



COOKING FOR
HEALTHY
KIDS



Culinary Skills Training for School Nutrition Professionals



Learning Objectives

- 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*.
- Demonstrate proper use of a chef's knife.
- Demonstrate roasting, steaming, blanching and quick pickling of vegetables.
- Demonstrate how to enhance flavors of foods using herbs, spices, culinary acids, and other ingredients.
- Build school meals in an attractive and appealing manner.
- Learn and apply scratch baking principles and techniques.



Course Goals

1. Improve the culinary skill level of school nutrition professionals.
2. Improve the quality of meals served to students.
3. Increase the consumption of vegetables, fruits, whole grains, plant proteins and lean meats amongst school-aged children.

Week Overview

Day 1: Knife Skills

Day 2: Vegetable Cookery

Day 3: Great Grains

Day 4: Sandwiches

Day 5: Salads





Daily Schedule

Culinary Lecture and Demonstration

Practical Kitchen Experience

Technique / Recipe Evaluation

Kitchen Keys

Nutrition Keys

Key Focuses

- Culinary technique
- Product evaluation
- How am I going to apply what I learned?





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Kitchen Keys: Weights & Volumes

Day One





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Demonstration

Popcorn – Why We Measure the Right
Way



Weights & Measures in School Foodservice

- Accurate weights and measures are essential for producing high-quality, consistent meals.
- Recipes depend on correct units, tools, and techniques.
- Basic math skills support recipe scaling, conversions, and adjustments.



Weight vs. Volume

- **Weight** measures an item's **mass** (ounces, pounds).
- **Volume** measures the **amount of space an item occupies** (teaspoon, tablespoon, fluid ounce, cup, pint, quart, gallon).
- Weight and volume are not interchangeable.



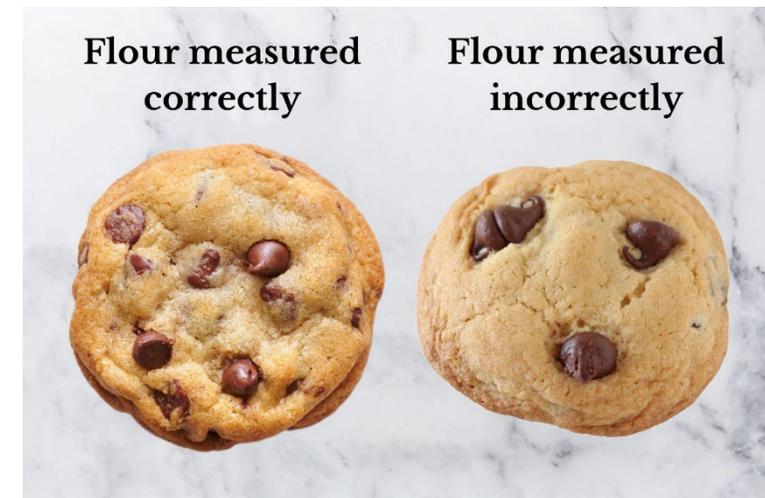
Why Weight is Often More Accurate



- A pound of bricks and a pound of feathers weigh the same, but take up different amounts of space.
- Weight is more accurate for solid ingredients over 2 ounces.
- Liquids are best measured by volume.

Why Accuracy Matters

- Measuring solids by volume can lead to large variations.
 - Example: Flour amounts vary based on scooping, packing, and leveling.
- Small differences can affect final product quality.



Common Measuring Tools

- Scales measure weight
 - Most accurate for dry ingredients
- Measuring cups and spoons measure volume
 - Works best for liquids
- Scoops measure volume
 - The scoop number equals scoops per quart



Dry vs. Liquid Measuring Tools

- **Liquid cups** include a **spout and headspace** to prevent spills.
- **Dry cups** have **straight rims** for leveling.
- **Ounces** measure weight; **fluid ounces** measure volume.



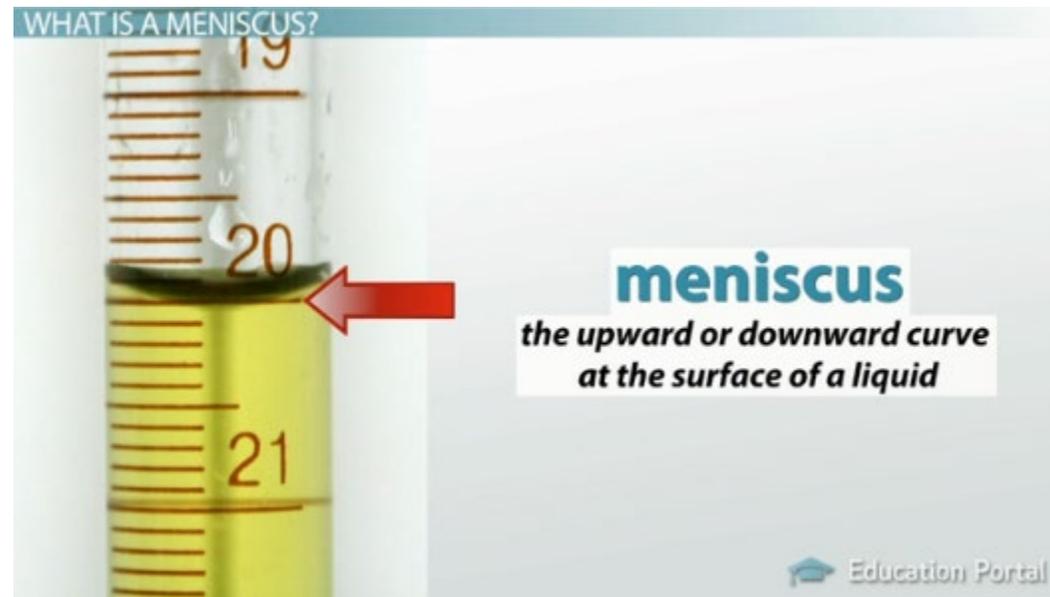
Proper Measuring Techniques

- Lightly spoon dry ingredients and level with a flat edge.
- Avoid tapping or shaking measuring containers.
- Brown sugar is usually packed unless stated otherwise.



Additional Best Practices

- Use a scale whenever possible.
- Check liquid measurements at eye level using the meniscus.
 - Meniscus – the natural curve that forms at the surface of a liquid in a measuring cut.
- **Measure all ingredients before starting the recipe.**



Serving and Portion Control

- Serving size impacts yield, cost, and satisfaction.
- Scoops ensure consistent portions.
- Incorrect portions lead to waste and shortages.



Volume Measure Equivalencies

- 3 teaspoons = 1 tablespoon | 16 tablespoons = 1 cup
- 2 cups = 1 pint | 1 pints = 1 quart
- 4 quarts = 1 gallon

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

Scoop Sizes

- The scoop number shows how many level scoops equal one quart.
- Using the correct scoop improves the consistency and yield control.

Portion Control Chart

Control accurate portions and food costs with the RightWay Food Service Portion Control Chart. Find the correct disher/scoop utensil for your serving size by using the below color-coded chart. For additional resources, please contact your sales rep or visit our website at www.rightwayfoodservice.com.



Color	Disher/Scoop Size #	Capacity (ounces)	Capacity (cups)
Black	40	¾	¾
Red	30	1	¾
Blue	24	1 ½	¾
Yellow	20	1 ¾	¾
Green	16	2	¾
Orange	12	2 ¾	¾
White	10	3*	¾*
Gray	8	4	¾
Teal	6	5 ½	¾

*Disher/Scoop capacity: 3 ¼ oz.

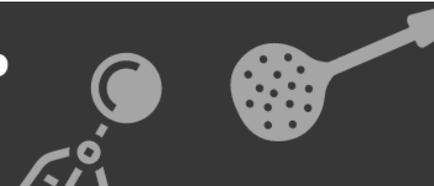
Not all foods measure the same:
 16 ounces = 4 cups of flour
 16 ounces = 3 cups of brown sugar
 16 ounces = 2 ½ cups of granulated sugar



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PORTION SCOOP SIZE CHART

Find the best scoop for your needs.



SIZE	COLOR	CAPACITY (FLUID OZ)
#4	Orange	8
#5	Teal	6.40
#6	White	5.33
#8	Gray	4
#10	Ivory	3.20
#12	Green	2.67
#16	Blue	2
#20	Yellow	1.60
#24	Red	1.33
#30	Black	1.07
#40	Orchid	0.80
#50	Rust	0.64
#60	Pink	0.53
#70	Plum	0.46
#100	Orange	0.32



Ladles and Pan Capacity

- Ladles measure volume and are labeled in fluid ounces.
- Steam table pans are filled to about 85% capacity.
- Understanding pan capacity supports accurate production planning.

Steam Table Pan Capacity							
Pan Size	Depth	Full Topped-off Capacity			85% Capacity		
		Cup	Qt	Ltr	Cup	Qt	Ltr
Full/Hotel Pan	2"	33.2	8.3	7.9	28.2	7.1	6.7
	4"	56.0	14	13.25	47.6	11.9	11.3
	6"	84.0	21	19.87	71.4	17.9	16.9
Half Pan	2"	17.2	4.3	4.07	14.6	3.7	3.5
	4"	26.8	6.7	6.34	22.8	5.7	5.4
	6"	40.0	10	9.46	34.0	8.5	8.0
Torpedo Pan	1"	8.4	2.1	1.99	7.1	1.8	1.7
	2"	14.8	3.7	3.5	12.6	3.1	3.0
	4"	22.8	5.7	5.39	19.4	4.8	4.6
	6"	32.8	8.2	7.76	27.9	7.0	6.6
Two-thirds Pan	1"	16.0	4	3.79	13.6	3.4	3.2
	2"	22.4	5.6	5.3	19.0	4.8	4.5
	4"	37.2	9.3	8.8	31.6	7.9	7.5
	6"	56.0	14	13.25	47.6	11.9	11.3
Third Pan	2"	10.4	2.6	2.46	8.8	2.2	2.1
	4"	16.4	4.1	3.88	13.9	3.5	3.3
	6"	24.4	6.1	5.77	20.7	5.2	4.9
Fourth Pan	2"	7.2	1.8	1.7	6.1	1.5	1.4
	4"	12.0	3	2.84	10.2	2.6	2.4
	6"	18.0	4.5	4.26	15.3	3.8	3.6
Sixth Pan	2"	4.8	1.2	1.14	4.1	1.0	1.0
	4"	7.2	1.8	1.7	6.1	1.5	1.4
	6"	10.8	2.7	2.56	9.2	2.3	2.2
Ninth Pan	2"	2.4	0.6	0.57	2.0	0.5	0.5
	4"	6.4	1.6	1.51	5.4	1.4	1.3

Adapted from: [Chef Resources](#) | [Professional Chef Websites](#) | [Culinary & Chef Information](#)



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Portion Accuracy Challenge – 1 Ounce Meatball





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Improved Nutrition in School Meals: Why Culinary Skills Matter

Day One





Improving Meal Quality



Your cafeteria or school food operation may be the largest restaurant in your community.



"High quality, flavor, and attractiveness should be the keynotes of the child nutrition program food policy."

-Mary de Garmo Bryan, in the 1936 textbook

The School Cafeteria



National School Lunch Act 1946

Purpose:

"It is hereby declared to be the policy of Congress, *as a measure of national security, to safeguard the health and well-being of the Nation's children* and to encourage the domestic consumption of **nutritious** agricultural commodities and other food..."



National School Lunch Act 1946

"...The *educational features of a properly chosen diet served at school* should not be under-emphasized. Not only is the child taught what a good diet consists of, but his parents and family likewise are indirectly instructed."

The National School Lunch Act

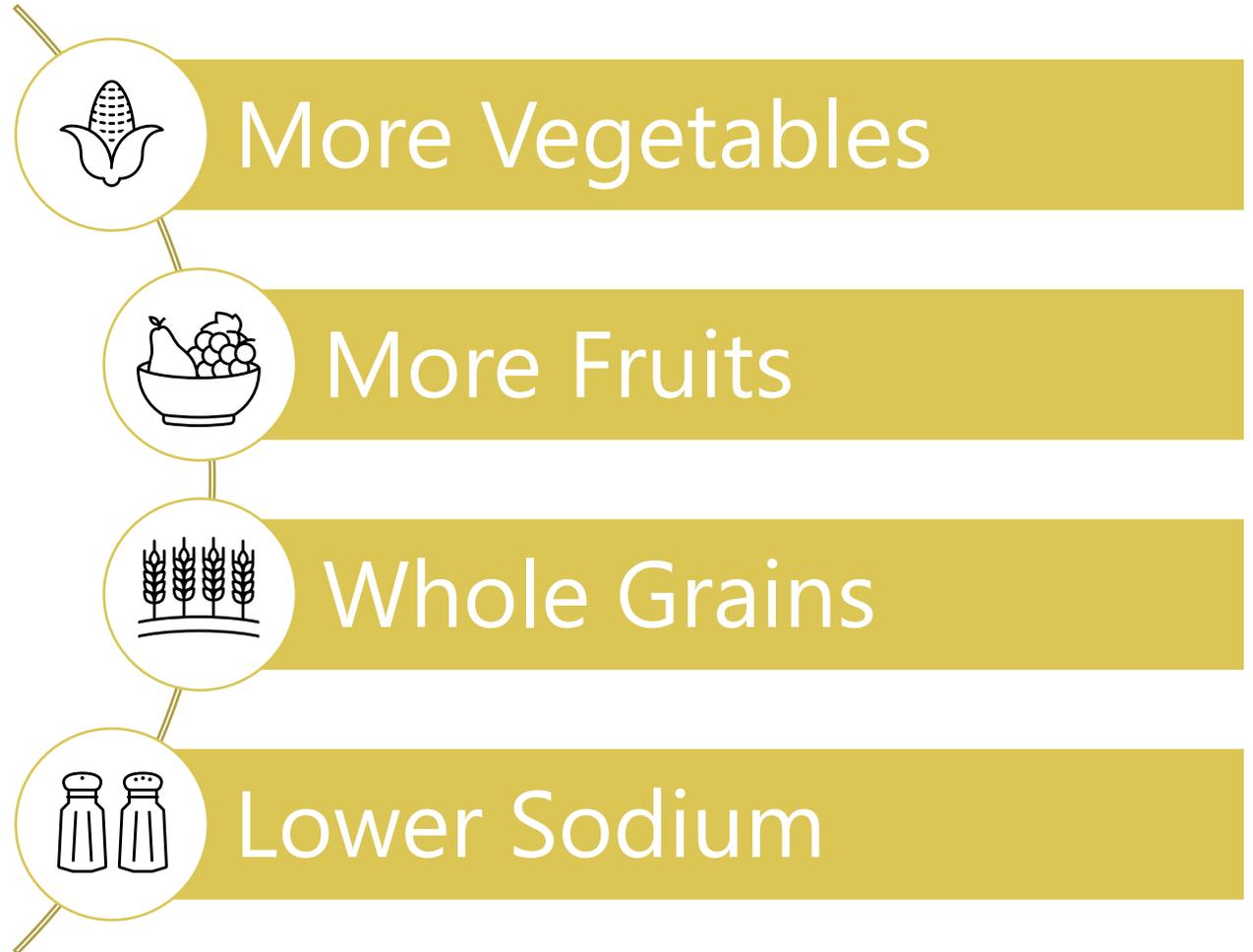
“In the long view, no nation is any healthier than its children or more prosperous than its farmers; and in the National School Lunch Act, the Congress has contributed immeasurably both to the welfare of our farmers and the health of our children.”

President Harry Truman
June 4, 1946



Healthy, Hunger-Free Kids Acts 2010

Improve the nutritional quality of school meals and ensure better access to healthy foods for children.

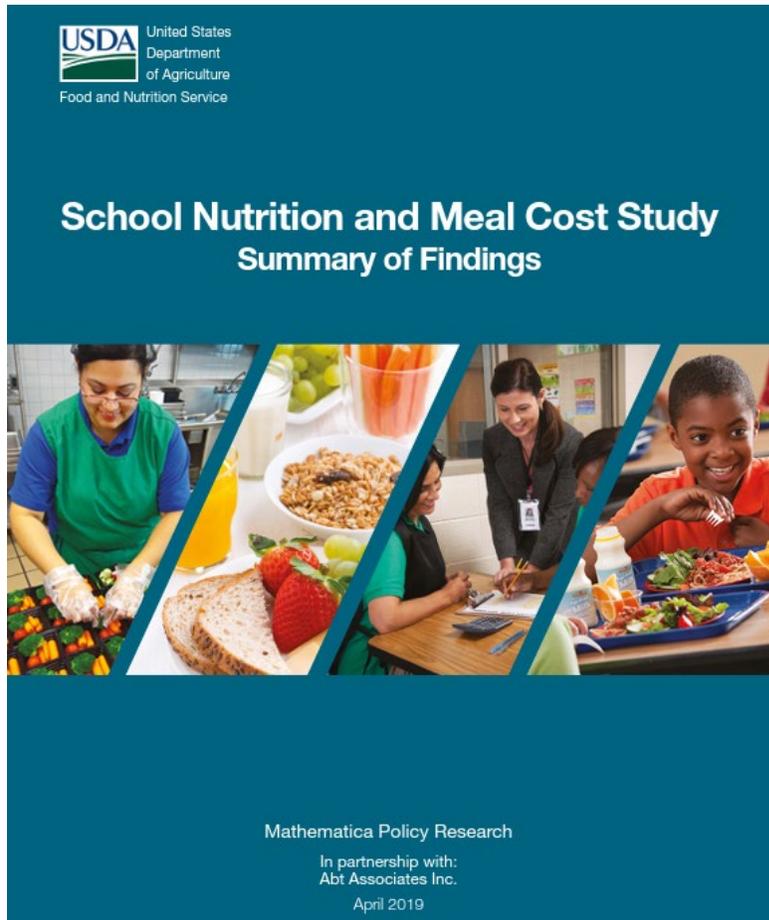


School Meals Today



School Nutrition and Meal Cost Study

A comprehensive research effort conducted by the USDA to assess various aspects of school meal programs (2019).



