Culinary Institute of America

NEISD
Cooking for Healthy Kids
Culinary Training

CIA Consulting
The Culinary Institute of America

Scan the QR code for the class survey and downloadable course content:

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The Culinary Institute of America

Welcome to the CIA!

Education is a gift. Those of us in the food service industry have a chance to "pay it forward" by sharing our gifts with others. For over 75 years, the Culinary Institute of America has provided students with unparalleled training, setting the gold standard for culinary excellence.

Providing our children with nourishing and healthy school meals is critical to their ability to learn, develop, and grow. We are excited to offer you this training and the tools to make better-tasting and healthier meals. The techniques and recipes you will learn this week have been field-tested and kid approved.

We want you to have the best experience possible during your training. If you have any questions, please ask your instructors or contact me directly at the number below. Once your training is complete, please feel free to stay in touch—we always enjoy hearing your success stories.

Wishing you all the best,

David Kamen '88 MBA PC[III]

Director CIA Consulting

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P.S. Did you know that the CIA is an independent, not-for-profit college? As such, your tuition supports our core mission of providing the world's best professional culinary education. If you'd like to further support the future of food with the gift of education, please visit www.ciagiving.org.

EXPECTATIONS FOR PARTICIPANTS

- ☑ No cell phone use or text messaging during class
- ☑ Actively participate
- ☑ Return promptly from breaks
- ☑ Remain in attendance for the class duration
- ☑ Complete the course evaluation
- ☑ Follow all established health and safety regulations
  - In addition to the precautions necessary to guard against food-borne illness, care must also be taken to avoid accidents. The following safety measures should be practiced.
    - Wash hands before beginning work in the kitchen
    - Keep all perishable items refrigerated until needed
    - NYS law: When handling "ready-to-eat" food items, if you don't cook them, glove them!
    - Wash hands, cutting boards, knives, etc., when switching between meats and vegetables
- ☑ Maintain proper uniform standards
- ☑ Act within the guidelines of the CIA's policy on harassment
  - The Culinary Institute of America (CIA) is committed to providing a working and learning environment free from harassment. Members of the CIA community, guests, and visitors have the right to be free from any form of harassment (which includes sexual misconduct and sexual harassment) or discrimination; all are expected to conduct themselves in a manner that does not infringe upon the rights of others.

PROGRAM OVERVIEW

Welcome to ***Cooking for Healthy Kids***, a joint educational project of The Culinary Institute of America (CIA) and the CIA's Healthy Kids Collaborative (HKC) membership. *Cooking for Healthy Kids* was created to provide significantly enhanced culinary training to school nutrition professionals nationwide who serve school meals under the USDA program. This will jumpstart the critical culinary education that school nutrition professionals need and serve as a model for a successful national culinary training program and related professional development for the K-12 sector. The overall goals of the *Cooking for Healthy Kids* training are to:

- Improve the culinary skill level of school nutrition professionals.
- Increase the quality and appeal of meals served to students.
- Increase the consumption of vegetables, fruits, whole grains, plant protein, and lean meats within the context of balanced menu planning for school-aged children.

This program is an outgrowth of the CIA's Healthy Kids Collaborative (HKC)—a network of thought-leading school nutrition professionals, chefs, suppliers, and other stakeholders working together to advance culinary-driven, healthy, flavorful foods for kids since its inception in 2015. This five-day training curriculum is based on the model created and implemented within the Indiana Department of Education by HKC Chair Catharine Powers, MS, RDN, LD of Culinary Nutrition Associates, LLC.

Working with HKC members and other external program partners convened in 2019 as part of a Cooking for Healthy Kids Alliance, the long-term vision of *Cooking for Healthy Kids* is to create a national culinary training initiative that supports and accelerates the evolution of US school foodservice into a sector of nutrition excellence and high culinary competency and one that is a significant driver of food system sustainability; a catalyst for overall student health, engagement, and performance; a contributor to reducing childhood hunger; and a cultivator of behaviors toward healthy, plant-forward dietary patterns.

The CIA and the Healthy Kids Collaborative are grateful to the Mother Cabrini Health Foundation for their generous support of developing and launching the *Cooking for Healthy Kids* culinary training pilot program in New York State during the summer of 2022. Additionally, the CIA appreciates HKC members, namely Rebecca Polson, Samantha Cowens-Gasbarro, Chela Cooper (among many others), and colleagues in the New York City Department of Education and Poughkeepsie City School District for their enthusiastic support and insightful contributions to the refinement of this curriculum which was created by Catharine Powers with title page graphics by Tami Petitto of Petitto Designs. For more information, please visit www.ciahealthykids.org.

TRAINING OVERVIEW, LEARNING OBJECTIVES, AND SCHEDULE

This *Cooking for Healthy Kids* training will focus on basic culinary skills needed by school food service professionals to prepare and serve more fruits, vegetables, whole grains, and salads while enhancing flavors and meeting the demands of today's guests. These basic culinary skills will help schools offer delicious foods and meals that support the *Dietary Guidelines for Americans* and school nutrition standards that kids want to eat!

After completing the training, participants will be able to:

- Apply the essential concept of *mise en place* and understand the benefits of kitchen organization.
- Demonstrate healthier cooking methods that apply the nutrition principles of the *Dietary Guidelines for Americans*.
- Properly handle and use a chef's knife.
- Demonstrate roasting, steaming, blanching, and quick pickling of vegetables.
- Learn and apply scratch baking principles and techniques.
- Enhance flavors of foods using herbs, spices, culinary acids, and other ingredients.
- Present school meals attractively and appealingly.

Each day of the hands-on class day will have five components:

1. Culinary Lecture and Demonstration
2. Practical Kitchen Experience
3. Technique / Recipe Evaluation
4. Kitchen Keys
5. Nutrition Keys

The three culinary skills labs focus on healthier ways to prepare and present food at school. These labs feature recipes related to school meal components. The culinary labs are:

1. Culinary Basics (mise en place and knife skills)
2. Preparing Vegetables for Greater Appeal
3. Scratch Baking Principals and Techniques

Each laboratory involves preparing, presenting, tasting, and evaluating items. Throughout the three-day training, the class will prepare many recipes. Each team will be responsible for at least two recipes in each lab; however, all participants will taste and evaluate all the finished products.

COOKING FOR HEALTHY KIDS 3-DAY WORKSHOP

The morning section will be hands-on learning, and the afternoon will be classroom learning.

	Monday – Day 1	**Tuesday – Day 2**	**Wednesday – Day 3**
8 am to 9:30 am* Culinary Lecture & Demonstration	Culinary Basics: Mise en place and Knife Skills	Cooking Vegetables for Greater Appeal	Scratch Baking Principals and Techniques
9:45 am to 12 noon Practical Kitchen Experience	Everyone will practice knife skills by cutting a variety of fruits and vegetables	Each team will prepare 3 vegetable dishes (steamed, roasted, and chilled)	French Bread (yeast bread) Quick Breads Scratch Biscuits – folding technique
LUNCH 12 to 1 pm	**LUNCH 12 to 1 pm**	**LUNCH 12 to 1 pm**	**LUNCH 12 to 1 pm**
1 pm to 1:30 pm Technique/ Recipe Evaluation	Evaluation	Evaluation	Evaluation
1:30 pm to 2 pm Kitchen Keys	Measures: weights and volumes	Herbs and spices Spice Blends	Reducing kitchen inventory and ingredient versatility
2 pm to 3 pm Nutrition Keys	Nutrition in school meals: -Introduction to Dietary Guidelines and Nutrition Standards -Behavioral economic techniques for NEISD serving line	Reducing sodium Enhancing flavor	Review key learnings and discuss implementation

*Start and end times may vary.

LAB RESPONSIBILITIES

To help you to get the most out of the lab experience:

1. Go into the lab with a positive attitude to contribute and have fun.
2. Read the recipe carefully. Ask questions if something is not clear.
3. Select a team leader for each lab. Rotate among team members.
4. The team leader will keep everyone on task and on time.
5. The team leader will coordinate responsibilities with each team member.
6. The team leader will present product to the class for evaluation and discussion.
7. Each participant should taste the product as it is being prepared.
8. Each person should evaluate the product.
9. Each team member will help clean up and organize the station.
10. Each team will "re-set" their workspace for the next lab.

MISE EN PLACE AND ORGANIZATION

Mise en place is about having *everything in place* for the task. It begins with the organization of you and your team, ensuring each member understands their assignment for the laboratory. The team should read the recipes before beginning any preparation and make a time and task schedule for each part of the task—including how the products will be presented. After the team is organized, assemble all ingredients and supplies before beginning the preparation. This is mise en place–getting it all together.

PREPARATION

Preparation begins with an understanding of the recipe or procedure to be followed. It involves:

1. assembling all ingredients and equipment.
2. weighing and measuring ingredients.
3. understanding the cooking method.
4. preheating equipment if required.

Unless the training team suggests a modification, the recipe or procedure should be followed exactly. Preparation also includes a plan for how it will be presented on the service line, including how it will be portioned and served.

TASTING AND PRODUCT EVALUATION

Each team prepares its products for presentation on the service line with an appropriate serving utensil. Each team describes the products and any unique aspects of the preparation. The leader identifies a nutrition principle involved in the preparation; the cooking method, flavor-enhancing techniques, and special culinary techniques.

COOKING FOR HEALTHY KIDS

Culinary Basics

Day One
Culinary Basics

Lesson-at-a-glance

Introductions and Orientation	Introductions Culinary skills orientation Team organization	30 minutes
Culinary demonstration	Successful kitchen production Kitchen organization (mise en place) Knife use • Selection • Parts • Sharpening • Using your knife • Cutting boards • Holding a knife • Knife cuts • Cutting vegetables • Cutting fruits Kitchen Demonstrations • Spice-rubbed chicken • Fruit Salad • Fruit Salsa • Roasted Potatoes • Roasted Sweet Potatoes	90 minutes
Hands-on	Preparing fruits and vegetables Cutting vegetables Cutting fruits	90 minutes
Evaluation and discussion		15 minutes
Clean up		15 minutes

SUCCESSFUL KITCHEN PRODUCTION

Staff Readiness

- Clean uniform, apron, and hair covering.
- Hands washed.
- Comfortable, closed-toe, non-skid shoes.
- Attentive.

Game Plan Organization

- What am I going to make?
- How much am I going to make?
- How much space will I need?
- How much time will I need?

Equipment

- What equipment will I use to prepare the product?
- What equipment will I use to cook the product?
- What will I serve the product in?
- What utensils do I need?

Food

- Gather the ingredients needed in the correct amounts to produce the recipe.
- Keep perishable items refrigerated.
- Prevent cross-contamination with proper sanitation practices.

Cooking

Pre-preparation:

- Washing.
- Cutting – slicing, dicing, etc.
- Seasoning.

Preparation:

- Start the item with the longest cooking times first.
- Clean as you go.

Finishing:

- Finish items as close to service as possible.

Serving

Set up service line:

- Trays, bowls, serving spoons, etc.
- Hot food hot, cold food cold.
- Food is arranged properly on the service line.

COOKING GUIDELINES

PRIORITIES IN FOOD PREPARATION AND SERVICE

Taste
The most important goal when preparing food is to make it taste GREAT.

Taste is affected by:
- Proper seasoning
- Execution of fundamentals
- Texture: consistency (viscosity), crunchiness, smoothness, etc.
- Freshness and quality of the product

Presentation
The appearance of food comes second only to taste in terms of importance. Some of the things that impact on presentation are:
- Portion size
- Proper food placement or arrangement
- Composition (avoid repetition of the same colors, preparation methods, etc.)
- Execution of fundamentals (properly and uniformly cut meats, vegetables, etc.)

Degree of Doneness / Proper Cooking
- Meats are cooked to the required temperature…but not overcooked.
- Vegetables are tender but not mushy.
- Grains are tender but not overcooked.

Temperature
- Hot foods hot
- Cold foods cold, on cold plates

Summary
Before we serve any meals from our kitchens, we should be able to answer "YES" to each of the following questions:
- Does it taste good?
- Does it look good?
- Is it cooked properly?
- Is it the correct temperature?

MISE EN PLACE

Everything in its place and a place for everything

Organization of yourself and your workspace is an essential skill that will make kitchen work easier and more efficient. Mise en place, a French term commonly used to express kitchen or workspace organization, requires planning and anticipation of the entire task.

Benefits of Mise en Place

- Increased speed and efficiency (e.g., cooks not running around gathering ingredients and equipment throughout product production)
- Professional appearance of workstation--critical in open kitchens or other situations where customers can view production
- Sanitary conditions are more easily maintained (e.g., products are held at the correct temperatures, which helps to avoid cross-contamination)

Kitchen Organization Should Include:

1. The recipe(s) and ingredients needed to complete the task
2. Food safety and sanitation needs
3. Small and large equipment needed. Consider equipment needs throughout the process, including the final container holding the product
4. Planning the time allotted to the process
5. When working in teams, identify how team members divide the tasks

Workspace Organization

- Recipe
- Recipe ingredients
- Cutting board (set board on a wet paper towel or antiskid mat to prevent it from sliding)
- Chef knife and paring knife, peeler if needed
- Refuse pan
- Small equipment – utensils, pans, service pans
- Large equipment – ovens, steamers, steam jacketed kettles, tilt skillet

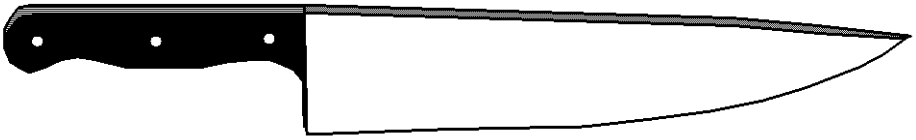
Organization and Workflow

- Table height and cutting board at correct height for individual.
- Organization appropriate for individual preferences (e.g., right, or left-handed individuals).
- Products are maintained at appropriate temperatures.

KNIFE SELECTION

Knives come in all shapes and sizes. Understanding the function of various knives will also help you pick the right one for the job.

Chef Knife: An all-purpose knife used for most cutting and dicing. Chef knives are versatile tools that can be used for most tasks. They are available in sizes ranging from 6″ to 12″ (8″ is standard). Choosing a knife, you can grip securely would be best—larger knives tend to fit best in larger hands. Chef knives with forged blades can be used for heavy-duty tasks such as cracking and chopping, while thinner, more flexible stamped blades work best for delicate tasks such as removing melon rinds.



Boning Knife: A knife with a narrow blade used to cut around the bones in meat during butchering. Boning knives are specialized knives used to de-bone poultry, smaller red meat cuts, and fillet fish.

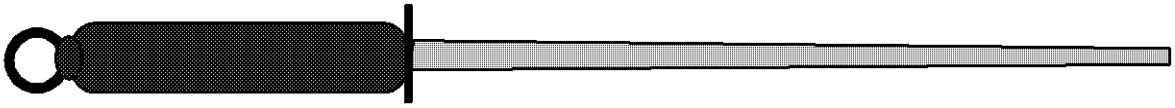
Paring Knife: This tool is mostly used for peeling fruits and vegetables, but it also slices small soft foods such as olives and mushrooms well.

Slicer: Long knife used for carving meats.

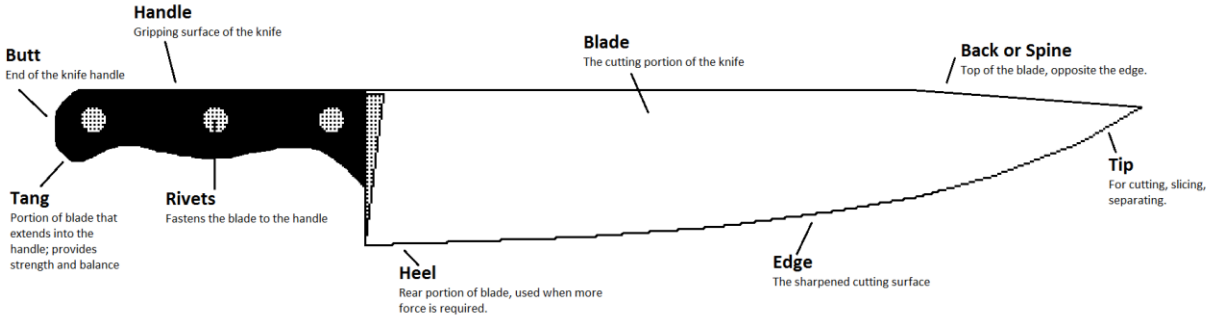
Serrated knife: not designed for cutting or chopping tasks. They are highly specialized knives designed for slicing breads and cakes. Slicers have less defined teeth and are “smoother” than standard serrated knives. Slicers are typically used only for carving meats.

Utility knives: primarily used for slicing. They are good with delicate foods such as fruit, small roasts, and poultry.

Sharpening Steel: Used for honing the edge of a knife.



KNIFE PARTS AND FUNCTIONS



Blade

The most common blade material is stainless steel, which is either forged or stamped. Forged blades are molded into shape and are generally heavier and more durable, with a prominent heel at the base of the blade. Stamped blades are cut from a solid metal sheet and are more lightweight but dull more quickly. Stamped blades are common on inexpensive, low-quality knives, but high-quality stamped blades can also be found. Stainless blades of both types are easily sharpened.

Handle

Wood has traditionally been used for knife handles but is replaced by plastics and laminated wood. Wood warps when wet and can harbor bacteria, making cleaning difficult. Plastic handles are often found in commercial kitchens because they are easy to clean and require no special care. Plastic is often used on stamped knives that do not have a full tang, an extension of the blade to which the handles are attached. On forged knives, the tang continues through the length and width of the handle. The handle is attached to the tang using three rivets.

Tip or point used for small incisions, around bones, punctures, and detailed work

Back or spine gives the blade appropriate stability and flexibility. Its thickness varies depending on the knife's style and intended uses.

Heel the end of the guard, used to break through small bones or shells

Edge primary cutting surface of the knife

Bolster attachment point between the handle and the blade provides stability and is found on higher-quality knives.

Tang runs through the handle (full tang) and provides balance and stability to the knife.

Rivets connect the handle to the tang.

SHARPENING KNIVES

A sharp knife is safer than a dull one. Sharp knives glide evenly through food, while dull knives tug, requiring more force.

KNIFE SHARPENERS

Sharpening stones may sharpen knives, but they require a certain skill.

Electric and hand-held knife sharpeners are designed to imitate the motion of a sharpening stone. When using knife sharpeners, the key is to use a single smooth motion as you pass the blade through. Jerks or pauses result in an uneven, gouged blade that may require professional attention.

sharpening steels do not sharpen knives, despite their name. Sharpening steels keep your knife blade sharp in between sharpening by re-aligning the microscopic burrs that make up the fine edge of your blade. Once the burrs are broken or bent, a sharpening steel will no longer help. To use a sharpening steel, hold your knife at a 20° angle against the steel and run it from tip to heel in one smooth motion. The safest way to use sharpening steel is to hold it point-down against a countertop or worktable, sweeping your knife against it blade-down.

STORING KNIVES

- Protect the blade of your knife when it is stored to keep it sharper. Magnetic knife strips or commercial knife blocks work best. If knives are stored in a drawer, protect the blade.
- Snap-on knife guards.
- Slice-in knife guards.

USING YOUR KNIFE

Rules for Knife Safety

- ✓ **S**ecurely hold your knife
- ✓ **A**nchor cutting boards
- ✓ **F**ingertips curled back
- ✓ **E**yes on the knife
- ✓ **T**ake your time
- ✓ **Y**ield to falling knives

ADDITIONAL SAFETY RULES FOR KITCHEN CUTLERY

- Always use a sharp knife. A sharp knife is safer than a dull knife because it requires less cutting pressure. If sharp, the knife will not slip as easily, and your hand will not tire as quickly.
- Use the correct size and type of knife for the job.
    - French knife - basic chopping and dicing
    - Boning knife - removing bones from meats and poultry
    - Slicer - slicing meats, poultry, and breads
    - Paring knife - peeling fruits and vegetables
- Hold the knife firmly in your hand and cut away from your body. Always use a cutting board.
- Always place knives on flat surfaces away from the table's edge, with the blade facing away from you. Never cover a knife with towels or other materials; keep it in sight of everyone.
- Do not grab a knife blindly; reach deliberately for the handle. Do not grab a knife if it falls off the table.
- When handing a knife to another person, point the handle toward them.

CUTTING BOARDS

Cutting boards come in many shapes and sizes. Choosing the correct cutting board is as important as choosing the correct knife! There are three important characteristics you should look for when selecting a cutting board:

- Easy to clean and sanitize.
- Protect the edge of your knife from becoming dull too quickly.
- Rough enough to keep your food from moving around as you chop.

It is also important to prevent the cutting board from moving around during use.

- Cutting boards with rubber feet: Limits you to using only one side of the cutting board
- Cutting boards with grippers in the corners: both sides can be used.

- Non-slip mats: used to secure any cutting board. If none of these are available, a good substitute is a damp (not wet!) dishcloth. Place it under the cutting board, then try to slide the board around before you start cutting. If the cutting board slides, re-dampen the cloth.

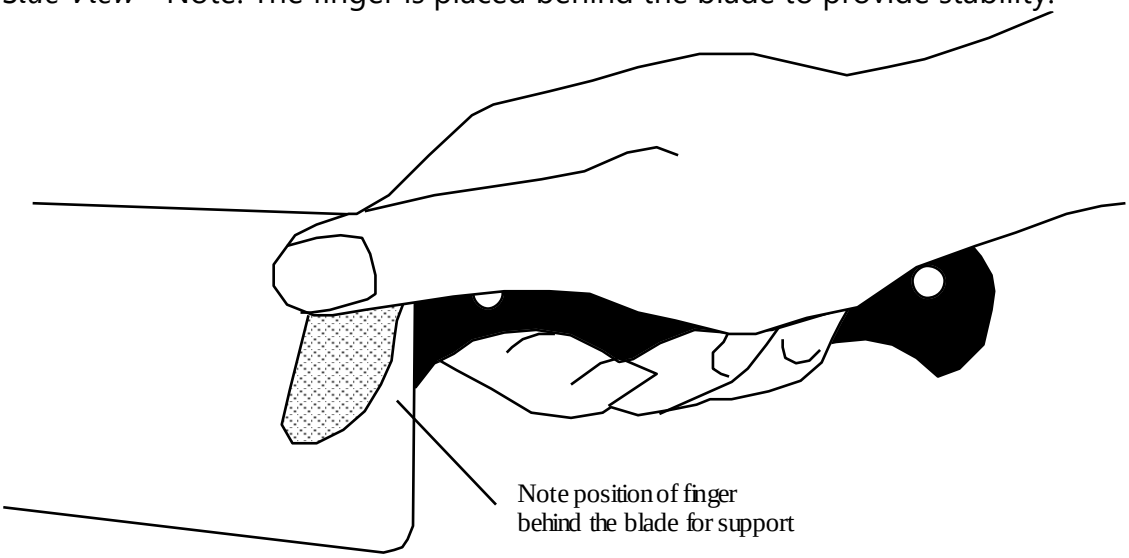
Cutting Board Type	**Pros**	**Cons**
Plastics High-density polyethylene or PE	Do not dull knives Can be washed in the dishwasher Can be bleached It can be resurfaced to remove deep grooves	Thinner boards (home-style) cannot be resurfaced
Plastic chopping mats	Cheaper than cutting boards Easy to transfer cut foods Can be bleached	Warp when washed in the dishwasher Do not protect the knife blade as well as thicker cutting board
Wood Hard rock maple or cherry hardwoods are less porous	Do not dull knives	Cannot be washed in the dishwasher Will not stand up to repeated bleaching Some cannot be resurfaced Cheaper wooden boards easily warp and crack Heavier
Bamboo Harder and even less porous than the hardwoods	Absorbs little moisture Resists scarring from knives	Gets worn or “furry” after a lot of use. Splinter eventually

HOLDING A KNIFE

The most secure way to grip a knife is by gripping the top of the blade firmly between your thumb and forefinger. Place your middle finger just behind the heel. This grip may take some time, but it gives you maximum control over your knife and allows you to pivot from the wrist when chopping.

Top View—Some cooks prefer to grip the knife by the handle, allowing the thumb and index finger to rest on the blade for support. However, an individual's preference to hold the knife in other ways is acceptable.

Side View - Note: The finger is placed behind the blade to provide stability.



CUTTING TECHNIQUES

- Food cut to specific sizes and shapes can be very useful.
- Consistently sized pieces cook evenly and at the same rate.
- Decorative cuts are pleasing to the eye and allow the food to garnish.

