CICN PRESENTS

THE MEATS/MEAT ALTERNATES LAB

TRAINING MANUAL

CICN
CULINARY INSTITUTE OF CHILD NUTRITION

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THE MEATS/MEAT ALTERNATES LAB

TRAINING MANUAL

EXECUTIVE DIRECTOR
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Key Area:
1 – Nutrition
2 – Operations

USDA Professional Standards Codes:
Menu Planning – 1100
Food Production – 2100
Serving Food – 2200

CICN | CULINARY INSTITUTE OF CHILD NUTRITION

2025

Disclaimer

This project has been funded at least in part with Federal funds from the U.S. Department of Agriculture, Food and Nutrition Service through an agreement with the Institute of Child Nutrition at the University of Mississippi. The content of this publication does not necessarily reflect the view or policies of the U.S. Department of Agriculture, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

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BACKGROUND INFORMATION FOR TRAINERS

WELCOME to *CICN Presents: The Meats/Meat Alternates Lab*. This training manual is an instructional aid for you, the course instructor. The manual provides the content and educational tools needed to introduce school nutrition professionals to concepts and basic skills related to preparing and serving safe, high-quality meals to students. To assist you further in successfully conducting this training, the Training Manual includes the following prompts:

INSTRUCTOR'S NOTE:
The purpose of the background information is to help you become familiar with the content of the training. It is not a part of the training detail.

DEMONSTRATE/DISCUSS

This prompt will be followed by talking points or instructions for the participants. Use these talking points as a guide for the topic of discussion. Following the instructions provided will assist you in having a successful training.

KEY MESSAGES

This prompt will provide important information that child nutrition professionals should understand. There are suggested questions to ask participants for discussion purposes. Please ensure the participants have a good understanding of these key messages before continuing with the training.

CLASS DISCUSSION PROMPTS

This prompt will suggest questions to ask the participants to start a good discussion among the group. For some questions, answers may be provided to help guide the conversation if participants seem reluctant to answer.

ADDITIONAL INFORMATION

- This training is intended for 24 participants, including hands-on food production activities for six teams of four participants each. However, if there are fewer than 24 participants, the total number of participants will be divided as needed.
- Best practices are bolded to prompt the instructor to emphasize the topic area.
- The equipment list, shopping list, setup guide, and lesson preparation information can be found in the Appendix of the Training Manual.

ACTIVITY INFORMATION

Participants will work together. At the beginning of the training, divide the participants into six teams of four. (The recommended team size for this training is four participants; however, if there are fewer than 24 participants, the total number of participants will be divided into six teams.) Assign the recipes each team will be working with during the team cooking lab. (For teams with fewer than four participants, consider adjusting the recipe assignments.)

Here are a few suggestions for developing teams:

- Allow participants sitting next to each other to be in teams or have them number off by the desired number of teams.
- Have child nutrition or culinary terms on one note card and the corresponding definition on another note card. Explain that participants need to circulate the room to find a match. The participants with matching cards are partners. For example, one card may have the word "food processor," and the corresponding definition card may read, "This piece of equipment is used to shred, chop, and blend foods."
- Place different colored dots on nametags, note cards, or on the outside of the workbooks. Use the colors to create groups or pairs.

The above suggestions can serve two purposes: an icebreaker and a way to form lab teams.

TRAINING-AT-A-GLANCE
(4.5 HOURS)

TIME	TOPIC	TASK	MATERIALS
INTRODUCTION			
20 minutes	Welcome and Overview	○ Introduce topic ○ Introduce instructor ○ Participant introductions ○ Training overview ○ Ground rules ○ Review USDA professional standards ○ Review ICN Competencies ○ Review training goals and objectives ○ Review culinary terms	Sign-in Sheet Training Manual
INTRODUCTION TO MEAT, FISH, POULTRY, AND MEAT ALTERNATES			
OBJECTIVES: ○ Identify a variety of types and forms of animal- and plant-based proteins. ○ Review the nutritional benefits of serving lean proteins in schools. ○ Discuss how to incorporate a variety of proteins in school menus.			
30 minutes	○ Types and forms of protein food items commonly served in schools ○ Nutritional benefits of lean proteins ○ Menu planning	○ Define meats and meat alternates ○ Review types, grades, and forms of lean meat, fish, and poultry ○ Storage and handling of lean meat, fish, and poultry ○ Discuss the nutritional benefits of meats/meat alternates ○ Discuss the ability to control fat and sodium when preparing proteins	○ Training Manual ○ Handout: Monterey Bay Aquarium Seafood Watch
CHEF DEMO			
OBJECTIVES: ○ Review a variety of preparation and cooking techniques for proteins. ○ Discuss food safety practices when preparing meats and meat alternates.			
45 minutes	○ Preparation techniques ○ Identify common protein foods ○ Adding flavor to proteins	○ Demonstrate and discuss techniques for seasoning and developing flavor in proteins ○ Review food safety practices and quality preparation benchmarks	○ Training Manual ○ Handout: Three Cooking Methods ○ Supplies ○ Equipment

TIME	TOPIC	TASK	MATERIALS
TEAM COOKING LAB			
OBJECTIVE: ○ Prepare various protein-based recipes utilizing the culinary skills of fabricating, seasoning, baking, roasting, sauté, and soup preparation.			
140 Minutes	Team Cooking Lab	○ Prepare a variety of recipes	○ Training Manual ○ Handout: Report – Out Template ○ Handout: Mise en Place ○ Handout: Mise en Place List (Template) ○ Food Safety Fact Sheets
REPORT OUT			
OBJECTIVE: ○ Evaluate the quality, taste, and appearance of the prepared recipe.			
15 Minutes	○ Report-Out ○ Marketing ○ Sampling Foods	○ Report on the following topics: • Description of recipes • Marketing (name/presentation) • Quality of recipe • Ease of production • Use in program	○ Training Manual ○ Recipe Evaluation Form
WRAP UP			
10 Minutes	Review the Training	○ Review the lesson ○ Discuss the implementation of skills	○ Training Manual ○ Handout: Application Action Plan ○ Handout: Reflections
CONCLUSION			
10 Minutes	Training Evaluation	○ Conduct Training Evaluation ○ Conclude the training	○ Training Manual ○ Training Evaluation QR code

THE MEATS/MEAT ALTERNATES LAB - INTRODUCTION

(5 MINUTES)

INTRODUCTION TALKING POINTS

- Welcome to *CICN Presents: The Meats/Meat Alternates Lab*.
- You can say: This training is designed to be hands-on, inviting you, the participant, to be an active learner. Today, we will focus on developing culinary skills that will better enable you to prepare scratch and speed scratch recipes. The Meats/Meat Alternates Lab will provide the tools to begin or advance your program's preparation of various protein food items. We will cover food safety practices, the use of tools and equipment, and various food preparation techniques.
- Introduce yourself and other special guests. You should state your name, title, credentials, and relevant experience.

INSTRUCTOR'S NOTE:

Introduce yourself to the attendees using the following format and select an icebreaker from the list below. Confirm that participants have signed the sign-in sheet and have a copy of the workbook and a pen or pencil.

ICEBREAKER IDEAS

- Facilitate an icebreaker to allow participants to introduce themselves and identify their titles, credentials, and relevant experience. Ideas may include asking participants to include a fun food fact about themselves in their introduction. Suggested examples include:
  - What's the strangest thing you've ever eaten?
  - If you could only eat one food for the rest of your life, what would it be, and why?
  - What's something that you regularly ate growing up?
  - What's your signature dish?
  - If you could go to dinner anywhere tonight, where would you go?
- After the icebreaker, instruct participants to form (or you may assign) six lab teams of four. Assign each team a number from 1 to 6 to correspond with the team's recipes listed below. (The recommended team size for this training is 4 participants; however, if there are fewer than 24 participants, the total number of participants will be divided as needed.)
- When using recipes in a team cooking lab, assign the recipes each team will work with at the beginning of the training. (Consider adjusting the recipe assignments for teams with fewer than four participants.)
- Assigning recipes at the beginning of the training allows participants to review the recipes they will prepare. Participants will better understand how the techniques discussed during lectures and demonstrations will be applied to the recipes they will use during the lab exercise.
- Consider combining the icebreaker and lab team formation.

LAB RECIPES						
TEAM	1	2	3	4	5	6
RECIPE 1	Blackened White Fish	Herb Roasted Chicken Drumsticks	Korean Beef	Mexicali Taco Boat	Oven Fried Chicken	Fish Chowder
RECIPE 2	Classic Macaroni and Cheese	Cuban Black Beans	Maple Sriracha Chickpeas	Quiche with Self-Forming Crust	Cheesy Lentil Bake	Cheesy Potato, Egg, and Bacon Bake
RECIPE 3	Turkey Breakfast Sausage	Honey Garlic Tofu	African Chicken and Kale Stew	Chana Masala	Beef Stir Fry	Carnitas Chili Verde Pork Quesadilla

RECIPE DISCLAIMER

This collection of recipes includes flavors inspired by regional and global cuisines and may vary from what would be authentic to specific cultures.

TRAINING OVERVIEW

Refer participants to the following documents and briefly review each one:

- Ground Rules
- USDA Professional Standards
- ICN Competencies
- Training Goals and Objectives
- Culinary Terms

INSTRUCTOR'S NOTE:
Time does not allow for a review of all of the terms and definitions included in the Culinary Terms. Ask volunteers to read the definitions for the following terms: **Batch Cook**, **Blanching**, **Mise en Place**, and **Standardized Recipe**. Ask if any other culinary terms need clarification.

GROUND RULES

INSTRUCTOR'S NOTE:
Before the training, you can send the following ground rules to all training participants.

ICN developed ground rules to help the training run smoothly and allow all participants to benefit from the course instruction and information.

SHOW UP ON TIME AND COME PREPARED
Be prompt when arriving and returning from breaks. Come with a positive attitude.

STAY MENTALLY AND PHYSICALLY PRESENT
Be present and stay on task. Listen attentively to others and avoid disruptive side conversations.

LET EVERYONE PARTICIPATE
Be patient when listening to others speak. Treat all participants with the same respect that you would want from them.

LISTEN WITH AN OPEN MIND
Stay open to new ways of doing things and listen for understanding. You can respect another person's point of view without agreeing with them.

THINK BEFORE SPEAKING
Seek first to understand, then to be understood. Avoid using idioms and phrases that can be misunderstood.

ATTACK THE PROBLEM, NOT THE PERSON
Respectfully challenge the idea, not the person. Honest and constructive discussions are necessary to get the best results.

FOCUS ON FOOD SAFETY
Ensure proper food safety practices are adhered to at all times. Practice proper handwashing and glove use, avoid cross-contact and cross-contamination, follow cleaning and sanitation practices, and proper temperature controls.

MAINTAIN PHYSICAL SAFETY
Kitchen environments are filled with the potential for accidents. Safeguard yourself and others by following good workplace safety practices. Keep floors clean and free of debris and standing water, move safely with sharp items such as knives, and use equipment cautiously to prevent burns, cuts, and other injuries. Immediately report any injuries to your instructor.

WEAR PROPER KITCHEN ATTIRE
Wear proper kitchen attire during team cooking labs. Proper attire includes closed-toed shoes (slip-resistant are preferable), a clean apron, and a hair restraint. Remove jewelry (including rings—except for a single, plain band without stones), remove nail polish and artificial fingernails, and maintain good personal hygiene.

PROFESSIONAL STANDARDS AND KEY AREA CODE

KEY AREA CODES

1 – Nutrition

2 – Operations

PROFESSIONAL STANDARDS

Menu Planning – 1100

Employee will be able to effectively and efficiently plan and prepare standardized recipes, cycle menus, and meals, including the use of USDA Foods, to meet all Federal school nutrition program requirements, including the proper meal components.

1140 – Write standardized recipes and use Food Buying Guide.

Food Production – 2100

Employee will be able to effectively utilize food preparation principles, production records, kitchen equipment, and food crediting to prepare foods from standardized recipes, including those for special diets.

2110 – Understand and effectively prepare food using a standardized recipe.

2130 – Develop culinary skills necessary for school meal preparation.

2140 – Properly use and care for equipment.

Serving Food – 2200

Employee will be able to correctly and efficiently serve food portions to meet all USDA school meal pattern requirements and encourage healthy food selections including those for special diets.

2230 – Serve food to maintain quality and appearance standards.

ICN COMPETENCIES

COMPETENCIES, KNOWLEDGE, AND SKILLS OF EFFECTIVE SCHOOL NUTRITION ASSISTANTS AND TECHNICIANS

FUNCTIONAL AREA 1: EQUIPMENT USE AND CARE — This functional area is defined as the selection, operation, and maintenance of foodservice equipment.

CORE COMPETENCY 1.1

1.1a Demonstrates the ability to select the correct foodservice equipment for the food product being prepared.

FUNCTIONAL AREA 2: FOOD PRODUCTION — This functional area is defined as the production of high-quality food products using procedures for receiving, inventory, preparation, and service of safe, appetizing, nutritious meals to students.

CORE COMPETENCY 2.2

2.2a Knows and demonstrates basic food preparation techniques used in producing large quantities of food items.
2.2b Knows and demonstrates the ability to prepare food products following standardized recipes.

CORE COMPETENCY 2.3

2.3a Knows the importance of and demonstrates proper procedures for monitoring and evaluating all foods (received and produced) to ensure quality standards are achieved.

OVERALL TRAINING GOALS

- Identify a variety of protein food items.
- Apply safe food handling practices to processing, cooking, and serving protein.
- Identify proper ways to process and prepare protein items for further preparation or line service.
- Utilize kitchen tools and equipment to prepare a variety of produce items efficiently.

TRAINING OBJECTIVES

- Identify a variety of types and forms of animal- and plant-based proteins.
- Review the nutritional benefits of serving lean proteins in schools.
- Discuss how to incorporate a variety of proteins in school menus.
- Review a variety of preparation and cooking techniques for proteins.
- Discuss food safety practices when preparing meats and meat alternates.
- Prepare various protein-based recipes utilizing the culinary skills of fabricating, seasoning, baking, roasting, sauté, and soup preparation.
- Evaluate the quality, taste, and appearance of the prepared recipe.

INTRODUCTION TO MEAT, FISH, POULTRY, AND MEAT ALTERNATES

(30 MINUTES)

TIME	TOPIC	TASK	MATERIALS
INTRODUCTION TO MEAT, FISH, POULTRY, AND MEAT ALTERNATES			
OBJECTIVES: ○ Identify a variety of types and forms of animal- and plant-based proteins. ○ Review the nutritional benefits of serving lean proteins in schools. ○ Discuss how to incorporate a variety of proteins in school menus.			
30 minutes	○ Types and forms of protein food items commonly served in schools ○ Nutritional benefits of lean proteins ○ Menu planning	○ Define meats and meat alternates ○ Review types, grades, and forms of lean meat, fish, and poultry ○ Storage and handling of lean meat, fish, and poultry ○ Discuss the nutritional benefits of meats/meat alternates ○ Discuss the ability to control fat and sodium when preparing proteins	○ Training Manual ○ Handout: Monterey Bay Aquarium Seafood Watch

OVERVIEW

This training is designed for child nutrition professionals interested in expanding their knowledge of different protein sources and understanding how to prepare them in a healthy and flavorful way.

DEFINE MEATS AND MEAT ALTERNATES

DISCUSS

Meats and meat alternates play an important role in school nutrition programs. These foods are used in school meals to ensure that children receive a nutritionally balanced diet.

- **Nutritional Value**: Meats and meat alternates are a primary source of protein, which is necessary for the growth, maintenance, and repair of the body. Protein is especially important for children, who are growing and developing rapidly. Meats and meat alternates also provide other essential nutrients, like iron, zinc, and B vitamins.
- **Dietary Guidelines**: Following the Dietary Guidelines for Americans, the U.S. Department of Agriculture (USDA) provides guidelines for school nutrition programs, including recommendations for serving different food components that include meats/meat alternates. The guidelines aim to ensure that the school meals provide a balanced diet.
- **Cultural and Dietary Habits**: In the United States, meats and meat alternates are a staple in many people's diets and are often considered a main part of meals. School nutrition programs reflect these cultural and dietary habits.
- **Familiarity and Acceptance**: Meals served in school programs are designed to be appealing and acceptable to children, which increases the likelihood of them being consumed. As meat is a familiar food item for many, it is often included in school meals.
- **USDA Foods:** Operated by the USDA, the USDA Foods in Schools program is an important source of nutritious, domestic food for school meals. Through the program, school food authorities select from over 200 products that USDA offers to purchase on their behalf, including meat and poultry products, which can make the meals cost-effective.

It is also worth mentioning that while meats are commonly served, there is growing recognition of the need for diverse dietary options. Many school nutrition programs now include vegetarian and vegan options and meals catering to other dietary restrictions and cultural food preferences. This approach ensures that all children can access nutritious and suitable meals for their specific dietary needs.

MEATS CLASSIFICATION:

Meats are classified into three broad areas:

- **Meats:** This typically includes red meat (beef or pork).
- **Poultry**: This includes birds such as chicken, turkey, and duck.
- **Fish**: All varieties of fish, shellfish, and seafood.

KEY MESSAGES

- Meats and meat alternates (M/MA) provide essential nutrients like protein, iron, zinc, and B vitamins, supporting growth and development in children.
- USDA guidelines ensure balanced school meals by incorporating nutritious and cost-effective M/MA options, including those provided through USDA Foods in Schools.
- School meal programs reflect cultural and dietary diversity, offering vegetarian, vegan, and culturally relevant M/MA choices to accommodate student needs.

CLASS DISCUSSION PROMPT

QUESTION:

What types of meats are you currently using in your programs?

POSSIBLE ANSWERS:

Answers will vary.

COMMON CREDITABLE MEAT ALTERNATES

In school nutrition programs, “meat alternates” refer to food items that can substitute for meat in providing necessary protein and other essential nutrients. They accommodate diverse dietary needs, preferences, and cultural or religious dietary restrictions among students. The USDA, which oversees school nutrition programs, includes the following in the category of meat alternates:

- **Cheese:** Includes natural and processed cheese, such as cheddar, mozzarella, and American cheese.
- **Whole Eggs:** A source of high-quality protein, including whole eggs and liquid egg products.
- **Beans, Peas, and Lentils:** Includes black beans, pinto beans, kidney beans, lentils, chickpeas, and green peas.
- **Peanut and Other Nut and Seed Butters:** Includes peanut butter, almond butter, cashew butter, and sunflower seed butter.
- **Nuts and Seeds:** Includes almonds, walnuts, sunflower seeds, pumpkin seeds, and cashews.
- **Yogurt or Soy Yogurt:** Includes plain or flavored, unsweetened or sweetened yogurt options.
- **Tofu and Other Soy Products:** Includes tofu, tempeh, and textured soy protein, which are good protein sources for vegetarian diets.