School Meals are More Nutritious

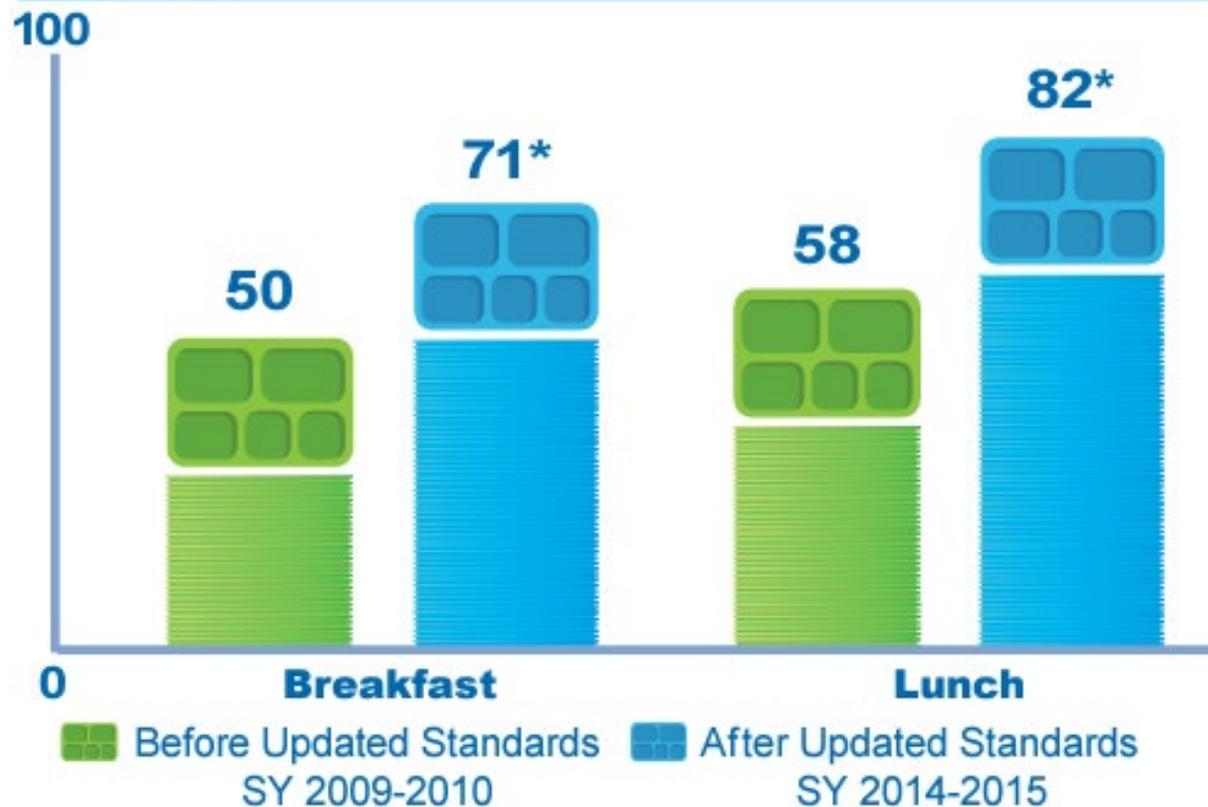
The Healthy Eating Index (HEI) assigns scores to meals based on how consistent they are with the Dietary Guidelines for Americans.

Higher scores indicate higher nutritional quality.



The HEI includes a total score and separate scores for different components of a healthy diet.

Average Total HEI Scores of Schools Meals



The updated nutrition standards went into effect in school year (SY) 2012-2013. *Difference between SY 2009-2010 and SY 2014-2015 is statistically significant.

Academic Benefits



Improved standardized test scores in math and English Language Arts



Improved attention and learning retention



Improved overall attendance, reduced tardiness and decrease in suspensions



Increase in overall educational attainment in adulthood



Health Benefits

Improved rates of mental illness (including anxiety and depression)

Improved overall behavioral health and reducing classroom disruptive behaviors

Reduced rates of overweight and obesity



Equity Benefits

Reduce

Reduce rates of food insecurity

Reduce

Reduce stigmas related to free or reduced-price meals

Increase

Increase availability of nutritious foods to minority students





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Dietary Guidelines for Americans & School Meal Standards

What School Nutrition Professionals Need to Know

Day 1



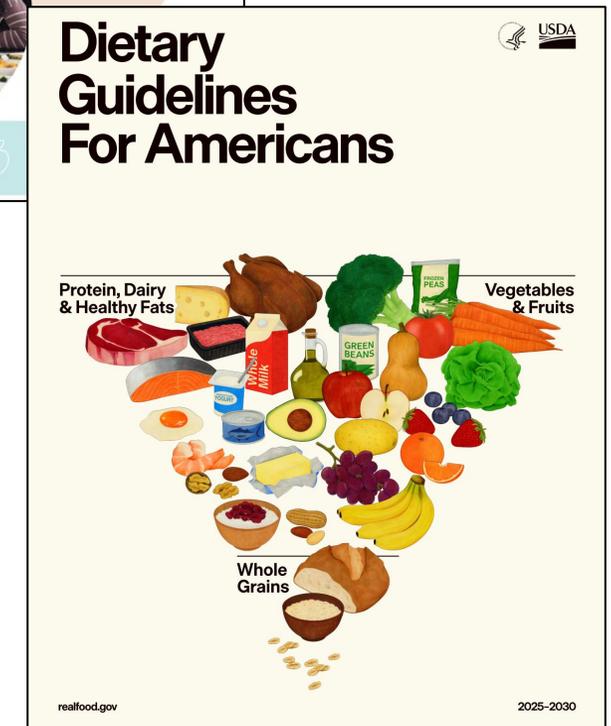
Why We're Talking About the *Dietary Guidelines for Americans (DGAs)*

Provide recommendations about what makes a healthy diet

Focus on disease *prevention* rather than disease *treatment*

Guide all federal nutrition programs & USDA uses them to set school meal standards

Current school meal rules are based on the 2020-2025 DGAs



DPG Facts

- Updated every 5 years
- Developed by the USDA and the Health and Human Services (HHS)
- Based on the best available science





The DGAs That Matter Right Now: 2020-2025

- Current USDA school meal standards are based on the 2020-2025 *DGAs*
- Focus on healthy dietary patterns
- Emphasis on nutrient-dense foods



April 25, 2024: USDA Final Rule

- USDA Food and Nutrition Services (FNS) published a final rule
- Title: *Child Nutrition Programs: Meal Patterns Consistent With the 2020-2025 DGAs*
- Continues science-based improvements to school meals





What the 2024 Final Rule is Based On

- Comprehensive review of the 2020-2025 DGAs
- Robust stakeholder input on the Child Nutrition Program (CNP) meal patterns
- Lessons learned from prior rulemakings
- This rulemaking was effective July 1, 2024, but the USDA is gradually phasing in required changes over time

Key Updates and When Schools Must Take Action

Earliest required changes: School Year (SY) 2025-2026

Added sugar limits:

- Product-based limits begin SY 2025-26
 - Breakfast cereals: no more than 6 grams of added sugar per dry ounce
 - Yogurt: no more than 12 grams of added sugar per 6 ounces (2 grams of added sugar per ounce)
 - Flavored milk: no more than 10 grams of added sugars per 8 fluid ounces
 - Competitive beverage for middle and high school students: no more than 15 grams of added sugars per 12 ounces
- Weekly limits by SY 2027-28

Sodium reductions:

- 10% reduction for breakfast, 15% for lunch by SY 2027-28



Key Updates and When Schools Must Take Action

- **Whole Grains:** 80% of grains offered must be whole-grain-rich (no change)
- **Milk:** Flavored low-fat and fat-free milk continues
- **Vegetables:** At breakfast, schools must offer at least two vegetable subgroups when substituting vegetables for fruit*
- **NSLP Snacks Meal Pattern:** NSLP afterschool snack meal pattern requirements for K-12 children updated to align with the Child and Adult Care Food Program (CACFP) snack meal pattern requirements
- **Meal Modifications for Disabilities:** Schools must accept medical statements provided by Registered Dietitians requesting meal modifications on behalf of students with disabilities
- **Buy American:** Stronger enforcement of domestic purchasing



School Meals Are Already Healthy

- Must meet strict federal nutrition standards
- Aligned with the *DGAs*
- Among the most nutritious meals children eat

What is the “Meal Pattern”?



The structure of a reimbursable meal



Specifies food groups and portion sizes



Based on the *DGAs*



National School Lunch Program

5 Components: Fruits, Vegetables, Grains,
Meats/Meat Alternates, Milk

Portion sizes by grade group (K-5, 6-8, 9-12)

Students must take at least 3 components, one
must be a fruit or vegetable

NSLP Meal Pattern Chart

Required Food Components for Lunch as of July 2024
Amount of Food¹per 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)
Vegetables – Dark ateen subgroup ³	1/2	1/2	1/2
Vegetables – Red/orange subgroup ³	3/4	3/4	1 1/4
Vegetables – Beans, peas, and lentils subgroup ³	1/2	1/2	1/2
Vegetables – Starchy subgroup ³	1/2	1/2	1/2
Vegetables – Other vegetables subgroup ^{3,4}	1/2	1/2	3/4
Vegetables – 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)

NSLP Dietary Specifications

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)	less than 10	less than 10	less than 10
Added sugars (% of total calories) - must be implemented by July 1, 2027	less than 10	less than 10	less than 10
Sodium limit - in place through June 30, 2027	Less than or equal to 1,110 mg	Less than or equal to 1,225 mg	Less than or equal to 1,280 mg
Sodium limit - must be implemented by July 1, 2027	Less than or equal to 935 mg	Less than or equal to 1,035 mg	Less than or equal to 1,080 mg

Endnotes

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

² Minimum creditable serving is 1/8 cup. 1/4 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.

(U.S. Department of Agriculture, 2024c)



School Breakfast Program

3 Components:

Must offer 4 items daily

Students must select at least 3 items, including fruit or vegetable

SBP Meal Pattern Chart

Required Food Components for Breakfast as of July 2024
Amount of Food¹per 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
Vegetables – Dark green subgroup	0	0	0
Vegetables – Red/orange subgroup	0	0	0
Vegetables – Beans, peas, and lentils subgroup	0	0	0
Vegetables – Starchy subgroup	0	0	0
Vegetables – 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)

SBP Dietary Specifications

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)	less than 10	less than 10	less than 10
Added sugars (% of total calories) - must be implemented by July 1, 2027	less than 10	less than 10	less than 10
Sodium limit - in place through June 30, 2027	Less than or equal to 540 mg	Less than or equal to 600 mg	Less than or equal to 640 mg
Sodium limit - must be implemented by July 1, 2027	Less than or equal to 485 mg	Less than or equal to 535 mg	Less than or equal to 570 mg

Endnotes

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

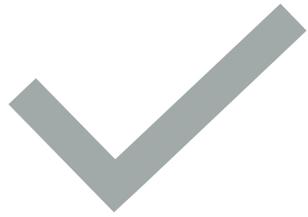
² Minimum creditable serving is 1/8 cup. Schools must offer 1 cup of fruit daily and 5 cups of fruit weekly. Schools may substitute vegetables for fruit at breakfast as described in paragraphs (c)(2)(i) and (ii) of this section.

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. (U.S. Department of Agriculture, 2024d)

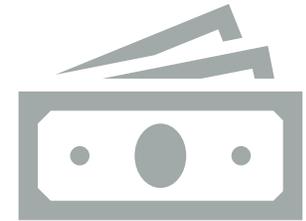
Current Expectations for Schools



Follow existing NSLP and SBP regulations



Use approved recipes and procurement



Maintain compliance for reimbursement

Looking Ahead: 2025-2030 *DGAs*

Released as federal nutrition guidance

Not yet translated into school meal rules

Reinforce familiar nutrition principles

- Whole, nutrient-dense foods
- Limits on sodium and added sugars
- Dietary patterns that support health

Key Takeaways



Current school meal standards are based on the 2020-25 DGAs



USDA's 2024 final rule updates those standards gradually



No immediate changes are required



School meals are already healthy and evidenced-based



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Behavioral Economics or Choice Architecture

Nudging Nutrition: Encouraging Healthy Food Choices in Schools

Day One





Encouraging Healthy Choices

Product
Placement

Improve taste
and quality

Increase variety

Write an
appealing
menu

Use positive
communication

Maintain a
pleasant
environment



Make Healthy Food More Convenient

The easier it is to eat a food, the more likely we are to eat it!

- Middle of display or refrigerator
- Put indulgent treats at the very top or bottom of shelves and in the back

Product Placement

Display white milk in
the front of the cooler





Product Placement

Display whole fruit
in attractive bowls



Product Placement

Display fruit in at least two locations





Improve Taste and Quality



Increase Variety

- More satisfied when they can choose!
 - *When kids were given a choice between carrots and celery, ATE 91% of the vegetables taken vs. 69% when carrots alone were offered*



Write an Appealing Menu

Printed
Menu

Menu
Board

Social
Media
Menus

MIDDLE SCHOOL LUNCH All Meals Served With Choice of Milk

MONDAY Today's Menu

**Spaghetti,
Breadstick**



OR

**Turkey &
Cheese
Sandwich**



ALL GRAIN/BREAD PRODUCTS ARE WHOLE GRAIN OR ENRICHED.

Tuesday



Chili, Crackers
Cinnamon Roll
OR
Chicken Salad
Sandwich
Spicy Sweet Doritos

Thursday



Chicken Drumstick,
Dinner Roll
Mashed Potatoes &
Gravy
OR
Italian Combo Wrap

Wednesday



Fiestada Pizza
OR
Spicy Sweet Doritos
Mozz String Cheese

Friday



Cheese Ripper,
Marinara
PB&J Sandwich
OR
Mozz String Cheese



January 2019

Elementary Lunch

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
	1 HAPPY NEW YEAR No School	2 <ul style="list-style-type: none"> Hot Dog w/ Bun Baked Beans Salad Bar Assorted Fresh Fruit Milk Variety 	3 <ul style="list-style-type: none"> Chicken Salad on Bun Carrot Sticks Assorted Fresh Fruit Salad Bar Milk Variety 	4 <ul style="list-style-type: none"> Stuffed Crust Pizza Boiled Broccoli Salad Bar Assorted Fresh Fruit Milk Variety
7 <ul style="list-style-type: none"> Cinnamon French Toast Potato Smiles Assorted Fresh Fruit Milk Variety 	8 <ul style="list-style-type: none"> Beef Taco Meal w/ Tortilla Rounds Salsa Assorted Fresh Fruit Salad Bar Milk Variety 	9 <ul style="list-style-type: none"> Ham & Cheese Wrap Dill Pickles Salad Bar Assorted Fresh Fruit Milk Variety 	10 <ul style="list-style-type: none"> Chicken Patty on Bun Boiled Carrots Salad Bar Assorted Fresh Fruit Milk Variety 	11 <ul style="list-style-type: none"> Cheese Pizza 4X6 Boiled Broccoli Assorted Fresh Fruit Salad Bar Milk Variety
14 <ul style="list-style-type: none"> Fish Sticks, Alaska Pollock Breaded Mozzarella Cheesesticks Peas Assorted Fresh Fruit Milk Variety 	15 <ul style="list-style-type: none"> Beef Taco Meal w/ Tortilla Rounds Salsa Kidney Beans Assorted Fresh Fruit Salad Bar Milk Variety 	16 <ul style="list-style-type: none"> Egg, Cheese, Bacon on Bun Sweet Potato Bites Salad Bar Assorted Fresh Fruit Milk Variety 	17 <ul style="list-style-type: none"> Chicken Parmesan on Bun Green Beans Salad Bar Assorted Fresh Fruit Milk Variety 	18 <ul style="list-style-type: none"> The Max Round 5" Pizza Boiled Broccoli Assorted Fresh Fruit Salad Bar Milk Variety
21 MLK DAY No School	22 <ul style="list-style-type: none"> Beef Taco Meal w/ Tortilla Rounds Salsa Kidney Beans Assorted Fresh Fruit Salad Bar Milk Variety 	23 <ul style="list-style-type: none"> Turkey & Cheese on Bun Carrot Sticks Salad Bar Assorted Fresh Fruit Milk Variety 	24 <ul style="list-style-type: none"> Chicken Alfredo Dinner Roll WG Green Beans Salad Bar Milk Variety 	25 <ul style="list-style-type: none"> TONY'S® 51% WG Bacon Scramble Pizza Boiled Broccoli Assorted Fresh Fruit Salad Bar Milk Variety
28 <ul style="list-style-type: none"> Cheeseburger on Bun Baked Beans Assorted Fresh Fruit Milk Variety 	29 <ul style="list-style-type: none"> Beef Taco Meal w/ Tortilla Rounds Salsa Assorted Fresh Fruit Salad Bar Milk Variety 	30 <ul style="list-style-type: none"> Pancake & Sausage Stick Potato Smiles Assorted Fruit Juice Salad Bar Milk Variety 	31 <ul style="list-style-type: none"> Popcorn Chicken Mashed Potatoes Corn Salad Bar Assorted Fresh Fruit Milk Variety 	

What Makes a Lunch?
 Select 3-5 Components

MILK	GRAIN	VEGETABLE
FRUIT	PROTEIN	OTHER

One must be a
 FRUIT OR VEGGIE

Boiled Carrots

Boiled Broccoli

Kidney Beans

Write an Appealing Menu

K-5 grade students like imaginative, playful names

- X-ray carrots
- Crazy carrot sticks
- Rainbow veggie pizza
- Sweet talking sweet potatoes

6-12 grade students like descriptive, sensory words

- Spiced butternut squash
- Fluffy mashed potatoes
- Warm baked apples

K-5 Menu with Smarter Lunchroom Names

Monday	Tuesday	Wednesday	Thursday	Friday
<p>Oven Baked Chicken Colorful Curried Rice Wild Broccoli Trees Mandarin Oranges Apple Crisp Milk Choice</p>	<p>Sloppy Joe on a Bun Crunchy Carrots and Celery with Creamy Hummus Dip Fresh Green Grapes Baked Chips** Milk Choice</p>	<p>Loaded Pork Tacos Fiesta Refried Beans Golden Corn Sliced Pears Chocolate Pudding** Milk Choice</p>	<p>Mighty Spaghetti & Meat Sauce Breadstick Super Hero Salad Sliced Peaches Milk Choice</p>	<p>Sweet and Sour Chicken and Rice Bowl Asian Medley Vegetables Apple Slices Strawberry Cup Milk Choice</p>
<p>Philly Chicken Sub Crunchy Carrot Sticks with Dip French Fries Fresh Melon Cup Milk Choice</p>	<p>Cheesy Omelet with Salsa Harvest Apple Muffin Super Sweet Potato Tots Canned Pears Milk Choice</p>	<p>Chicken Nuggets Creamy Butternutty Mac & Cheese Vibrant Veggie Salad Canned Peaches Milk Choice</p>	<p>Hamburger on a Bun Tangy Apple Cranberry Coleslaw Baked Bean Bonanza Toasted Potato Wedges Fruit Cocktail Milk Choice</p>	<p>Scrumptious Stromboli with Marinara Sauce Groovy Green Beans Citrus Fruit Cup Oatmeal Cookie Milk Choice</p>
<p>Toasted Cheese Sandwich Mouth-Watering Minestrone Soup Oven Roasted Potato Wedges Pineapple Chunks Milk Choice</p>	<p>Creamy Chicken Alfredo Power Peas Cherr-ific Salad Vanilla Apples with Raisins Milk Choice</p>	<p>Turkey and Cheese Sub Sweet Cinnamon Squash Crunchy Carrot Sticks and Dip Canned Peaches Baked Chips** Milk Choice</p>	<p>Pizza Sticks with Marinara Sauce Zesty Bean Salad Razzy Cran-Grape Gelatin with Whipped Topping Milk Choice</p>	<p>Hearty Chicken Pot Pie Go-Pack-Go Broccoli Strawberries and Bananas Clementine Milk Choice</p>

Notes:

** Indicates an "extra" item that does not contribute to the meal pattern
All grains are whole grain rich.

Milk Choice includes:
1% White
Skim White
Skim Chocolate

6-8 Menu with Smarter Lunchroom Names

Monday	Tuesday	Wednesday	Thursday	Friday
<p>Oven Baked Chicken Colorful Curried Rice Bright Green Broccoli Mandarin Oranges Apple Crisp Milk Choice</p>	<p>Sloppy Joe on a Bun Crunchy Carrots and Celery with Creamy Hummus Dip Fresh Green Grapes Baked Chips** Milk Choice</p>	<p>Loaded Pork Tacos Fiesta Refried Beans Golden Corn Sliced Pears Chocolate Pudding** Milk Choice</p>	<p>Savory Spaghetti & Meat Sauce Breadstick Crisp Romaine Salad Sliced Peaches Milk Choice</p>	<p>Sweet and Sour Chicken and Rice Bowl Asian Medley Vegetables Apple Slices Strawberry Cup Milk Choice</p>
<p>Philly Chicken Sub Crunchy Carrot Sticks with Dip French Fries Fresh Melon Cup Milk Choice</p>	<p>Cheesy Omelet with Salsa Harvest Apple Muffin Tasty Sweet Potato Tots Canned Pears Milk Choice</p>	<p>Chicken Nuggets Creamy Butternutty Mac & Cheese Garden Fresh Salad Canned Peaches Milk Choice</p>	<p>Hamburger on a Bun Tangy Apple Cranberry Coleslaw Cowboy Beans Toasted Potato Wedges Fruit Cocktail Milk Choice</p>	<p>Scrumptious Stromboli with Marinara Sauce Great Green Beans Citrus Fruit Cup Oatmeal Cookie Milk Choice</p>
<p>Toasted Cheese Sandwich Mouth-Watering Minestrone Soup Oven Roasted Potato Wedges Pineapple Chunks Milk Choice</p>	<p>Creamy Chicken Alfredo Vibrant Green Peas Cherr-ific Salad Vanilla Apples with Raisins Milk Choice</p>	<p>Turkey and Cheese Sub Sweet Cinnamon Squash Crunchy Carrot Sticks and Dip Canned Peaches Baked Chips** Milk Choice</p>	<p>Pizza Sticks with Marinara Sauce Italian Bean Salad Razzy Cran-Grape Gelatin with Whipped Topping Milk Choice</p>	<p>Hearty Chicken Pot Pie Go-Pack-Go Broccoli Strawberries and Bananas Clementine Milk Choice</p>

Notes:

** Indicates an "extra" item that does not contribute to the meal pattern

All grains are whole grain rich.