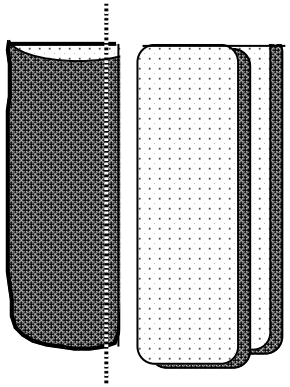
CUTTING FOODS

- Squaring off is helpful for most types of food. Make straight cuts with your fingers curled back to create a flat surface on all four sides. This also eliminates the need to peel vegetables before cutting them.
- Make a series of slices or planks straight down through the food.
- These slices can be stacked or cut individually into sticks, batonnet, or julienne.
- Sticks can then be cut into cubes – or dice.
- Cuts should be made by lifting the heel end of the knife off the cutting board, then slicing forward and down in a single smooth motion.

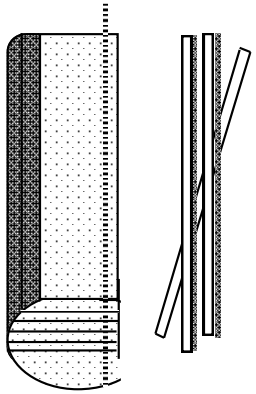
Onions:

1. Cut the stem end off, leaving the hairy roots.
2. Place the onion on the newly cut flat side and slice straight down through the middle of the root end to cut the onion in half. Peel the onion.
3. Working close to the edge of the counter or worktable, make a series of horizontal slices through each onion half, working from the bottom up (depending on the size of the onion, you should be able to make three or four cuts).
4. Make a series of vertical cuts through the fattest part of the onion. DO NOT cut through the root end – this is holding everything together to make the next step easier.
5. To finish dicing the onion, make a second series of vertical cuts starting at the stem end (where you made the first cut) and continuing back toward the root end (that is holding everything together). Stop cutting if the root end becomes too small to hold onto securely. Only cut back as far as you feel comfortable going!

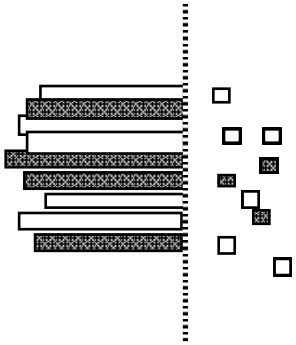
Planks, Sticks, Dice



Planks:
Cut vegetable lengthwise into desired thickness

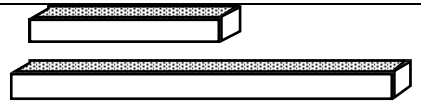
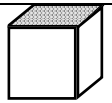
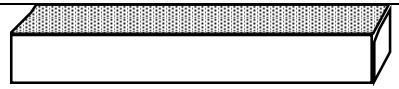
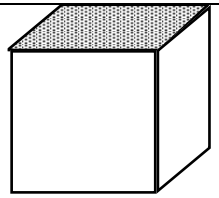


Sticks:
Stack slices and cut again lengthwise into the desired thickness, yielding sticks.



Dice:
Lay sticks in a bundle cut crosswise into the desired thickness; this will yield dice.

BASIC KNIFE CUTS

Small Dice	(1/4" x 1/4" x1/4")		Julienne	(1/8" x 1/8" x 1 or 2")	
Medium Dice	(1/3" x 1/3" x 1/3")		Bâtonnet	(1/4" x 1/4" x 2 or 2-1/2")	
Large Dice	(3/4" x 3/4" x 3/4")				

CULINARY LAB EXPERIENCE

Set up a workstation:

- Cutting board – anchored to prevent it from sliding
- Refuse container
- Container for potatoes (with water)
- Onions
- Carrots
- Additional vegetables and fruits (per team assignment)
- Chef's knife
- Vegetable peeler

Each participant will cut:

- Potato – 1 each, large dice
- Sweet Potato – 1 each, large dice
- Onion – 1 each, small dice
- Carrot – 1 each, various cuts (as assigned)
- Bell pepper, sweet – 1 each, various cuts (as assigned)
- Scallions, bias cut

Additionally, each team will cut:

	Vegetable	**Small fruits**	**Large fruit**
Team 1	Broccoli	Oranges *wedges*	Watermelon *large dice & small dice*
Team 2	Cauliflower	Apples *slices*	Cantaloupe *large dice & small dice*
Team 3	Butternut squash/ winter squash	Kiwi *sliced*	Honeydew *large dice & small dice*
Team 4	Zucchini/summer squash	Strawberries *small dice*	Pineapple *large dice & small dice*
Team 5	Broccoli	Oranges *slices*	Watermelon *large dice & small dice*
Team 6	Cauliflower	Apples *small dice*	Cantaloupe *large dice & small dice*
Team 7	Butternut squash/ winter squash	Kiwi *small dice*	Honeydew *large dice & small dice*
Team 8	Zucchini /summer squash	Strawberries *small dice*	Pineapple *large dice & small dice*

From cut produce, we will prepare: fruit salad, fruit salsa, roasted potatoes with various seasonings

# Seasonal Fruit Salsa	Yield: 5 cups Servings: 20 each One portion provides: ¼ cup fruit	

Ingredients	20 Servings	Directions
Fruit, small diced (see chart)	varies	**CCP**: No bare-hand contact with ready-to-eat food. 1. Gently mix all ingredients. 2. Cover and refrigerate for 2 hours to allow the flavors to blend. **CCP**: Hold and serve at 41°F or lower.
Onion, diced (see chart)	1 cup	
Jalapeno pepper, finely diced	2 ounces	
Vegetable, diced (see chart)	1 pound	
Herb, chopped (see chart)	½ cup	
Acid (see chart)	½ cup	

Yield: 5 cups

Recipe Notes: Seasonal Fruit Salsa

	Spring	Summer	Fall	Winter
Fruit	Strawberries 8 ounces Pineapple, crushed 20 ounces	Watermelon 20 ounces Cantaloupe 8 ounces	Apples 12 ounces Peaches 12 ounces	Mandarin oranges 15 ounces Kiwi 14 ounces
Onion	Red onion	Sweet onion	Sweet onion	Red onion
Vegetable	Red pepper	Cucumber, peeled	Red pepper	Cucumber, peeled
Herb	Cilantro	Mint	Parsley	Mint
Acid	Lime juice	Lime juice	Apple cider vinegar	Lemon juice

Nutrients vary depending on the ingredients used.

Source: Culinary Nutrition Associates LLC

The outcome, allergen information, and nutrient data may vary depending on your location's specific ingredients and equipment.

SEASONAL FRUIT SALAD	CREDITING: ½ CUP (4 OUNCE SPOODLE OR NO. 8 SCOOP) ONE PORTION PROVIDES: ½ CUP FRUIT	

INGREDIENTS	20 SERVINGS	DIRECTIONS
Seasonal fruit, large dice	1 seasonal selection (see chart)	**CCP**: No bare-hand contact with ready-to-eat food. 1. Combine the fruit. 2. Toss with the Honey Mint Citrus Dressing. 3. Chill for service. **CCP**: Hold and serve at 41°F or lower.
Honey Mint Citrus Dressing (attached)	1 cup	

Spring - berry delight		Summer - melon salad		Fall - Waldorf style		Winter - tropical fruit	
Strawberries	1 ½ pounds	Watermelon	3 pounds	Apples	1 ½ pounds	Pineapple, canned	40 ounces
Banana	2 pounds	Cantaloupe	2 pounds	Grapes	1 pound	Mango	1 ½ pounds
Blueberries	12 ounces	Honeydew	2 pounds	Mixed fruit, canned	30 ounces	Kiwi	1 pound

Nutrients vary depending on the ingredients used.
Source: Culinary Nutrition Associates LLC
The outcome, allergen information, and nutrient data may vary depending on your location's specific ingredients and equipment.

# Honey Mint Citrus Dressing	Serving Size: 2 tablespoons One portion provides: Does Not Credit	

Ingredients	1 gallon	Test Portion –1 cup
	Measure	**Measure**
Orange juice, 100% juice	3 quarts	¾ cup
Lemon juice, 100% juice	1 quart	¼ cup
Honey	½ cup	1 ½ teaspoons
Salt, kosher	4 teaspoons	¼ teaspoon
Mint, fresh, finely chopped	2 cups	2 tablespoons

Directions

CCP: No bare-hand contact with ready-to-eat food.

1. Mix the orange juice, lemon juice, honey, and salt with an immersion blender, food processor or blender, or wire whisk.
2. Add the chopped mint.

CCP: Hold and serve at 41°F or lower.

Nutrients Per Serving

Calories	15	Cholesterol (mg)	0	Dietary Fiber (g)	0	Vitamin D (mcg)	0	Potassium (mg)	60
Total Fat (g)	0	Sodium (mg)	60	Added Sugars (g)	1	Iron (mg)	0.2	Vitamin A-RAE (mcg)	10.47
Saturated Fat (g)	0	Total Carbohydrate (g)	4	Protein (g)	0	Calcium (mg)	10	Vitamin C (mg)	15

Source: Adapted from Culinary Nutrition Associates LLC

The outcome, allergen information, and nutrient data may vary depending on specific ingredients and equipment.

ROASTED POTATOES WITH SEASONINGS	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: ½ CUP STARCHY VEGETABLE	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Potatoes, russet	12 pounds	2 pounds, 8 ounces	1. Preheat the oven to 375°F. 2. Scrub the potatoes (peel them if desired) and cut them into large dice or wedges. 3. Toss the potatoes with salt, oil, and the seasoning blend of choice. Arrange the potatoes in a single layer on parchment-lined sheet pans. 4. Roast in the oven for about 40 minutes or until browned and tender. **CCP**: Cook until internal temperature reaches 135°F. **CCP**: Hold for hot service at 135°F or higher.
Salt, kosher	1 tablespoon	1 teaspoon	
Oil, olive, or canola	½ cup	1 tablespoon, 1 ½ teaspoons	

NUTRIENTS PER SERVING (WITHOUT SEASONING MIX)

Calories	110	Cholesterol (mg)	0	Dietary Fiber (g)	1	Vitamin D (mcg)	0	Potassium (mg)	450
Total Fat (g)	2.5	Sodium (mg)	120	Added Sugars (g)	0	Iron (mg)	0.9	Vitamin A-RAE (mcg)	0.05
Saturated Fat (g)	0	Total Carbohydrate (g)	20	Protein (g)	2	Calcium (mg)	10	Vitamin C (mg)	6

Ranch – for 50 servings		**Rosemary -** for 50 servings		**BBQ** – for 50 servings	
Garlic, granulated	2 tablespoons	Rosemary, dried	3 tablespoons	Cumin, ground	2 tablespoons
Onion, granulated	2 tablespoons	Garlic, granulated	2 tablespoons	Smoked paprika	2 tablespoons
Dill weed, dried	2 tablespoons	Onion, granulated	2 tablespoons	Garlic, granulated	2 tablespoons
Salt, kosher	2 teaspoons	Salt, kosher	2 teaspoons	Onion, granulated	2 tablespoons
Black pepper, ground	1 ½ teaspoons	Black pepper, ground	1 ½ teaspoons	Salt, kosher	2 teaspoons
				Black pepper, ground	1 ½ teaspoons

Source: Adapted from Culinary Nutrition Associates LLC
The outcome, allergen information, and nutrient data may vary depending on your location's specific ingredients and equipment.

Chili-Cinnamon Roasted Sweet Potatoes

Serving Size: ½ cup

One portion provides: ½ cup red/orange vegetable

Ingredients	50 Servings	10 servings	Directions
Sweet potatoes	15 pounds, 8 ounces	3 pounds	1. Preheat the oven to 400°F. 2. Scrub the potatoes (peel them if desired) and cut them into large dice, wedges, or sticks.
Chili powder	1 tablespoon	¾ teaspoon	3. Combine the seasonings: chili powder through the salt.
Cinnamon, ground	2 teaspoons	½ teaspoon	
Sugar, white granulated	1 tablespoon	½ teaspoon	
Black pepper, ground	1 teaspoon	¼ teaspoon	
Garlic, granulated	½ teaspoon	1/8 teaspoon	
Salt, kosher	½ teaspoon	1/8 teaspoon	
Oil, olive, or canola	1 cup	3 tablespoons	4. Drizzle the sweet potatoes with the oil, sprinkle with the seasoning mixture, and toss well to coat. 5. Place the potatoes in a single layer on parchment-lined sheet trays. 6. Bake for 12 to 15 minutes until tender and browned in spots. **CCP**: Cook until internal temperature reaches 135°F or above. **CCP**: Hold for hot service at 135°F or higher.

Nutrients Per Serving

Calories	120	Cholesterol (mg)	0	Dietary Fiber (g)	3	Vitamin D (mcg)	0	Potassium (mg)	30
Total Fat (g)	4.5	Sodium (mg)	55	Added Sugars (g)	0	Iron (mg)	0.6	Vitamin A-RAE (mcg)	824.47
Saturated Fat (g)	0.5	Total Carbohydrate (g)	18	Protein (g)	2	Calcium (mg)	30	Vitamin C (mg)	17

Source: Adapted from Culinary Nutrition Associates LLC

The outcome, allergen information, and nutrient data may vary depending on your location's specific ingredients and equipment.

BAKED CHICKEN DRUMSTICK	SERVING SIZE: K-8: 1 DRUMSTICK 9-12: 2 DRUMSTICKS 1 DRUMSTICK PROVIDES: 1.5 OZ. EQ M/MA	

INGREDIENTS	50 SERVINGS	25 SERVINGS	DIRECTIONS
Chicken, drumsticks (One 3.7 oz. drumstick = 1.5 oz. cooked chicken meat) CN Labeled to provide 1.5 oz. eq m/ma	11 pounds 10 ounces	5 pounds 14 ounces	1. If needed, thaw the chicken under refrigeration overnight. 2. Toss the chicken with a seasoning blend. 3. Line the chicken in a single layer on parchment-lined sheet trays. 4. Bake until internal temperature reaches 165°F: Conventional oven: 400°F for 45-55 minutes. Convection oven: 350°F for 30-35 minutes. **CCP**: Heat to 165°F for <1 second (instantaneous). **CCP**: Hold for hot service at 135°F or higher.

Ranch – for 50 servings		**Rosemary -** for 50 servings		**BBQ** – for 50 servings	
Garlic, granulated	2 tablespoons	Rosemary, dried	3 tablespoons	Cumin, ground	2 tablespoons
Onion, granulated	2 tablespoons	Garlic, granulated	2 tablespoons	Smoked paprika	2 tablespoons
Dill weed, dried	2 tablespoons	Onion, granulated	2 tablespoons	Garlic, granulated	2 tablespoons
Salt, kosher	2 teaspoons	Salt, kosher	2 teaspoons	Onion, granulated	2 tablespoons
Black pepper, ground	1 ½ teaspoons	Black pepper, ground	1 ½ teaspoons	Salt, kosher	2 teaspoons
				Black pepper, ground	1 ½ teaspoons

NUTRIENTS PER SERVING (WITHOUT SEASONING)									
Calories	100	Cholesterol (mg)	75	Dietary Fiber (g)	0	Vitamin D (mcg)	0.1	Potassium (mg)	130
Total Fat (g)	6	Sodium (mg)	60	Added Sugars (g)	0	Iron (mg)	0.5	Vitamin A-RAE (mcg)	6.66
Saturated Fat (g)	1.5	Total Carbohydrate (g)	0	Protein (g)	13	Calcium (mg)	10	Vitamin C (mg)	0

PRODUCT EVALUATION FOR CULINARY BASICS

Participants evaluate each food product as part of the tasting in this culinary laboratory. For each food product (row) and each evaluation category (column), circle either **A** (acceptable) or **NA** (not acceptable).

Food Product	Appearance	Taste	Texture	Eating Quality	Comments
Seasonal Fruit Salad	A or NA	A or NA	A or NA	A or NA	
Seasonal Fruit Salsa	A or NA	A or NA	A or NA	A or NA	
Roasted Potatoes with Seasonings	A or NA	A or NA	A or NA	A or NA	
Chili-Cinnamon Roasted Sweet Potatoes	A or NA	A or NA	A or NA	A or NA	
Baked Chicken Drumstick	A or NA	A or NA	A or NA	A or NA	

DAY TWO
COOKING VEGETABLES FOR GREATER APPEAL

Lesson-at-a-glance

Culinary demonstration	Vegetable cookery principles Purchase forms of vegetables Blanching Steaming Roasting Oven-roasted potatoes Sautéing and stir-frying Braising and stewing Glazing Seasonings DEMO: Blanched broccoli Roasted Brussels sprouts Roasted watermelon rind Steamed edamame Quick pickled cucumbers	60 minutes
Hands-on	Blanched vegetables Steamed vegetables Roasted vegetables Quick pickling	2 ½ hours
Evaluation and discussion		15 minutes
Clean-up		15 minutes

VEGETABLE COOKERY

Proper selection, purchasing, handling, and preparation of vegetables will enhance the taste, presentation, and nutritional value of vegetables.

- Purchase quality raw product
- Cut only when ready to use
- Cuts should enhance natural shape
- Cook as quickly as possible
- Cook as close to service as possible
- Cook small batches at a time
- Cook until tender

EFFECTS OF OVERCOOKING

- Color loss
- Texture (mushy)
- Vitamin loss

Vegetables are packed with nutrients for children.

1. Most vegetables are naturally low in fat and calories. None have cholesterol. (Sauces or seasonings may add fat, calories, or cholesterol).
2. Vegetables are important sources of many nutrients, including potassium, dietary fiber, folate (folic acid), vitamin A, vitamin E, and vitamin C.
3. Diets rich in potassium may help to maintain healthy blood pressure. Vegetable sources of potassium include sweet potatoes, white potatoes, white beans, tomato products (paste, sauce, and juice), beet greens, soybeans, lima beans, winter squash, spinach, lentils, kidney beans, and split peas.
4. As part of a healthy diet, dietary fiber from vegetables helps reduce blood cholesterol levels and may lower the risk of heart disease. Fiber-containing foods such as vegetables help provide a feeling of fullness with fewer calories.

Keeping the Nutrients

The way a vegetable is prepared can affect its nutrient content. Heat can destroy some nutrients, and some dissolve in water. The culinary techniques described in this lesson are based on principles designed to keep nutrients in vegetables.

Remember to keep the nutrients in vegetables:

- Keep the vegetables in big pieces.
- Cook in just a little water (if any).
- Cook only a short time.

Additional Information

Green vegetables:

- Use plenty of water; vegetables should be covered with water. Exception to the rule: tender spinach can be cooked using very little water in a covered pot.
- Do not cover during cooking.
- Acid (such as vinegar or citrus juice) destroys color.

White vegetables:

- Acid intensifies the color of white vegetables.
- Alkaline (baking soda) makes white vegetables turn yellow.

Red/orange vegetables:

- Do not peel beets before cooking.
- Acid intensifies the red color.
- Beets can also be baked in their skins and then peeled.
- Acid will brighten the color of carrots slightly.
- Most orange vegetables are good for glazing.

PURCHASING FORMS OF VEGETABLES

Form	Advantages	Disadvantages	Examples
Fresh vegetables	• Taste good • Good texture • Product acceptability	• Limited shelf life • Quality varies • Requires preparation	• Broccoli • Carrots • Green beans
Frozen vegetables can be cooked by most of the methods used for fresh vegetables.	• Year-round availability • Less waste • Less labor • Practical for some types of vegetables	• Loss of texture due to freezing • Quality variance between producers • Flavor loss	• Peas • Corn • Lima beans
Canned vegetables: reheat them in the liquid from the can, adjust seasonings.	• Shelf life • Practical for some vegetables	• Poor color • Mushy • Poor flavor	• Beet • Beans (kidney, pinto, black)
Dry vegetables reconstituted in a liquid.	• Shelf life • Convenient	• Takes time to reconstitute	• Dry beans • Freeze-dried peppers

BLANCHING VEGETABLES

Blanching means dipping food into boiling water for a very short time, only a minute or two. This method briefly and partially cooks food.

Blanching is used to:

- Prepare vegetables for further cooking (for example, broccoli)
- Remove strong or bitter flavors (for example, kale)
- Soften firm foods (for example, carrots)
- Set colors of vegetables (for example, snow peas)
- Loosen skins for peeling (for example, ripe tomatoes)

Mise en place

- Prepare the vegetable: wash, peel, trim, cut
- Liquid: usually water
- Equipment: steam-jacketed kettle or large stock pot
- Ice bath or freezer

Quick steps for Blanching

1. Bring a large pot of water to a boil.
2. Immerse vegetables in boiling water for 30 seconds to 1 minute, depending on ripeness or firmness desired.
3. Remove the vegetables from the boiling water.
4. Immediately immerse in ice water to chill.

CCP: Cool to 41°F or lower within 4 hours.

Tips

- Use plenty of water. This prevents the water from cooling down when you add the vegetables, so they cook quickly and evenly.
- Test for doneness by removing a vegetable with a pair of tongs. Rinse under cold water, and take a bite. It should snap beneath your teeth but have lost some of its raw crunch.
- Drain immediately and then quick-chill (a technique known as “shocking”) by immersing in an ice bath or rinsing with ice-cold water. Shocking stops cooking and sets the color so the vegetables remain vibrant.
- Once chilled, spread the vegetables out on a tray to dry.

STEAMING

Nearly all vegetables can be cooked by steaming and this method is frequently used because it is easy and economical. This basic cooking method often requires additional steps to make the product ready to serve. This may include adding sauces, seasonings, and flavorings. Steaming is especially good for vegetables that easily become broken or mushy when simmered.

Examples
Broccoli, carrots, peas, cauliflower, beans, snow peas

Mise en place

- Prepare the vegetable: wash, peel, trim, cut
- Liquid: usually water
- Equipment: steamer, steam-jacketed kettle, or large stock pot
- Optional components: aromatics: spices, herbs, citrus zest, sauces

Quick steps for steaming

Steaming Vegetables in a Steamer

1. Place approximately 25 - ½ cup servings of the fresh or frozen vegetable in a perforated 12 X 20 X 2-inch pan. Do not place a larger number of vegetables in the pan to allow room for the steam to circulate around them. Don't add liquid.
2. Steam uncovered at 5 pounds pressure for a compartment steamer. Follow the manufacturer's directions for steamers operating at other pressures or when using convection steamers or combination ovens.
3. Season with herbs and spices. Limit salt to 1 teaspoon for 50 - ½ - cup servings.
4. Serve the hot vegetable at once.

Steaming Vegetables in an Oven

1. Place approximately 50 - ½ cup servings of the fresh or frozen vegetables in a perforated 12 X 20 X 2-inch counter pan. Then, place the perforated pan in a 4-inch-deep counter pan that contains 2 cups of water. Do not place a larger number of vegetables in the pan to allow room for the steam to circulate around them.
2. Cover both pans tightly with foil. This arrangement of pans creates a steamer effect in a perforated pan.
3. Place the covered pans in an oven at 350° F for approximately 20 minutes. Cook the vegetables until fork tender, varying the time depending on the vegetables.
4. Drain the excess liquid from the cooked vegetable.
5. Season with herbs and spices. Do not add butter or margarine. Limit salt to 1 teaspoon for 50 servings. Serve the hot vegetable at once.

How to
Steam Vegetables

Steamer

1.) Place 25, ½ - cup serving of the fresh or frozen veggies in a perforated 12x20x2-inch pan.

2.) Steam uncovered.

Oven

1.) Place 50, ½ - cup servings of the fresh or frozen veggies in a perforated 12x20x2-inch counter pan. Place the pan in a 4-inch deep counter pan that contains 1 quart of water.

2.) Cover both pans tightly with foil and cook at 350° F for approximately 20 minutes.

After cooking

3.) Season with herbs, spices, citrus zest, or light sauces. Optional - salt no more than ½ teaspoon per 25 portions.

4.) Serve the hot vegetables at once.

Tips

- Steamed vegetables are best when batch cooked.
- If holding is necessary, do so in the warmer, not on the steamtable.

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ROASTING/BAKING

Roasting vegetables in the oven gives them a caramelized exterior and flavor while keeping the inside moist and tender.

Examples

Asparagus	Mushrooms	Summer squash
Beets	Onions	Sweet potatoes
Brussels sprouts	Parsnips	Tomatoes
Carrots	Peppers	Turnips
Corn	Potatoes	Zucchini
Eggplant	Rutabagas	

Mise en place

- Prepare the vegetable: wash, peel, trim, cut
- Equipment: oven
- Optional components: marinade, seasonings, or aromatics

Quick steps for roasting and baking

1. Preheat the oven to 375°F- 425°F. The longer the vegetable needs to cook, the lower the oven temperature. This will ensure that the vegetable is thoroughly cooked without the exterior burning.
2. Cut vegetables into uniform shapes and sizes.
3. Toss vegetables with oil—season with pepper, garlic, spices, or herbs. Use no more than 1 teaspoon of salt per 50 portions.
4. Place vegetables in a single layer on a sheet pan. Do not crowd the vegetables, as this will cause them to steam.
5. Bake until vegetables are tender.

How to
Roast Vegetables

Roasting is a dry heat cooking method that is popular for vegetables. Nearly any vegetable can be roasted, and doing so will create a caramelized exterior with a tender interior.

