



Culinary Institute
of America

2025 California Foodservice Professionals Orientation and Physiology of Taste

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Production Schedule

- Orientation/Recipe Review 1 hour 15 minutes
- Break – Transition to Kitchen 15 minutes
- Production/Demonstrations 2 ½ hours
- Lunch 1 hour

*Times subject to change

Kitchen Responsibilities

- Keep stations clean
- Properly handle and store all food
 - When handling “ready-to-eat” food items...if you don’t cook it, glove it!
 - Wash hands, cutting boards, knives, etc. when switching between meats and vegetables
- Clean all small equipment as you go
 - Kitchen assistants will put them away
- All pots, pans, and cutting boards put away
- At end of class, kitchens need to be left clean and set up for next day

Learning Objectives

- Demonstrate how to effectively set up your workstation and organize your mise en place
- Prepare a menu in a 2 ½ hour time frame for evaluation
- Discuss and identify Production strengths and weaknesses
- Evaluate methods to improve strengths and weaknesses based on Chef's feedback
- Use feedback to prepare for next day's exercise

Mise en Place

- French term for “everything in its place”
- What does this mean?
 - A clean, organized workstation
 - Recipe mise en place (MEP)
 - Make sure you read through the **entire** recipe
 - Prep time vs. service
 - Physically ready to cook
 - Mentally prepared to cook – proper state of mind!

Mise en Place- Helps you achieve you GOALS

- Mental- Read your recipes before you start to do anything
 - Ingredients- all cut and ready to be cooked
 - Equipment- ovens on, pots, pans, utensils, etc...
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- Proper serving temperature
 - hot foods hot, cold foods cold
 - appropriate temperature plates
 - Proper garnishing of platters

Typical work station setup

Tasting spoons
with receptacle

Sanitation bucket with handy wipes

Salt and Pepper

Receptacles for
trash and compost

Paper towels

Secured cutting board

Receptacles for product

Basic Cooking Terminology

- **SAUTE**- COOKING QUICKLY IN A SMALL AMOUNT OF FAT OVER HEAT
- **PAN FRY**- COOKING IN HOT FAT OR OIL IN A SHALLOW PAN
- **DEEP FRY**- COOKING COMPLETELY SUBMERGED IN FAT OR OIL
- **STIR FRY**- COOKING QUICKLY OVER VERY HIGH HEAT WHILE STIRRING
- **ROASTING** - COOKING USING DRY, HEATED AIR

Basic Cooking Terminology

- **GRILLING** - COOKING ON A RACK OVER DIRECT HEAT
- **BROILING** - COOKING UNDER DIRECT HEAT
- **BRAISING** - COOKING BY SEARING, THEN COOKING IN LIQUID 1/3-1/2 THE DEPTH OF THE FOOD (USE SAME PAN FOR BOTH!)
- **STEWING** - SEARING THE FOOD THEN COOKING SUBMERGED COMPLETELY IN LIQUID (USE SAME PAN FOR BOTH!)
- **SEARING** - COOK OVER HIGH, DIRECT HEAT

Basic Cooking Terminology

- **SHALLOW POACH** - COOKING NATURALLY TENDER FOODS IN A SMALL AMOUNT OF LIQUID
- **POACH** - TO COOK BY SUBMERGING FOOD IN WATER KEPT AT A CONSTANT, MODERATE TEMPERATURE
- **STEAMING**-TO COOK USING THE HEAT FROM BOILINGWATER, WITHOUT SUBMERGING FOOD IN WATER
- **BLANCHING**-TO PARTIALLY COOK A FOOD IN HOT LIQUID

Kosher and Halal

These both have additional sanitation practices in addition to what we already practice.

What are some of these differences?

Kosher

Food Handling Requirements

- You must keep and store meat and dairy separately.
- You can only use kosher ingredients.
- You must clean any evidence of non-kosher ingredients from your kitchen surfaces and utensils before you can use them.