Milk Choice includes:

1% White
Skim White
Skim Chocolate



Use Positive Communication



GREETING



SERVING



CASH
REGISTER



SPECIAL
REQUESTS



CONFLICT

Use Suggestive Selling

- Attitudes are contagious!
- Signs and verbal prompts influence us to see and desire products
- Peer pressure

**Fruit comes
with your
meal!**

**Take an apple
for later!**

**Would you like
some salad
with that
pizza?**

**Try today's
special! It's
delicious!**

Maintain a Pleasant Environment

Attractive dining room

Branded dining room

Easy to read menu board

Cleaning supplies not visible during service

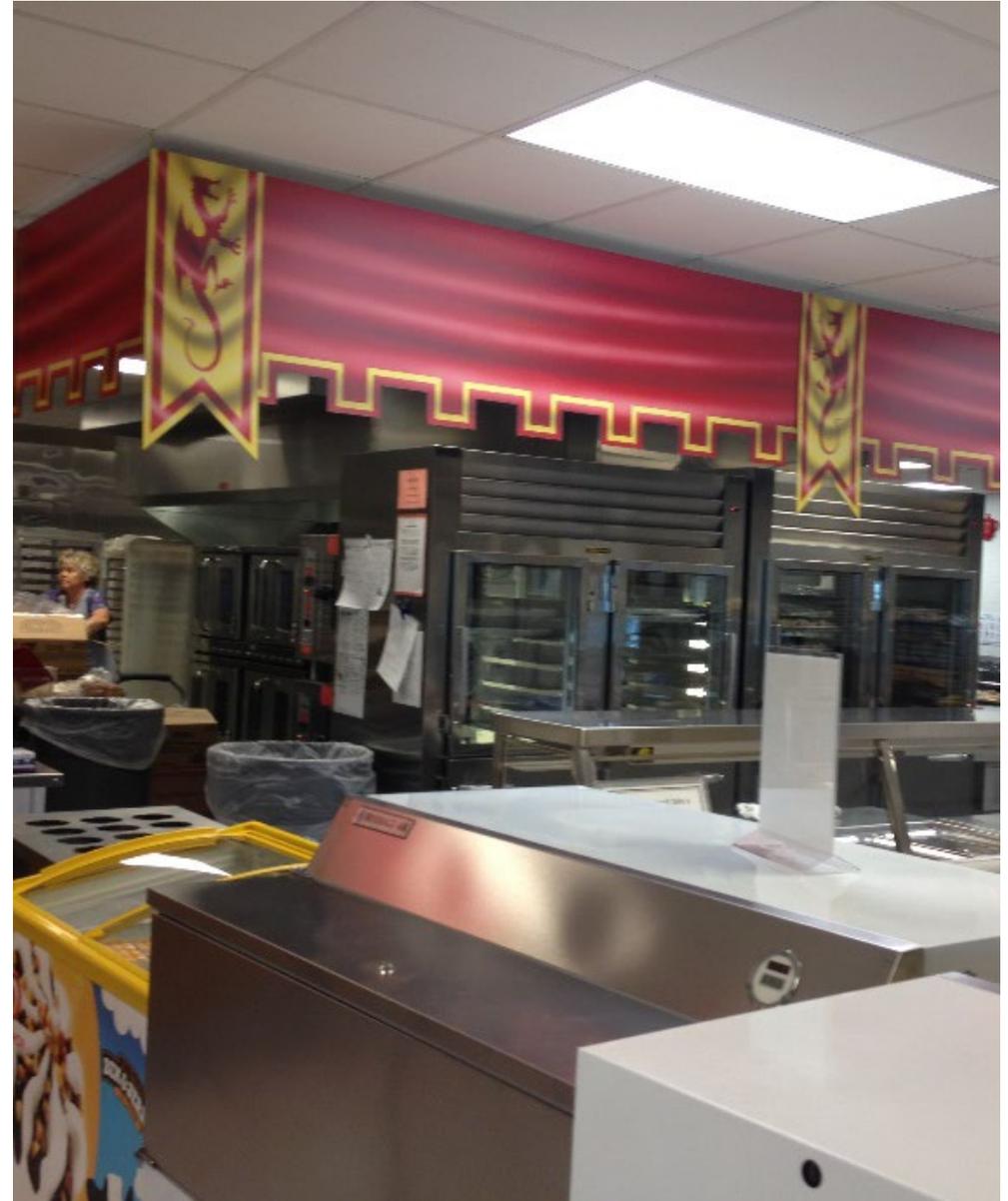
Recycling/trash bins are away from dining students

Warrick County School Corporation (Indiana)





Warrick County School Corporation (Indiana)





Culinary Institute
of America

Pulses: Dried Beans, Peas, & Lentils

Day Two



What are Pulses?

- **Pulses** are a specific type of legume
 - **Legumes** are one of the largest families of flowering plants
 - Thousands of species worldwide: ~19,000-20,000!
- Dry, edible seeds of the legume plant
 - Dried beans, dried peas, chickpeas, and lentils
- Peanuts, soybeans, and fresh peas are legumes, but not pulses
- Versatile, delicious flavor, **nutrient-dense**
- Packed with vitamins + minerals, complex carbohydrates, dietary fiber, plant-based protein, low in fat



Vegetable, Meat/Meat Alternate, or Both?

- Both – they fit into two USDA food groups and may be credited as either a:
 - Vegetable (beans, peas, and lentils subgroup)
 - Meat/meat alternate
- May only be credited toward one component per meal, not simultaneously
- In NSLP can be counted toward the weekly beans, peas, and lentils vegetable subgroup requirement



Vegetable Subgroups for NSLP

Fresh, frozen, or canned

DARK GREEN	RED/ORANGE	LEGUMES
<ul style="list-style-type: none"> Arugula Beet greens Bok choy Broccoli Broccoli rabe (rapini) Broccolini Butterhead lettuce (Boston, Bibb) Chicory Cilantro Collard greens Endive Escarole Fiddle heads Grape leaves Kale Mesclun Mustard greens Parsley Spinach Swiss chard Red leaf lettuce Romaine lettuce Turnip greens Watercress 	<ul style="list-style-type: none"> Bell peppers (red, orange) Carrots, orange Cherry peppers Orange peppers Pimientos Pumpkin Red chili peppers Red peppers Salsa (100% vegetables) Spaghetti squash Sweet potatoes/yams Tomatoes Tomato juice Winter squash (acorn, butternut, Hubbard) 	<ul style="list-style-type: none"> Black beans Black-eyed peas (mature, dry) Cowpeas Edamame Fava beans Garbanzo beans (chickpeas) Great Northern beans Kidney beans Lentils Lima beans (mature, dry) Mung beans Navy beans Pink Beans Pinto beans Red beans Refried beans Soy beans (mature, dry) Split peas White beans <p>*Does not include immature (fresh) beans or peas</p>
STARCHY	OTHER	
<ul style="list-style-type: none"> Black-eyed peas, fresh (not dry) Corn Cassava (yuca) Cowpeas, fresh (not dry) Field peas, fresh (not dry) Green bananas Green peas Hominy, whole (canned, drained) Jicama Lima beans, green (not dry) Parsnips Pigeon peas, fresh (not dry) Plantains Potatoes Poi Taro (malanga) Water chestnuts Yautia (tannier) 	<ul style="list-style-type: none"> Artichokes Asparagus Avocado Bamboo shoots Bean sprouts, cooked only (for food safety) Beans, green/yellow Beets Breadfruit Brussel sprouts Cabbage (green, red, napa) Cactus (nopales) Cauliflower Carrots, rainbow Celery Chayote (mirliton) Chives Cucumbers Daikon Eggplant Garlic Iceberg lettuce Mixed greens lettuce Mixed vegetables Mushrooms Okra Olives Onion Pepperoncini Peppers (green, sweet bell, green chilies, jalapeno, purple, yellow) Pickles Radishes Sauerkraut Snap/Snow peas Spaghetti squash Tomatillos Zucchini 	

Beans, Peas, and Lentils Subgroup



TEXAS DEPARTMENT OF AGRICULTURE
COMMISSIONER SID MILLER

Fraud Hotline: 1-866-5-FRAUD-4 or 1-866-537-2834 | P.O. Box 12847 | Austin, TX 78711
Toll Free: (877) TEX-MEAL | For the hearing impaired: (800) 735-2989 (TTY)

This product was funded by USDA.
This institution is an equal opportunity provider.



Food and Nutrition Division
Nutrition Assistance Programs



Updated 5/28/2024
www.SquareMeals.org

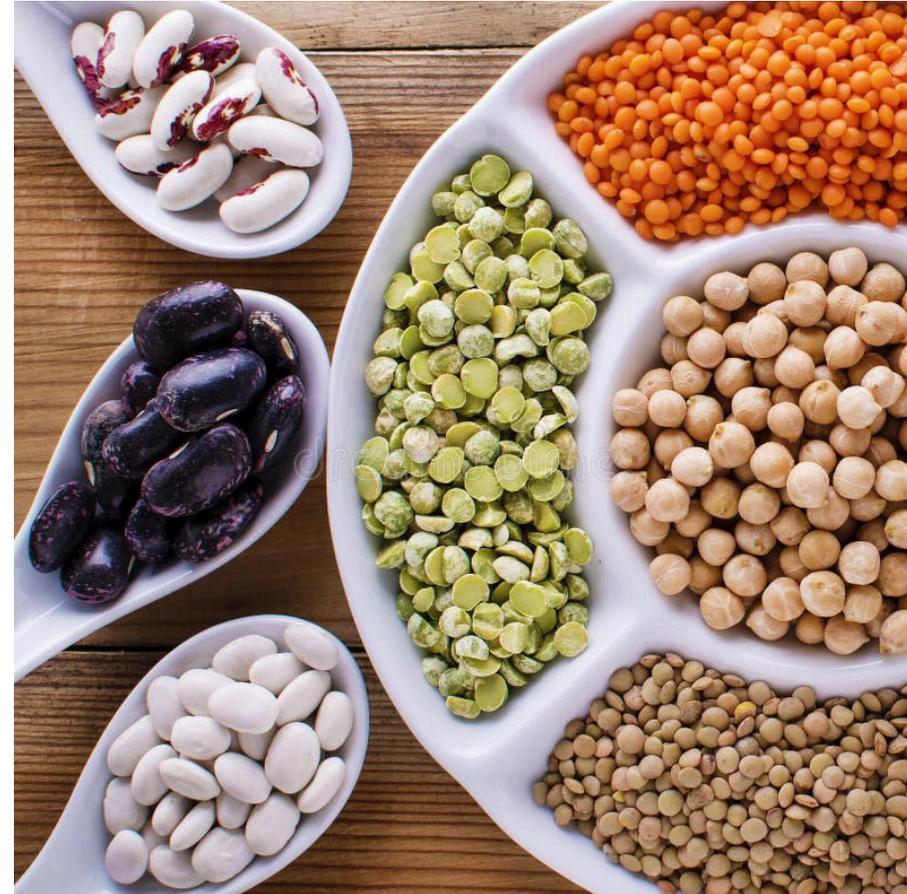
Health Benefits

- Blood Pressure Control
- Cancer Risk Reduction
- Energy Production
- Heart Disease Risk Reduction
- Improves Digestion
- Weight Management
- Kidney Health



Nutrients

- Dietary Fiber
- Folate
- Plant-based Iron
- Phosphorus
- Potassium
- Plant-based protein
- Healthy fat
- Zinc



Versatility in School Meals



Side salads

Tuscan White Bean Salad



Salad toppers

Moroccan Crispy Roasted Chickpeas



Vegetable side dish

Red Beans & Rice
Burke County School Nutrition



Plant-based main dish

Asian-Style Sweet & Spicy Veggie Burger



Breakfast

Huevos Rancheros

Purchasing Forms

Canned

Dried

Dehydrated

Frozen-IQF (Individually Quick Frozen)





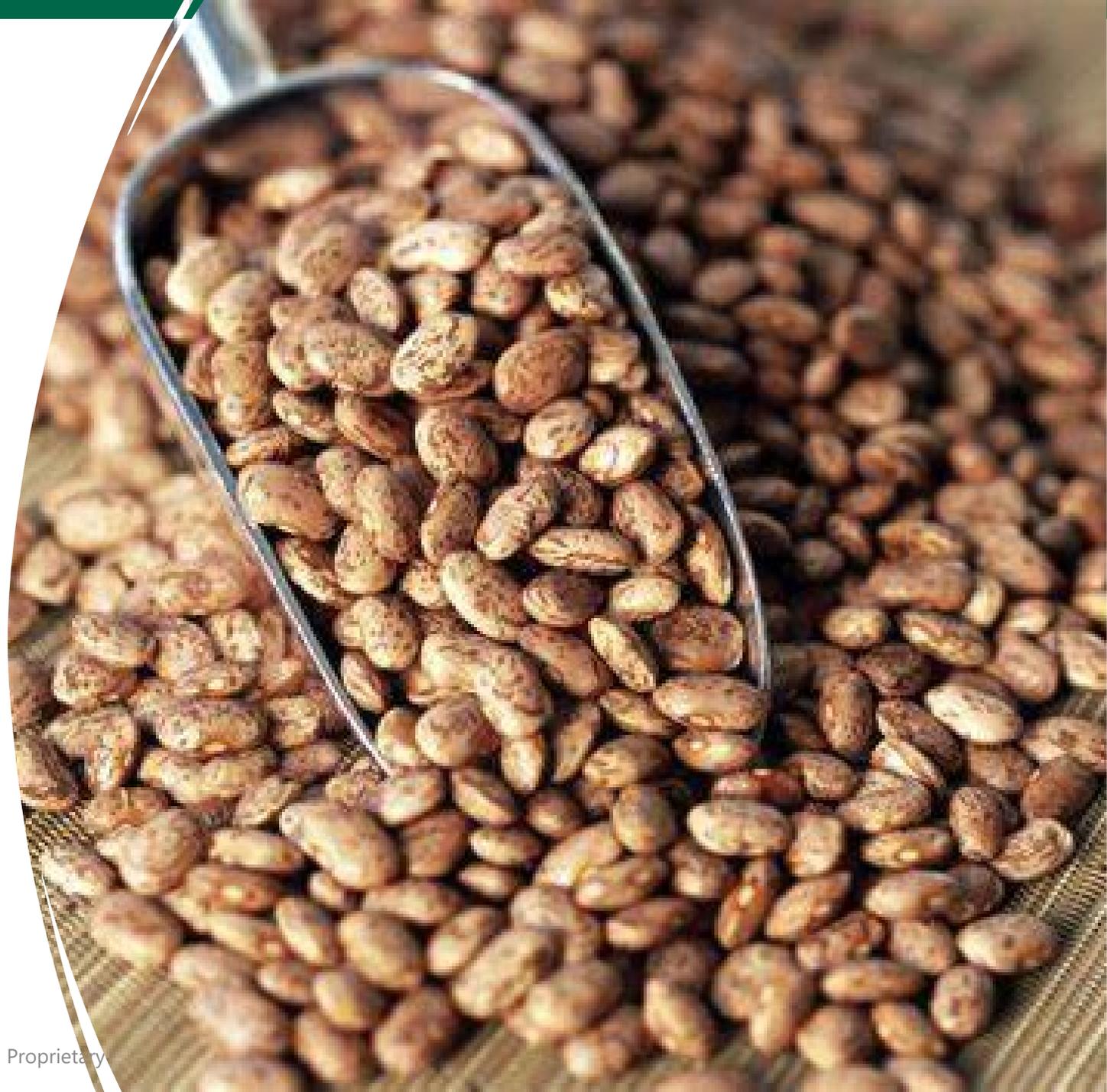
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Beans, Peas, & Lentils ID Challenge



Pinto Bean

- Light brown color
- Creamy texture
- Mild, earthy flavor
- Commonly used in Mexican cuisine and are great for refried beans



Small Red Bean

- Slightly smaller than kidney beans
- Robust flavor and firm texture
- Often used in soups, chili, and Creole dishes



Pink Bean

- Similar in size to pinto beans
- Have a smooth, delicate flavor
- Often used in Caribbean and Latin American dishes



Red Kidney Bean

- Large, kidney-shaped
- Deep red color
- Slightly sweet flavor
- Commonly used in chili, soups, and salads



Great Northern Bean

- Medium-sized white beans
- Delicate flavor
- Smooth texture
- Great for casseroles, soups, and stews



Lima Bean

- Also known as butter beans
- Starchy, buttery texture
- Slightly sweet flavor
- Often used in Southern cuisine



White Kidney Bean

- Also known as Cannellini Beans
- Large, creamy white beans
- Slightly nutty flavor
- Popular in Italian dishes like minestrone and salads



Navy Bean

- Small white beans
- Mild flavor
- Soft texture
- Often used in baked beans and soups



Small White Bean

- Slightly smaller than navy beans
- Mild flavor
- Often used in soups and stews



Black Bean

- Small, shiny black beans
- Dense, meaty texture
- Earthy flavor
- Commonly used in Latin American and Caribbean cuisines



Whole Green Pea

- Round, green peas
- Slightly sweet flavor
- Often used in soups and stews



Green Split Pea

- Dried, peeled, and split green peas
- Cook quickly
- Slightly sweet, earthy flavor
- Ideal for soups and purees



Yellow Split Pea

- Similar to green split peas
- Milder, sweeter flavor
- Often used in Indian dal and soups



Lentil

- Small, lens-shaped legumes
- Come in various colors, including green, brown, and red
- Mild, earthy flavor
- Cook quickly
- Perfect for soups and stews



Cranberry Bean

- Also known as borlotti beans
- Beige with red speckles
- Creamy texture
- Slightly nutty flavor
- Commonly used in Italian and Portuguese dishes



Chickpea/Garbanzo Bean

- Round, beige legumes
- Firm texture
- Nutty flavor
- They are the key ingredient in hummus and falafel



Black-Eyed Pea

- Cream-colored peas with a black spot
- Mild, earthy flavor
- Often used in Southern and African American cuisine





Culinary Institute
of America

Farm to School

Day Two



Three Core Elements of Farm to School

Procurement

Education

School
Garden



USDA Office of Community Food Systems



increase the availability of local foods in child nutrition programs



promote hands-on learning activities such as gardening, farm visits, and culinary classes



encourage the integration of food related education into regular, standards-based curriculum to help children make lifelong healthy eating choices



School Gardens





Composting



Composting: Vermiculture



Container Gardening



Tower Gardens

Grow more in less time

Grow inside cafeteria

Less mess

Moveable



**Westside Elementary School,
Warner Robins, Georgia**

Greenhouses



**Howard Valentine
Coffman Cove School,
Alaska**



**Unicoi County Schools,
Tennessee**

Hydroponics in Schools

Students at Amidon-Bowen Elementary in Washington, D.C. excited about the fast growth of their salad greens.