Step 1: Preheat the oven to 375 °- 425 °F .

The longer the vegetable needs to cook, the lower the oven temperature. This will ensure that the vegetable is thoroughly cooked without the exterior burning.

Step 2: Cut vegetables into uniform shape and size.

Step 3: Toss vegetables in oil. Season with pepper, garlic, spices, or herbs.

Use no more than 1 teaspoon of salt per 50 portions.

Step 4: Place vegetables in a single layer on a sheet pan.

Do not crowd the vegetables, as this will cause them to steam an not brown properly.

Step 5: Bake until vegetables are tender.

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Oven Roasted Potato Fries

Steps to better oven-baked potatoes:

1. Preheat the oven to 425°F - 450°F.
2. Remove only the number of French fries to be used within 1 hour.
3. Place a single layer of French fries on a sheet pan. For best results, use 2 ½ pounds per full sheet pan. Bake according to package instructions. Turn once for uniform cooking.
4. Season fries. Limit the salt to 1 teaspoon for 50 servings of fries. This would add 45 mg of sodium. Try other seasonings instead of salt.

Seasoning variations	Seasonings	Amount needed per 10 pounds of potatoes
Garlic and Herb	Oregano leaves Paprika Thyme leaves Garlic, granulated Granulated onion	1 ½ tablespoons 1 ½ tablespoons 1 ½ tablespoons 1 tablespoon 2 teaspoons
Southwest	Paprika Granulated onion Garlic, granulated Adobo seasoning Black pepper	1 tablespoon 1 ½ tablespoons 1 ½ tablespoons 1 teaspoon 1 teaspoon
Buffalo	Granulated onion Garlic, granulated Chili pepper Red pepper Paprika	1 tablespoon 1 ½ tablespoons 1 ½ tablespoons 1 teaspoon 1 teaspoon
Parmesan-Rosemary	Rosemary, crushed Garlic, granulated Parmesan cheese	2 tablespoons 1 ½ tablespoons ½ cup
Barbecue	Cumin Smoked paprika Garlic, granulated Granulated onion Black pepper	2 tablespoons 2 tablespoons 2 tablespoons 2 tablespoons 1 ½ teaspoon
Ranch	Garlic, granulated Granulated onion Dill weed Black pepper	2 tablespoons 2 tablespoons 2 tablespoons 1 ½ teaspoon

QUICK PICKLES

Quick pickles, also known as refrigerator pickles, are simply vegetables or fruits that are pickled in a vinegar, water, salt, and sugar solution and stored in the refrigerator. Quick pickles don't develop the deep flavor that fermented pickles do, but they only require a few hours in the brine before they can be enjoyed. Quick pickles are a lower-sodium version of a traditional pickle. They offer a sweet-sour, flavor-packed addition to a sandwich or salad bar. Almost any vegetable can be quickly pickled.

Basic Quick Pickle Recipe (1 quart)
1 quart of brine will pickle about 2 pounds of vegetables.

INGREDIENTS	AMOUNTS	DIRECTIONS
Vinegar Rice wine vinegar, red or white wine vinegar, apple cider vinegar	2 cups	1. In a medium pot over high heat, bring vinegar, water, sugar, salt, and seasonings to a boil, stirring occasionally. Reduce heat to medium-low and simmer for 10 minutes. 2. Place the vegetable in a heatproof container or jar. Pour the hot brining liquid over the vegetables. Cover and chill for at least 2 hours before serving.
Water	2 cups	
Sugar	2 tablespoons	
Salt, kosher	1 tablespoon	
Seasonings	1 tablespoon	

Flavoring Quick Pickles

Fresh herbs	dill, thyme, oregano, and rosemary hold up well
Dried herbs	thyme, dill, rosemary, oregano, or marjoram
Garlic cloves	smashed for mild garlic flavor, or sliced for stronger garlic flavor
Fresh ginger	peeled and thinly sliced
Whole spices	mustard seed, coriander, peppercorns, red pepper flakes
Ground spices	turmeric or smoked paprika are great for both color and flavor

Try these vegetables for pickling:

Asparagus	Cucumbers	Snap peas
Beets	Eggplant	Summer squash
Brussels sprouts	Green beans	Turnips
Carrots	Onions	Zucchini
Corn	Peppers	Mushrooms

Try these fruits for pickling:

Blueberries	Grapes	Plums
Strawberries	Rhubarb	Peaches
Cherries	Watermelon rind	

Guide to

Quick Pickling

Quick pickles are a lower-sodium version of a traditional pickle. While they don't develop the deep flavor of fermented pickles, they offer a sweet-sour, flavor-packed addition to sandwiches, salads, and bowls.

2 cups **vinegar**

2 cups **water**

1 tablespoon **sugar**

1 tablespoon **salt**

1 tablespoon **seasoning**

1 quart of brine will pickle about 2 pounds of vegetables

Directions

1. **Bring vinegar, water, sugar, salt, and seasonings to a boil in a medium pot over high heat, stirring occasionally.**
2. **Place vegetables in a heatproof container or jar. Pour hot brining liquid over vegetable. Cover and chill at least 2 hours before serving.**

Tips

- Chill overnight
- Increase sugar for sweeter flavor
- Add chili flakes for spicy flavor

Suggested Vegetables

- Carrots
- Red onion
- Zucchini
- Cauliflower
- Jalapeno
- Green Beans

# ROASTED BRUSSELS SPROUTS	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: ½ CUP OTHER VEGETABLE	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Brussels sprouts, fresh halved or quartered	12 pounds	2 pounds, 8 ounces	1. Preheat the oven to 400°F. 2. Trim the Brussels sprouts by cutting off the brown ends and removing the yellow outer leaves.
Oil, olive	1 cup	3 tablespoons	3. Toss the Brussels sprouts in a bowl with the olive oil, salt, and pepper. Spread them on a parchment-lined sheet pan in an even layer (do not overcrowd) and roast for 25 to 35 minutes until crisp outside and tender on the inside. Shake the pan from time to time to brown the sprouts evenly.
Salt, kosher	1 tablespoon	¾ teaspoon	
Black pepper, ground	2 ½ teaspoons	½ teaspoon	
Balsamic vinegar, optional	¼ cup	1 tablespoon	4. Remove the Brussels sprouts from the oven. Toss with the balsamic vinegar and honey, if desired. **CCP**: Cook until internal temperature reaches 135°F or above. **CCP**: Hold for hot service at 135°F or higher.
Honey, optional	¼ cup	1 tablespoon	
NOTE: *This dish works wonderfully with fresh Brussels sprouts, but frozen is a good substitute in large food-service facilities.*			

SERVING NOTES:

Thai sweet chili sauce may be used instead of balsamic vinegar and honey.

NUTRIENTS PER SERVING									
Calories	90	Cholesterol (mg)	0	Dietary Fiber (g)	3	Vitamin D (mcg)	0	Potassium (mg)	380
Total Fat (g)	5	Sodium (mg)	120	Added Sugars (g)	1	Iron (mg)	1.5	Vitamin A-RAE (mcg)	92.02
Saturated Fat (g)	1	Total Carbohydrate (g)	10	Protein (g)	3	Calcium (mg)	40	Vitamin C (mg)	74

SOURCE: Adapted from Culinary Nutrition Associates LLC

# Roasted Watermelon Rind	Serving Size: ½ cup One portion provides: ½ cup Fruit	

Ingredients	50 Servings	10 Servings	Directions
Watermelon rind		10 cups	1. Preheat the oven to 400°F. 2. In a large bowl, toss the watermelon rind with the oil, salt, pepper, granulated garlic, rosemary, and thyme. 3. Spread the rind in a single layer onto a parchment-lined sheet pan. Place in the oven and roast for 1 hour, stirring every 15 minutes until the rind is bite-tender (not mushy) and browned. 4. Place the roasted rind into a steam table pan and stir in the cheese. **CCP**: Cook until internal temperature reaches 135°F or above. **CCP**: Hold for hot service at 135°F or higher.
Oil, canola		¼ cup	
Salt, kosher		½ teaspoon	
Pepper, black, ground		¼ teaspoon	
Garlic, granulated		¼ teaspoon	
Rosemary, dried		2 teaspoons	
Thyme, dried		2 teaspoons	
Parmesan cheese, grated		¼ cup	

Serving Notes:

Nutrients Per Serving									
Calories		Cholesterol (mg)		Dietary Fiber (g)		Vitamin D (mcg)		Potassium (mg)	
Total Fat (g)		Sodium (mg)		Added Sugars (g)		Iron (mg)		Vitamin A-RAE (mcg)	
Saturated Fat (g)		Total Carbohydrate (g)		Protein (g)		Calcium (mg)		Vitamin C (mg)	

Source: Adapted from the National Watermelon Promotion Board

STEAMED EDAMAME - IN POD	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: ½ CUP BEANS, PEAS, AND LENTILS	

	50 SERVINGS	**10 SERVINGS**	**DIRECTIONS**
Edamame, frozen in pod	15 pounds	3 pounds	1. STEAMER: Arrange an entire bag of frozen edamame in a half-size hotel pan. Steam for 7 to 8 minutes. 2. STEAM JACKETED KETTLE: Bring 5 quarts of water to boil on high in a 7-quart pot. Add the entire bag of frozen edamame into the boiling water. Quickly return to boil, cook 5 minutes longer. Do not cover. Drain and serve.
Oil, canola	½ cup	2 tablespoons	3. Combine oil, salt, pepper and lemon zest. Toss cooked edamame with the seasoning mixture.
Salt, kosher	1 teaspoon	¼ teaspoon	
Black pepper, ground	½ teaspoon	¼ teaspoon	
Lemon zest	¼ cup	1 tablespoon	
Smoked paprika, optional	1 teaspoon	½ teaspoon	4. Garnish with smoked paprika. **CCP**: Cook until internal temperature reaches 135°F or above. **CCP**: Hold for hot service at 135°F or higher.

RECIPE NOTES:

NUTRIENTS PER SERVING									
Calories	180	Cholesterol (mg)	0	Dietary Fiber (g)	7	Vitamin D (mcg)	0	Potassium (mg)	600
Total Fat (g)	10	Sodium (mg)	95	Added Sugars (g)	0	Iron (mg)	3.6	Vitamin A-RAE (mcg)	1.15
Saturated Fat (g)	0	Total Carbohydrate (g)	20	Protein (g)	16	Calcium (mg)	90	Vitamin C (mg)	0.6

QUICK PICKLED CUKES	SERVING SIZE: ¼ CUP ONE PORTION PROVIDES: ¼ CUP OTHER VEGETABLE	

INGREDIENTS	**50 SERVINGS**	**10SERVINGS**	**DIRECTIONS**
Cucumbers, thinly sliced	6 ½ pounds	1 ¼ pounds	1. Place the cucumbers in a bowl or container.
Vinegar, cider	4 cups	1 cup	2. Combine the vinegar, water, sugar, and salt in a saucepan. Bring to a boil and stir until the sugar is dissolved. 3. Pour the hot liquid over the cucumbers. 4. Refrigerate for at least 3 hours before serving. **CCP**: Hold and serve at 41°F or lower.
Water	4 cups	1 cup	
Sugar, white granulated	¼ cup	1 tablespoon	
Salt, kosher	¼ cup	1 tablespoon	

SERVING NOTES:

Add ½ teaspoon red chili flakes for sweet and spicy cucumbers.

NUTRIENTS PER SERVING									
Calories	15	Cholesterol (mg)	0	Dietary Fiber (g)	0	Vitamin D (mcg)	0	Potassium (mg)	100
Total Fat (g)	0	Sodium (mg)	460	Added Sugars (g)	1	Iron (mg)	0.2	Vitamin A-RAE (mcg)	3
Saturated Fat (g)	0	Total Carbohydrate (g)	3	Protein (g)	0	Calcium (mg)	10	Vitamin C (mg)	2

SOURCE: Samantha Cowens-Gasbarro

COOKING VEGETABLES FOR GREATER APPEAL
TEAM ASSIGNMENTS

	Vegetable	Recipe 1 (Cold Vegetable Salad)	Recipe 2 (Roast)	Recipe 3 (Steam)	Quick Pickle
Team 1	*Broccoli*	Broccoli Salad (using blanched broccoli)	Ranch-Roasted Broccoli	Lemon Zest Broccoli	Dilly Cukes
Team 2	*Cauliflower*	Cauliflower Salad	Roasted Cauliflower with Turmeric	Buffalo Cauliflower Bites	Banh Mi Pickled Veggies (see Bahn Mi Vietnamese Sandwich recipe)
Team 3	*Carrots*	Moroccan Carrot Salad	Roasted Carrot Fries	Honey Carrots Coins	Pickled Spicy Carrots
Team 4	*Butternut squash*	Butternut Squash Parfait	Roasted Butternut Squash	Mashed Butternut Squash	Giardiniera
Team 5	*Summer squash*	Zucchini Fries	Roasted Ratatouille	Zucchini Parmesan	Turmeric Zucchini
Team 6	*Corn*	Edamame and Corn Salad	Esquites	Corn Pudding	Pickled Jalapenos
Team 7	*Green beans*	Green beans with Bean Salad with Almonds (using blanched green beans)	Sesame-Roasted Green Beans	Pizza Green Beans	Dilly Green Beans
Team 8	*Beans*	BBQ Three Bean Salad	Roasted Chickpeas	Maple Sriracha Baked Beans	Pickled Watermelon Rind

These recipes were developed for training and have not been tested or standardized for production.

BLANCHED BROCCOLI	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: ½ CUP DARK GREEN VEGETABLE	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Broccoli florets	7 pounds	1 pound, 8 ounces	1. Use a steam kettle, tilting braising pan, or stockpot. Bring the water to a boil. Place the broccoli in the boiling water and cook for 2-3 minutes or just until the color of the vegetables becomes brighter (green vegetables will become a brighter green) and tender. 2. Immediately drain all of the hot water. 3. To stop cooking, immerse the broccoli in an ice water bath and leave for about 1 minute or until completely cooled. 4. Drain the broccoli well and store it covered in the refrigerator until time to use. **CCP**: Hold at 41°F or lower until ready to use.
Water, boiling			
Ice water bath			

NUTRIENTS PER SERVING

Calories	20	Cholesterol (mg)	0	Dietary Fiber (g)	1	Vitamin D (mcg)	0	Potassium (mg)	210
Total Fat (g)	0	Sodium (mg)	15	Added Sugars (g)	0	Iron (mg)	0.6	Vitamin A-RAE (mcg)	95.25
Saturated Fat (g)	0	Total Carbohydrate (g)	3	Protein (g)	2	Calcium (mg)	30	Vitamin C (mg)	59

BROCCOLI SALAD	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: 3⁄8 CUP DARK GREEN VEGETABLE AND 1⁄8 CUP FRUIT	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Broccoli florets, blanched	7 pounds	1 pound, 8 ounces	**CCP**: No bare-hand contact with ready-to-eat food. 1. Combine the broccoli, onions, and raisins in a large bowl. 2. Whisk the mayonnaise, vinegar, and sugar separately, then add to the broccoli mixture. Stir well to combine. **CCP**: Hold and serve at 41°F or lower.
Onion, red, small diced	1 medium	2 ounces	
Raisins	1 ½ pounds	5 ounces	
Mayonnaise	1 quart	¾ cup	
Vinegar, cider	½ cup	2 tablespoons	
Sugar, white granulated	¼ cup	1 tablespoon	

NUTRIENTS PER SERVING									
Calories	180	Cholesterol (mg)	5	Dietary Fiber (g)	2	Vitamin D (mcg)	0	Potassium (mg)	320
Total Fat (g)	13	Sodium (mg)	135	Added Sugars (g)	1	Iron (mg)	0.8	Vitamin A-RAE (mcg)	98.08
Saturated Fat (g)	2	Total Carbohydrate (g)	15	Protein (g)	2	Calcium (mg)	40	Vitamin C (mg)	59

SOURCE: Adapted from *New School Cuisine Cookbook: Nutritious and Seasonal Recipes for School Cooks by School Cooks*, Vermont Agency of Education, School Nutrition Association of Vermont, USDA, Team Nutrition, and Vermont FEED. http://vtfeed.org/resource-library

RANCH-ROASTED BROCCOLI	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: ½ CUP DARK GREEN VEGETABLE	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Broccoli florets, fresh	8 ¾ pounds	1 ¾ pounds	1. Preheat the oven to 400°F. 2. In batches, toss the ingredients in a large bowl until combined. 3. Spread the broccoli on sheet pans lined with sprayed parchment paper. 4. Roast the broccoli for 15 to 20 minutes or until it is soft and golden brown. **CCP**: Cook until internal temperature reaches 135°F or above. **CCP**: Hold for hot service at 135°F or higher.
Oil, olive, or canola	½ cup	1 ½ tablespoon	
Salt, kosher	1 tablespoon	½ teaspoon	
Ranch Seasoning	4 tablespoons	1 tablespoon	
NOTE: *This dish works wonderfully with farm-fresh broccoli, but frozen is a good substitute in large food-service facilities.*			

NUTRIENTS PER SERVING									
Calories	45	Cholesterol (mg)	0	Dietary Fiber (g)	2	Vitamin D (mcg)	0	Potassium (mg)	270
Total Fat (g)	2.5	Sodium (mg)	115	Added Sugars (g)	0	Iron (mg)	0.8	Vitamin A-RAE (mcg)	119.26
Saturated Fat (g)	0	Total Carbohydrate (g)	4	Protein (g)	2	Calcium (mg)	40	Vitamin C (mg)	76

# LEMON ZEST BROCCOLI	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: ½ CUP DARK GREEN VEGETABLE	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Broccoli brunches	10 ½ pounds	2 pounds 2 ounces	1. Remove the broccoli crowns from the stems and chop. 2. Steam the broccoli in a steamer or a large pot with 2 inches of water, covered, over high heat, just until bright green, 2-7 minutes, depending on the method used. **CCP**: Cook until internal temperature reaches 135°F or above. 3. Drain thoroughly.
Lemons, fresh	2 each	½ each	4. Grate the outer yellow lemon skin with a zesting tool or on the small grating side of a cheese grater.
Parmesan cheese, grated	3 ounces (¾ cup)	3 tablespoons	5. Mix the broccoli with the lemon zest, Parmesan cheese, salt, pepper, and olive oil in hotel pans. **CCP**: Hold for hot service at 135°F or higher.
Salt, kosher	1 tablespoon	½ teaspoon	
Black pepper	2 teaspoons	½ teaspoon	
Oil, olive	¾ cup	3 tablespoons	

NUTRIENTS PER SERVING									
Calories	50	Cholesterol (mg)	0	Dietary Fiber (g)	1	Vitamin D (mcg)	0	Potassium (mg)	180
Total Fat (g)	4	Sodium (mg)	140	Added Sugars (g)	0	Iron (mg)	0.5	Vitamin A-RAE (mcg)	83.29
Saturated Fat (g)	1	Total Carbohydrate (g)	3	Protein (g)	2	Calcium (mg)	40	Vitamin C (mg)	49

SOURCE: Fresh From the Farm: The Massachusetts Farm to School Cookbook, http://www.massfarmtoschool.org/wp-content/uploads/2012/05/farm_to_school_cookbook.pdf

DILLY CUKES	SERVING SIZE: N/A USED AS GARNISH DOES NOT CREDIT QUANTITIES USED AS GARNISH	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Water	3 cups	½ cup, 2 tablespoons	1. Bring the water, vinegar, salt, and sugar to a boil in a small pot.
Vinegar, apple cider	3 cups	½ cup, 2 tablespoons	
Salt, kosher	2 tablespoons	1 teaspoon	
Sugar, white	5 tablespoons	1 tablespoon	
Cucumbers	10 cups	2 cups	2. Place the cucumbers and dill in a large bowl. Pour the pickling liquid over the vegetables. Marinate for 1-2 hours or refrigerate for up to 3 days. **CCP:** Hold and serve at 41°F or lower.
Dill, fresh or dried	4 tablespoons	2 ½ teaspoons	

NUTRIENTS PER SERVING									
Calories	10	Cholesterol (mg)	0	Dietary Fiber (g)	0	Vitamin D (mcg)	0	Potassium (mg)	30
Total Fat (g)	0	Sodium (mg)	190	Added Sugars (g)	1	Iron (mg)	0.1	Vitamin A-RAE (mcg)	1.27
Saturated Fat (g)	0	Total Carbohydrate (g)	2	Protein (g)	0	Calcium (mg)	0	Vitamin C (mg)	0.62

SOURCE: Culinary Nutrition Associates LLC

BLANCHED CAULIFLOWER	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: ½ CUP OTHER VEGETABLE	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Cauliflower florets, fresh	7 pounds, 4 ounces	1 pound, 8 ounces	1. Prepare the washed, cut cauliflower.
Water, boiling			2. Use a steam kettle, tilting braising pan, or stockpot to bring water to a boil. Place the cauliflower in the boiling water and cook for 2-3 minutes. To blanch small amounts of vegetables, place the vegetables in a colander and then set the whole colander in the boiling water. 3. Immediately drain all hot water.
Ice bath			4. Immerse the vegetables in an ice bath (water with ice), making sure all the vegetables are submerged. Leave for about 1 minute to stop the cooking process. 5. Drain the vegetables well and store them covered in the refrigerator until time for use. **CCP**: Hold at 41°F or lower until ready to use.

NUTRIENTS PER SERVING

Calories	15	Cholesterol (mg)	0	Dietary Fiber (g)	1	Vitamin D (mcg)	0	Potassium (mg)	200
Total Fat (g)	0	Sodium (mg)	20	Added Sugars (g)	0	Iron (mg)	0.3	Vitamin A-RAE (mcg)	0
Saturated Fat (g)	0	Total Carbohydrate (g)	3	Protein (g)	1	Calcium (mg)	10	Vitamin C (mg)	32.79

CAULIFLOWER SALAD	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: ½ CUP OTHER VEGETABLE	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Cauliflower florets, fresh blanched	7 pounds, 4 ounces	1 pound, 8 ounces	**CCP**: No bare-hand contact with ready-to-eat food. 1. Trim cauliflower and cut into bite-sized pieces—blanch cauliflower.
Mayonnaise, low fat	2 ½ cups	½ cup	2. Combine mayonnaise, vinegar, mustard, and black pepper.
Vinegar, apple cider	⅓ cup	1 tablespoon	
Mustard, Dijon	1 tablespoon, 2 teaspoons	1 teaspoon	
Black pepper, ground	2 ½ teaspoons	½ teaspoon	
Celery, sliced thinly	5 cups	1 cup	3. Gently combine celery, green onions, cauliflower, parsley, and dressing. 4. Chill. **CCP**: Hold and serve at 41°F or lower.
Onion, green, sliced thinly	1 ¼ cups	¼ cup	
Parsley, flat leaf, chopped	½ cup, 2 tablespoons	2 tablespoons	

NUTRIENTS PER SERVING

Calories	30	Cholesterol (mg)	0	Dietary Fiber (g)	2	Vitamin D (mcg)	0	Potassium (mg)	240
Total Fat (g)	1	Sodium (mg)	150	Added Sugars (g)	1	Iron (mg)	0.4	Vitamin A-RAE (mcg)	6.75
Saturated Fat (g)	0	Total Carbohydrate (g)	5	Protein (g)	1	Calcium (mg)	20	Vitamin C (mg)	34.59

Source: Culinary Nutrition Associates LLC

ROASTED CAULIFLOWER WITH TURMERIC	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: ½ CUP OTHER VEGETABLE	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Cauliflower, florets	12 pounds	2 pounds, 6 ounces	1. Preheat convection oven to 400°F. Line 3 sheet pans with parchment paper. 2. Trim cauliflower and cut or break into 2-inch florets.
Oil, olive	½ cup	2 tablespoons	3. Whisk olive oil, sesame oil, turmeric, and salt in a large bowl. Add the cauliflower and toss to coat. 4. Divide the cauliflower among the prepared sheet pans and spread in a single layer. Roast until golden, 18 to 20 minutes. **CCP**: Cook until internal temperature reaches 135°F or above. **CCP**: Hold for hot service at 135°F or higher.
Oil, sesame	½ cup	2 tablespoons	
Ground Turmeric	3 tablespoons	2 teaspoons	
Salt, kosher	1 tablespoon	1 teaspoon	

NUTRIENTS PER SERVING									
Calories	70	Cholesterol (mg)	0	Dietary Fiber (g)	2	Vitamin D (mcg)	0	Potassium (mg)	330
Total Fat (g)	4.5	Sodium (mg)	150	Added Sugars (g)	0	Iron (mg)	0.7	Vitamin A-RAE (mcg)	0
Saturated Fat (g)	1	Total Carbohydrate (g)	6	Protein (g)	2	Calcium (mg)	20	Vitamin C (mg)	52.47

SOURCE: *New School Cuisine Cookbook: Nutritious and Seasonal Recipes for School Cooks by School Cooks*, Vermont Agency of Education, School Nutrition Association of Vermont, USDA, Team Nutrition, and Vermont FEED. http://vtfeed.org/resource-library

BUFFALO CAULIFLOWER BITES	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: ½ CUP OTHER VEGETABLE	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Cauliflower, fresh (1 medium head is about 6 cups)	11 pounds, 4 ounces	2 pounds, 4 ounces	1. Preheat the oven to 400°F. 2. Prepare the cauliflower into florets.
Butter, melted	½ cup	2 tablespoons	3. Whisk the butter, hot sauce and lemon juice. 4. Toss the cauliflower in the hot sauce mixture until well coated. 5. Spread the cauliflower onto a sheet tray and roast until beginning to brown and tender, about 20 minutes. **CCP**: Cook until internal temperature reaches 135°F or above. **CCP**: Hold for hot service at 135°F or higher.
Hot sauce (such as Frank's)	2 cups	½ cup	
Lemon juice	¼ cup	1 tablespoon	

NUTRIENTS PER SERVING

Calories	45	Cholesterol (mg)	5	Dietary Fiber (g)	2	Vitamin D (mcg)	0	Potassium (mg)	280
Total Fat (g)	2.5	Sodium (mg)	510	Added Sugars (g)	0	Iron (mg)	0.4	Vitamin A-RAE (mcg)	43.43
Saturated Fat (g)	1.5	Total Carbohydrate (g)	5	Protein (g)	2	Calcium (mg)	20	Vitamin C (mg)	62.44

BLANCHED CARROTS	ONE SERVING: ½ CUP ONE PORTION PROVIDES: ½ CUP RED/ORANGE VEGETABLE	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Carrots, fresh, peeled and cut	8 pounds	1 pound 10 ounces	1. Prepare the washed, cut carrots.
Water, boiling			2. Use a steam kettle, tilting braising pan, or stockpot to bring water to a boil. Place the carrots in the boiling water and cook for 2-3 minutes or until tender. To blanch small amounts of vegetables, place the vegetables in a colander and then set the whole colander in the boiling water. 3. Immediately drain all hot water.
Ice bath			4. Immerse the vegetables in an ice bath (water with ice), making sure all the vegetables are submerged. Leave for about 1 minute to stop the cooking process. 5. Drain the vegetables well and store them covered in the refrigerator until time for use. **CCP**: Hold at 41°F or lower until ready to use.