Animal Processing

- Live kill only, no stunning
- **Fore quarters only:** chuck, rib, plate, basket
- Must have cloven hoof/ chew cud
- **Fish:** must have scales
- Rabbinical supervision required to ensure a proper kill

Kosher

Kosher Facts

- Rules are the foundation of kosher food
- Rooted in history and religion, strict rules of what can and cannot be eaten
- Kosher is the Jewish word meaning “fit”
- High level of hygiene and safety, stricter than Halal
- There are several categories for kosher food and a certification process to help identify kosher foods

Halal – more sanitary practices

Food Handling Requirements

- Halal means “appropriate” or “permitted”
- No Pork, carnivorous animals, birds of prey, reptiles, amphibians, insects
- High level of hygiene and safety
- No alcohol or intoxicants

Animal Processing

- Humane processing techniques
- Animal must be alive/ facing Meca
- Performed by a Muslim or Person of the Book
- The animal must be healthy/ free from harm
- Must utilize clean, sharp tools

Halal

Halal Facts

- Cleaning all preparation and serving dishes, and surfaces where you'll prepare food.
- Reserving a chopping board, prep area, and knife for halal meat.
- Separating halal and non-halal meat into different containers.
- Avoiding cooking halal and non-halal meat in the same cookware, but can cook halal meat over non-halal meat in the same oven

Halal Foods

- Seafood, including fish
- Bread, Pastries, Desserts
- Cereals, including breakfast, organic, and natural
- Rice, Pasta
- Milk, Cheese products, Ice Cream, eggs, as long as it's from a halal source
- Coffee mixes and tea blends
- Seasonings
- Fruits, fresh and dried, Juices
- Honey, Syrups, Jams and jellies
- Legumes, Nuts, Peanut butter
- Pizzas, as long as it has halal meats and vegetables
- Vegetables, both frozen and fresh
- Processed potatoes, such as french fries
- Sauces and dressing
- Soups and soup bases
- Tofu
- Halal deli meats

Key Terms

- Taste
- Flavor
- Seasoning
- Umami
- Pungency
- Mouthfeel
- Sodium
- Natural vs. Added Sugar
- Aroma
- Palate
- Balance
- Contrast
- Flavor Carrier
- Fermentation
- Culinary Literacy

What influences our experience of food & flavor? (context)

Cultural Background

Social context

Presentation/expectation

Personal memories & associations (comfort foods, childhood favorites)