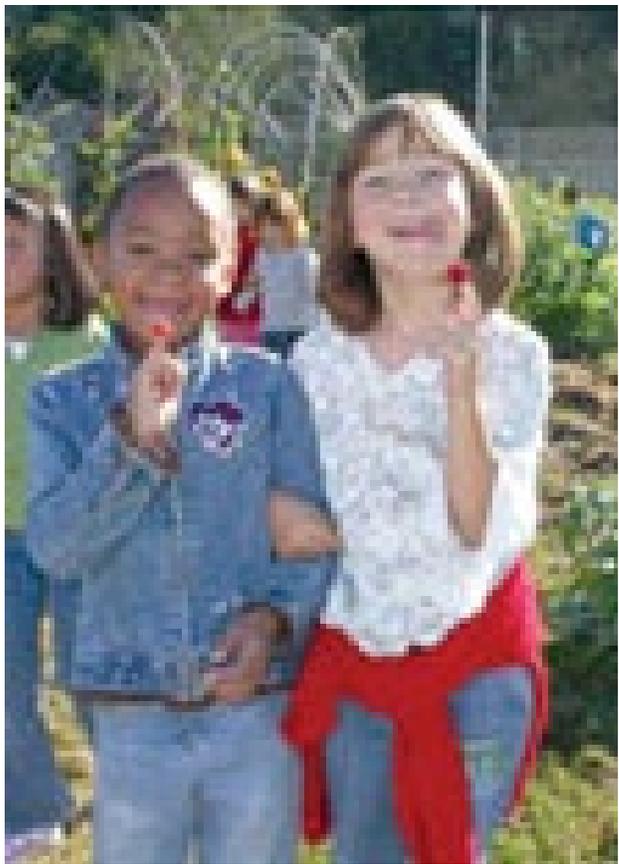
Raising Cows

**Hagerstown
Junior/Senior High
School,
Wayne County, Indiana**





Chickens!



**Lincoln Elementary School,
Olympia, WA**

Spartanburg County School District 6

- District: 11,000 students, 15 schools
- Greenhouse
- 16 acres of crops
 - Broccoli
 - Cabbage
 - Cucumber
 - Sweet potatoes
 - Blueberries
 - Watermelon
 - Honey





Farm to School: Food Education



Food Cultures

USDA
United States Department of Agriculture

BRINGING TRIBAL FOODS AND TRADITIONS INTO CAFETERIAS, CLASSROOMS, AND GARDENS

SCHOOLS AND NATIVE AMERICAN TRIBES across the country are incorporating traditional foods like bison, mesquite flour, wild rice, and ancient varieties of squash and corn into school meals and providing complementary educational activities that teach students about nutrition and Native American food traditions. There are more than 560 tribes recognized by the U.S. government, each with its own food and agricultural history and culture. Operating a farm to school program in a tribal setting or in a school with a high Native American population can help connect students to this history and expand markets for local and Native American farmers. This fact sheet explores how school and tribes are integrating traditional foods into child nutrition programs (CNPs), buying traditional foods locally, and incorporating multicultural nutrition education into classroom curriculum and hands-on lessons in school gardens.

Incorporating Traditional Foods into Menus
The United States Department of Agriculture (USDA) encourages Indian Tribal Organizations, along with all operators of CNPs, to serve traditional and locally grown and raised foods. The **Child Nutrition Programs and Traditional Foods memo (TA01-2015)** explains that traditional foods may be served in CNPs and includes examples of how several traditional foods may contribute towards reimbursable meals. The **USDA Food Buying Guide (FBG)** is a great place to start when creating menus that incorporate traditional food items since it includes crediting information and portion sizes needed to meet the nutritional standards for federal reimbursement.

The **Circle of Nations Boarding School** located in Wahpeton, North Dakota, a charter under the Sisseton Wahpeton Oyate tribe, incorporates bison meat from the Intertribal Buffalo Council (ITBC) Sisseton-Wahpeton Oyate herd into lunch meals. Bison meat is substituted for ground beef in items such as chili and spaghetti sauce. In addition, food from the school garden is served daily on the salad bar. Lise Erdrich, School Health Coordinator, says that the students rated her salsa verde recipe, made with traditional green tomatillos, "better than guacamole!"

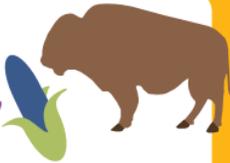
Meat from domesticated and wild game animals, including many traditional foods like bison and venison, may be served in child nutrition programs.

For information about serving meat, see the memo, Procuring Local Meat, Poultry, Game, and Eggs for Child Nutrition Programs (SP01 CACFP01 SFSP01-2016).

While the FBG provides a list of products commonly served in CNPs, it is not comprehensive. If a food is served as part of a reimbursable meal, but not listed in the FBG, the yield information of a similar food or an in-house yield may be used to determine the contribution towards meal pattern requirements.

Since traditional foods may provide a different nutrient yield than the substitutes listed in the FBG, it is important to pay attention to preparation techniques and the nutritional content of the foods being substituted.

OFFICE of COMMUNITY FOOD SYSTEMS



www.fns.usda.gov/cfs/tribal-foods



AMERICAN INDIAN TRADITIONAL FOODS IN USDA SCHOOL MEALS PROGRAMS

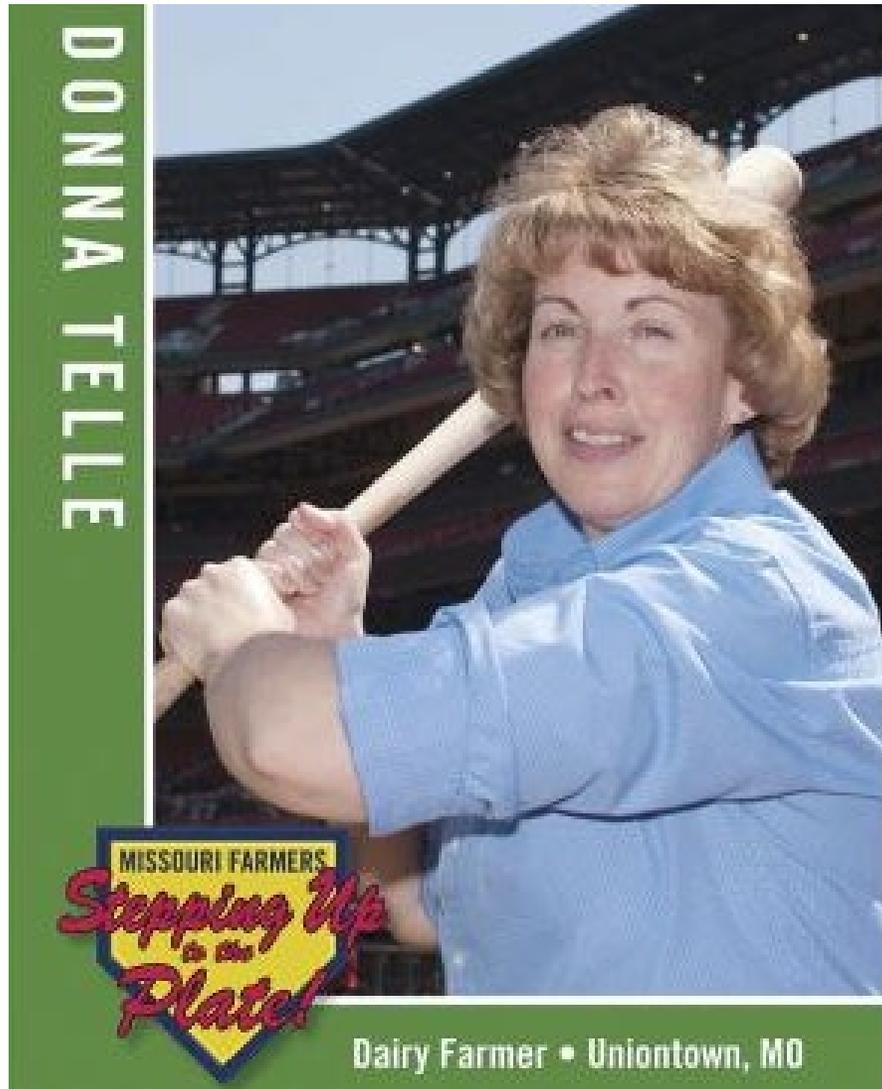
A Wisconsin Farm to School Toolkit



Wisconsin Department of Public Instruction

<https://dpi.wi.gov/news/dpi-connected/traditional-foods-wisconsin>

Farmer Trading Cards



“We care about continuing the tradition of family farming while producing nutrient-rich milk.”

DONNA TELLE

Raises: Holstein Dairy Cattle

Location: Uniontown, Missouri

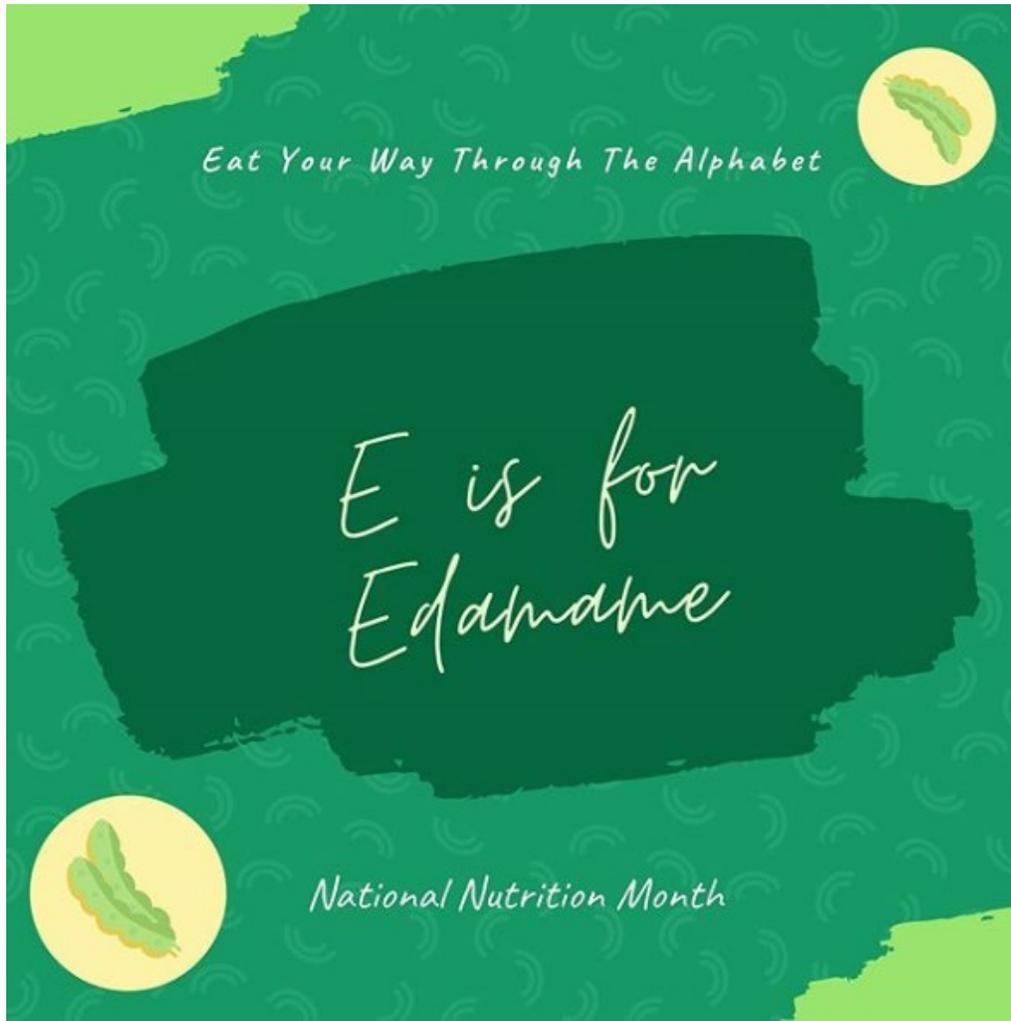
Farming for: 27 years, a 5th generation farmer
(her sons are 6th generation!)

Hobbies: FFA Alumni, Perryville Pirate
Athletic Club

Meet other farmers and register to win the “Ultimate At-Home Tailgate” at FarmersFeedUs.org



Eat the Alphabet





Cooking Classes



Cooking Clubs: **Cookingwithkids.org**

- Cooking with Kids educates and empowers children and families to make healthy food choices through hands-on nutrition education with fresh, affordable foods.
 - How to videos
 - Cooking lessons
 - Cafeteria resources
 - Tasting Lessons





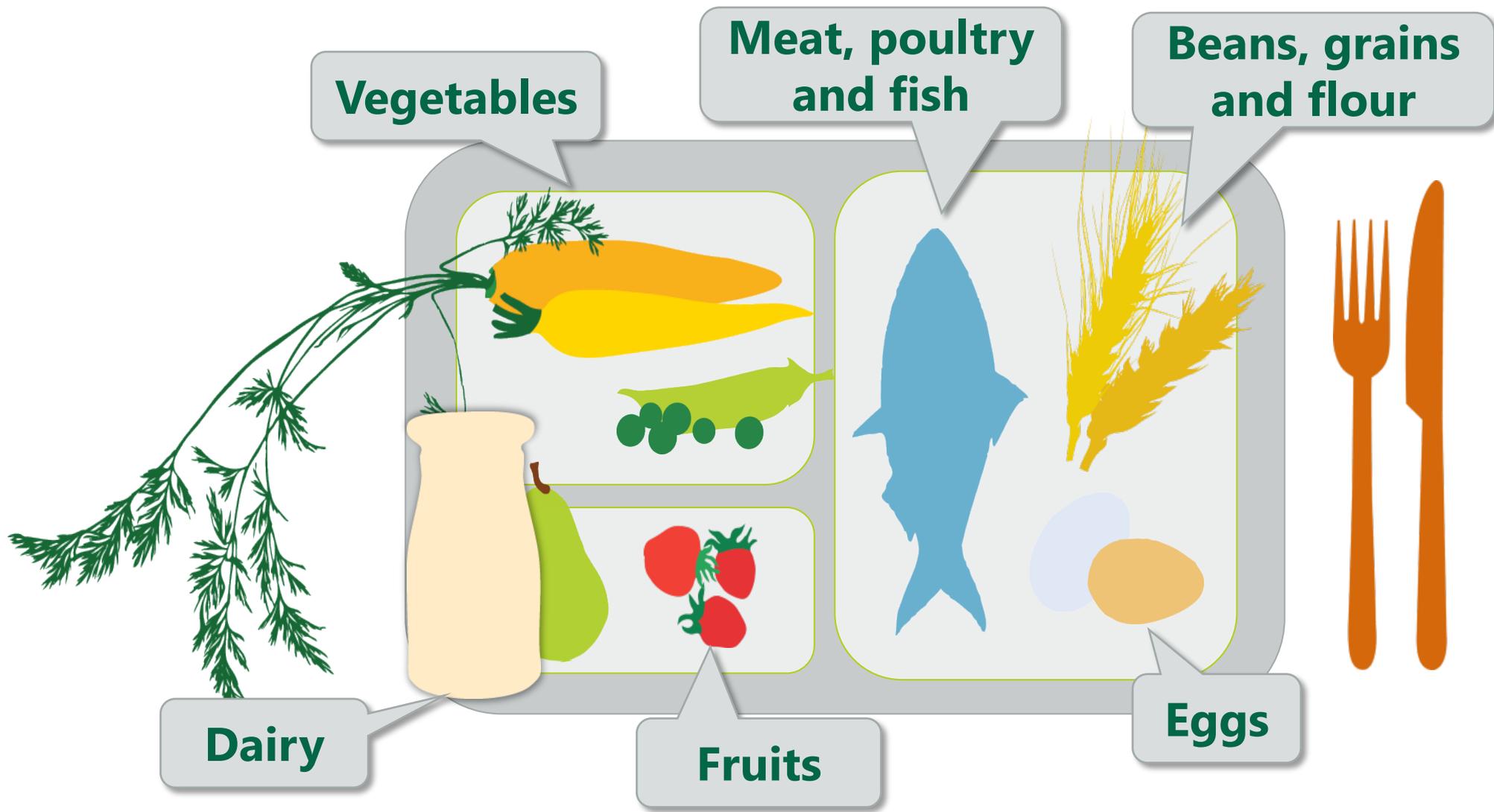
Field Trips





Farm-to-School Procurement





Students Benefit

Fruit and vegetable consumption

Food choices

Academic achievement

Food education





Benefits of Buying Local

Supporting the local economy and local farms

Building partnerships between the school system and community

Lower transportation costs

Fulfilling student, parent and/or teacher requests for local food



Small Steps

Asking

- Asking your current vendor to sell local farm products

Planning

- Planning menus around seasonal availability of local products

Buying and highlighting

- Buying and highlighting only one or two local products each month



Small Steps

Host

- Hosting one or two local food meals or events each school year (i.e. Indiana Food Day)

