United States—culture, ingredients, and dishes
  5. Pacific Rim/Coast—culture, ingredients, and dishes
  6. Mexico—culture, ingredients, and dishes

New England is in the northeast corner of the United States situated along the Atlantic Seaboard, so it has access to a large supply of fresh seafood. Because this region was the location of some of the earliest European settlements of the United States, Native Americans had an influence on New England cuisine. It has also been influenced by the Puritans and Portuguese, Irish, and Italian immigrants who came over from Europe. Traditional New England recipes are not highly seasoned. The flavors are deep and rich and tend to be more mild than spicy. One-pot cookery is common in the region.

The Midwest region of the United States consists of states in the center of the country. These states are known for their grassy plains, lakes and streams, change of seasons, and a good climate and conditions for raising cattle and growing vegetables. Midwestern cuisine usually showcases simple, hearty dishes that make use of locally grown food. Midwestern cuisine has many cultural influences because people immigrated to this area from Germany, Britain, Italy, Hungary, and Scandinavia. The food is generally hearty, but can be prepared with a light hand with seasonings ranging from sage, dill, caraway, mustard, and parsley to bring out bold and spicy flavors. Barbecue, chicken-frying, pickling, and canning are popular cooking methods of the region.

Due to the wide expanse of this region, it’s easiest to discuss Southern cuisine in three parts: the Tidewater region of Virginia and North Carolina; the Low Country of South Carolina, Georgia, and northeastern Florida; and the Gulf Coast area of the Mississippi Delta and Louisiana. The flavor profiles of Southern regions vary from the highly flavored and spicy Cajun food to the more mild but full-flavored food of the Tidewater region. In all cases, the flavors are fresh and typical of local ingredients. The cooking techniques used in the southern United States cover the full range of techniques used in Western cookery. One that is somewhat of a hallmark of the region is one-pot cookery, in which a full meal is prepared in one pot. Everything is well spiced and carries an exquisitely blended flavor and aroma.

The Southwest is composed of Texas, Arizona, and New Mexico. Much of the cuisine of the Southwest has been heavily influenced by Mexican culture, heritage, and cooking methods. The flavor profiles of Southwestern cuisine is typically smoky and spicy, and the cooking methods consist of grilling, smoking, and barbecuing.
Sometimes referred to as Asian fusion or Euro-Pacific, Pacific Rim cuisine was created around the early 1970s when many eclectic styles of fusion cuisine become popular. Pacific Rim cuisine is a combination of the cuisine of many different countries along the Pacific Coast. It is a style of cooking and presenting foods that combines the ingredients and techniques of Asian and West Coast cuisines. Additional Pacific Coast flavors are based in seafood, sourdough bread, and local fruits and vegetables.

Mexican cuisine derives from ancient Aztec and Mayan cultures, which were very sophisticated in their food preparation. Mexican tacos and enchiladas are just the beginning of the bold and broad palate of our neighbors to the south. The flavor profile of Mexican cuisine is spicy hot and earthy. Most of the flavors originate from vegetarian sources, but meat, poultry, and seafood feature prominently in modern Mexican cuisine. Cooked mole is a feature in Mexican cuisine.
Section 10.1 Review Questions

1. One-pot cooking is a notable cooking method in the Northeast.

2. The Midwest flavors are much milder than those in Southwestern cuisine.

3. The South includes the Tidewater, Low Country, and Gulf Coast regions.

4. Stir-frying, grilling, and baking are often used in Pacific Rim/Coast cuisine.

5. Each student will have a unique answer that does not need to be limited to the cuisines covered thus far in the text.

6. Each student will have a unique answer, but possible answers include New England clam chowder or Manhattan clam chowder, New England boiled dinner, barbecued meat (dry-rub), meatloaf, and so on.

7. Each student will do research and present his or her own opinions and findings.

8. Students may have a variety of ideas. It’s possible to combine all the southern spicy areas, all the northern meat areas, and the western fusion areas. They could also combine the fusion sections of Pacific Rim/Coast and Southwest, then all of the Eastern seaboard and Gulf Coast where seafoods are featured, then the Midwestern milder meat and dairy region.
Section 10.1 Activities

1. Students should do some research into the cooking method, the traditional menu, and so on.

2. The subregions of the South are specifically influenced by their geography, native plants and wildlife, and ethnic origins of inhabitants.

3. This assignment will be time consuming. It will also help students synthesize all of the information they have read in this section.
Section 10.2
Central America and the Caribbean

Introduce the Section
a. There are cultural influences that infuse Caribbean cuisine with many different flavors and foundations.
b. Central American cuisine has grown out of both poverty and the availability of tropical fruits.
c. Discuss the objectives for the section.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
• Many students have never considered Central American cuisine as being different than Mexican.
• There are many tropical influences in Caribbean and Central American cuisines.
• Central America and the Caribbean have different cuisines.
• Perhaps the students have heard of jerk spice. If so, they have heard of Caribbean cuisine.
• If they have eaten a banana, they have probably eaten food from Central America.

Reinforce and Review
• The Caribbean was the first part of the Americas with permanent European settlers.
• Christopher Columbus arrived on the island of Hispaniola, now the location of Haiti and the Dominican Republic.
• Several European nations settled in the Caribbean.
• African slaves were also brought to the region.
• The Caribbean is currently a popular tourist and cruise ship destination, and is influenced by popular chefs.
• Central America has experienced less tourism and fewer European settlers.
• Central America has pockets of ancient and traditional cultures.

Flavor Profile
Tropical fruit of Central America includes the bananas that are sold in the United States.
Figure Focus

**Figure 10.20:** The regions discussed here are tropical.

**Discuss**

- Have students ever heard the phrase “Banana Republic”? They might have heard of a retail outlet by this name, but not realize that it is a political term.
- Have students ever considered what this might mean?
- Have them discuss the real political meaning of the name.
**Discuss**

- Have students ever tasted typical Central American dishes such as *curtido*?
- There is some overlap with Mexican foods.

**Vocabulary Terms**

- **Cacao**: A tropical tree that grows seed pods that produce the beans that are ground to make cocoa powder (which is then made into chocolate).
- **Gallo pinto**: A Central American bean and rice dish.
- **Curtido**: A typical Central American relish made from cabbage, onions, and carrots in vinegar.

**Figure Focus**

**Figure 10.21**: Corn husks are used for tamales in Mexico, and banana leaves are often used in Central America.
Techniques: Central American Cooking Methods

Central American cooking methods have been used since ancient time, like Mexican techniques.

Nutrition: Yuca

Many different cultures across the world depend on yuca for calories and nutrients. Ask students if they’ve ever tasted yuca.

Figure Focus

Figure 10.22: Cassava roots are used for food.
**Essential Skills: Making Pupusas**

In El Salvador and Guatemala, a *pupusa* might be perfect for a quick lunch on the go. Ask students if they've ever tasted a *pupusa.*

**Teaching Tips**

- *Pupusas* would be interesting for students to make in class.
- Students might also like to try making *curtido* a day or two in advance of the *pupusas.*

**Figure Focus**

**Figure 10.23a:** Be sure not to add too much water to the dough.

**Figure 10.23b:** *Pupusas* are often sold by open air vendors.
Did You Know . . . ?

There are seven Central American nations. Guatemala is the largest, and it is twice as large as the next largest country.

Flavor Profile

Tropical fruit greatly influences Caribbean cuisine.

Reinforce and Review

• After Columbus discovered a route to the Caribbean, European settlers arrived and established settlements.
• There were native people on the islands when Europeans arrived.
• Many of the natives died when they contracted new illnesses from Europeans.
**In-Class Activity:**
The Tropics—Earth Math

Mathematics Connection, 21st-Century Skills—Global Awareness

The Tropic of Cancer is a latitudinal line around the Northern Hemisphere. The Tropic of Capricorn is a similar line around the Southern Hemisphere. The Equator is halfway between the two Tropic lines.

The region between the two Tropic lines is called “tropical” or “the tropics.” This includes the Equatorial region. Tropical fruit and other tropical foods grow here.

Some of the region just beyond those lines with similar climate is also thought of as “tropical” because palm trees grow, although technically these areas would be “subtropical” (Los Angeles or Florida, for example).

Have the students use a globe, a map, or online resources to discover the latitudes of the tropics. Have them verbalize the locations of the tropics in correct nomenclature, while pointing to the tropic lines on a map or globe.

The Tropics exist at 23° 26’ 22” N and S of the Equator. The students should be able to verbalize what those numbers mean.

These are the measurements of latitude, which are horizontal when considering the Earth with the poles top and bottom. The lines of latitude do not intersect, and run east–west around the girth, with the Equator as the central and 0° line.

Each line of latitude is approximately 60 nautical miles apart. It is referenced using a number and the term “degree” and a superscript symbol (°). The area between degrees is referenced in “minutes” with the symbol ′ and “seconds” with the symbol ″. There are 60 minutes between each degree and 60 seconds between each minute.

The lines of longitude run north–south and all intersect at the poles. They are at right angles, or 90° to the lines of latitude. They are also 60 nautical miles wide at the Equator, but narrow as they proceed toward the poles where they intersect.

Climate zone locations are determined by the degrees of latitude. Students probably already realize that the Equator is very hot, the poles are very cold, and the climate zones range between the two.

The student should be able to verbalize these concepts, which are the mathematical interpretation of planet Earth.

---

**Figure Focus**

*Figure 10.24: The Caribbean islands are home to a wide variety of cultures.*

**Vocabulary Terms**

- **Jerk spice:** A Jamaican dry rub for barbecued meat.
Reinforce and Review

- African cuisine heavily influences Caribbean and Creole cuisines, plus others elsewhere (soul food cuisine elements).
- Africans were brought to these regions for the slave trade after the Europeans arrived.
- They brought some of their familiar foods and cooking methods.
- These elements have fused and blended with the cuisines of the other cultures.
- These same cuisine elements are still found in Africa.

Vocabulary Terms

- Cubano: A ham, cheese, pork, and pickle grilled sandwich on Cuban bread.
- Pan Cubano: Sandwich roll from Cuba.

Figure Focus

**Figure 10.25:** Jerk spice is applied before roasting.

**Figure 10.26:** Caribbean carrot juice is a mixture of carrot juice, cream, and sugar.
Reinforce and Review
- *Sofrito* is used to flavor rice.
- Without the *sofrito*, rice is bland.
- *Sofrito* is found throughout Puerto Rico.
- Although *sofrito* has peppers in it, it is not especially hot.

### Techniques: Caribbean Cooking Methods

| Barbecue grills are often homemade oil drums with a metal grate over the fire. |

### What’s New: What’s Stevia?
Stevia is sold in the United States.

### Vocabulary Terms
- *Sofrito*: A Puerto Rican foundational cooked sauce.

---

**Figure Focus**

*Figure 10.27:* Stevia is regarded as a promising sweetener.
Steel drums are now found throughout the Caribbean islands.

Summary

- Remind students to review the following:
  1. Central America—culture, ingredients, and dishes
  2. Caribbean—culture, ingredients, and dishes
Section 10.2
Review Questions

1. Central American cuisine is tropical and earthy.

2. Central American techniques include griddle-frying and steaming.

3. Caribbean food is smoky, spiced, and tropical.

4. Barbecue is originally from the Caribbean. The cuisine is also tropical.

5. Students might need to do some extra research, and can choose many different spices, including peppers, cocoa, vinegar, cinnamon, allspice, cilantro, cumin, and oregano.

6. This will require outside research by students. The first aspect is to make the *pan Cubano* roll. Then the pork must be roasted and ready at the correct time to make the sandwiches.

7. Each is made from ingredients that grow well in the local area. The combination gets spicier the further south you travel. Mirepoix is made in the north with the mild ingredients of carrots, celery, and onion. Trinity trades the sweet and earthy carrot for the bold flavor of green bell pepper. *Sofrito* is made with jalapeño peppers, which add heat, in addition to added meat and more herbs and spices.

8. Each student will respond with personal opinions and thoughts.
Section 10.2 Activities

1. There is some outside research required, and the students should divide the tasks for this assignment. They might want to consult a history or social studies text or resource.

2. Jerk spice is a signature dish of Jamaica. It brings a very powerful and full-spectrum flavor to barbecued meat.

3. This activity will require outside research. Each student's meal will be different.
**Section 10.3**
**South America**

**Introduce the Section**
a. There are many cultural and geographic areas of South America.
b. There will be a brief overview of the continent, and then focus on two countries.
c. Supplemental information could be added as desired.
d. Discuss the objectives for the section.

**Vocabulary Review**
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

**Teach**

**Discuss**
- Contrary to what some might believe, there are very few tortillas in South American cuisine.

**Vocabulary Terms**
- **Quinoa**: Flour from the grain-like goosefoot plant.
Reinforce and Review

- The terrain of South America still determines the diet to a great extent.
- There are some very untouched areas, especially in the Amazon rainforests and the high Andes Mountains.
- Tortillas are not as common in South America as they are in Central America and Mexico, but hot peppers are found throughout the continent.
- Much of South America was settled by the Spanish, but Portuguese, Dutch, and French people settled some of the regions.
- The English and Germans and other Europeans are also represented in South America.

**Figure Focus**

**Figure 10.28:** The South American continent is vast.
Discuss

• In what ways are the Portuguese influences in Brazil different than the Spanish influences in other parts of South America?
• In what ways are they the same?
• Students could read the text in the book together for some information, or they could read silently in advance of the discussion.

Flavor Profile
The cuisine of Portugal is still a major influence in Brazil.
Figure Focus

Figure 10.29: Brazil is larger than Australia and a little smaller than the continental United States.

Reinforce and Review

- Brazil is in the tropical zone, so there are tropical fruits that grow in Brazil.
- Citrus fruits also grow in Brazil.
- Their citrus fruits are shipped throughout the world.
Techniques: Brazilian Cooking Methods
Churrasco is a specialty of Brazilian cooking.

Reinforce and Review
• Yerba matè and guarana are quite strong with their caffeine-like qualities.
• They also have nutritional and health-promoting aspects.
• However, when made into soda pop, they have the same drawbacks as other sweetened sodas.

Regional Ingredients and Dishes
Portuguese-bred Brazilian cuisine is not based upon corn and tortillas like many of its South American neighbors. Tropical fruits like bananas are a staple of the daily diet. Meat roasted on skewers over fire (churrasco), as shown in Figure 10.30, is a specialty. A bean stew called feijoa (FEY-ow-da) is a hallmark item in both Portugal and Brazil.

Figure 10.30: Entire restaurants are designed around churrasco skewered meats.
The World Health Organization is concerned with both nutrition and food safety.

**Essential Skills: Cracking Coconuts**

The liquid that pours out of a coconut is not coconut milk; it is coconut water.

**Fast Fact: Did You Know . . . ?**

The South American continent is vast. It begins above the Equator and proceeds south toward the Antarctic Circle.
**Flavor Profile**

Potatoes are ancient cuisine elements of Peru and the high Andes.

**CUSTOMIZED INSTRUCTION**

Literacy Connection, 21st-Century Skills—Access and Evaluate Information, Global Awareness

Access the following article:


This article covers the various cuisines, fusions, and influences in Peru. It also discusses Peruvian influences on other cuisines of the world.

Have students read all or your selection of parts of it aloud in the classroom.

If students have language or reading challenges, select passages that are in keeping with their ability level.

After students have read the information, jigsaw the various aspects of this article. Have students present their findings to the class.

**More Advanced Students**

Track the various historical influences on the cuisine of Peru. What were the events that brought different cultures to Lima?

**Less Advanced Students**

What are the various influences that Peruvian cuisine has provided to the rest of the world?

**Special Needs Students**

Chef Acurio now has 20 restaurants in South America and has opened one in San Francisco. How many miles is San Francisco, California from Lima, Peru?

**ESOL Students**

Has the native culture of the ESOL student been part of the history of Peruvian cuisine? Has the cuisine of the native culture been influenced by Peru?

Have students share some information about their native culture with the class.

**Figure Focus**

**Figure 10.32:** Peru is on the Pacific Coast, high in the Andes Mountains and down to the shore.
Reinforce and Review

- The very high Andes Mountains extend down the western side of the South American continent, not far from the Pacific coast.
- The Incan people were adapted to living in the high Andes.

Vocabulary Terms

- **Ceviche**: A citrus and fish mixture common to most of the Latin American coastal regions.

---

**Figure Focus**

**Figure 10.33**: Terracing for agriculture was a needed adaptation on the mountainsides.

**Figure 10.34**: A fresh-tasting Peruvian specialty.
Reinforce and Review

- Machu Picchu is an ancient Incan terraced city perched very high in the areas of the Andes.
- It is located an elevation of 8,000 feet above sea level.

Techniques: Peruvian Cooking Methods

Did students realize that mashed potatoes were actually a Peruvian contribution to their diet?

Nutrition: Cherimoya

If at all possible, try and obtain a cherimoya for the students to taste, and have the students research cherimoyas.

Fast Fact: Did You Know . . . ?

Peruvian cooking includes many ways of preparing many varieties of potatoes.