Texture/Mouthfeel

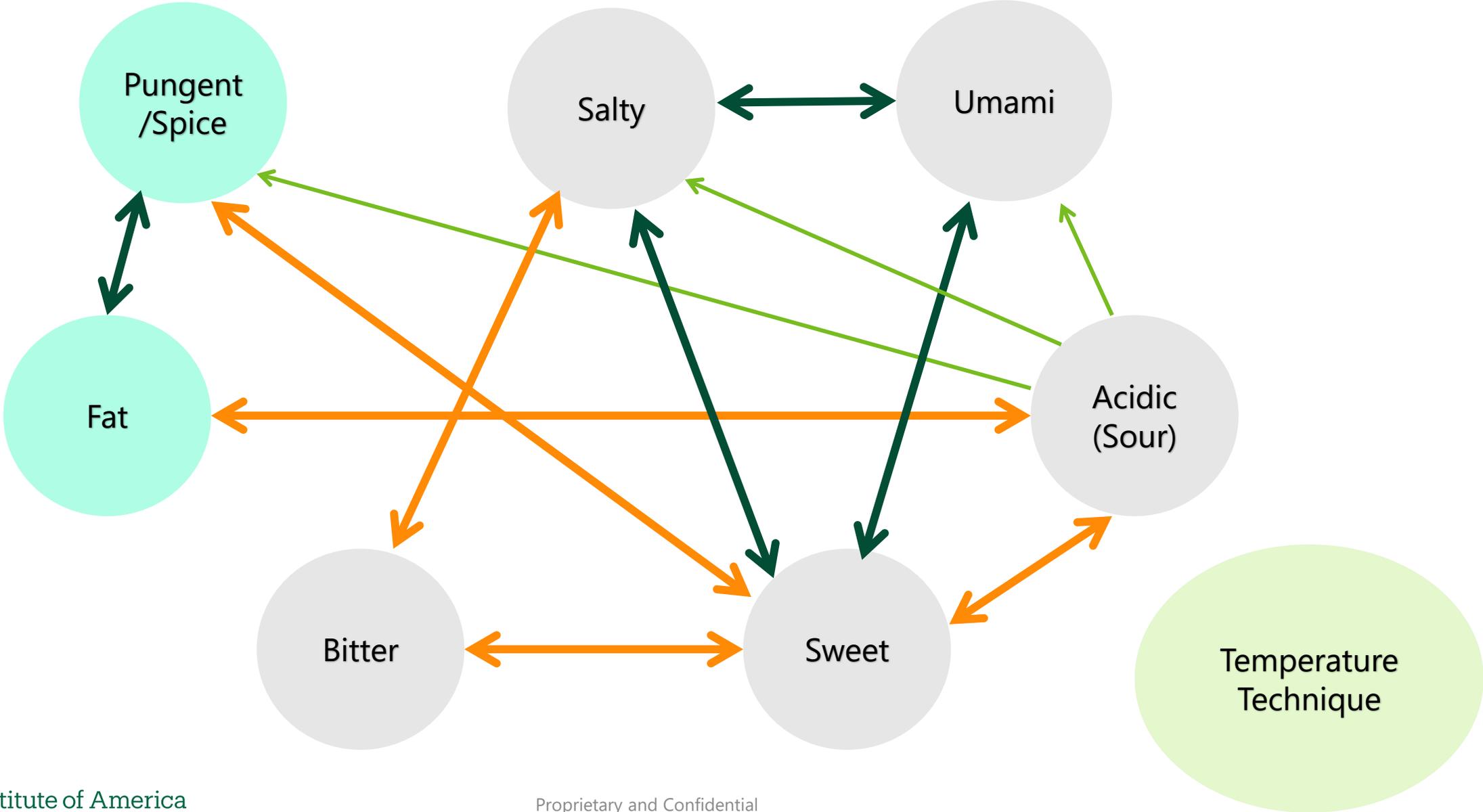
Social Justice/Environmental Justice

Environment (personal) & Terroir (external)

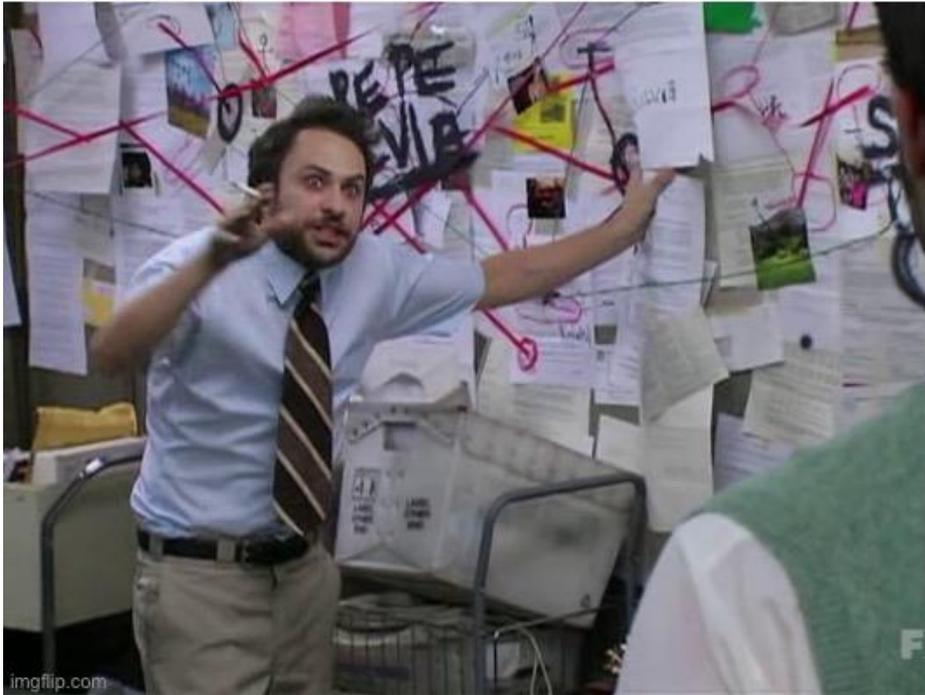
Current state of being (hunger, intoxicated, hungover, full)

Food Insecurity

Balance of taste & flavor - Seasoning



Chef explaining how to balance flavors and seasoning



What's Wrong?	To Balance
Too sweet	Sour/acid or spice/Heat
Too salty	Sour/Acid or cut with unseasoned batch
Too hot/spicy	Sweet/fat
Too sour	Sweet/fat
Too bland	Salt/heat/spices
Too bitter	Sweet/Fat
Needs brightness	Sour/Acid/Aromatics/heat
Needs depth	Fat/heat/aromatics/spices

How to Reduce Reliance on Salt, Sugar & Fat for Flavor

1. Seasoning with 'the tastes'
2. Herbs & Spices
3. Cooking Techniques
4. Smart Swaps and Pairings

Seasoning With The “Tastes”

Sweet

Sour (Acid)

Salty

Bitter

Umami

Sweetness – What is it and Where is it coming from?



Can come from:

- Whole Foods – fruits, vegetables, dairy, grains, etc.
- *Naturally derived sugars – honey, maple, molasses
- Processed or refined sugars – table sugar, corn syrup
- Sugar substitutes – stevia, monk fruit, date syrup, etc.