NUTRIENTS PER SERVING

Calories	35	Cholesterol (mg)	0	Dietary Fiber (g)	2	Vitamin D (mcg)	--	Potassium (mg)	--
Total Fat (g)	0	Sodium (mg)	40	Added Sugars (g)	0	Iron (mg)	0	Vitamin A-RAE (mcg)	637.86
Saturated Fat (g)	0	Total Carbohydrate (g)	8	Protein (g)	1	Calcium (mg)	20	Vitamin C (mg)	5.67

MOROCCAN CARROT SALAD	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: ½ CUP RED/ORANGE VEGETABLE AND 1/8 CUP FRUIT	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Carrots, matchsticks	6 pounds	1 ¼ pound	**CCP**: No bare-hand contact with ready-to-eat food. 1. Combine matchstick carrots, dried raisins or cherries in a large mixing bowl and set aside.
Raisins or dried cherries	1 pound	3 ½ ounces	
Dressing			
Orange juice, fresh	¾ cup	2 ½ tablespoons	2. Combine orange juice, lemon juice, orange zest, brown sugar, salt, and cinnamon in the bowl of a mixer. Mix on medium speed, using a wire whip, until well blended. Alternatively, you can mix by hand in a mixing bowl with a whisk. 3. Slowly add the olive oil while mixing; whisk until well combined. 4. Pour the citrus cinnamon dressing over the carrot mixture and mix until carrots are well coated with dressing. **CCP**: Hold and serve at 41°F or lower.
Lemon juice, fresh	½ cup	1 ½ tablespoon	
Orange zest	2 tablespoons	1 ½ teaspoons	
Sugar, brown, packed	¼ cup	1 tablespoon	
Salt, kosher	1 teaspoon	¼ teaspoon	
Cinnamon, ground	2 teaspoons	½ teaspoon	
Oil, olive	1 cup	3 tablespoons	

NUTRIENTS PER SERVING

Calories	90	Cholesterol (mg)	0	Dietary Fiber (g)	3	Vitamin D (mcg)	0	Potassium (mg)	220
Total Fat (g)	4	Sodium (mg)	90	Added Sugars (g)	1	Iron (mg)	0.8	Vitamin A-RAE (mcg)	0.41
Saturated Fat (g)	0.5	Total Carbohydrate (g)	17	Protein (g)	1	Calcium (mg)	30	Vitamin C (mg)	2.24

SOURCE: Washington State Schools "Scratch Cooking" Recipe Book, OSPI Child Nutrition Services, September 2013.

ROASTED CARROT FRIES	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: ½ CUP RED/ORANGE VEGETABLE	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Carrots, fresh, peeled, and cut into small sticks (battonet)	10 pounds	2 pounds	1. Purchase fresh carrot sticks for this recipe, or cut whole carrots into sticks. 2. Toss carrot sticks with the canola oil and seasonings until the carrots are lightly coated. 3. Spread the carrots in a single layer on sheet pans. 4. Roast in a preheated 375° F oven for approximately 30 minutes or until the carrots are softened and caramelized. **CCP**: Cook until internal temperature reaches 135°F or above. **CCP**: Hold for hot service at 135°F or higher.
Oil, canola	¼ cup	2 ½ teaspoons	
Garlic, granulated	2 tablespoons	½ tablespoons	
Black pepper	½ teaspoon	⅛ teaspoon	

NUTRIENTS PER SERVING									
Calories	50	Cholesterol (mg)	0	Dietary Fiber (g)	2	Vitamin D (mcg)	0	Potassium (mg)	0
Total Fat (g)	1	Sodium (mg)	45	Added Sugars (g)	0	Iron (mg)	0	Vitamin A-RAE (mcg)	785.07
Saturated Fat (g)	0	Total Carbohydrate (g)	10	Protein (g)	1	Calcium (mg)	20	Vitamin C (mg)	7.04

Recipe Notes:

Hold hot at 140° F until served. Portion with a 4-ounce spoodle (½ cup). Heat to 145° F or higher for at least 15 seconds.

Optional: Salt-free seasonings such as onion powder, Italian seasoning, and/or black pepper may be added to taste when tossing the carrots and oil together.

SOURCE: Oklahoma Farm to School

HONEY CARROT COINS	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: ½ CUP RED/ORANGE VEGETABLE	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Carrots, peeled and sliced	12 pounds, 8 ounces	2 pounds, 8 ounces	1. Steam carrots until tender but still slightly firm, checking for doneness, if necessary, about 5-10 minutes, depending on the intensity of your steamer. (Alternatively, boil 2 inches of water to cook in a pot. Add carrots and cover, then follow the directions above.) 2. Stir in the honey, butter, lemon juice, salt, and pepper until well combined. **CCP**: Cook until internal temperature reaches 135°F or above. **CCP**: Hold for hot service at 135°F or higher.
Honey	1 cup	¼ cup	
Butter	4 ounces	1 ounce	
Lemon juice, fresh	¼ cup, 2 tablespoons	1 ½ tablespoons	
Salt, kosher	1 tablespoon	1 teaspoon	
Black pepper, ground	1 teaspoon	⅛ teaspoon	

NUTRIENTS PER SERVING									
Calories	100	Cholesterol (mg)	5	Dietary Fiber (g)	3	Vitamin D (mcg)	0	Potassium (mg)	10
Total Fat (g)	2.5	Sodium (mg)	270	Added Sugars (g)	7	Iron (mg)	0	Vitamin A-RAE (mcg)	1000.74
Saturated Fat (g)	1.5	Total Carbohydrate (g)	19	Protein (g)	2	Calcium (mg)	30	Vitamin C (mg)	9.65

SOURCE: Massachusetts Farm to School

# PICKLED SPICY CARROTS	SERVING SIZE: N/A USED AS GARNISH DOES NOT CREDIT QUANTITIES USED AS GARNISH	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Water	3 cups	½ cup, 2 tablespoons	1. Bring water, vinegar, salt, and sugar to a boil in a small pot. 2. Place carrots and jalapenos in a large bowl. Pour pickling liquid over the vegetables. Marinate for 1-2 hours or refrigerate for up to 3 days. **CCP**: Hold and serve at 41°F or lower.
Vinegar, apple cider	3 cups	½ cup, 2 tablespoons	
Salt, kosher	2 tablespoons	1 ½ teaspoons	
Sugar, white granulated	5 tablespoons	1 tablespoon	
Carrots	10 cups	2 cups	
Jalapenos	1 cup	¼ cup	

NUTRIENTS PER SERVING									
Calories	15	Cholesterol (mg)	0	Dietary Fiber (g)	1	Vitamin D (mcg)	0	Potassium (mg)	90
Total Fat (g)	0	Sodium (mg)	310	Added Sugars (g)	1	Iron (mg)	0.1	Vitamin A-RAE (mcg)	215.05
Saturated Fat (g)	0	Total Carbohydrate (g)	4	Protein (g)	0	Calcium (mg)	10	Vitamin C (mg)	4.18

SOURCE: Culinary Nutrition Associates LLC

BUTTERNUT SQUASH PARFAIT	SERVING SIZE: 1 PARFAIT ONE PORTION PROVIDES: 1 OZ. MEAT/MEAT ALTERNATE, 1/4 CUP RED/ORANGE VEGETABLE, 1/4 CUP FRUIT, 1 OZ. GRAIN EQUIVALENT	

INGREDIENTS	60 SERVINGS	10 SERVINGS	DIRECTIONS
Butternut squash, frozen	20 pounds (approx. 8 fresh squash)	3 pounds, 6 ounces (approx. 1 ½ fresh squash)	1. Preheat oven to 425° F. 2. Distribute squash evenly onto three baking sheets. Toss each sheet with two tablespoons olive oil and two tablespoons maple syrup.
Olive oil	3/8 cup	1 tablespoon	
Maple syrup	3/8 cup	1 tablespoon	
Salt	2 teaspoons	½ teaspoon	3. Sprinkle each sheet evenly with salt and cinnamon. Toss the squash together to coat it evenly. Bake for 30 minutes, then set aside.
Cinnamon, ground	2 tablespoons	1 teaspoon	
Cranberries, dried	7-1/2 cups	1 ¼ cup	**CCP**: No bare-hand contact with ready-to-eat food. 4. In one 8-fluid ounce cup, add 4 ounces, or ½ cup, of yogurt. 5. Add 1 ounce of granola on top of yogurt. 6. Top granola with ½ cup squash and 1/8 cup dried cranberries. **CCP**: Hold and serve at 41°F or lower.
Yogurt, vanilla, non-fat	15 pounds	2 ½ pounds	
Granola, whole grain-rich	4 pounds	11 ounces	

NUTRIENTS PER SERVING									
Calories	350	Cholesterol (mg)	5	Dietary Fiber (g)	4	Vitamin D (mcg)	1	Potassium (mg)	790
Total Fat (g)	4	Sodium (mg)	200	Added Sugars (g)	1	Iron (mg)	3.8	Vitamin A-RAE (mcg)	1105.22
Saturated Fat (g)	0.5	Total Carbohydrate (g)	76	Protein (g)	7	Calcium (mg)	220	Vitamin C (mg)	32.16

Source: Reprinted/ excerpted from American Indian Traditional Foods in USDA School Meals Programs with permission from the Wisconsin Department of Public Instruction, 125 South Webster Street, Madison WI 53703, 1-800-243-8782.

ROASTED BUTTERNUT SQUASH	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: ½ CUP RED/ORANGE VEGETABLE	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Butternut squash, peeled, seeded, cut into ½ inch cubes Steam or microwave squash for 3 minutes to make peeling easier.	13 ½ pounds	2 pounds, 12 ounces	1. Spray four full sheets lightly with food release. Distribute the squash evenly among pans in a single layer, carefully not to overcrowd the pans.
Butter, unsalted	¼ pound	2 tablespoons	2. Mix the butter with olive oil, brown sugar, salt, cinnamon, and pepper. Mix thoroughly. 3. Divide the butter mixture equally among pans. Stir until squash is well coated. 4. Roast, uncovered, until cooked through and lightly browned. • Convection Oven: Bake at 350° F; about 20-30 minutes. • Conventional Oven: Bake at 375° F; about 30-35 minutes. **CCP**: Cook until internal temperature reaches 135°F or above. **CCP**: Hold for hot service at 135°F or higher.
Oil, olive	¾ cup	1 ½ tablespoon	
Sugar, brown, packed	2 ¼ cups	½ cup	
Salt, kosher	4 teaspoons	¾ teaspoon	
Cinnamon, ground (Optional)	1 ½ tablespoons	1 teaspoon	
Black pepper, ground	1 teaspoon	¼ teaspoon	

NUTRIENTS PER SERVING

Calories	130	Cholesterol (mg)	5	Dietary Fiber (g)	2	Vitamin D (mcg)	0	Potassium (mg)	390
Total Fat (g)	4.5	Sodium (mg)	150	Added Sugars (g)	11	Iron (mg)	0.8	Vitamin A-RAE (mcg)	576.38
Saturated Fat (g)	2	Total Carbohydrate (g)	23	Protein (g)	1	Calcium (mg)	60	Vitamin C (mg)	22.01

SOURCE: Owatonna Public Schools, Now We're Cooking! A collection of Simple Scratch Recipes Served in Minnesota Schools, Minnesota Department of Healthy. www.health.state.mn.us/divs/hpcd/chp/cdrr/nutrition/greattrays/pdfs/NowCooking.pdf

MASHED BUTTERNUT SQUASH	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: ½ CUP RED/ORANGE VEGETABLE	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Butternut squash	16 pounds	3 ¼ pounds	1. Steam squash until soft. Time will depend on how small the pieces are and the type of steamer used, 10-30 minutes (check after 10 minutes). CCP: Heat to 135°F or higher. 2. Mash butternut in a mixer or food processor until smooth.
Butter	6 ounces	2 tablespoons	3. While squash is hot, mix in butter, brown sugar, salt, cinnamon, and pepper. **CCP**: Cook until internal temperature reaches 135°F or above. **CCP**: Hold for hot service at 135°F or higher.
Salt, kosher	2 teaspoons	½ teaspoon	
Sugar, brown, packed	½ cup	1 tablespoon	
Cinnamon	1 tablespoon	½ teaspoon	
Black pepper, ground	1 teaspoon	1/8 teaspoon	

NUTRIENTS PER SERVING									
Calories	80	Cholesterol (mg)	5	Dietary Fiber (g)	3	Vitamin D (mcg)	0	Potassium (mg)	440
Total Fat (g)	2.5	Sodium (mg)	120	Added Sugars (g)	1	Iron (mg)	0.9	Vitamin A-RAE (mcg)	677.61
Saturated Fat (g)	1.5	Total Carbohydrate (g)	160	Protein (g)	1	Calcium (mg)	60	Vitamin C (mg)	26.01

SOURCE: Fresh From the Farm: The Massachusetts Farm to School Cookbook, http://www.massfarmtoschool.org/wp-content/uploads/2012/05/farm_to_school_cookbook.pdf

GIARDINIERA	SERVING SIZE: N/A USED AS GARNISH DOES NOT CREDIT QUANTITIES USED AS GARNISH	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Vinegar, apple cider	3 cups	½ cup	1. Bring vinegar, water, salt, and sugar to a boil in a small pot.
Water	3 cups	½ cup	
Salt, kosher	2 tablespoons	1 teaspoon	
Sugar, white granulated	2 tablespoons	1 teaspoon	
Carrots, sliced	2 ½ cups	½ cup	2. Place vegetables in a large bowl. 3. Pour pickling liquid over vegetables. 4. Marinate for 1 to 2 hours or refrigerate for up to 3 days. **CCP**: Hold and serve at 41°F or lower.
Cauliflower, florets	2 ½ cups	½ cup	
Peppers, bell, red, battonet cut	2 ½ cups	½ cup	
Zucchini, sliced	2 ½ cups	½ cup	

NUTRIENTS PER SERVING									
Calories	10	Cholesterol (mg)	0	Dietary Fiber (g)	0	Vitamin D (mcg)	0	Potassium (mg)	60
Total Fat (g)	0	Sodium (mg)	200	Added Sugars (g)	0	Iron (mg)	0.1	Vitamin A-RAE (mcg)	61.28
Saturated Fat (g)	0	Total Carbohydrate (g)	2	Protein (g)	0	Calcium (mg)	0	Vitamin C (mg)	9.94

SOURCE: Culinary Nutrition Associates LLC

ZUCCHINI FRIES

SERVING SIZE: ½ CUP

ONE PORTION PROVIDES: ½ CUP OTHER VEGETABLE

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Squash, summer, fresh	10 pounds	2 pounds	1. Preheat oven to 400°F. 2. Wash and cut zucchini into 3 inches by 1-inch sticks.
Flour, all-purpose, enriched	2 ½ cups	½ cup	3. Combine flour, salt, and pepper in the first bowl.
Salt, kosher	5/8 teaspoon	1/8 teaspoon	
Black pepper	5/8 teaspoon	1/8 teaspoon	
Eggs, large	5 large	2 large	4. Whisk eggs well with three tablespoons of water in a second bowl.
Water	1 cup	3 tablespoons	
Breadcrumbs, panko	1 quart, 1 cup	1 cup	5. Combine breadcrumbs, cheese, and Italian seasoning in a third bowl. Mix well. 6. Set up a breading station (flour, egg, breadcrumbs) with a parchment-lined sheet pan. Dip zucchini sticks in flour, then egg, then breadcrumbs, coating evenly. Place on the sheet pan, spacing 1/2 inch apart. Repeat. 7. Bake the zucchini sticks for 15-20 minutes (rotating halfway through) until crispy and the zucchini is cooked through. **CCP**: Cook until internal temperature reaches 135°F or above. **CCP**: Hold for hot service at 135°F or higher.
Parmesan, cheese, grated	2 ½ cups	½ cup	
Italian seasoning	5 tablespoons	1 tablespoon	

NUTRIENTS PER SERVING

Calories	90	Cholesterol (mg)	20	Dietary Fiber (g)	1	Vitamin D (mcg)	0.1	Potassium (mg)	250
Total Fat (g)	2	Sodium (mg)	120	Added Sugars (g)	0	Iron (mg)	1	Vitamin A-RAE (mcg)	27.72
Saturated Fat (g)	1	Total Carbohydrate (g)	13	Protein (g)	4	Calcium (mg)	60	Vitamin C (mg)	15.50

SOURCE: Adapted from Windham Raymond School Department, Windham, Maine

ROASTED RATATOUILLE	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: ½ CUP OTHER VEGETABLE	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Squash, summer (zucchini) fresh, sliced into ¼ inch thick half-moons	3 ½ pounds	12 ounces	1. Pre-heat convection oven to 375°F (400°F for conventional oven). 2. Prepare vegetables. Place vegetables on parchment paper lined sheet trays in a single layer. Do not overcrowd the sheet pans.
Squash, summer, (yellow) fresh, sliced into ¼-inch thick half-moons	3 ½ pounds	12 ounces	
Onion, red, fresh, thinly sliced	1 ¼ pound	2 ounces	
Peppers, sweet, green, fresh, thinly sliced	1 pound	2 ounces	
Peppers, sweet, red, fresh, thinly sliced	1 pound	2 ounces	
Tomatoes, cherry	1 ½ pound	2 ½ ounces	
Oil, canola	½ cup	2 tablespoons	3. Mix oil, salt, pepper, garlic, Italian seasoning, and red pepper flakes. 4. Pour the oil mixture over the vegetables and toss until evenly coated. 5. Roast until tomatoes pop and other vegetables caramelize, approximately 15 minutes. If necessary, continue roasting for 5-10 minutes until vegetables are tender. **CCP**: Cook until internal temperature reaches 135°F or above. **CCP**: Hold for hot service at 135°F or higher.
Salt, kosher	1 ½ teaspoon	½ teaspoon	
Black pepper	1 ½ teaspoon	¼ teaspoon	
Garlic, granulated	1 tablespoon	1 teaspoon	
Italian seasoning blend	1 tablespoon	1 teaspoon	
Red pepper flakes, optional	1 teaspoon	1/8 teaspoon	

NUTRIENTS PER SERVING

Calories	45	Cholesterol (mg)	0	Dietary Fiber (g)	1	Vitamin D (mcg)	0	Potassium (mg)	140
Total Fat (g)	3.5	Sodium (mg)	105	Added Sugars (g)	0	Iron (mg)	0.3	Vitamin A-RAE (mcg)	16.80
Saturated Fat (g)	0	Total Carbohydrate (g)	3	Protein (g)	1	Calcium (mg)	10	Vitamin C (mg)	20.34

SOURCE: Rebecca Polson, Spartanburg County School District Six

ZUCCHINI PARMESAN	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: ½ CUP OTHER VEGETABLE AND 0.25 OZ M/MA	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Squash, summer, fresh, sliced	12 pounds	2 pounds, 12 ounces	1. Preheat convection oven to 350°F. For 10 servings: Coat one 2-inch, half-hotel pan with cooking spray. For 50 servings: Coat two 2-inch hotel pans with cooking spray. 2. Prepare vegetables. 3. Dividing ingredients evenly between the two pans (for 50 servings), layer half the zucchini, all the onion and garlic, then the remaining zucchini. Divide the sauce between the pans. Cover and bake until just tender, about 20 minutes.
Onions, peeled, sliced	2 pounds	6 ounces	
Garlic, peeled, sliced thin	8 cloves	2 cloves	
Tomato sauce or marinara	1 gallon	3 cups	
Mozzarella, part-skim, shredded	1 pound	3 ounces	4. Uncover and sprinkle with mozzarella and Parmesan cheeses. Bake, uncovered until the cheese is melted and bubbly, 5 to 10 minutes more. **CCP**: Cook until internal temperature reaches 135°F or above. **CCP**: Hold for hot service at 135°F or higher.
Parmesan cheese, grated	1 quart	¾ cup	

NUTRIENTS PER SERVING

Calories	100	Cholesterol (mg)	10	Dietary Fiber (g)	1	Vitamin D (mcg)	0.1	Potassium (mg)	270
Total Fat (g)	5	Sodium (mg)	530	Added Sugars (g)	0	Iron (mg)	1	Vitamin A-RAE (mcg)	50.69
Saturated Fat (g)	2.5	Total Carbohydrate (g)	9	Protein (g)	5	Calcium (mg)	140	Vitamin C (mg)	11.20

SOURCE: *New School Cuisine Cookbook: Nutritious and Seasonal Recipes for School Cooks by School Cooks*, Vermont Agency of Education, School Nutrition Association of Vermont, USDA, Team Nutrition, and Vermont FEED. http://vtfeed.org/resource-library

# TURMERIC ZUCCHINI	SERVING SIZE: N/A USED AS GARNISH DOES NOT CREDIT QUANTITIES USED AS GARNISH	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Water	3 cups	½ cup, 2 tablespoons	1. Bring water, vinegar, salt, and sugar to a boil in a small pot. 2. Place turmeric and zucchini in a large bowl. Pour pickling liquid over the vegetables. Marinate for 1-2 hours or refrigerate for up to 3 days. **CCP**: Hold and serve at 41°F or lower.
Vinegar, apple cider	3 cups	½ cup, 2 tablespoons	
Salt, kosher	2 tablespoons	1 teaspoon	
Sugar, white granulated	5 tablespoons	1 tablespoon	
Zucchini, sliced	10 cups	2 cups	
Turmeric	3 tablespoons	2 teaspoons	

NUTRIENTS PER SERVING									
Calories	10	Cholesterol (mg)	0	Dietary Fiber (g)	0	Vitamin D (mcg)	0	Potassium (mg)	70
Total Fat (g)	0	Sodium (mg)	190	Added Sugars (g)	1	Iron (mg)	0.3	Vitamin A-RAE (mcg)	2.48
Saturated Fat (g)	0	Total Carbohydrate (g)	2	Protein (g)	0	Calcium (mg)	10	Vitamin C (mg)	4.44

SOURCE: Culinary Nutrition Associates LLC

EDAMAME AND CORN SALAD	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: ¼ CUP STARCHY VEGETABLE AND 1/8 CUP BEANS, PEAS, AND LENTILS	

INGREDIENTS	65 SERVINGS	10 SERVINGS	DIRECTIONS
Dressing			
Mayonnaise, low-fat	14 ounces	2 ounces	1. Whisk together mayonnaise and lemon juice.
Lemon Juice, fresh	10 ounces	1 ½ ounces	
Black pepper, ground	2 teaspoons	¼ teaspoon	2. Add seasonings and stir until well combined. Let stand in refrigerator overnight.
Ginger root, raw, grated	1 tablespoon	½ teaspoon	
Salad			
Whole Kernel Sweet Corn	18 cups, drained	2 ¾ cups	3. Drain corn (thawed frozen corn may be substituted).
Edamame, blanched	8 ¾ cups	1 1/3 cups	4. Combine corn, edamame, onion, red pepper and cilantro. Mix well. 5. Add dressing and mix until ingredients are well coated with dressing. **CCP**: Hold and serve at 41°F or lower.
Onions, chopped, raw	2 ½ cups	1/3 cups	
Peppers, bell, red, diced	2 ½ cups	1/3 cups	
Cilantro leaves, raw, chopped	1 cup	2 tablespoons	

NUTRIENTS PER SERVING									
Calories	70	Cholesterol (mg)	0	Dietary Fiber (g)	2	Vitamin D (mcg)	0	Potassium (mg)	190
Total Fat (g)	2.5	Sodium (mg)	150	Added Sugars (g)	0	Iron (mg)	0.6	Vitamin A-RAE (mcg)	9.84
Saturated Fat (g)	0	Total Carbohydrate (g)	10	Protein (g)	4	Calcium (mg)	30	Vitamin C (mg)	12.45

SOURCE: Saint Paul Public Schools, *Now We're Cooking! A collection of Simple Scratch Recipes Served in Minnesota Schools*, Minnesota Department of Healthy. www.health.state.mn.us/divs/hpcd/chp/cdrr/nutrition/greattrays/pdfs/NowCooking.pdf

ESQUITES

SERVING SIZE: ½ CUP
ONE PORTION PROVIDES: ½ CUP STARCHY VEGETABLE

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Corn, yellow, whole kernel, frozen	2 gallons	1 ½ quarts	1. Steam corn for 4 minutes or until at 135 F.
Yogurt, Greek, plain, whole milk	20 ounces	4 ounces	2. In a mixing bowl, combine the yogurt, mayonnaise, chipotle chili powder, chopped cilantro, minced garlic, juice, and zest from the lime(s) and most of the Parmesan cheese (reserve some for sprinkling on the top as a garnish, along with a little cilantro). 3. Add the cooked corn and toss to coat well.
Mayonnaise, low-fat	20 ounces	4 ounces	
Chipotle chili powder	1 ¼ teaspoons	¼ teaspoon	
Garlic, raw	5 cloves	1 clove	
Cilantro, fresh, chopped	2 ½ cups	½ cup	
Limes, raw	5 each	1 each	
Cheese, parmesan, grated	2 ½ cups	½ cup	
Paprika	1 tablespoon, 2 teaspoons	1 teaspoon	4. Garnish with paprika, remaining Parmesan, and chopped cilantro. **CCP**: Cook until internal temperature reaches 135°F or above. **CCP**: Hold for hot service at 135°F or higher.