Note, the items listed above are not an exhaustive list of the meat alternates foods.

KEY MESSAGES

- Meat alternates provide essential protein and nutrients while accommodating diverse dietary needs, preferences, and cultural or religious restrictions in school nutrition programs.
- USDA-approved meat alternates include cheese, eggs, beans, lentils, nut and seed butters, nuts, seeds, yogurt, soy yogurt, tofu, and other soy products.
- Meat alternates support vegetarian and plant-based diets, offering versatile and nutritious options to ensure all students receive balanced meals.

CLASS DISCUSSION PROMPT

QUESTION:
What types of meat alternates are you currently using in your programs?

POSSIBLE ANSWERS:
Answers will vary.

TYPES, GRADES, AND FORMS OF LEAN MEAT, FISH, AND POULTRY

DISCUSS

TYPES OF LEAN MEAT, FISH, AND POULTRY

Different types of lean meat, fish, and poultry can be used in school nutrition programs. Some of the most common types include:

- **Beef:** Beef is a good source of protein and iron. Some lean cuts of beef include sirloin tip roast, eye of round roast, top round roast, and lean ground. Lean ground beef typically has 10% or less fat content. Additionally, pre-cooked products are commonly used in school nutrition, including beef crumbles and burger-type patties.
- **Pork:** Pork is another good source of protein and iron. Some commonly used forms of pork include shoulder (butt) roast, loin chops, and reduced sodium ham products. Pre-cooked items include pulled pork and low-fat (or lean) sausage-type patties.
- **Fish:** Fish is a good source of protein and omega-3 fatty acids. Some lean fish include Pollock, catfish, tuna, and rockfish. Fish products can be found both raw and pre-cooked (or canned).
- **Chicken:** Chicken is a good source of protein and low in fat. Some common cuts of chicken include breast, thigh, and drumstick. Pre-cooked products, including diced, strips, shredded, and breaded items, are commonly used in school nutrition.
- **Turkey:** Turkey is a good source of protein and low in fat. Some common cuts of turkey include breast, thigh, and drumstick. Turkey roasts (cooked and raw options), deli-style products, and formed products such as sausages are also available sources.

KEY MESSAGES

- Lean meats, fish, and poultry provide high-quality protein and essential nutrients such as iron, zinc, and omega-3 fatty acids while keeping fat content lower.
- Selecting lean cuts and pre-cooked options can help meet USDA meal pattern requirements and support healthy eating habits in students.
- Fresh, frozen, canned, and pre-cooked options each have advantages—select the best format based on storage, preparation time, and student preferences.
- Using flavorful, culturally relevant, and visually appealing preparations can improve student acceptance of lean protein options.
- Safe handling, storage, and cooking of meat, fish, and poultry are critical to maintaining food safety and quality in school meals.

CLASS DISCUSSION PROMPT

QUESTION:

What factors do you consider when choosing between fresh, frozen, canned, or pre-cooked options for lean meat, fish, and poultry in your menus?

POSSIBLE ANSWERS:

Storage capacity, shelf life, preparation time, labor availability, equipment needs, cost, and student acceptance.

GRADES OF LEAN MEAT AND POULTRY

DISCUSS

Lean meat and poultry are graded based on their quality and yield.

THE BASIC GRADES FOR BEEF, ACCORDING TO THE USDA BEEF GRADING SHIELDS, ARE:

- **Prime:** Prime beef is produced from young, well-fed beef cattle. It has slightly abundant marbling (the amount of fat interspersed with lean meat) and is generally sold in upscale restaurants.
- **Choice:** Choice beef is high quality but has less marbling than Prime. It has a small amount of marbling.
- **Select:** Select beef is very uniform in quality and typically leaner than the higher grades. It is fairly tender, but because it has less marbling, it may lack some of the juiciness and flavor of the higher grades. It has a slight amount of marbling.
- **Standard and Commercial:** Standard and Commercial grades of beef are frequently sold as ungraded or store-brand meat. Utility, Cutter, and Canner grades are lower-quality grades of beef that are seldom, if ever, sold at retail. Instead, they are used to make ground beef and processed products.

USDA GRADING OF PORK:

Although inspection is mandatory, grading for quality is voluntary, and a plant pays to have its pork graded. USDA grades for pork reflect only two levels: **Acceptable grade** and **Utility grade**. Pork sold as Acceptable quality is the only fresh pork available in supermarkets and should have a high proportion of lean meat relative to fat and bone. Pork graded as Utility is primarily used in processed products and is unavailable in supermarkets for consumer purchase.

Pork grading is based on standards similar to those used for poultry, as outlined in the USDA Poultry and Poultry Products Grades and Standards. These standards focus on factors such as meat quality, appearance, and the ratio of lean to fat content.

THE BASIC GRADES FOR POULTRY, ACCORDING TO THE USDA POULTRY AND POULTRY PRODUCTS GRADES AND STANDARDS, ARE:

- **U.S. Grade A.** A lot of ready-to-cook poultry, parts, or poultry food products consisting of one or more ready-to-cook carcasses or parts, or individual units of poultry food products of the same kind and class, each of which conforms to the requirements for A quality may be designated as U.S. Grade A.
- **U.S. Grade B.** A lot of ready-to-cook poultry or parts consisting of one or more ready-to-cook carcasses or parts of the same kind and class, each of which conforms to the requirements for B quality or, better, may be designated as U.S. Grade B.

- **U.S. Grade C.** A lot of ready-to-cook poultry or parts consisting of one or more ready-to-cook carcasses or parts of the same kind and class, each of which conforms to the requirements for C quality or better, may be designated as U.S. Grade C.

FISH AND SEAFOOD GRADING

Fish grading differs from beef, pork, and poultry grading. The grading is used to determine market price at the terminal and is not a factor in selecting products for use in school meals.

There is a resource school nutrition programs can use to help select the types of fish to use based on factors including sustainability and effects on consumer health. The Monterey Bay Aquarium has produced the *Seafood Watch Consumer Guides,* a repository of guides to help operators and consumers responsibly select fish and seafood items for their menus.

Many commercially enjoyable fish are in trouble due to destructive fishing and farming practices. Seafood Watch assesses how specific fisheries or farms perform against our rigorous standards. School meal operators can make a difference for our ocean by making responsible seafood choices.

KEY MESSAGES

- USDA grading provides a consistent system for evaluating meat and poultry quality, which can help guide purchasing decisions.
- For beef, Prime has the highest marbling and flavor, but Choice and Select often provide a better balance of cost, nutrition, and quality for school meals.
- Pork grading is limited to Acceptable and Utility, with Acceptable being the only grade sold fresh in supermarkets.
- Poultry grading (A, B, C) reflects quality and appearance; Grade A is the highest and most common for school nutrition programs.
- Seafood grading is different and often not used for school menu decisions, but sustainability resources like Monterey Bay Aquarium's Seafood Watch can help select environmentally responsible, healthy seafood options.
- Choosing the right grade helps ensure meals are nutritious, appealing, and cost-effective while supporting sustainability goals.

CLASS DISCUSSION PROMPT

QUESTION:

How can grading information help you decide which meat or poultry products to purchase for your menus?

POSSIBLE ANSWERS:

Guides purchasing decisions for quality, consistency, cost, and preparation needs.

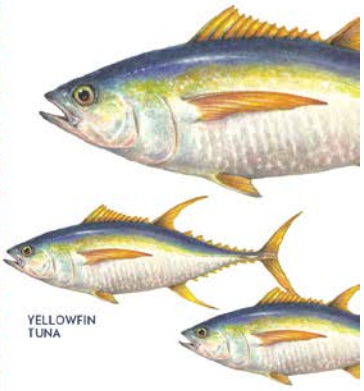
HANDOUT: MONTEREY BAY AQUARIUM SEAFOOD WATCH

Monterey Bay Aquarium Seafood Watch

The Monterey Bay Aquarium Seafood Watch program creates science-based recommendations that help consumers and businesses make ocean-friendly seafood choices. Carry this guide with you and share it with others to help spread the word.

NATIONAL SEAFOOD GUIDE Spring / Summer 2025

Seafood Watch®



Monterey Bay Aquarium

Monterey Bay Aquarium
Seafood Watch

The Monterey Bay Aquarium Seafood Watch program helps consumers and businesses choose seafood that's fished or farmed in ways that support a healthy ocean, now and for future generations.

Take action

ASK "Do you sell sustainable seafood?" This simple but powerful action lets businesses know it is important to you.

BUY Best Choice options first.

CHOOSE Good Alternatives if you can't find a Best Choice and visit SeafoodWatch.org for the full list.

SeafoodWatch.org

Your choices matter

You can make a difference for our ocean by making responsible seafood choices.

Use these recommendations for popular seafood when dining and shopping.

Visit SeafoodWatch.org for our full range of seafood guides. Or scan the QR code below.

BEST CHOICE

Abalone (farmed)
Arctic char
Bass (farmed from US or Mexico)
Catfish (farmed from US)
Clams (farmed)
Cod: Pacific (from AK)
Crab: king (from AK)
Flounder (from AK)
Mussels (farmed)
Oysters (farmed)
Rockfish (from US)
Sablefish/black cod (from AK pots)
Salmon (farmed from New Zealand)
Scallops (farmed)
Seaweed (farmed)
Shrimp (farmed from US)
Sole (from US)
Squid (from CA)
Sturgeon (farmed from US)
Swordfish (from US buoy gear, harpoon, or pole-&-line)
Trout (farmed from US)
Tuna: albacore/white (troll or pole-&-line)
Tuna: skipjack/chunk light (from Pacific troll or pole-&-line)

GOOD ALTERNATIVE

Clams (wild from US or Canada)
Cod: Atlantic
Lobster: spiny (from US or Mexico)
Mackerel (from Ecuador, Japan, or Morocco)
Mahi-mahi (from US)
Oysters (wild from US)
Sablefish/black cod (from US longline)
Salmon (wild from US)
Salmon: Atlantic (farmed from ME or Faroe Islands)
Sardine (from Japan or Morocco)
Scallops (wild)
Shrimp (wild from US or Canada; farmed from Ecuador, Honduras, or Thailand)
Snapper (from US)
Swordfish (imported harpoon, pole-&-line; from US gillnet or longline)
Squid (from Chile or Peru)
Tilapia (from Colombia, Honduras, Indonesia, Mexico, or Taiwan)
Tuna: canned (check label for pole-&-line, troll-caught, FAD-free, or free school)
Tuna: yellowfin/ahi (from US; from Atlantic or Pacific free school)

AVOID

Basa/pangasius/swai (imported)
Branzino/seabass (farmed from Mediterranean)
Chilean seabass (from Chile)
Crab (from Asia)
Crab: snow (from Canada)
Eel (imported farmed)
Lobster: American (from US or Canada)
Mahi-mahi (imported)
Octopus
Orange roughy
Salmon (farmed from Canada, Chile, Norway, or Scotland)
Sharks
Shrimp (all other imported options)
Squid (all other imported options)
Swordfish (imported gillnet or longline)
Tilapia (from China)
Trout: rainbow (from Chile)
Tuna: bluefin (farmed/ranched)
Tuna (from Indian Ocean)
Tuna (all other options)

How to use this guide

BEST CHOICE
Buy first. It is well managed and caught or farmed in an environmentally responsible manner.

GOOD ALTERNATIVE
Buy if a Best Choice option is not available. There are moderate environmental concerns.

AVOID
Pass on this seafood for now. It's caught or farmed in ways that harm marine life or the environment.

This list does not reflect all recommendations, exceptions may apply. View the full list on SeafoodWatch.org.

FORMS OF LEAN MEAT, FISH, AND POULTRY

Lean meat, fish, and poultry can be purchased in a variety of forms, including:

- **Fresh:** Fresh meat, fish, and poultry have not been frozen.
- **Frozen (raw):** Frozen meat, fish, and poultry have been frozen at a very low temperature to preserve quality.
- **Frozen (pre-cooked):** These items are commonly referred to as value-added items due to the items being pre-prepared for further use in recipes.
- **Canned:** Canned meat, fish, and poultry have been cooked and then sealed in a can.
- **Smoked**: Smoked meat, fish, and poultry have been cooked with smoke.

CHOOSING LEAN MEAT, FISH, AND POULTRY FOR SCHOOL NUTRITION PROGRAMS

When choosing lean meat, fish, and poultry for school nutrition programs, it is important to consider the following factors:

- **Cost:** Certain cuts of lean meat, fish, and poultry can be expensive, so it is important to consider the cost when selecting the cut or form of product you purchase.
- **Nutrients:** Lean meat, fish, and poultry are good sources of protein, iron, zinc, and omega-3 fatty acids.
- **Palatability:** When prepared correctly, lean meat, fish, and poultry are palatable to children.
- **Convenience:** Lean meat, fish, and poultry are typically easy to source and can be easy to prepare.

KEY MESSAGES

- Lean meat, fish, and poultry are available in multiple forms—fresh, frozen (raw or pre-cooked), canned, and smoked—each offering different advantages for menu planning.
- Pre-cooked frozen products can save preparation time and labor, making them valuable for busy school kitchens.
- Selecting the right form and cut should balance cost, nutritional value, and student appeal.
- Lean meat, fish, and poultry provide high-quality protein, iron, zinc, and omega-3 fatty acids, supporting student health and development.
- Proper preparation can enhance palatability and encourage student acceptance.
- Convenience, storage capabilities, and preparation requirements should be considered to ensure efficient and consistent meal service.

CLASS DISCUSSION PROMPT

QUESTION:

What factors does your program consider when selecting the types and forms of meats/meat alternates to procure and menu?

POSSIBLE ANSWERS:

Answers will vary.

STORAGE AND HANDLING OF LEAN MEAT, FISH, AND POULTRY

DISCUSS

Lean meat, fish, and poultry should be stored and handled properly to prevent foodborne illness. Follow these tips:

- Store lean meat, fish, and poultry in the refrigerator at 41 ºF or below or freezer at 0 ºF or below.
- Do not thaw lean meat, fish, and poultry at room temperature. Lean meat, fish, and poultry should be thawed in the refrigerator at 41 °F or below.
- Prevent cross-contamination when preparing meat, fish, and poultry.
- Cook lean meat, fish, and poultry to the proper internal temperature.
  - Beef, pork, and lamb (steaks, chops, roasts): 145 ºF
  - Ground meats (beef, pork, lamb): 160 ºF
  - Poultry (whole, parts, ground): 165 ºF
  - Fish and shellfish: 145 ºF
- Keep cooked lean meat, fish, and poultry hot until served.
- Discard any leftover lean meat, fish, and poultry left out at room temperature for more than two hours.

KEY MESSAGES

- Keep refrigerated at 41 ºF or below; freeze at 0 ºF or below.
- Thaw in the refrigerator, not at room temperature.
- Avoid cross-contamination during preparation.
- Cook to sae internal temperatures: beef/pork/lamb 145 ºF, ground meats 160 ºF, poultry 165 ºF, fish/shellfish 145 ºF.
- Hold hot foods until service; discard if left out over two hours.

CLASS DISCUSSION PROMPT

QUESTION:

What steps are used in your program to ensure the safe handling and service of raw (including raw from frozen) meat, fish, and poultry?

POSSIBLE ANSWERS:

Answers will vary.

NUTRITIONAL BENEFITS OF MEATS/MEAT ALTERNATES

Serving meats and meat alternates in school nutrition programs offer several nutritional benefits. These foods provide essential nutrients vital for children's growth and development.

- **Protein:** Meats and meat alternates are rich in protein, which is important for building and repairing tissues, producing enzymes and hormones, and supporting overall growth. Protein helps energize students throughout the day and promotes healthy muscles and bones.
- **Iron:** Meats, such as lean beef, poultry, and fish, contain iron easily absorbed by the body. Iron is necessary to produce healthy red blood cells, which carry oxygen to various body parts. Adequate iron intake helps prevent fatigue and supports cognitive function.
- **Zinc**: Meats and meat alternates, like beans and lentils, are good sources of zinc. Zinc supports the immune system, promotes wound healing, and aids growth and development. It also contributes to healthy skin, hair, and nails.
- **Vitamin B12**: Meats, particularly animal products, are excellent sources of vitamin B12. This vitamin is essential for forming red blood cells and helps maintain a healthy nervous system. A sufficient intake of vitamin B12 is crucial for children's brain development and overall well-being.
- **Omega-3 fatty acids**: Certain meats, such as fatty fish like salmon or sardines, provide omega-3 fatty acids. These healthy fats are beneficial for heart health and brain function and reduce inflammation. Including fish as a meat alternative can introduce these important nutrients into children's diets.
- **Nutrient Density**: Meats and meat alternates offer a high concentration of essential nutrients in a relatively small portion. This nutrient density ensures that students receive a good amount of vitamins, minerals, and proteins while consuming a reasonable quantity of food. It helps meet their nutritional needs without excessive calorie intake.
- **Variety and Flavor:** Including meats and meat alternates in school meals allows for a diverse and flavorful menu. This variety helps promote student satisfaction and encourages them to consume a well-rounded diet. Different meats and meat alternates offer various flavors and textures, making meals enjoyable and appealing to children.

It is important to note that while meats and meat alternates provide valuable nutrients, offering a balanced and varied selection of other food groups, such as fruits, vegetables, whole grains, and dairy products, is essential to ensure a well-rounded and nutritious meal for students.

KEY MESSAGES

- Meats and meat alternates are rich in protein, supporting growth, muscle, and bone health.
- Provide easily absorbed iron to prevent fatigue and support cognitive function.
- Supply zinc for immune function, wound healing, and healthy growth.
- Offer vitamin B12 for red blood cell formation and nervous system health.
- Fatty fish supply omega-3s for heart, brain, and reduced inflammation.
- Nutrient-dense, providing essential vitamins and minerals in modest portions.
- Add variety and flavor to school menus, increasing student satisfaction and diet quality.