Figure Focus

**Figure 10.35:** The cherimoya’s rich and creamy pulp, with a hint of a sweet flavor, makes it an excellent dessert fruit.
Summary

- Remind students to review the following:
  1. South America—overall culture and ingredients
  2. Brazil—culture, ingredients, and dishes
  3. Peru—culture, ingredients, and dishes
Section 10.3
Review Questions

1. Portugal has had the strongest influence on Brazilian cuisine.

2. Roasting and stewing are common cooking methods in Brazil.

3. They are often mashed, but boiling or frying would also be correct answers.

4. Potatoes and beans are Peruvian staples. Students could also mention rice, corn, fish (coastal), and peppers.

5. Students should concentrate on a combination of rice and beans.

6. Each student will have an idea about this. They might need to do some outside research.

7. Either answer could be correct. The meat-based diet of Brazil’s vast population and area is coupled with the meat diet of Argentina, Paraguay, Uruguay, and some of the other areas have meat-based diets as well. However, the potato—a gift from Peru—is so ubiquitous throughout North and South America that it might be chosen, too.

8. Each student will identify different things. Students might mention the complementary proteins that are found in Mexican food, and also seen in the beans and rice dishes of South America. Because Mexico is part of North America, this can connect the two continents. Seafood also connects the two continents, as there are vast coastlines along both sides with much access to fish and other seafood. The plains of both continents are ideal for grazing beef, so beef is common on both continents. Tropical fruit is found more in south than the north, as the north only has a small section of tropics north of the Equator (Tropic of Cancer) in Central America and the Caribbean. The south has some of that tropic as well, plus the Equatorial area and the tropic south of it as well (Tropic of Capricorn).
Section 10.3 Activities

1. If this will take too long for the class period, jigsaw the assignment by assigning regions to each group. When they are done, assemble a large completed map for display in the classroom.

2. This will be interesting for the students. They should note the similarity in meat, often beef, as a main dish. A main difference should be tropical foods. Plus, Brazil has a coastline and seafood, unlike the Midwest. The Midwest does have the Great Lakes, which have great freshwater fish.

3. This will require some outside research.
Case Study Follow-Up

1. It would be appropriate for the students to choose cuisines of various regions to highlight global awareness. They might also include some dishes from native cultures. Finally, at least one menu option could be a complementary protein item, perhaps based on Three Sisters, tortillas, beans and rice, or another successful dietary strategy of Native Americans.

2. Practice would help. They will need to do a trial run or two before actually trying to serve a new dish at an Earth Day party.

3. Each student will have an opinion, and should be able to defend it. The most global possibilities are probably the Pacific Rim/Coast of North America, with American, Asian, and Mexican flavors, plus fresh vegetables and fruit, including citrus. Another would be Brazil, with African and Portuguese influences. The Caribbean might have more nationalities influencing a small area than any other portion of the Americas.
Apply Your Learning

**Compare and Contrast**
Students should definitely have potatoes, and probably corn, in the Venn overlap. They will come up with other ideas as well.

**Language and the Culinary Arts**
Students might want to consult history resources for this assignment. When settlers arrive in a new place, they still talk and they still eat.

**Some Like It Hot**
Students will research capsaicin and other chemical compounds that lend heat to chili peppers. The greater the capsaicin content, the greater the heat. Another chemical they might research is peperine, the heat from black pepper. Students might learn that in addition to tasting “hot” and “burning,” these substances actually cause some heart rate and blood pressure response (increase, usually), and can even trigger the release of endorphins. That helps explain their popularity!

**A Selling Script**
The students can be creative with this.
Exam Prep Answers

1. C
2. B
3. B
4. B
5. D
6. C
7. B
8. D
9. B
10. A
Recipe

New England-Style Clam Chowder

- This recipe helps the students develop technique skills with roux.

New England-Style Clam Chowder

Yield: 3.5 quarts
Prep Time: 50 minutes

Ingredients:
- 2 qt canned clams with juice
- 1½ qt water or fish stock
- 1 lb 4 oz potatoes, small dice
- 8 oz salt pork, small dice
- 2 oz whole butter
- 1 lb onions, small dice
- 8 oz celery, small dice
- 4 oz flour
- 1 qt milk
- 8 fl oz heavy cream
- To taste salt and pepper
- To taste Tabasco sauce
- To taste Worcestershire sauce
- To taste fresh thyme
- As needed fresh parsley for garnish
- As needed parsley, julienned, for garnish

Instructions:
1. Drain the clams, reserving both the clams and their liquid. Add enough water or stock so that the total liquid equals 2 quarts.
2. Simmer the potatoes in the clam liquid until nearly cooked through. Strain and reserve the potatoes and the liquid.
3. Render the salt pork with the butter. Add the onions and celery to the rendered fat and sweat until tender but not brown.
4. Add the flour and cook to make a blond roux.
5. Add the clam liquid to the roux, whisking away any lumps.
6. Simmer for 30 minutes, skimming as necessary.
7. Bring the milk and cream to a boil and add to the soup.
8. Add the clams and potatoes, and season to taste with salt, pepper, Tabasco sauce, Worcestershire sauce, and thyme.
9. Garnish each serving with fresh parsley and julienned carrot as desired.

Nutritional Content:
- Calories: 430
- Calories from fat: 230
- Total fat: 20 g
- Saturated fat: 12 g
- Trans fat: 0 g
- Cholesterol: 85 mg
- Sodium: 315 mg
- Carbohydrates: 19 g
- Dietary fiber: 2 g
- Sugars: 0 g
- Protein: 24 g
- Vitamin A: 60%
- Vitamin C: 40%
- Calcium: 30%
- Iron: 12%

Nutritional analysis provided by FoodCalc, www.foodcalc.com
Recipe

Jamaican Jerked Pork Chops

- Help students appreciate the interesting combination of spices. Cinnamon, allspice, and nutmeg are not just for sweets, but some students might be new to the concept.
Recipe

Ceviche of Scallops

- The fish isn’t “raw” even though it is uncooked. It is denatured with acid rather than heat.
Chapter 11 Overview
Chapter 11 follows from Chapter 10, introducing students to the cultures and cuisines of four major regions.

Section 1: The first section discusses European cultures and foodways, focusing on France, Spain, and Italy.

Section 2: This section describes Mediterranean food patterns, focusing on Morocco, Greece, and Tunisia.

Section 3: This section explores the cultures and cuisines of the Middle East, especially in Egypt, Iran, and Saudi Arabia.

Section 4: This section discusses Asian cultures and food patterns, focusing on China, Japan, and India.

Advance Preparation

Review
Sections 11.1–11.4
Chapters 9, 10
Level 1, Chapter 1

Contact
Owners or chefs of restaurant and foodservice operations and stores specializing in the cuisines discussed in this chapter

Prepare
Maps and images of the countries and regions under discussion
Images of a tandoori oven

CUSTOMIZED INSTRUCTION OPTIONS

<table>
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<tr>
<th>Less Advanced Students</th>
<th>More Advanced Students</th>
<th>ESOL Students</th>
<th>Special Needs Students</th>
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<td>Pages 707, 746</td>
<td>Pages 721, 746</td>
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CHAPTER TOOLS

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<tr>
<th>21st-Century Skills</th>
<th>Mathematics</th>
<th>Science</th>
<th>Literacy</th>
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In-Class Activity:
Create a Celebration


Working in groups of two or three, identify some characteristics you all share—some aspects of your common culture. Devise a celebration of your group’s culture. What will it emphasize and why? What foods will be served? What activities will occur? How many people are expected to attend?

Draw up an action plan for your cultural celebration. If possible, the class should conduct a “culture fair” so that class members can see one another’s work.

Case Study
Going Global

- Encourage students to explore relationships between the cuisines of the Americas and the cuisines of the other countries that will be represented at this event.
- Discuss what ingredients are commonly associated with these regions and why.
- Help students identify some ways to market this event. Who do Miguel and Chef Kate hope to attract to this fundraiser? How might those attending differ from the crowds participating in the previous Earth Day event?
- What other establishments and organizations might be interested in partnering with Kabob?
- What difficulties might Miguel and Chef Kate face in planning and executing this event?
- Note that there are follow-up questions about the case study at the end of the chapter.
- This activity could be done in groups, as a class, or as a homework assignment.

Homework Activity:
Festival Focus

Literacy Connection, 21st-Century Skills—Communicate Clearly, Information Literacy, Initiative and Self-Direction

Does your community celebrate any cultural festivals, such as the event planned at Kabob? Identify a local gathering and describe it: When it is held, what it celebrates, what cultural groups sponsor it, what activities typically occur, and other relevant information. In what ways does this event support the notion of “community”?

If your community does not hold any such festivals, research and report on a festival held elsewhere.

Write a one-page report describing the festival and its effects on the local community.
### Professional Profile

<table>
<thead>
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<th>Discuss</th>
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<tr>
<td>Lina Fat notes that restaurant and foodservice employees often say, “This isn’t my real job.” What does the term “real job” mean in this context? What does it mean in terms of professionalism?</td>
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<tr>
<td>Fat was trained as a pharmacist but is now a restaurateur. What skills might she have learned in her previous field that have helped her succeed?</td>
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<tr>
<td>Similarly, what skills can one learn in restaurant and foodservice professions that can be used to advance careers in other areas?</td>
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</tbody>
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<tr>
<th>Reinforce and Review</th>
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<tbody>
<tr>
<td>Cooking is a combination of science and creativity.</td>
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<tr>
<td>The skills learned in the restaurant and foodservice industry can be adapted to other professions and can help us learn to discipline ourselves as well.</td>
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<tr>
<td>There is something to learn in every job that can help to prepare you for a future career.</td>
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<th>Teaching Tips</th>
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<tr>
<td>This is the last chapter in the text. Encourage students to relate Lina Fat’s vision of professionalism with those offered by other individuals profiled in this book and in Level 1.</td>
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<tr>
<td>How have the various “Professional Profiles” in Levels 1 and 2 helped students expand their understandings of the restaurant and foodservice industry?</td>
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<tr>
<td>In Level 1, Chapter 1, students were encouraged to think about their own skills, interests, and passions and how these could help identify career paths. In what ways have students’ skills, interests, and passions changed since then? What events or experiences contributed to these changes?</td>
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### Focus and Engage

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<th>Discuss</th>
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<tr>
<td>Encourage students to discuss why the countries covered in this chapter are relevant to American cuisines.</td>
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<tr>
<td>Why is it important to study a country’s history and cultures along with its cuisines?</td>
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### Teaching Tips

- Use maps or other images when introducing each section to students to help them understand relevant geographies.
- Throughout this chapter, encourage students to relate information that they have learned in other courses, especially history, to the material in the textbook.
- Make sure students understand that this material is simply a broad overview and does not delve deeply into the cuisines or cultures of any one country.
Teach

Discuss

• In what ways has European history affected American history?
• How can a society’s geography affect its consumption patterns?
• How can a country’s politics affect what its people eat?

Reinforce and Review

• Europe consists of 50 countries, and far more cuisines.

Teaching Tips

• Encourage students to explore cuisines not addressed in this chapter by researching print and online sources, dining at “ethnic” restaurants, and trying appropriate recipes.
• Consider asking owners or chefs from local restaurants or stores specializing in the cuisines discussed in this chapter to speak to the class.

Professional Profile (cont.)

Discuss In what ways is the restaurant and foodservice industry similar to the entertainment industry? In what ways is it different?
Lina Fat demonstrates a clear passion for customer service. In what ways have students experienced such passion, either on the giving or the receiving side?
Is the United States a melting pot or a salad bowl? Which metaphor better describes American culture and society? Which better describes American eating patterns?

Reinforce and Review Foodservice is like entertainment: To succeed in this industry, one must really enjoy working with people.
Global cuisine is not new. It is a reflection of American heritage.

Teaching Tips Encourage students to discuss why different cultures have influenced the cuisines of different American regions, linking this discussion to the material covered in Chapter 10.

Section 11.1 Europe

Introduce the Section

a. Explain the importance of studying European culture and history in terms of understanding American society.
b. Explain why France, Spain, and Italy are appropriate selections to introduce the breadth of European cuisines.
c. Discuss the objectives for the section.

Vocabulary Review

a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.
Discuss

• Why did each new invader have a different cuisine? What can be deduced about a society based on knowledge of its people's eating habits?
• What can Figure 11.1 tell us about what foods might be popular in various parts of contemporary France?
• Why do many Americans associate French food with "fancy" food? Is this appropriate? Why or why not?

Reinforce and Review

• France's cultures and cuisines have been shaped by its numerous invaders and settlers over the centuries.
• Important contributors to French culture and cuisine include the Gauls, the Romans, and the Moors.

Teaching Tips

• Provide students with images, such as maps of what would later become France as it appeared under various rulers.

Flavor Profile

Encourage students to discuss the following:

• What does it mean to say that a cuisine reflects "fresh and refined" dishes? What examples can students identify, either in France or in the United States?
• In what ways does reduction typify French cuisines?
• Historically and culturally, why might traditional French cuisines not incorporate many strong spices?

Homework Activity: A Statement of Principles

Literacy Connection, 21st-Century Skills—Critical Thinking and Problem-Solving, Access and Evaluate Information, Initiative and Self-Direction

In what ways have the cooking principles emphasized in this course reflected French culinary traditions? Is this important? Why or why not?

Discuss your opinions in a two-paragraph essay.
Chapter 11 | Global Cuisine 2: Europe, the Mediterranean, the Middle East, and Asia

**Discuss**
- How might the French Revolution of 1789 have affected French cultures and cuisines?
- How might the seemingly simple act of introducing a fork to France have required a profound transformation of upper class eating habits?
- How did the transportation advances of the Industrial Revolution help to codify and spread “French cuisine”?
- Why did most French people maintain traditional, regional eating patterns, despite changes in technology and transportation that offered new foods and new ways of eating them?
- Why might Brittany, in northwest France, be known for its seafood and for buckwheat?

**Reinforce and Review**
- The 1533 AD marriage of Henri II to the Italian Caterina de’Medici had a profound effect on the development of contemporary French cuisines; among other things, she and her court are credited with introducing roux, forks, and refined sauces.
- The Industrial Revolution broke down regional barriers across France, improving both transportation and technology.
- Over the course of a century, haute cuisine, cuisine classique, and nouvelle cuisine helped to define international impressions of French food.

**Teaching Tips**
- Relate this discussion to the material in Level 1, Chapter 1, about the history of the restaurant and foodservice industry.

**Vocabulary Terms**
- **Haute cuisine**: A style of eating characterized by elaborately conceived and presented dishes requiring a highly skilled kitchen and dining-room staff.
- **Cuisine classique**: A modification and simplification of haute cuisine, usually associated with Escoffier and characterized by multiple courses of rich foods.
- **Nouvelle cuisine**: A lighter, more delicate cuisine evolved from cuisine classique, commonly incorporating nontraditional flavors and techniques.

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**Homework Activity: French Foods**

**Literacy Connection, 21st-Century Skills**—Reason Effectively, Communicate Clearly, Information Literacy, Work Independently

Students should each identify and research a dish that they believe to be characteristically French. They should explain its origins, ingredients, and cooking method.

Students should present an oral report describing the dish to the class.

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**Figure Focus**

**Figure 11.2**: Escoffier originally developed the brigade system, still used in kitchens worldwide.

But perhaps the event that most profoundly affected the development of French cuisine was the 1533 AD marriage of Henri II to the Italian Catherine de’Medici. As a member of Florence’s powerful ruling family, Catherine was used to the finer things in life, which included food. She was so disappointed in the simple, rustic food popular in France at that time that she brought in cooks from Italy. In fact, she and her employees were credited with introducing roux and forks to France, as well as refining sauces and increasing the use of vegetables.

The Industrial Revolution of the nineteenth century began to break down regional barriers throughout France as improvements in transportation allowed products to be shipped nationwide. These changes, along with advances in technology, gave chefs new opportunities for demonstrating their skills and creativity. The resulting development of haute cuisine, characterized by highly refined dishes and the creation of a systematically disciplined brigade system (a hierarchy of specialized roles in the kitchen), soon spread throughout the globe (see Figure 11.2). "French" soon became synonymous with both "fine dining" and "fancy." Most French people, however, maintained their traditional, regional eating habits.

Haute cuisine eventually became "cuisine classique" and later "nouvelle cuisine" (noo-veh kwah-ZEEUN), as chefs in the late twentieth century embraced lighter dishes and simpler flavors—in a sense, returning to their roots. Contemporary French cuisine blends new and old as well as regional and global, and France continues to be esteemed as a culinary capital.

Each of France’s regions has a unique gastronomic identity, characterized largely by its geography. Brittany, in northwest France, is renowned for its seafood (especially oysters) and its buckwheat crépes (KREIPS). Nearby Normandy,
Discuss

- Explain how U.S. culinary regions relate to French culinary regions. For instance, how is the American Northeast similar to the French northeast? What foods and cooking methods are popular in which regions?
- What is the U.S. culinary capital? Why?

