Successful Kitchen Production

Staff Readiness

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

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 (cold foods at or below 41°F)
- Prevent cross-contamination with proper sanitation practices

Cooking

Pre-preparation:

- Washing
- Cutting (slicing, dicing, etc.)
- Seasoning strategies (using herbs and spices to reduce or replace sodium)

Preparation:

- Start the item with the longest cooking times first
- Clean as you go
- Batch cooking when needed

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
- Arrange food properly on the service line
- Monitor and rotate items as needed

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 (acid, herbs, and spices)
- Execution of fundamentals and appropriate cooking techniques
- 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 (plating for visual appeal)
- 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

FINAL CHECKLIST

Before we serve any meals from our kitchens, we should be able to answer "YES" to each of the following questions:

1. Does it taste good?
2. Does it look good?
3. Is it cooked properly?
4. Is it the correct temperature?

Maintaining these guidelines ensures that every meal served is **delicious, visually appealing, and meets quality standards**.

Mise en Place

Everything in its place and a place for everything

Organization 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. Maintaining mise en place ensures efficiency, sustainability, consistency, and professionalism.

Benefits of Mise en Place

- Increased speed and efficiency (cooks not running around gathering ingredients and equipment throughout food preparation)
- Professional appearance of workstation (critical in open kitchens or other situations where customers can view production)
- Sanitary conditions are more easily maintained (products held at correct temperatures, which helps to avoid cross-contamination)
- Ensures inventory management and waste reduction (preventing unnecessary food waste and reducing over-purchasing or spoilage)

Kitchen organization should include:

- Recipes and ingredients needed to complete the task
- Food safety and sanitation needs
- Small and large equipment needed (Consider equipment needs throughout the entire process, including the final container that will hold the product)
- Planning the time allotted to the process, from start to finish
- Division of labor (identify how the tasks are to be divided among the team)

Workspace Organization

- Recipe and recipe ingredients
- Cutting board (set on a wet paper towel or antiskid mat to prevent sliding)
- Chef knife, paring knife, peeler (if needed)
- Refuse pan (for food scraps and waste)
- Small equipment: utensils, mixing bowls, pans, service pans
- Large equipment: ovens, steamers, steam jacketed kettles, tilt skillet

Organization and Workflow

- Table height and cutting board at correct height
- Organization appropriate for individual preferences (right or left-handed)
- Products maintained at appropriate temperatures

KNIFE SELECTION

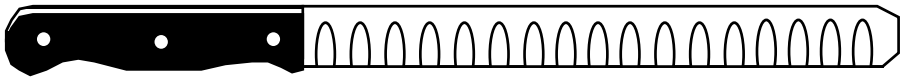
Knives come in all shapes and sizes. Understanding the function of various knives will help you pick the right tool for the job.

Chef Knife: An all-purpose, versatile knife that can be used for most cutting and dicing. They are available in sizes ranging from 6″ to 12″ (8″ is standard). Choose a knife that you can grip securely. Larger knives fit best in larger hands. Chef knives with forged blades can be used for heavy-duty tasks such as breaking down poultry or cutting through tough vegetables. Thinner, more flexible stamped blades work best for delicate tasks such as removing melon rinds.

Boning Knife: A specialized knife with a narrow blade, used to de-bone meat such poultry, smaller red meat cuts, and filleting fish.

Paring Knife: A knife mostly used for peeling fruits and vegetables, but also for slicing small soft foods such as olives and mushrooms

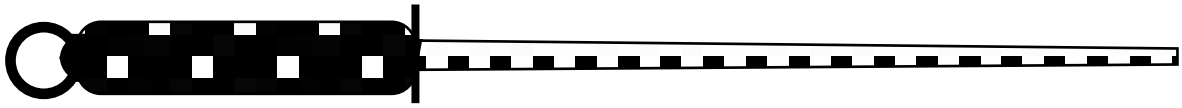
Slicer: Long knife used for carving meats.