CLASS DISCUSSION PROMPT

QUESTION:

How can we ensure the food is healthy and tasty so the students like it and get all the necessary nutrients?

POSSIBLE ANSWERS:

- Creating menus with a variety of Meats/Meat Alternates
- Proper cooking of foods
- Proper seasoning
- Include regional and culturally relevant flavors in M/MA recipes

CONTROL FAT AND SODIUM WHEN PREPARING PROTEINS

DISCUSS

When preparing proteins for school nutrition programs, it's important to manage the amounts of fat and sodium (salt) to ensure the meals are healthy for students.

- **Choosing Lean Proteins:** Lean proteins, like skinless chicken breast, turkey, fish, and certain cuts of pork and beef, are lower in fat than others. Also, beans, lentils, and tofu can be good low-fat protein options. Choosing these types of proteins lowers the amount of fat.
- **Cooking Methods:** How you cook proteins can also affect their fat content. Grilling, baking, broiling, or steaming proteins instead of frying them can help reduce the amount of fat. Fried food can soak up a lot of the oil, making it higher in fat.
- **Trimming and Draining:** If the meat has visible fat, trim it off before cooking. Also, after cooking ground meats, you can drain off the fat to reduce its fat content.
- **Seasoning Choices:** The amount of sodium in a meal often comes from the seasonings used. Many sauces, mixes, and pre-packaged seasonings are high in sodium. Using herbs, spices, vinegar, or lemon juice to season foods can add flavor without adding sodium.
- **Read Labels:** Packaged foods, including some proteins, can be high in sodium. By reading nutrition labels, you can choose lower sodium options. Also, labels can help you choose leaner proteins.
- **Rinsing and Draining:** When using canned proteins, like beans or tuna, you can rinse and drain them to reduce sodium.
- **Educate Students:** This helps them understand the importance of nutrition and encourages them to make healthier choices in their own lives.

So, with some care and thought, it is quite possible to control the amount of fat and sodium when preparing proteins for school meals. It can help keep the meals tasty while making them healthier for students. Remember, managing the fat and sodium in school meals is not just about providing healthy food; it is also a key part of helping students learn about nutrition and developing healthy eating habits for life.

KEY MESSAGES

- Choose lean proteins like skinless poultry, fish, lean cuts of beef and pork, beans, lentils, and tofu to reduce fat content in school meals.
- Use healthier cooking methods such as grilling, baking, broiling, or steaming instead of frying to minimize added fat.
- Reduce sodium by making smart seasoning choices, using herbs, spices, vinegar, or citrus instead of high-sodium sauces and mixes.
- Read nutrition labels and rinse canned proteins to select lower-sodium options and help students learn about healthy eating habits for life.

CLASS DISCUSSION PROMPT

QUESTION:

What steps does your program take to reduce fat and sodium in the meats and meat alternates prepared in your school(s)?

POSSIBLE ANSWERS:

Answers will vary.

ASK IF THERE ARE ANY QUESTIONS.

CHEF DEMO

(45 MINUTES)

TIME	TOPIC	TASK	MATERIALS
CHEF DEMO			
OBJECTIVES: ○ Review a variety of preparation and cooking techniques for proteins ○ Discuss food safety practices when preparing meats and meat alternates			
45 minutes	○ Preparation techniques ○ Identify common protein foods ○ Adding flavor to proteins	○ Demonstrate and discuss techniques for seasoning and developing flavor in proteins. ○ Review quality preparation benchmarks.	○ Training Manual ○ Handout: Three Cooking Methods ○ Supplies ○ Equipment

INSTRUCTOR'S NOTE:
With each demonstration, explain how using the correct tools and equipment makes the demonstrated task more efficient. Reference the correlating handouts as available. Utilize the handout: Demonstration Communication Skills for Trainers for additional assistance during culinary demonstrations. After Class Discussion Prompts are added, include Instructor's Note: Ask if there are any questions.

OVERVIEW

In this informative chef demonstration, we will explore the essential practices and techniques involved in the safe handling, processing, and cooking of M/MA. Throughout the demonstration, you will have the opportunity to observe and ask questions as our chef expertly showcases each technique. By the end of this session, you will be equipped with valuable knowledge and practical skills that will elevate your ability to prepare and cook M/MA in a safe and delicious manner for school nutrition programs.

DISCUSS

- M/MA refer to food items that provide high-quality protein and essential nutrients such as iron, zinc, and B vitamins. According to the Dietary Guidelines for Americans (www.dietaryguidelines.gov), a healthy eating pattern includes a variety of protein sources, including lean meats, poultry, seafood, eggs, legumes, nuts, and soy products.
- M/MA are important components of balanced meals, contributing to satiety and muscle health while providing essential amino acids. Proper selection, storage, preparation, and cooking techniques ensure that these protein sources are both flavorful and safe to consume.

- Today's principal task is to develop your knowledge of how to properly handle, process, and prepare M/MA-based menu items while maintaining food safety and quality.
- The team cooking lab is designed to reinforce the topics discussed during the demonstration portion of the lesson, allowing you to apply key techniques for preparing safe, nutritious, and appealing M/MA dishes.
- This lesson encourages hands-on participation—application and repetition are the best ways to increase your skill level and build confidence in handling and cooking meats and meat alternates effectively.
- Throughout the training, you will be introduced to various cooking methods. The methods can be divided into three main categories: dry heat, moist heat, and combination.
  - **Dry-heat cooking** is a method of cooking that uses air or fat to transfer heat. This method is best for cooking tougher meat, poultry, and seafood cuts. Dry-heat cooking methods include roasting, baking, grilling, broiling, sautéing, and frying.
  - **Moist-heat cooking** is a method of cooking that involves the use of water or a liquid to transfer heat. This method is best for cooking delicate fish, vegetables, and eggs. Moist-heat cooking methods include boiling, steaming, simmering, and poaching.
  - **Combination cooking** is a method of cooking that combines both moist and dry heat to achieve the desired result. Moist heat cooking methods, such as braising, poaching, and steaming, are combined with dry heat methods, such as baking, roasting, and grilling. This type of cooking is often used to tenderize tougher cuts of meat and to add flavor and moisture to vegetables and grains.

The cooking methods that will be discussed and demonstrated today will include:

- Roasting – Chicken legs
- Baking – Tofu
- Sautéing – Ground beef
- Braising – Beans
- Combination Cooking – Pork shoulder

KEY MESSAGES

- Meat/meat alternates (M/MA) provide high-quality protein and key nutrients like iron, zinc, and B vitamins, supporting satiety, muscle health, and overall growth.
- A healthy eating pattern includes a variety of protein sources—lean meats, poultry, seafood, eggs, legumes, nuts, and soy products.
- Proper selection, storage, handling, and cooking are essential for both food safety and quality.
- Cooking methods fall into three categories:
- Dry heat – Uses air or fat (e.g., roasting, baking, grilling, broiling, sautéing, frying).
- Moist heat – Uses water or liquid (e.g., boiling, steaming, simmering, poaching).
- Combination – Uses both moist and dry heat for tenderness and flavor (e.g., braising, roasting after poaching).

- Matching the cooking method to the product type ensures optimal texture, flavor, and safety.
- Hands-on practice reinforces skills and builds confidence in preparing safe, nutritious, and appealing M/MA dishes.
- Class Discussion Prompt
- Can you share a time when adjusting the cooking method improved the quality or appeal of a menu item? Possible Answers: Answers will vary. Could include student preference for familiar flavors, versatility of certain products, or ease of preparation.

HANDOUT: THREE COOKING METHODS

THREE COOKING METHODS		
DRY-HEAT METHODS	**MEDIUM**	**EQUIPMENT**
Broiling	Air	Overhead broiler
Grilling	Air	Grill
Roasting	Air	Oven, combi oven
Baking	Air	Oven, combi oven
Sautéing	Fat	Tilt skillet (May sauté using a sheet pan in an oven)
Stir-frying	Fat	Tilt skillet, steam-jacketed kettle, wok
Pan-frying	Fat	Stovetop, tilt skillet
MOIST-HEAT METHODS	**MEDIUM**	**EQUIPMENT**
Poaching	Water or other liquid	Stovetop, oven, steam-jacketed kettle, tilt skillet
Simmering	Water or other liquid	Stovetop, steam-jacketed kettle, tilt skillet
Boiling	Water or other liquid	Stovetop, steam-jacketed kettle, tilt skillet
Steaming	Steam	Convection steamer, combi oven
COMBINATION-HEAT METHODS	**MEDIUM**	**EQUIPMENT**
Braising	Fat, then liquid	Oven, combi oven, tilt skillet
Stewing	Fat, then liquid	Oven, combi oven, tilt skillet

DEVELOPING FLAVOR

DISCUSS

Today's goal is to explore how to make nutritious meals bursting with flavor while reducing our reliance on sugar and sodium.

We aim to provide you with a toolbox of ideas and techniques to keep your meals exciting and tasty while maintaining a healthy nutritional profile. We hope you are as excited as we are to embark on this flavor-packed journey!

We will focus on various easy methods and ingredients to incorporate into your daily food preparation routine, especially when working with Meat/Meat Alternates (M/MA) such as poultry, fish, tofu, beans, and legumes.

- **Spices and Herbs**: The easiest and healthiest way to add flavor to M/MA is using various herbs and spices. Basil, oregano, rosemary, thyme, cumin, turmeric, and cinnamon can elevate the taste of chicken, fish, or tofu without added sugar or sodium. Try a cumin and coriander blend for beans or a rosemary-thyme rub for lean meats.
- **Citrus Juice/Zest**: Lemon, lime, and orange juice or zest provide a tangy, fresh flavor that works well with fish, poultry, or even lentils. Citrus can help break down tough fibers in meats, like chicken or pork, while enhancing natural flavors in meat alternates like tempeh.
- **Vinegars**: Different types of vinegar, like apple cider vinegar, balsamic vinegar, or rice vinegar, add a tangy kick to marinades or sauces for meats and meat alternates. A balsamic glaze can brighten up grilled chicken, while rice vinegar can give tofu or edamame a fresh, zesty taste.
- **Marinades**: Marinades are great for both tenderizing and flavoring M/MA. A simple marinade with olive oil, garlic, citrus juice, and herbs works beautifully on lean cuts of beef, chicken, or even tofu and seitan. Marinades bring out the natural flavors of meat alternates while keeping them moist and tender.
- **Dry Rubs**: Dry rubs made from a blend of spices and herbs are perfect for M/MA. Rubbing a mix of paprika, garlic powder, cumin, and pepper onto chicken, pork, or baked tofu creates a flavorful crust and infuses the dish with depth without extra sodium.
- **Grilling or Roasting**: These cooking methods naturally enhance the flavors of M/MA. Grilling adds a smoky char to chicken or fish, while roasting brings out the nutty, rich flavors in chickpeas, lentils, or tempeh.
- **Homemade Sauces**: Create your own sauces with low-sugar and low-sodium ingredients to pair with M/MA. For example, a fresh tomato sauce with garlic, onions, and herbs can be served over grilled chicken or black bean patties.
- **Vegetable Broths**: Use homemade vegetable broths as a cooking liquid for M/MA. Poaching chicken or simmering beans in broth adds depth without excess sodium.

- **Aromatics**: Onions, garlic, celery, and carrots are excellent for building flavor in M/MA dishes. Sautéing these before adding meats or alternates like lentils or tofu provides a rich, flavorful base for stews, soups, or stir-fries.
- **Mustard**: Dijon mustard can add tanginess and depth to M/MA without much sodium or sugar. It works well in marinades for chicken or as a glaze for baked tofu.
- **Salsas and Chutneys**: Fresh salsas and chutneys made from fruits, vegetables, and herbs are healthy, flavorful toppings for M/MA. Mango salsa pairs perfectly with grilled fish, while a tomato-cilantro salsa brightens up black bean burgers or lentil loaves.

KEY MESSAGES

Remember, the key to great flavor is balance. Combining these methods will often result in the most flavorful and satisfying Meat/Meat Alternate (M/MA) dishes. Whether you're working with chicken, fish, tofu, beans, or legumes, layering flavors through marinades, spices, and cooking techniques will enhance the natural taste of the M/MA.

When developing new M/MA recipes, do not forget to taste as you go and adjust seasonings as needed to achieve the perfect flavor balance. However, once the recipe has been standardized, it's important for the cook to follow it as written to ensure the nutritional content—especially for protein sources like meats and meat alternates—remains consistent and meets dietary guidelines.

CLASS DISCUSSION PROMPT

QUESTION:

What are some flavor development methods that you are using in your programs to enhance the flavors of meats and meat alternates?

POSSIBLE ANSWERS:

Answers will vary.

INSTRUCTOR'S NOTE:
Ask if there are any questions.

ROASTING CHICKEN LEGS

DISCUSS

Roasted chicken legs can be a crowd-pleaser and an excellent way to incorporate fresh, unprocessed proteins into a school nutrition program.

Chicken legs can be affordable, usually costing less than other cuts such as breast and thigh meat.

INSTRUCTOR'S NOTE:
This demonstration will focus on how to prepare chicken legs for roasting. If the training space allows, cook off the chicken legs once the class has started the Team Cooking Lab. Invite the participants to taste the final product once the legs are cooked and allowed to rest. Tasting can also happen during the sampling and evaluation portion of the training following the cooking portion of the Team Cooking Lab.

For the best results, chicken legs should be roasted at 400 °F and cooked to an internal temperature of 185 °F. While 185 °F may seem too high of a final temperature, there are a few good reasons to cook to a higher temperature.

- Cooking at 185 °F eliminates the bloodline that can still be present at the safe internal temperature of 165 °F, making the appearance more appealing to students.
- The higher temperature allows more fat to be rendered (cooked out of the meat), making the final product leaner.
- The higher final cooking temperature makes the skin crisper and develops a more appealing color, ultimately providing students with a more attractive final product.

DEMONSTRATE/DISCUSS

One way to pack a lot of flavor into chicken is by seasoning the product with an herb and spice rub.

To make the spice rub, combine:

- 2 tablespoons paprika
- 2 tablespoons dried thyme
- 2 tablespoons dried oregano
- 2 tablespoons garlic powder
- 2 tablespoons onion powder
- 2 tablespoons dried parsley
- 1/2 tablespoon kosher salt
- 1 tablespoon black pepper

To prepare the chicken for roasting, complete the following steps:

- Preheat the oven to 400 °F.
- Pat the chicken legs dry with single-use paper towels to remove surface moisture (allowing more browning).
- Toss the chicken legs with the spice rub (discard remaing rub after seasoning).
- Arrange the legs on a sheet tray lined with parchment paper.

To roast the chicken, complete the following steps:

- Once prepped, roast the chicken legs at 400 °F for 35-45 minutes or until the product reaches an internal temperature of 185 °F.
- Transfer to a serving vessel/pan.
- Allow to rest for 5-10 minutes before service.

BAKING TOFU

DISCUSS

Serving tofu in school nutrition programs can offer several benefits:

- **Nutritional Value:** Tofu is a rich source of protein, essential amino acids, iron, calcium, and other vital nutrients. Including tofu in school meals can provide students with a nutritious plant-based protein option, especially for those who follow vegetarian or vegan diets.
- **Dietary Diversity**: Introducing tofu in school nutrition programs adds variety to the menu and expands students' exposure to different types of food. It promotes culinary exploration and encourages students to try new flavors and textures, helping them develop a well-rounded palate.
- **Allergen-Friendly:** Tofu is naturally free from common allergens like dairy, eggs, and nuts. By incorporating tofu into school meals, students with certain allergies or dietary restrictions. If the student is allergic to soy, they could not have tofu.
- **Healthier Alternative:** Tofu is a low-fat and cholesterol-free protein source. Replacing high-fat meat options with tofu can help reduce the overall saturated fat content in school meals, contributing to a healthier and more balanced diet.
- **Sustainable Choice**: Tofu production generally has a lower environmental impact than animal-based protein sources. Utilizing tofu in school nutrition programs promotes sustainability and educates students about the environmental benefits of plant-based foods.
- **Cost-Effectiveness**: Tofu is suitable for any school nutrition program, regardless of budget. It can be purchased in bulk and used in various recipes, providing a cost-effective alternative to pricier protein sources.

INSTRUCTOR'S NOTE:
This demonstration will focus on how to prepare tofu for baking. If the training space allows, cook off the tofu once the class has started the Team Cooking Lab. Once the tofu is cooked, invite the participants to taste the final product. Tasting can also happen during the sampling and evaluation portion of the training following the cooking portion of the Team Cooking Lab.

By incorporating tofu into school nutrition programs, operators can encourage healthy eating habits, promote dietary diversity, and cater to the nutritional needs of a diverse student population.

DISCUSS/DEMONSTRATE

Preparing the tofu:

- Drain the tofu: Remove it from its packaging and drain any excess liquid. Pat the tofu dry with paper towels to remove as much moisture as possible.
- Cut the tofu into the desired shape and size once drained and pressed (see Note). Common options include cubes, slices, or strips.

Note: Press the tofu (optional): To improve the texture and remove more moisture, place it between two clean kitchen towels or paper towels and press it with a heavy object for about 20-30 minutes. This step is optional but can yield firmer tofu.

Seasoning and marinating (optional):

- During recipe development, you can marinate the tofu to enhance its flavor. Prepare a marinade of choice using ingredients like low-sodium soy sauce, garlic, ginger, or other seasonings. Place the tofu in a container and pour the marinade over it. Allow the tofu to marinate for at least 30 minutes or as the recipe instructs.

Preparing the tofu for baking:

- Preheat the oven to a suitable temperature, usually around 375-400 °F.
- Spray a baking sheet or pan with non-stick cooking spray or line it with parchment paper to prevent the tofu from sticking.

Baking the tofu:

- Place the tofu on the prepared baking sheet, leaving space between each piece for even baking. You can also brush the tofu with a little oil or marinade (follow the site's recipe) for added flavor and to help with browning.
- Place the baking sheet with the tofu in the preheated oven.
- Bake the tofu for approximately 25-30 minutes or until it becomes golden brown and slightly crispy outside. The cooking time may vary depending on the size and thickness of the tofu pieces, so keep an eye on them to prevent overcooking.

Additional baking (braising) method:

- Tofu can also be baked in a sauce, such as curry for Tikka Masala. The process lends itself to a braising method, cooking the tofu in a liquid (sauce), allowing the tofu to pick up the flavors of the sauce.