Reinforce and Review

- Famous French regional dishes include choucroute, boeuf bourguignon, ratatouille, bouillabaisse, and cassoulet.
- Important French ingredients include pork and pork fat, foie gras, poulet de Bresse, saffron, and Dijon mustard.
- Lyon is located in Burgundy, which is in southeast France; it is the country’s culinary center.

Teaching Tips

- Encourage students to identify other ingredients and dishes that they consider to be typically “French.” How is the “nationality” of a dish determined?

Techniques:
French Cooking Methods

Encourage students to discuss the following:

- Which of these cooking methods are commonly used in American kitchens?
- How have French culinary traditions informed American traditions?
- What other methods of cooking are popular in France?

Vocabulary Terms

- **Foie gras**: The engorged liver of a specially fattened goose or duck, which is seared or poached.
- **Poulet de Bresse**: A famously flavorful blue-legged chicken native to Bresse, in Burgundy.
- **Cassoulet**: A hearty casserole of beans and meat, popular in southwest France.
- **Duck confit**: Salted pieces of duck, subsequently poached in duck fat.
- **Jambon de Bayonne**: A mild pork ham.

Figure Focus

**Figure 11.3**: Foie gras is used in a variety of ways in French cuisine; here, it is seared and served atop beef tenderloin, then garnished with a turned mushroom cap and sliced truffles in the famous dish *Tournedos Rossini*, named for the composer Gioacchino Rossini.
Homework Activity: Confit

Science Connection, Mathematics Connection, Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently

Find a recipe for confit meat. What ingredients does it require? What type of fat does it use, and how might that affect the flavor of the finished product?

Explain the science involved in confit. How do the salt and the fat work to preserve the item?

Convert the recipe you have selected to feed 4, 10, and 45 guests. Be sure your work is accurate.

Discuss

- How is pot au feu similar to olla podrida? How are the two dishes different? What other one-pot dishes are popular in other cultures around the world?
- Why do students think that olive oil predominates in southern Italy, whereas butter is used in northern Italy?

Reinforce and Review

- France is home to the five mother sauces: espagnole, velouté, béchamel, hollandaise, and tomato.
- Pot au feu is a one-pot dish combining meat, poultry, and vegetables cooked in a rich broth, then strained and served in two separate courses.
- The two major cooking fats in Italy are butter, used in the north, and olive oil, used in the south.
- Greek invaders introduced olives, honey, and nuts to what is now southern Italy, and later Arab occupiers brought citrus, couscous, pasta, and saffron.

Teaching Tips

- Work with students as they practice the concept of confit. A variety of ingredients, such as meat, fruit, or vegetables.
- What ingredients do students consider traditionally "Italian"? Which of these ingredients actually originated in contemporary Italy?

Homework Activity: Famous Figures—France

Literacy Connection, 21st-Century Skills—Work Creatively with Others, Use Systems Thinking, Information Literacy, Communication and Collaboration, Social and Cross-Cultural Skills

Working in small groups, research a famous figure in French cuisine, not including Escoffier or Carême. Prepare and present a group report discussing this individual's life and contributions to cuisine.

Alternately, present a report describing an important development in French culture and how it affected the country's cuisines.
Discuss

- In what ways are French and Italian historical experiences similar? How are they different?
- Think about your favorite “Italian” dishes. What ingredients first used in the Americas are required to make them? In what ways are these dishes still “Italian”?

Reinforce and Review

- The Roman Empire, which colonized much of the known world at the time, was responsible for introducing a wide range of ingredients and ideas to contemporary Italy.
- Other ingredients, like lemons, coffee, and rice, were first brought to the region by travelers and traders, not colonizers.
- For centuries, Venice was a major trading community, linking Europe with the Middle East and Asia.
- The new foods brought back from the Americas through the Columbian Exchange dramatically affected Italian dining patterns.

Teaching Tips

- Encourage students to imagine and describe a world in which the Columbian Exchange never took place.

CUSTOMIZED INSTRUCTION

Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Information Literacy

Less Advanced Students

What ingredients entered the Old World as a result of the Columbian Exchange? What ingredients entered the New World? How were these cuisines affected?

CUSTOMIZED INSTRUCTION

Literacy Connection, 21st-Century Skills—Make Judgments and Decisions, Communicate Clearly

Special Needs Students

What are some of your favorite foods? Which ones were originally American, but came to Europe as part of the Columbian Exchange?

Vocabulary Terms

- **Columbian Exchange**: The exchange of ingredients, ideas, and other resources between the Old World and the New World.

Figure Focus

**Figure 11.4**: What characteristics of Italy’s geographic position might have affected the development of its cuisines?

**Figure 11.5**: Which ingredient involved in the Columbian Exchange had the most profound effects on European culture and society? Why?
Teaching Tips

- Saltimbocca means “jump in the mouth”—it refers to the exciting combination of flavors that virtually leap in the diner’s mouth.

Vocabulary Terms

- Bollito misto: A rich stew containing a mixture of meat and vegetables, cooked in a succulent broth.
- Bagna cauda: A dipping sauce made of olive oil, anchovy, and garlic, served with raw vegetables.
- Bistecca alla Fiorentina: A thick beefsteak that has been grilled.
- Saltimbocca alla Romana: Pound and breaded veal, sautéed with sage and prosciutto.

Flavor Profile

Encourage students to discuss the following:

- What other countries might have cuisines reflecting poverty? How do the choices of ingredients there reflect economic and social conditions?
- Why might olive oil be considered a signifier of poverty in Italy, although it is treated as a luxury ingredient in the United States?
- What Italian dishes can students identify that fit into the tradition of “la cucina povera”?

Fast Fact: Did You Know . . . ?

Encourage students to discuss the following:

- What other foods are considered highly acidic? Which of these might have been included in or excluded from European tables during this period of history?
- Today, which European countries besides Italy do students associate with tomato use? Why? What characteristics do these countries share with Italy?
- Early Europeans were right, in one way: The leaves and stems of tomato plants actually do contain compounds that are poisonous to humans. What other fruit or vegetables can students identify that have both edible and inedible parts? A classic example is rhubarb: The stalks are edible, but the leaves are poisonous and should be cut away from the stalks and discarded immediately upon harvest.

Reinforce and Review

- Modern Italy remained a loose configuration of independent states until unification in 1861, which helps account for persisting differences in regional cuisines.
- Northern Italy is known for its abundant use of animal fats, including a variety of meat and dairy products, as well as for its reliance on nonpasta starches, like rice, potato, and cornmeal.
- Popular dishes in northern Italy include risotto alla Milanese, osso buco, minestrone alla Genovese, bollito misto, and bagna cauda.
- Central Italy is characterized by its use of simple, fresh flavors; popular ingredients include fresh meat and seafood, white beans, tomatoes, and other vegetables and fruit.
- Popular dishes in central Italy include bistecca alla Fiorentina, saltimbocca alla Romana, and brodetto.
Discuss

- In what ways has the Italian climate affected the country’s culinary habits? Compare this to French cuisines.
- Why is dried pasta used almost exclusively in the south, whereas fresh pasta is used almost exclusively in the north?
- Broadly speaking, which Italian cuisines (north, central, or south) best characterizes what we think of as “Italian” food in the United States? Why might this be the case?

Reinforce and Review

- Southern Italy is known for its use of non-cow’s-milk cheeses, fresh seafood and vegetables, and locally produced olives and olive oil.
- Popular southern Italian dishes include vitello tonnato, spaghetti alla vongole, macaroni with tomato sauce, pizza, and pasta con le sarde.
- Dried pasta, made with semolina flour and water, is common throughout the south; fresh pasta, which uses softer flour and eggs, is used in the north.
- Emilia-Romagna, in northern Italy, is famed for the high-quality ingredients it produces, including prosciutto di Parma, aceto balsamico tradizionale, and Parmigiano-Reggiano.

Homework Activity: Emilia-Romagna

Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Information Literacy, Initiative and Self-Direction

The region of Emilia-Romagna is known worldwide for its high-quality balsamic vinegars, cheeses, and cured meat. Select one of its famous products and research it, identifying its characteristics, manufacturing process, and culinary uses.

Discuss your findings in a one-page report.

Vocabulary Terms

- Vitello tonnato: A Neapolitan dish made with cold veal, served with a sauce made of tuna.
- Pasta con le sarde: A dish of dried pasta, combined with a sauce made of sardines, raisins, and fennel and topped with fresh sardines.

Homework Activity: TomAYto, TomAHto

Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Initiative and Self-Direction

Tomatoes were considered to be poisonous in many European cultures, so it took centuries for them to become established as valuable ingredients in some areas.

Research the history of tomatoes in the United States. When and where were they first eaten? In what ways were they originally used? What is the annual tomato consumption in the United States today?

Report your findings in a brief essay.
Homework Activity: Famous Figures—Italy

Literacy Connection, 21st-Century Skills—Work Creatively with Others, Use Systems Thinking, Information Literacy, Communication and Collaboration, Social and Cross-Cultural Skills

Working in small groups, research a famous figure in Italian cuisine. Prepare and present a group report discussing this individual’s life and contributions to cuisine. Alternately, present a report describing an important development in Italian culture and how it affected the country’s cuisines.

CUSTOMIZED INSTRUCTION

Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly

Special Needs Students

What is your favorite type of pizza? Why? Do you know the origins of your favorite pizza toppings?

Techniques: Italian Cooking Methods

Encourage students to discuss the following:

- Based on what you have learned about Italian cuisines, which of these cooking methods would most likely be used in which regions of Italy? Why?
- How are these cooking methods similar to those popularly used in France? How would you explain that?
- What special equipment and skills are needed to operate either a spit or a wood-burning oven? How might the flavors of foods roasted in these ways differ from the flavors of foods cooked in a conventional gas or electric oven?

On the Job: Food Policy Analyst

Encourage students to discuss the following:

- What makes the work of food policy analysts so important?
- In what ways do food policy analysts affect our daily eating patterns?
- How can access to food be considered a national security issue?

Fast Fact: Did You Know . . . ?

Encourage students to discuss the following:

- Why do students think that strong-tasting ingredients like garlic and anchovy were used to flavor these early pizzas?
- When it was originally developed, pizza was considered an inexpensive food for the poor. How does this fit into the earlier discussion of “la cucina povera”?
- How has pizza changed from its early beginnings? Is it still considered street food, or food for the less wealthy? What do we think of when we think of pizza?

Homework Activity: Italian Foods

Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Information Literacy, Work Independently

Students should each identify and research a dish that they believe to be characteristically Italian. They should explain its origins, ingredients, and cooking method.

Students should present an oral report describing the dish to the class.
Discuss

- Compare and contrast the lingering effects of the Arabian occupation on France and Spain. In what culture was it the most significant?
- What ingredients or dishes do students consider characteristically “Spanish”? Why?
- Why do students think that French and Italian cuisines have been more popularly accepted in the United States than Spanish cuisine?

Reinforce and Review

- Historically, Spain’s peninsular location provided many opportunities for trade and conquest, but it also left the region vulnerable to conquest by others, such as the Romans, the Visigoths, and the Arabs, all of whom left their marks on Spanish cuisine.
- Arabs had a profound impact on Spanish cuisine, introducing an enormous range of foods like sugarcane, citrus and other fruit, and spices (notably saffron).
- The “medieval green revolution” was a drastic improvement in the efficiency of agricultural practices, due to the introduction of Arabian technology, which resulted in much higher levels of public nutrition.
- Both Sephardic Jews and Arabs coexisted in Spain; both cuisines shared a love for sweet-and-sour combinations.

Flavor Profile

Encourage students to discuss the following:
- What does it mean to say that a cuisine is “earthy and complex”?
- In what ways might Spain’s history explain the flavors popular there today?
- How are the characteristic flavors of French, Italian, and Spanish cuisines similar? How do they differ?

Homework Activity: Spanish Foods

Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Information Literacy, Work Independently

Students should each identify and research a dish that they believe to be characteristically Spanish. They should explain its origins, ingredients, and cooking method.

Students should present an oral report describing the dish to the class.

Figure Focus

Figure 11.7: What countries might have a strong influence on Spanish culture and cuisine? Why?
Chapter 11 | Global Cuisine 2: Europe, the Mediterranean, the Middle East, and Asia

Figure Focus

Figure 11.8: Why are cured pork products, like jamón Ibérico and prosciutto di Parma, popular in warmer regions?

Discuss

- How are French, Spanish, and Italian foods all related? How are they different?
- Do students think that France, Spain, and Italy are representative of European cuisines? Why or why not?

Reinforce and Review

- A cocido is a boiled, one-pot meal incorporating meat, vegetables, and legumes, found throughout Spain.
- The coast of northern Spain is famous for seafood, especially cod and eels; across the north, Galician, Basque, and Catalan cuisines all differ significantly.
- Central Spain is known for agriculture. Wheat, sheep, and a wide variety of vegetables and fruit are produced and widely consumed here, often featured in hearty but simple dishes.
- Southeastern Spain is known for citrus, saffron, and rice; overall, southern Spain is famous for its seafood and cured hams.

Homework Activity: Famous Figures—Spain

Literacy Connection, 21st-Century Skills—Work Creatively with Others, Use Systems Thinking, Information Literacy, Communication and Collaboration, Social and Cross-Cultural Skills

Working in small groups, research a famous figure in Spanish cuisine. Prepare and present a group report discussing this individual’s life and contributions to cuisine.

Alternately, present a report describing an important development in Spanish culture and how it affected the country’s cuisines.

Vocabulary Terms

- Paella: A dish with numerous variations, involving rice, olive oil, and saffron cooked in a wide, shallow pan over an open fire.

Homework Activity: Regional Cuisines

Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently

Each student should select (or be assigned) a different region of Spain and research its cuisine, including principal ingredients, flavor profiles, cultural influences on cuisine, and important dishes.

Write a one-page report describing the region’s cuisine.
Discuss

- What characteristics of Spanish cuisine are most prominent? If you had to select one word to describe it, what would it be and why?
- Spanish chefs are at the forefront of a worldwide revolution in gastronomy, introducing radical new culinary techniques and flavors. How might this be related to Spain’s rich history of exploration and trade?

Reinforce and Review

- “White” gazpacho, which preceded the Columbian Exchange, was made with garlic, almonds, and grapes.
- Tapas are small savory snacks, usually associated with bar food; originally, the term referred to a slice of bread laid over the top of one’s wine glass to prevent insect contamination.

Fast Fact: Did You Know . . . ?

Encourage students to discuss the following:

- Is saffron so expensive because it is comparatively rare and difficult to produce, or because people like its taste so much?
- Saffron’s high price has also led to adulteration and fraud. What other ingredients might be susceptible to similar concerns?
- What dishes are characterized by the use of saffron?

Techniques: Spanish Cooking Methods

Encourage students to discuss the following:

- How are Spanish cooking methods similar to French and Italian cooking methods?
- Olive oil is used liberally in Spanish cuisine. What cooking techniques are best suited to its use?
- Why is paella-making considered a separate technique?

Homework Activity: One-Pot Wonders

Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently

Many of the cuisines discussed in this chapter are known for their one-pot dishes. Identify a famous one-pot dish and research it. What are its primary characteristics and ingredients? Where is it traditionally eaten and by whom? What other cultures might have influenced its development?

Discuss your findings in a one-page report.

Figure Focus

Figure 11.9: Only the slender pistils are used to produce saffron; they must be removed by hand.
Figure Focus

Figure 11.10a: Why are the aromatics toasted?

Figure 11.10b: How does brining the fish affect its flavor and texture?

Figure 11.10c: Why is it important to heat the marinade before pouring it over the seared fish?

Essential Skills:

Escabeche

Encourage students to discuss the following:

- How is escabeche similar to and different from ceviche?
- Why did the technique of escabeche develop? (Note: The acid and spices in the marinade helped to preserve the cooked fish.)
- What might seeing the term “escabeche” on a menu indicate about an operation?

Homework Activity:

Portuguese Cuisines

Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Information Literacy, Work Independently

What foods are popular in Spain’s neighbor, Portugal? How are its cuisines similar to and different from Spain’s? What might account for these similarities and differences?

Write a brief report describing your findings.

CUSTOMIZED INSTRUCTION

Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently

More Advanced Students

Research the Basque region of Europe, investigating its history, language, and cuisine. What is its flavor profile? What ingredients, cooking techniques, and dishes are most popular?

Discuss your findings in a one-page report.
Summary

• Remind students to review the following:
  1. France—culture, ingredients, and dishes
  2. Italy—culture, ingredients, and dishes
  3. Spain—culture, ingredients, and dishes
Section 11.1
Review Questions

1. Signature French cooking methods include braising, sautéing, sous vide, deglazing, reducing, and confiting.

2. Students may identify and explain a difference of their choosing, so long as it is accurate.

3. Spanish flavors are earthy and complex, with unusual flavor combinations and contributions from a number of cultures.

4. Escabeche is a particularly Spanish culinary technique.

5. Students may identify any of a variety of dishes so long as they can identify the specific characteristics of the dishes they choose.