NUTRIENTS PER SERVING

Calories	110	Cholesterol (mg)	5	Dietary Fiber (g)	2	Vitamin D (mcg)	0	Potassium (mg)	200
Total Fat (g)	3	Sodium (mg)	180	Added Sugars (g)	1	Iron (mg)	0.5	Vitamin A-RAE (mcg)	34.55
Saturated Fat (g)	1	Total Carbohydrate (g)	20	Protein (g)	4	Calcium (mg)	50	Vitamin C (mg)	7.55

SOURCE: Adapted from Windham Raymond School Department

CORN PUDDING

SERVING SIZE:

ONE PORTION PROVIDES: ¼ CUP STARCH VEGETABLE

INGREDIENTS	50 SERVINGS	25 SERVINGS	DIRECTIONS
Milk, nonfat	2 cups	1 cup	1. Combine milk, flour, eggs, oil, sugar, pepper, and nutmeg in the mixer bowl. Mix with a whip on low for 2 minutes, 1 minute at medium speed, and 1 minute at high speed. It may be mixed by hand.
Flour, all-purpose, enriched	12 ounces	6 ounces	
Eggs, large	14 large	7 large	
Oil, canola	4 ounces	2 ounces	
Sugar, white granulated	2 tablespoons	1 tablespoon	
White pepper	1 teaspoon	½ teaspoon	
Nutmeg, ground	1 teaspoon	½ teaspoon	
Corn, canned or frozen	2 quarts	1 quart	2. Change to paddle. Add whole-kernel corn and cream-style corn. Mix for 2 minutes on low speed. 3. Pour mixture into a steam table pan lightly coated with pan release spray. For 50 portions use 12”x20”x2” steamtable pan. For 25 portions, use a one-half - 2-inch steam table pan. 4. Bake until golden brown. Conventional oven at 375°F for 50-60 minutes. Convection oven at 325°F for 30-40 minutes. **CCP**: Cook until internal temperature reaches 135°F or above. **CCP**: Hold for hot service at 135°F or higher.
Corn, cream style corn	2 quarts	1 quart	

NUTRIENTS PER SERVING

Calories	130	Cholesterol (mg)	20	Dietary Fiber (g)	1	Vitamin D (mcg)	0.4	Potassium (mg)	60
Total Fat (g)	6	Sodium (mg)	20	Added Sugars (g)	1	Iron (mg)	0.9	Vitamin A-RAE (mcg)	22.97
Saturated Fat (g)	0.5	Total Carbohydrate (g)	16	Protein (g)	3	Calcium (mg)	40	Vitamin C (mg)	0.03

SOURCE: Menus that Move, Ohio Department of Education, http://education.ohio.gov/Topics/Other-Resources/Food-and-Nutrition/Resources-and-Tools-for-Food-and-Nutrition/Menus-that-Move

Day 2 / Team 6

# PICKLED JALAPENOS	SERVING SIZE: N/A USED AS GARNISH DOES NOT CREDIT IN QUANTITIES USED AS GARNISH	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Water	3 cups	½ cup, 2 tablespoons	1. Bring water, vinegar, salt, and sugar to a boil in a small pot.
Vinegar, apple cider	3 cups	½ cup, 2 tablespoons	
Salt, kosher	2 tablespoons	1 ½ teaspoons	
Sugar, white granulated	5 tablespoons	1 tablespoon	
Jalapenos	10 cups	2 cups	2. Place jalapenos in a large bowl. Pour pickling liquid over vegetables. Marinate for 1-2 hours or refrigerate for up to 3 days. **CCP**: Hold and serve at 41°F or lower.

NUTRIENTS PER SERVING									
Calories	10	Cholesterol (mg)	0	Dietary Fiber (g)	0	Vitamin D (mcg)	0	Potassium (mg)	40
Total Fat (g)	0	Sodium (mg)	290	Added Sugars (g)	1	Iron (mg)	0	Vitamin A-RAE (mcg)	9.70
Saturated Fat (g)	0	Total Carbohydrate (g)	2	Protein (g)	o	Calcium (mg)	0	Vitamin C (mg)	21.35

SOURCE: Culinary Nutrition Associates LLC

BLANCHED GREEN BEANS	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: ½ CUP OTHER VEGETABLE	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Green beans, fresh, trimmed, whole	6 ¼ pounds	1 pound 4 ounces	1. Prepare the washed, cut green beans.
Water, boiling			2. Use a steam kettle, tilting braising pan, or stockpot to bring water to a boil. Place the green beans in the boiling water and cook for 2-3 minutes. To blanch small amounts of vegetables, place the vegetables in a colander and then set the whole colander in the boiling water. 3. Immediately drain all hot water.
Ice			4. Immerse the vegetables in an ice bath (water with ice), making sure all the vegetables are submerged. Leave for about 1 minute to stop the cooking process. **CCP**: Hold and serve at 41°F or lower.

NUTRIENTS PER SERVING

Calories	20	Cholesterol (mg)	0	Dietary Fiber (g)	2	Vitamin D (mcg)	0	Potassium (mg)	120
Total Fat (g)	0	Sodium (mg)	0	Added Sugars (g)	0	Iron (mg)	0.6	Vitamin A-RAE (mcg)	19.56
Saturated Fat (g)	0	Total Carbohydrate (g)	4	Protein (g)	1	Calcium (mg)	20	Vitamin C (mg)	6.92

Day 2 / Team 7

# Green Bean Salad with Almonds	Serving Size: ½ cup One portion provides: ½ cup other vegetable	

Ingredients	50 Servings	10 Servings	Directions
Almonds, whole, roasted	2 cups	½ cup	**CCP**: No bare-hand contact with ready-to-eat food. 1. Lightly toast the almonds over medium-high heat in a sauté pan (or in an oven), about 3 minutes. Add half of the tamari and stir until the almonds are coated evenly about 30 seconds. Cool. Chop the almonds roughly.
Tamari	½ cup	2 tablespoons	
Green beans, trimmed	6 ¼ pounds	1 pound, 4 ounces	2. Blanch the green beans.
Oil, sesame	½ cup	2 tablespoons	3. In a large bowl, combine the sesame oil, vinegar, garlic, ginger, and remaining tamari. Add the drained green beans and toss to coat. Garnish with roasted almonds. **CCP**: Hold and serve at 41°F or lower.
Vinegar, rice wine	¾ cup	3 tablespoons	
Garlic, minced	2 Tablespoons	2 teaspoons	
Ginger, fresh, peeled, grated	2 tablespoons	2 teaspoons	

Nutrients Per Serving									
Calories	90	Cholesterol (mg)	0	Dietary Fiber (g)	2	Vitamin D (mcg)	0	Potassium (mg)	170
Total Fat (g)	7	Sodium (mg)	200	Added Sugars (g)	0	Iron (mg)	0.8	Vitamin A-RAE (mcg)	19.56
Saturated Fat (g)	0.5	Total Carbohydrate (g)	6	Protein (g)	3	Calcium (mg)	40	Vitamin C (mg)	6.94

SESAME-ROASTED GREEN BEANS	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: ½ CUP OTHER VEGETABLE	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Green Beans, trimmed	12 pounds	2 pounds, 6 ounces	1. Preheat convection oven to 300°F or conventional oven to 325°F.
Oil, canola	¼ cup	1 tablespoon	2. Drizzle the green beans with the oil and sprinkle with salt and pepper. Divide green beans among four full sheet pans (for 50 portions) and spread in a single layer. Bake for 15 minutes.
Oil, sesame	1 tablespoon	1 teaspoon	
Salt, kosher	1 tablespoon	1 teaspoon	
Black pepper, ground	2 teaspoons	½ teaspoon	
Sesame Seeds	½ cup	2 tablespoons	3. Stir the sesame seeds evenly into each pan of the green beans and bake until they start to brown, 4 to 5 minutes more. **CCP**: Cook until internal temperature reaches 135°F or above. **CCP**: Hold for hot service at 135°F or higher.

NUTRIENTS PER SERVING

Calories	60	Cholesterol (mg)	0	Dietary Fiber (g)	3	Vitamin D (mcg)	0	Potassium (mg)	230
Total Fat (g)	2.5	Sodium (mg)	200	Added Sugars (g)	0	Iron (mg)	1.2	Vitamin A-RAE (mcg)	37.21
Saturated Fat (g)	0	Total Carbohydrate (g)	8	Protein (g)	2	Calcium (mg)	40	Vitamin C (mg)	13.15

SERVING NOTES:

Pan size	12x20x2 Steam Table Pan

SOURCE: *New School Cuisine Cookbook: Nutritious and Seasonal Recipes for School Cooks by School Cooks*, Vermont Agency of Education, School Nutrition Association of Vermont, USDA, Team Nutrition, and Vermont FEED. http://vtfeed.org/resource-library

PIZZA GREEN BEANS	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: ½ CUP OTHER VEGETABLE	

INGREDIENTS	50 SERVINGS	12 SERVINGS	DIRECTIONS
Green beans, ends snipped	9 ¼ pounds	1 pound, 8 ounces	1. Steam beans in a perforated pan until tender but firm and still bright green, about 4-8 minutes, depending on the intensity of the steamer.
Oil, olive	¼ cup	1 tablespoon	2. Heat oil in a small skillet pan. Add garlic and heat very briefly, over medium-low heat, just until the garlic starts to cook (do not brown garlic).
Garlic, minced	¼ cup	1 tablespoon	
Tomatoes, canned, diced, drained	16 ounces	½ cup	3. Add tomatoes, oregano, salt, and pepper. Heat. 4. Toss the green beans with the tomato mixture in a steam table pan and serve. **CCP**: Cook until internal temperature reaches 135°F or above. **CCP**: Hold for hot service at 135°F or higher.
Oregano, dried	½ cup	2 tablespoons	
Salt, kosher	2 teaspoons	½ teaspoon	
Black pepper, ground	1 teaspoon	¼ teaspoon	

NUTRIENTS PER SERVING

Calories	40	Cholesterol (mg)	0	Dietary Fiber (g)	2	Vitamin D (mcg)	0	Potassium (mg)	160
Total Fat (g)	1.5	Sodium (mg)	110	Added Sugars (g)	0	Iron (mg)	0.9	Vitamin A-RAE (mcg)	24
Saturated Fat (g)	0	Total Carbohydrate (g)	5	Protein (g)	1	Calcium (mg)	40	Vitamin C (mg)	8.31

SOURCE: adapted from Pizza Green Beans, What's Cooking, USDA Mixing Bowl, https://whatscooking.fns.usda.gov/quantity/child-nutrition-cnp/pizza-green-beans-usda-recipe-schools

DILLY GREEN BEANS	SERVING SIZE: N/A USED AS GARNISH DOES NOT CREDIT IN QUANTITIES USED AS GARNISH	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Water	3 cups	½ cup, 2 tablespoons	1. Bring water, vinegar, salt, and sugar to a boil in a small pot.
Vinegar, apple cider	3 cups	½ cup, 2 tablespoons	
Salt, kosher	2 tablespoons	½ tablespoon	
Sugar, white granulated	5 tablespoons	1 tablespoon	
Green beans, trimmed	10 cups	2 cups	2. Place green beans and dill in a large bowl. Pour pickling liquid over vegetables. 3. Marinate for 1-2 hours or refrigerate for up to 3 days. **CCP**: Hold and serve at 41°F or lower.
Dill, fresh	4 tablespoons	1 tablespoon	

NUTRIENTS PER SERVING									
Calories	101	Cholesterol (mg)	0	Dietary Fiber (g)	1	Vitamin D (mcg)	0	Potassium (mg)	40
Total Fat (g)	0	Sodium (mg)	290	Added Sugars (g)	1	Iron (mg)	0.2	Vitamin A-RAE (mcg)	7.11
Saturated Fat (g)	0	Total Carbohydrate (g)	3	Protein (g)	0	Calcium (mg)	10	Vitamin C (mg)	2.49

SOURCE: Culinary Nutrition Associates LLC

BBQ THREE BEAN SALAD	SERVING SIZE: ½ CUP ONE PORTION PROVIDES: 2 OZ. M/MA EQ. OR ½ CUP BEANS/PEAS/LENTILS	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Beans, black, low sodium, canned, drained	7 pounds	1 ½ pounds	**CCP**: No bare-hand contact with ready-to-eat food. 1. Rinse all beans in cold water and drain well. 2. Combine all beans in a large bowl.
Beans, pinto, low sodium, canned, drained	7 pounds	1 ½ pounds	
Beans, garbanzo, low sodium, canned, drained	7 pounds	1 ½ pounds	
Yogurt, Greek, plain, nonfat	2 pounds	6 ounces	3. Combine yogurt, BBQ sauce, and lime juice in a bowl. Mix well.
Barbecue sauce	12 ounces	2 ounces	
Juice, lime, fresh	4 ounces	1 ounce	
Pepper, black, ground	2 teaspoons	½ teaspoon	4. In a small bowl, add black pepper, onion, garlic, dill, chili powder, and cilantro and mix well to combine spices. Add to BBQ yogurt mixture. Stir well. 5. Pour yogurt mixture over beans and lightly toss to combine. **CCP**: Hold and serve at 41°F or lower.
Onion, granulated	2 teaspoons	½ teaspoon	
Garlic, granulated	2 teaspoons	½ teaspoon	
Dill, dried	2 teaspoons	½ teaspoon	
Chili powder	2 teaspoons	½ teaspoon	
Cilantro, dried	2 teaspoons	½ teaspoon	

NUTRIENTS PER SERVING

Calories	200	Cholesterol (mg)	0	Dietary Fiber (g)	11	Vitamin D (mcg)	0	Potassium (mg)	550
Total Fat (g)	2	Sodium (mg)	330	Added Sugars (g)	2	Iron (mg)	3.2	Vitamin A-RAE (mcg)	2.98
Saturated Fat (g)	0	Total Carbohydrate (g)	34	Protein (g)	12	Calcium (mg)	110	Vitamin C (mg)	3.46

SOURCE: Danone

ROASTED CHICKPEAS	SERVING SIZE: ¼ CUP ONE PORTION PROVIDES: ¼ CUP BEANS, PEAS, AND LENTILS	

INGREDIENTS	105 SERVINGS	10 SERVINGS	DIRECTIONS
Chickpeas, canned, drained, rinsed, dried well	3 each #10 cans	2 ½ cups	1. Preheat oven to 350°F.
Oil, canola	1 ½ cup	2 ½ tablespoons	2. Mix oil and the remaining seasonings in a bowl. 3. Add the beans and coat well. Spread them on the sheet pan evenly. 4. Bake for 20 minutes at 350°F. Stir the beans around on the pan and bake for another 20 to 25 minutes until crisp and roasted. Beans will turn dark in color and will be crunchy.
Paprika	2 ½ tablespoons	¾ teaspoon	
Garlic, granulated	2 tablespoons	¾ teaspoon	
Onion powder	3 tablespoons	1 teaspoon	
Black pepper, ground	1 ½ tablespoon	½ teaspoon	
Salt, kosher	2 teaspoons	¼ teaspoon	

NUTRIENTS PER SERVING									
Calories	90	Cholesterol (mg)	0	Dietary Fiber (g)	3	Vitamin D (mcg)	0	Potassium (mg)	50
Total Fat (g)	4.5	Sodium (mg)	120	Added Sugars (g)	0	Iron (mg)	0.4	Vitamin A-RAE (mcg)	4.70
Saturated Fat (g)	0	Total Carbohydrate (g)	9	Protein (g)	3	Calcium (mg)	20	Vitamin C (mg)	0.10

Yield: about 25 cups

RECIPE NOTES:

- 1 #10 can fit perfectly on a sheet pan.
- Store at room temperature in an air tight container.
- Serve in soufflé cup, or use to top a salad, or serve as a healthy snack.
- If you bake ahead and they are not crisp at time of service, return them back in oven at 400° for 5 minutes to re-crisp.
- Can add cayenne pepper to make them spicy.

SOURCE: adapted from USDA Foods Recipe by Chef Deanna Olson (Crunchy Bonzo Beans), Iowa Department of Education.
https://www.educateiowa.gov/pk-12/nutrition-programs/quick-links-nutrition/learning-tools-nutrition/usda-foods-recipes-chef

MAPLE SRIRACHA BAKED BEANS	SERVING SIZE: 2/3 CUP (#6 SCOOP) ONE PORTION PROVIDES: ½ CUP VEGETABLE	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Chickpeas, canned, drained, and rinsed (10 pounds drained)	2¼ #10 cans	2 pounds	1. Preheat oven to 375°F. 2. Add chickpeas and onions to a 2-inch full-sized steam table pan.
Onion, diced	1¼ pounds	4 ounces	
Tomatoes, canned, crushed, no-added salt	24 ounces	5 ounces	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 ½ to 2 hours. The liquid should be thickened around the beans. Add more water if needed. **CCP**: Cook until internal temperature reaches 135°F or above. **CCP**: Hold for hot service at 135°F or higher.
Maple syrup	16 ounces	3 ounces	
Sugar, brown	10 ounces	2 ounces	
Sriracha sauce	¼ cup	1 tablespoon	
Worcestershire sauce	¼ cup	1 tablespoon	
Ginger, fresh	¼ cup	1 tablespoon	
Stock, vegetable, low sodium	1 quart	1 cup	

NUTRIENTS PER SERVING

Calories	180	Cholesterol (mg)	0	Dietary Fiber (g)	6	Vitamin D (mcg)	0	Potassium (mg)	210
Total Fat (g)	2.5	Sodium (mg)	280	Added Sugars (g)	11	Iron (mg)	1.2	Vitamin A-RAE (mcg)	11.61
Saturated Fat (g)	0	Total Carbohydrate (g)	35	Protein (g)	7	Calcium (mg)	60	Vitamin C (mg)	1.91

SOURCE: USA Pulses

PICKLED WATERMELON RIND	SERVING SIZE: N/A USED AS GARNISH DOES NOT CREDIT IN QUANTITIES USED AS GARNISH	

INGREDIENTS	50 SERVINGS	10 SERVINGS	DIRECTIONS
Water	5 quarts	4 cups	1. Bring water and salt to boil over medium-high heat in a large pot.
Salt, kosher	5 tablespoons	1 tablespoon	
Peeled watermelon rind, cut into 1 x 1/2 x 2-inch pieces (Leave a thin layer of pink)	3 quarts, ½ cup	2 ½ cups	2. Add rind pieces and boil until tender, about 5 minutes. Strain, reserving liquid, and transfer rinds to a large glass or plastic bowl.
Sugar, white, granulated	3 ¾ cups	¾ cup	3. Combine the reserved liquid with the remaining ingredients in a saucepan. Bring to a boil over medium-high heat, stirring until sugar dissolves. Simmer for 15 minutes until slightly reduced. Pour over watermelon rinds in bowl. Place a plate over the top to keep the rinds submerged in liquid. Cover and refrigerate for one day. Transfer to a glass jar and keep sealed in the refrigerator for up to 1 week. **CCP**: Hold and serve at 41°F or lower.
Vinegar, apple cider	2 ½ cups	½ cup	
Peppercorns	20 each	4 each	
Fresh ginger root, long slice	5 each	1 each	

NUTRIENTS PER SERVING

Calories		Cholesterol (mg)		Dietary Fiber (g)		Vitamin D (mcg)		Potassium (mg)	
Total Fat (g)		Sodium (mg)		Added Sugars (g)		Iron (mg)		Vitamin A-RAE (mcg)	
Saturated Fat (g)		Total Carbohydrate (g)		Protein (g)		Calcium (mg)		Vitamin C (mg)	

SOURCE: The National Watermelon Promotion Board, Adapted from https://www.watermelon.org/recipes/watermelon-rind-pickles/

PRODUCT EVALUATION FOR COOKING VEGETABLES FOR GREATER APPEAL

Participants evaluate each food product as part of the tasting in this culinary laboratory. For each food product (row) and each evaluation category (column), circle either **A** (acceptable) or **NA** (not acceptable).

Food Product	Appearance	Taste	Texture	Eating Quality	Comments
Broccoli Salad	A *or* NA	A *or* NA	A *or* NA	A *or* NA	
Ranch-Roasted Broccoli	A *or* NA	A *or* NA	A *or* NA	A *or* NA	
Lemon Zest Broccoli	A *or* NA	A *or* NA	A *or* NA	A *or* NA	
Dilly Cukes					
Cauliflower Salad	A *or* NA	A *or* NA	A *or* NA	A *or* NA	
Roasted Cauliflower with Turmeric	A *or* NA	A *or* NA	A *or* NA	A *or* NA	
Steamed Cauliflower/Buffalo Sauce	A *or* NA	A *or* NA	A *or* NA	A *or* NA	
Banh Mi Pickled Vegetables					
Moroccan Carrot Salad	A *or* NA	A *or* NA	A *or* NA	A *or* NA	
Lemon-Roasted Carrots	A *or* NA	A *or* NA	A *or* NA	A *or* NA	
Orange-Glazed Carrots	A *or* NA	A *or* NA	A *or* NA	A *or* NA	
Pickled Spicy Carrots					
Butternut Squash Soup	A *or* NA	A *or* NA	A *or* NA	A *or* NA	
Roasted Butternut Squash	A *or* NA	A *or* NA	A *or* NA	A *or* NA	
Mashed Butternut Squash	A *or* NA	A *or* NA	A *or* NA	A *or* NA	
Giardiniera					
Zucchini Fries	A or NA	A or NA	A or NA	A or NA	
Roasted Summer Squash	A or NA	A or NA	A or NA	A or NA	
Zucchini Parmesan	A or NA	A or NA	A or NA	A or NA	
Turmeric Zucchini					
Edamame and Corn Salad	A or NA	A or NA	A or NA	A or NA	
Esquites	A or NA	A or NA	A or NA	A or NA	
Corn Pudding	A or NA	A or NA	A or NA	A or NA	
Pickled Jalapeno					
Green Beans with Almonds	A or NA	A or NA	A or NA	A or NA	
Sesame-Roasted Green Beans	A or NA	A or NA	A or NA	A or NA	
Pizza Green Beans	A or NA	A or NA	A or NA	A or NA	
Dilly Green Beans					
BBQ Bean Salad	A or NA	A or NA	A or NA	A or NA	
Roasted Chickpeas	A or NA	A or NA	A or NA	A or NA	
Maple Sriracha Baked Beans	A or NA	A or NA	A or NA	A or NA	
Pickled Watermelon Rind					

Day Three
Scratch Baking Principals and Techniques

LESSON-AT-A-GLANCE

Culinary demonstration	Introduction to Baking Principals and Techniques Team Assignments Timeline	60 minutes
Hands-on		3 1/2 hours
Evaluation and discussion		15 minutes
Clean-up		15 minutes

TEAM ASSIGNMENTS

Team	Yeast Bread	Biscuit	Quick Bread
Team 1	Oatmeal Sandwich	Biscuit	Apple Quick Bread
Team 2	French Bread	Biscuit	Banana Quick Bread
Team 3	Oatmeal Sandwich	Biscuit	Apple Quick Bread with Blueberries
Team 4	French Bread	Biscuit	Banana Quick Bread with Dates
Team 5	Oatmeal Sandwich	Biscuit	Apple Quick Bread with Dried Cranberries
Team 6	French Bread	Biscuit	Banana Bread with Chocolate Chips
Team 7	Oatmeal Sandwich	Biscuit	Apple Quick Bread
Team 8	French Bread	Biscuit	Banana Quick Bread with Blueberries

HANDS-ON TIMELINE

- **9:00 AM** – Mix yeast bread dough. Teams may use warmer water to demonstrate how water temperature affects proofing.
- **9:30 AM** – Yeast bread begins proofing. All teams prepare biscuit dough together.
- **10:00 AM** – Scale ingredients for quick breads. Fold yeast bread dough and continue proofing as required.
- **10:15 AM** – Finish shaping and baking biscuits.
- **10:30 AM** – Mix and portion quick bread batters.
- **10:40 AM** – Remove biscuits from the oven and allow them to cool.
- **11:00 AM** – Place quick breads in the oven.
- **11:05 AM** – Divide yeast doughs, pre-shape, and let them rest.
- **11:20 AM** – Perform the final shaping of yeast bread. Allow to proof and bake.
- **12:00-12:15 PM** – Breads are cool enough to slice and use for lunch sandwiches.