Serving:

- Once the tofu is cooked, remove it from the oven and let it cool for a few minutes.
- The baked tofu can be served as a standalone protein option or added to salads, stir-fries, sandwiches, or other dishes as desired.

BROWNING GROUND BEEF

DISCUSS

Browning ground meats is an excellent method to develop deep, rich flavors in the product.

The chemical reaction that happens when proteins are cooked over direct heat is called the Maillard Reaction.

INSTRUCTOR'S NOTE:
This demonstration will be conducted from start to finish to highlight the process of browning ground meats.

The Maillard reaction is like magic in cooking: it happens when you cook ground meats at high heat, such as in a sauté pan or tilt skillet. The heat causes the proteins and sugars in the meat to interact, creating new complex flavors, colors, and aromas—this is what we call "browning." It is why a seared steak tastes so much better than a boiled one; browning is not just about color but also the delicious, savory flavor we love in cooked meats.

DEMONSTRATE/DISCUSS

- **Prepare the meat:** Remove the ground meat from its packaging and break it into smaller pieces if it is clumped together. This step will help it cook more evenly.
- **Preheat the pan**: Use a large tilting skillet or frying pan and set the temperature to medium-high heat. Allow it to preheat for a couple of minutes until it is hot.
- **Add oil or fat:** To prevent the meat from sticking to the pan and to promote browning, add a small amount of oil or fat. Common options include vegetable oil, olive oil, or butter. Use the amount listed on the recipe you are using.
- **Heat the oil or fat:** Allow it to heat until it shimmers or melts completely, indicating it is hot enough.
- **Add the ground meat:** Carefully add it to the hot pan, spreading it out evenly to maximize contact with the cooking surface.
- **Let it brown:** Allow the meat to cook without stirring for a few minutes, letting it brown on one side. The browning process adds flavor and develops a desirable texture.
- **Break up and stir:** After a few minutes, use a spatula or spoon to break the meat into smaller crumbles. Stir the meat occasionally to ensure even browning on all sides.
- **Cook thoroughly:** Continue cooking the ground meat, stirring occasionally, until it's fully cooked. The cooking time may vary depending on the type of meat and the recipe you're following. It is important to cook ground meat until it reaches a safe internal temperature to eliminate potential bacteria or pathogens. Be sure to follow the food code enforced by your local health department.
- **Drain excess fat (optional):** If a significant amount is rendered during cooking, drain it off with a spoon or by pouring the meat into a colander. This step should be indicated in your recipe and will produce leaner results.
- **Use in your recipe:** Once the ground meat is fully browned and cooked, it's ready to be used in your chosen recipe. You can incorporate it into dishes like tacos, chili, pasta sauces, casseroles, or any other recipe that calls for browned ground meat.

BRAISING BEANS

DISCUSS

Braising beans for use in a school nutrition program offers several benefits:

INSTRUCTOR'S NOTE:
Due to time constraints, this portion of the Chef's Demonstration will only be a discussion versus a demonstration. Discuss the process and engage the participants by discussing possible uses for braised beans. Also, discuss how braising can be used on various Meats/Meat Alternates to develop flavorful proteins.

- **Enhanced Flavor:** Braising involves cooking beans slowly in a flavorful liquid, such as broth or tomato sauce. This slow-cooking method allows the beans to absorb the flavors of the liquid, resulting in a rich and delicious taste. It helps enhance the beans' overall flavor profile, making them more appealing to students.
- **Improved Texture:** Braising helps to soften the beans and create a tender texture. It breaks down the tough fibers and makes them easier to chew and digest. This process can be particularly important for younger children who may have difficulty with harder or chewier foods.
- **Increased Nutrient Availability**: Beans are a nutritious food source of protein, dietary fiber, vitamins, and minerals. Braising beans can help improve the availability and digestibility of these nutrients. The slow-cooking process breaks down complex carbohydrates and proteins, making them easier for the body to absorb and utilize.
- **Cost-Effectiveness**: Beans are an affordable source of nutrition, making them a popular choice for school nutrition programs. Braising beans can be a cost-effective way to prepare them in large quantities. Schools can provide students with nutritious meals without compromising taste or quality by using simple ingredients and slow cooking methods.
- **Versatility:** Braised beans can be used in various dishes, making them a versatile ingredient for school menus. They can be served as a standalone side dish, added to soups, stews, or chili, or used as a filling for wraps or burritos. The versatility of braised beans allows for creative and nutritious meal options within the school nutrition program.

Braising beans, such as pinto beans, is a great way to prepare them for a school nutrition program. Here are the steps you can follow:

If using dried beans, the first steps include:

- **Soak the beans**: Rinse the pinto beans thoroughly under cold water and remove any debris. Transfer the beans to a large bowl and cover them with water. For food safety, soak the beans overnight or for at least 8 hours. This process helps to soften the beans and reduce cooking time.
- **Drain and rinse:** After soaking, drain the beans and rinse them again under cold water to remove any residual starch.

Next steps for using both canned and dried (already soaked) beans:

- **Prepare the braising liquid**: Combine the soaked and rinsed beans in a large steam table pan with fresh water or low-sodium vegetable or chicken broth. A low-sodium option to control the sodium content is best for a school nutrition program. The liquid should cover the beans by about 2 inches.
- **Add aromatics:** Enhance the flavor of the beans by adding aromatics such as diced onions, minced garlic, bay leaves, and herbs like thyme or oregano. You can also include chopped vegetables like carrots and celery if desired.
- **Bring to a boil:** Uncover the pan in a 425 °F oven and bring the liquid to a boil. Once boiling, reduce the heat to 275 °F to maintain a gentle simmer.
- **Simmer and braise:** Cover the pan with foil or a lid and let the beans simmer for about 1 to 1.5 hours or until they become tender. Stir occasionally to prevent sticking, and check the liquid level. Add more water or broth to submerge the beans if it reduces too much.
- **Seasoning:** Once the beans are tender, season them with salt and pepper to taste. It's important to add salt at this stage to enhance the flavors. However, use a modest amount of salt for a school nutrition program or ignore it altogether and rely on other seasonings for flavor.
- **Adjust consistency:** If you prefer a thicker consistency, you can cook the uncovered beans longer to reduce the liquid. Alternatively, if you want a thinner consistency, add more water or broth and continue cooking until desired.
- **Serve or store:** Once the beans are fully cooked and seasoned to your liking, they are ready to serve. If you plan to store them, let them cool down before transferring them to food-safe containers. Refrigerate or freeze the beans depending on your needs.

Remember to follow your school nutrition program's specific guidelines and regulations regarding sodium content, portion sizes, and storage requirements.

COMBINATION COOKING

DISCUSS

Combination cooking methods utilize both moist and dry heat. It is typically used when preparing tough cuts of meat, grains, or beans, peas, and lentils but can also be applied to more tender foods. In school nutrition programs, these methods help to ensure that a variety of tasty, nutritious meals are available to students. Some common combination cooking methods used include:

INSTRUCTOR'S NOTE:
Due to time constraints, this portion of the Chef's Demonstration will only be a discussion versus a demonstration. Discuss the process and engage the participants by discussing possible uses for combination cooking methods.

- **Braising**: This technique involves searing the food at high temperatures and finishing it off covered at lower temperatures while sitting in a small amount of liquid (which may also add flavor). This method is often used for cooking tougher cuts of meats such as beef chuck, pork shoulder, or chicken thighs, but can also be used with meat alternates like tofu or tempeh.
- **Stewing**: Stewing is similar to braising but usually involves smaller pieces of meat and more liquid. The food is cooked slowly over low heat, making tough meats tender and flavors meld. Meats often used for stewing include beef, pork, and poultry, but it is also a great method for preparing legumes and meat substitutes like lentils, beans, or textured vegetable protein (TVP).
- **Pot Roasting**: This method is generally used for larger pieces of meat, often tougher cuts. The meat is browned then cooked slowly in a covered pot with a little liquid. Beef pot roast is a classic example, but pot roasting can also be used for pork, poultry, and even large slabs of tofu or seitan for a vegetarian or vegan option.
- **Steam Roasting**: Also known as steam baking, this method involves roasting the food in a sealed environment containing moisture (steam). This step keeps the food moist, allowing it to brown and develop flavors. Chicken, turkey, and lean cuts of pork and beef can be steam-roasted, as can large plant-based proteins like tofu or tempeh.

When it comes to meats and meat alternates in a school nutrition program, the following considerations are crucial:

- **Meats**: Understanding the cuts and types of meat is important. Tougher cuts like chuck roast, shanks, or pork shoulder are better suited to methods like braising or stewing. Leaner cuts, such as sirloin, tenderloin, boneless skinless chicken breast, or pork loin, can be cooked faster but may become dry and tougher if overcooked.
- **Poultry**: Chicken and turkey are commonly used in schools because they are lean, affordable, and versatile. All combination methods can be applied.
- **Fish**: Fish can be cooked with combination methods, but care should be taken as it can easily be overcooked. Baking with a covering of sauce or in foil is a common method.

- **Meat Alternates**: Beans, peas, lentils, tofu, tempeh, seitan, and other plant-based proteins can be cooked using combination methods. Legumes can also be stewed, while tofu and tempeh can be braised, baked, or stewed.
- **Eggs**: Eggs are a great source of protein and can be cooked in various ways. They can be hard-boiled, baked into casseroles, or used in baking.
- **Cheese**: Cheeses can provide a good source of protein and can be used in various dishes. Melted cheese can add flavor and richness to baked dishes.
- **Beans, Peas, and Lentils:** These are not only great meat alternates but also a good source of fiber. They can be pressure-cooked, stewed, or used in baked dishes.

In addition to understanding these methods, a school recipe developer must also consider nutrition guidelines, allergies, dietary restrictions, and the importance of creating meals that are balanced, nutritious, and appealing to children.

QUALITY PREPARATION BENCHMARKS

DISCUSS

Regarding preparing meats and meat alternates in school nutrition programs, several quality benchmarks should be considered to ensure safe and nutritious meals for students. These benchmarks typically focus on sourcing, handling, cooking methods, and food safety. Here are some key aspects of quality preparation benchmarks for meats and meat alternates:

- **Sourcing:**
  - Select reputable suppliers who provide high-quality meats and meat alternates.
  - Ensure that the products meet recognized standards for food safety and quality.
  - Consider sourcing local and sustainable options when available.
- **Storage and Handling:**
  - Store meats and meat alternates at appropriate temperatures to prevent bacterial growth and spoilage, following the food code enforced by the local health department.
  - Follow strict protocols for receiving, storing, and rotating inventory to maintain freshness and minimize waste.
  - Use separate storage areas or containers to prevent cross-contamination between different types of meats and meat alternates.
  - Defrost meats following safe and acceptable practices.
- **Food Safety:**
  - Adhere to food safety guidelines and regulations, including proper handwashing, sanitation, and glove use when handling raw meats.
  - Implement Hazard Analysis Critical Control Points (HACCP) principles to identify and manage potential hazards at various stages of food preparation.
  - Ensure that meats and meat alternates are cooked to safe internal temperatures to eliminate harmful bacteria, following the food code enforced by your local health department.
- **Cooking Methods:**
  - Utilize appropriate cooking methods that preserve the nutritional value and sensory qualities of meats and meat alternates.
  - Consider methods such as grilling, baking, roasting, or steaming to minimize the use of added fats.
  - Avoid overcooking to prevent dryness and loss of flavor.
- **Nutritional Value:**
  - Select meats and meat alternates that provide essential nutrients for growing children, such as protein, iron, and vitamins.
  - Incorporate a variety of options to cater to different dietary preferences and restrictions, including vegetarian and vegan alternates.
  - Monitor portion sizes to ensure adequate nutritional balance in meals.

- **Sensory Appeal:**
  - Strive to prepare meats and meat alternates that are visually appealing, flavorful, and have a desirable texture.
  - Utilize seasonings, herbs, and spices to enhance taste while keeping sodium levels in check.
  - Offer diverse menu items to cater to students' preferences and cultural backgrounds.
- **Continuous Improvement:**
  - Regularly evaluate the quality of meats and meat alternates through feedback from students, staff, and nutrition professionals.
  - Stay informed about new developments in food science, culinary techniques, and nutritional research to continually improve the quality of prepared meats and meat alternates.
  - Collaborate with nutrition experts and attend training programs to enhance knowledge and skills related to meat and meat alternate preparation in school nutrition programs.

These benchmarks are designed to ensure that meats and meat alternates prepared in school nutrition programs meet the highest standards of quality, safety, and nutrition, supporting the health and well-being of students.

TEAM COOKING LAB

TIME	TOPIC	TASK	MATERIALS
TEAM COOKING LAB			
OBJECTIVE: ○ Prepare various protein-based recipes utilizing the culinary skills of fabricating, seasoning, baking, roasting, sauté, and soup preparation.			
140 minutes	Team Cooking Lab	○ Prepare a variety of recipes.	○ Training Manual ○ Handout: Report-Out Template ○ Handout: Mise en Place ○ Handout: Mise en Place List (Template) ○ Handouts: Food Safety Fact Sheets

LESSON OVERVIEW

- Today we will be going into the kitchen lab for some hands-on experience preparing meats and meat alternates recipes. Teams will prepare assigned recipes.
- During the Team Cooking Lab, participants will apply the skills and knowledge presented in this training for preparing protein-based recipes.
- We will sample the food prepared by each team and report out on our experiences.

DISCUSS

- The purpose of this lab is to provide you with the opportunity to apply the skills and knowledge we have discussed.
- Today we have discussed a variety of preparation and cooking techniques; now you get to put those techniques into action.
- Briefly describe the recipes. Instruct participants to get into previously assigned teams. Assign participants to teams 1–6. The corresponding recipes are listed below.
- The lab is an opportunity for you to learn the skills; this is not a competition, nor is it site-level production. Take your time and be intentional with your choices and movements. Most importantly, practice food safety, ask questions, build your skillset, and have fun!
- Ensure participants know what team they are in and review the **Report-Out Template** handout.

TEAM ORGANIZATION

- Each team will select a team manager and a team spokesperson.

MANAGER RESPONSIBILITIES

- Ensuring adherence to food and workplace safety practices by the team
- Working with the team to develop a mise en place list and production schedule
- Keeping the team on schedule and task
- Communicating any equipment or food needs to the team's assigned chef instructor
- Ensuring the group has left the workstation clean and ready for the next lab (including sweeping the floors of the workstation area, all dishes are cleaned, and all parts of the station tool kit are at the station and cleaned)

SPOKESPERSON RESPONSIBILITIES

- Working with team members to complete the Report-Out Template for each recipe
- Filling out the Report-Out Template
- Presenting the team's report-out to the training group

REPORT-OUT TEMPLATE

Complete for each recipe produced.

ORIGINAL NAME OF RECIPE PRODUCED:	NEW NAME (IF APPLICABLE):
Service Line Display How will it be displayed on your service line? (Garnish, pan size, etc.)	
Service Method How will you serve the recipe at your site(s)?	
Batch Cooking How can the recipe be batch cooked?	
Ease of Execution How difficult was the recipe to produce?	
Scalability Is the recipe easy to scale up or down?	
Use in Program Would you use this recipe in your school meal program?	
Changes Would you make any changes to the recipe to meet your site(s) needs better?	

- Review your recipes and develop your mise en place list as a team. Work together to divide the workload among team members.

INSTRUCTOR'S NOTE:
Briefly review mise en place.

- Mise en place is a French term meaning "to everything in place." This phrase describes the steps needed to prepare for the production process of a dish or menu item.
- Mise en place is a collection of good work habits that has six steps included.
- Review the six steps using the **Mise en Place** handout and ask if there are any questions.

DISCUSS

- Direct participants to the **Mise en Place List (Template)** handout
- Once you develop your mise en place list, bring it up to review before preparing the recipes. Your mise en place list should include the following:
  - Ingredients needed
  - Ingredient amounts
  - Equipment needed
  - Preparation steps and assignments (who will complete each task)
  - Production schedule
- You will find shared pantry ingredients at a centralized weighing/measuring station. Please do not take shared bulk ingredients to your workstation.

TEAM RECIPES

RECIPES FOR TRAINING						
TEAM	**1**	**2**	**3**	**4**	**5**	**6**
RECIPE 1	Blackened White Fish	Herb Roasted Chicken Drumsticks	Korean Beef	Mexicali Taco Boat	Oven Fried Chicken	Fish Chowder
RECIPE 2	Classic Macaroni and Cheese	Cuban Black Beans	Maple Sriracha Chickpeas	Quiche with Self-Forming Crust	Cheesy Lentil Bake	Cheesy Potato, Egg, and Bacon Bake
RECIPE 3	Turkey Breakfast Sausage	Honey Garlic Tofu	African Chicken and Kale Stew	Chana Masala	Beef Stir Fry	Carnitas Chili Verde Pork Quesadilla

- Direct participants to the following handouts in the Training Manual:
  - **Food Safety Fact Sheet: Internal Cooking Temperatures**
  - **Food Safety Fact Sheet: Cooking Foods**
  - **Food Safety Fact Sheet: Handwashing**
- Next, instruct participants to do the following:
  - Wash hands and put on aprons and gloves.

INSTRUCTOR'S NOTE:
Circulate around the training space to observe and mentor participants as they prepare and execute their assigned recipes.

HANDOUT: MISE EN PLACE

Culinary Quick Bites
BASIC FOOD PREPARATION SKILLS

MISE EN PLACE
(TO PUT IN PLACE)

MISE EN PLACE (TO PUT IN PLACE)

Step 1: Review Recipes & Production Records

- Review recipes several days in advance to identify needed food and equipment
- Look for ways to combine like tasks, identify foods that require time to defrost, and check inventory to ensure you have enough product on hand

Step 2: Prioritize Your Work

- List the sequence of activities needed to complete the recipe
- Pay attention to cook and cool times of food items
- Start with the meal service time and work backwards

Step 3: Collect Tools & Prepare Equipment

- While gathering and collecting equipment and tools, make sure what you need is in good operating condition
- If equipment is malfunctioning, you can adjust the menu and schedule

Step 4: Gather Recipe Ingredients

- Gather ingredients and place them in the proper storage location
- Make sure your production plan includes time for retrieving items throughout the production process

Step 5: Prepare Ingredients

- Double-check the type of cut and the quantity associated with each item
- Ensure food safety by only having foods you are actively working with at your workstation

Step 6: Set Up Your Workstation

- Ensure your workstation coincides with steps one through five
- Limit unnecessary movements by keeping items easily accessible and building an economy of motion

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MISE EN PLACE LIST TEMPLATE

RECIPE NAME/SERVINGS:			
INGREDIENTS AND PREPARATION STEPS	**QUANTITY NEEDED**	**EQUIPMENT NEEDED**	**TEAM MEMBER**

*Mise en place: Participants can plan their recipe preparation method and ingredients efficiently.