6. Students may suggest any of a variety of dishes as long as they can support and defend their choices.

7. Students may answer in a variety of ways so long as they can logically defend their responses.

8. Students should focus on the culinary aspects of the Columbian Exchange, discussing these clearly and accurately.
Section 11.1 Activities

1. Students may choose any European country besides France, Italy, and Spain and should produce a group presentation describing its cuisine, including common ingredients, representative cooking methods, and any other information about the country’s cuisine that the students consider important.

2. Students will need to research one of the four cooking methods suggested to learn about its history and significance.

3. Students should explain the science behind processing food without air, including any food safety issues.
Homework Activity:
Moroccan Foods

Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Information Literacy, Work Independently

Students should each identify and research a dish that they believe to be characteristically Moroccan. They should explain its origins, ingredients, and cooking method.

Students should present an oral report describing the dish to the class.

Section 11.2
The Mediterranean

Introduce the Section
a. Explain the importance of studying Mediterranean culture and history in terms of understanding American society.
b. Explain why Morocco, Greece, and Tunisia are appropriate selections to introduce the breadth of Mediterranean cuisines.
c. Discuss the objectives for the section.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
• Why are France, Spain, and Italy categorized here as "European," not "Mediterranean"? What are the pros and cons of this approach?
• Encourage students to explore why Morocco has historically been a logical choice for a trading center.

Reinforce and Review
• Morocco has been a trade center since the twelfth century BCE, so a variety of cultures have influenced its development and its cuisine.
• The Phoenicians, who established trading posts in present-day Morocco, also introduced sausage to the region.
• The Carthaginians subsequently brought wheat and semolina to the area. The native Berbers used semolina to develop couscous, which became a staple starch.

Teaching Tips
• Provide a map to enable students to understand where Morocco is situated with respect to Europe and the Middle East.

Vocabulary Terms
• Maghreb: The countries of North Africa that share a similar set of cultural influences.
Discuss

- Arab occupiers introduced the same ingredients and culinary concepts to multiple regions, including Morocco, Spain, and France. Why have the cuisines of these three countries developed so differently?

Reinforce and Review

- Arab occupiers had the most significant effects on Moroccan cuisine, introducing characteristic ingredients like saffron, ginger, cumin, and cinnamon, and initiating the practice of combining sweet and sour flavors.
- Under the Ottoman Empire, the use of sweets and pastries was revolutionized as sugar and honey came to prominence.
- Spanish influences arrived with the expulsion of the Moors in 1492. These new arrivals also introduced innovative agricultural techniques, such as irrigation, and were shortly followed by the results of the Columbian Exchange.
- Other European influences arrived later, as Morocco was occupied by the British, French, and Spanish.

Flavor Profile

Encourage students to discuss the following:

- In what ways does a country’s cuisine reflect its culture?
- What flavors and ingredients do students perceive as particularly “Moroccan”?
- Morocco is located just a few miles from Spain. In what ways are the two countries’ flavor profiles similar and different?

Homework Activity:
Famous Figures—Morocco

Literacy Connection, 21st-Century Skills—Work Creatively with Others, Use Systems Thinking, Information Literacy, Communication and Collaboration, Social and Cross-Cultural Skills

Working in small groups, research a famous figure in Moroccan cuisine. Prepare and present a group report discussing this individual’s life and contributions to the cuisine.

Alternately, present a report describing an important development in Moroccan culture and how it affected the country’s cuisines.

Vocabulary Terms

- **Pastilla**: A delicacy made by layering sheets of delicate warqa with almonds and pastry cream.

Figure Focus

**Figure 11.11**: Given Morocco’s location, do students think its cuisine would be similar to that of other African countries? Why or why not?
Figure Focus

**Figure 11.12:** Although traditionally made of heavy clay, contemporary tagines are often made of cast iron, which also allows slow, even cooking to take place.

**Figure 11.13:** Couscousières and tagines are essential components for cooking authentic Moroccan cuisine.

**Discuss**
- How did the traditional shape of the tagine evolve? Where did the idea for this cooking vessel arise?

**Reinforce and Review**
- The spice mixtures la kama and ras-el-hanout are characteristic flavors in Moroccan cuisine, as is preserved lemon.
- Couscous is the national dish of Morocco, although tagine is also a very popular dish.
- Tagines often include sweet and savory ingredients; they are typically flavored with preserved lemon and ras-el-hanout.
- Couscous is generally served with a spicy stew: The tiny bits of pasta are rolled into balls and eaten by hand.

**Teaching Tips**
- Make sure students realize that couscous is more closely related to pasta than to a grain.

**Vocabulary Terms**
- **La kama:** A Moroccan spice mixture including black pepper, turmeric, ginger, cumin, and nutmeg.
- **Tagine:** A slow-cooked meat stew, cooked in an eponymous and characteristic earthenware vessel.
- **Couscousière:** A specialized cooking vessel consisting of a large pot, a perforated insert, and a tight-fitting lid.

**Homework Activity:**
Here, Chicky, Chicky!

Science Connection, Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently

Chickpeas are popular legumes throughout many of the cuisines discussed in this chapter. Why are they found in so many different environments? What nutritional value do they offer? Where are they found, and what makes them so widely used?

Describe your findings in a one-page report.
Discuss

- Why do students think that lamb plays such a prominent role in Moroccan celebrations and everyday meals?
- Compared to the European countries discussed in this chapter, why did Moroccan cuisine undergo so few changes after the Columbian Exchange?

Reinforce and Review

- *B’stilla* can be understood as a savory version of *pastilla*: Although it contains sugar, *warqa*, and crushed almonds, its main ingredient is spicy stewed pigeon.
- *Choua*, *meshoui*, and *harira* are all lamb dishes, but the latter is an everyday stew, whereas the two former are festival fare.

Teaching Tips

- Monitor students as they make couscous.

Vocabulary Terms

- *B’stilla*: Stewed and spiced pigeon, layered with *warqa*, sugar, and crushed almonds and formed into a pie.
- *Choua*: Steamed forequarter lamb, flavored with cumin.
- *Meshoui*: A whole roasted lamb.
- *Harira*: A thick stew of chickpeas, rice, meat, and vegetables.

**Essential Skills: Couscous**

Encourage students to discuss the following:

- Why is it important to soak couscous in cold water before steaming it? What effect might hot water have?
- What might contemporary Moroccan cuisine be like if semolina had never been brought to the region?
- Besides onions, what other aromatic ingredients and spices might be appropriate in couscous?

**Figure Focus**

**Figure 11.14a**: Soaking couscous in a glass vessel enables the cook to monitor the swelling of the individual grains.

**Figure 11.14b**: Steaming couscous, rather than boiling it, helps it develop a light and fluffy texture.
Chapter 11 | Global Cuisine 2: Europe, the Mediterranean, the Middle East, and Asia

Vocabulary Terms
• Archestratos: A Greek writer believed by some to have produced the world’s first cookbook.

Figure Focus
Figure 11.14c: Sautéing aromatic ingredients helps bring out their flavors.

Figure 11.14d: Couscous is typically served on a platter or in a large bowl, to encourage communal dining.

Techniques: Moroccan Cooking Methods
Encourage students to discuss the following:
• How do Moroccan cooking techniques resemble common European cooking techniques?
• Why has Morocco developed cooking equipment used specifically for certain dishes?
• What other cuisines use specific cooking equipment for particular dishes?

Discuss
• What ingredients and foods do students consider to be typically “Greek”? Why?
• In ancient times, Greeks were profoundly interested in food and cuisine, prizing chefs and ingredients. How might this relate to contemporary American culture?

Reinforce and Review
• In ancient times, Greeks prized their chefs and wrote scholarly treatises on cuisine.
• By 2000 BCE, Greeks had begun to trade with the Minoans and subsequently rivaled the Phoenicians for control of the area.

Flavor Profile
Encourage students to discuss the following:
• How are typical Greek flavors similar to and different from those of other cuisines?
• Why might mountain herbs play such a prominent role in Greek cuisine?
• What does it mean to say a cuisine has “clean” flavors?

Homework Activity: Famous Figures—Greece
Literacy Connection, 21st-Century Skills—Work Creatively with Others, Use Systems Thinking, Information Literacy, Communication and Collaboration, Social and Cross-Cultural Skills
Working in small groups, research a famous figure in Greek cuisine. Prepare and present a group report discussing this individual’s life and contributions to the cuisine.
Alternately, present a report describing an important development in Greek culture and how it affected the country’s cuisines.
Discuss

- Olives and olive oil are fundamental to Greece, both its cooking and its culture. Can students identify other ingredients that are so closely linked with a particular culture?

Reinforce and Review

- Greece’s culinary reputation encouraged the occupying Romans to take Greek chefs and to facilitate the flow of culinary ideas and ingredients between the two regions.
- The Ottomans, whose empire later controlled Greek territory, were strongly influenced by Persian cuisine and introduced spicy, fruity elements to Greek cuisine.
- Greece’s unusual physical geography limited contact by Europeans while facilitating trade with other regions.
- The Columbian Exchange introduced tomatoes and peppers, both of which became important ingredients.
- Olive trees have made a fundamental, basic, and lasting contribution to both Greek cuisine and Greek character; olive oil is the universal fat, and local olives are both consumed and exported.

Teaching Tips

- Use a map to identify particular aspects of Greece’s physical geography that influence its cuisine, such as the mountains, islands, and coastlines.

Homework Activity: Greek Foods

Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Information Literacy, Work Independently

Students should each identify and research a dish that they believe to be characteristically Greek. They should explain its origins, ingredients, and cooking method.

Students should present an oral report describing the dish to the class.

Figure Focus

Figure 11.15: How might Greece’s geography contribute toward the development of many regional cuisines rather than a single dominant cuisine?
Discuss
- How do dishes like moussaka, a definitive Greek dish, reflect foreign influence on Greek cuisine?
- Many of the countries discussed so far have had a tradition of small dishes, such as mezze or tapas. What other characteristics do these countries share?
- How does baklava resemble typical Moroccan desserts? What explains the similarity?

Reinforce and Review
- Herbs are widely used in Greek cuisine because so many, such as oregano, thyme, and dill, grow so well in the climate.
- Wild greens, collectively called horta, are commonly gathered and eaten; eggplant is also a popular vegetable.
- Olive oil and lemon juice are the two most important flavoring ingredients in Greek cuisine.
- Common proteins include goat, lamb, seafood, and dairy products. Vegetables are extremely popular and grow profusely.

Teaching Tips
- Bring a variety of olives (or olive oils) to class so that students can observe and taste them.

Vocabulary Terms
- Moussaka: A casserole of lamb and eggplant that is often covered with a layer of béchamel sauce or beaten egg before baking.
- Hummus: A dip of puréed chickpeas seasoned with lemon juice, olive oil, and sesame-seed paste.
- Mezze: Greece’s version of hors d’oeuvres or appetizers.
- Skorthalia: One of two major Greek sauces, a combination of olive oil, garlic, and bread that accompanies fried fish or cooked vegetables.
- Avgolemono: One of two major Greek sauces, a lemony egg sauce often used to finish seafood soups and stews.
- Baklava: A highly sweetened pastry layering phyllo dough with chopped nuts.

Figure Focus
Figure 11.16: Of the five olives pictured here, only Kalamata olives are Greek. Niçoise and Picholine olives are French, Manzanilla olives are Spanish, and Moroccan oil-cured olives are produced in Morocco.
Discuss

- Greece is part of the European continent, but many of its food traditions originated in the Middle East or North Africa. What might this indicate about the Mediterranean?
- The “Mediterranean diet” is a set of healthy eating practices based on regional cuisines. In what ways is the traditional Greek diet nutritious? Would you choose to follow it? Why or why not?

Reinforce and Review

- Phyllo, warqa, and malsoufa are all regional names for paper-thin sheets of dough, used in both sweet and savory preparations.
- Wheat has been cultivated for thousands of years in the Mediterranean, so flatbreads are common throughout the Mediterranean and Middle East; in Greece, the pita, with its easily stuffed pocket, is most popular.

Teaching Tips

- Assist students in making baklava, using either homemade or purchased phyllo.

Techniques: Greek Cooking Methods

Encourage students to discuss the following:

- Many European and Mediterranean cuisines share similar cooking methods. What might explain that?
- What are some reasons that baking is so popular in Greece?
- How does Greece’s physical geography promote the prevalent cooking methods?

Trends: Gastro-Tourism

Encourage students to discuss the following:

- How would you market your community to gastro-tourists?
- Have you ever traveled somewhere just to eat? Why might such journeys be so important to some people?
- If you were to become a “gastronaut,” where would you go, and why? Would you travel with an established agency or explore on your own? What are the pros and cons of each approach?

Figure Focus

Figure 11.17: Baklava is a highly sweetened pastry made with nuts; the phyllo (filo) sheets used to prepare it are known in other parts of the Mediterranean as warqa and malsoufa.
Figure Focus
Figure 11.18: Tunisia is in the center of the north African coastline, in the heart of the Mediterranean Sea.

Homework Activity:
Tunisian Foods

<table>
<thead>
<tr>
<th>Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Information Literacy, Work Independently</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students should each identify and research a dish that they believe to be characteristically Tunisian. They should explain its origins, ingredients, and cooking method.</td>
</tr>
<tr>
<td>Students should present an oral report describing the dish to the class.</td>
</tr>
</tbody>
</table>

Fast Fact:
Did You Know . . . ?

Encourage students to discuss the following:

- Why have so many uses been developed for olive oil?
- What do you think the benefits might be of using olive oil in cosmetics and soaps? What are some potential disadvantages?
- What other uses for olive oil can you imagine?

Discuss

- Tunisia and Morocco have had very similar histories, but their geographies are different. How might this affect the similarity of their cuisines?
- Why are dishes like salads meshouia and chakchouka, remnants of the colonial past, popular in contemporary Tunisia?

Reinforce and Review

- Until modern times, the Tunisian and Moroccan experiences of occupation and colonization were very similar.
- In 1956, both Tunisia and Morocco gained independence from France.
- Due to the history of French colonialism, many Tunisian dishes are similar to French items.

Teaching Tips

- Use a map to demonstrate how Tunisia’s physical geography, especially its coastline and its agricultural areas, affect its cuisine.

Vocabulary Terms

- **Salade composée**: A salad made with roasted peppers, tomatoes, tuna, and hard-boiled egg.
- **Chakchouka**: A dish of mixed vegetables, flavored with brown sugar and topped with beaten egg.

Flavor Profile

Encourage students to discuss the following:

- How are typical Tunisian flavors similar to and different from Moroccan flavors? How does this reflect their shared history?
- Why are spicy flavors so important in Tunisian cuisine?
- Does the Tunisian flavor profile resemble the French flavor profile? Why or why not?
Discuss
- What effect did the Columbian Exchange have on Tunisian cuisine?
- How do the spicy condiments used in Tunisian cuisine relate to the complex moles used in Mexican cuisine?

Reinforce and Review
- Many Tunisian dishes have French names or histories, such as briki à l’oeuf.
- Spicy flavors predominate in Tunisian cuisine: Although harissa is the most popular condiment, tabil, chermoula, and ras-el-hanout are also widely used.
- Other popular ingredients in Tunisian cuisine include ginger, pickled lemon, spicy merguez sausage, lamb, couscous, flatbreads, and a wide array of vegetables.
- As in Morocco, highly sweetened desserts are popular, with honey, dates, and other fruits in demand.
- Tunisian cuisine differs from other Mediterranean and Maghreb states in both its ingredients and its cooking methods: Wild boar, edible fungi, and spiny lobsters are all popular foods, and although tagines and couscous are commonly made, their cooking methods differ from those used in Morocco.
- In particular, Tunisian tagines stand out from their counterparts in other countries: These dishes are thick stews combined with beaten egg, baked until set, and cut into large squares.

Teaching Tips
- Divide students into groups to make harissa, tabil, or chermoula. Hold a taste test to see which condiment students prefer and why.

Vocabulary Terms
- **Harissa**: A highly spiced condiment made of chilis, coriander, garlic, and olive oil, used throughout Tunisian cuisine.
- **Tabil**: A spicy condiment made of chilis, coriander, caraway, and garlic, used to flavor beef or veal.
- **Chermoula**: A mixture of pureed onion and garlic mixed with pungent spices, like chili and saffron.

Figure Focus
**Figure 11.19**: How do either Moroccan or Tunisian tagines resemble dishes popular in other cuisines?

**Homework Activity: Famous Figures—Tunisia**

**Literacy Connection, 21st-Century Skills—Work Creatively with Others, Use Systems Thinking, Information Literacy, Communication and Collaboration, Social and Cross-Cultural Skills**

Working in small groups, research a famous figure in Tunisian cuisine. Prepare and present a group report discussing this individual’s life and contributions to cuisine. Alternately, present a report describing an important development in Tunisian culture and how it affected the country’s cuisines.
Discuss

- What are the possible origins of poisson complet? Why do you think these ingredients and flavors are arranged in such a way? Does the dish sound appealing? Why or why not?
- How do the cuisines of Tunisia, Greece, and Morocco compare to those of France, Spain, and Italy? Consider both ingredients and cooking methods. Should these latter three countries be considered part of the Mediterranean, based on what you have learned? Why or why not?