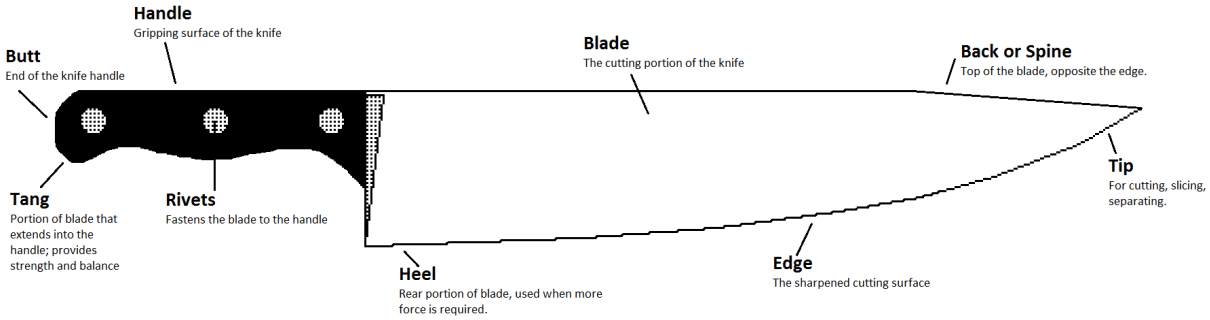
Serrated Knives: Highly specialized knives designed for slicing breads and cakes. Serrated knives have defined teeth and are “saw like” compared to slicing knives. They are not designed for cutting or chopping tasks.

Utility Knives: Used primarily for slicing. They work well with delicate foods such as fruit, small roasts, and poultry.

Sharpening Steel: Used for honing the edge of a knife between sharpenings



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. Both types can be sharpened easily and are used in a variety of kitchen settings.

Handle: Wood has traditionally been used for knife handles but modern options like plastic and laminated wood are now more common. Wood warps when wet and can harbor bacteria, making it difficult to clean. Plastic handles are found often 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, providing more balance and durability, and secured with three rivets for stability.

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

Back/ spine: gives blade appropriate stability and flexibility, varies in thickness depending on the style of knife 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: connects the handle to the tang

Sharpening Knives

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

Knife Sharpeners

Sharpening stones may be used to sharpen knives but 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 to fix.

Sharpening steels keep your knife blade sharp in between sharpening by realigning the microscopic burrs that make up the fine edge of your blade. Despite their name, these do not sharpen knives. 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 a 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 using snap-on knife guards or slice-in knife guards.

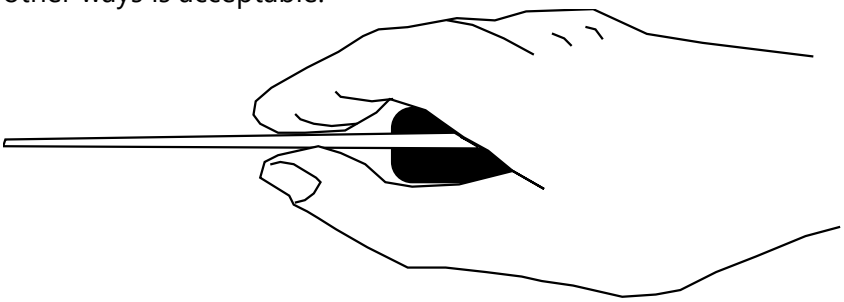
Knife Safety Rules

- Always use a sharp knife. A sharp knife is safer than a dull knife. It requires less cutting pressure. If sharp, the knife will not slip as easily, and your hand will not tire as quickly.
- Always use a cutting board. Anchor the cutting board to avoid slippage.
- Use the correct size and type of knife for the job.
- Hold the knife firmly and securely in your hand. Cut away from your body. Keep your eyes on the knife. Take your time.
- 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.
- Yield to falling knives. Do not grab a knife blindly; reach deliberately for the handle. If a knife falls off the table, do not grab it.
- When handing a knife to another person, point the handle toward them.
- Never place a knife in the dishwashing area. Always hand-wash and return to your cutting area or storage location.
-