Begin

- Beginning by serving local foods on a limited or pilot basis, such as serving at only one school



Small Steps

Begin

- Begin with one item – maybe lettuce

Look

- Look for a product unique to your area

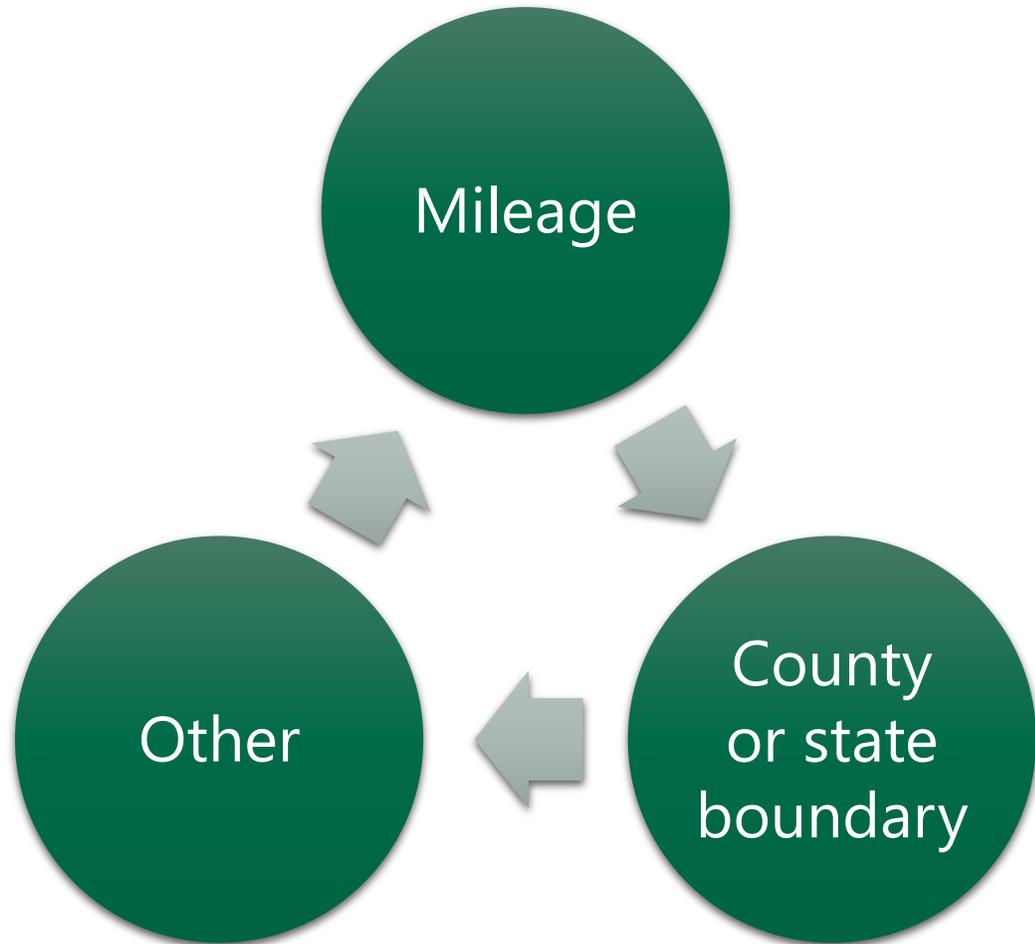
Create

- Create excitement for that one item



Geographic Preference

How do we define local?





Culinary Institute
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Ingredient Versatility & Speed Scratch in School Meals

Day Three





Types of Meal Preparation

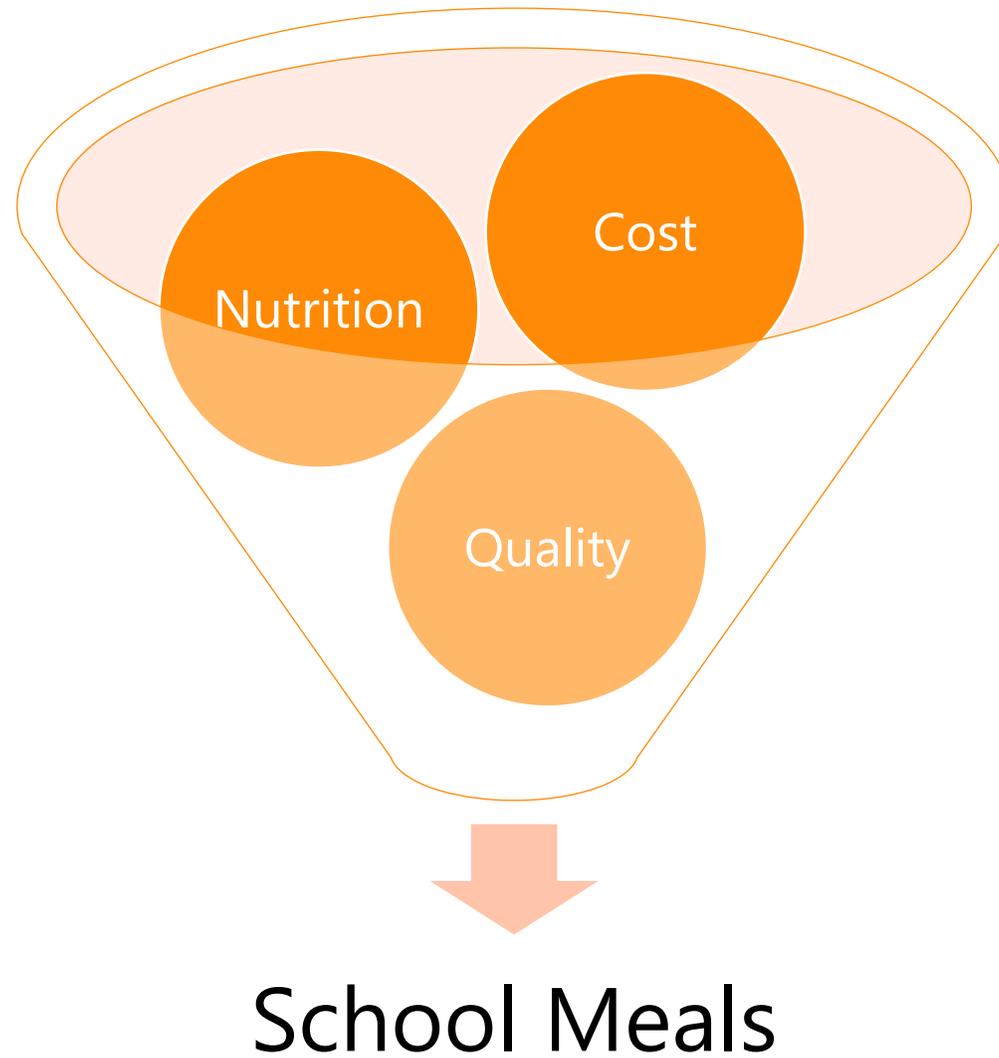
Finished or
Convenience

Speed
Scratch

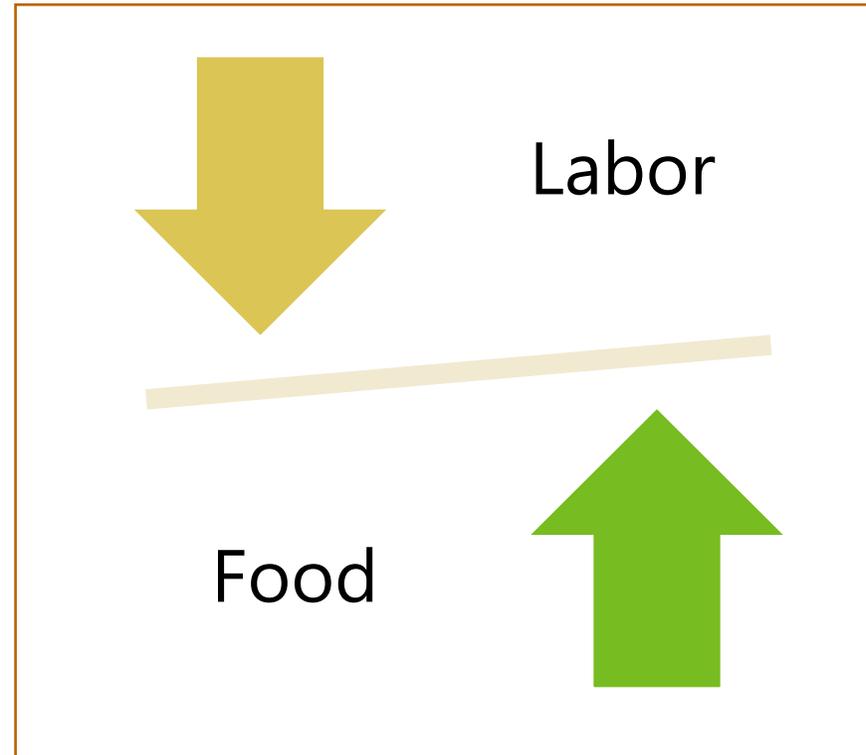
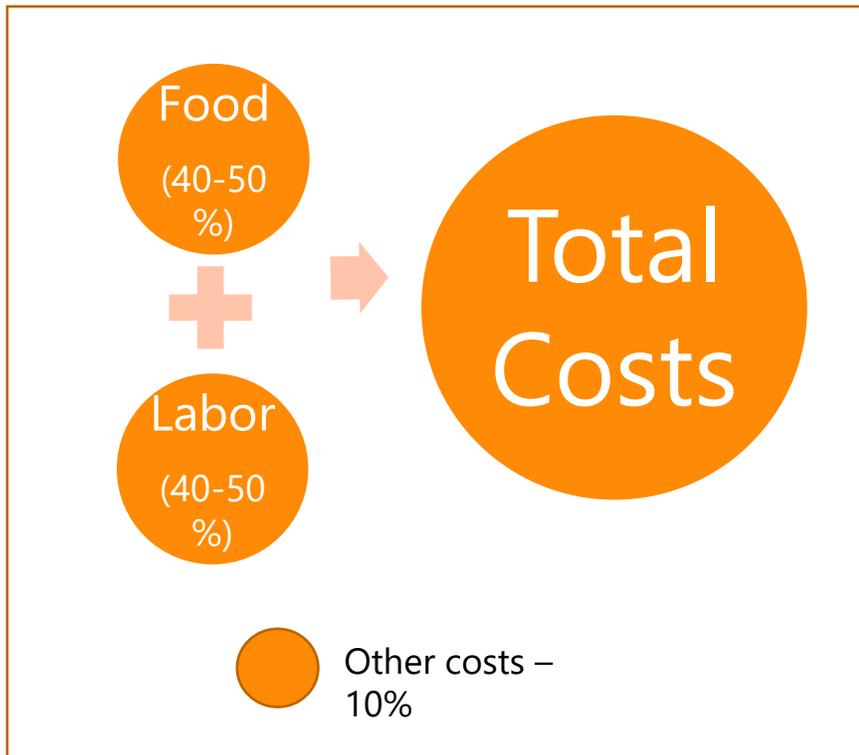
Scratch



Scratch or Convenience?



The Economics of School Food Operations



Sodium



Quality



Scratch Cooking

Uses all ingredients in the most basic form.

ALL cooking and assembly takes place on site.



Advantages of Scratch Cooking

Ingredient control

Provides maximum variety and creativity in meal preparation

Control ingredients based on nutrition concerns

Fewer additives and preservatives

Usually less waste in packaging

Uses quality fresh ingredients

Lower ingredient costs

Increased sales

Flexibility with addressing allergy concerns



Disadvantages of Scratch Cooking

Increases
planning time

Increased labor

Requires more
skill



Finished or Convenience Cooking

Heat
and
serve



Advantages of Finished or Convenience

Convenient

Time saving

Energy saving

Fear of cooking
success is
minimized



Disadvantages of Finished or Convenience

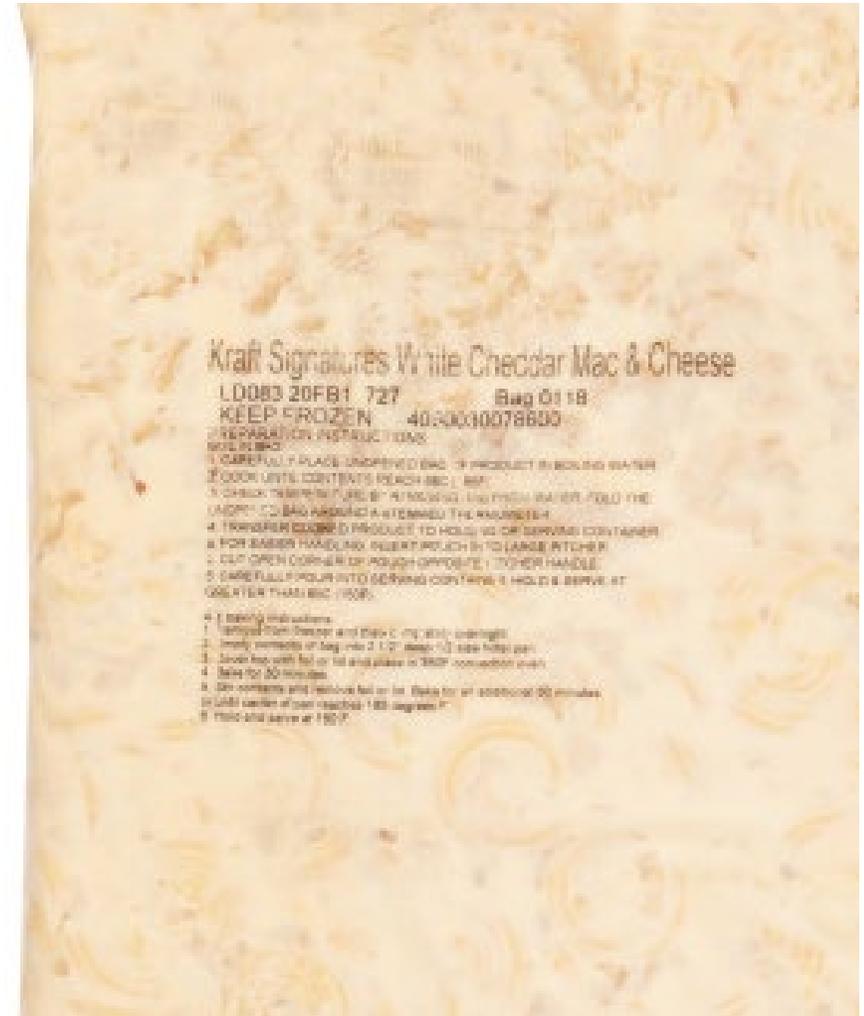
More expensive than the other meal preparation strategies

Highest sodium/fat content than the other meal preparation strategies

Flavor and appearance may not compare as well as the other meal preparation strategies

More additives and preservatives than all other meal preparation strategies

More packaging than the other meal preparation strategies



Speed Scratch

Uses value-added or minimally prepared ingredients.

MOST assembly takes place on site.





Advantages of Speed Scratch

Saves time and energy by providing short cuts

Adds variety and creativity to recipes

Usually less expensive than convenience foods

Easier for inexperienced cooks to prepare

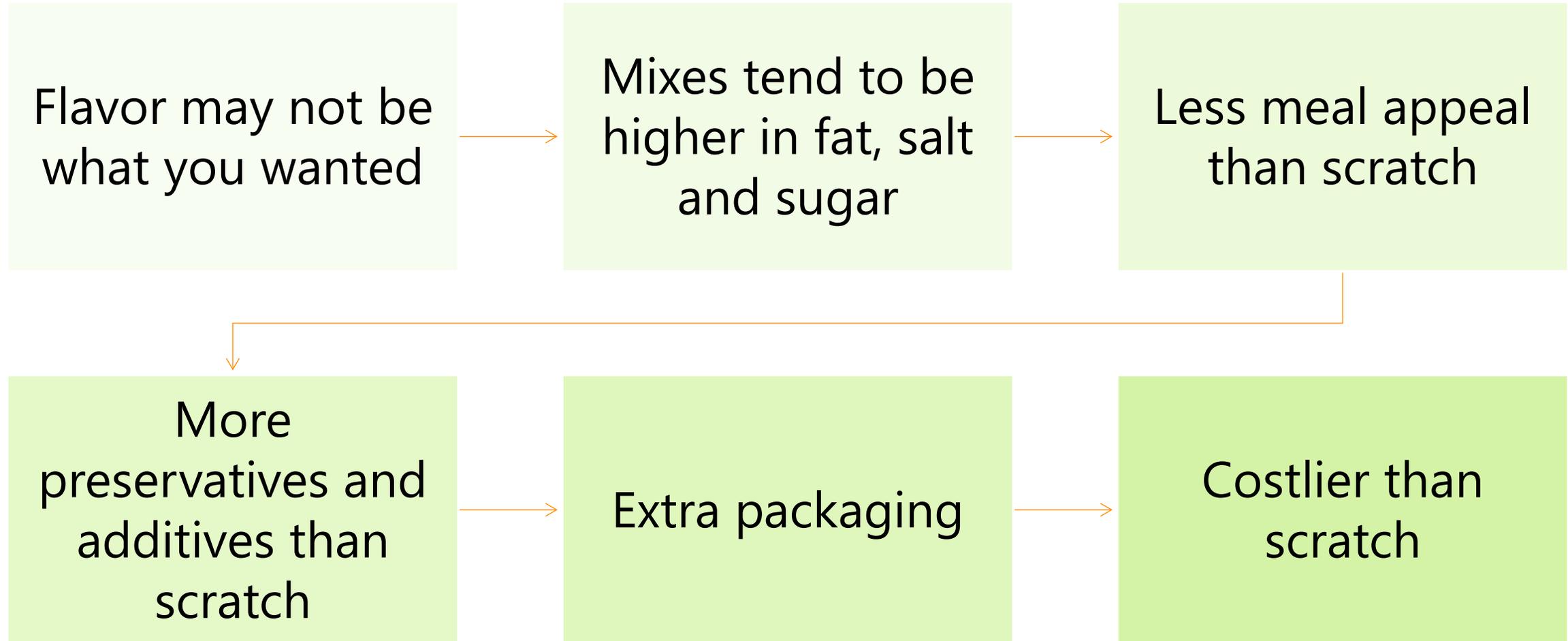
Uses resources of food companies to improve ingredients