Reinforce and Review

- Tomatoes, olives, eggs, pastas, and seafood are all popular Tunisian ingredients.
- Grilling and deep-frying are popular cooking techniques.

Teaching Tips

- Relate the use of tomatoes, olives, and pasta to Italian cuisine to demonstrate the breadth of the Mediterranean.

Techniques: Tunisian Cooking Methods

Encourage students to discuss the following:

- How are Tunisian cooking methods similar to and different from those used in Morocco and Greece?
- What can Tunisian cooking methods indicate about the country’s geography and natural resources?
- Why do students think that the Tunisian and Moroccan tagines have evolved so differently?

Nutrition: Mediterranean Diet

Encourage students to discuss the following:

- Why is olive oil considered to be a “healthy” fat?
- One study found that the Mediterranean diet is associated with a 70 percent decrease in mortality from all causes. What might explain these results?
- If the Mediterranean diet is associated with so many health benefits, why do the majority of people worldwide choose not to follow it?
Summary

• Remind students to review the following:
  1. Morocco—culture, ingredients, and dishes
  2. Greece—culture, ingredients, and dishes
  3. Tunisia—culture, ingredients, and dishes
Section 11.2
Review Questions

1. The Moroccan cuisine is sweet, sour, and spicy.

2. Common Moroccan cooking techniques include tagine, making couscous, steaming, and spit-roasting.

3. The two staple ingredients in Greek cuisine are olive oil and lemon juice.

4. Ingredients commonly used in Tunisian cuisine include tomatoes, eggs, olives, pasta, seafood, lamb, merguez sausage, flatbreads, couscous, honey, dates, and chilis.

5. B’stilla: Sweetness from sugar, sourness from ras-el-hanout; Festival tagine: Sweetness from honey, sourness from onion and ras-el-hanout.

6. Moroccan tagines are prepared in a vessel called a tagine. It has a conical top and a shallow basin and is used to make rich meat stews, often seasoned with ras-el-hanout or preserved lemon. Tunisian tagines are lightly sweetened meat and vegetable stews, thickened with chickpeas or potatoes, and combined with egg and cheese before baking until set; these tagines are served cut into dense squares.

7. Students should explain the similarities and differences between the two cuisines.

8. Students should discuss common ingredients, dishes, and cooking methods in defense of the Greek flavor profile.
Section 11.2
Activities

1. Students should describe the most important aspects of their chosen country’s cuisine when creating their media products.

2. Students should research couscous and how it has spread and evolved. They should write a cogent paper describing their findings, making sure to answer the questions asked in the activity.

3. Students should research olive oil and its effects on Mediterranean history and cultures. Those choosing to present their findings as a chart should be sure to provide as much information as those writing the two-page paper would have to include.
Section 11.3
The Middle East

Introduce the Section
a. Explain the importance of studying Middle Eastern culture and history in terms of understanding American society.
b. Explain why Egypt, Iran, and Saudi Arabia are appropriate selections to introduce the breadth of Middle Eastern cuisines.
c. Discuss the objectives for the section.

Vocabulary Review
a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

Teach

Discuss
• Just as it can be difficult to determine whether a country belongs to Europe or to the Mediterranean, it can be difficult to determine whether a country belongs to the Mediterranean or to the Middle East. What factors do we use in making these decisions?
• What dishes, ingredients, and cooking methods do students identify with the Middle East? Why?
• In what ways might Mediterranean cuisines resemble Middle Eastern cuisines?
• Egypt imports over 60 percent of its food from other countries. How might this affect its cuisine?

Reinforce and Review
• Although Egypt is part of the Fertile Crescent and contains some rich agricultural soil, the country is predominantly desert and must import the majority of its food.
• Most Egyptians adhere to traditional diets, influenced to a varying extent by the cultures that have controlled or been controlled by Egypt over the centuries.

Teaching Tips
• Use a map to help students understand how Egypt has been affected by such a variety of other cultures and why it imports much of its food.

Homework Activity:
Egyptian Foods

Homework Activity:
Famous Figures—Egypt
Flavor Profile
Encourage students to discuss the following:
- Which cuisine that has been discussed so far in this chapter most closely resembles that of Egypt? Why?
- Egypt has a long coastline. Why does it have an agriculture-based cuisine?
- Why are Egyptian flavors so simple, unlike the more complex flavors of the neighboring Maghreb?

Discuss
- Why have European cuisines and ingredients had such a small effect on Egyptian diets?

Reinforce and Review
- Although Egypt was once a colonial power in its own right, it was subsequently invaded and governed by various cultures until it became independent from Great Britain in 1956.
- Peoples who occupied or governed Egyptian territory included the Libyans, Nubians, Assyrians, Greco-Macedonians, Romans, Arabs, Turks, and British.
- Like some of the other cultures discussed in this chapter, both the Islamic Empire and the Ottoman Empire occupied Egypt at different times.
- Traders and colonizers introduced foods like rice, fruit, garlic, tahini, and chickpeas.
- The three staple ingredients in Egyptian cuisine are onions, wheat, and olives.

Homework Activity: Time on Their Side
Mathematics Connection, Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Create Media Products, Work Independently
Create a timeline showing key points in Egyptian history, such as its occupation of or by other peoples and the construction of the pyramids. The timeline should include at least ten key points.

Figure Focus
Figure 11.20: Egypt is bordered by two seas. How might this have affected its trading patterns and ultimately its cuisine?

Homework Activity: Trading Up
Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Information Literacy, Work Independently
Egypt imports over 60 percent of its food each year. Where does it get this food? Who are its primary trading partners? What foods does it import? Report your findings in a single paragraph.
Figure Focus

**Figure 11.21:** What meats do students think might be commonly used to make shawarmas?

Discuss

• Egypt is unique among Middle Eastern countries in enjoying a cuisine that is mostly vegetarian. What factors might account for this difference?

• What does it mean to describe a dish as “working-class”?

• Does *ful medames* sound like a typical American breakfast dish? What dishes does it resemble?

Reinforce and Review

• Contemporary Egyptians enjoy a traditional diet. Although seafood is consumed along the coast, the rest of the country follows a predominantly vegetarian—even vegan—diet, relying on vegetables, legumes, and wheat.

• The national dish is *ful medames*, made with fava beans, onions, and spices and consumed as a breakfast dish.

• Although most other cultures make falafel with chickpeas, Egyptians use fava beans in this dish.

• Flatbreads, often sprinkled with spice mixtures and dipped into vegetable purées, are popular throughout Egypt.

• Inland Egyptians consume little animal protein, although eggs, pigeon, and camel are favorites.

Teaching Tips

• Assist students making baba ghanoush in the classroom kitchen.

Vocabulary Terms

• *Duqqa*: A spice mixture that typically includes sesame, dried mint, coriander, and cumin.

• *Baba ghanoush*: A purée of eggplant, chickpeas, lemon juice, parsley, cumin, and olive oil.

• *Shawarma*: Shredded meat served in a pita with tahini.
Chapter 11 | Global Cuisine 2: Europe, the Mediterranean, the Middle East, and Asia

Essential Skills: Flatbreads

Encourage students to discuss the following:

- Why are flatbreads so popular throughout so much of the world? What cuisines are not associated with flatbreads? What might account for this?
- What might happen if the water used to make the dough is too warm?
- How do flatbreads made of wheat differ from flatbreads made of corn?

Homework Activity: Flatbreads

Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Be Self-Directed Learners

Many cuisines worldwide have a tradition of flatbread consumption. Identify a flatbread from a cuisine not discussed in this textbook and describe its ingredients, where it is commonly eaten, its method of manufacture, and other relevant information. Include and discuss at least two recipes for making the flatbread. How do they differ?

Discuss your findings in a one-page report, appending the recipes.

Figure Focus

**Figure 11.22a:** What effect might adding dairy products have on the finished flatbread?

**Figure 11.22b:** When kneading the dough, be sure that all ingredients are fully incorporated and smooth.

**Figure 11.22c:** If desired, the portions can be weighed to ensure uniformity.

**Figure 11.22d:** What effect might brushing fat onto the prepared dough have on the finished flatbread?

**Figure 11.22e:** How might the finished flatbread appear and taste differently, depending on whether it was baked or pan-fried?
Figure Focus

**Figure 11.23:** Like Egypt, Iran is bounded by two separate bodies of water. How might this have affected the development of its cuisine?

### Homework Activity: Iranian Foods

**Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Information Literacy, Work Independently**

- Students should each identify and research a dish that they believe to be characteristically Iranian. They should explain its origins, ingredients, and cooking method.
- Students should present an oral report describing the dish to the class.

### Techniques:
**Egyptian Cooking Methods**

- Encourage students to discuss the following:
  - How might baking in a clay oven produce a different dish than baking in a conventional oven?
  - How does Egypt’s unique cuisine affect its cooking methods?
  - In what ways are Egyptian cooking methods similar to those used in the Mediterranean? What accounts for those similarities?

### Discuss

- How might Iranian cuisine have developed differently if the Silk Road had taken a different path?
- How might both Egypt and Iran be said to be culturally distinct from other Middle Eastern nations? Given these differences, what makes them appropriate representatives of the Middle East?

### Reinforce and Review

- Iran, or Persia, is one of the world’s oldest continuous civilizations; although once a colonial power, it was subsequently occupied by the Islamic Empire.
- Iranians adopted Islam without adopting other Arabian practices and behaviors, maintaining a distinctly Persian society and identity.
- A major influence on the development of Iranian cuisine was its presence on the Silk Road between China and modern-day Italy; this brought such contemporary staples as eggplant, long-grain rice, and citrus fruit while spreading the use of rosewater, spinach, and pomegranates.

### Teaching Tips

- Review a map of the region with students to help them understand the significance of the Silk Road in spreading cultural influences.

### Flavor Profile

- Encourage students to discuss the following:
  - Why is “balance” an important part of Iranian cuisine? How does it reflect the broader Iranian culture?
  - Of the cultures and cuisines studied thus far, here and in Chapter 10, which does Iran most resemble?
  - Why might Iranian cuisine be expected to incorporate sweet-and-sour elements?
Discuss

- As in Greece, Iranian cuisine relies heavily on lemon, stuffed vegetables, lamb, wheat, and sweet desserts. What other similarities between the two cuisines and cultures can you identify, and how can you explain them? What are some notable differences?
- Three major methods of rice cookery have developed in Iran. What does that signify about the culture and about the cuisine?
- How is the Iranian preference for balanced flavors reflected in its traditional meal patterns?

Reinforce and Review

- Iranian food relies on a combination of traditional ingredients, like wheat and lamb, and recent imports, like rice and lemon.
- A traditional Iranian meal includes rice, meat, and a mixture of onion, vegetables, herbs, and nuts; these dishes are served with an array of fresh vegetables, dairy products, and bread.
- The three major types of rice cookery practiced in Iran are polo, katteh, and damy.
- Polo is made using the soak-boil-steam technique, also known as the “three-step method.”
- Stuffed meat and vegetables, known as dolmehs, are popular, as are kebabs and other lamb dishes.
- Desserts are very sweet, often inspired by French traditions, although others adhere to more traditional patterns.

Teaching Tips

- Divide the students into groups and assign each group one version of Iranian rice cookery. Afterward, encourage students to taste the finished products, identifying which they prefer and why.

Vocabulary Terms

- Katteh: One of three major methods of rice cookery in Iran, this method uses raw rice to create a moist, clumpy product, traditionally a breakfast dish in the north.

Figure Focus

Figure 11.24: Iranian meals typically incorporate a number of side dishes and garnishes.

Homework Activity: Famous Figures—Iran

Literacy Connection, 21st-Century Skills—Work Creatively with Others, Use Systems Thinking, Information Literacy, Communication and Collaboration, Social and Cross-Cultural Skills

Working in small groups, research a famous figure in Iranian cuisine. Prepare and present a group report discussing this individual’s life and contributions to cuisine. Alternately, present a report describing an important development in Iranian culture and how it affected the country’s cuisines.
Figure Focus
Figure 11.25: Iranian flavors tend to be complex and rich, with no single flavor dominating the whole. What other cuisines share this tendency?

Homework Activity: Iranian Ingredients

Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Initiative and Self-Direction

Research an ingredient that is popular in Iran but is used less often in the United States, such as sumac, tahini, or rosewater. Describe it, including its flavor, how it is manufactured, the dishes in which it is used, and other characteristics you think relevant. If possible, taste or cook with the selected ingredient.

Discuss your findings in a one-page report.

Discuss
- What other cuisines share the Iranian tendency to combine savory and sweet ingredients in dessert dishes?
- Explain why many Iranian desserts exhibit French influence.

Reinforce and Review
- Some Iranian desserts, like koresht-e-mast, include meat as well as other savory ingredients.
- Important flavoring elements in Iranian cuisine include nuts, fruits, rosewater, saffron, and sumac.
- Vegetable oils have largely replaced animal fats in Iranian cooking.
- Vegetables are important in Iranian cuisine, as is seafood.

Teaching Tips
- Bring a sample of tahini to class for students to taste.

Techniques: Iranian Cooking Methods

Encourage students to discuss the following:
- Why is the three-step method of rice cooking so important in Iranian cuisine?
- How are common Iranian cooking methods similar to and different from common Egyptian methods? How do each country’s cooking methods reflect its culture?

Fast Fact: Did You Know . . . ?

Encourage students to discuss the following:
- What is tahini? How is it used?
- What other cuisines also use tahini?
**Discuss**

- The Egyptian national dish, *ful medames*, is a simple vegetarian or vegan dish eaten for breakfast, whereas the Saudi Arabian national dish, *khouzi*, is an elaborate and extravagant meat-based dish served at large gatherings and festivals. How do these two dishes demonstrate each country’s culinary culture? What do they indicate about the breadth of Middle Eastern cuisine?

**Reinforce and Review**

- Like most other cuisines (and cultures), Saudi Arabian foodways have been influenced by trade as well as by occupation.
- The Persian Empire introduced rosewater and saffron; the Greco-Macedonian Alexander the Great later conquered the region, and both Indian and Greek foods were introduced.
- Like Iran, contemporary Saudi Arabia was conquered by the Islamic Empire; unlike Iran, the region became more or less assimilated into Arabian traditions.
- Typical Saudi Arabian meals include communal platters heaped with rice and garnished with meat and vegetable dishes, flatbreads, and freshly made pickles.
- *Khouzi* is considered by some to be the Saudi Arabian national dish: A whole lamb is stuffed and cooked, then served with rice that has been combined with clarified butter and almonds.
- Common flavorings include *buhat*, made with black pepper, cardamom, coriander, cassia, clove, nutmeg, and paprika; *loomi*, or dried Omani lime; and cinnamon.

**Teaching Tips**

- Use a map to help students understand Saudi Arabia’s location in the Middle East.

**Figure Focus**

**Figure 11.26**: Like Egypt and Iran, Saudi Arabia is bounded by water on two sides. How might this have affected its cultural and culinary development?
Figure Focus

Figure 11.27: Which of these vegetables entered Saudi Arabia through the Columbian Exchange?

Discuss

- How did the Columbian Exchange affect Saudi Arabian cuisine? Was this significant?
- Compare the Saudi Arabian spice mixture baharat to spice mixtures commonly used in other countries.
- In what ways is Saudi Arabian cuisine more typically Middle Eastern than that of Egypt or Iran?

Reinforce and Review

- Other common flavoring ingredients include saffron, tamarind, tomato, tahini, lemon juice, and olive oil.
- Common vegetables include eggplant, cucumbers, zucchini, and okra; dates, which have been cultivated in the region for thousands of years, are extremely popular, as are figs, melons, and pomegranates.
- Rice is the most popular grain, although wheat is common.
- Fresh herbs are used abundantly, especially parsley, mint, and cilantro.
- Sheep’s-milk products are popular ingredients and garnishes, not served alone; other animal proteins include lamb, chicken, egg, and—in coastal areas—seafood.

Teaching Tips

- Work with students to make fresh vegetable pickles, using some combination of vegetables and flavorings common in Saudi Arabia.

Techniques:

Saudi Arabian Cooking Methods

Encourage students to discuss the following:

- Why might pickling be an important cooking method in Saudi Arabia?
- Explain why grilling and spit-roasting are popular throughout much of the Middle East and Mediterranean.
**Nutrition: Fat-Tailed Sheep**

Encourage students to discuss the following:

- How has the use of fat from fat-tailed sheep made the traditional nomad diet more nutritious?
- What other benefits can fat-tailed sheep provide?
- Why is global demand for lean meat increasing?

**Homework Activity: Saudi Arabian Foods**

**Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Information Literacy, Work Independently**

Students should each identify and research a dish that they believe to be characteristically Saudi Arabian. They should explain its origins, ingredients, and cooking method.

Students should present an oral report describing the dish to the class.

**Homework Activity: Famous Figures—Saudi Arabia**

**Literacy Connection, 21st-Century Skills—Work Creatively with Others, Use Systems Thinking, Information Literacy, Communication and Collaboration, Social and Cross-Cultural Skills**

Working in small groups, research a famous figure in Saudi Arabian cuisine. Prepare and present a group report discussing this individual’s life and contributions to cuisine.

