Culinary Institute of America

# Cupertino Unified School District Training

Chef Sky Hanka, MS, NBC-HWC, ‘12

April 2025

# What's your WHY?

# Program Overview

- Lecture  1 – 1.5 hr
- Demos & Hands-on Production  2.5 – 3 hr
- Dinner/Critique 30 min
- Review & Preparation for the next day 30 min

| Day 1 | **Day 2** |
| --- | --- |
| Introduction | **Food Safety Review** |
| Mise en Place | **Plant-Forward Cuisine** |
| Knife Skills | **Seasoning & Flavor** |
| Exploring Indian and Asian Flavors | **What next?** |
| Production Review | |

Link to:

PowerPoints

Recipes

Survey ☺

Culinary Institute of America

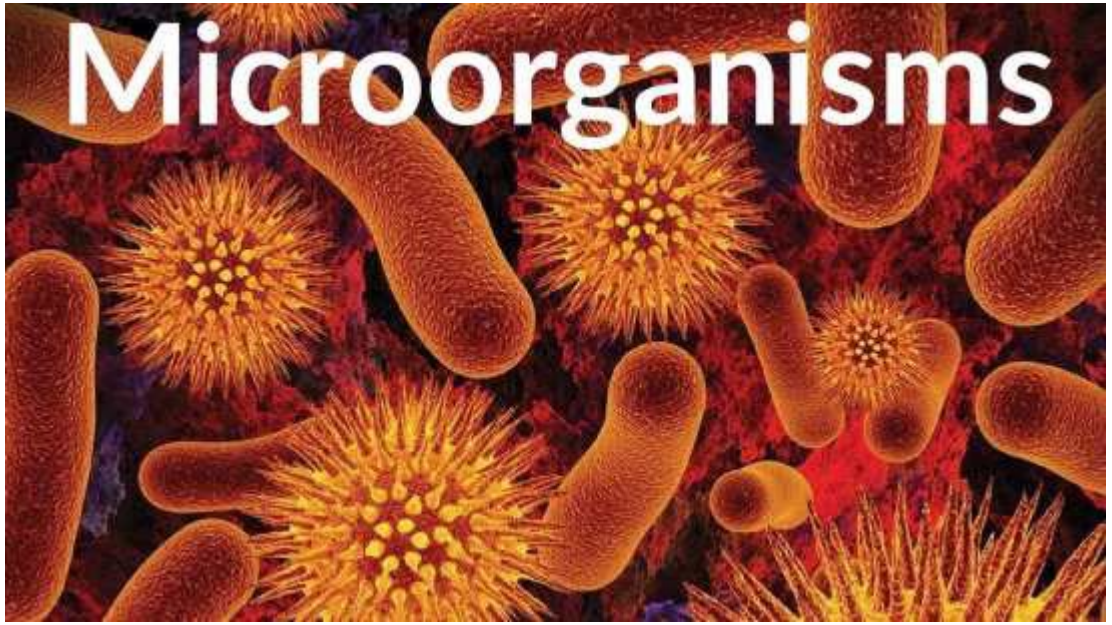
# Food Safety Review

# Learning Objectives

- **Identify** common foodborne pathogens and their sources.
- **Recognize** the conditions that allow bacteria and pathogens to grow.
- **Implement** best practices to prevent foodborne illnesses in school kitchens.
- **Understand** how food handlers can contaminate food and how to prevent cross-contamination.
- **Identify** critical control points (CCPs) in school food operations and strategies to maintain food safety standards.