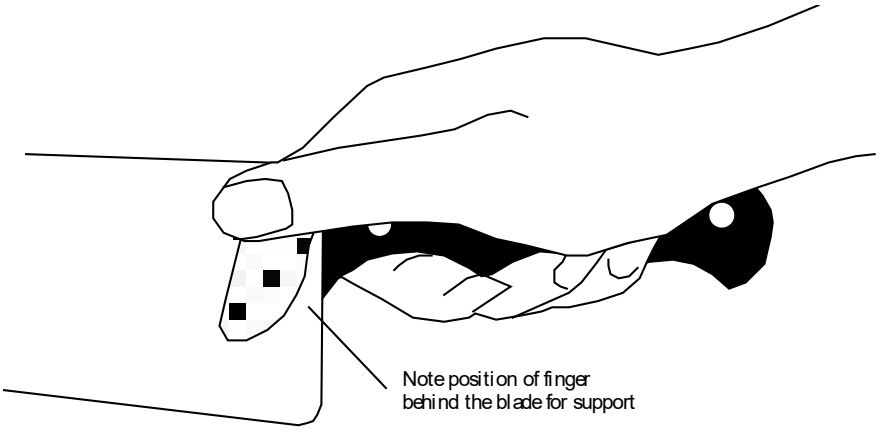
HOLDING A KNIFE

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 getting used to, but it gives you maximum control over your knife and allows you to pivot from the wrist when chopping.

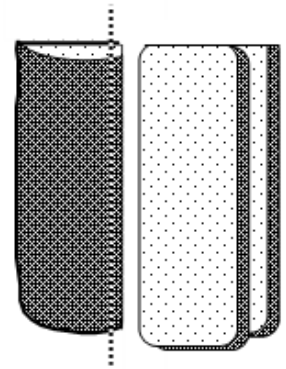
Top View—Some cooks prefer to grip the knife by the handle, allowing the thumb and index finger to rest on the blade for support. However, an individual's preference to hold the knife in other ways is acceptable.



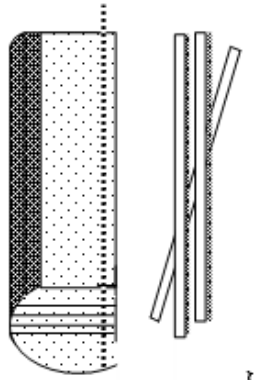
Side View - Note: The finger is placed behind the blade to provide stability.



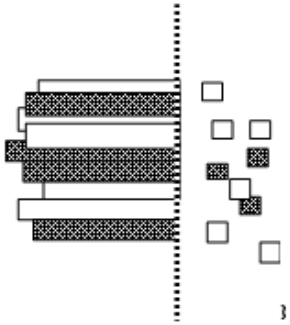
Planks,·Sticks,·Dice¶



¶
Planks:¶
Cut·vegetable·lengthwise·into·desired·thickness¤



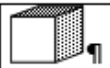
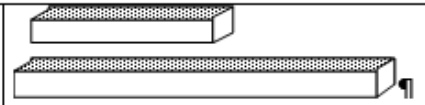
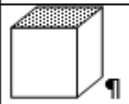
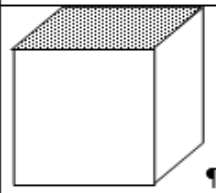
Sticks:¶
Stack·slices·and·cut·again·lengthwise·into·desired·thickness;·this·will·yield·sticks¤



Dice:¶
Lay·sticks·in·a·bundle,·cut·crosswise·into·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")¤		Battonet¤	(1/4"·x·1/4"·x·2·or·2-1/2")¤	
Large·Dice¤	(3/4"·x·3/4"·x·3/4")¤		¤		

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.

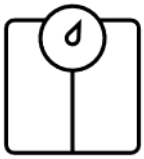
The importance of weight and volume can be further demonstrated by that 1 ¼ cups of flour mentioned earlier. Flour is a solid ingredient that's best measured by weight. If the flour is measured using a volume measuring cup though, the quantity can vary greatly from person to person, even when the same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

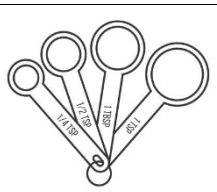
- If it was spooned in or scooped in with the measuring cup
- If it was packed down into the cup
- If it was leveled off with a straight edge

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.

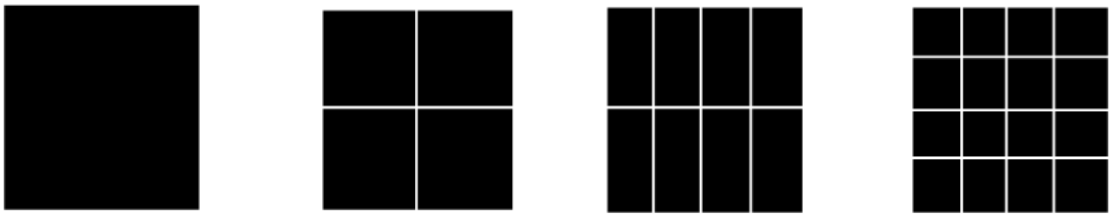
- If possible, measure all ingredients before starting the recipe to increase efficiency and decrease the chance of error.