Alternately, present a report describing an important development in Saudi Arabian culture and how it affected the country’s cuisines.

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**Figure Focus**

**Figure 11.28:** Fat-tailed sheep are characteristically leaner-bodied than other sheep, as demonstrated in this photograph.
Summary

• Remind students to review the following:
  1. Egypt—culture, ingredients, and dishes
  2. Iran—culture, ingredients, and dishes
  3. Saudi Arabia—culture, ingredients, and dishes

Most people still adhere to traditional diets, although influenced to some extent by the variety of cultures that have controlled or been controlled by Egypt throughout the centuries. Egypt was absorbed by the Islamic Empire in 639 and by the Ottoman Empire in 1517. Traders and colonizers introduced new food items such as rice and a variety of fruits from India, China, and Persia. Garlic, tabini, and chickpeas remain staple parts of the Egyptian cuisine today. Onions, which have been an essential ingredient since the pyramids were constructed, remain fundamental to contemporary diets, as do wheat and olives. Egypt’s agriculture-based cuisine follows traditional foodways, especially in its heavy use of olive oil and wheat. Bread, vegetables, and legumes are also central to the typical Egyptian diet, and most flavorings are simple and straightforward: lemon juice, parsley, and sesame. Baking in clay ovens, braising, and roasting are common cooking methods.

Iran, or Persia, is one of the world’s oldest continuous civilizations, having been established around 7000 BCE. Iranians adopted Islam without adopting Arabian practices, maintaining a distinct Persian identity. A major influence on Iranian culture and cuisine came from its presence on the ancient Silk Road between China and modern Italy, a conduit for both ideas and ingredients such as long-grain rice, citrus fruits, and eggplant, all of which remain essential in the Iranian diet today. Persia reciprocated by sharing its own ingredients—like rosewater, pomegranates, and spinach—with other cultures.

The key word in Iranian cuisine is “balanced.” A good mixture of vegetables, dairy products, meat, herbs, and vegetables is presented at every meal. Pungent ingredients and sweet-and-sour combinations are popular in this very complex and aromatic cuisine. Popular cooking methods are the three-step rice method of soak-boil-steam; braising; and grilling.

The food of Saudi Arabia has been influenced by a variety of sources, including trade with the Horn of Africa, India, Iraq, and the Mediterranean. The Persian Empire, which occupied the area around 550 BCE, introduced ingredients like saffron and rosewater, while Alexander the Great’s regime brought Greek and Indian food to the region. The Islamic Empire later incorporated contemporary Saudi Arabia into both its territory and culinary traditions. The flavor profile is complex, herb, and vegetable. Fruity and mildly acidic flavors are popular, as are mixtures of sweet and savory spices. Common cooking methods are grilling, spit-roasting, and pickling.
Section 11.3
Review Questions
1. Egyptian cuisine is predominantly vegetarian or vegan.

2. Iranian cuisine is balanced, using pungent ingredients and sweet-and-sour combinations; the cuisine is very complex and aromatic.

3. The three-step rice cooking method is soak-boil-steam.

4. Saudi Arabian cuisine is complex, herby, and vegetal, with fruity and mildly acidic flavors and mixtures of sweet and savory spices.

5. Students should research Saudi Arabian cuisine to identify pickled dishes.

6. Students may suggest a variety of dishes so long as they properly support their selections.

7. Students may choose any of the three cuisines discussed, although it will be more difficult to defend Iranian and Egyptian cuisines.

8. Students have been encouraged to discuss this issue throughout the text; their responses should sum up any classroom discussions as well as their own judgment after reading the text.
Section 11.3 Activities

1. Students should prepare the selected dish for their classmates, explaining its history and why it is typical of its country’s cuisine.

2. Student answers will vary, but they should be logical and properly supported.

3. Student answers will vary. Students should submit copies of the recipes they choose and explain why the cooking methods used are appropriate.
**Section 11.4**

**Asia**

**Introduce the Section**

a. Explain the importance of studying Asian culture and history in terms of understanding American society.
b. Explain why China, Japan, and India are appropriate selections to introduce the breadth of Asian cuisines.
c. Discuss the objectives for the section.

**Vocabulary Review**

a. Direct students to the key terms.
b. Pronounce each word, and have the students repeat the pronunciation out loud.
c. Discuss the definition of each word.

**Teach**

**Discuss**

- It is as difficult to determine the precise boundaries of Asia as it is to determine the boundaries of the Mediterranean or the Middle East. Why does this present such a challenge? Does a country fit into one category or another based on its citizens’ opinions and identities, so that if the people think they’re Mediterranean, then they are Mediterranean? Why or why not?
- What comes to mind when students think of “Chinese food”? Why?

**Reinforce and Review**

- The Chinese were the first to control fire and use it to cook food.
- Traditionally, foods in China carry meaning or symbolism that goes beyond simple nourishment.
- Chinese cuisine is based on the philosophy of yin and yang, which is part of the Tao.
- Foods should not be forced to become what they are not: They should be kept in their most natural and pure states.

**Teaching Tips**

- Encourage students to discuss Asian cuisines that they have experienced, either at home or in restaurants. What have some characteristics of these meals been?
- Remind students that this is simply an introduction to Asian cuisines and should not be taken as all-encompassing.

**Homework Activity:**

**Chinese Foods**

**Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Information Literacy, Work Independently**

Students should each identify and research a dish that they believe to be characteristically Chinese. They should explain its origins, ingredients, and cooking method. Students should present an oral report describing the dish to the class.

**Vocabulary Terms**

- *Tao:* The belief that a single guiding principle orders the universe.
Chapter 11 | Global Cuisine 2: Europe, the Mediterranean, the Middle East, and Asia

Figure Focus

Figure 11.29: China’s extreme size has enabled a number of regional cuisines to develop.

Homework Activity: Famous Figures—China

Literacy Connection, 21st-Century Skills—Work Creatively with Others, Use Systems Thinking, Information Literacy, Communication and Collaboration, Social and Cross-Cultural Skills

Working in small groups, research a famous figure in Chinese cuisine. Prepare and present a group report discussing this individual’s life and contributions to cuisine.

Alternately, present a report describing an important development in Chinese culture and how it affected the country’s cuisines.

Flavor Profile

Encourage students to discuss the following:

• What is the difference between eating to live and eating for pleasure? How are the two principles related?

• Is it possible to receive all the nourishment a healthy body requires from grains? Why or why not?

• Which is usually the most enjoyable and satisfying component of a meal: the grain, the vegetable, or the meat? Why?

Discuss

• What does it mean to “eat the symbol, not the nourishment”?

• Why is it important to have some understanding of Chinese religious beliefs when discussing Chinese culinary traditions?

Reinforce and Review

• The Chinese believe that every food has an inherent character, ranging from hot to cold.

• Chinese religious belief divides the world into five parts: earth, wood, fire, metal, and water. Each of which has a corresponding flavor and affects a corresponding body part: earth/ sweet/stomach, wood/sour/liver, fire/bitter/heart, metal/pungent/lungs, and water/salty/kidneys.

• These relations among the elements of nature, food, and the human body lead to the Chinese principle of balance.

• Chinese meals and recipes combine tan and ts’ai to provide balance.

• Buddhism, which emphasizes balance, serenity, and peace, has had a profound impact on Chinese cuisines, including the rise of vegetarianism and the development of meat substitutes.

Teaching Tips

• Make sure students understand how vast China’s landmass is to give them a sense of the importance of regional cuisines.

Vocabulary Terms

• Tan: Grains and rice.

• Ts’ai: Vegetables and meat.
Discuss
- Why have certain Chinese cuisines become more popular than others in the United States?

Reinforce and Review
- Trade has been a major influence on Chinese cuisines. The presence of the Silk Road allowed interaction as far west as Italy and as far south as India, introducing ginger, eggplant, and peppers.
- After 1911, when China opened its border to Western influences, trade across the Pacific Ocean brought European-style desserts and cooking equipment to China.
- China has the largest population in the world, with one of the largest landmasses. Three regional cuisines that have been influential in the United States include Mandarin, Szechwan-Hunan, and Canton.
- Chopsticks are the primary eating utensils in China, so stir-frying—in which foods are cut into small pieces before cooking—is very popular.
- Some common Chinese cooking techniques that are less known in the United States include velveting, lacquering, and red-cooking.

Vocabulary Terms
- **Velveting**: Pieces of meat are coated with cornstarch and egg whites before stir-frying, to retain moisture and improve sauce adherence.
- **Lacquered meats**: Larger items of meat are coated with multiple layers of a flavorful, sweet marinade before being roasted.
- **Red-cooking**: Meat or fish is stewed in a broth of soy sauce and water to develop a rich color and succulent taste.

Homework Activity: **Duck, Duck, Goose**

Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently

What is Peking duck? How is it produced? What special equipment is needed to prepare it? How and with what is it eaten? Why is it important in Chinese cuisine and culture?
Discuss your findings, including any other material you consider relevant, in a one-page paper.
Discuss

- Why is wheat preferred in northern China, when rice is preferred elsewhere?
- Relate Chinese and Iranian conceptions of balance. How are they similar?

Reinforce and Review

- Mandarin is the cuisine of imperial northern China, so its roots are elaborate and delicate. Common ingredients include soybean paste, dark soy sauce, rice wine, onions, pork, and duck.
- Wheat is the preferred starch of Mandarin cuisine; it appears as noodles, dumplings, and steamed buns.
- Famous Mandarin dishes include bird’s-nest soup, Peking duck, and moo shu pork.
- Szechwan-Hunan cuisine is known for hot, spicy flavors, although the concept of balance remains important; other popular ingredients include Szechwan pepper, garlic, scallions, five-spice powder, mushrooms, ginger, fennel, chicken, and pork.
- Five-spice powder is a blend of anise seed, Szechwan pepper, fennel seed, cloves, and cinnamon.
- Famous Szechwan-Hunan dishes include kung pao chicken and hot and sour soup.
- Canton is located on the Pearl River, an important center for international trade; unsurprisingly, its cuisine was the first to be introduced to the United States.

Homework Activity:
A-Choo!

Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Information Literacy, Work Independently

Research Szechwan, or Sichuan, pepper. Investigate its culinary uses, its flavor, its production, other common names, and other information that you consider relevant.
Discuss your findings in a one-page paper.

Homework Activity:
It’s Soy Good

Science Connection, Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently

Research the role of soy sauce in Chinese cuisine. What types of soy sauce are commonly available? What are their characteristics, and how are they used? What impact does the use of soy sauce have on the Chinese diet, from a flavor standpoint? What about from a nutritional perspective?
Discuss this information in a one-page report.

Figure Focus

Figure 11.31: What characteristics of each dish can students identify that mark the items as Mandarin?
Reinforce and Review

- Cantonese immigrants brought their culinary traditions to the United States during the nineteenth century.
- Cantonese cuisine strives for color harmony as well as a balance of yin and yang.
- Famous Cantonese dishes include sweet-and-sour pork, egg foo yung, and lemon chicken.

Teaching Tips

- Divide students into groups to practice the technique of red-cooking.

Essential Skills: Red-Cooking

Encourage students to discuss the following:

- Why is red-cooking popular throughout China, not just in a particular region?
- What ingredients might be particularly well-suited to this cooking technique? Which might not work so well?
- Why is sugar added to the cooking meat and vegetables? Compare this to some other cuisines discussed in this chapter.

Homework Activity: Rice

Discuss the importance of rice in Asian cuisines, from both a nutritional and a cultural perspective. Why is it so prevalent, and why is it so respected? How much rice is consumed annually in Asia, and which types are most popular? What role does rice play in nutrition? How is rice typically prepared?

Discuss these and any other aspects of rice you consider important in a one-page paper.

Figure Focus

**Figure 11.32a:** Ginger, garlic, and scallions are popular aromatics in much of China.

**Figure 11.32b:** Properly searing the meat will help develop the appropriate color and flavor in the finished dish.

**Figure 11.32c:** The finished product takes on a rich reddish color with a pronounced sheen.

CUSTOMIZED INSTRUCTION

**Literacy Connection, 21st-Century Skills—Solve Problems, Communicate Clearly, Information Literacy, Work Independently**

Less Advanced Students

Besides rice, what other starches are consumed in Asia? Where do these predominate?

Special Needs Students

Have you ever eaten Chinese foods? Which ones? Which flavors were especially prominent?
Figure Focus
Figure 11.33: How does Japan’s geographic position affect its cuisines?

Homework Activity:
Japanese Foods
Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Information Literacy, Work Independently
Students should each identify and research a dish that they believe to be characteristically Japanese. They should explain its origins, ingredients, and cooking method.
Students should present an oral report describing the dish to the class.

Techniques:
Chinese Cooking Methods
Encourage students to discuss the following:
• Most of the other cuisines discussed in this chapter have used cooking methods that are common in the United States. Why are some common Chinese cooking techniques relatively unknown here?
• How does steaming help to reinforce the principle that foods should be kept in their most natural and pure states?
• How does lacquering resemble barbecuing? Compare the two cooking techniques.

Fast Fact:
Did You Know . . . ?
Encourage students to discuss the following:
• What other culinary uses do soybeans have?
• Why are soybeans so commonly used throughout Chinese cuisine?
• In what other cuisines are soy products widely used?

Discuss
• Russia is geographically near to Japan. Why have its cuisine and culture had so little effect on Japan?

Reinforce and Review
• China and Korea have significantly influenced Japanese culture through both trade and religion.
• The introduction of Buddhism resulted in the banning of meat eating and animal slaughter in Japan.
• In the twelfth century, the arrival of Zen Buddhism, tea, and frying radically changed Japanese culture, resulting in the development of two new cuisines.
• Cha kaiseki is the cuisine of tea drinking, and shojin ryori is the vegetarian cuisine following the tenets of Zen Buddhism.

Teaching Tips
• Use a map to demonstrate Japan’s physical proximity to Korea, China, and Russia.

Vocabulary Terms
• Cha kaiseki: A ritualized cuisine in which meals are served in the context of a formal tea ceremony.
 Flavor Profile

Encourage students to discuss the following:

• How is the Japanese flavor profile similar to and different from the Chinese flavor profile?
• Why is soy such an important ingredient in Japanese cuisine?
• Explain why strong flavors, like ginger and wasabi, might be necessary to Japanese cuisine.

Discuss

• Like Japan, Egypt is considered to have an agriculture-based cuisine despite its long coastline. How are the two cuisines and cultures similar and different?
• How does the use of a single word for both “cooked rice” and “meal” signal the importance of rice in Japanese society?
• How is the principle of wabi sabi related to the Chinese conception of balance?

Reinforce and Review

• Trade with Westerners, especially the Portuguese, introduced ingredients like tomatoes, sweet potatoes, and peppers, and brought cooking techniques like baking and deep-frying.
• Despite Japan's 200-year closure to Westerners, today it is strongly influenced by Western culture and cuisines.
• Japanese cuisine is fundamentally based on agriculture. Rice cultivation is essential to Japanese culture, and soybean cultivation is also very important.
• Soybeans are used to make tofu, shoyu (soy sauce), and miso.
• Together, rice and soy could provide a virtually complete protein and adequate calorie diet with no other foods necessary.
• Other important ingredients include seafood and sea vegetables, wasabi, sesame, vinegar, daikon radish, and shiitake mushrooms.
• The Japanese prioritize quality of food over quantity, prizing visual appeal, seasonality, and respect for ingredients.

Vocabulary Terms

• Gohan: The Japanese word for both “cooked rice” and for “meal.”
• Wabi sabi: A Zen Buddhist principle of quiet simplicity merged with quiet elegance.
Discuss

- What geographic characteristics influence Japanese cuisines?

Reinforce and Review

- Hokkaido, northern Japan, produces most of the seafood consumed in Japan, as well as a wide variety of vegetables; wheaten ramen noodles were developed there.
- In the rice belt, mountain vegetables and maitake mushrooms are also produced; buckwheat soba noodles and hot-pots using local seafood are popular.
- Tokyo and its environs are famous for nigiri-sushi, seafood, and soybean products.
- Kansai, in the west, produces vegetables, fruit, rice, and Kobe beef; sukiyaki and udon noodles are specialties.
- Southern Kyushu grows a wide variety of vegetables and fruit, including onions, strawberries, and shiitake mushrooms.

Teaching Tips

- Bring a variety of soy-based ingredients to class so students can taste them.
- Make instant dashi and encourage students to taste it.

Homework Activity

- Famous Figures—Japanese
  Literacy Connection, 21st-Century Skills—Work Creatively with Others, Use Systems Thinking, Information Literacy, Communication and Collaboration, Social and Cross-Cultural Skills
  Working in small groups, research a famous figure in Japanese cuisine. Prepare and present a group report discussing this individual’s life and contributions to cuisine.
  Alternately, present a report describing an important development in Japanese culture and how it affected the country’s cuisines.

Homework Activity: Kobe Beef

Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently

What is Kobe beef? Explain how the cattle are raised and how their meat differs from conventionally produced beef in flavor, appearance, and texture. Describe suitable cooking methods, and investigate the growing popularity of Kobe beef in the United States.