*Note: Naturally derived but still counts as “added sugar” when used separately

Seasoning with Sweetness—Naturally

- **Sweet Vegetables** – carrots, beets, corn, squash, onions
- **Fruit-Based Additions** – apples, dates, dried fruits, roasted grapes
- **Cooking Techniques** – roasting, caramelizing, reducing
- **Spices** – cinnamon, clove, cardamom to *perceive* sweetness
- **Ferments** – sweet pickled veggies, fruit chutneys

Choosing Sugar Substitutes

Substitute	What it is	Best Uses
Fruit Purees	Apple sauce, banana, date paste – fiber + sweet	Baked goods, dressings, sauces (cooked and uncooked)
Maple Syrup	Mineral-rich sap syrup	Glazes, baked goods, oatmeal, marinades
Honey	From Bees!	Dressing, yogurt, tea, roasted vegetables, soups, any seasoning
Molasses	Byproduct of sugarcane, rich in iron and flavor	BBQ sauce, spice cakes, baked beans, baked goods
Stevia	Plant-derived, very sweet with 0 calories	Cold drinks, low-calorie desserts
Monk Fruit	Extract of lup han guo fruit, 0 calorie	Beverages, puddings, diabetic friendly sweets
Coconut sugar	Less processed, lower glycemic index	Baking, sauces, coffee
Date Syrup	Made from cooked/blended dates, retains fiber and minerals	Pancakes, smoothies, grain bowls, sauces, dressings

Sour (Acidity) – Brightness & Contrast

Adds freshness, balances fats, enhances complexity

- Citrus: Lemon, lime, grapefruit, yuzu.
- Vinegars: Apple cider, balsamic, rice, sherry, red
- Fermented foods: Pickles, Sauerkraut, kimchi, yogurt, buttermilk
- Fermented drinks: kombucha, kefir,
- Sour fruits (green apple, rhubarb, gooseberries)
- Tamarind, pomegranate molasses



Practical applications for acidity

Dressings & Vinaigrettes	Lemon juice, lime, or vinegars as the acid base Yogurt or buttermilk in creamy dressings Add mustard or citrus zest for layered flavor Using ferment brine to blend dressing, vinaigrette, or sauces
Marinades & Sauces	Lemon juice, lime, or vinegars as the acid base Yogurt or buttermilk in creamy dressings Add mustard or citrus zest for layered flavor
Soups & stews	Add lemon juice or vinegar at the end to lift flavors A spoonful of fermented brine (pickle juice or sauerkraut liquid) can act like culinary "MSG" Try tamarind paste or pomegranate molasses for global twists
Sides & Salads	Use citrus to enhance fresh fruit or grain salads Dress roasted veggies with a splash of balsamic or sherry vinegar Brighten bitter greens with a honey-lime or apple cider vinaigrette Fermented Brine in fatty sides (guacamole with sauerkraut)
A pop in a sweet dish	Lemon zest in muffins or pancakes Berries with balsamic or yogurt Citrus curd or tangy fruit compotes for natural balance

Salt! NaCl

Function in seasoning and flavor:

- Boost perceived taste of foods
- Can balance bitterness, sweetness, and acidity
- Crave for survival

Function in cooking:

- Affects moisture retention in proteins and vegetables
- Tenderizes foods
- Used for preservation (think processed foods but also preserved)



Salt should support flavor..not be the only flavor

Use It Effectively:

- Season in layers (before, during, after cooking).
- Use flaky salt for finishing (Maldon)
- Pair salt with acidity (citrus, vinegar) to create balance.
- For contrast – balances sweetness in desserts (salted caramel, chocolate)

Overuse:

- Overpowers subtler flavor
- Can desensitize taste buds over time
- Linked to hypertension and cardiovascular disease risk
- Often shows up in processed foods and packaged foods

Bitter – Complexity & Balance



Adds depth and can contrast sweet, salty, rich flavors offsets sweetness, and stimulates digestion

- Often bitter foods tamed through cooking techniques (grill, braise, roast)
- Balances rich and fatty foods (bitter greens with creamy dressing)
- Used in marinades and spice rubs

Bitter foods;

- Leafy greens (kale, arugula, radicchio, dandelion greens)
- Coffee, cacao, tea
- Grapefruit, citrus peels, cranberries
- Hops, dark chocolate, charred foods
- Olive oils
- Spices: turmeric, fenugreek, mustard seed
- Brassicas: broccoli, brussel sprouts, cabbage
- Citrus zest or peel



Umami (Savoriness)

Adds a savory, deep, mouth-coating taste

- Makes dishes feel rich and satisfying often without the need for excess salt
- Develops over time (slow cooking, roasting)
- Layered in for complexity in stocks, soups, sauces

umami foods: Mushrooms, tomatoes, Parmesan cheese, aged meats, bone broths, slow roasted meats, grilled meats, seaweed

Fermented umami sources: Miso, soy sauce, fish sauce, kombu, Worcestershire sauce.