APPLE QUICK BREAD

SERVING SIZE: 1 SLICE, 10 EACH FROM 1 LOAF

ONE PORTION PROVIDES: 1.75 oz. eq. grain

INGREDIENTS	50 SERVINGS, 5 LOAVES	20 SERVINGS, 2 LOAVES
Oil, vegetable	900 g	360 g
Sugar, white, granulated	500 g	200 g
Eggs, large	8 each	3 each
Applesauce, canned, unsweetened	1,375 g	550 g
Cinnamon	45 g	15 g
Nutmeg	12.5 g	5 g
Salt, Kosher	3 ¾ teaspoons	1 ½ teaspoons
Baking Powder	2 tablespoons, 1 ½ teaspoons	1 tablespoon
Whole wheat flour, white	1,000 g	400 g
Whole wheat flour	450 g	180 g
Apple, cored, small diced	800 g	320 g

DIRECTIONS

1. Heat the oven to 350°F.
2. Whisk the oil, sugar, eggs, applesauce, cinnamon and nutmeg.
3. Sift the dry ingredients.
4. Gently combine the dry ingredients with the wet until you only see a few streaks of flour.
5. Fold in the apple.
6. Bake in prepared 9 x 5 loaf pans for 52-60 minutes or until a toothpick comes out clean.

NUTRIENTS PER SERVING

Calories	330	Cholesterol (mg)	30	Dietary Fiber (g)	4	Vitamin D (mcg)	0.2	Potassium (mg)	160
Total Fat (g)	20	Sodium (mg)	330	Added Sugars (g)	10	Iron (mg)	1.4	Vitamin A (RAE)	13.85
Saturated Fat (g)	3	Total Carbohydrate (g)	38	Protein (g)	5	Calcium (mg)	70	Vitamin C (mg)	1.05

Blueberry 50 servings	Blueberry 20 servings	Dry Cranberry 50 servings	Dry Cranberry 20 servings
Replace 448 grams of chopped apple with blueberries, fresh or frozen	Replace 320 grams of chopped apple with blueberries, fresh or frozen	Replace 140 grams of chopped apple with dry cranberries	Replace 100 grams of chopped apple with dry cranberries

BISCUIT

SERVING SIZE: 1 BISCUIT

ONE PORTION PROVIDES: 1.5 oz. eq. grain

INGREDIENTS	45 SERVINGS	9 SERVINGS
Whole wheat flour, white	900 g	180 g
Whole wheat flour	300 g	60 g
Salt, Kosher	3 ¾ teaspoons	¾ teaspoon
Baking Powder	¼ cup	2 ½ teaspoons
Butter, unsalted, cold	515 g	103 g
Egg, large, cold	5 each	1 each
Milk, whole, cold	565 g	113 g

DIRECTIONS

7. Preheat the oven to 375°F.
8. Sift all the dry ingredients.
9. Cut the butter and shortening into the dough until the butter is not larger than a dime.
10. Whisk the egg and milk together.
11. Add the wet to the dry ingredients.
12. Form a soft dough.
13. Knead gently by hand to bring together all the dry flour.
14. Roll the dough into a rectangle shape, about ½ inch thick.
15. Chill the dough for 15 minutes.
16. Remove from the freezer and fold the dough in thirds (like a letter).
17. Roll the dough to ¾” thick.
18. Use the bench scraper to create sharp corners.
19. Freeze for 20 minutes to 1 hour.
20. Cut into 9 pieces, squares.
21. Bake for approximately 16 minutes.

NUTRIENTS PER SERVING

Calories	190	Cholesterol (mg)	40	Dietary Fiber (g)	3	Vitamin D (mcg)	0.2	Potassium (mg)	120
Total Fat (g)	11	Sodium (mg)	270	Added Sugars (g)	0	Iron (mg)	1.2	Vitamin A (RAE)	89.43
Saturated Fat (g)	6	Total Carbohydrate (g)	20	Protein (g)	4	Calcium (mg)	100	Vitamin C (mg)	0

FRENCH BREAD

SERVING SIZE: 1.5 OZ
ONE PORTION PROVIDES: 2.25 oz. eq. grain

INGREDIENTS	50 SERVINGS	25 SERVINGS
Flour, bread, white, enriched	20 ounces	10 ounces
Whole wheat flour, white	20 ounces	10 ounces
Whole wheat flour	24 ounces	12 ounces
Yeast, instant	0.26 ounces (i.e., 1 tablespoon)	0.13 ounces (i.e.,1 ½ teaspoons)
Non-fat Milk Powder	2 ounces	1 ounces
Honey	4 ounces	2 ounces
Oil, vegetable	4 ounces	2 ounces
Water, 74°F	1 pound, 12.8 ounces	1 pound, 6.4 ounces
Salt, Kosher	1.2 ounces (i.e., 2 tablespoons)	0.6 ounce (i.e., 1 tablespoon)

DIRECTIONS

22. Add the water and all other liquid ingredients to the bowl.
23. Combine the dry ingredients and mix to combine.
24. Add the dry to the wet.
25. Mix for 2 minutes at the lowest speed.
26. Mix for 4 minutes on medium.
27. Mix for 2 minutes on high.
28. Scrap the dough out of the bowl and coat it in a thin layer of oil (very thin).
29. Rest for 45 minutes.
30. Fold the dough.
31. Rest for 45 minutes.
32. Divide into 3 pieces of 550 g each.
33. Gently roll into an oblong cylinder.
34. Rest for 15 minutes.
35. Shape into 9” long batards.
36. Proof for 30 minutes at 80 F with 80% humidity.
37. Score with 3 light diagonal slashes.
38. Bake at 460°F with steam, or spray the loaves with water before baking.
39. 22 minutes or until an instant-read thermometer reaches 200°F.

NUTRIENTS PER SERVING

Calories	140	Cholesterol (mg)	0	Dietary Fiber (g)	3	Vitamin D (mcg)	0.1	Potassium (mg)	130
Total Fat (g)	1	Sodium (mg)	270	Added Sugars (g)	0	Iron (mg)	1.4	Vitamin A (RAE)	8.11
Saturated Fat (g)	0	Total Carbohydrate (g)	29	Protein (g)	5	Calcium (mg)	20	Vitamin C (mg)	0.44

Oats and Banana Bread

Serving Size: 1 slice, 8 per loaf

One portion provides: 2 oz. eq. grain

Ingredients	40 Servings	8 Servings
Butter, unsalted	1 pound, 4 ounces	4 ounces
Whole wheat flour, white	6 ¼ cups	1 ¼ cups
Oat Flour	3 ¾ cups	¾ cup
Salt, Kosher	5 teaspoons	1 teaspoon
Baking powder	2 tablespoons, 1 ½ teaspoons	1 ½ teaspoons
Sugar, white, granulated	2 ½ cups	½ cup
Brown sugar, packed	1 ¼ cups	¼ cup
Eggs, large	10 each	2 each
Bananas, ripe, mashed	15 each	3 each
Extract, vanilla	5 teaspoons	1 teaspoon
Golden Raisins	2 ½ cups	½ cup
Dried Grated Unsweetened Coconut	2 ½ cups	½ cup

Directions

1. Preheat the oven to 350°F.
2. Grease a 9 x 5 loaf pan.
3. Mix together all the dry ingredients.
4. Cream the butter and the sugar, and add the eggs, banana, and vanilla.
5. Combine the wet ingredients with the dry, and mix gently. There will be lumps.
6. Add the raisins and coconut.
7. Bake for 45-60 minutes.

Nutrients Per Serving

Calories	410	Cholesterol (mg)	75	Dietary Fiber (g)	5	Vitamin D (mcg)	0.3	Potassium (mg)	390
Total Fat (g)	18	Sodium (mg)	310	Added Sugars (g)	19	Iron (mg)	1.8	Vitamin A (RAE)	118.42
Saturated Fat (g)	11	Total Carbohydrate (g)	62	Protein (g)	7	Calcium (mg)	90	Vitamin C (mg)	4.14

Blueberry: 8 servings	Blueberry: 40 servings	Date: 8 servings	Date: 40 servings	Chocolate Chip: 8 servings	Chocolate Chip: 40 servings
Replace the ½ cup of golden raisins with 6 ounces of frozen or fresh blueberries	Replace the 2 ½ cups of golden raisins with 1 pound, 14 ounces of frozen or fresh blueberries	Replace the ½ cup of golden raisins with ¾ cup of chopped dates	Replace the 2 ½ cups of golden raisins with 3 ¾ cups of chopped dates	Replace the ½ cup of golden raisins with ½ cup chocolate chips	Replace the 2 ½ cups of golden raisins with 2 ½ cups of chocolate chips

OATMEAL SANDWICH BREAD

SERVING SIZE: 1 SLICE

ONE PORTION PROVIDES: 1.5 oz. eq. grain

INGREDIENTS	50 SERVINGS	25 SERVINGS	DIRECTIONS
Oats, rolled, old-fashioned, dry	10.6 ounces	5.3 ounces	8. Place the oats in the mixing bowl with the water to soften for 10 minutes.
Water, tap	2 pound, 8 ounces	1 pound, 4 ounces	
Flour, bread, enriched	1 pound, 8 ounces	12 ounces	9. Add all of the rest of the ingredients to the bowl. 10. Mix on low for 2 minutes. 11. Mix on medium for 4 minutes. 12. Mix on high for 4 minutes. 13. Allow the dough to rest in a covered bowl with a thin film of oil for 1 hour. 14. Fold the dough.
Whole wheat flour, white	1 pound, 8 ounces	12 ounces	
Whole wheat flour	1 pound	8 ounces	
Milk, whole	7 ounces	3.5 ounces	15. Allow to rest for 1 more hour. 16. Divide the dough into 945 g pieces. 17. Loosely roll into oblong cylinders. 18. Rest for 15 minutes. 19. Shape the dough into tight loaf pan cylinders.
Honey	4.8 ounces	2.4 ounces	
Oil, vegetable	4.8 ounces	2.4 ounces	
Salt, Kosher	1.4 ounces (i.e., 1 tablespoon, 1 teaspoon)	0.7 ounces (i.e., 3 ½ teaspoons)	
Yeast, instant	0.36 ounces (i.e., 1 tablespoon)	0.18 ounces (i.e., 1 ½ teaspoons	13. Allow the dough to proof for 35 minutes at 80°F, 80% humidity. 14. Bake at 420°F for 30-40 minutes or until the internal temperature is 200°F.

NUTRIENTS PER SERVING

Calories	190	Cholesterol (mg)	0	Dietary Fiber (g)	3	Vitamin D (mcg)	0.1	Potassium (mg)	130
Total Fat (g)	4	Sodium (mg)	310	Added Sugars (g)	2	Iron (mg)	1.7	Vitamin A (RAE)	1.88
Saturated Fat (g)	0.5	Total Carbohydrate (g)	33	Protein (g)	6	Calcium (mg)	20	Vitamin C (mg)	0.01

PRODUCT EVALUATION FOR CULINARY BASICS

Participants evaluate each food product as part of the tasting in this culinary laboratory. For each food product (row) and each evaluation category (column), circle either **A** (acceptable) or **NA** (not acceptable).

Food Product	Appearance	Taste	Texture	Eating Quality	Comments
Apple Quick Bread (and variations)	A or NA	A or NA	A or NA	A or NA	
Biscuit	A or NA	A or NA	A or NA	A or NA	
French Bread	A or NA	A or NA	A or NA	A or NA	
Oats and Banana Bread (and variations)	A or NA	A or NA	A or NA	A or NA	
Oatmeal Sandwich Bread	A or NA	A or NA	A or NA	A or NA	

COOKING FOR HEALTHY KIDS

Kitchen Matters

Nutrition Matters

WEIGHTS AND MEASURES

In foodservice operations, weights and measures are essential components to producing high-quality meals. All recipes require a basic understanding of the different units, the purpose of measuring tools, and the right techniques for measurement. Sometimes, recipes also require conversions or alterations. Because of this, math skills are essential for working in the kitchen.

WEIGHT VS. VOLUME

There are many forms of measurement, such as weight, time, speed, and volume. Each of these forms has a distinct purpose and unit of measure. Weight and volume are two types of measurements that are often confused.

> **Weight** is the measure of an items mass. In foodservice, the most common units of weight are ounces and pounds.
>
> **Volume** is the measure of the amount of space an item takes up. There are seven units of volume, including teaspoon, tablespoon, fluid ounce, cup, pint, quart, and gallon.

To highlight the difference between weight and volume, consider this age-old question; what weighs more, a pound of bricks or a pound of feathers?

Both the bricks and the feathers have an equal weight—one pound. However, the items have very different volumes because they take up different amounts of space. The amount of feathers needed to weigh one pound is much more than the amount of bricks needed. Due to this, weight is regarded as the more accurate measurement for solid ingredients weighing more than two ounces. Liquid ingredients, on the other hand, are usually best measured with volume.

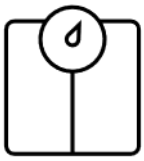
The importance of weight and volume can be further demonstrated by that 1 ¼ cups of flour mentioned earlier. Flour is a solid ingredient that's best measured by weight. If the flour is measured using a volume measuring cup though, the quantity can vary greatly from person to person, even when the same cup is used. Factors that alter quantity:

- If it was spooned in or scooped in with the measuring cup
- If it was packed down into the cup
- If it was leveled off with a straight edge

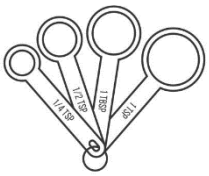
Even small differences in quantity can make a big difference in a recipe's result. Essentially, using the correct measuring tools and techniques matters. That's not to suggest that a small portion of flour must always be weighed on a scale. Nevertheless, ensuring that all ingredients are measured with the correct method will greatly improve the quality of food.

MEASURING TOOLS AND TECHNIQUES

There are different measuring tools created for different purposes. Here are the most common tools used within foodservice operations:



Scales measure weight. They are the most accurate way to measure dry ingredients but can also be used for some liquid ingredients as well.



Measuring cups and **measuring spoons** measure volume. They are best used for liquid ingredients but can be used for small quantities of dry ingredients too.

Scoops measure volume. The scoop number equals the average number of scoops in a quart

For graduated dry and liquid ingredients, the standard sizes are: 1 quart, 1 pint, 2 quarts, 1 gallon. Since weight is the best measure for dry ingredients, these units are generally not used for quantities greater than 1 quart. Nonetheless, there are variations for tools depending on their intended use, and it's important to understand these differences.

Liquid measures will have a curved lip above the spill line to prevent spilling.

Dry measures have a straight rim to level off any ingredient.

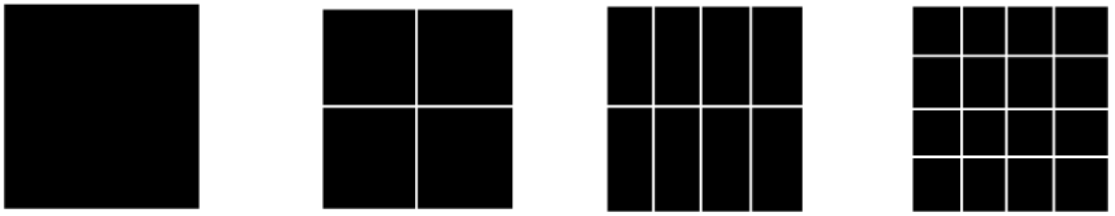
Another important distinction is between ounces and fluid ounces. An ounce is a measure of weight, while a fluid ounce is a measure of volume. Any ingredient labeled with ounces will not equal the same quantity of that ingredient in fluid ounces, as liquid weights may vary. When it comes to measuring ingredients, the right technique is key. Even if you use the correct tool for the job, the wrong use of that tool will result in inconsistent results when following a recipe. To ensure all ingredients are measured correctly:

- Lightly spoon dry ingredients into a measuring cup. Level off the top by using a flat-edged utensil such as a knife or a metal spatula. Avoid tapping or shaking the measuring container; this will pack the ingredient and lead to inaccurate quantities.
    - An exception to this rule is brown sugar. Typically, this ingredient should be firmly packed into a measuring cup, although the recipe should specify what to do.
- Use a scale whenever possible to measure dry ingredients. If one is not available, use the largest instrument possible to increase accuracy. For instance, measuring four cups of flour using a one-quart container is better than using a four-cup container four different times. Every time the flour is spooned into the cup, it increases the chance of human error.
- Checking the amount of liquid in a measuring cup by sitting it steady on the counter and looking at the meniscus. The meniscus is the natural upward or downward curve seen at the top of the liquid. To do this, examine the container at eye level and determine if the meniscus is at the desired unit. This will produce the most accurate results for your recipe.
- If possible, measure all ingredients before starting the recipe to increase efficiency and decrease the chance of error.

PORTIONING

How food is portioned will directly relate to the yield of a recipe. Most often, scoops are used for portioning. Selecting the right scoop size and following the right technique is essential whenever serving food. If you over portion, you will run out of food too quickly. If you under portion, you'll be left with excessive leftovers. Incorrect portioning doesn't only affect the operation's bottom line. It can also negatively impact consumers. If one kid gets a heaping serving of food while another gets a tiny serving, you will have very unsatisfied students on your hands. To avoid this issue, use instruments that measure both weight and volume, and remember the right techniques for accurate measure.

VOLUME MEASURES



1 gallon = 4 quarts = 8 pints = 16 cups

1 gallon=128 oz. 1 qt.=32 oz. 1 pt.=16 oz. 1 cup=8 oz.

WEIGHTS AND MEASURES EQUIVALENCIES

dash	.....	less than 1/8 teaspoon
3 teaspoons (tsp.)	.....	1 Tablespoon (1/2 fl. oz.)
2 Tablespoons (Tbsp.)	.....	1/8 cup (1 fl. oz.)
4 Tablespoons	.....	1/4 cup (2 fl. oz.)
8 Tablespoons	.....	1/2 cup (4 fl. oz.)
16 Tablespoons	.....	1 cup (8 fl. oz.)
1 gill	.....	1/2 cup
2 cups	.....	1 pint
2 pints	.....	1 quart (approx. 1 liter)
4 quarts	.....	1 gallon
8 quarts	.....	1 peck
4 pecks	.....	1 bushel

SCOOPS

The number on the scoop indicates how many level scoops make one quart.

Scoop Number	Measure	Weight in Fluid Ounces	Scoops per Cup
4	1 cup	8 fl. oz.	1
5	3/4 cup	6.4 fl. oz.	1.25
6	2/3 cup	5.3 fl. oz.	1.5
8	1/2 cup	4 fl. oz.	2
10	3/8 cup	3.2 fl. oz.	2.5
12	1/3 cup	2.6 fl. oz.	3
16	1/4 cup	2 fl. oz.	4
20	3 1/3 tablespoons	1.6 fl. oz.	5
24	8 teaspoons	1.33 fl. oz.	6
30	2 tablespoons	1 fl. oz.	7.5
40	1 2/3 tablespoons	.75 fl. oz.	10
50	3 3/4 teaspoons	.64 fl. oz.	12.5
60	1 tablespoon	.5 fl. oz.	15
70	2 3/4 teaspoons	.45 fl. oz.	17.5
100	2 teaspoons	.32 fl. oz.	25

LADLES

Ladles are labeled "oz." "fl oz.", fluid ounce, would be more accurate since they measure volume, not weight.	Ladle	Approx. measure
	1 fl. oz.	1/8 cup
	2 fl. oz.	1/4 cup
	3 fl. oz.	3/8 cup
	4 fl. oz.	1/2 cup
	6 fl. oz.	3/4 cup
	8 fl. oz.	1 cup
	12 oz.	1 1/2 cups

HOTEL OR STEAMTABLE PAN CAPACITY

Pan Size		Approximate Pan Capacity Full		Approximate Pan Capacity 85 Percent	
		Quarts	Cups	Quarts	Cups
Full Size	12" x 20" x 2 1/2"	8 1/4	33	7	28
	4"	14	56	12	48
	6"	21	84	18	72
Half Pan	12" x 10" x 2 1/2"	4	16	3 1/2	14
	4"	6 1/2	26	5 1/2	22
	6"	9 1/2	38	8	32
Third size	12' x 6" x 2 1/2"	2 2/5	9 3/5	2	8
	4"	3 7/8	15 1/2	3 1/4	13
	6"	6	24	5	20 1/2
Fourth size	10' x 6" x 2 1/2"	1 7/8	7 1/2	1 1/2	6 3/8
	4"	3	12	2 1/2	10
	6"	4 1/2	18 1/4	3 7/8	15 1/2
Sixth size	6' x 6" x 2 1/2	1 1/4	5	1	4 1/4
	4"	1 7/8	7 1/2	1 1/2	6 3/8
	6"	2 3/4	11	2 1/3	9 1/3

DIETARY GUIDELINES FOR AMERICANS 2020-2025

The Dietary Guidelines has been the cornerstone of federal nutrition guidance since the 1980s, when the first set of recommendations were released. Its development plays a central role in shaping federal policies and programs related to food, nutrition, and health. Though the Dietary Guidelines aim to help individuals reduce their risk of chronic diet-related disease, they are not written for consumers directly.

The Dietary Guidelines for Americans are written for policymakers, nutrition educators, and health professionals. They support the development of science-based nutrition policy, nutrition education messages, and consumer materials for the public. The 2020-2025 guidelines focus on making every bite count at every stage of life. Four overarching guidelines exist to support this central theme.

1. **Follow a healthy eating pattern across the lifespan.** All food and beverage choices matter, not just individual meals. Following a healthful eating pattern at an appropriate calorie level will help to achieve and maintain a healthy body weight, support nutrient adequacy, and reduce the risk of chronic diseases.
   The life stages are divided into infancy, toddlerhood, childhood, adolescence, adulthood, pregnancy, lactation, and older adulthood. Each of these periods requires a unique number of calories, vitamins, and minerals to thrive.
   A clear sign of a healthy dietary pattern is the inclusion of several nutrient-dense foods. Nutrient-dense foods are items that offer a higher number of vitamins and minerals for the number of calories they provide. Even small efforts towards nutrient-density add up. For example, swapping just one snack a day will make a big difference to overall diet quality over the course of weeks and months.
2. **Customize and enjoy food and beverage choices.** All individuals—regardless of age, socioeconomic status, and racial/ethnic background—can reap the benefits of a healthy dietary pattern. When people customize their food choices, they're enabled to follow an eating plan that works best for their unique lives.
   Customizing dietary guidelines begins with personal preferences. Eating should be enjoyable, and people will be more willing to improve their diet when the food is appetizing. Budget and cultural traditions also play a role. A nutritious dietary pattern does not need to be expensive, and there are endless options for meals that are both culturally diverse and healthy.
   To create a personalized, balanced eating plan, select a variety of nutrient-dense foods across and within the five main food groups. Every food group contains several items, such as:
   - ***Vegetables***:
     - Dark-green leafy: broccoli, chard, collards, kale, spinach

    - Red and orange: carrots, sweet potatoes, red/yellow bell peppers
    - Beans, peas, and lentils: black beans, black-eyed peas, lima beans
    - Starchy: corn, jicama, plantains, white potatoes, yams
- ***Fruits:*** While whole fruits have the best nutritional value, fresh, frozen, canned, dried, and 100% fruit juices are each a part of this group.
- ***Grains:*** with the goal to make half as whole grains:
    - Whole grains: brown rice, buckwheat, oats, popcorn, whole grain cereal
    - Refined grains: white breads, cream of wheat, and refined-grain cereals
- ***Dairy and Fortified Soy Alternatives****:* Can also be lactose-free or lactose-reduced products if needed
- ***Protein Foods****:*
    - Meat, poultry, eggs: beef, pork, chicken, turkey, and lamb.
    - Seafood: catfish, cod, crab, salmon, sardine, shrimp, and anchovy.
    - Nuts, seeds, soy: tree nuts, peanuts, nut butters, tofu, and pumpkin seeds.