Produce a one-page report on your findings.

Techniques: Japanese Cooking Methods

Encourage students to discuss the following:
- Which of these techniques are commonly used in the United States?
- How might nabemono resemble one-pot dishes from other cuisines?
- How can respect for ingredients be demonstrated through one’s cooking methods?
**Figure Focus**

**Figure 11.35:** Is sushi always made of raw fish? What are some other common ingredients?

**Figure 11.36:** Fresh tofu is available in firm, silken, or dried form, and is made from soy milk.

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**Nutrition:**

**Tofu**

Encourage students to discuss the following:

- Why are soybeans and soy products consumed in so many parts of Asia?
- What nutrients do soy foods provide?
- What are some cooking methods that are appropriate for tofu?

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**CUSTOMIZED INSTRUCTION**

Science Connection, Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently

**More Advanced Students**

Traditionally, the tongue was believed to identify four basic tastes: salty, sweet, sour, and bitter. However, scientific advances have shown that the tongue can recognize other tastes as well, such as spicy or floral.

An important development in the study of taste was the discovery of umami, a meaty or savory sensation. This concept is important in contemporary Japan and is becoming more popular worldwide.

Research umami, including foods in which it is found, its uses, and other information you consider relevant. Write a two-page report describing umami’s scientific and culinary importance.

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**CUSTOMIZED INSTRUCTION**

Literacy Connection, 21st-Century Skills—Reason Effectively, Communicate Clearly, Work Independently

**ESOL Students**

Some of the cuisines discussed in this chapter have been based on underlying religious or philosophical guidelines. Is your cuisine of origin based on principles like these? If so, describe them in a brief essay.
Chapter 11 | Global Cuisine 2: Europe, the Mediterranean, the Middle East, and Asia

Figure Focus

Figure 11.37: Like China, India has an extremely large landmass and therefore a number of regional cuisines.

Teaching Tips

• Use a map to help students understand the various cultures and climates that compose India.

Discuss

• Religious beliefs have profoundly affected many Asian cuisines. What culinary traditions in other regions of the world have been influenced by religions?
• How can trade monopolies affect a region’s economics and culture?

Reinforce and Review

• Hinduism is the dominant faith in India, accounting for 80 percent of the population; it promotes vegetarianism and discourages meat consumption.
• The Islamic Empire occupied much of what is now northern India; this region later became the Moghul Empire.
• The Moghul Empire was strongly influenced by Persian culture, and Persian cuisine was mimicked with Indian ingredients; lamb, kebabs, elaborate rice dishes, and meat dishes cooked with cream, nuts, and dried fruit became and remain popular.
• For centuries, Arab traders monopolized the Indian spice trade, bringing with them the ingredients and techniques they encountered along the route.
• In 1498, Vasco da Gama discovered a sea route to India, opening the region to multiple trading partners.

Homework Activity:

Famous Figures—India

Literacy Connection, 21st-Century Skills—Work Creatively with Others, Use Systems Thinking, Information Literacy, Communication and Collaboration, Social and Cross-Cultural Skills

Working in small groups, research a famous figure in Indian cuisine. Prepare and present a group report discussing this individual’s life and contributions to cuisine.
Alternately, present a report describing an important development in Indian culture and how it affected the country’s cuisines.

Flavor Profile

Encourage students to discuss the following:
• Based on the flavor profiles discussed in this chapter and Chapter 10, what other cuisines does India’s resemble? Why?
• Why is there relatively little meat consumption in India? How might this affect its flavor profile?
• What do students think of when they think about “Indian food”? What ingredients do they expect to encounter?
Reinforce and Review

- Once the sea route to India had been found, subsequent explorers brought ingredients like peppers, potatoes, and cashews, all of which became important in Indian cuisine.
- The British left the most profound impact on Indian cuisine. The British East India Company traded spices, so its employees were extremely interested in food, and under the British Raj a new Anglo-Indian cuisine developed.
- India is the second-most populous country in the world, and therefore offers a wide variety of ingredients, flavors, and cooking techniques.
- Turmeric, cumin, coriander, and red pepper are commonly used in curry dishes.
- Kashmir retains many Moghul culinary traditions; hearty, dry meat dishes, such as rogan josh, are popular.
- Common Kashmiri ingredients include masalas, lamb, sheep, goat, saffron, ghee, and dried fruit.

Teaching Tips

- Students should understand that “curry” is a generic term, with no fixed meaning.

Homework Activity: Hello, Dal-ly!

Science Connection, Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently

Research the importance of dal in India, both from a nutritional and a cultural perspective. What varieties of dal are commonly consumed in India, and in what ways? How does dal contribute both flavor and nutrition to the Indian diet?

Describe your research in a one-page paper.

Vocabulary Terms

- **Masala**: A mixture made by grinding and frying a combination of spices at the time of use; these mixtures are common in Kashmiri cuisine.
- **Garam masala**: A popular masala made with strong-tasting spices, like black cardamom, black pepper, and clove.

Homework Activity: Regional Cuisines

Literacy Connection, 21st-Century Skills—Critical Thinking and Problem Solving, Communicate Clearly, Information Literacy, Work Independently

Each student should select (or be assigned) a different region of India and research its cuisine, including principal ingredients, flavor profiles, cultural influences on cuisine, and important dishes.

Write a one-page report describing the region’s cuisine.
The nearby Punjab enjoys a cuisine based on wheat, vegetables, and dairy. Many Punjabis belong to the vegetarian Sikh religion, though other residents consume meat. Tandoori cookery is important here, as in Kashmir. One famous dish is raan mussalam, or leg of lamb roasted in a tandoori (tah-noh-DOOR-e) with a marinade of papaya and yogurt. Delhi, on the other hand, mixes Moghul and Punjabi cuisine, so a characteristic dish is a spicy korma, which is seafood or meat cooked with a spicy, yogurt-based sauce, usually served as a celebratory food.

In the region of Rajasthan, cuisine emphasizes the use of dals, or pulses, although it is not an especially vegetarian state. Cooks of this region often marinate skewered meat in yogurt and spices before grilling, as in the Middle East, and elaborate chicken and meat dishes with rice are popular for festivals. In Gujrat, however, the presence of Jainism, an ancient religion, ensures a healthy vegetarian cuisine. Stif-fried vegetables with mustard and chili or saucy curries served with chutney are typical. Finally, West Bengal, in its use of panchphoron, or “five-spice,” is a pungent combination of cumin, fennel, fenugreek, mustard, and onion seed. Mangsho jhol, a lamb curry, is popular here, as are cheese patties cooked in syrup (see Figure 11.39).

Reinforce and Review

- The Punjab cuisine is based on wheat, vegetables, and dairy; tandoori cookery is popular, as in raan mussalam, although many Punjabi belong to the vegetarian Sikh religion.
- Kormas, meat or seafood cooked with a spicy yogurt sauce, are popular celebratory items in Delhi, which combines Moghul and Punjabi cuisines.
- Rajasthani cuisine emphasizes the use of dals; popular foods include skewered, marinated, and grilled meat and elaborate chicken and meat dishes.
- The Jain population in Gujarat enjoys a vegetarian cuisine; popular items include stir-fried vegetables with mustard and chili.
- West Bengal is known for panchphoron, a spice mixture including cumin, fennel, fenugreek, mustard, and onion seed, and for its mangsho jhol, a lamb curry.
- Southern cooking tends to be lighter and hotter than northern cooking.
- Goa retains the culinary traditions of its Portuguese occupiers, such as the use of pork, vinegar, and cashews; fish curries and spicy meat vindaloos are popular.
- Kerala, the only state in India where the sale of beef is legal, incorporates many spices and tropical flavors, such as coconut, cardamom, and ginger, into its cuisine, and seafood and stews are popular.
- Throughout India, flatbreads and crackers are popular. These may be made of lentils, chickpeas, or wheat.

Teaching Tips

- Provide images of a tandoori oven and explain to students how these are operated.

Vocabulary Terms

- **Dum**: A type of steaming in which preparers cover the cooking pot and seal it with strips of dough; popular in northern India and also used in some European peasant traditions.
Discuss

- Why have dal become so prominently used throughout India? Compare the Indian use of dal to the Egyptian use of fava beans.

Reinforce and Review

- Dal are the dried legumes and pulses popular throughout India and much of the Middle East.
- Pulao is a one-pot dish of vegetables, fruit, nuts, spices, meat or fish, and sometimes yogurt, reserved for special occasions and originating in Persian times.
- Another Persian dish, today used for celebrations, is biryani. This one-pot meal uses basmati rice, meat, vegetables, and spices.
- Tarka is the technique of scattering whole or ground spices into hot fat until they pop, flavoring the oil.
- Bhuna is similar to stir-frying, but with a small amount of water added
- Korma is a yogurt-based braise incorporating spices and nuts.
- Talana involves deep-frying items that have been dunked into a legume-based batter.

Teaching Tips

- Students have now reached the end of the second year of the program. Encourage them to discuss what they have learned over the last two years. What information was particularly helpful? What do they think was overlooked or omitted? Do they believe that this program is a good introduction to the restaurant and foodservice industry?

Techniques: Indian Cooking Methods

Encourage students to discuss the following:

- Why does talana use a legume-based batter instead of a flour-based batter?
- When meat is braised using the korma method, what role does the yogurt play?
- What other cuisines have cooking methods similar to these?

What’s New: Technology and Rice Cultivation

Encourage students to discuss the following:

- Why is it important to combine traditional and contemporary methods of rice growing?
- How many kinds of rice can students identify?
- How many rice-growing countries can students identify?
Summary

• Remind students to review the following:
  1. China—culture, ingredients, and dishes
  2. Japan—culture, ingredients, and dishes
  3. India—culture, ingredients, and dishes
Section 11.4
Review Questions
1. Chinese cooking methods include stir-frying, steaming, red-cooking, lacquering, and velveting.

2. Characteristic Japanese flavors include ginger, miso, shoyu, wasabi, and dashi.

3. Indian cooking methods include steaming, dum, tandoor, tarka, bhuna, korma, and talana.

4. The flavor profile of Indian cuisine is complex, aromatic, and subtle.

5. Students may answer in various ways, as long as they clearly and logically defend their positions.

6. Students may suggest a variety of dishes, but their selections should be suitable for the proposed festival: easy to serve, easy to maintain quality and safety over time, and so on.

7. Student responses may vary as long as they clearly and logically defend their answers.

8. Student responses may vary as long as they properly support their arguments.
Section 11.4 Activities

1. Student answers may vary but should clearly compare the selected cuisine to a cuisine discussed in this section.

2. Students should research korma and discuss its history and evolution.

3. Student answers will vary. Students should submit copies of the recipes they choose and explain why the cooking methods used are appropriate.
Case Study Follow-Up

1. Students should be able to justify their selections.

2. Student responses will vary, as long as they can logically and clearly defend their positions.

3. Student answers will vary, but their choices should be adequately supported.
Apply Your Learning

Portioning
Students should demonstrate proficiency in recipe conversion.

Revisiting Trade Routes
Students should discuss both the Columbian Exchange and the Silk Road, focusing primarily on how these affected regional cuisines.

Cured Meats
Students should discuss both the processes involved in the proper manufacture of cured meats and the historical and cultural reasons for curing meats. They should also be able to observe and identify a number of differences among cured, raw, and cooked meat.

Globalized Cuisine
Students should incorporate the material from Chapter 9 in their responses where appropriate. Their reports should clearly identify and discuss the effects of globalization on regional eating patterns.
Exam Prep Answers

1. B
2. B
3. D
4. D
5. C
6. B
7. D
8. B
9. C
10. D
Many non-Spaniards view paella as Spain’s national dish, but most Spaniards consider it to be a regional Valencian dish. Valencians, in turn, regard paella as one of their symbols.

**Recipe**

**Paella Valencia**

1. Heat the stock, tomato sauce, saffron, and salt in a large saucepan over medium heat.
2. In a paella pan over medium heat, heat the oil and sauté the chicken and chorizo until browned, about 7 to 8 minutes.
3. Add the vegetables and sauté for another 2 minutes.
4. Add the rice and stir to coat. Add the stock mixture, adjust seasoning, bring to a simmer, and cook for 8 minutes over medium-low heat.
5. Arrange the shellfish and the peas on the rice and continue cooking for another 5 minutes.
6. Remove from heat, squeeze the lemons over the top, cover, and let sit for 5 minutes.
7. Garnish with the julienne red pepper and serve.
Recipe

Chicken Tagine

- Tagine refers both to the cooking pot as well as a stew cooked in it. This is a classic dish prepared in Northern Africa, especially Morocco. The tagine itself consists of two parts: a round pot (traditionally clay), and a conical cover with a small hole that allows some steam to escape.
Many cuisine-related sources describe hummus as one of the oldest known prepared foods, with a long history in the Middle East stretching back to antiquity. In reality, this is folklore; its historical origins are unknown.

**Recipe**

**Hummus bi Tahini**

1. After soaking the chickpeas overnight, boil them in water until tender, about 1 to 2 hours. Drain the chickpeas, reserving the cooking liquid. In a food processor, blend the chickpeas with about 4 fluid ounces of cooking liquid until they become a smooth paste.
2. Add the lemon juice, garlic, olive oil, tahini, and salt. Process until well incorporated.
3. Adjust seasoning and texture with water, if necessary. Garnish with paprika and parsley and serve.
Recipe

Tandoori-style Chicken

- Tandoori refers to the super-hot clay oven used to cook a lot of Indian bread and meat. You probably do not have a tandoori oven at home, but you can replicate the effect by cooking the chicken directly under a very hot broiler.
Appendix A

Staying Connected with the National Restaurant Association throughout Your Career

The National Restaurant Association has the resources and tools to support you throughout your education and career in the restaurant and foodservice industry. Through scholarships, educational programs, industry certifications, and member benefits, the Association is your partner now and into the future:

- **Scholarships:** The Association’s philanthropic foundation, the National Restaurant Association Educational Foundation (NRAEF), offers scholarships to college students through its **NRAEF Scholarship Program**. These scholarships can help pave your way to an affordable higher education and may be applied to a culinary, restaurant management, or foodservice-related program at an accredited college or university. We encourage you to investigate the opportunities, which include access to special program scholarships for ProStart students who earn the National Certificate of Achievement, as well as ManageFirst Program students. You may be awarded one NRAEF scholarship per calendar year—make sure you keep applying every year! The NRAEF partners with state restaurant associations to offer student scholarships. Check with your state to see if they offer additional scholarship opportunities. The NRAEF also offers professional development scholarships for educators. Visit www.nraef.org/scholarships for information.
College education: As you research and apply to colleges and universities to continue your industry education, look for schools offering the National Restaurant Association’s ManageFirst Program. Just like Foundations of Restaurant Management & Culinary Arts, the ManageFirst Program and curriculum materials were developed with input from the restaurant and foodservice industry and academic partners. This management program teaches you practical skills needed to face real-world challenges in the industry, including interpersonal communication, ethics, accounting skills, and more. The program includes the ten topics listed below, plus ServSafe Food Safety and ServSafe Alcohol:

- Controlling Foodservice Costs
- Customer Service
- Food Production
- Hospitality and Restaurant Management
- Human Resources Management and Supervision
- Inventory and Purchasing
- Managerial Accounting
- Menu Marketing and Management
- Nutrition
- Restaurant Marketing

You can also earn the ManageFirst Professional (MFP) credential by passing five required ManageFirst exams and completing 800 work hours in the industry. Having the MFP on your resume tells employers that you have the management skills needed to succeed in the industry. To learn more about ManageFirst or to locate ManageFirst schools, visit www.managefirst.restaurant.org.

Certification: In the competitive restaurant field, industry certifications can help you stand out among a crowd of applicants.

The National Restaurant Association’s ServSafe Food Protection Manager Certification is nationally recognized. Earning your certification tells the industry that you know food safety and the critical importance of its role—and enables you to share food safety knowledge with every other employee.
Appendix A | Staying Connected with the National Restaurant Association throughout Your Career

Through ServSafe Food Safety, you’ll master sanitation, the flow of food through an operation, sanitary facilities, and pest management. ServSafe is the training that is learned, remembered, shared, and used. And that makes it the strongest food safety training choice for you. For more information on ServSafe, visit www.ServSafe.com.

The challenges surrounding alcohol service in restaurants have increased dramatically. To prepare you to address these challenges, the National Restaurant Association offers ServSafe Alcohol. As you continue to work in the industry, responsible alcohol service is an issue that will touch your business, your customers, and your community. Armed with your ServSafe Alcohol Certificate, you can make an immediate impact on an establishment. Through the program, you’ll learn essential responsible alcohol service information, including alcohol laws and responsibilities, evaluating intoxication levels, dealing with difficult situations, and checking identification. Please visit www.ServSafe.com/alcohol to learn more about ServSafe Alcohol.

National Restaurant Association membership: As you move into the industry, seek out careers in restaurants that are members of the National Restaurant Association and your state restaurant association. Encourage any operation you are part of to join the national and state organizations. During your student years, the National Restaurant Association also offers student memberships that give you access to industry research and information that can be an invaluable resource. Students in the ProStart program receive a complimentary student membership; ask your educator for details. For more information, or to join as a student member, visit www.restaurant.org.