PORTIONING

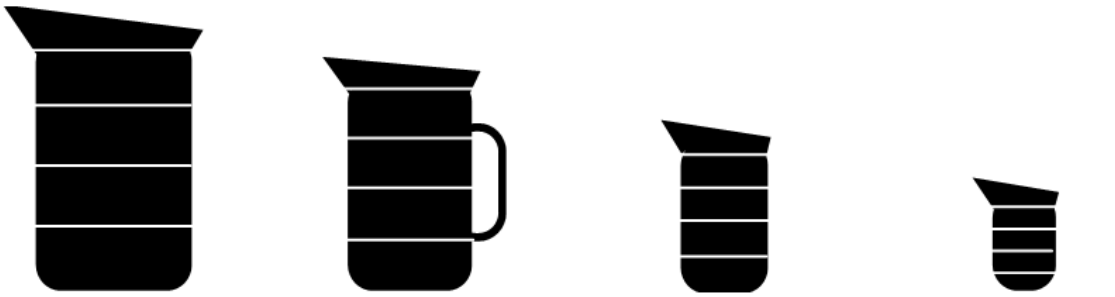
How food is portioned will directly relate to the yield of a recipe. Most often, scoops are used for portioning. Selecting the right scoop size and following the right technique is essential whenever serving food. If you over portion, you will run out of food too quickly. If you under portion, you'll 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 (fl. oz.)	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 (Fluid ounce)	Approximate measure
1 oz.	1/8 cup
2 oz.	1/4 cup
3 oz.	3/8 cup
4 oz.	1/2 cup

	6 oz.	3/4 cup
	8 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

Weights and Measures Equivalencies

dash	=	less than ⅛ teaspoon
3 teaspoons (tsp.)	=	1 Tablespoon (½ fl. oz.)
2 Tablespoons (Tbsp.)	=	⅛ cup (1 fl. oz.)
4 Tablespoons	=	¼ cup (2 fl. oz.)
8 Tablespoons	=	½ cup (4 fl. oz.)
16 Tablespoons	=	1 cup (8 fl. oz.)
2 cups	=	1 pint
2 pints	=	1 quart (approximately 1 liter)
4 quarts	=	1 gal.

Metric Weights and Measures Equivalencies

1 gram (g)	=	1/28 oz. (or 0.035 oz.)
½ ounce (oz.)	=	14 g
1 ounce	=	28.35 g (approx. 30 g)
2 ounces	=	56 g (approx. 60 g)
4 ounces	=	110 g
6 ounces	=	170 g
8 ounces	=	225 g
12 ounces	=	340 g
1 pound (16 oz.)	=	450 g
1 kilogram (kg)	=	2.21 lb.
1 liter (L)	=	33.92 fl. oz.

Temperature Equivalencies

250 °F	very cool	130 °C
300 °F	low	150 °C
350 °F	moderate	180 °C
400 °F	hot	200 °C
450 °F	very hot	230 °C

METRIC CONVERSION TABLE

To Change	To	Multiply by
Ounces (oz.)	Grams (g)	28.35
Pounds (lb.)	Kilograms (kg)	.45
Teaspoons (tsp.)	Milliliters (mL)	5
Tablespoons (Tbsp.)	Milliliters (mL)	15
Fluid Ounces (fl. oz.)	Milliliters (mL)	30
Cups	Liters (L)	.24
Pints (pt.)	Liters (L)	.47
Quarts (qt.)	Liters (L)	.95
Gallons (gal.)	Liters (L)	3.8
Temperature (°F)	Temperature (°C)	5/9 after subtracting 32°

Example: 9°F above boiling equals 5°C above boiling

Recipe Literacy – Key Elements

Recipe Title

Baked Chicken Drumstick

Serving Size & Credible Portions

Serving Size:
K-8: 1 drumstick
9-12: 2 drumsticks

1 drumstick provides 1.5 oz. eq m/ma

Ingredients

Ingredients	50 Servings	25 Servings
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

Yield

Ingredient amount needed for specific yield

Direction Or Preparation Method/ Order

Directions

1. Thaw chicken under refrigeration overnight. For best results, place in a perforated pan to drain overnight.
2. Toss chicken with seasoning blend.
3. Lay thawed chicken in single layer on sheet pans lined with parchment paper.
4. Bake until internal temperature reaches 165°F:
   Conventional oven: 400°F for 45-55 minutes.
   Convection oven: 350°F for 30-35 minutes.