Consistent product

Less waste



Disadvantages of Speed Scratch





Sodium in Spaghetti Sauce

Spaghetti sauce

Sodium in 1/2 cup

Classico

350 mg

Prego

420 mg

Ragu

530 mg

Hunts

610 mg

Made on-site

40 mg

Reducing Inventory

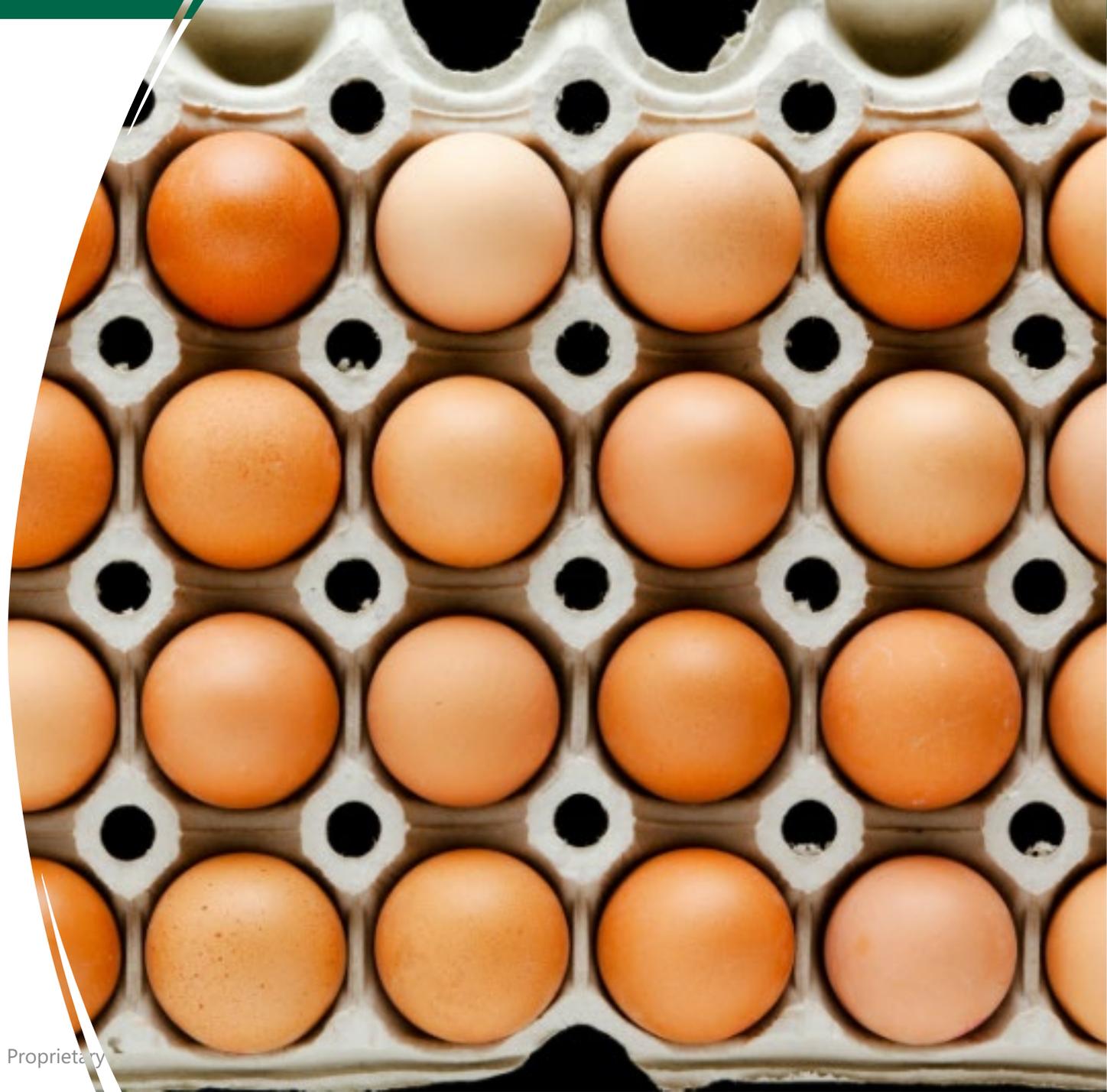


Core Ingredients

Whole ingredients

Less processed

No seasonings





Core....and more!

Menu item flexibility

Customizable menu items

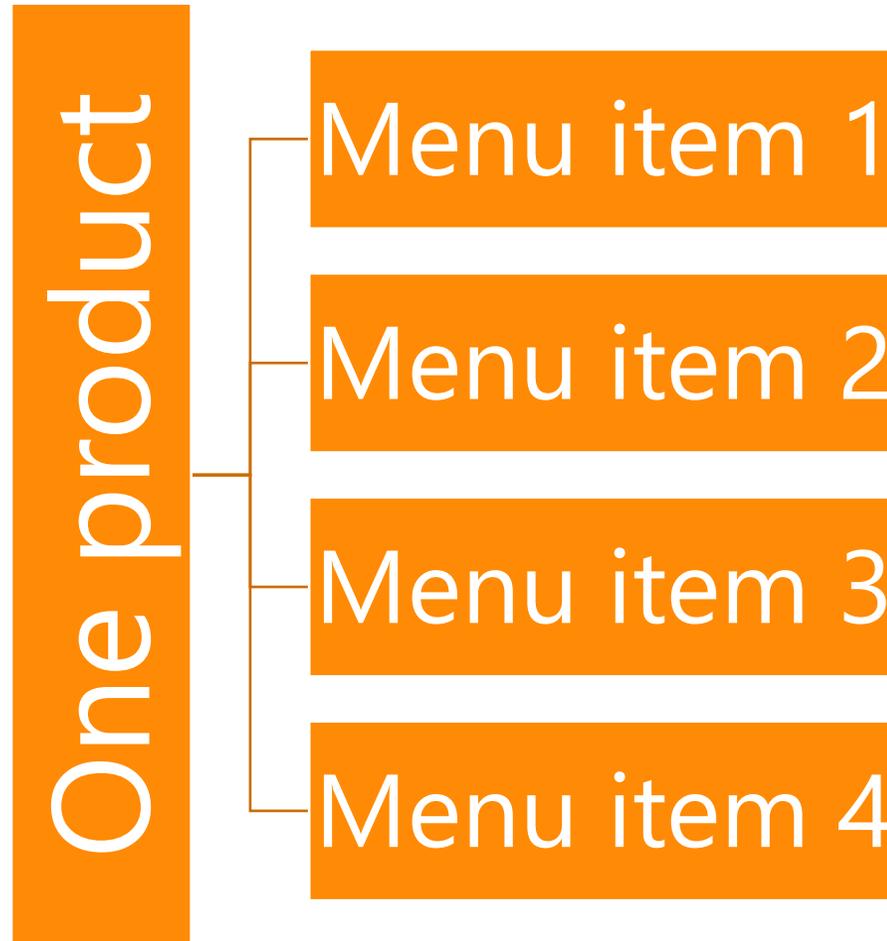
Increase global flavors

Work across grade levels



Minimize SKUs:

Maximize Menu ***Cross-Utilization***



Cross-Utilization: Chicken Breast

Chicken Breast

Shredded chicken

Diced chicken

Chicken strips

Chicken tenders

Whole chicken
breast



Cross-Utilization: Shredded Chicken



Shredded Chicken



Chicken Chili



Pulled Chicken Taco



BBQ Pulled Chicken



Chicken Noodle Soup



Chicken Tetrazzini

Cross-Utilization: Diced Chicken



Diced Chicken



Chicken Pot Pie



Buffalo Chicken Tot Bake



Italian Chicken with Oregano and
Lemon



Kung Pao Chicken with Sweet
Peppers



Caribbean Chicken Sub



Cross-Utilization: **Chicken Strips**



Chicken Strips



Chicken Fajita
Rice Bowl



Chicken Stir-fry



Cheesy Chicken Fajitas



Chicken Teriyaki



Chicken Curry
Casserole

Enhance the Menu with Cross-Utilization

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Bean and Rice Burrito WG Tortilla Scoops** Deluxe Refried Bean Dip** Whole Kernel Corn Fresh Kiwi Halves Canned Peaches** Choice of Milk	Homestyle Spaghetti with Meat Sauce WW Sliced Bread** Build Your Own Side Salad Chilled Canned Pears Choice of Milk	Loaded Turkey Sub Chunky Chicken Noodle Soup Build Your Own Side Salad Assorted Fresh Melon Bowl Choice of Milk	Beef Shepherd's Pie Fresh-Baked WW Breadstick Steamed Broccoli Purple Grapes Baked Apples WW Sugar Cookie* Choice of Milk	Chicken Patty Sandwich Baked Beans Oven Roasted Potato Wedges Juicy Pineapple Tidbits Orange Juice Cup** Choice of Milk
Toasted Cheese Sandwich Creamy Tomato Soup Vibrant Green Peas Banana Apple Crisp Choice of Milk	Fiesta Chicken Fajitas Aztec Grain Salad* Refried Beans Shelled Edamame Purple Grapes Choice of Milk	Homestyle Chili w/ WG Cornbread Savory WW Crackers Crisp Romaine Salad with Chickpeas** Fresh Pear Pineapple Chunks** Choice of Milk	Turkey & Dressing Supreme Fresh-Baked WW Dinner Roll Two Potato Mash Carrot Sticks Dried Wisconsin Cranberries Orange Juice Cup** Choice of Milk	Chicken Nuggets Homestyle WW Biscuit Three Bean Salad Fresh Broccoli Spears Mandarin Oranges Choice of Milk
French Toast Sticks w/Maple Syrup Baked Sweet Potatoes & Apples Fresh Celery Sticks Orange Wedges Choice of Milk	Hot Ham, Broccoli, & Cheese Pita Crispy Veggie Dippers w/Ranch Fresh Kiwi Halves Banana** Choice of Milk	Honey Mustard Deli Wrap Macaroni & Cheese Baked Beans Fresh Jicama Pineapple Chunks Choice of Milk	Roasted Turkey w/Gravy WW Dinner Roll* Mediterranean Quinoa Salad Fresh Romaine Salad Carrots ** Applesauce Cup Choice of Milk	Pizza Sticks w/ Marinara Dipping Sauce Oven Roasted Potato Wedges Assorted Fresh Melon Bowl Choice of Milk
Hearty Spanish Stew w/Cheddar Topping** Fresh Baked WW Breadstick Crisp Vegetables w/Ranch Baked Apples Purple Grapes Choice of Milk	Black Bean Quesadilla Steamed Corn Refried Beans Chilled Canned Pears Choice of Milk	Country Smoked Turkey and Bean Soup w/Cheddar Topping Build Your Own Side Salad WW Cinnamon Roll WW Dinner Roll* Juicy Pineapple Tidbits Choice of Milk	All-American Chicken Wrap Build Your Own Side Salad Fresh Celery Sticks w/Peanut Butter** Assorted Fresh Melon Bowl Choice of Milk	Flame-Broiled Cheeseburger Sweet Potato Tots Baked Beans Fresh Mixed Fruit Cup Choice of Milk
Deluxe Taco Pie WG Cornbread Whole Kernel Corn Sweet Potato Sticks Fresh Kiwi Choice of Milk	Hearty Beef Stew w/Cheddar Topping Fresh-Baked WW Dinner Roll Crisp Broccoli w/Hummus Green Grapes Pumpkin Bar Choice of Milk	Fish Tacos Cilantro-Lime Rice Roasted Squash Cucumber Slices** Grapefruit Choice of Milk	Greek Chicken Salad WW Breadsticks Confetti Soup Green Pepper Slices** w/Cucumber Dipping Sauce** Orange Choice of Milk	Turkey Corn Puppies Oodles of Noodles** Harvest Glazed Carrots Sugar Snap Peas Peaches Canned Apricots** Choice of Milk

Cross-Utilization: Cheese



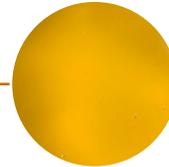
Cheese



Chicken Taco



Broccoli Mac and Cheese



Nacho Cheese Sauce



Beef Tamale Pie



Three Sisters Enchiladas



Cross-Utilization: **Beef Crumbles**



Beef Crumbles



Chili



Beef Shepherd's Pie



Spaghetti and Meat Sauce



Beef Tamale Pie



Spy Thai Beef



Cross-Utilization: **Diced Tomatoes**



Diced Tomatoes



Chili



Salsa



Spaghetti Sauce



Beef Tamale Pie



Enchilada Sauce



Cross-Utilization: Frozen Carrots



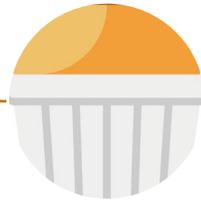
Frozen Carrots



Roasted Carrots



Honey Carrot Coins



Burke County Carrot Souffle



Carrot & Quinoa Muffins



Cross-Utilization: **Frozen Broccoli**



Frozen Broccoli



Cumin Roasted Broccoli



Creamy Broccoli Soup



Lemon Zest Broccoli



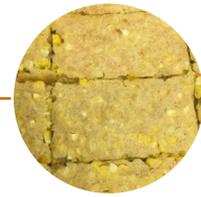
Broccoli Mac & Cheese



Cross-Utilization: **Frozen Corn**



Frozen Corn



Corn Pudding



Mexicali Corn



Corn Chowder with Thyme



Corn & Sorghum Salad



Culinary Institute
of America

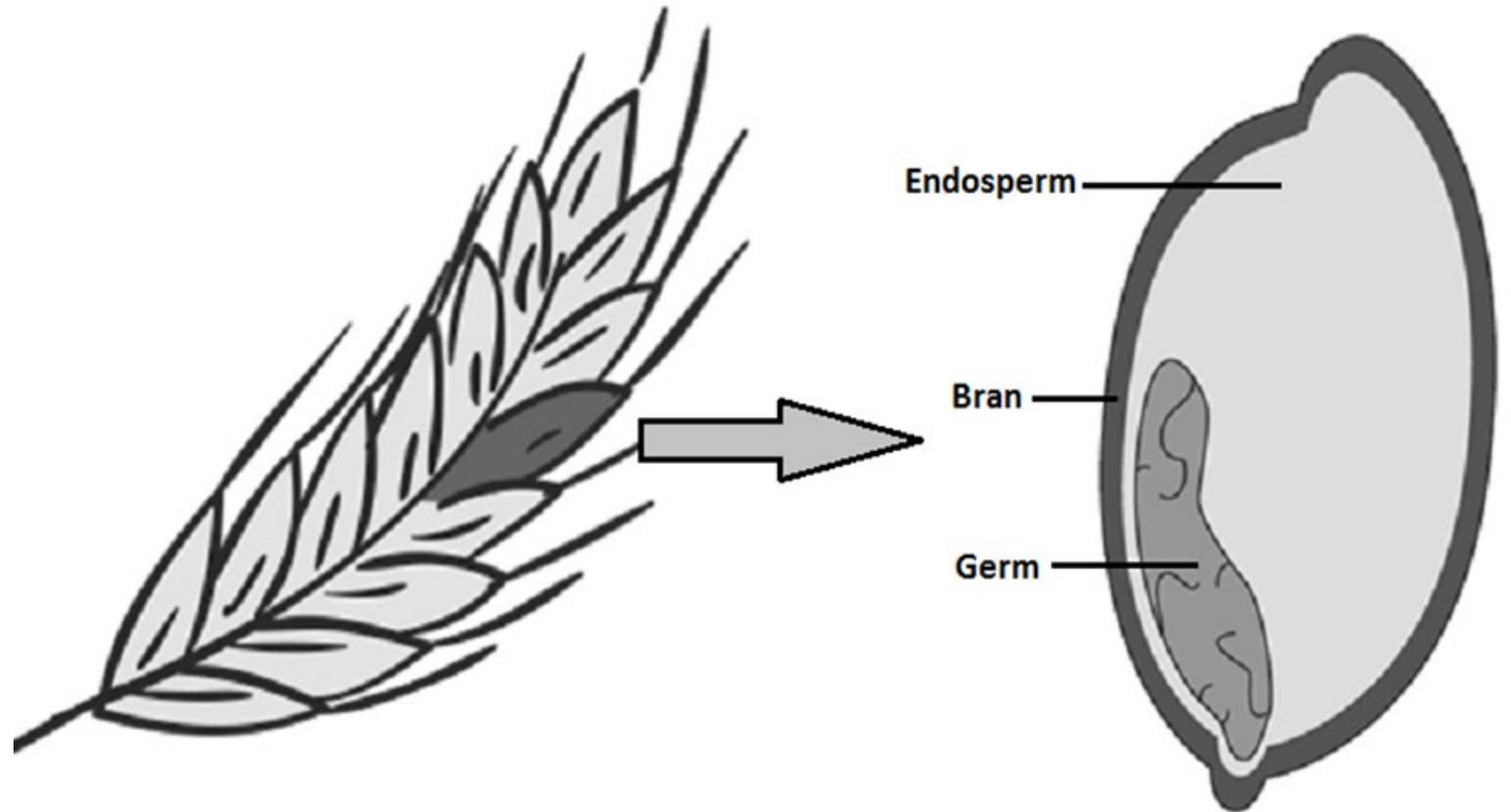
Exploring Whole Grains

Day 3



What is an Intact Whole Grain?

- Grains that contain all three parts of the kernel – the **bran**, **germ**, and **endosperm** – in their original proportions
- These grains are unrefined and closely resemble their natural state



Parts of a Whole Grain

Bran

The outer skin of the kernel that helps to protect the inner kernel, It contains **fiber**, important **antioxidants**, **iron**, **zinc**, **copper**, **magnesium**, **B vitamins**, and **phytonutrients**.

Germ

The embryo which, if fertilized by pollen, will sprout into a new plant. It contains **B vitamins**, **vitamin E**, **antioxidants**, **phytonutrients**, and **unsaturated fats**.

Endosperm

The germ's food supply, which, if the grain were allowed to grow would provide essential energy to the young plant. As the largest portion of the kernel, the endosperm contains **starchy carbohydrates**, **proteins**, and **small amounts of vitamins and minerals**.

WHOLE GRAIN, **WHOLE BENEFIT.**

Eat whole grains for **vitamins, minerals, and fiber.**



IN THE BRAN

antioxidants, B vitamins, fiber

IN THE ENDOSPERM

starchy carbohydrates,
proteins, small amounts
of vitamins and minerals

IN THE GERM

B vitamins, protein,
minerals, healthy fats

Whole grains **help reduce** your risk of:



Heart Disease



Diabetes



Certain Cancers

EXAMPLES OF WHOLE GRAINS. TRY A NEW ONE EVERYDAY!