Management credentials: After you’ve established yourself in the industry, strive for the industry’s highest management certification—the National Restaurant Association’s Foodservice Management Professional® (FMP®). The FMP certification recognizes exceptional managers and supervisors who have achieved the highest level of knowledge, experience, and professionalism that is most valued by our industry. You become eligible to apply and sit for the FMP Exam after you’ve worked as a supervisor in the industry for three years. Passing the FMP Exam places you in select company; you will have joined the ranks of leading industry professionals. The FMP certification is also an impressive credential to add to your title and resume. For more information on the Foodservice Management Professional certification, visit www.managefirst.restaurant.org.

Make the National Restaurant Association your partner throughout your education and career. Take advantage of the Association’s scholarship, training, certification, and membership benefits that will launch you into your career of choice. Together we will lead this industry into an even brighter future.
Appendix B | Handling a Foodborne-Illness Outbreak

Foodborne-illness is the greatest threat to a foodservice operation's customers. As a manager, you'll need to know what to do if some of your customers get sick. Handling a foodborne-illness outbreak involves the following three steps:

1. Preparing
2. Responding
3. Recovering

Preparing for a Foodborne-Illness Outbreak

As you know by now, the first step to preventing outbreaks is to put a food safety program in place. That program must train all staff on the policies and procedures that will keep food safe in your operation, such as personal hygiene and good cleaning and sanitizing.

But even with your best efforts, an outbreak might happen. How you respond to it can make the difference between your operation surviving or closing. Successful managers create tools that will be helpful in the event of an outbreak and that increase the chance of overcoming it.

One such tool is a foodborne-illness incident report form. This form will help you document the following critical pieces of information:
Appendix B | Foundations of Restaurant Management & Culinary Arts

- When and what the customer ate at the operation
- When the customer first became ill
- Medical attention received by the customer
- Other food eaten by the customer

Get legal help when developing your form and make sure you teach staff how to fill it out the right way. Whenever a customer reports getting sick from food eaten at your operation, fill out the form. Don't wait for more than one customer to report something.

Another tool you’ll need is an emergency contact list. This list should contain contact information for the local regulatory authority, testing labs, and the operation's management team.

Finally, your operation should determine who will be in charge if a foodborne-illness outbreak happens. You should also identify who will speak to the media—there should be one person to handle all of the contact with journalists.

Responding to a Foodborne-Illness Outbreak

In a foodborne-illness outbreak, you may be able to avoid a crisis by quickly responding to customer complaints. Here are some things you should consider when responding to an outbreak.
### Appendix B | Handling a Foodborne-Illness Outbreak

<table>
<thead>
<tr>
<th>IF</th>
<th>Then</th>
</tr>
</thead>
</table>
| A customer calls to report a foodborne-illness.                    | • Take the complaint seriously and express concern. Do not admit or deny responsibility.  
  • Complete the foodborne-illness incident report form.            |
| There are similar customer complaints of foodborne-illness.        | • Contact the operation’s management team.                           
  • Identify common food items to determine the potential source of the complaint. |
  • Contact the local regulatory authority to help with the investigation. |
| The suspected food is still in the operation.                      | • Put the suspected food somewhere away from other food. Put a label on it to prevent selling it. |
  • If possible, get samples of the suspected food from the customer. |
| The suspected outbreak is caused by an ill staff member.           | • Do not allow the staff member to continue to be in the operation until he or she has recovered. |
| The regulatory authority confirms that your operation is the source of the outbreak. | • Cooperate with the regulatory authority to resolve the crisis. |
| The media contacts your operation.                                 | • Follow your communication plan. Let your spokesperson handle all communication. |

### Recovering from a Foodborne-Illness Outbreak

The final step in preparing for a foodborne-illness outbreak is developing procedures to recover from one. Think about what you need to do to make sure that the operation and the food are safe. This is critical for getting your operation running again. Consider the following in your recovery plan:

- Work with the regulatory authority to resolve issues.
- Clean and sanitize all areas of the operation so the incident does not happen again.
- Throw out all suspected food.
- Investigate to find the cause of the outbreak.
- Establish new procedures or revise existing ones based on the investigation results. This can help to prevent the incident from happening again.
- Develop a plan to reassure customers that the food served in your operation is safe.
Appendix C
Identifying Pests

Despite a foodservice manager’s best efforts to prevent infestations, pests may still get into an operation. Remember, the best way to deal with pests is to work with a pest control operator (PCO). To work with a PCO effectively, you must be able to determine the type of pests you are dealing with. Record the time, date, and location of any signs of pests and report them to your PCO. Early detection means early treatment.

Cockroaches

Roaches often carry pathogens. Most live and breed in dark, warm, moist, and hard-to-clean places. You can often find them in sink and floor drains, in spaces around hot water pipes, and near motors and electrical devices in equipment. If you see a cockroach in daylight, you may have a major infestation. Generally, only the weakest roaches come out during the day. There are several types of roaches that can infest your operation. See the illustrations below.
If you think you have a roach problem, check for the following signs:

- **Odor.** Usually there will be a strong, oily odor.
- **Droppings.** Roach feces look like grains of black pepper.
- **Egg cases.** These are capsule-shaped. They may be brown, dark red, or black, and may appear leathery, smooth, or shiny.

## Rodents

Rodents are a serious health hazard. They eat and ruin food, damage property, and spread disease. A building can be infested with both rats and mice at the same time. Rodents hide during the day and search for food at night. Like other pests, they reproduce often. Typically, they do not travel far from their nests. Mice can squeeze through a hole the size of a nickel to enter a facility, while rats can fit through half dollar-sized holes. Rats can jump 3 feet (1 meter) in the air and can even climb straight up brick walls. There are several types of rodents that can infest your operation. See the illustrations below.

![Roof rat](image1)
![Common house mouse](image2)
![Norway rat](image3)

Here are some signs that there are rodents in the operation:

- **Gnaw marks:** Rats and mice gnaw to get at food and to wear down their teeth, which grow continuously.
Tracks: Rodents tend to use the same pathways through your operation. If rodents are a problem, you may see dirt tracks along light-colored walls.

Droppings and urine stains: Fresh droppings are shiny and black. See figure at right. Older droppings are gray. Rodent urine will “glow” when exposed to a black (ultraviolet) light.

Nests: Rats and mice use soft materials, such as scraps of paper, cloth, hair, feathers, and grass to build their nests. The photo at right shows an example of a mouse’s nest.

Holes: Rats usually nest in holes located in quiet places. Nests are often found near food and water and may be found next to buildings.

Illustrations courtesy of Orkin, Inc.
Appendix D

Building a Career

This appendix reviews some of the career information provided in Year 1, Chapter 12: Building a Successful Career in the Industry including information about the job search, sample résumés and cover letters, portfolios, school applications and scholarships, and the interview process.

The Job Search

Job hunting can be both exciting and stressful. The job market is the ideal place to tell others about your abilities, talents, and dreams. Search job ads in online job search engines and job banks by keyword, discipline, and location. These sites are usually more current than traditional classified ads, since posts are frequently updated. Most online job sites allow job seekers to post their résumés online for free. Some sites require job seekers to complete an online résumé or questionnaire as well.

The steps for searching for a job include the following:

1. Decide what characteristics your desired job should have, including the hours and days desired, as well as job responsibilities. Although finding a job that matches your list exactly is unlikely, generally knowing the desired job characteristics will help.

2. Determine which areas may be open to compromise. Willing to work part of the weekend? How late is too late to catch a ride? Think about what trade-offs can be made to accept a job.
Appendix D | Foundations of Restaurant Management & Culinary Arts

3. Gather and organize the information needed for applying. Compile a work history (if possible), including complete contact information for each of your previous employers. Make sure all personal contact information is at hand. Talk with people about being references and review all past training and skills.

4. Create the documents needed for applying—a résumé, reference list, customizable cover letter, and portfolio.

5. Identify the search methods. Examples include the Internet, newspapers, and friends.

6. Choose the businesses to contact. Create a list of their addresses and contact information.

7. Research each business chosen. Knowing as much as possible about the business makes for a better prepared interview and shows an eagerness to work for the business.

8. Contact the businesses chosen in whatever method they’ve indicated. If applying in person, be sure to dress professionally and be prepared with all application documents.

9. When a potential employer makes contact, decide on an interview time. Don’t be late! Ask questions during the interview to make sure that the job meets all your needs.

10. After sending a résumé or applying, call the business once a week to ask about open positions and check the status of an application (if the business hasn’t initiated a follow-up contact). Keep searching.

Sample Résumés and Cover Letters

A résumé is a written summary of experience, skills, and achievements that relate to the job being sought. A résumé is not a life story. It is like a sales brochure that tells an employer why the applicant is the best person to hire for the job. Use these basic tips to create a successful résumé:

- Include all important information such as name, address, telephone number, and email address in case the résumé gets separated from the cover letter.
- Use active language.
- Avoid using buzzwords or jargon.
- Show off accomplishments. Employers want to know what the applicant has accomplished, not what his or her responsibilities or duties were. If possible, quantify achievements with percents or dollars.
Put work experience first unless just entering the job market; then showcase education first. List degrees, GPA, honors, scholarships, and accomplishments.

Include professional references that can speak about your accomplishments. Grab the potential employer’s attention!

Leave white space and use headings and section breaks. See Figure D.1. Visual layout is important. If it looks unprofessional or cluttered, a résumé will not impress the employer.

Keep the length of a résumé to one to two pages. The employer needs just enough information about accomplishments to make a decision about an interview.

Edit and proofread any résumé or cover letter before sending it out.

When sending a résumé to a potential employer, send a cover letter along with it. A cover letter is a brief letter in which applicants introduce themselves to an employer. The following are tips for writing a cover letter:

Attention: Grab a reader’s attention in the first paragraph to make sure the person keeps on reading. State the reason for writing the letter.

Interest: Hold the reader’s interest by mentioning the source of his or her name as a contact or how the job opening or company became of interest.
**Desire:** Tell the reader what you want to do for his or her company. List qualifications and the reasons for the application. See Figure D.2.

**Action:** End the letter by mentioning meeting in an interview.

Ms. Linda Brown  
Manager  
Uptown Grille  
75 East Pleasant Street  
Funtown, USA 50094  

January 5, 2011

Dear Ms. Brown:

I am applying for the position of part-time server with the Uptown Grille that I read about in Sunday's Anytown Daily. This position offers a great opportunity for me to continue my career in foodservice. I am a senior at Anytown High School, where I'm enrolled in a new program that combines food preparation classes with health and safety procedures as well as business management courses. Currently, I work as a busperson at the Blue Bird Café, so I have learned some of the basics of customer service and have received food safety training.

For your review, I am enclosing a copy of my résumé that shows my qualifications. I am hardworking, dependable, and honest, with a pleasant disposition and outgoing personality. My references can testify to these characteristics.

I am sure that once you have had a chance to review my résumé and meet with me, you will agree that my enthusiasm and willingness to learn will help me become an ideal server at Uptown Grille. You can reach me Monday through Friday after 3:30 p.m. or at any time on Saturday and Sunday at 123-456-7890.

I look forward to hearing from you at your earliest convenience. Thank you for your consideration.

Sincerely,

Faith Fitzpatrick  
110 West 84th Street  
Funtown, USA 50094  
Phone: 123-456-7890  
Email: ffitz@otmail.net

---

**Figure D.2:** A sample cover letter.
Portfolios

A portfolio is a collection of samples that showcase interests, talents, contributions, and studies. A portfolio displays an applicant’s finest efforts and is a good self-marketing tool to show potential employers. The following is a list of items a portfolio may include:

- Lists or samples of skills and abilities (such as the list of competencies learned at worksites)
- Samples of work
- Examples of problems solved (at school, in the community, with friends)
- Examples demonstrating teamwork
- Examples showing leadership and responsibility
- Important experiences and what was learned from them
- Certificates of recognition and reward (the certificate received upon successful completion of this program and a high school diploma are two examples)
- Newsletters or announcements (with name or group highlighted)
- Essays, reports, and papers (those with high grades or positive teacher remarks)
- Letters of thanks you’ve received; particularly ones that highlight your motivation and work ethic
- Résumé
- Audio or videotapes that display abilities
- Test scores
- Original recipes
- Letters of recommendation from past employers or groups

Make sure that portfolios are complete, neat, and well-organized. Include a cover page that gives the following:

- Full name, address, and phone number
- Career objectives
- A brief description of the contents
Appendix D

Select samples that highlight the applicant's best talents. Each sample should be accompanied by a brief explanation of why it is important. Type information whenever possible. Include clean photocopies of letters and other important documents or certificates.

A portfolio is best displayed in a three-ring binder or folder. It's a good idea to use three-ring clear plastic sleeves to hold samples. A portfolio should be about 10 pages in length and easy to carry to interviews. A portfolio that is sloppy, too long, or too big does not make a good impression.

School Applications and Scholarships

In addition to asking for your name and address, college or trade school applications require education information. The application may also require that applicants state the program or course of study they are applying for and ask them to complete a short essay. When writing the essay, remember that the person reviewing the application is looking for signs that the applicant will be successful. If the essay is open-ended, write about successes and future goals.

Ask parents or a teacher to review your essay drafts. It is always a good idea to have an essay proofread by someone who is particularly strong in grammar and composition.

It's important to remember that the process of completing college applications has stages with strict deadlines. Applications and essays must be delivered to schools within a specified time frame. Essays take time to write. Also be aware of the time it will take for a school district to provide grades to application schools.

A scholarship is a grant or financial aid award to a student for the purpose of attending college. A large number of available scholarships aren't awarded each year just because no one applies, so the first step in being awarded a scholarship is simply to apply. Applicants who meet the base criteria for the scholarship should apply and let the awarding organization make the decision. They should not assume that they will not get a scholarship. Only by not applying do students guarantee that they won't get any scholarships.

To find scholarships:

- Contact the financial aid office of the school to find out what types of scholarships the school offers and how to apply for them.

- Search the Internet. Some Web sites collect and organize scholarship information. Narrow the search based on potential majors, but don't overlook scholarships that might be available to all students. Also consider searching for scholarships based on ethnicity or disability.
Talk with a guidance counselor. Share findings and ask about any local scholarships that might be available.

Scholarship applications are similar to college applications in that they always have deadlines. Some also require applicants to answer questions or submit an essay. Add these due dates to the continuing list of application deadlines.

Some states and schools also have financial aid to offer students. This includes grants, educational loans, and work study (working as a student for the school). To qualify for financial aid at any school that receives federal funds (almost all of them), the student and the student’s parents will need to complete the Free Application for Federal Student Aid (FAFSA). Get information about the FAFSA and the submission deadlines at www.fafsa.ed.gov. This application is used by the federal government to determine the total amount of financial aid for which an applicant qualifies. In most cases, students should automatically apply for financial aid and let the school determine whether they qualify. Remember that educational loans do have to be repaid, so students should minimize borrowing if possible.

**The Interview**

Most job interviews last about an hour, depending on the job level. Most interviewers try to help applicants relax and feel comfortable. The potential employer will ask questions to get to know the applicant better and to see whether the applicant’s talents would be a suitable match for the job available. The potential employer has a job position to fill and wants to hire someone capable of doing the job or learning it quickly. The interviewer also wants to know whether the applicant will fit in with the restaurant or foodservice team and the organization as a whole.

Think of the interview as a chance to visit a workplace, to learn more about an interesting job, and an opportunity to meet new people. It’s important to make a good impression, but it’s also important to be true to yourself.

Bring the following to the interview:

- Portfolio, including résumé
- Names, addresses, and phone numbers of three people as references, personal and professional
- Birth certificate or valid passport; Social Security card; driver’s license or state-issued ID; green card or proof of ability to work in the United States
The steps to be taken before an interview, during the interview, and after the interview are shown in Table D.1.

<table>
<thead>
<tr>
<th>Table D.1: Interview Steps</th>
</tr>
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<tbody>
<tr>
<td><strong>Before the interview</strong></td>
</tr>
<tr>
<td>• Know the route to the job. Take a preview trip to the interview site. Consider traffic.</td>
</tr>
<tr>
<td>• If you’re taking public transportation, bring enough money and allow time for delays.</td>
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<tr>
<td>• Know what materials to take.</td>
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<tr>
<td>• Review important interview questions and responses.</td>
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<tr>
<td>• Practice aloud.</td>
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<tr>
<td>• Bring a pen that writes clearly and a clean notebook.</td>
</tr>
<tr>
<td>• Write down the name, address, and telephone number of the interviewer.</td>
</tr>
<tr>
<td>• Give yourself enough time to get ready.</td>
</tr>
<tr>
<td>• Get a good night’s sleep.</td>
</tr>
<tr>
<td>• Arrive at the interview 15 minutes before the appointment.</td>
</tr>
<tr>
<td>• If you are going to be late, call the interviewer.</td>
</tr>
<tr>
<td>• Good luck and relax!</td>
</tr>
</tbody>
</table>