# Key Terms

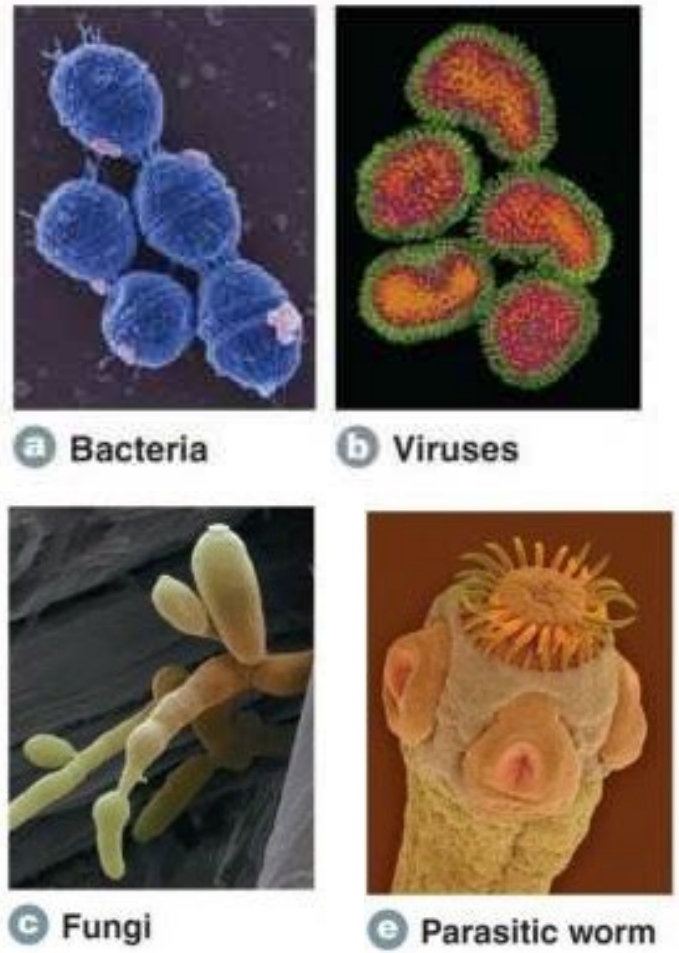
- Foodborne illness
- Pathogens
- Cross-contamination
- TCS (time & temperature control for safety Foods)
- TDZ (temperature danger zone)
- Hot holding
- Cold holding
- Cooling process
- Reheating
- FIFO
- Sanitizing vs Cleaning
- Personal hygiene
- RTE foods
- HACCP
- CCPS
- Corrective Action




- Small, living organisms that can be seen only through a microscope
- Some are harmless or even beneficial
  - Mold for blue cheese
  - Yeast for bread
- Some are **harmful – called pathogens**
  - Can make sick by eating
  - Can make sick by producing toxins

# Types of pathogens

- Viruses
  - Survive freezing and cooking
  - Need a host (humans/animals) to reproduce
- Bacteria
  - Produce spores & toxins (some survive cooking)
  - Multiply rapidly in TDZ
- Parasites
  - Must be in flesh of an animal to survive
  - Common in raw meat, fish, and contaminated water
- Fungi
  - Mostly spoils foods rather than cause illness