AMARANTH



BARLEY



BUCKWHEAT



BULGUR



CORN



FARRO



FONIO



FREEKEH



MILLET



OATS



QUINOA



RICE



RYE



SORGHUM



TEFF



TRITICALE



WHEAT



WILD RICE

Types of Grains

Whole

Contain all essential parts of the grain seed– the bran, germ and endosperm

Whole Grain Rich

- Half (50%) of the grain is whole grain

Refined

- A process that removes the bran and germ
- Milling removes dietary fiber, iron and many B vitamins

Enriched

- The refined grain with the iron and B vitamins added back after processing

Health Benefits of Whole Grains

1

Consuming whole grains as part of a healthy diet may **reduce the risk of heart disease**

2

Consuming whole grain foods that contain **fiber**, as part of an overall healthy diet, can support **healthy digestion**

3

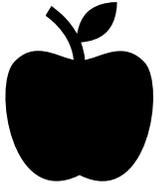
Eating whole grains, as part of an overall healthy diet, may help with **weight management**

4

Eating grain products **fortified with folate** helps prevent **neural tube defects** when consumed as part of an overall healthy diet **before and during pregnancy**



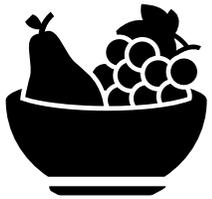
Fiber and Health



Recommended fiber intake: 14 grams per 1,000 calories.



Of the under-consumed nutrients, calcium, potassium, **dietary fiber**, and vitamin D are considered **nutrients of public health concern** because low intakes are associated with health concerns.



Low intakes of dietary fiber are due to low intakes of vegetables, fruits, and **whole grains**.



Research indicates possible protective effects of dietary fiber against: colon cancer, heart disease, and diabetes.

Soluble Fiber

Attracts water and turns to gel during digestion.

Binds with cholesterol compounds transporting them out of the body.

Sources

- Oat bran
- Barley
- Nuts
- Seeds
- Beans
- Lentils
- Some fruits and vegetables



Insoluble Fiber

Adds bulk to stool and helps food pass through digestion more quickly.

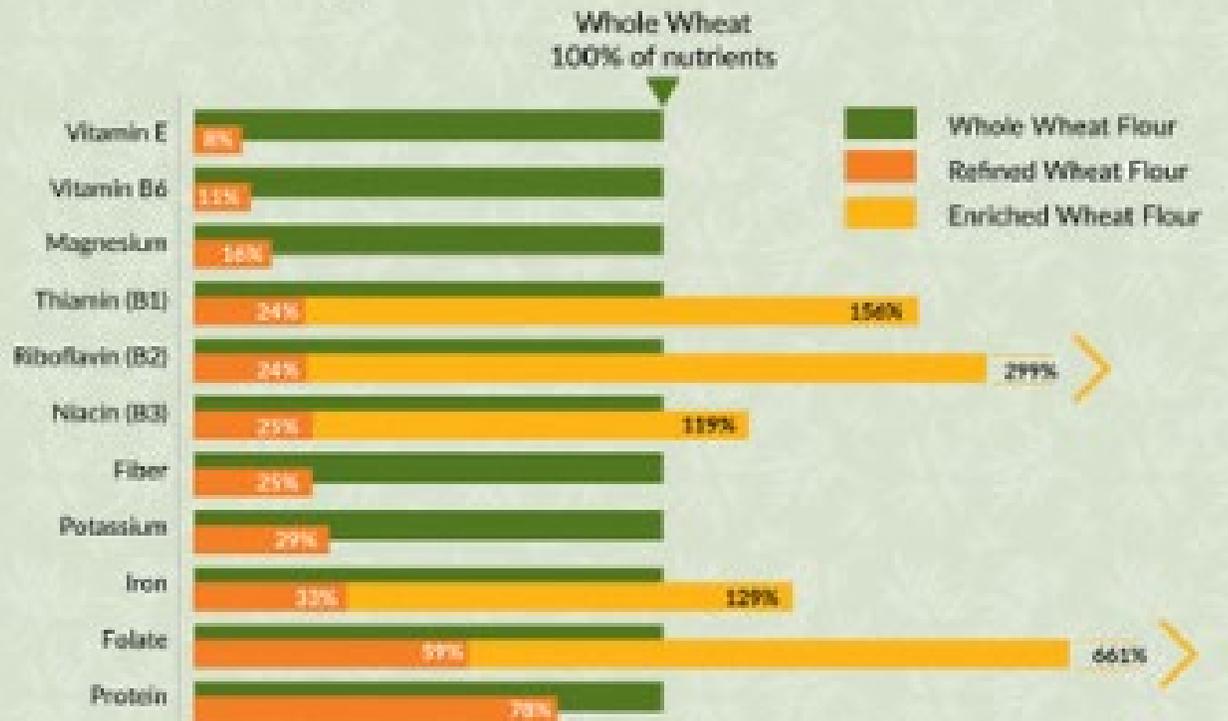
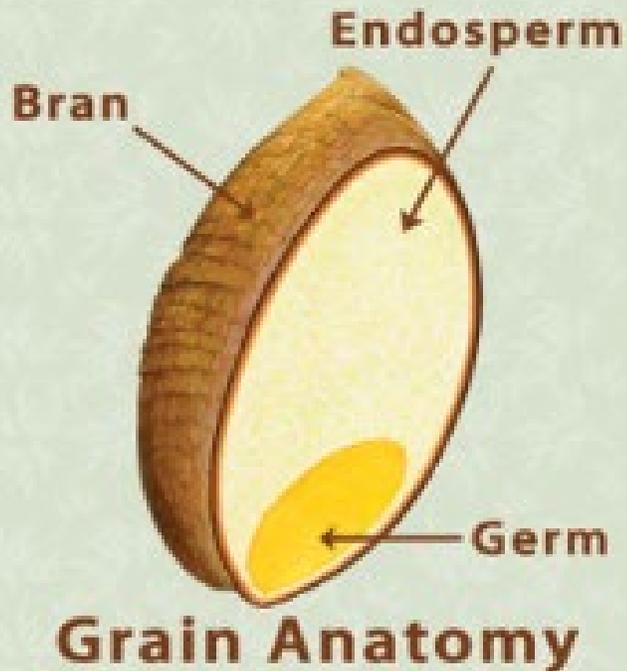
Sources

- Wheat bran
- Whole grains
- Seeds
- Nuts
- Fruit and vegetable (peel)



WHOLE GRAINS 101

Whole grains are healthier, with more fiber, more protein, and higher levels of many essential nutrients. Most of the grain kernel's nutrients—and flavor—are in the bran and germ, which are routinely stripped out to make white flour.





Grain ID Activity



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of America

Flavor Enhancers: Herbs, Spices, Culinary Acids

Day 4



Taste / Flavor

Most important factor influencing food choice

American palate has grown bolder

Flavor and healthful cooking are bound together



It Makes "Sense"

Taste

Smell

Touch

Sight

Sound



The "Tastes"



Sweet

- Innate preference for sweet from birth – endorphins
- **Mellows** acidic and bitter tastes
- *Sources: sugars, sugar alcohols, alternative sweeteners*



Salty

- Preference strongly influenced by environmental factors – from 4 to 6 months, innate
- **Enhances** flavor, **counteracts** bitterness, **accentuates** sweetness
- *Source: salt*



Sour

- Proved bright, sharp flavors
- **Reduces** saltiness, **balances** spiciness
- *Source: acidic ingredients, citrus, vinegars*



Bitter

- Taste for bitterness helps people sense natural toxins
- **Provides** complexity, depth
- *Sources: quinine, dark chocolate, beer, coffee, grapefruit juice, zests*



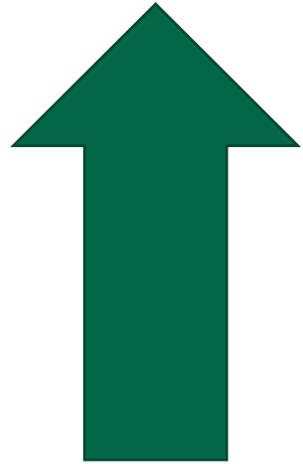
Umami

- Japanese for "delicious". Described as savory, brothy or meaty
- *Sources: meat, cheese, tomatoes, mushrooms, seaweed, MSG, miso and fermented products*

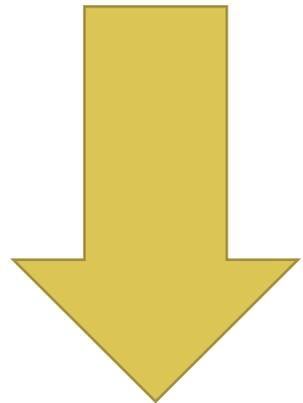




Children's Taste Preference



Sweet
Salty
Sour



Bitter





Smell

10,000 times more sensitive than our sense of taste.



Touch - Mouthfeel

Temperature

- Cold suppresses sweetness
- Bitterness is more intense with a cold solution
- Sourness is more tense with a warm solution

Chemethesis

- Burn of chilis
- Cool of mint
- Sting from carbonation

Texture: give us insight into the "taste of food"

- Velvet smoothness of mousse
- Crunch crust of bread
- Snap of a sugar snap pea



Sight

Colors



Shapes



Consistency



Moisture



Sound

Crunch

Crackle

Sizzle

Squeaky

Carbonation





Culinary Institute
of America

Jelly Bean Sensory Evaluation Challenge





What's Up With Sodium?



Salt or Sodium



Sodium chloride is the chemical name for salt



Salt is 40% sodium and 60% chloride



Most of the sodium we consume is in the form of salt.



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 U.S.

Majority of persons in the U.S. exceed current recommendations for sodium, partly due to consumption of highly processed and prepared/restaurant foods



Sources of Sodium in Our Diet

- The salt shaker is not the blame!
 - More than 75% of the sodium Americans consume comes from restaurant, prepackaged, and processed foods.
 - Only about 5% of dietary sodium is added during home cooking and only about 6% is added at the table.
 - The remaining 12% of dietary sodium occurs naturally in foods.
- Surprising sources of sodium:
 - Lots of packaged and processed foods
 - Breads and rolls, cold cuts/cured meats, and pizza

Food	Sodium Range (in milligrams)
1 slice white bread	80 - 230
3 oz turkey breast, deli or pre-packaged luncheon meat	450 - 1,050
4 oz slice frozen pizza, plain cheese, regular crust	370 - 730
4 oz slice restaurant pizza, plain cheese, regular crust	510 - 760
4 oz boneless, skinless chicken breast, fresh	40 - 330
3 oz chicken strips, restaurant, breaded	430 - 900
3 oz chicken nuggets, frozen, breaded	200 - 570
1 cup chicken noodle soup, canned prepared	100 - 940
1 corn dog, regular	350 - 620
1 cheeseburger, fast food restaurant	710 - 1,690
1 oz slice American cheese, processed (packaged or deli)	330 - 460
1 cup canned pasta with meat sauce	530 - 980
5 oz pork with barbecue sauce (packaged)	600 - 1,120
1 oz potato chips, plain	50 - 200



Sodium levels of the same food can vary widely, so choose wisely.

Source: www.cdc.gov

Sodium Intake Recommendations

The Dietary Guidelines for Americans recommend limiting sodium to less than **2,300** mg per day ages 14 and above.

For children, the recommendations vary by age:

- Ages 1 – 3: less than 1,200 mg per day
- Ages 4 – 8: less than 1,500 mg per day
- Ages 9 – 13: less than 1,800 mg per day



Final Rule for Sodium in School Meals

Final Rule for Sodium in School Meals

Age/Grade Group	Current Sodium Limit: In place through June 30, 2027	Sodium Limit: Must be implemented by July 1, 2027 (approximate 15% reduction for lunch and approximate 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.

Read Food Labels



Bosco's® Whole Grain Pizza
Stuffed Breadsticks

Nutrition Facts

72 Servings Per Container

Serving Size 107g

Amount Per Serving

Calories

250

Daily Value % *

Total Fat 9g 12%

Saturated Fat 4.5g 23%

Trans Fat 0g

Cholesterol 25mg 8%

Sodium 510mg 22%

Total Carbohydrate 30g 11%

Dietary Fiber 3g 11%

Total Sugars 3g

Includes 3g Added Sugars 6%

Protein 11g

Vitamin D MC 0%

Calcium mg 10%

Iron mg 10%

Potassium mg 4%

*The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.



Sodium Labeling

Label term	Definition
Sodium free	Less than 5 mg per serving
Very low sodium	35 mg or less per serving
Low sodium	140 mg or less per serving
Reduced or Less sodium	At least 25 % less per serving than the reference food
Unsalted or no salt added	No salt added during processing; however, the product may still contain sodium



Soy Sauce

1 tablespoon = **960** mg sodium



Less Sodium Soy Sauce

1 tablespoon = **590** mg sodium

High-Sodium Ingredients

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

Which food has more sodium?

- One bagel
- Two slices of bacon

Answer:

- **One bagel (500mg)**
- Two slices of bacon (320 mg)



Which food has more sodium?

- Half can of tuna in water
- One slice of devil's food cake (from cake mix)

Answer:

- **One slice of devil's food cake (370 mg)**
- Half can of tuna in water (150 mg)



Which food has more sodium?

- Lowfat cottage cheese (1/2 cup)
- Yoplait light yogurt (6 oz)

Answer:

- **Lowfat cottage cheese (450 mg)**
- Yoplait light yogurt (85 mg)



Salt Math

1 teaspoon of table salt weighs 5.6 grams or 5600 mg

$5600 \text{ mg} \times 40\% \text{ (sodium)} = 2240 \text{ mg sodium}$

1 teaspoon of salt = 2240 mg of sodium





Using Salt

Table salt	50 portions	100 portions
1 teaspoon (2240 mg sodium)	45 mg per portion	23 mg per portion
1 tablespoon (6720 mg sodium)	135 mg	70 mg
2 tablespoons (13,440 mg sodium)	270 mg	135 mg

Comparing Salts

Salt	Amount	Weight	Sodium (mg)
Table salt	1 teaspoon	6 grams	2300
Diamond Crystal kosher salt	1 teaspoon	2.8 grams	1120
Diamond Crystal sea salt	1 teaspoon	5.6 grams	2160
Morton kosher salt	1 teaspoon	4.8 grams	1920
Morton sea salt	1 teaspoon	5.6 grams	2240
Diamond Crystal Salt Sense <i>Ingredients: salt, silicon dioxide, tricalcium phosphate, sodium bicarbonate, dextrose, potassium iodine</i>	1 teaspoon	4 grams	1560
Morton Salt Substitute <i>Ingredients: potassium chloride</i>	1 teaspoon	5 grams	No sodium

Types of Salt

Table salt

Kosher salt

Sea salt

Curing or brining salt

Himalayan pink salt

Hawaiian black salt

Smoked salt





Cut the Sodium in School Meals & Menus





Sodium Free Ingredients: **Citrus**





Sodium Free Ingredients: **Vinegars**





Sodium Free Ingredients: **Herbs**





Sodium Free Ingredients: **Spice Blends**



Sodium Free Ingredients: **Onions and Garlic**



Essential Spices and Herbs

- Garlic, granulated
- Onion powder
- Cumin
- Paprika, sweet
- Paprika, smoked
- Chili powder
- Ginger, ground
- Pepper, black
- Pepper, red
- Rosemary
- Oregano
- Thyme





Spice	Sodium per 1 teaspoon
Garlic, granulated	0
Garlic salt	1960
Onion powder	0
Onion salt	1800
Black pepper	0
Paprika	0
Cumin	5



Make Your Own Spice Blend



SEASONINGS BLENDS

Yield: 1 quart

Mexican	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 Cayenne pepper	1 cup 1 ¼ cup ¼ cup 1 ¼ cup ¼ cup
Italian	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 Mace, ground Cloves, ground Brown sugar	1 cup 1 cup ¾ cup 2 tablespoons 1 tablespoon 1 tablespoon 1 cup
Garlic & Herb	Onion, granulated 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, ground	1 cup 1 cup ¾ cup 2 tablespoons ¾ cup 2 tablespoons ¼ cup
Ranch	Garlic, granulated Onion powder Dill weed Black pepper, ground	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, ground Brown sugar	½ cup 2 tablespoons ½ cup 2 tablespoons ½ cup 2 tablespoons ½ cup 2 tablespoons ½ cup 2 tablespoons 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** as needed.

Using 1 teaspoon of salt for 50 servings adds about 45 mg of sodium per serving.

Using 1 tablespoon of salt for 100 servings adds about 70 mg of sodium per serving.

Seasoning Blends

Spice or Herb	Mexican	Buffalo	Italian	BBQ	Ranch	Tandoori
Garlic, granulated	1/3 cup	1 ¼ cup	1 cup	1 cup	1 ¼ cup	
Onion powder	1/3 cup	1 cup		1 cup	1 ¼ cup	
Cumin	1 ¼ cup			½ cup 2 tablespoons		2/3 cup
Paprika		¼ cup				2/3 cup
Paprika, smoked	1/3 cup			½ cup 2 tablespoons		
Chili powder	1 ¾ cup	1 ¼ cup				
Pepper, black				¼ cup	¼ cup	
Red pepper, ground		¼ cup				
Pepper, cayenne						2/3 cup
Ginger, ground						2/3 cup
Turmeric						2/3 cup
Basil, dried			1 1/3 cup			
Oregano, dried			1/3 cup			
Thyme, dried			1 cup			
Rosemary, dried			1/3 cup			
Dill weed, dried					1 ¼ cup	

Ranch

Garlic, granulated

Onion, granulated

Pepper, black

Dill



BBQ

Garlic, granulated

Onion, granulated

Pepper, black

Paprika, smoked

Cumin



Taco Seasoning

Garlic, granulated

Onion powder

Cumin

Paprika

Chili powder



Taco seasoning	Sodium in 2 teaspoons
Regular	560 mg
Low-sodium	220 mg
Made on-site	15 mg

Regular Taco Seasoning

280 mg sodium per teaspoon

Nutrition Facts
6 servings per container
Serving size 1 tsp (4g)

Amount per serving
Calories 15

	% Daily Value*
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 280mg	12%
Total Carbohydrate 2g	1%
Dietary Fiber 0g	0%
Total Sugars less than 1g	
Includes 0g Added Sugars	0%
Protein 0g	
Vitamin D 0mcg 0%	Calcium 0mg 0%
Iron 0.4mg 2%	Potassium 0mg 0%

Ingredients: Salt, Spice, Garlic Powder, Sugar, Corn Starch, Onion Powder, Chili Pepper, Red Bell Pepper, Paprika, Onion. Contains 2% or less of: Garlic, Vegetable Oil (canola, soybean and/or sunflower oil), Silicon Dioxide (anticaking agent), Natural Flavor, Extractives of Paprika (color). *Dried

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For food safety and quality, follow the cooking directions.
Directions
You Will Need: 1 Lb Boneless Skinless Chicken Breasts, 1 Tbsp Vegetable Oil, ¼ Cup Water, 1 Pkt Taco Seasoning Mix

1. Cut chicken into thin strips. Heat oil in 10-inch skillet over **medium-high** heat. Add chicken; cook and stir until no longer pink.
2. Stir in water and seasoning mix. Heat to boiling.
3. Reduce heat; simmer uncovered **3 to 4 minutes**, stirring often, until thickened. Use as taco filling. Refrigerate leftovers.