HANDOUT: FOOD SAFETY FACT SHEET: INTERNAL COOKING TEMPERATURES

INTERNAL COOKING TEMPERATURES

135º F

- Fresh, frozen, or canned fruits and vegetables cooked for hot holding
- Commercially processed ready-to-eat food

145º F

- Whole beef, pork, and seafood

155º F

- Ground beef and pork
- Fish sticks
- Cubed and Salisbury steak
- Eggs cooked for hot holding

165º F

- Poultry
- Stuffed beef, pork, and seafood
- Stuffed pasta such as lasagna or manicotti
- Reheating leftovers

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12/2017

HANDOUT: FOOD SAFETY FACT SHEET: COOKING FOODS

Food Safety Fact Sheet
Cooking Foods

Introduction

Cooking is a critical control point, or a point at which reaching proper internal temperatures can help ensure that a food is safe to eat. Cooks must know the proper temperatures for cooking food, monitor internal cooking temperatures, and record cooking temperatures.

Here Are the Facts

The appropriate temperature for cooking foods is based on temperatures that will kill bacteria associated with that specific food. That is why, for example, poultry products have a higher cooking temperature than beef. It is important to know the temperature requirements for menu items used in your school nutrition program.

Application

Cook foods to the appropriate internal temperature.

- 135 °F for 15 seconds
  - ◊ Fresh, frozen, or canned fruits and vegetables cooked for hot holding
  - ◊ Ready-to-eat food that has been commercially processed
- 145 °F for 15 seconds
  - ◊ Beef, pork, and seafood
- 155 °F for 15 seconds
  - ◊ Ground products containing beef, pork, or fish
  - ◊ Fish nuggets or sticks
  - ◊ Cubed or Salisbury steaks
  - ◊ Eggs cooked for hot holding
- 165 °F for 15 seconds
  - ◊ Poultry
  - ◊ Stuffed beef, pork, or seafood
  - ◊ Pasta stuffed with beef, eggs, pork, or seafood such as lasagna or manicotti

Monitor cooking temperatures.

- Check food temperatures with clean, sanitized, and calibrated thermometer.
- Avoid inserting the thermometer into pockets of fat or near bones when taking internal temperatures.
- Take at least two internal temperatures from each batch of food.

Cooking Foods cont.

- Insert thermometer into the thickest part of the food, which usually is in the center.
- Record the temperature and the time the temperature was checked.

Take corrective action if appropriate temperatures are not met, which usually means that cooking is continued until the temperature at the thickest part of the food is appropriate.

Remember, follow state or local health department requirements.

References

U.S. Department of Agriculture, Food and Nutrition Service, & Institute of Child Nutrition. (2015). *Food safety in schools*. University, MS. Author.

U.S. Department of Agriculture, Food and Nutrition Service, & Institute of Child Nutrition. (2016). *HACCP-based standard operating procedures: Cooking time/temperature control for safety foods*. Retrieved from http://www.nfsmi.org/ResourceOverview.aspx?ID=75

U.S. Department of Agriculture, Food and Nutrition Service, & Institute of Child Nutrition. (2005). *Thermometer information resource.* University, MS. Author.

U.S. Department of Health and Human Services Public Health Services, Food and Drug Administration. (2013). *FDA food code.* Retrieved from http://www.fda.gov/food/guidanceregulation/retailfoodprotection/foodcode/ucm374275.htm

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For more information, please contact helpdesk@theicn.org.

02/2016

HANDOUT: FOOD SAFETY FACT SHEET: HANDWASHING

Food Safety Fact Sheet
Handwashing

Introduction

Handwashing is the single most important practice in any school nutrition program. School nutrition employees can improve the safety of the food they serve by washing their hands frequently, correctly, and at the appropriate times.

Here Are the Facts

Foodborne illnesses are transmitted by food handlers that contaminate food and food contact surfaces. Individuals who handle food when they have a foodborne illness, gastrointestinal illness, infected lesion, or are around someone who is ill can pass along those illnesses. Individuals can simply touch a surface that is contaminated with a bacteria or virus and pass that along to others. Handwashing minimizes the risk of passing along bacteria or viruses that can cause foodborne illnesses. Follow state or local health department requirements.

Application

It is important to know how and when to wash hands and exposed areas of the arms.

How?

- Wet hands and forearms with warm running water at least 100 °F and apply soap.
- Scrub lathered hands and forearms, under fingernails, and between fingers for at least 10–15 seconds. Rinse thoroughly under warm running water for 5–10 seconds.
- Dry hands and forearms thoroughly with single-use paper towels.
- Dry hands using a warm air hand dryer.
- Turn off water using paper towels.
- Use paper towel to open door when exiting the restroom.

When?

- Beginning to work, either at the beginning of shift or after breaks.

  Before

  - ◊ Moving from one food preparation area to another
  - ◊ Putting on or changing disposable gloves

  After

  - ◊ Using the toilet
  - ◊ Sneezing, coughing, or using a handkerchief or tissue
  - ◊ Touching hair, face, or body
  - ◊ Handling raw meats, poultry, or fish

Handwashing cont.

- ◊ Eating, drinking, or chewing gum
- ◊ Clean up activity such as sweeping, mopping, or wiping counters
- ◊ Touching dirty dishes, equipment, or utensils
- ◊ Handling trash
- ◊ Handling money
- ◊ Any time that hands may have become contaminated

Remember, follow state or local health department requirements.

References
U.S. Department of Agriculture, Food and Nutrition Service, & Institute of Child Nutrition. (2015). *Food safety in schools*. University, MS. Author.
U.S. Department of Agriculture, Food and Nutrition Service, & Institute of Child Nutrition. (2016). *HACCP-based standard operating procedures: Washing hands*. Retrieved from http://www.nfsmi.org/ResourceOverview.aspx?ID=75
U.S. Department of Agriculture, Food and Nutrition Service, & Institute of Child Nutrition. (2004). *Wash your hands: Educating the school community*. University, MS. Author.
U.S. Department of Health and Human Services Public Health Services, Food and Drug Administration. (2013). *FDA food code*. Retrieved from http://www.fda.gov/food/guidanceregulation/retailfoodprotection/foodcode/ucm374275.htm

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REPORT OUT
(15 MINUTES)

TIME	TOPIC	TASK	MATERIALS
REPORT OUT			
OBJECTIVES: ○ Evaluate the quality, taste, and appearance of the prepared recipe.			
15 Minutes	○ Report-Out ○ Marketing ○ Sampling Foods	○ Report on the following topics: • Description of recipes • Marketing (name/presentation) • Quality of recipe • Ease of production • Use in program	○ Training Manual ○ Recipe Evaluation Form

DEMONSTRATE/DISCUSS

- ○ Instruct participants to place finished products in the appropriate size pans and set the pans up as a station for participants to choose the recipes they will sample.
- ○ Discuss any garnishes (e.g., chopped parsley, fresh lemon slices).
- ○ Direct the participants to the **Recipe Evaluation Form** handout in the Training Manual and ask them to complete the form as they try the food items.

EVALUATION

- ○ Using the recipe evaluation form in your Training Manual, rate each recipe based on appearance, taste, texture, and overall quality.
- ○ Instruct them to note whether they would incorporate this recipe in their school menu, considering if the item would appeal to their student population. If not, ask them to please indicate why.
- ○ Gather evaluation forms once complete.
- ○ Instruct participants to clean their stations.

INSTRUCTOR'S NOTE:
Overall Quality is subjective and will depend upon the person's own preferences. Ask the participants to "step outside themselves" and rate the Overall Quality through the lens of their students.

RECIPE EVALUATION FORM

Instructions: Rate the following recipes on a scale of 1 to 5 (1 = did not like at all; 5 = enjoyed very much).

RECIPE	APPEARANCE	TASTE	TEXTURE	OVERALL QUALITY	WOULD YOU INCORPORATE THIS RECIPE INTO YOUR MENU? WHY OR WHY NOT?	
					YES/ NO	EXPLAIN

Comments/Recommendations:

WRAP UP
(10 MINUTES)

TIME	TOPIC	TASK	MATERIALS
WRAP UP			
10 Minutes	Review the training	○ Review the training ○ Discuss implementation of skills	○ Training Manual ○ Handout: Application Action Plan ○ Handout: Reflections

DEMONSTRATE/DISCUSS

- ○ Today, we have discussed important concepts related to culinary skills and the many benefits associated with the proper preparation and cooking protein-based food items.
- ○ We've discussed and demonstrated the following:
  - Types, grades, and forms of M/MAs
  - Storage and handling of M/MAs
  - Nutritional benefits and fat and sodium controls of M/MAs
  - Food safety practices for preparing M/MAs
  - How to prepare various protein-based recipes
- ○ Thank you all for your participation during the training today. I hope you found it beneficial and gained knowledge and skills that will assist you in preparing and serving meals for the students in your program.
- ○ We know that learning is always enhanced if we are given a chance to personally relate to the material and how we might apply it.

ACTION PLANNING

- ○ Direct participants to the **Application Action Plan** worksheet. Give participants about 5 minutes to fill in the answers for the three sections on the worksheet:
  - List the most useful knowledge and/or skills you gained during this training.
  - What are some steps you can take to apply what you have learned?
  - What barriers do you think you might face when trying to apply what you have learned at your job?

CLASS DISCUSSION PROMPTS

Now that we have concluded our final lesson, are there any questions?

- Spend 5 minutes (more if time allows) allowing participants to share what they wrote in their **Application Action Plan**, and as a group, offer suggestions for eliminating any perceived barriers they mention.
- Encourage participants to jot down ideas they may want to "borrow" from each other as they share their thoughts.
- Encourage participants to network and stay connected to share success stories and offer support.
- Encourage participants to spend some time thinking through what they have learned in this lesson. They can write some of their reflections in the **Reflections** page so they can come back to these thoughts later.

The ICN has numerous other training resources available online at www.theicn.org, including access to the Child Nutrition Recipe Box, Child Nutrition Sharing Site, Culinary Institute of Child Nutrition resources, and the ICN Help Desk for further technical assistance.

APPLICATION ACTION PLAN

List the most useful knowledge and/or skills you gained during this training.

What are some steps you can take to apply what you have learned?

What barriers do you think you might face at your job when trying to apply what you have learned at this training?

REFLECTIONS

Instructions: Spend some time thinking through what you have learned in this lesson. Write some of your reflections here so you can come back to these thoughts later.

CONCLUSION

(10 MINUTES)

TIME	TOPIC	TASK	MATERIALS
CONCLUSION			
10 Minutes	Training Evaluation	○ Conduct Training Evaluation ○ Conclude the training	○ Training Manual ○ Training Evaluation QR code

DISCUSS

- ○ Congratulate participants for completing the training.
- ○ Remind the participants to implement their new knowledge and skills through their action plans.
- ○ Ask participants to complete an evaluation of the training.

DEMONSTRATE/DISCUSS

- ○ Facilitate a question-and-answer session.
- ○ Allow participants to ask questions and provide answers.
- ○ If a question is state-specific, direct participants to their State agency.
- ○ If a question needs further attention, direct participants to the ICN Help Desk.
- ○ Thank you for your participation today. Please visit the ICN website (www.theicn.org) for future training needs. ICN has several online trainings available through the ICN iLearn system.

INSTRUCTOR'S NOTE:
Thank the participants and the host site (if applicable) and conclude the training.

REFERENCES

Culinary Institute of America. (2011). *The professional chef* (9th ed.). New Jersey: John Wiley & Sons, Inc.

Gisslen, W. (2018). *Professional cooking* (9th ed.). New Jersey: John Wiley & Sons, Inc.

Institute of Child Nutrition. (2016). *Cooking foods*. https://theicn.org/icn-resources-a-z/food-safety/

Institute of Child Nutrition. (2016). *Handwashing*. https://theicn.org/icn-resources-a-z/food-safety/

Institute of Child Nutrition. (2016). *Washing fruits and vegetables*. https://theicn.org/icn-resources-a-z/food-safety/

Institute of Child Nutrition. (2018). *Practical skills for preparing quality meals: A five-step process*. University, MS: Author.

Institute of Child Nutrition. (2018). *Vegetable subgroups mini-poster*.

Monterey Bay Aquarium. (2025). *Seafood Watch.* https://www.seafoodwatch.org/globalassets/sfw/pdf/guides/seafood-watch-national-guide.pdf

The John C. Stalker Institute of Food and Nutrition. (n.d.). *Back to basics: Mediterranean flavors*. https://johnstalkerinstitute.org/resource/back-to-basics-mediterranean-flavors-recipes/

U.S. Department of Agriculture, Food and Nutrition Service. (2019). *Professional standards*. https://www.fns.usda.gov/school-meals/professional-standards

U.S. Department of Agriculture, Agriculture Marketing Service. (n.d.). *Grading Standards.* https://www.ams.usda.gov/grades-standards

APPENDIX

CULINARY TERMS

A la carte – Food items that can be purchased as separate items rather than part of a reimbursable meal

Acidulation – The process of adding citric or acetic acid to water, used to preserve color, to clean aluminum, or to soak kidneys and game.

Additives – Substances added to many foods to prevent spoilage or to improve appearance, texture, flavor, or nutrition; they might be synthetic materials copied from nature or naturally occurring substances

Aerate – To incorporate air into a mixture by sifting or mixing

Al Dente – Italian term meaning “to the tooth”; used to describe mainly pasta that is cooked until a slight resistance when bitten into

Aroma – The sensations of smell as interpreted by the brain

Aromatics – Plant ingredients, such as onion, garlic, herbs, and spices, used to enhance the flavor and fragrance of food

Back-loading spices – Adding seasoning and spice at or near the end of the cooking process

Bake/Roast – Dry-heat cooking method in which foods are surrounded by hot, dry air in a closed environment

Baste – To moisten foods using their natural juices periodically during cooking

Batch cook – Prepare a menu item in small amounts, so it will be at its peak quality when placed on the service line

Blanching – To briefly submerge in simmering water, boiling water, or fat to assist in the preparation of foods

Blend – The process of combining two or more ingredients so that they lose their individual characteristics and become smooth and uniform

Blooming – A cooking technique where spices are gently heated in oil or fat to intensify their flavors and aromas

Boil – The cooking of food by immersion in water that has been heated to near its boiling point (212 °F or 100 °C)

Bound salad – A salad comprised of cooked meats, poultry, fish, shellfish, pasta, or potatoes combined with a dressing

Braise – A combination-cooking method that first sears the food at a high temperature then finishes it in a covered pot at a low temperature while sitting in some amount of liquid

Broil – A method of cooking using direct heat, which is much like grilling except that the heat source is over the food instead of under it

Brown –The process of partially cooking the surface of meat to help remove excess fat and give the meat a brown color crust and flavor through various browning reactions; ground meat will frequently be browned prior to adding other ingredients and completing the cooking process

Brunoise – The finest dice and is derived from the julienne

Calorie – A measure of energy

Caramelize – The process of browning sugar in the presence of heat

Carryover cooking – When food retains heat and continues to cook even after being removed from the source of heat

Chef knife – A large, general-purpose kitchen knife, usually 8” to 10” long, that has a blade curving upward along its length and ending in a narrow point

Chiffonade – A preparation of finely sliced or shredded leafy vegetables or herbs

Chop – To cut into pieces of roughly the same size

Coagulation – The irreversible transformation of proteins from a liquid or semi-liquid state to a drier, solid state

Coring – The process of removing the seeds or pit from fruit or vegetable

Cross-contact – Occurs when an allergen accidentally transfers from one food to another food or from a food contact surface to a food that does not contain the allergen

Cross-contamination – The transfer of pathogens such as bacteria, viruses, and parasites from hand-to-food, food-to-food, or equipment and contact surfaces-to-food (You are probably most familiar with this type of contamination.)

Culinary acid – A substance that neutralizes a base (alkaline) in a liquid solution; includes foods like citrus juice, vinegar, and wine that have a sour or sharp flavor; acids have a pH of less than 7

Danger zone – The temperature range in which bacteria grow rapidly—41 °F to 135 °F; bacteria can double in number in as little as 20 minutes

Degrease – To remove the fat from the surface of a hot liquid such as a sauce, soup, or stew, also known as defatting or fat trimming

Dice – To cut ingredients into small cubes (1/8” for small or fine, 1/4” for medium, 3/4” for large is standard)

Dietary Guidelines for Americans – Provides information to help Americans make healthy food choices; based on the current body of nutrition science, the Dietary Guidelines is a go-to resource for policymakers, public health professionals, and other experts working to improve the health of individuals, families, and communities across the nation

Dredging – To coat a food item in flour or ground crumbs prior to frying or sautéing

Dry heat cooking – Cooking with the circulation of hot air or direct contact to transfer heat to food without the use of moisture, steam, broth, water, or any type of liquid; methods include grilling, pan-frying, broiling, baking, and deep-fat frying

Emulsion – A uniform mixture of two unmixable liquids, such as oil and water, are forced into a uniform distribution

Enzymatic browning – An oxidation (see Oxidation) reaction that takes place in some foods, mostly fruit and vegetables, causing the food to turn brown

Evaporation – Heated water that is turned into a gas and vaporizes

Fabrication – The process of slicing and dicing food, often used to describe slicing or dicing fresh fruits and vegetables

Fat – One of the basic nutrients used by the body to provide energy; also provides flavor to food and gives a feeling of fullness

Fiber – A plant-based nutrient that is sometimes called roughage or bulk; a type of carbohydrate but, unlike other carbs, cannot be broken down into digestible sugar molecules

FIFO – An inventory system that ensures that items that are purchased first are used first. When new items arrive, they must be placed behind the older items on the storage shelves, cooler, or freezer

Flavonoids – Plant pigments that dissolve readily in water, found in red, purple, and white vegetables such as blueberries, red cabbage, and beats

Flavor – The sensory impression of a food or other substance, determined mainly by the chemical senses of taste and smell

Fold – The process of blending a light ingredient, such as beaten egg whites, into a heavier ingredient by lifting from underneath with a spatula or spoon

Front-loading spices – Adding seasoning and spice at or near the beginning of the cooking process

Garnish – An edible decoration or accompaniment to a prepared dish to increase eye appeal

Grate – The process of transforming solid, firm food items into small pieces by rubbing the item against a grating instrument.