# Conditions supporting the growth of pathogens

- **F**ood
- **A**cidity
- **T**emperature

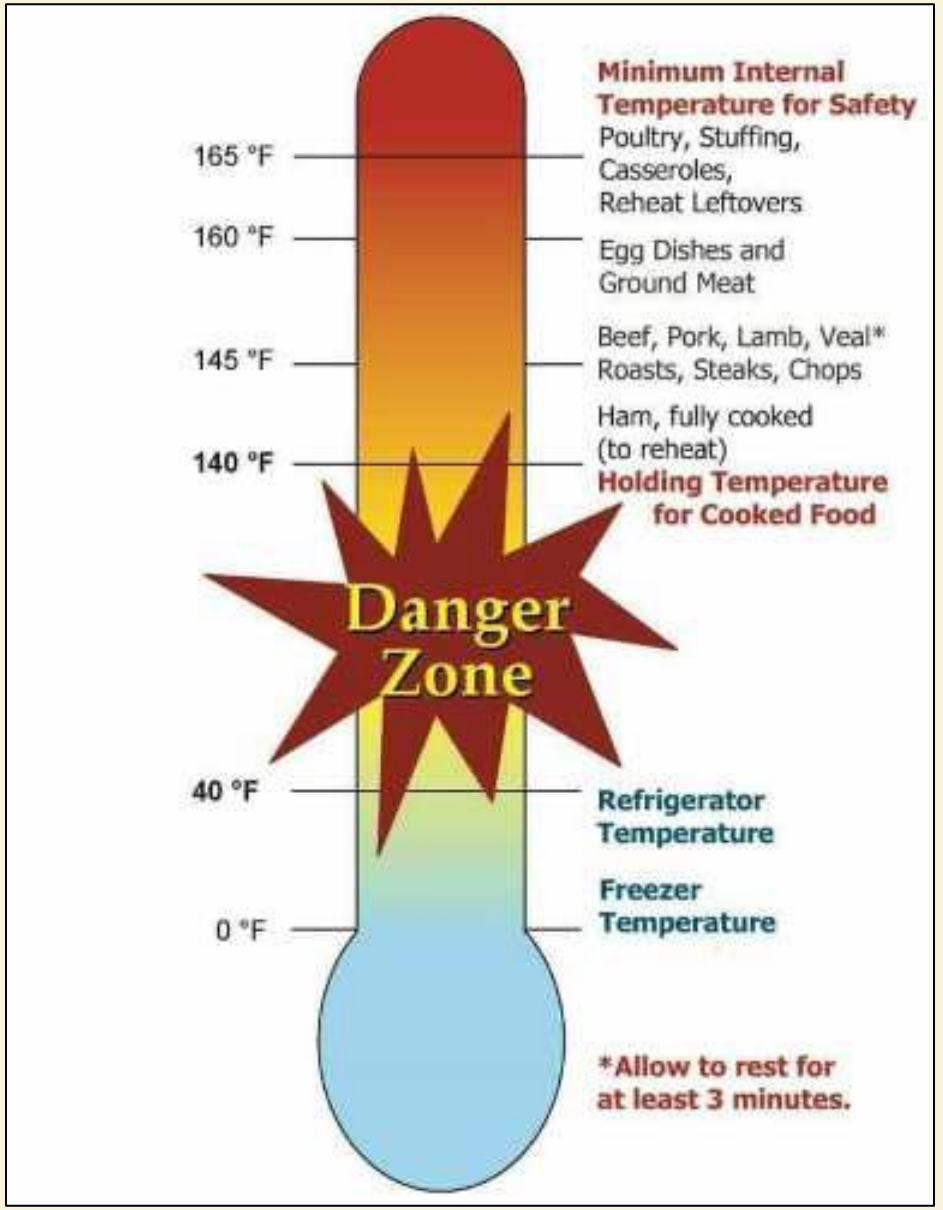
- **T**ime
- **O**xygen
- **M**oisture

# Preventing Foodborne Illness

- **Control time and temperature**
- **Prevent cross-contamination**
- **Practice Good Personal Hygiene**
- **Purchase food from approved, reutable suppliers**
- **Proper food labeling**
- **Follow HACCAP &  Know CCPS**

# Temperature Danger Zone

- **41°F - 135°F**
- Ideal for pathogen growth



# Controlling Time & Temperature

## Hot & Cold Food Holding

Hot Holding: Keep hot foods at 135°F or higher to prevent bacterial growth.

Cold Holding: Keep cold foods at 41°F or lower to slow bacteria multiplication.

Monitor temperatures frequently with a food thermometer.

## Cooling Process: How to Cool Food Safely

To prevent foodborne illness, follow the 2-Step Cooling Method:

1. First Step: Cool food from 135°F to 70°F within 2 hours.

2. Second Step: Cool food from 70°F to 41°F within the next 4 hours.

•Use shallow pans, ice baths, or blast chillers to speed up cooling.
•Do NOT cover hot food tightly while cooling—allow air circulation.