CCP: Heat to 165°F or higher for 15 seconds.
CCP: Hold at 135°F or higher.

Critical Control Points

Ranch – for 50 servings		**Rosemary** - for 50 servings		**BBQ** – for 50 servings	
Garlic, granulated	2 tablespoons	Rosemary	3 tablespoons	Cumin	2 tablespoons
Granulated onion	2 tablespoons	Garlic, granulated	2 tablespoons	Smoked paprika	2 tablespoons
Dill weed	2 tablespoons	Granulated onion	2 tablespoons	Garlic, granulated	2 tablespoons
Salt	2 teaspoons	Salt	2 teaspoons	Granulated onion	2 tablespoons
Black pepper	1 ½ teaspoon	Black pepper	1 ½ teaspoon	Salt	2 teaspoons
				Black pepper	1 ½ teaspoon

Nutrients Per Serving							
Calories	91	Total Fat (g)	4	Vitamin A (IU)	.38	Calcium (mg)	.3
Protein(g)	12	Saturated Fat (g)	1	Vitamin C (mg)	0	Sodium (mg)	155
Carbohydrate (g)	.2	Cholesterol (mg)	65	Iron (mg)	.01	Dietary Fiber (g)	0

RECIPE LITERACY: STANDARDIZED RECIPES & KEY ELEMENTS

A **standardized recipe** is a tested, written set of instructions that consistently produces the same yield, portion size, quality, and nutritional value every time it is prepared—no matter who is cooking it.

In school food service, standardized recipes ensure:

- Consistent meals for students
- Accurate meal pattern crediting
- Cost control and reduced waste
- Food safety and regulatory compliance

Standardized recipes are not just instructions—they are tools that support:

- Team consistency across shifts and kitchen locations
- Training new staff
- Batch cooking at scale
- Meeting USDA and district requirements

When followed correctly, standardized recipes help kitchens deliver meals that are safe, compliant, and flavorful!

Key Elements of a Standardized Recipe

1. **Recipe Title:** tells you the name of the dish, often hints at the cooking method (baked, roasted, simmered). Can help us identify the recipe and signal what equipment or technique may be required.
2. **Serving Size/ Portion Size:**
    a. The serving size is the amount of food planned for one student based on grade level and meal pattern requirements.
        i. In school foodservice, serving size may vary by grade group (K-8 vs 9-12) and is determined by nutrition and meal pattern standards. Example: K-8: 1 drumstick, 9-12: 2 drumsticks.
    b. The portion size is the actual amount of food placed on the plate or tray during serving. The portion size is influenced by the serving utensils or scoops, but should match the planned serving size every time.
3. **Yield / Total Number of Servings:**
    a. The yield is the total amount of food a recipe produces when prepared as written, i.e. how much the recipe makes. Yield is often listed as the total number of servings or the total weight.
4. **Credible amounts (e.g., oz eq M/MA)**

    a. The credible amount tells you how much a food contributes toward the meal pattern requirements, such as a meat/meat alternative (M/MA), grains, or vegetables. Creditable amounts are based on USDA standards, are often listed in ounce equivalents (oz eq), and verified through CN labels or product documentation

5. **Ingredient List**
    a. The ingredient list is all of the ingredients you will need to prepare the total amount desired. Ingredients should be listed in order of use with quantities measured by weight and/or volume.
    b. Ingredient list should include product descriptions and specifications (e.g., CN_labeled, frozen, canned, cooked)
6. **Directions, Method, Preparation Steps**
    a. In this section of a standardized recipe you will find step-by-step instructions in order of operations that should help guide production flow. Cooking times, temperatures, and critical control points are highlighted in this section.
7. **Critical Control Points (CCPs)**
    a. Often found in the direction/method area are the minimum internal cooking temperatures, holding temperature requirements, and/or any cooling or reheating instructions of the recipe.
    b. CCPs protect food safety, meet HACCP and regulatory standards, and help prevent foodborne illness and must always be followed.
8. **Nutrition Information**
    a. Included to help support menu planning, meet nutrition guidelines, and provide transparency for reporting.