Honing Steel – A kitchen tool that is mounted on the handle is a rounded stick-like rod—typically made from steel, ceramic, or diamond-coated steel. They are commonly used to straighten the edge of a knife as it is dragged along the rod from heel to tip in a downward slicing motion.

Julienne – A culinary knife cut in which the food item is cut into long thin strips, similar to matchsticks

Knead – A method of mixing pliable dough by stretching, folding, and pushing in order to form gluten in the flour

Maillard reaction – A chemical reaction between an amino acid and a reducing sugar, usually requiring the addition of heat; like caramelization, it is a form of non-enzymatic browning

Marinade – A liquid, such as vinegar or oil, with spices or other flavorings added to it that is made for the purpose of soaking a food in it to add flavor or to tenderize

Marinate – The process of soaking foods in seasoned and acidic liquid before cooking for hours or days, adding flavor to the food

Melt – To become altered from a solid to a liquid state, usually by heat

Mince – To cut into very small pieces where uniformity or shape is not important

Mirepoix – A French term used to describe a combination of chopped flavorful vegetables used to flavor stocks, soups, braises, and stews; contains two parts onion to one part each of celery and carrot

Mise en place – Meaning “everything in place”; refers to the preparation and organization of ingredients and equipment

Mix – To combine, join, blend, or put together two or more things

Moist heat cooking – Cooking with water, other liquid, or steam to transfer heat to food; methods include poaching, simmering, boiling, braising, stewing, pot roasting, and steaming

Nutrient analysis – Calculated nutrient content of foods, recipes, and/or menus

Nutrient dense – Food that is high in nutrients but relatively low in calories; contains vitamins, minerals, complex carbohydrates, lean protein, and healthy fats

Nutrients – A substance used by an organism to survive, grow, and reproduce

Oxidation – A chemical reaction that takes place in some foods, mostly fruit and vegetables, causing the food to turn brown

Parboiling – To partially cook a portion of food in simmering/boiling water; similar to blanching but cooked for longer

Parcooking – Partially cooking food by any cooking method

Paring knife – A thin-bladed knife intended for coring and paring (peeling) fruit such as apples as well as slicing small ingredients; it is majorly used for detailed and controlled cutting

Pasteurization – The process of heating foods, such as milk, cheese, yogurt, beer, fruit ciders, wine, and other foods to a temperature high enough and for a sufficient period of time to destroy harmful micro-organisms

Peel – The outer skin or rind of a fruit and vegetable; this outer skin will generally be removed and discarded before the vegetable is used, but there are occasions when it is left on; the peel on a fruit is also often removed, but depending on its use, it may be required to remain on the flesh of the fruit

Pilaf – A savory rice dish in which the rice is browned in oil or butter before it is cooked in liquid; cooked in just enough liquid so that all of the liquid is absorbed; contains various seasonings and generally includes chopped vegetables

Poach – A method in which items are cooked gently in liquid at 160 °F to 180 °F

Portion – Also known as serving size; a standardized amount of food served

Purée – Cooked food, usually vegetables, fruits, or legumes that has been ground, pressed, blended, or sieved to the consistency of a creamy paste or liquid

Reduce – The process of thickening and intensifying the flavor of a liquid mixture such as a soup, sauce, wine, or juice by simmering or boiling; as the food cooks, the liquid evaporates, leaving the cooking vessel and decreasing the total volume of liquid

Render – To transform solid fat into liquid form by use of heat

Rondelle – A type of cut that creates round or oval, flat pieces by cutting a cylindrical vegetable crosswise

Roux – A mixture of fat (especially butter) and flour used as a thickening agent in the making of sauces

Sauté – To cook food quickly over relatively high heat, literally meaning “to jump” as the food does when placed in a hot pan

Score – To make shallow cuts in the surface of meat, fish, bread, or cakes; has several purposes, such as decorating the food, tenderizing, aiding in the absorption of flavor when marinating, and allowing fat to drain from meat while cooking; trays of baked items such as cornbread may be scored to indicate where the item should be cut without actually cutting it

Scratch-based food preparation – Utilizes multiple culinary techniques within a recipe while prioritizing the incorporation of ingredients as close to their original state as possible to produce student-approved menu items

Seasoning – An ingredient added to a dish that intensifies the flavors of other ingredients

Shred – A method of cutting food into thin slices or pieces using a sharp knife, food processor, or grater. Shred cooked meat by pulling apart into strips using forks

Simmer – To maintain the temperature of a liquid just below boiling; also a cooking method in which items are cooked in a simmering liquid

Slice – To cut, generally across the grain, into thin pieces that are consistent in thickness; will most often range from 1/16" to 3/8" in thickness

Slurry – A thickening mixture that is made up of equal parts flour and water that is prepared for use in making soups, stews, and sauces

Sofrito – In Italy, sofrito is called soffritto (or, if raw, battuto) and is a combination of three ingredients: onion, carrot, and celery, with a ratio of two parts onion to one part carrot and celery

Spatula – A hand-held tool that is used for lifting, flipping, or spreading

Speed-scratch food preparation – Incorporates value-added food products with additional ingredients, utilizing minimal production steps, to produce student-approved menu items

Spice – A seed, fruit, root, bark, or other plant substance primarily used for flavoring, coloring, or preserving food

Standardized recipe – A recipe that has been tried, adapted, and retried several times for use by a given foodservice operation, and it has been found to produce the same quality results and yield every time the exact procedures are used

Steam – A cooking process that places foods above, not in, water that is boiling or hot enough to produce steam that cooks the foods with moist hot air (vapors)

Stew – A cooking technique that calls for the main ingredient to be cut into bite-sized pieces, either stewed or blanched, and then cooked in a flavorful liquid that may be thickened with flour or roux

Stir-fry – A cooking method traditionally performed in a wok; foods are cut into small pieces and stirred or tossed frequently as they cook

Stock – A flavorful liquid prepared by simmering bones and/or vegetables in water with aromatics until their flavor is extracted; used as a base for soups, sauces, and other preparations

Strain – To remove undesirable particles from a liquid, to separate liquid from other solids, or to separate various contents from other contents, such as removing smaller particles from larger particles

Sweat – To cook, usually covered, without browning over low heat to encourage flavors to be extracted from vegetables and spices

Tare – Reset an electronic or spring-style scale to zero, also known as "zero the scale," and may be used to weigh ingredients without weighing the container

Time standard – A recipe that has been tried, adapted, and retried several times for use by a given foodservice operation, and it has been found to produce the same quality results and yield every time the exact procedures are used

Toast – Browning food by exposure to dry heat

Toss – To mix the ingredients of a food dish, such as salads and pasta, by using a light lift and drop method

Trinity – A combination of aromatic vegetables, including onion, celery, and green bell pepper.

Umami – The name for the taste sensation produced by the free glutamates commonly found in fermented and aged foods

Whetstone – A fine-grained stone that sharpens knives when the blade is drawn across the coarse surface of the stone at a 22° angle

Whip – To beat food with a mixer to incorporate air and produce volume, often used to create heavy or whipping cream, salad dressings, or sauces

Work simplification – The process of finding the easiest and most efficient way to do a job

Yield – The amount of product resulting in the completion of the preparation process

Zest – To cut the zest, or the colorful part of the skin that contains oils and provides aroma and flavor, away from the fruit

INSTRUCTOR'S PREPARATION GUIDE

The preparation guide is designed to help the instructor prepare for each food/cooking activity. The narrative in the training manual provides more detail.

For all demonstrations, please have your mise en place staged for quick access as you work through the various demonstrations. Time is limited, so being fully prepared before beginning the demos is essential.

NOTE: Please use the same knife and cutting board (as appropriate) throughout the training. A chef knife and cutting board are listed in most of the demo prep guides; using a new knife and board each time is not required. Clean, as appropriate, between tasks.

Emphasize the need to follow the site's recipes upon returning to work throughout the demos. Recommend the participants work with their menu planners and recipe developers to adjust the site's recipes (if needed) based on the lessons learned during the demonstrations.

The recipes used during the demos are for demonstration purposes only. They are not nutritionally analyzed nor credited for use in the National School Lunch Program (NSLP)/School Breakfast Program (SBP)/Child and Adult Food Care Program (CACFP).

CHEF DEMONSTRATION GUIDE

Demo Name: Roasting Chicken Legs

PREPARATION NOTES

- Preheat the oven to 400 °F.
- Pat the chicken legs dry with single-use paper towels to remove surface moisture (allowing more browning).
- Toss the chicken legs with the spice rub (discard the remaining rub after seasoning).
- Arrange the legs on a sheet tray lined with parchment paper.
- Once prepped, roast the chicken legs at 400 °F for 35-45 minutes or until the product reaches an internal temperature of 185 °F.
- Transfer to a serving vessel/pan.
- Allow to rest for 5-10 minutes before service.

INGREDIENTS

- Chicken legs – 2 lb
- Paprika – 2 Tbsp
- Thyme, dried – 2 Tbsp
- Oregano, dried – 2 Tbsp
- Garlic powder – 2 Tbsp
- Onion powder – 2 Tbsp
- Parsley, dried – 2 Tbsp
- Salt, kosher – ½ Tbsp
- Black pepper – 1 Tbsp

EQUIPMENT

- Bowl, mixing – 1 ea
- Sheet tray – 2 ea
- Tongs – 2 ea
- Food pans – as needed
- Digital thermometer – 1 ea

Demo Name: Baking Tofu

PREPARATION NOTES

- Drain the tofu: Remove it from its packaging and drain any excess liquid. Pat the tofu dry with paper towels to remove as much moisture as possible.
- Cut the tofu: Cut it into the desired shape and size once drained and pressed (see Note). Common options include cubes, slices, or strips.
- Press the tofu: To improve the texture and remove more moisture, place it between two clean kitchen towels or paper towels and press it with a heavy object for about 20-30 minutes. This step is optional but can yield firmer tofu.
- Preheat the oven to a suitable temperature, usually around 375-400 °F .
- Spray a baking sheet or pan with non-stick cooking spray or line it with parchment paper to prevent the tofu from sticking.
- Place the tofu on the prepared baking sheet, leaving space between each piece for even baking. You can also brush the tofu with a little oil or marinade (follow the site's recipe) for added flavor and to help with browning.
- Place the baking sheet with the tofu in the preheated oven.
- Bake the tofu for approximately 25-30 minutes or until it becomes golden brown and slightly crispy outside. The cooking time may vary depending on the size and thickness of the tofu pieces, so keep an eye on them to prevent overcooking.

INGREDIENTS

- Tofu – 2 14-oz packages
- Non-stick Cooking Spray

EQUIPMENT

- Chef knife – 1 ea
- Cutting board – 1 ea
- Sheet tray – 1 ea
- Food pans – as needed
- Tongs – 1 ea

Demo Name: Browning Ground Beef

PREPARATION NOTES

- Prepare the meat: Remove the ground meat from its packaging and break it into smaller pieces if it is clumped together. This will help it cook more evenly.
- Preheat the pan: Use a large tilting skillet or frying pan and set the temperature to medium-high heat. Allow it to preheat for a couple of minutes until it is hot.
- Add oil or fat: To prevent the meat from sticking to the pan and to promote browning, add a small amount of oil or fat. Common options include vegetable oil, olive oil, or butter. Use the amount listed on the recipe you are using.
- Heat the oil or fat: Allow it to heat until it shimmers or melts completely, indicating it is hot enough.
- Add the ground meat: Carefully add it to the hot pan, spreading it out evenly to maximize contact with the cooking surface.
- Let it brown: Allow the meat to cook without stirring for a few minutes, letting it brown on one side. The browning process adds flavor and develops a desirable texture.
- Break up and stir: After a few minutes, use a spatula or spoon to break the meat into smaller crumbles. Stir the meat occasionally to ensure even browning on all sides.
- Cook thoroughly: Continue cooking the ground meat, stirring occasionally, until it's fully cooked. The cooking time may vary depending on the type of meat and the recipe you're following. Cooking ground meat until it reaches a safe internal temperature to eliminate potential bacteria or pathogens is important, following the food code enforced by your local health department.
- Drain excess fat (optional): If a significant amount of fat is rendered during cooking, you can drain it off with a spoon or by pouring the meat into a colander. This step should be indicated in the recipe you are using. This step will produce leaner results.

INGREDIENTS

- Beef, ground – 2 lb
- Oil – as needed

EQUIPMENT

- Tilt skillet or frying pan – 1 ea
- Spoon – 1 ea
- Colander – 1 ea
- Food pans – as needed

TEAM FOOD PREPARATION

- Set up team stations with the listed equipment.
- Alternately, if the training space allows, you may set up a centralized tool and equipment staging area and require teams to gather their equipment after completing their mise en place list.
- Set up a centralized shared pantry ingredients (oils, spices, etc.) station along with scales and measures. Instruct participants to weigh/measure what they need from those ingredients and only take what they need back to their station.

ASSIGN TEAMS: (SEE RECIPES FOR LISTS OF INGREDIENTS.)

TEAM 1:

- Blackened White Fish
- Classic Macaroni and Cheese
- Turkey Breakfast Sausage

EQUIPMENT

- Anti-slip mat (or damp cloth) – 2 ea
- Chef knife – 2 ea
- Cutting board – 2 ea
- Food pan, assorted – as needed
- Paring knife – 2 ea
- Sheet tray – 2 ea
- Stockpot, 6 qt – 1 ea
- Spoon – 2 ea
- Colander – 1 ea
- Mixing bowls, assorted – as needed
- #20 Scoop – 1 ea

TEAM 2:

- Herb Roasted Chicken Drumsticks
- Cuban Black Beans
- Honey Garlic Tofu

EQUIPMENT

- Anti-slip mat (or damp cloth) – 2 ea
- Chef knife – 2 ea
- Cutting board – 2 ea
- Food pan, assorted – as needed
- Mixing bowls, assorted – as needed
- Sheet tray – 3 ea
- Stockpot, 6 qt – 1 ea
- Spoon – 2 ea

TEAM 3:

- Korean Beef
- Maple Sriracha Chickpeas
- African Chicken and Kale Stew

EQUIPMENT

- Anti-slip mat (or damp cloth) – 2 ea
- Chef knife – 2 ea
- Cutting board – 2 ea
- Food pan, assorted – as needed
- Mixing bowls, assorted – as needed
- Sheet tray – 3 ea
- Blender – 1 ea
- Stockpot, 6 qt – 1 ea
- Spoon – 2 ea

TEAM 4:

- Mexicali Taco Boat
- Quiche With Self Forming Crust
- Chana Masala

EQUIPMENT

- Anti-slip mat (or damp cloth) – 2 ea
- Chef knife – 2 ea
- Cutting board – 2 ea
- Food pan, assorted – as needed
- Mixing bowls, assorted – as needed
- Sheet tray – 3 ea
- Stockpot, 6 qt – 1 ea
- Spoon – 2 ea
- Mixer – 1 ea
- Skillet – 1 ea

TEAM 5:

- Oven Fried Chicken
- Cheesy Lentil Bake
- Beef Stir Fry

EQUIPMENT

- Anti-slip mat (or damp cloth) – 2 ea
- Chef knife – 2 ea
- Cutting board – 2 ea
- Food pan, assorted – as needed
- Mixing bowls, assorted – as needed
- Sheet tray – 3 ea
- Stockpot, 6 qt – 1 ea
- Spoon – 2 ea

TEAM 6:

- Fish Chowder
- Cheesy Potato, Egg, and Bacon Bake
- Carnitas Chili Verde Pork Quesadilla

EQUIPMENT

- Anti-slip mat (or damp cloth) – 2 ea
- Chef knife – 2 ea
- Cutting board – 2 ea
- Food pan, assorted – as needed
- Mixing bowls, assorted – as needed
- Sheet tray – 3 ea
- Stockpot, 6 qt – 1 ea
- Spoon – 2 ea

EQUIPMENT CHECKLIST

INSTRUCTOR'S NOTE:
At least 4 weeks prior to the training, contact the site coordinator to ensure the equipment is available. If any equipment is unavailable on-site, ask the site coordinator if it is possible to borrow equipment from another kitchen. Then, if any equipment is still unavailable, coordinate with the Institute of Child Nutrition to ship missing equipment as needed. Clean and return the ICN's equipment after the training using the shipping label provided with the equipment.

EQUIPMENT	TOTAL	CONFIRM EQUIPMENT IS PRESENT	USE THIS SPACE TO ADD COMMENTS IF EQUIPMENT/ SUPPLIES ARE NOT AVAILABLE. PLEASE INCLUDE ANY EQUIPMENT SUBSTITUTIONS USED.
APPLIANCES AND FOOD PROCESSING EQUIPMENT			
Blender	1		
Commercial Mixer	1		
Oven	2		
Range or countertop burner	1		
Steamer	1		
Tilt Skillet	1		
POTS & PANS			
6-quart stock pot with lid	6		
4-inch half size steam table pan	2		
2-inch half size steam table pan	12		
Lid for half-size pan (or foil)	2		
Full-size sheet pan	16		
12-inch skillet	2		

EQUIPMENT	TOTAL	CONFIRM EQUIPMENT IS PRESENT	USE THIS SPACE TO ADD COMMENTS IF EQUIPMENT/ SUPPLIES ARE NOT AVAILABLE. PLEASE INCLUDE ANY EQUIPMENT SUBSTITUTIONS USED.
SMALL KITCHEN TOOLS			
Anti-slip mat	12		
Chef knife	12		
Pairing knife	2		
Cutting board	12		
Measuring cups, full set	6		
Measuring spoons, full set	6		
Digital thermometer	6		
1-quart liquid measure	3		
2-cup liquid measure	1		
Rubber spatula	9		
Metal mixing spoon	12		
Whisk	6		
Tongs	6		
Mixing bowls, assorted	6		
Large mixing bowl	6		
Mesh strainer/Colander	2		
SUPPLIES			
Parchment Paper	12		
Souffle cups (2 oz)	72		
Tasting utensils			

SHOPPING LIST

INSTRUCTOR'S NOTE:
If certain ingredients are unavailable where you are training, use your best culinary judgment to find an alternative.