# Preventing Cross-Contamination & Good Personal Hygiene

**Don't allow ready-to-eat food to contact contaminated hands, surfaces, or raw food**

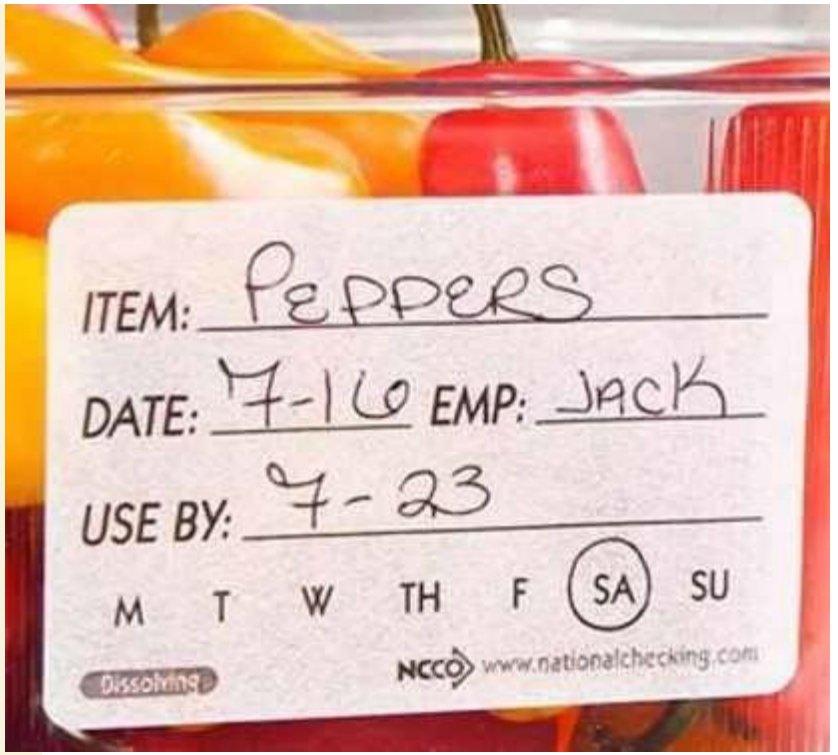
- Separate cutting boards & utensils
- Store raw foods below cooked/RTE foods in fridge
- Change gloves & wash hands between tasks
- Sanitize worksurfaces & equipment between tasks

**Good Hygiene Practices**

- Handwashing
  - Before and after handling food
  - After touching face, hair, phone, body
  - After using restroom or handling trash
- Clean uniform and aprons
- Gloves with handling RTE foods
- Stay home if sick

# Food Labeling

- Label all kitchen food and non-food items
- Store chemicals separately, away from food
- Label foods requiring time and temperature control with:
  - Date food was made
  - Use by date
- Label foods not being monitored for temperature control with:
  - Time removed from refrigeration
  - Time it must be discarded



# HACCP & Critical Control Points

**Critical Control Points (CCPs)**

- CCPs are key steps in food production where hazards must be controlled to ensure food safety.

- Examples of CCPs in school kitchens:
  - Receiving & Storage: Checking food temperatures upon delivery.
  - Cooking: Ensuring food reaches safe internal temperatures (e.g., poultry at 165°F).
  - Cooling: Properly cooling food using the 2-Step Cooling Method.
  - Holding: Keeping hot food above 135°F and cold food below 41°F.
  - Reheating: Ensuring food is reheated to 165°F before service.

# Corrective Action: What to do when CCP Fails

When should immediate action be taken?

- Examples of Corrective Actions:
  - **Food does not reach correct cooking temperature?** Continue cooking until it meets safety guidelines.
  - **Cooling food did not reach 70°F within 2 hours?** Reheat to **165°F** and cool again properly.
  - **Cold food rises above 41°F during storage?** Discard if in the danger zone too long.
  - **Expired or damaged food received?** Reject the delivery.


Culinary Institute
of America
Plant Forward Cooking

# Learning Objectives

- Define **plant-forward cooking**.
- Identify the **health, sustainability, and cost benefits** of plant-forward cooking.
- Recognize **plant-based protein sources** and how to create complete protein meals.
- Describe how **portioning and plating** plant-forward meals in school food service.
- Transform traditional **comfort foods** into plant-forward versions while maintaining appeal.
- Understand the role of **seafood and sustainable options** in a plant-forward diet.
- Apply plant-forward cooking principles to **school meal planning and menu development**.

# PLANT-FORWARD COOKING

A style of cooking and eating that emphasizes and celebrates, but is not limited to, plant-based foods—including fruits and vegetables (produce); whole grains; beans, other legumes (pulses) and soy foods; nuts and seeds; plant oils; and herbs and spices— and that reflects evidence-based principles of health and sustainability.

# *Healthy, sustainable, plant-forward food choices are those that:*

1. Feature minimally processed, slow-metabolizing plant-based foods.

2. Place animal-based foods in a reduced or optional role.

3. Might include vegetarian and vegan choices.

4. Highlight the value of fresh, seasonal, locally produced foods.

5. Emphasize healthy dietary patterns.

6. Celebrate cultural diversity, personal preferences, and deliciousness.

7. Begin with transparent ingredient sourcing that supports sustainable farms and fisheries.

# Where is the Protein?

Protein is not synonymous with meat

Protein = complex molecules composed of amino acids (legos!)