Cooking Techniques to bring out umami: Roasting, Searing, Reduction, caramelization, Maillard reaction, slow cooking



Spice/Pungent (Heat & Warmth)

Spice is a sensation, not a taste.

Adds warmth, heat, pungency. Excites the palate and builds complexity. Can enhance or contrast other flavors
Can reduce the need for added sugar or salt by increasing flavor perception

Types of Pungency

Source	Sensation	Examples
Capsaicin	Heat/spice	Chili peppers, hot sauce, paprika
Piperine	Sharp warmth	Black pepper
Allyl Compounds	Pungent bite	Garlic, onions, horseradish, mustard
Gingerol	Warm heat + sweetness	Ginger, galangal
Sinigrin	Nasal-cleaing sharpness	Wasabi, mustard, radish



Fat

- Carries and intensifies flavors (especially fat-soluble ones like herbs and spices)
- Provides **mouthfeel**—creaminess, richness, or crispness
- Increases **satiety** and sensory satisfaction
- Balances bitter, salty, spicy, and acidic flavors
- Creates texture contrast (crispy edges, silky sauces)

Flavorful, Nutrient-Rich Fat Sources:

- Oils:** olive oil, sesame oil, avocado oil, walnut oil
- Whole foods:** avocado, nuts, seeds, coconut, olives
- Dairy & alt-dairy:** yogurt, cheese, kefir, coconut milk
- Animal-based:** egg yolks, fatty fish, butter, ghee



How else can we build flavor
and season?

Herbs & Spices

What They Do:

- Add aroma, complexity, and identity to dishes
- Enhance flavor without sodium or sugar
- Support global flavor profiles and cultural relevance
- Create visual appeal and freshness

Tips for Using Them:

- Use dried herbs early in cooking, fresh herbs at the end
- Toast spices before using to release oils and flavor
- Blend herbs/spices into pastes, rubs, dressings, marinades

Examples:

- Cumin + coriander in lentils
- Cilantro + lime in slaws or grains
- Smoked paprika + oregano in beans or chili
- Mint + basil in fresh salads or yogurt sauces
- In marinades!
- Curries!
- Spice Blends (Za'atar, togarashi)

Building Flavor with Cooking Techniques

Techniques to Try:

- Roasting – concentrates natural sugars, creates caramelization
- Toasting – awakens flavor in spices, grains, seeds
- Searing – Maillard reaction adds savory depth
- Reducing – concentrates sauces and broths
- Simmering/Braising – blends flavors over time
- Infusing – flavors oils, broths, or liquids with herbs/spices

Cooking techniques **naturally enhance flavors**, allowing for more depth and richness without relying on sodium.

Swaps – A recap

What you're reducing or replacing	Swap or pairing	Why it works
Added Sugar	Roasted fruit, fruit puree, warm spices, roasted vegetables, grains	Brings out natural sweetness + complexity
Salt	Citrus, vinegar, fermented brine, miso	Adds brightness, tang, umami
Heavy Fat	Toasted seeds, avocado, yogurt, tahini	Keeps it rich and adds texture
Bland vegetables/grains	Add acid, spices, fresh herbs, citrus, or crispy texture	Boost satisfaction and flavor variety

Discuss Menu and Expectations

- Review recipes and the expected outcome for each dish – Each recipe will be doubled
- All items to be served Family Style
- 20 portions should be prepared and served for Tuesday and Wednesday production
- Portions should be easy to serve (smaller individual items, sliced, etc.)

What are you Making?

- Various Globally inspired dishes
- Items that can serve multiple roles on a menu
 - Main item
 - Sides
 - Accompaniments
 - Sauces, spreads, flavor enhancers
- Most importantly very good food for you and the other guests

Chef's Critique and Feedback

- Chef's will provide feedback on the food produced
- Focus will be on:
 - Timing
 - Organization
 - Developing good work habits

Self-Evaluation

- Evaluate your Dish
 - What did you do well?
 - What needs improvement?
- Evaluate your Performance
 - How was your timing?
 - Did you complete all your tasks?
 - Extra Time? How could you elevate the cuisine?



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Any Questions?