QUESTIONS OR COMMENTS?
Call 1-800-300-8664 Mon - Fri 7:30 a.m. - 5:30 p.m. CT
Information from the package will be helpful. Old El Paso Consumer Services, P.O. Box 200, Minneapolis, MN 55440

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Ingredients: Salt, spice, garlic powder, corn starch, onion powder, chili pepper, red bell pepper, paprika, onion.....

Less Sodium Taco Seasoning

110 mg sodium per teaspoon

Nutrition Facts
About 6 servings per container
Serving size 2 Tsp (5g)

Amount per serving
Calories 15

	% Daily Value*
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 220mg	10%
Total Carbohydrate 3g	1%
Dietary Fiber less than 1g	2%
Total Sugars 0g	
Includes 0g Added Sugars	0%
Protein 0g	
Iron 0.4mg	2%

Not a significant source of vitamin D, calcium, and potassium.
*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Ingredients: Corn Starch, Maltodextrin, Chili Pepper, Onion Powder, Salt, Spice, Sea Salt (potassium magnesium chloride, salt). Contains 2% or less of: Vegetable Oil (canola and/or soybean oil), Silicon Dioxide (anticaking agent), Citric Acid, Natural Flavor.

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For food safety and quality, follow the cooking directions.
DIRECTIONS
You Will Need: 1 Lb Lean Ground Beef, ¾ Cup Water

1. Cook beef in 10-inch skillet over **medium-high** heat 6 to 7 minutes, breaking up and stirring; drain.
2. Stir in water and seasoning mix; heat to boiling.
3. Reduce heat; simmer uncovered **3 to 4 minutes**, stirring often, until thickened. Refrigerate leftovers.

QUESTIONS OR COMMENTS?
Call 1-800-300-8664
Information from the package will be helpful.

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Ingredients: corn starch, maltodextrin, chili pepper, onion powder, salt, spice, sea salt.....

Compare Brands: Ketchup

Condiment	Sodium per 2 tablespoon
Heinz	320
Hunt's	360
Del Monte	380
Red Gold	160
Red Gold Naturally Balanced	100



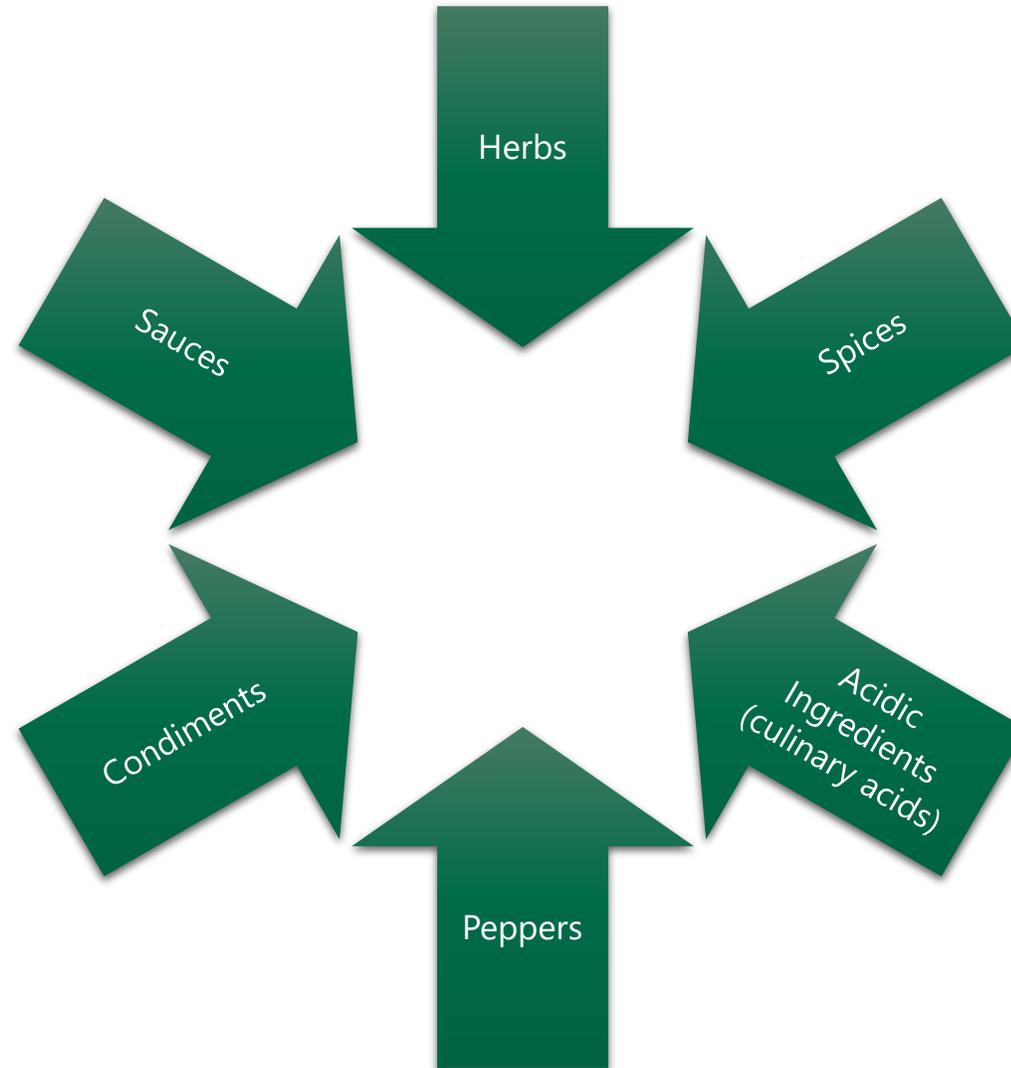


Seasoning Primer





Seasonings or Flavorings



Herbs



Fresh Herbs



Dried Herbs



Pesto and Purees



Herbs

The leaves of aromatic plants

Some herbs dry more successfully than others

Aroma is a good indicator of quality in both fresh and dried herbs

1 tablespoon cut, fresh herbs =
1 teaspoon crumbled dry herbs
= $\frac{1}{4}$ to $\frac{1}{2}$ teaspoon ground dried herbs





Versatile Fresh Herbs

Parsley

Cilantro

Mint

Basil



Examples of Using Fresh Herbs

- Tomatoes with Fresh Basil
- Corn and Black Bean Salad with Cilantro
- Zucchini and Apple Salad with Mint
- Baked Potato with Chives



Spices

- Aromatics prepared from the roots, buds, flowers, fruits, bark or seeds of plants
 - Cinnamon comes from a bark
 - Pepper from a berry
 - Ginger from a root
 - Nutmeg from a fruit



Spices

Most spice flavors are intense and powerful

Spices are usually dried and available whole or ground

Whole spices retain flavor longer than ground spices



Developing Flavor: Spices

- Coleslaw with Caraway
- Spinach Dip with Nutmeg
- Black Beans with Toasted Cardamom
- Carrots with Cumin
- Butternut Squash with Cinnamon



Developing Flavor: Acidic Ingredients

Citrus Juices

Citrus Zests

Vinegars

Tomato Products



Developing Flavor: **Acidic Ingredients**

Carrots cooked with
orange juice or zest

Green beans with toasted
walnuts and vinaigrette

Vegetable Soup with
Tarragon Vinegar



Additional Flavor Ingredients

Onions

Garlic

Leeks



Additional Flavor Ingredients: Condiments

Horseradish

Wasabi

Ginger

Mustards

Pickles

Olives

Salsas





Additional Flavor Ingredients: **Peppers**

Hot Peppers

Sweet Peppers

Pepper Sauce



Developing Flavor: Peppers

Adobe Chili Sauce

Raspberry Chipotle Sauce

Marinated Roasted Peppers

Brown Rice Pilaf with Diced Peppers

Roasted Red Pepper Coulis





Added Sugars



Reducing Sugars

Americans are eating and drinking **too much added sugars** which can lead to health problems such as **weight gain** and **obesity, type 2 diabetes,** and **heart disease.**

About **40% of children and adolescents** are **overweight** or have **obesity**; the rate of obesity increases throughout childhood and teen years

School breakfast offers protection from obesity



10% of the Calories from Sugar in our Diets

Total Calories	10% Calories from Sugar	4 calories in a gram of sugar	Sugar (grams)
2000 x.10	= 200	÷ 4	= 50 grams sugar

- Food labels: 4 grams of sugar = 1 teaspoon
- 1 – 12 oz. can of cola contains 39 grams of added sugar
 - Almost 10 tsp of sugar!
- That's 156 empty calories!

10% of the Calories from Sugar in School Meals

	Calories (maximum)	10% Calories from Sugar	Sugar (grams)
Breakfast			
K-5	500	50	12.5
6-8	550	55	13.75
9-12	600	60	15
Lunch			
K-5	650	65	16.25
6-8	700	70	17.5
9-12	850	85	21.25

4 gm sugar = 1 tsp

Sugars on the Label

Nutrition Facts	
8 servings per container	
Serving size 8 fl oz (240mL)	
Amount per serving	
Calories	110
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 5mg	0%
Total Carbohydrate 27g	10%
Dietary Fiber 0g	0%
Total Sugars 25g	
Includes 23g Added Sugars	46%
Protein 0g	
Vitamin D 0mcg	0%
Calcium 0mg	0%
Iron 0mg	0%
Potassium 40mg	0%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Total Sugars

Includes sugars naturally present in many foods and beverages, such as sugar in milk and fruits as well as any added sugars that may be present in the product.

Added Sugars

Includes sugars that are added during the processing of foods (such as sucrose or dextrose), foods packaged as sweeteners (such as table sugar), sugars from syrups and honey, and sugars from concentrated fruit or vegetable juices. They do not include naturally occurring sugars that are found in milk, fruits, and vegetables.

The Daily Value for added sugars is 50 grams per day based on a 2,000 calorie daily diet.

Source: www.fda.gov/food/new-nutrition-facts-label/added-sugars-new-nutrition-facts-label



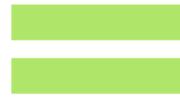
What is in a Name?

Brown sugar	Corn sweetener	Corn syrup
Fruit juice concentrates	High-fructose corn syrup	Honey
Invert sugar	Malt sugar	Molasses
Raw sugar	Sugar	Syrup

- Dextrose
- Fructose
- Glucose
- Lactose
- Maltose
- Sucrose

Added Sugars

1 teaspoon
granulated
sugar



4 grams of
sugar

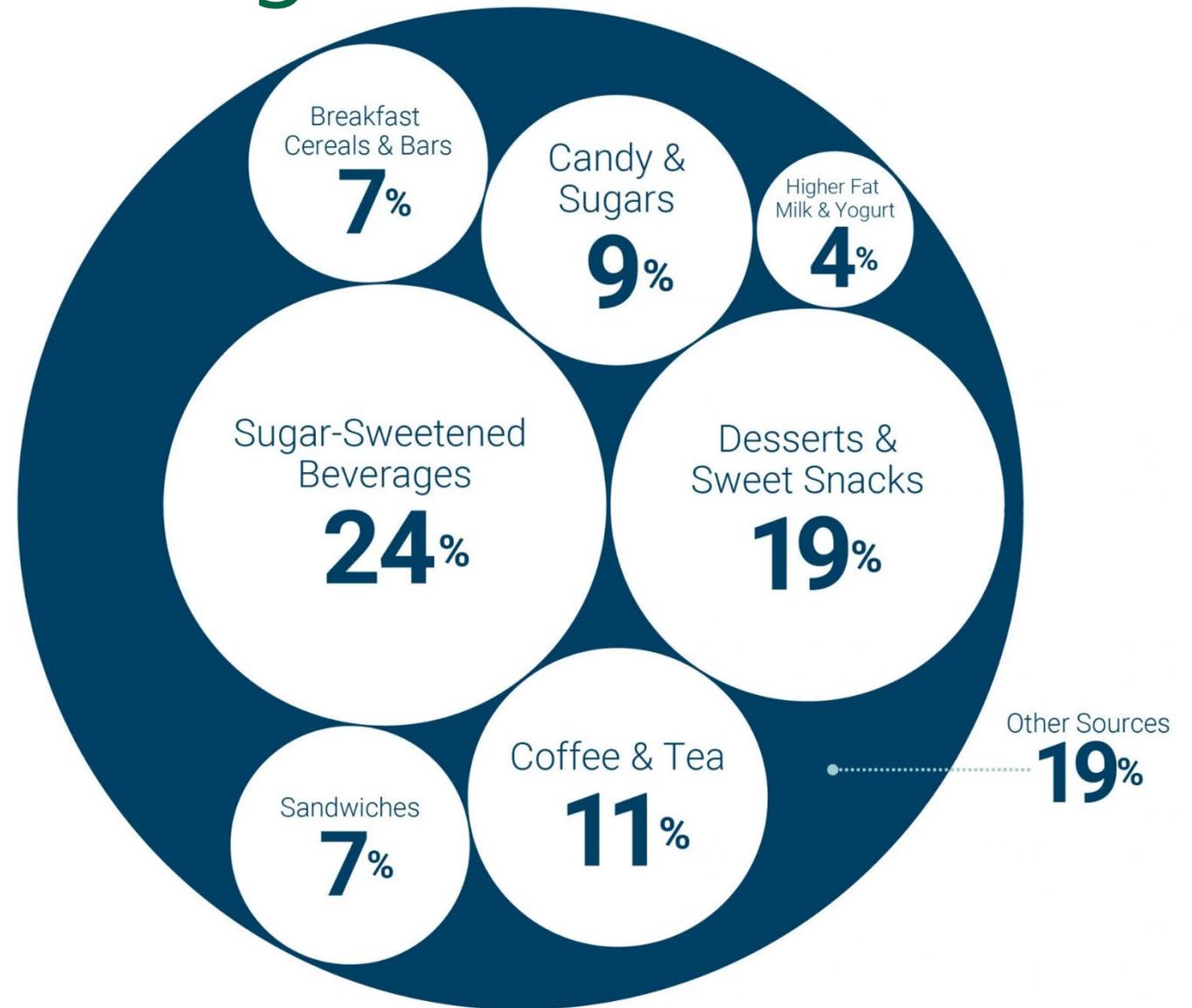
- 1 fruit flavored yogurt contains 13g added sugar
- This equals 3 teaspoons worth of granulated sugar





Food Sources of Added Sugar

Where is sugar in our diets?



Soda and Sugar

Pay attention to portion size.

Portion	Calories	Added Sugar (gm)
8 ounces	100	23
12 ounces	140	34
20 ounces	240	56
32 ounces	380	90
64 ounces	760	180



Rethink Your Drink

Whole Fruit Comparison to 100% Fruit Juice

Meet nutritional needs primarily from nutrient-dense foods and beverages

	Orange (1 cup) 	Orange Juice (1 cup) 	Apple (1 cup) 	Apple Juice (8 fl oz.) 	Grapes (1 cup) 	Grape Juice (8 fl oz) 
Calories:	85 kcals	112 kcals	65 kcals	120 kcals	104 kcals	160 kcals
Sugar:	14 g	21 g	13 g	24 g	23 g	36 g
Fiber:	3.3 g	0 g	3 g	0 g	1.4 g	0 g
Vitamin C:	98 mg	85 mg	6 mg	83 mg	5 mg	45 mg
Calcium:	70 mg	260 mg	7.5 mg	13 mg	15 mg	26 mg
Potassium:	275 mg	350 mg	135 mg	0 g	288 mg	0 g



Benefits of Whole Fruit

At least half of the recommended amount of fruit should come from whole fruit, rather than 100% juice



Top 10

Sources of Added Sugars at School Breakfast

Data from the USDA School Nutrition and Meal Cost Study showed that flavored milk, ready-to-eat cereals, and condiments and toppings are among the top sources of added sugars at school breakfast.²



1
Flavored Fat-Free (skim) Milk



2
Sweetened Ready-to-Eat Breakfast Cereal



3
Syrups, Frostings, and Other Condiments and Toppings



4
Muffins and Sweet/Quick Breads



5
Granola Bars and Breakfast Bars



6
Toaster Pastries



7
Pancakes, Waffles, and French Toast



8
Sweet Crackers (e.g., graham crackers, animal crackers, etc.)



9
Cinnamon Buns



10
Sweetened Yogurt

Added Sugar: Breakfast



One Toaster Pastry equals one ounce equivalents of grain.

Pop-Tarts® Made with Whole Grain Frosted Blueberry, 2 ct

Equivalent to 7 tsp. of sugar!

Nutrition Facts	
6 servings per container	
Serving size	1 Pouch (96g)
Amount per serving	
Calories	340
% Daily Value*	
Total Fat 5g	6%
Saturated Fat 1.5g	8%
Trans Fat 0g	
Polyunsaturated Fat 2g	
Monounsaturated Fat 1g	
Cholesterol 0mg	0%
Sodium 350mg	15%
Total Carbohydrate 73g	27%
Dietary Fiber 5g	19%
Total Sugars 29g	
Includes 28g Added Sugars	56%
Protein 4g	
Vitamin D 0mcg 0%	• Calcium 270mg 20%
Iron 3.7mg 20%	• Potassium 110mg 2%
Vitamin A 20%	• Thiamin 20%
Riboflavin 20%	• Niacin 20%
Vitamin B ₆ 20%	

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Added Sugar: Breakfast



Equivalent to about 5 tsp. of sugar!

Nutrition Facts

Serving Size

1 Container (56g)

As
Packaged

Calories

210

% DV

Total Fat	2.5g	3%
Saturated Fat	0.5g	3%
Trans Fat	0g	
Cholesterol	0mg	0%
Sodium	320mg	14%
Total Carbohydrate	45g	16%
Dietary Fiber	4g	14%
Soluble Fiber	1g	
Total Sugars	19g	
Incl. Added Sugars	19g	38%
Protein	5g	
Vitamin D		15%
Calcium		15%
Iron		30%
Potassium		4%

Added Sugar: Breakfast

Food	Portion	Calories	Total Sugar	Added Sugar
Plain yogurt, lowfat	1 cup	150	17	0
Fruit flavored yogurt	1 cup	200	26	17
Milk, lowfat	1 cup	100	12	0
Chocolate milk, lowfat, reduced sugar	1 cup	140	18	6
Oatmeal	1 cup	170	1	0
Instant oatmeal	1 cup	320	22	16
Fruit juice	1 cup	110	21	0
Fruit drink	1 cup	120	27	27



How Do We Reduce Sugar in School Breakfasts?



Switch to Savory



Switch to School-Made

This will allow you to reduce the amount of sugar in the recipe compared to premade





Use the Natural Sweetness of Fruits

Fruit Puree

Unsweetened Applesauce

Banana Puree

Prune Puree

Dates



Use "Sweet" Spices

Cinnamon

Allspice

Vanilla

Chinese 5 spice