FOOD	TOTAL NEEDED	INVENTORY FROM PRIOR WORKSHOP	PURCHASED
PRODUCE			
Broccoli, fresh	1 lb + 5 oz		
Carrot, fresh	2 lb + 2 oz		
Cilantro, fresh	3 bunch		
Garlic, minced	6 bulbs		
Ginger, root	3 ea		
Kale, fresh	1 lb		
Lemon, juice	¼ cup		
Lime, juice	1/3 cup		
Onion, green, fresh	5 bunches		
Onion, yellow, fresh	3 lb + 2 oz		
Pepper, green bell, fresh	1 ea		
Pepper, red bell, fresh	5 ea		
Potato, russet, fresh	10 oz		
Spinach, fresh	6 oz		
Sweet potato, fresh	12 ea		
Tomato, fresh	2 lb		
CONDIMENTS/OILS			
Honey	1.5 cups		
Maple syrup	10 oz		
Oil, canola	2 cups		
Oil, olive	1 cup		
Oil, sesame	¼ cup		
Soy sauce	1 ¼ cup		
Pan Spray	2 small cans		
Sriracha	2 Tbsp		
Worcestershire	2 Tbsp		

FOOD	TOTAL NEEDED	INVENTORY FROM PRIOR WORKSHOP	PURCHASED
REFRIGERATOR			
Bacon, reduced sodium, cooked, crumbled	2 oz		
Beef, ground, raw, 85/15	5 lb		
Beef, round, thin-sliced, raw	3 lb		
Butter, unsalted	1 oz		
Cheese, American, cubed	3 lb + 2 oz		
Cheese, cheddar, low-fat, shredded	4 lb		
Chicken, cooked, diced	2 lb		
Chicken, drumsticks, raw	10 lb		
Egg whites	6 oz		
Eggs, whole egg liquid	4 oz		
Eggs, whole, fresh	4 oz		
Fish, white, raw	5 lb		
Margarine	4 oz		
Milk, 1% fat	3.5 cups		
Milk, non-fat	3 qt		
Pork, cooked, pulled	3 lb + 12 oz		
Tofu, extra firm	(6) 14 oz package		
Turkey, bacon, reduced sodium, cooked, crumbled	6 oz		
Turkey, ground, raw, 85/15	1 lb + 4 oz		
DRY/CANNED			
Baking powder	¼ tsp		
Beans, black, canned, low-sodium	1 lb + 11 oz		
Chickpeas, canned, low-sodium	9 lb 8 oz		
Cornstarch	1 cup		
Flour, all-purpose	4 oz		
Flour, whole wheat	2 oz		
Lentils, dry	1 lb		
Milk, instant, dry, non-fat	2 oz		
Penne, whole grain	1 lb + 5 oz		
Salsa, verde, prepared	1 lb + 14 oz		
Stock, beef, low-sodium	1 cup		
Stock, chicken, low-sodium	1 qt		
Stock, vegetable	2 cups		
Sugar, brown	2 cups		

FOOD	TOTAL NEEDED	INVENTORY FROM PRIOR WORKSHOP	PURCHASED
DRY/CANNED			
Tomato, canned, crushed, no salt added	32 oz		
Tomato, canned sauce	1 cup		
Tomato paste	16 oz		
Tomatoes, canned, diced, no salt added	3 lb		
Tortilla, flour	15 ea		
DRIED SPICES ***PURCHASE IN SMALLEST QUANTITIES AVAILABLE***			
Bullion, vegetable	1 cube		
Cayenne	1 tsp		
Chili, powder	3 Tbsp		
Cumin, ground	4 Tbsp		
Garlic, powder	8 Tbsp		
Ginger, ground	1 tsp		
Marjoram, leaves, or ground	1 tsp		
Mustard, dry	1 Tbsp		
Nutmeg, ground	1.5 tsp		
Onion, powder	3 Tbsp		
Paprika, ground	3 Tbsp		
Pepper, black, ground	5 Tbsp		
Pepper, red flakes	1 tsp		
Sage, ground	2 tsp		
Salt, kosher	5 Tbsp		
Seasoning, Italian	½ Tbsp		
Seasoning, poultry	1 Tbsp		
Thyme leaves, dried	4 Tbsp		
Turmeric, ground	¾ Tbsp		
FREEZER			
Bell pepper and onion blend, frozen	2 lb + 10 oz		
Corn, frozen	13 oz		
Potatoes, shredded, frozen	1 lb + 9 oz		

RECIPES

TEAM 1

- Blackened White Fish
- Classic Macaroni and Cheese
- Turkey Breakfast Sausage

TEAM 2:

- Herb Roasted Chicken Drumsticks
- Cuban Black Beans
- Honey Garlic Tofu

TEAM 3:

- Korean Beef
- Maple Sriracha Chickpeas
- African Chicken and Kale Stew

TEAM 4:

- Mexicali Taco Boat
- Quiche With Self Forming Crust
- Chana Masala

TEAM 5:

- Oven Fried Chicken
- Cheesy Lentil Bake
- Beef Stir Fry

TEAM 6:

- Fish Chowder
- Cheesy Potato, Egg, and Bacon Bake
- Carnitas Chili Verde Pork Quesadilla

Blackened White Fish

Cooking Process: #2 Same Day

NSLP/SBP CREDITING INFORMATION	
SERVING SIZE	1 SERVING PROVIDES
2 oz (fillet)	2 oz eq M/MA

	12 SERVINGS	
INGREDIENTS	WEIGHT	MEASURE
Fish, white, raw*	2 lb 8 oz	
Garlic, powder		2 tsp
Chili, powder		2 tsp
Onion, powder		2 tsp
Paprika, ground		2 tsp
Pepper, black, ground		1 tsp
Thyme leaves, dried		1 tsp
Salt, kosher		1 tsp
Oil, canola		1 Tbsp
Lime, juice		1/3 cup

* Fish, white, raw (e.g., cod, tilapia, haddock, halibut, pollock)

Instructions:

1. Trim and divide fish fillets if purchased as whole fish. **CCP: Refrigerate until served.**
2. Mix all of the dry spices in a shallow dish.
3. Coat both sides of the fillets in the dry spices mixture.
4. Spray sheet pans with cooking spray and place the seasoned fillets on a sheet pan.
5. Drizzle oil on fillets and cook for about 8 minutes.

   CCP: Heat to an internal temperature of 145 ºF for 15 seconds.

   CCP: Hold for hot service at 135 ºF or higher.
6. Sprinkle fillets with freshly squeezed lime juice just before serving.

Recipe adapted from: The John C. Stalker Institute

NUTRIENTS PER SERVING			
Calories	103.3	Total Carbohydrates	2 g
Total Fat	2.8 g	Dietary Fiber	0.6 g
Saturated Fat	0.6g	Total Sugars	0.2 g
Sodium	254 mg	Protein	18 g

Classic Macaroni and Cheese

Cooking Process: #2 Same Day

NSLP/SBP CREDITING INFORMATION	
SERVING SIZE	1 SERVING PROVIDES
2/3 cup (No. 6 scoop)	2 oz eq M/MA 1 oz eq Grain

	25 SERVINGS	
INGREDIENTS	WEIGHT	MEASURE
Water		1 gallon + 2 qt
Penne, whole grain	1 lb + 5 oz	
Milk, non-fat		1 qt + 2 cups
Margarine	4 oz	
Mustard, dry		½ Tbsp
Pepper, black, ground		¼ tsp
Cheese, American, cubed	3 lb + 2 oz	

Instructions:

1. Heat water to a rolling boil.
2. Slowly add macaroni. Stir constantly until the water boils again. Cook for about 8 minutes or until tender; stir occasionally. DO NOT OVERCOOK. Drain well.
3. Quickly stir milk into macaroni. Add margarine or butter and seasonings.
4. Add the cheese and stir until the cheese is melted and the mixture is smooth. The mixture is quite liquidy at this stage.
5. Pour the macaroni and cheese mixture into steam table pans (12” x 20” x 2 ½”), which have been lightly coated with pan release spray.
6. Hold for 30 minutes on a 180-190° F steam table to allow sufficient time for the mixture to set up properly.
7. Portion with No. 6 scoop (⅔ cup).

CCP: Heat to 165 °F or higher for at least 15 seconds.

CCP: Hold at 135 °F or higher.

Recipe adapted from USDA Recipes for Schools

NUTRIENTS PER SERVING			
Calories	296	Total Carbohydrates	24.46 g
Total Fat	14.28 g	Dietary Fiber	1.72 g
Saturated Fat	7.32 g	Total Sugars	5.81 g
Sodium	599 mg	Protein	17.15 g

Turkey Breakfast Sausage

Cooking Process: #2 Same Day

NSLP/SBP CREDITING INFORMATION	
SERVING SIZE	1 SERVING PROVIDES
1 each (patty)	1 oz eq M/MA

	12 SERVINGS	
INGREDIENTS	WEIGHT	MEASURE
Turkey, ground, raw, 85/15	1 lb + 4 oz	
Maple Syrup		¾ tsp
Salt, kosher		½ tsp
Ginger, ground		½ tsp
Sage, ground		½ tsp
Pepper, black ground		½ tsp
Pepper, red flakes		¼ tsp
Pan spray		As needed

Instructions:

1. Preheat oven to 375° F.
2. Mix the ground turkey, syrup, and spices in a large bowl until well blended.
3. Use a #20 scoop to portion 1.6 oz of turkey into 12 balls onto a lined, sprayed sheet pan.
4. Place a piece of parchment on top of the balls and a sheet pan on top of the parchment.
5. Push down and press evenly to make sausage patties.
6. Take the pan and top layer of parchment off and place sausage patties in the oven.
7. Bake in a preheated oven for 15-18 minutes or until the internal temperature reaches 165 °F.

   CCP: Heat to 165 °F or higher for at least 15 seconds.

   CCP: Hold for hot service at 135 °F or higher.

Recipe adapted from Chef Rebecca Polson

NUTRIENTS PER SERVING			
Calories	50	Total Carbohydrates	0.28 g
Total Fat	2.5 g	Dietary Fiber	0 g
Saturated Fat	0.7 g	Total Sugars	0.25 g
Sodium	98 mg	Protein	6.5 g

Herb Roasted Chicken Drumsticks

Cooking Process: #2 Same Day

NSLP/SBP CREDITING INFORMATION	
SERVING SIZE	1 SERVING PROVIDES
1 each (drumstick)	1.5 oz eq M/MA

	12 SERVINGS	
INGREDIENTS	WEIGHT	MEASURE
Chicken, drumsticks, raw	3 lb	
Garlic, powder		½ Tbsp
Onion, powder		½ Tbsp
Seasoning, Italian		½ Tbsp
Salt, kosher		½ tsp
Pepper, black, ground		¼ tsp

Instructions:

1. Thaw chicken under refrigeration overnight. For best results, place in a perforated pan to drain overnight.
2. Toss chicken with a seasoning blend.
3. Lay thawed chicken in a single layer on sheet pans lined with parchment paper.
4. Bake until internal temperature reaches 165 °F:

   Conventional oven: 400 °F for 45-55 minutes.

   Convection oven: 350 °F for 30-35 minutes.

Note: For best results, cook to 185 F – this will ensure the skin is crisp and the bloodline is dark.

CCP: Heat to 165 °F or higher for 15 seconds.

CCP: Hold at 135 °F or higher.

This recipe was found on the Healthy Schools Recipe

NUTRIENTS PER SERVING			
Calories	91	Total Carbohydrates	0.2 g
Total Fat	4 g	Dietary Fiber	N/A g
Saturated Fat	1 g	Total Sugars	N/A g
Sodium	155 mg	Protein	12 g

Cuban Black Beans

Cooking Process: #2 Same Day

NSLP/SBP CREDITING INFORMATION	
SERVING SIZE	1 SERVING PROVIDES
2/3 cup (No. 6 scoop)	1 oz eq M/MA

	12 SERVINGS	
INGREDIENTS	WEIGHT	MEASURE
Oil, canola		¼ cup
Onion, yellow, diced	4 oz	
Pepper, green bell, diced	4 oz	
Garlic, minced	1.5 oz	
Cumin, ground		1 Tbsp
Bullion, vegetable		1 cube
Beans, black, canned, low-sodium	1 lb + 11 oz	
Water		1 cup
Cilantro, fresh, chopped		¼ cup
Onion, green, sliced		¼ cup

Instructions:

1. Heat oil in a steam table pan at 425 °F until it shimmers.
2. Add onions and bell peppers. Cook for 4-5 minutes or until onions become translucent, stirring occasionally.
3. Add garlic, cumin, vegetable base, and beans. Stir and return to oven for 3-4 minutes.
4. Add water and salt.
5. Bring to a boil. Reduce to 325 °F. Simmer for at least 10 minutes.
6. Add cilantro. Stir well.
7. Serve black beans on top of rice.
8. Portion black beans with No. 6 scoop (⅔ cup).
9. Garnish with onions.

CCP: Heat to 140 °F or higher.

CCP: Hold for hot service at 135 °F or higher.

Recipe adapted from USDA Recipes for Schools

NUTRIENTS PER SERVING			
Calories	98	Total Carbohydrates	12 g
Total Fat	5 g	Dietary Fiber	3 g
Saturated Fat	0 g	Total Sugars	0.5 g
Sodium	438 mg	Protein	4 g

Honey Garlic Tofu

Cooking Process: #2 Same Day

NSLP/SBP CREDITING INFORMATION	
SERVING SIZE	1 SERVING PROVIDES
4.67 (6 fl oz Spoodle)	2 oz eq M/MA

	20 SERVINGS	
INGREDIENTS	WEIGHT	MEASURE
Tofu, extra firm, cubed 1” x 1” x 1”		(4) 14 oz packages
Cornstarch		¾ cup
Honey		1 ½ cups
Soy sauce, low-sodium		¾ cup
Garlic, minced		¼ cup
Ginger, minced		1/8 cup
Onion, green, bias cut		½ cup

Instructions:

1. Preheat oven to 425° F.
2. Dry off your tofu with single-use paper towels. Cut drained tofu horizontally in half, then cut 3 (crosswise) x 4 (horizontally) to make 24 pieces. Pieces should be approximately 1 inch in diameter.
3. Toss with the cornstarch and arrange on a parchment-lined sheet pan in a single layer.
4. Place tofu in the oven for 25-30 minutes or until golden brown.
5. Heat the honey, soy sauce, ginger, and garlic in a kettle or pot until bubbly.
6. Remove the tofu from the oven and place it into a steam table pan.
7. Combine crispy tofu with the sauce, then toss to coat thoroughly. Top with green onion.
8. Serve using a 6 fl oz Spoodle.

   CCP: Heat to 140 °F or higher.

   CCP: Hold for hot service at 135 °F or higher.

Recipe adapted from Santa Clara United School District

NUTRIENTS PER SERVING			
Calories	62	Total Carbohydrates	6.3 g
Total Fat	1.5 g	Dietary Fiber	0 g
Saturated Fat	0.23 g	Total Sugars	1.2 g
Sodium	58 mg	Protein	5.9 g

Korean Beef

Cooking Process: #2 Same Day

NSLP/SBP CREDITING INFORMATION	
SERVING SIZE	1 SERVING PROVIDES
No. 12 scoop	3 oz eq M/MA

	10 SERVINGS	
INGREDIENTS	WEIGHT	MEASURE
Onion, green, bias cut		5 each
Beef, ground, raw, 85/15	2 lb + 8 oz	
Garlic, raw, minced	2 oz	
Ginger, raw, grated	1 oz	
Sugar, brown, packed		¾ cup
Cayenne		1 tsp
Salt, kosher		¼ tsp
Pepper, black, ground		¼ tsp
Oil, sesame		1.25 fl oz
Soy sauce		1.25 fl oz

Instructions:

1. Combine brown sugar, soy sauce, sesame oil, red pepper flakes, salt, and pepper in a separate bowl.
2. Set tilt skillet to medium-high heat. Once heated, add beef. Brown completely.
3. Drain excess oil/fat.
4. Add garlic and grated fresh ginger for about one minute, until fragrant.
5. Add the soy sauce mixture to the ground beef and cook for 3-5 minutes for flavors to set.
6. Garnish with sliced green onions.

CCP: Heat to 165 °F or higher.

CCP: Hold for hot service at 135 °F or higher.

Recipe adapted from Londonderry School District

NUTRIENTS PER SERVING			
Calories	293	Total Carbohydrates	20 g
Total Fat	17 g	Dietary Fiber	0.43 g
Saturated Fat	5 g	Total Sugars	16 g
Sodium	261 mg	Protein	16 g

Maple Sriracha Chickpeas

Cooking Process: #2 Same Day

NSLP/SBP CREDITING INFORMATION	
SERVING SIZE	1 SERVING PROVIDES
2/3 cup (No. 6 scoop)	2.25 oz eq M/MA

	25 SERVINGS	
INGREDIENTS	WEIGHT	MEASURE
Chickpeas, canned, low-sodium, drained	7 lb	
Onion, yellow, diced	1 lb	
Tomato, canned, crushed, no salt added	12 oz	
Maple syrup		8 fl oz
Sugar, brown	5 oz	
Sriracha		2 Tbsp
Worcestershire		2 Tbsp
Ginger, fresh, grated		2 Tbsp
Stock, vegetable		2 cups

Instructions:

1. Preheat oven to 375 °F.
2. Add chickpeas and onions to a 2-inch deep full-sized steam table pan.
3. In a separate bowl, whisk together the remaining ingredients. Pour over beans and onions and toss to coat.
4. Cover and place in the oven for 1 hour. The liquid should be thickened around the beans.
5. If the oven is too hot, beans may get dry. Add more water and stir if this happens.

   CCP: Heat to 165 °F or higher.

   CCP: Hold for hot service at 135 °F or higher.