Food Group	**Recommended amount in the 2000 Calorie Pattern**
Vegetables	**2 ½ cup-equivalents/day**
Dark Green	1 ½ cup-equivalents/week
Red & Orange	5 ½ cup-equivalents/week
Legumes (Beans & Peas)	1 ½ cup-equivalents/week
Starchy	5 cup-equivalents/week
Other	4 cup-equivalents/week
Fruits	**2 cup-equivalents/day**
Grains	**6 ounce-equivalents/day**
Whole Grains	More than 3 ounce-equivalents/day
Refined Grains	Less than 3 ounce-equivalents/day
Dairy	**3 cups/day**
Protein Foods	**5 ½ ounce-equivalents/day**
Seafood	8 ounce-equivalents/week
Meats, Poultry, Eggs	26 ounce-equivalents/week
Nuts, Seeds Soy Products	5 ounce-equivalents/week
Oils	**27 grams per day**
Limit on Calories for Other Uses (% of Calories)	**270 calories/day (14%)**

3. **Focus on meeting food group needs and stay within calorie limits.** While items from each food group are needed to make up a healthy dietary pattern, calories are also important. Identifying and preparing foods so they provide the appropriate amount of energy should be considered at each life stage.

   Generally, foods are at their most appropriate calorie level when they have the least number of added sugars and saturated fats. People can easily make more nutritious selections by consuming foods in their most nutrient dense form.

Food Group	Recommendation
Vegetables	Reduce the use of added salt, butter, and creamy sauces. Add them to dishes like burgers, tacos, pizzas, and stews.
Fruits	Offer a variety of whole, fresh fruits in season.
Grains	At least half of all grains should be whole grains. Swap refined ("white") grains for whole grains.
Dairy	Fat-free and low-fat dairy products are the best. Try adding fat-free or low-fat milk with breakfasts or snacks.
Protein	If serving meat, aim for lean forms (chicken breast or ground turkey) over the more processed forms (hot dogs or ham).

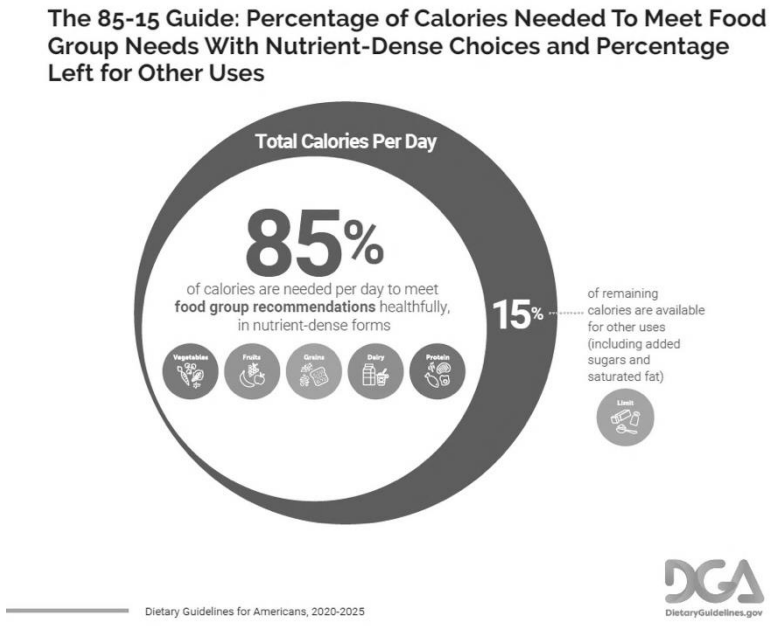
Some foods do not fit easily into the five main groups. However, these foods can be included in a healthy dietary pattern and include:

- Oils -They provide essential fatty acids to the diet. Popular varieties include canola, corn, olive, and soybean. Cooking with oils instead of fats like butter, shortening, or coconut oil will make diets more nutritious.
- Beverages - The best beverages are the ones with the least number of sweeteners and cream. Water, 100% juice, and fat-free and low-fat milk are the staples of a healthy eating pattern.
- Caffeine - This dietary component is not an essential nutrient but is regarded as safe when consumed by healthy adults in appropriate quantities.

4. Limit food and beverages higher in added sugars, saturated fat, and sodium.

The Dietary Guidelines emphasize including more nutrient-dense foods while limiting other foods. Added sugars, saturated fats, and sodium do not provide essential vitamins or minerals and they can contribute to chronic disease risk when consumed in excess.

Just because some foods are more nutritious than others though, does not mean that people can never eat sugar, saturated fat, or sodium. The 2020-2025 guidelines note that about 15% of daily calories are available for the use of food choices that are not nutrient-dense.



Nevertheless, key recommendations exist to help people make appropriate selections regarding how much of these foods to consume.

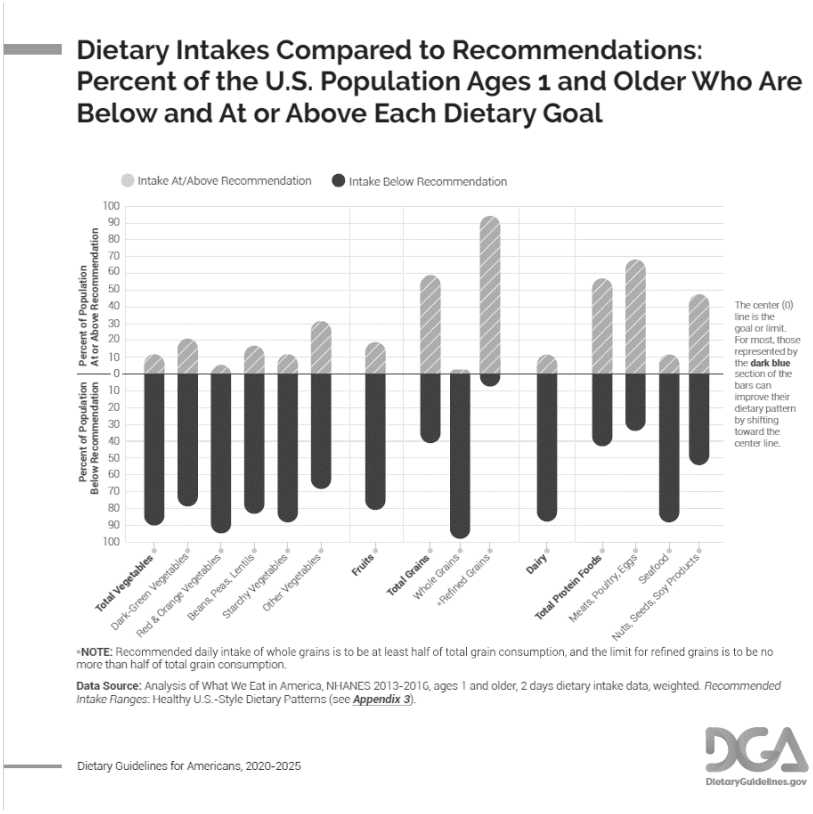
- ***Added Sugars:*** Limit to less than 10% of total calories daily. Added sugars are added to foods as they're processed or prepared. They add calories without other nutritional value. (Natural sugars—in fruits, vegetables, and milk—are not added sugars.)
- ***Saturated & Trans Fats:*** For those older than two, limit saturated fats to less than 10% of total calories daily. Replace them with unsaturated fats like plant oils, avocados, nuts, seeds.

  Diets high in saturated and trans fats are associated with heart disease. The most common forms of saturated fats include butter, whole milk, and meats that aren't labeled lean. Small amounts of trans fats occur naturally in some animal-based foods. As of 2018, artificial trans fats are no longer added to processed foods.
- ***Sodium:*** Limit to less than 2,300 mg daily. While sodium does not contain calories, eating patterns that are high in sodium are associated with high blood pressure and heart disease. Common sources of sodium include canned foods, rice mixed dishes, and processed meats.

Principles of Healthy Eating Patterns

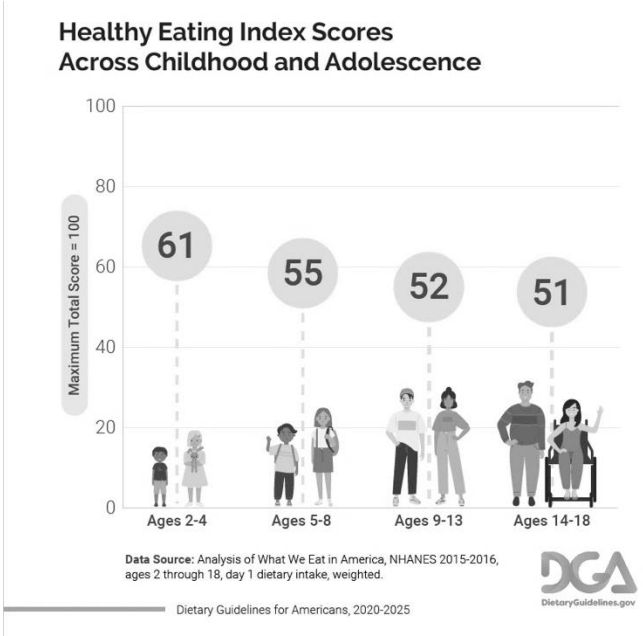
In addition to the overarching guidelines, the USDA highlights three major principles for any healthy eating pattern.

1. ***Meet nutritional needs primarily from foods and beverages***
    - Fortified foods and beverages can sometimes be used to meet the recommendations for vitamins and minerals. However, it is always best to maximize nutrition through whole, nutrient-dense foods.
2. ***Choose a variety of nutrients from each food group***
    - Serving an array of foods from each meal component will improve the overall nutritional value of the menu
    - Variety looks like different categories and types of products. Fresh, frozen, canned, and dried products all have a place in a healthful dietary pattern.
3. ***Pay attention to portion size***
    - Refer to the serving size on the Nutrition Facts Label for the recommended amount to be consumed in one sitting. Consuming the appropriate portions will ensure that meals are dishing up the right number of calories and other essential nutrients.



Children and Adolescents

The Dietary Guidelines for Americans were created to reach individuals at all stages of life. When serving people within certain age groups, its beneficial to think about their unique nutritional needs. The children and adolescent life stage includes anyone between the ages of two and 18. During this stage, lifelong habits are set. As such, school foodservice operations can play a major role in establishing healthful dietary patterns.



The most recent data suggests that children and adolescents are not consuming enough nutrient-dense foods. At the same time, they're overconsuming added sugar, saturated fat, and sodium. Recommendations for improving children and adolescent eating patterns are to:

- Maintain the common dietary components of early childhood (total fruit and dairy) while increasing the components that are under consumed (total vegetables, whole grains, and seafood)
- Decrease the number of sugar-sweetened beverages consumed, which are not necessary in the diets of children and adolescents.
- Select high-quality dairy products, such as unsweetened fat-free and low-fat milk, yogurt, cheese, and fortified soy beverages
- Focus on optimal protein intake during the adolescent years. Recognize that adolescent females are the most likely to experience nutritional inadequacies.

When children and adolescents are exposed to an array of nutrient-dense foods in all the essential food groups, they are more likely to continue making healthy choices in the future. School is one of the central settings that can make a positive impact on their students' wellness. For example, schools can work to:

- Improve the selection and variety of healthy foods served in cafeterias and vending machines
- Provide nutrition education programs, educational material, and school gardens
- Promote school-based physical activity

School Breakfast Program Meal Pattern
As of July 1, 2024

Amount of Food[1] per Week (minimum per day)

Meal Components	Grades K-5	Grades 6-8	Grades 9-12
Fruits (cups)[2]	5 (1)	5 (1)	5 (1)
Vegetables (cups)[2]	0	0	0
• Dark green subgroup	0	0	0
• Red/orange subgroup	0	0	0
• Beans, peas, and lentils subgroup	0	0	0
• Starchy subgroup	0	0	0
• Other vegetables subgroup	0	0	0
Grains or meats/meat alternates (oz. eq.)[3]	7–10 (1)	8–10 (1)	9–10 (1)
Fluid milk (cups)[4]	5 (1)	5 (1)	5 (1)

Daily Amount Based on the Average for a 5-Day Week5

Dietary Specifications	Grades K-5	Grades 6-8	Grades 9-12
Minimum-maximum calories (kcal)	350–500	400–550	450–600
Saturated fat (% of total calories)	< 10	< 10	< 10
Added sugars (% of total calories) - must be implemented by July 1, 2027	< 10	< 10	< 10
Sodium limit - in place through June 30, 2027	≤540 mg	≤600 mg	≤640 mg
Sodium limit - must be implemented by July 1, 2027	≤485 mg	≤ 535 mg	≤570 mg

ENDNOTES

[1] Food items included in each group and subgroup and amount equivalents.

[2] Minimum creditable serving is 1⁄8 cup. Schools must offer 1 cup of fruit daily and 5 cups of fruit weekly. Schools may substitute vegetables for fruit at breakfast as described in paragraphs (c)(2)(i) and (ii) of this section.

[3] Minimum creditable serving is 0.25 oz. eq. School may offer grains, meats/meat alternates, or a combination of both to meet the daily and weekly ounce equivalents for this combined component. At least 80 percent of grains offered weekly at breakfast must be whole grain-rich as defined in § 210.2 of this chapter, and the remaining grain items offered must be enriched.

[4] Minimum creditable serving is 8 fluid ounces. All fluid milk must be fat-free (skim) or low-fat (1 percent fat or less) and must meet the requirements in paragraph (d) of this section.

[5] By July 1, 2027, schools must meet the dietary specification for added sugars. Schools must meet the sodium limits by the dates specified in this chart. Discretionary sources of calories may be added to the meal pattern if within the dietary specifications.

National School Lunch Program Meal Pattern

As of July 1, 2024

Amount of Food1 per Week (minimum per day)

Meal Components	Grades K-5	Grades 6-8	Grades 9-12
Fruits (cups)[2]	2 1⁄2 (1⁄2)	2 1⁄2 (1⁄2)	5 (1)
Vegetables (cups)[2]	3 3⁄4 (3⁄4)	3 3⁄4 (3⁄4)	5 (1)
• Dark green subgroup[3]	1/2	1/2	1/2
• Red/orange subgroup[3]	3/4	3/4	1 1⁄4
• Beans, peas, and lentils subgroup[3]	1/2	1/2	1/2
• Starchy subgroup[3]	1/2	1/2	1/2
• Other vegetables subgroup[3,4]	1/2	1/2	3/4
• Additional vegetables from any subgroup to reach total	1	1	1 1⁄2
Grains (oz. eq.)[5]	8–9 (1)	8–10 (1)	10–12 (2)
Meats/meat alternates (oz. eq.)[6]	8–10 (1)	9–10 (1)	10–12 (2)
Fluid milk (cups)[7]	5 (1)	5 (1)	5 (1)

Daily Amount Based on the Average for a 5-Day Week8

Dietary Specifications	Grades K-5	Grades 6-8	Grades 9-12
Minimum-maximum calories (kcal)	550–650	600–700	750–850
Saturated fat (% of total calories)	< 10	< 10	< 10
Added sugars (% of total calories) - must be implemented by July 1, 2027	< 10	< 10	< 10
Sodium limit - in place through June 30, 2027	≤ 1,110 mg	≤ 1,225 mg	≤ 1,280 mg
Sodium limit - must be implemented by July 1, 2027	≤ 935 mg	≤ 1,035 mg	≤ 1,080 mg

ENDNOTES

[1] Food items included in each group and subgroup and amount equivalents.

[2] Minimum creditable serving is 1⁄8 cup. One quarter-cup of dried fruit counts as 1⁄2 cup of fruit; 1 cup of leafy greens counts as 1⁄2 cup of vegetables. No more than half of the fruit or vegetable offerings may be in the form of juice. All juice must be 100 percent full-strength.

[3] Larger amounts of these vegetables may be served.

[4] This subgroup consists of "Other vegetables" as defined in paragraph (c)(2)(ii)(E) of this section. For the purposes of the NSLP, the "Other vegetables" requirement may be met with any additional amounts from the dark green, red/orange, and bean, peas, and lentils vegetable subgroups as defined in paragraph (c)(2)(ii) of this section.

[5] Minimum creditable serving is 0.25 oz. eq. At least 80 percent of grains offered weekly (by ounce equivalents) must be whole grain-rich as defined in § 210.2 of this chapter, and the remaining grains items offered must be enriched.

[6] Minimum creditable serving is 0.25 oz. eq.

[7] Minimum creditable serving is 8 fluid ounces. All fluid milk must be fat-free (skim) or low-fat (1 percent fat or less) and must meet the requirements in paragraph (d) of this section.

[8] By July 1, 2027, schools must meet the dietary specification for added sugars. Schools must meet the sodium limits by the dates specified in this chart. Discretionary sources of calories may be added to the meal pattern if within the dietary specifications.

ENCOURAGE HEALTHY FOOD CHOICES IN SCHOOLS
NUDGING NUTRITION

Product Placement
• Display fruit in at least two locations. • Offer vegetables on all service lines. • Make grab-and-go (pre-packaged) healthy options easy to find. • Display white milk in the front of the cooler.
Improve Taste and Quality
• Offer sliced or cut fruit daily. • Display whole fruit in attractive bowls. • Season vegetables. • Serve cut, raw veggies with a dip like hummus.
Increase Variety

• Offer at least two fruit choices each day.
• Offer at least four vegetable choices each day.
  o Two hot vegetables
  o Two cold vegetables
• Offer pre-packaged main salads each day.

Write an Appealing Menu
• Menu Board • Menu Item Descriptions • Menu Promotions
Use Positive Communication
• Greeting • Serving • Cash Register • Special Requests • Manage Conflicts
Maintain a Pleasant Environment
• Attractive dining room. • Branded dining room. • Easy to read menu board. • Cleaning supplies not visible during service. • Recycling/trash bins are away from dining students. • Clear traffic pattern.

CATCHY NAMES

K-5 grade students like creative, playful names: X-ray Carrots, Big Bad Bean Burrito

Match the adjective to the menu item:

Green beans	Sweet Talking
Baked sweet potatoes	Fiesta
Baked apples	Snappy
Black bean soup	Green lantern
Peas	Power
Veggie pizza	Rainbow

6-12 grade students like descriptive, sensory words: Spiced Butternut Squash, Fluffy Mashed Potatoes, Warm Baked Apples

Match the adjective to the menu item:

Green beans	Harvest
Baked sweet potatoes	Home-style
Baked apples	Spiced
Black bean soup	Fresh
Peas	Garden
Veggie pizza	Texas

Add your own adjectives to these common menu items:

Baked chicken: _____
Turkey Sub: _____
Chef Salad: _____
Grilled Cheese Sandwich: _____
Hamburger: _____
Sides: _____
Corn: _____
Kale: _____
Kiwi: _____
Salad Bar: _____
Rice: _____
Squash: _____
Mixed/Steamed Veggies: _____

Your Favorite Menu Items:

_____ _____

_____ _____

_____ _____

Food Naming Word Bank

Food Properties	*Sensory – Taste/Smell*	*Appeal*	*Silly*
Bubbly	Aromatic	Bright	Cool
Cheesy	Bitter	Colorful	Crazy
Chewy	Delectable	Delightful	Dazzling
Chunky	Delicious	Fresh	Dynamite
Creamy	Fiery	Gorgeous	Extraordinary
Crisp(y)	Flavorful	Green/Red	Fabulous
Crunchy	Fruity	Intense	Famous
Flaky	Gingery	Luscious	Fantastic
Fluffy	Lemony	Mouth-Watering	Heavenly
Frosty	Mild	Pure	Hip
Glazed	Nutty	Refreshing	Jazzy
Gooey	Peppery (peppered)	Robust	Jolly
Hearty	Savory	Sunny	Lively
Hot	Scrumptious	Vivid	Snappy
Juicy	Spicy	Appetizing	Snazzy
Moist	Sugary	Delicious	Spectacular
Plump	Sweet	Local	Splashy
Rich	Tangy	Smothered	Superb
Ripe	Tart	Marvelous	Tantalizing
Saucy	Yummy	Wonderful	Wild
Seasoned	Zesty	Delectable	Wow
Silky	Zingy	Bubbling	Zippy
Sizzling	Chilled	Infused	Zesty
Sparkling	Cold		Zingy
Sticky	Mellow		
Toasty (toasted)	Icy		
Velvety	Refreshing		
Whipped			

Food Naming Examples

Fruits	Veggies	Main Dishes
Berrilicious Fruit Smoothie	Crazy Carrot Sticks	Fiery Chicken Fajitas
Savory Cinnamon Apples	Wild Potato Wedges	Tasty Turkey Burger
Jazzy Juice	Zesty Zucchini Pasta	Dynamite Turkey Dog
Outstanding Oranges	Tangy Vegetable Stir-Fry	Intense Chicken Chili
Super Power Strawberries	Snazzy Sugar Snap Peas	Dynamite Deli Sandwich
Sun-Ripened Kiwi	Luscious Leafy Greens	Chillin' Chicken
Peppy Pears	Cool Corn on the Cob	Surfs Up Fish Sandwich
Pump Me Up Pineapple	Spectacular Spinach	Touchdown Turkey Wrap
	Energy Boosting Edamame	Super Salad
	Be Strong Beans	Sporty Spaghetti w/ Meatballs

Adapted from Ohio Smarter Lunchroom Movement, https://ohiosmarterlunchrooms.files.wordpress.com/2015/11/food-naming-word-bank.pdf

Cues for Positive Communication with Students and Staff

Occasion	Goal	Examples
Greeting	• Create a welcoming atmosphere • Take the first step to building rapport • Promote a reimbursable meal and/or targeted food item	• "Good morning! What would you like to try today?" • "Hello! Would you like to try the [entrée]? • "Welcome to lunch! The [entrée] is popular today. Would you like to try it?" • "Today is [entrée] day. Would you like some?" • "Welcome to the lunchroom! What can I get for you today? The [targeted item] is a great choice."
Serving	• Create a reimbursable meal • Promote healthy sides	• "The [vegetable] goes well with the [entrée]." • "Which vegetable/side would you like with that?" • "The [fruit] is perfectly ripe." • "If you don't like [first side offered], how about trying the [other side]?" • "You can make [the entree] a meal with some [fruit/vegetable sides]." • "Today we're serving [list items]. Can I get you come [target item]?" • "We have a great new recipe: [list targeted item(s)]. Would you like to try it? Tell us what you think!"
Cash Register	• Create a reimbursable meal • Prompt students to "fill out" an incomplete meal	• "I see you don't have all your items. Why not grab a [handheld fruit in nearby basket]?" • "You get 3 sides with your meal. You can still take one – go ahead and pick." • "Your meal is not complete! Don't forget to take a [fruit, vegetable, or juice] as a side." • "You forgot milk! It's included with your lunch. How about getting some now?" • "It's not too late, go back and get [missing item]." • • "You can make that a meal with [missing item(s)]."
Special Requests	• Ensure all students can eat a complete meal • Assist new readers (elementary, special needs, and ELL students)	• To staff (discretely): "I see that [student] has a special diet. I will try to set aside a [preferred item]; however, to ensure he/she gets the correct meal, please bring him/her to the front of the line."

		• To students still mastering reading: "Today's specials are [read menu]." • To students still mastering reading: "Here is a menu (show picture menu). What would you like today? What looks the best to you?" • To students still mastering reading: "Today's specials are [list items]. Would you like to try [target item(s)]?"
Managing Conflict	• De-escalate situation • Avoid creating or allowing lasting negative feelings on either side • Keep serving line moving smoothly and quickly	• "I'm sorry you don't like [first item offered]; how about [other entrée option] instead?" • "I'd be happy to explain what makes a reimbursable meal." • "The USDA defines what counts as a reimbursable meal, we aren't allowed to make substitutions [ex. soda for milk, snack for fruit]."