Tips for increasing recipe literacy

Before cooking, always:

- Read the entire recipe, highlight unfamiliar terms or key phrases
- Confirm yield and portion size
- Check thawing or advance prep needs
- Identify CCPs
- Gather all equipment and ingredients
- Create a prep list or schedule

VEGETABLE COOKERY

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

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 When using canned vegetables, reheat them in the liquid from the can, adjust seasonings.	• Shelf life • Practical for some vegetables	• Poor color (green vegetables) • Mushy • Poor flavor (taste canned)	• Beet • Beans (kidney, pinto, black)
Dry vegetables must be reconstituted in a liquid.	• Shelf life • Convenient	• Takes time to reconstitute	• Dry beans • Freeze-dried peppers

Vegetables are packed with nutrients for children

1. On their own most vegetables are naturally low in fat and calories.
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. Dietary fiber from vegetables, as part of an overall healthy diet, helps reduce blood cholesterol levels and may lower 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 the nutrient content. Some nutrients can be destroyed by heat and some dissolve in water. The culinary techniques described in this lesson are based on culinary principles designed to keep the 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.

Effects of Overcooking

- Color loss
- Texture (mushy)
- Vitamin loss

TYPES OF VEGETABLE COOKERY

BLANCHING

Blanching means dipping a food into boiling water for a very short time, only a minute or two. Then shocking in an ice bath to stop the cooking process and preserve the flavor and freshness of the partially cooked food.

Blanching is used to:

- Prepare vegetables for further cooking (example broccoli)
- Remove strong or bitter flavors (example kale)
- Soften firm foods (example carrots)
- Set colors of vegetables (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, tongs, strainer
- Ice bath or freezer

Quick steps for Blanching

1. Bring 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 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 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 serving 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 the vegetables. Do not add any liquid.
2. Steam uncovered at 5 pounds pressure for a compartment steamer. Follow 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 IN AN OVEN

1. Place approximately 50, ½ cup servings of the fresh or frozen vegetable 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. To allow room for the steam to circulate around the vegetables, do not place a larger number of vegetables in the pan.

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 vegetable until it is fork tender. Times will vary with 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.
6. Serve the hot vegetable at once.

Additional information

- Season the vegetables with herbs and spices
- Garnish the vegetables with various nuts or seeds
- Use freshly chopped herbs for additional garnish and flavor

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, sheet trays
- Optional components: marinade, seasonings, or aromatics

Quick steps for roasting and baking

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.
2. Cut vegetables into uniform shape and size.
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.

Oven Roasted Potato Fries

Steps to better oven-baked potatoes:

1. Preheat the oven to 425 °F - 450 °F.
2. Remove from the freezer 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.

Note: Limit the salt to 1 teaspoon for 50 servings of fries. This would add an additional 45 mg of sodium. Try other seasonings instead of salt.

Seasoning variations	Seasonings	Amount needed per 10 pounds 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 also only require a few hours in the

brine before they can be enjoyed. Quick pickles are a lower-sodium version to a traditional pickle. They offer a sweet-sour, flavor-packed addition to a sandwich or salad bar. Almost any vegetable can be quick 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. Bring vinegar, water, sugar, salt, and seasonings to a boil in a medium pot over high heat, stirring occasionally. Reduce heat to medium-low and simmer 10 minutes. 2. Place vegetable in a heatproof container or jar. Pour hot brining liquid over vegetable. Cover and chill 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	

TYPES OF GRAIN COOKERY

SIMMERING

Grains properly cooked by simmering are relatively dry and fluffy, with a sweet, nutty flavor.

Commonly Simmered Grains

- Rice
- Bulgur
- Wheat
- Hominy
- Sorghum
- Barley
- Buckwheat
- Quinoa
- Millet

Mise en place

- Grain
  - Check the grain carefully and remove any debris
  - Presoak as necessary
- Liquid
  - Water
  - Stock or broth
  - Juice
  - Any acid liquid (citrus juice) should be added during the final part of cooking to avoid toughening the grain
- Optional components
  - Spices or herbs
  - Aromatics
- Equipment
  - Steam jacketed kettle, tilt skillet, oven

Quick Steps for Boiling Grains and Legumes

1. Bring the liquid to a rolling boil.
2. Add the grain to the boiling liquid.
3. Establish a simmer and cook to the proper doneness.
4. Drain and serve them or hold in a warm place.

STEAMING

Few grains are truly cooked by steaming. Couscous and rice are a few of the grains steamed - a *couscoussière* is customarily used for this purpose.