Recipe adapted from USA Pulses

NUTRIENTS PER SERVING			
Calories	190	Total Carbohydrates	37 g
Total Fat	2.5 g	Dietary Fiber	6 g
Saturated Fat	0 g	Total Sugars	13 g
Sodium	250 mg	Protein	7 g

African Chicken and Kale Stew

Cooking Process: #2 Same Day

NSLP/SBP CREDITING INFORMATION	
SERVING SIZE	1 SERVING PROVIDES
1 cup	2 oz eq M/MA

	20 SERVINGS	
INGREDIENTS	WEIGHT	MEASURE
Bell pepper and onion blend, frozen	2 lb + 10 oz	
Tomato, fresh	1 lb + 6 oz	
Oil, olive		½ cup
Tomato paste	16 oz	
Chicken, cooked, diced	2 lb + 8 oz	
Nutmeg, ground		1 tsp
Garlic, powder		2 Tbsp
Salt, kosher		1 tsp
Cumin, ground		1 Tbsp
Water		1 qt
Kale, fresh, stemmed, trimmed, chopped	1 lb	

Instructions:

1. Puree peppers and onions in a blender.
2. Puree tomatoes in a blender.
3. Turn the tilt skillet on high (or use a stock pot on a range or a steam table pan in a 450 °F oven) and add oil to heat. Add tomato paste and sauté for 10 minutes, ensuring that tomato paste and oil have mixed.
4. Add chicken and stir with oil and tomato paste. Stir well until chicken is coated.
5. Add pureed vegetables.
6. Turn down the heat and let simmer for 10-15 minutes, stirring occasionally.
7. Mix nutmeg, garlic powder, cumin, and salt separately.
8. Add nutmeg, garlic powder, cumin, and salt. Simmer for another 10 minutes.
9. Add kale and stir well to incorporate.
10. Add water and stir. Bring to a simmer.
11. Simmer for 20-30 minutes (covered) and hold hot for service.

    CCP: Heat to 165 °F or higher.

    CCP: Hold for hot service at 135 °F or higher.

African Chicken and Kale Stew (Continued)

Recipe adapted from Khadija Ahmed (Community member from Maine)

NUTRIENTS PER SERVING			
Calories	182	Total Carbohydrates	12 g
Total Fat	8 g	Dietary Fiber	3 g
Saturated Fat	0.82 g	Total Sugars	6 g
Sodium	186 mg	Protein	15 g

Mexicali Taco Boat

Cooking Process: #2 Same Day

NSLP/SBP CREDITING INFORMATION	
SERVING SIZE	1 SERVING PROVIDES
1 Taco Boat	2.5 oz eq M/MA

	12 SERVINGS	
INGREDIENTS	WEIGHT	MEASURE
Sweet potato, fresh		12 ea
Chili, powder		1 Tbsp
Cumin, ground		1 Tbsp
Garlic, powder		2 tsp
Onion powder		2 tsp
Pepper, red flakes		½ tsp
Pepper, black, ground		½ tsp
Salt, kosher		½ tsp
Beef, ground, raw, 85/15	2 lb + 6 oz	
Tomato, canned sauce, no salt added		1 cup
Tomato, fresh, diced	½ lb	
Cheddar, low-fat, shredded	6 oz	
Cilantro, chopped	1 oz	

Instructions:

1. Pre-heat oven to 375 °F
2. Place sweet potatoes on a parchment-lined sheet tray and roast at 375 °F for 35 minutes or until done. Hot hold for use with beef mixture.
3. Combine spices, then set aside.
4. Brown beef over medium-high heat, then drain rendered fat.
5. Add spices to beef and cook for 3 minutes.
6. Add tomato sauce and allow to simmer for 5-10 minutes.
7. Split each sweet potato open, and top with 3 oz of beef mixture.
8. Garnish with diced tomato, cheddar cheese, and cilantro.

CCP: Heat to 165 °F or higher.

CCP: Hold for hot service at 135 °F or higher.

Mexicali Taco Boat (Continued)

Recipe adapted from USDA Recipes for Schools

NUTRIENTS PER SERVING			
Calories	332	Total Carbohydrates	30 g
Total Fat	17.65 g	Dietary Fiber	5 g
Saturated Fat	6.82 g	Total Sugars	6.5 g
Sodium	202 mg	Protein	13.79 g

Quiche with Self-Forming Crust

Cooking Process: #2 Same Day

NSLP/SBP CREDITING INFORMATION	
SERVING SIZE	1 SERVING PROVIDES
1 slice	1 oz eq M/MA

	12 SERVINGS	
INGREDIENTS	WEIGHT	MEASURE
Egg whites	6 oz	
Eggs, whole egg liquid	3⅛ oz	
Milk, non-fat		1⅓ c + 1 Tbsp + 2⅛ tsp
Flour, whole-wheat	1¾ oz	
Baking powder		<⅛ tsp
Salt, kosher		⅜ tsp
Pepper, black, ground		⅛ tsp
Nutmeg, ground		<⅛ tsp
Pepper, red bell, fresh, diced	2 oz	
Onion, yellow, diced	2 oz	
Spinach, chopped	1½ oz	
Cheese, cheddar, low-fat, shredded	3⅛ oz	

Instructions:

1. Pour egg whites and eggs into a commercial mixer (batch as needed). Using a wire whip attachment, mix on low speed for 2 minutes. DO NOT OVER MIX.
2. Add milk, flour, baking powder, salt, pepper, and nutmeg (optional). Mix for 4 minutes on low speed. Set aside for step 3.
3. In a large bowl, combine peppers, onions, spinach, and egg mixture. Stir well.
4. Pour egg and vegetable mixture into a steam table pan (12” x 11” x 2½”) lightly coated with pan-release spray.
5. Sprinkle cheese over each pan.
6. Bake:

   Conventional oven: 375 °F for 50-60 minutes.

   Convection oven: 325 °F for 25-35 minutes.
7. Portion: Cut each pan 5 x 5 (25 pieces per pan). Serve 1 piece (2” x 3 ¾" square).

   CCP: Heat to 165 °F or higher.

   CCP: Hold for hot service at 135 °F or higher.

Quiche with Self-Forming Crust (Continued)

Recipe adapted from USDA Recipes for Schools

NUTRIENTS PER SERVING			
Calories	66	Total Carbohydrates	6 g
Total Fat	2.47 g	Dietary Fiber	1 g
Saturated Fat	1.35 g	Total Sugars	2 g
Sodium	173 mg	Protein	6 g

Chana Masala

Cooking Process: #2 Same Day

NSLP/SBP CREDITING INFORMATION	
SERVING SIZE	1 SERVING PROVIDES
1 cup	1 oz eq M/MA

	25 SERVINGS	
INGREDIENTS	WEIGHT	MEASURE
Oil, olive		¼ cup
Onion, yellow, diced	1 lb + 4 oz	
Garlic, minced		10 cloves
Chickpeas, low-sodium, drained	2 lb + 8 oz	
Turmeric, ground		¾ Tbsp
Ginger, fresh, grated		1 Tbsp
Salt, kosher		2 tsp
Tomato, canned, diced, no salt added	3 lb	
Lemon, juice		¼ cup
Water		½ cup
Cilantro, chopped		½ cup

Instructions:

1. Heat oil in a wide skillet.
2. Add the onion and sauté until translucent, then add the garlic
3. Add the drained and rinsed garbanzo beans, ginger, spices, salt, tomatoes, lemon juice, and water. Bring to a simmer and cook over medium-low heat for 15 minutes, stirring frequently.
4. Stir in the cilantro.

CCP: Heat to 165 °F or higher.

CCP: Hold for hot service at 135 °F or higher.

Recipe adapted from the John C. Stalker Institute

NUTRIENTS PER SERVING			
Calories	105	Total Carbohydrates	15.8 g
Total Fat	3.2 g	Dietary Fiber	3.2 g
Saturated Fat	0.3 g	Total Sugars	2.9 g
Sodium	400 mg	Protein	4 g

Oven Fried Chicken

Cooking Process: #2 Same Day

NSLP/SBP CREDITING INFORMATION	
SERVING SIZE	1 SERVING PROVIDES
1 Drumstick	2 oz eq M/MA

	12 SERVINGS	
INGREDIENTS	WEIGHT	MEASURE
Chicken, drumsticks, raw	6 lb	
Oil, canola		¼ cup
Flour, all-purpose	4 oz	
Milk, instant, dry non-fat	2 oz	
Seasoning, poultry		1 Tbsp
Pepper, black, ground		½ tsp
Paprika, ground		1 tsp
Garlic, powder		1 tsp

Instructions:

1. Place chicken pieces in a large bowl. Drizzle oil over chicken. Toss to coat thoroughly.
2. Combine flour, dry milk, poultry seasoning, pepper, paprika, and garlic powder in a separate bowl. Mix well.
3. Coat oiled chicken with seasoned flour. Arrange chicken on each ungreased sheet pan
4. Bake:
    a. Conventional oven: 400° F for 45-55 minutes
    b. Convection oven: 350° F for 30-35 minutes
5. Transfer to steam table pan for service.

CCP: Heat to 165 °F or higher.

CCP: Hold for hot service at 135 °F or higher.

Healthy School Recipes

NUTRIENTS PER SERVING			
Calories	343	Total Carbohydrates	9.67 g
Total Fat	20 g	Dietary Fiber	0.3 g
Saturated Fat	4.66 g	Total Sugars	N/A g
Sodium	104 mg	Protein	29.35 g

Cheesy Lentil Bake

Cooking Process: #2 Same Day

NSLP/SBP CREDITING INFORMATION	
SERVING SIZE	1 SERVING PROVIDES
¼ cup (No. 16 Scoop)	1.5 oz eq M/MA

	30 SERVINGS	
INGREDIENTS	WEIGHT	MEASURE
Lentils, dry	1 lb	
Water		1 qt
Tomato, canned, crushed, no salt added	20 oz	
Salt, kosher		½ Tbsp
Pepper, black, ground		1 tsp
Marjoram, leaves, or ground		1 tsp
Sage, ground		1 tsp
Thyme, leaves, dried		2 tsp
Garlic, powder		1.5 tsp
Cheese, cheddar, low-fat, shredded	1 lb	

Instructions:

1. Rinse lentils in a strainer under running water.
2. Place lentils, water, crushed tomatoes, and seasonings in a full-size 2-inch deep steam table pan. Stir to combine.
3. Cover and bake for 35 minutes or until all water is absorbed.
4. Remove from the oven and sprinkle the top evenly with cheese. Cover and place in the warmer for at least 15 minutes to let the cheese melt.
5. Hold hot for service, above 135 °F.

   CCP: Heat to 165 °F or higher.

   CCP: Hold for hot service at 135 °F or higher.

Recipe adapted from Chef Samantha Cowens-Gasbarro

NUTRIENTS PER SERVING			
Calories	51	Total Carbohydrates	5 g
Total Fat	1.1 g	Dietary Fiber	1.6 g
Saturated Fat	0.67 g	Total Sugars	1.2 g
Sodium	262 mg	Protein	5.3 g

Beef Stir Fry

Cooking Process: #2 Same Day

NSLP/SBP CREDITING INFORMATION	
SERVING SIZE	1 SERVING PROVIDES
1 cup	2 oz eq M/MA

	15 SERVINGS	
INGREDIENTS	WEIGHT	MEASURE
Cornstarch	2 oz	
Water		¾ cup
Soy Sauce		¼ cup
Ginger, ground		¼ tsp
Garlic, powder		1 tsp
Pepper, black, ground		¼ tsp
Stock, beef, low-sodium		1 cup
Oil, canola		¼ cup
Carrot, fresh, sliced	1 lb + 10 oz	
Onion, yellow, raw, sliced	8 oz	
Broccoli, fresh, chopped	1 lb + 5 oz	
Salt, kosher		½ tsp
Oil, canola		¼ cup
Beef, round, thinly sliced, raw	3 lb	

Instructions:

1. Dissolve cornstarch in water and soy sauce. Add ginger, garlic powder, and pepper.
2. Heat beef stock to a boil and slowly stir in the cornstarch mixture. Return to a simmer.
3. Cook for 3-5 minutes, until thickened. Remove from heat.
4. Prepare no more than 50 portions per batch. Sauté carrots (peeled, ¼" chopped) in oil for 4 minutes.
5. Add onions and cook for 1 minute.
6. Add broccoli and cook for 2 more minutes. Remove to steam table pan (12" x 20" x 2½"). Add salt. Keep warm.
7. Sauté beef cubes in oil for 2-3 minutes. Add beef to vegetables in a steam pan.
8. Add sauce and mix to coat beef and vegetables.
9. Portion with 2 rounded No. 10 scoops (¾ cup + 1 tablespoon).

CCP: Heat to 165 °F or higher.

CCP: Hold for hot service at 135 °F or higher.

Beef Stir Fry (Continued)

Recipe adapted from Burke County School District

NUTRIENTS PER SERVING			
Calories	377	Total Carbohydrates	29.3 g
Total Fat	19 g	Dietary Fiber	3.5 g
Saturated Fat	5.8 g	Total Sugars	3.1 g
Sodium	283 mg	Protein	22 g

Fish Chowder

Cooking Process: #3 Complex

NSLP/SBP CREDITING INFORMATION	
SERVING SIZE	1 SERVING PROVIDES
1 cup	2 oz eq M/MA

	12 SERVINGS	
INGREDIENTS	WEIGHT	MEASURE
Potato, russet, diced	10 oz	
Pepper, red bell, fresh, diced	8 oz	
Carrot, fresh, diced	8 oz	
Butter, unsalted	1 oz	
Garlic, powder		¾ Tbsp
Thyme leaves, dried		¾ Tbsp
Salt, kosher		½ Tbsp
Stock, chicken, low-sodium		1 qt
Milk, 1%		2 cups
Corn, frozen, thawed	13 oz	
Fish, white, raw*	2 lb + 3 oz	
Turkey, bacon, reduced sodium, cooked, crumbled	6 oz	

* Fish, white, raw (e.g., cod, tilapia, haddock, halibut, pollock)

Instructions:

1. Dice potatoes and set them aside.
   (This step can be done the day before by covering diced potatoes with cold water and holding them in the refrigerator—below 41° F. Drain before adding to the soup. This step will prevent diced potatoes from browning)
2. Dice peppers, carrots, and onions.
3. Heat a kettle to medium-high heat. Add butter and melt.
4. Add diced vegetables. Sauté until onions are translucent.
5. Add garlic, thyme, and salt. Stir well and cook for 2 more minutes.
6. Add chicken broth and milk. Stir.
7. Bring to a simmer. DO NOT BOIL.
8. Add potatoes and corn. Simmer for 30 minutes or until vegetables are cooked through.
9. Add fish. Cook for 8 minutes until it is flaky and falls apart.
10. Portion 1 cup of soup into containers and top with ½ oz of crumbled bacon.
11. Hold hot for service, above 135 °F.

Fish Chowder (Continued)

CCP: Heat to 165 °F or higher.

CCP: Hold for hot service at 135 °F or higher.

Recipe adapted from Chef Samantha Cowens-Gasbarro

NUTRIENTS PER SERVING			
Calories	195	Total Carbohydrates	18 g
Total Fat	6.6 g	Dietary Fiber	2.3 g
Saturated Fat	2.7 g	Total Sugars	5.2 g
Sodium	471 mg	Protein	17 g

Cheesy Potato, Egg, and Bacon Bake

Cooking Process: #2 Same Day

NSLP/SBP CREDITING INFORMATION	
SERVING SIZE	1 SERVING PROVIDES
1 serving	1.5 oz eq M/MA

	16 SERVINGS	
INGREDIENTS	WEIGHT	MEASURE
Onion, green, diced		1 cup
Egg, whole, fresh		8 ea
Milk, 1%		12 fl oz
Onion, powder		½ tsp
Garlic, powder		½ tsp
Salt, kosher		1 tsp
Pepper, black, ground		1 tsp
Potato, shredded, frozen	1 lb + 9 oz	
Cheese, cheddar, low-fat, shredded	8 oz	
Bacon, reduced sodium, cooked, crumbled	2 oz	

Instructions:

1. Preheat oven to 350 °F.
2. Spray a full-size, 2 ½ inch deep steam table pan with pan spray.
3. Dice green onions into a small dice.
4. Whisk eggs, milk, onion powder, garlic powder, salt, and pepper in a large bowl.
5. Add shredded potato, cheese, and green onions. Stir gently to combine.
6. Pour into a prepared steam table pan.
7. Sprinkle with bacon.
8. Bake for 40-50 minutes.

   **Recipe note: At this point, this can be covered and held in the refrigerator overnight. Increase baking time by 15-20 minutes if baking from cold.

9. Cover and continue to cook if it is browning too fast in the oven.
10. Remove from oven and let cool slightly before cutting.
11. Cut pan 8 x 4 into pieces.

CCP: Heat to 165 °F or higher.

CCP: Hold for hot service at 135 °F or higher.

Cheesy Potato, Egg, and Bacon Bake (Continued)

Recipe adapted from Chef Samantha Gasbarro developed for Stephanie Hodges of The Nourished Principles

NUTRIENTS PER SERVING			
Calories	159	Total Carbohydrates	10 g
Total Fat	9 g	Dietary Fiber	1 g
Saturated Fat	4 g	Total Sugars	1 g
Sodium	329 mg	Protein	10 g

Carnitas Chili Verde Pork Quesadilla

Cooking Process: #2 Same Day

NSLP/SBP CREDITING INFORMATION	
SERVING SIZE	1 SERVING PROVIDES
1 quesadilla	2 oz eq M/MA

	15 SERVINGS	
INGREDIENTS	WEIGHT	MEASURE
Pork, cooked, pulled	3 lb + 12 oz	
Salsa, verde, prepared	1 lb + 14 oz	
Garlic, powder		½ Tbsp
Pepper, black, ground		½ Tbsp
Salt, kosher		½ Tbsp
Tortilla, flour		15 ea
Cheese, cheddar, low-fat, shredded	1 lb + 4 oz	

Instructions:

1. Shred pork with a wire whisk, pour salsa verde over the pork, then cover the pan with a metal lid.
2. Convection oven method: cook pork with salsa verde in a preheated 350° F oven for 20 minutes or until internal temperature reaches 165° F.
3. Arrange tortillas according to the established method of quesadillas. Using a #10 serving scoop, portion one #10 scoop of shredded cheese onto each tortilla. Using a #6 scoop, portion out one scoop of shredded pork. Fold each tortilla into a rectangle without leaving any open seams.
4. Hold warm, above 135° F, until service.

   CCP: Heat to 165 °F or higher.

   CCP: Hold for hot service at 135 °F or higher.

Recipe adapted from Chef Juan Zamorano San Diego Unified School District

NUTRIENTS PER SERVING			
Calories	465	Total Carbohydrates	34 g
Total Fat	20 g	Dietary Fiber	3.7 g
Saturated Fat	8.73 g	Total Sugars	3.4 g
Sodium	678 mg	Protein	36 g

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