Adapted from Iowa Department of Education

ENHANCING FLAVOR IN FOODS

It Makes Sense

The popping of corn, the crunch of a crusty bread, the sight of vibrant red strawberries, the aroma of cinnamon rolls, and the taste of juicy oranges. All five of our senses provide us with perceptions, when collected, become "flavor". It is this collective *flavor* that is the primary reasons why we eat what we do. Taste is the most important influence on our food choices.

Concern about food not tasting good is the most often mentioned obstacle to buying healthful foods. Your message to students should focus on flavor while delivering healthful food!

The Five Senses

1. Hearing
2. Sight
3. Touch
4. Smell
5. Taste

Components of Flavor

Taste

Our sense of taste comes from the chemical receptors, or taste buds, in our mouth. These some 10,000 taste buds record five basic tastes:

- sweet
- salty
- sour
- bitter
- umami

Additionally, the insides of our mouths feel such sensations as the burn of hot chilies, the cooling effect of mint, or the fizz of carbonated beverages.

Smell

Although the sense of taste is most often given credit for the appeal or dislike of a food, the sense of smell is most often the guilty party. Unlike our limited repertoire of tastes, the number of odors we can detect seems to be unlimited. When we put food in our mouth the chewing process releases volatile compounds that pass to the olfactory receptors cells at the top of our nasal passages. Our sense of smell is thought to be 10,000 times more sensitive than our sense of taste. Think about the last time you had a cold. Did you complain about foods having no taste?

Visual

When food is placed in front of us one of the first senses that gives you flavor clues is sight. We can anticipate the sweetness of strawberries by the intensity of red color. Steam rising off the vegetables indicates they are piping hot. The golden brown of toast hints at its crispness. It is certainly true that "we eat with our eyes." Just by looking at a tray you can anticipate how the food will feel and taste, even before the first bite.

Texture

A piece of poached salmon that flakes away under the gentle prodding of a fork hints at the tenderness of the fish. On the contrary, when a blade of a knife refuses to penetrate a piece of meat it indicates that the meat will be tough and chewy. The velvet smoothness of a mousse, the crunchy crust of a bread, and the snap of a sugar snap pea are all texture indicators that give us insight into the "taste" of a food.

Temperature

The temperature of our food affects our perception of its taste. Coldness suppresses sweetness. Bitterness is more intense with in cold solution. Sourness is more intense with a warm solution

Sound

The sizzle of onions when they hit the sauté pan is a sign that tells us the pan is just the right temperature. The snap of a carrot tells of its freshness. There are many sounds in our culinary world that add to the enhancement of the *flavor* of foods.

What can school nutrition operators do?

The first thing you can do as a foodservice operator is to take a moment and note the different ways in which all five of the senses are interacting in your operation and in the foods, you are serving. Look for ways to enhance all the aspects of flavor!

The "Tastes"

- Sweet
- Sour (Acid)
- Salty
- Bitter (Alkaline)
- Umami

Flavor in cooking is developed through…

- the selection of quality ingredients
- the appropriate use of seasonings and flavorings
- the application of processes that capture flavor
- the proper execution of cooking techniques

FLAVOR ENHANCERS

Herbs	Fresh, Dried, Pestos
Spices	Whole, Ground, Toasted
Aromatic ingredients	Onions, Shallots, Garlic, Leeks, Ginger
Peppers	Hot: ancho, chipotle, jalapeno, poblano, serrano, habanero, Scotch bonnets Sweet green, red, yellow, orange, purple
Acidic Ingredients	Vinegars: malt, cider, balsamic, fruit, herb, garlic Citrus: zest or peel, juice Tomatoes: Juice, fresh, canned
Flavorful liquids	Stocks: vegetable, chicken, beef, fish Juices: fruit or vegetable
Other Condiments	Horseradish, Wasabi, Ginger, Mustards, Pickle Relishes, Olives, Salsas (Fruit & Vegetable), Ketchup, Infused Oils
Cooking processes	Extraction Infusion Marinating Reductions
Cooking methods	Sautéing Searing Poaching Roasting Baking Toasting • Toast nuts and seeds to bring out the flavor. • Roast vegetables for unique, robust flavors.

HERBS

Herbs: The leaves of annual and perennial low growing shrubs
Aromatic seeds: The seeds of graceful lacy annual plants (anise, caraway, coriander)

CULINARY HERBS

Variety	Description	Peak Season	Uses/ Affinities
Basil	leaves are pointed, green. Purple varieties, large or small-leafed varieties available, also specialty types with cinnamon, clove and other flavors	Summer/ year-round	Flavoring for sauces, pesto sauce, dressings, infusing oils, vinegars etc. Also available in dried-leaf form. Chicken, fish and pasta dishes
Bay leaf	Smooth, rigid leaf	Summer	Available dried year-round. Used to flavor soups, stews, stocks, sauces and grain dishes
Chervil	Similar in shape to parsley, with finer leaves, licorice flavor	Summer	Component of "fines herbes" often used in "pluches" to garnish dishes. Egg, chicken, shellfish, dishes.
Cilantro	Similar in shape to parsley, with pronounced, unique flavor	Mid to late summer	Component of Asian and South/Central American dishes; flavoring for salsas and other uncooked sauces.
Dill	Feathery shape with strong aroma	Late summer	Fresh is used to flavor sauces, stews, braises (especially Central and Eastern European dishes). Seeds used in pickles.
Marjoram	Small, rounded leaves with a flavor similar to oregano	Throughout summer	Used in Greek, Italian and Mexican dishes. Especially suitable for vegetable dishes.

Mint	Pointed, textured leaves. Size varies by type, as does particular flavor.	Throughout summer	Used to flavor sweet dishes, beverages, as a "tisane" and in some sauces. Mint jelly is traditional with lamb.
Oregano	Small, oval leaves	Throughout summer	Used with a variety of sauces, with poultry, beef, veal, lamb and vegetables
Parsley	Feathered leaves; may be curly or flat	Year-round	Component of "fines herbs" and of bouquet garni. Flavoring for sauces, soups, dressings, and other dishes. Garnish.
Rosemary	Leaves shaped like pine needles with a pine aroma and flavor	Year-round	Large branches used as skewers. Popular in Middle Eastern dishes, grilled foods and in marinades. Dried is nearly as intense in flavor as fresh.
Sage	Large leaves, may be furry or velvety. Sage-green color	Summer	Popular as flavoring in stuffings, sausages and some stews. Dried, rubbed sage also available.
Savory	Summary savory has flavor similar to thyme. Winter savory is more like rosemary	Summer and fall	Used in salads, stuffings, sauces.
Tarragon	Narrow leaves with pronounced licorice flavor	Summer	Another component of "fines herbs." Used with chicken, fish, veal, egg.
Thyme	Very small leaves. Varieties available with special flavors (nutmeg, mint, lemon, etc.)	Summer	Part of bouquet garni. Dried leaves may occasionally be used in place of fresh. Used to flavor soups, stocks, stews and braises.

Source: The New Professional Chef (6th edition)

SPICES

Derived from the bark, root, fruit, or berry of perennial plants. Examples:
Bark – cinnamon, Root – ginger, Berry – pepper, Fruit -nutmeg

Name	Uses/ Affinities
Allspice	Braises, forcemeats, fish, pickles, desserts
Anise	Desserts and other baked goods, liqueur
Caraway	Rye bread, pork, cabbage, soups, stews, some cheeses,
Cardamom	Curries, some baked goods, pickling
Cayenne	Sauces, soups, most meats, some fish, and poultry
Celery seed	Salads (including cole slaw), salad
Chili powder	Chili and other Mexican dishes, curries
Cinnamon	Desserts, some baked goods, sweet potatoes, hot beverages, curries, pickles, and preserves
Cloves	Stocks, sauces, braises, marinades, curries, pickling, desserts, some baked goods
Coriander seeds	Curries, some forcemeats, pickling, some baked goods
Cumin	Curries, chili, and other Mexican dishes
Dill seeds	Pickling, sauerkraut
Fennel seeds	Sausage, fish and shellfish, tomatoes, some baked goods, marinades
Fenugreek	Curries, meat, poultry, chutney
Ginger	Fresh: Asian dishes, curries, braises: ground dry: some desserts and baked goods
Horseradish	Sauces (for beef, chicken, fish), egg salad, potatoes, beets
Juniper	Marinades, braises (especially game), sauerkraut, gin, and liqueurs
Mace	Some forcemeats, pork, fish, spinach, other vegetables, pickles, desserts, and baked goods
Mustard	Pickling, meats, sauces, cheese and eggs, prepared mustard
Nutmeg	Sauces and soups (especially cream), veal, chicken, aspics, spinach, mushrooms, potatoes, other vegetables, desserts (especially custards), baked goods
Paprika	Braises and stews (including goulash), sauces, garnish
Pepper	Stocks, sauces, meats, vegetables, many other uses
Saffron	Poultry, seafood, rice pilafs, sauces, soups, some baked goods
Star anise	Asian dishes, especially pork and duck
Turmeric	Curries, sauces, pickling, rice

PEPPER

Black peppercorns	Available as whole berries, cracked, or ground. The Telicherry peppercorn is one of the most prized. Mignonette or shot pepper is a combination of coarsely ground or crushed black and white peppercorns.
White peppercorn	Black peppercorns are allowed to ripen and then husks are removed. May be preferred for pale or lightly colored sauces. Available in same form as black peppercorns.
Green peppercorns	Unripe peppercorns that are packed in vinegar or brine; also available freeze-dried (they must be reconstituted in water before use).
Cayenne	A special type of chili, originally grown in Cayeene in French Guiana. The chili is dried and ground into a fine powder. The same chili is used to make hot pepper sauces.
Chili flakes	Dried, whole red chili peppers that are crushed or coarsely ground.
Paprika	A powder made from dried sweet peppers (pimientos). available as mild, sweet, or hot. Hungarian paprikas are considered superior in flavor.

Source: The New Professional Chef (6th edition)

SEASONING BLENDS **Yield: 1 quart**

Mexican *adapted from USDA Recipe, Mexican Seasoning Mix, G-01A*	Onion powder Garlic, granulated Paprika, smoked Cumin, ground Chili powder	1/3 cup 1/3 cup 1/3 cup 1 ¼ cup 1 ¾ cup
Buffalo	Onion powder Garlic, granulated Paprika Chili pepper Red pepper	1 cup 1 ¼ cup ¼ cup 1 ¼ cup ¼ cup
Italian *adapted from USDA recipe, Italian Seasoning Mix, G-01*	Basil, dried Oregano, dried Marjoram, dried Thyme, dried	1 1/3 cup 1/3 cup 1 cup 1/3 cup
Caribbean Spice	Ginger, ground Black pepper, ground Orange peel, dried, ground Mace, ground Cloves, ground Brown sugar	1 cup 1 cup 7/8 cup 1 tablespoon 1 tablespoon 1 cup
Garlic & Herb	Granulated onion Garlic, granulated Paprika Oregano leaves Thyme leaves	1/3 cup 2/3 cup 1 cup 1 cup 1 cup

Barbecue	Onion powder Garlic, granulated Paprika, smoked Cumin, ground Black pepper	1 cup 1 cup 7/8 cup 7/8 cup ¼ cup
Ranch	Garlic, granulated Onion powder Dill weed Black pepper	1 ¼ cup 1 ¼ cup 1 ¼ cup ¼ cup
Parmesan-Rosemary	Garlic, granulated Rosemary, crushed Parmesan cheese	½ cup ¾ cup 2 ¾ cups
Spice Rub	Onion powder Garlic, granulated Paprika Cumin, ground Chili powder Black pepper Brown sugar	5/8 cup 5/8 cup 5/8 cup 5/8 cup 5/8 cup 2 tablespoons ¾ cup
Tandoori	Paprika Cumin, ground Coriander Cayenne Pepper Ginger, ground Turmeric	2/3 cup 2/3 cup 2/3 cup 2/3 cup 2/3 cup 2/3 cup

ADDING SALT

Salt may be added to any of these seasoning blends according to the flexibility you have.
Using 1 teaspoon of salt for 50 portions adds about 45 mg of sodium per portion.
Using 1 tablespoon of salt for 100 portions adds about 70 mg of sodium per portion.

VINEGAR

The term "vinegar" comes from the French *vin aigre*, or sour wine. Vinegar is an acidic liquid produced through fermentation. Souring is a natural process that occurs when an alcoholic liquid is exposed to the air. Bacteria present in the air converts the alcohol into a natural acetic acid, and it is this acid that gives vinegar its characteristic sharpness. Vinegar is an essential ingredient in the kitchen and a highly versatile flavoring. Keep vinegars in a cool place away from light; they do not need to be refrigerated. Most vinegars can be kept almost indefinitely if stored correctly.

TYPES OF VINEGAR

Vinegar	Acetic Acid	Flavor	Uses
Wine vinegar France, Italy, Spain Champagne Sherry Balsamic	At least 6 % acetic acid	Produced from both red and white wines, the quality of the vinegar depends on the quality of the wine. There are almost as many types of wine vinegar as there are wines.	Wine vinegars are ideal for mayonnaise and all kinds of salad dressings. They are also used in many classic butter sauces, such as béarnaise.
Malt vinegar England	4-8 %	Malt vinegar is made from grain (malted barley) and is strongly flavored.	Often used as a pickling vinegar for onions and other vegetables. It is also used in the manufacture of sauces and chutneys. Best with straight forward food such as fish and chips, cold meats, or when preparing relishes and chutneys.
Cider vinegar North America	5-6 %	It has a strong, sharp flavor and so should only be used where it complements the other ingredients.	Cider vinegar is best for salads, dressings, marinades, condiments, and most general vinegar needs. It is the best choice for deglazing pork chops with sautéed apples. Used in fruit pickling.
Rice wine vinegar Far East	2-4 %	Japanese rice vinegars are mellow and mild, while vinegar from China is sharp and sometimes slightly sour.	Rice vinegar is popular in Asian cooking and is great sprinkled on salads and stir-fry dishes. Its gentle flavor is perfect for fruits and tender vegetables.

CITRUS

- Lemon
- Lime
- Orange
- Grapefruit
- Kumquat
- Tangerine

Zest	Use	Tool	Examples
Fine Zest	Dressings, sauces, cookies	Microplane	
Coarse zest	Muffins or salads	Zester	
Citrus peel	Flavoring soups, water Lemon extract powder	Vegetable peeler	

Zesting citrus:

- Wash and dry fruit thoroughly before zesting.
- Remove zest from the fruit BEFORE cutting or juicing the fruit.
- Remove ONLY the outer part of the peel; do not include the bitter white pith.

Citrus Salt

Kosher salt	1/4 cup
Lemon zest	1 tablespoon finely grated
Lime zest	1 tablespoon finely grated
Orange zest	1 tablespoon finely grated

Citrus Sugar

Lemon zest	1 teaspoon
Lime zest	1 teaspoon
Grapefruit zest	1 teaspoon
Orange zest	1 teaspoon
Granulated sugar	1 cup

REDUCE THE SODIUM

What is sodium?

Sodium is a mineral which everyone needs to regulate body fluids. Sodium also helps nerves and muscles to function properly. Sodium is abundant in our food supply.

Salt or sodium

- Sodium chloride is the chemical name for salt.
- 90 % of the sodium we consume is in the form of salt. Most of this is found in processed food and foodservice operations.
- Salt (NaCl) is 40% sodium (Na) and 60% chloride (CL).

The problem with too much sodium

- Too much sodium is the leading risk factor for high blood pressure.
- High blood pressure is the major risk factor for heart disease and stroke, both are leading causes of death in the US.
- Americans consume substantially more sodium than recommended, more than 3400 mg of sodium daily.

Recommendations

- The 2020-2025 Dietary Guidelines for Americans recommend limiting sodium to less than 2300 mg per day (about one tsp. of table salt) for the public.
- Recommend 1500 mg per day for certain populations, such as people with hypertension, prehypertension, or other risk factors for cardiovascular disease.

Final Rule for Sodium in School Meals

Age/Grade Group	Current Sodium Limit: through June 30, 2027	Sodium Limit: Must be implemented by July 1, 2027 (approximate 15% reduction for lunch, 10% reduction for breakfast from current limits)
School Breakfast Program		
K-5	≤ 540 mg	≤ 485 mg
6-8	≤ 600 mg	≤ 535 mg
9-12	≤ 640 mg	≤ 570 mg
National School Lunch Program		
K-5	≤ 1,110 mg	≤ 935 mg
6-8	≤ 1,225 mg	≤ 1,035 mg
9-12	≤ 1,280 mg	≤ 1,080 mg

Source: https://www.fns.usda.gov/cn/school-nutrition-standards-updates/sodium.
Limits apply to the average amount of sodium in lunch and breakfast menus offered during a school week.

Where is it found

- Salt, or sodium chloride, is the primary source of sodium in the diet.
- Processed foods

Sodium-Rich Ingredients

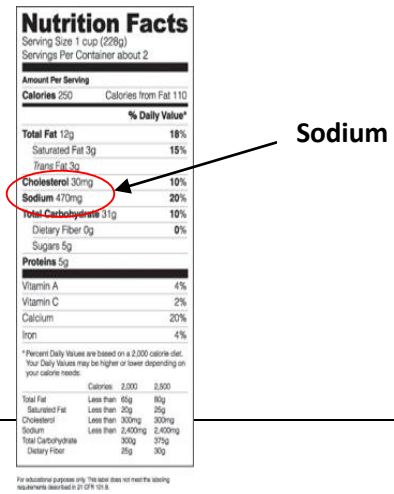
Sodium is in a variety of compounds used as food ingredients. Sodium both preserves food and enhances flavor. Look for added sodium in ingredient lists. Check labels for sodium content.

Ingredient	Function
Monosodium glutamate (MSG)	Flavor enhancer
Sodium benzoate	Preservative
Sodium caseinate	Thickener and binder
Sodium citrate	Buffer used to control acidity in soft drinks
Sodium nitrite	Curing agent in meat
Sodium phosphate	Emulsifier and stabilizer
Sodium propionate	Mold inhibitor
Sodium saccharin	Artificial sweetener

Sodium labeling

Label term	Definition
Sodium free	Less than 5 mg per serving.
Very low sodium	35 mg or less per serving and, if the serving is 30 g or less or 2 tablespoons or less, per 50 g of the food.
Low sodium	140 mg or less per serving and, if the serving is 30 g or less or 2 tablespoons or less, per 50 g of the food.
Reduced or Less sodium	At least 25 percent less per serving than the reference food.
Unsalted or no salt added	no salt added during processing; however, the product may still contain sodium

Label Reading



SALT IN COOKING

- Tastes good and is inexpensive.
- Our taste (sensory preferences) for salt can be decreased.
- Make gradual changes to lessen the amount of sodium over time.

FUNCTIONS OF SALT

- Added salt improves the sensory properties and taste of virtually every food.
- Salt was found to improve the perception of product thickness.
- Salt will enhance other tastes, such as sweetness.
- Used in curing meat, brining products.
- Used in baking to control yeast.
- Retains moisture.
- In cheeses, salt removes excess water, creating a firmer texture and contributes to characteristics such as meltability, shredding, stretching, and flow.
- Enhancing raw poultry, beef, pork, and seafood products with sodium-containing (salt, sodium phosphates) solutions to improve the tenderness (juiciness) of leaner cuts of meat.
    - A regular serving of meat (4 oz.) without enhancement contains 68 mg of sodium.
    - The same serving of meat injected up to 10 percent of its weight with brine contains 384 mg sodium per serving.

STRATEGIES FOR SODIUM REDUCTION

- Gradual reduction without students' knowledge
- Use of low-sodium foods
- Modification of the size and structure of salt particles
- Use of substitutes and enhancers

Salt	Amount	Weight	Sodium
Table salt	1 tsp.	6 g	2300 mg
Diamond Crystal kosher salt	1 tsp.	2.8 g	1120 mg
Morton kosher salt	1 tsp.	4.8 g	1920 mg
Morton sea salt	1 tsp.	5.6 g	2240 mg
Diamond Crystal Salt Sense *Ingredients: salt, silicon dioxide, tricalcium phosphate, sodium bicarbonate, dextrose, potassium iodine*	1 tsp.	3.2 g	1560 mg
Morton Salt Substitute *Ingredients: potassium chloride*	1 tsp.	3.6 grams	0 mg

SODIUM IN CONDIMENTS, SAUCES, SALAD DRESSINGS

Ingredients naturally low in sodium	
Vegetables, fresh, frozen Vegetable juices (freshly made) Fruits and fruit juices Vinegars Citrus juices	House-made stocks Sun-dried tomatoes Herbs Spices

Ingredients high in sodium	
Pre-prepared salad dressings Pre-prepared sauces Food bases (chicken, beef, vegetable, etc.)	Spice salts (garlic salt, celery salt, etc.) Pre-prepared mayonnaise Canned vegetable juices

Some high-sodium condiments		
Onion salt Celery salt Garlic salt Seasoned salt Meat tenderizer Bouillon	Soy sauce Steak sauce Barbeque sauce Catsup	Mustard Worcestershire sauce Salad dressings Pickles Chili sauce Relish

Packaged food category	mg sodium (mean value)
Barbecue sauce, ketchup, steak sauce, marinades	1081 mg / 100 gm
Salsa, dips, dipping sauces, tartar sauces, mustard sauce, sweet and sour sauce	712 mg / 100 gm
Asian-style condiments	706 mg / tbsp.
Salad dressing	1019 mg / 100 gm
Mayonnaise and mayonnaise-type dressing	713 mg / 100 gm
Entree sauces (tomato-based pasta sauces)	442 mg / 100 gm
Entree sauces (gravy, cheese, pizza, Alfredo)	550 mg / 100 gm
Dry seasoning mixes	415 mg / serving

Reduce Inventory – Increase Menu Variety

Inventory Control:

Managing SKUs

A stock keeping unit (SKU) is the scannable bar code found on product labels. Each unique food item in your inventory has a SKU. Reducing the number of items in inventory will simplify receiving, speed up inventory, reduce inventory costs and make it easier to find products in the freezer. An efficient school food operation will work to minimize the number of SKUs while maximizing variety.

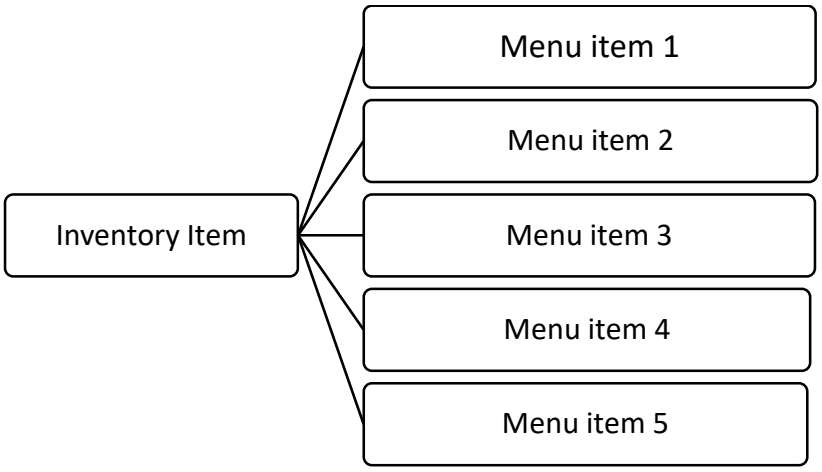
Core Ingredients

- Whole ingredients
- Less processed
- No seasonings

and More

- Menu item flexibility
- Customizable menu items
- Increase global flavors
- Work across grade levels

Stretch the Menu Using Cross-Utilization



CHICKEN BREAST

•Shredded chicken	○BBQ pulled chicken
	○Chicken noodle soup
	○Chicken tetrazzini
	○Chicken chili with beans
	○Chicken taco
•Diced chicken	○Kung pao chicken with sweet peppers
	○Italian chicken with oregano and lemon
	○Summer chicken stew
	○Buffalo chicken tot bake
	○Chicken pot pie
	○Caribbean chicken sub
•Chicken strips	○Chicken fajita rice bowl
	○Chicken stir-fry
	○Cheesy chicken fajitas
	○Chicken teriyaki
	○Chicken curry casserole
•Chicken tenders	○Crispy chicken tenders with dipping sauce
	○Fresh green salad with chicken tenders
	○Teriyaki glazed chicken
•Whole chicken breast	○Kati-Kati baked chicken
	○Honey-lemon chicken
	○Baked rosemary balsamic chicken
	○Sweet and sassy chicken
	○Chicken slider with honey mustard aioli

PERSONAL REFLECTION

Topic	What did I learn?	How am I going to use this information?
Culinary Basics Mise en Place Knife Skills		
Cooking Vegetables for Greater Appeal		
Scratch Baking Principles and Techniques		

ACTION PLAN

From your Personal Reflection notes, identify your top 3 priorities that you want to address when you return to your school. Develop an action plan for accomplishing each.

Goal	Action Steps	People who can help me Resources needed	Date to accomplish
Priority One			
Priority Two			
Priority Three			

These materials were developed at the Culinary Institute of America.

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