Commonly Steamed Grains

- Couscous
- Short grain rice

Mise en place

- Main item
- Steaming Liquid
  - Couscous is traditionally steamed over a stew
  - Water or stock (rice)
- Optional components
  - Salt and pepper
  - Cooking fat to provide flavor and keep grains from clumping
- Equipment
  - Steamer

Quick steps for Steaming Grains

1. Place the grain over simmering or boiling liquid.
2. Steam the grain until tender.
3. Adjust the seasoning to taste and serve or hold the item.

COOKING PASTA

Boiling

1. Measure the water in a steam-jacketed kettle.
   - Basic recipe for pasta is 1-pound pasta, 1-gallon water, 1 teaspoon salt. Increase all ingredients based on the number of pounds of pasta to be cooked.
2. Bring water to a rolling boil and add pasta gradually. Stir to separate the pieces.
   - When cooking filled pastas like ravioli, add to boiling water and then gently simmer so filled pasta pieces are not broken.
3. Return water to a boil and begin timing. Cook uncovered until the pasta is al dente.
   - Do not stir the pasta while it is cooking. Be careful not to overcook. If pasta is to be used in a recipe that will be cooked again, cooking can be reduced by about 2 minutes.
4. When pasta is done, drain immediately in a colander.
   - Do not rinse pasta that is to be served hot.
   - A small amount of oil can be tossed with the pasta to prevent sticking.
5. Serve hot pasta immediately.
   - To cool pasta, cover with cold water until chilled. Drain, cover, and refrigerate until needed.
6. Pre-cooked pasta can be reheated by quickly immersing in boiling water.
   - Do not allow to cook. Drain. Add sauce or seasonings and serve immediately.

Grain	Grain Quantity	Liquid Quantity	Time	USDA Food Buying Guide
Brown rice, long grain	1	2	30 to 45 minutes	1-pound long grain, regular (about 2 ½ cups) makes about 4 3/8 cups cooked. 1 cup dry = about 1 ¾ cup cooked.
Quinoa	1	2	12 to 15 minutes	1 pound dry (about 2 ½ cups) makes about or 6 ½ cups cooked.
Wheat berries	1	3	Cook 45 to 60 minutes	1 pound dry (about 2 ¼ cups) makes 6 cups cooked.
Bulgur	1	2	10 to 12 minutes	1 pound dry (about 3 cups) makes 9 ¾ cups cooked.
Sorghum	1	3 or 4	45 to 50 minutes	1 pound dry is about 2 1/3 cups. 1 cup dry sorghum makes 3 cups cooked sorghum.
Corn grits	1	4	25 to 30 minutes	1 pound dry (about 3 cups) makes about 10 7/8 cups cooked.
Oats	1	2.25	varies	1 pound dry (about 6 cups) makes about 11 3/8 cups cooked.
Barley	1	3	60 minutes	1 pound dry (about 2 1/3 cups) makes about 10 ½ cups cooked.
Couscous, whole wheat	1 (1 cup)	1.5 (2.75 cup)	10 minutes (heat off) (USDA)	1 pound dry (about 2 ½ cups) makes about 6 ¾ cups cooked.
Pasta	1	6	8 to 12 minutes (Varies by size)	1-pound whole wheat penne (about 5 3/8 cups) makes about 8 5/8 cups cooked. 1-pound whole wheat spaghetti (about 4 ¾ cups) equals about 8 ½ cups cooked.

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.

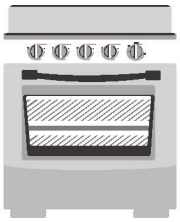
Tips

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

HealthySchoolRecipes
culinary solutions for school nutrition programs

How to
Roast Vegetables

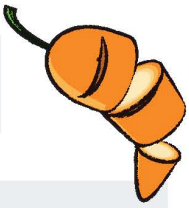
Roasting is a dry heat cooking method that is popular for vegetables. Nearly any vegetable can be roasted, and doing so will create a caramelized exterior with a tender interior.



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.

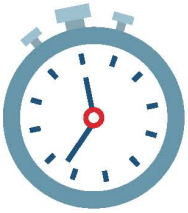


Step 3: Toss vegetables in oil. Season with pepper, garlic, spices, or herbs.

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.

HealthySchoolRecipes
culinary solutions for school nutrition programs