Both animal foods and plants-based foods contain amino acids, but in different forms and amounts.

"Complete Protein" = term used to define foods that have all 9 essential amino acids our body cannot produce.

Animal proteins are complete proteins while Plant-proteins are often paired to provide the 9 essential amino acids:

- Legumes + Grains (beans & rice, lentils & whole wheat)
- Legumes + Nuts/Seeds (hummus with tahini)
- Legumes + Vegetables (tofu & leafy greens)

# Where is the Protein?

The RDA is 0.8 grams per kg of body weight (a minimum)

- For a 140 lb person = 50 grams per day
- For a 200 lb person = 70 grams per day

We don't eat foods in isolation!

Think quality, not quantity

Consider the Protein Package

Instead of using the word **protein** as a synonym for *meat*, consider the protein package and plant-based sources of protein, like:

Beans – Peas – Legumes – Whole Grains – Vegetables – Fruits

# WE LARGELY MISS OUT ON A WHOLE WORLD OF PLANT PROTEINS

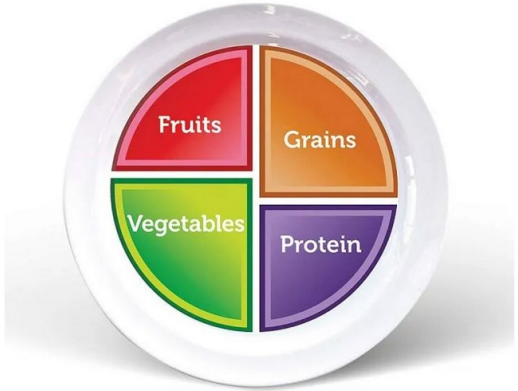
# Transitioning to Plant-Forward: Portioning & Plating

Traditional American = Meat Centric + vegetable sides

Plant-Forward approach = vegetables and grains take the spotlight

A balanced guide:

- ½ plate = fruits & vegetables
- ¼ plate = whole grains
- ¼ plate = lean protein




https://www.myplate.gov/

Typical restaurant portion: steak with mushroom sauce, baked potato with sour cream and chives, and broccoli rabe.

USDA recommended portion: steak with mushroom sauce, baked potato with sour cream and chives, and broccoli rabe.

Portion with healthy alterations made: filet mignon steaks with black trumpet mushroom coulis, grilled sweet potatoes, and broccoli rabe.

Typical restaurant portion: poached salmon with hollandaise, rice, and squash noodles.

USDA recommended portion: poached salmon with hollandaise, rice, and squash noodles.

Portion with healthy alterations made: poached salmon with yellow pepper coulis, brown rice, and squash noodles.

# Plant-Forward School Meal Examples

| Dish | Plant-Forward Adapatation |
|---|---|
| Spaghetti & Meatballs | Whole grain spaghetti with lentil & mushroom meatballs |
| Tacos | Black Bean & Sweet Potato Tacos with whole wheat tortillas and a Poblano Lime Crema |
| Mac & Cheese | Butternut squash or cauliflower based sauce with whole grain pasta |
| BBQ Sloppy Joes | Lentil, sweet potato and mushroom on whole grain bun |
| Stir-Fry | Brown rice and tofu stir fry with ginger soy glaze |
| Chili | 3 bean chili or bean and squash chili with cheddar and tortilla topping * use LOTS of spices |
| Burgers | Black bean and quinoa burger with avocado spread |
| Breakfast Burrittos | Basic burrito or burrito with tofu scramble |
| Shepherd's Pie | Lentil and veggie filling with mashed sweet potato toppings |

# Strategies for eating more plant-based

- **Use Familiar Dishes** Serve black bean & sweet potato tacos instead of traditional meat tacos.
- **Enhance Flavor** Add umami-rich ingredients like mushrooms, miso, or smoked paprika.
- **Offer Choices** Provide plant-forward and traditional protein options in a build-your-own format.
- **Make It Visually Appealing** Use colorful ingredients like roasted red peppers, fresh herbs, or bright sauces.
- **Incorporate Student Voice** Allow students to vote on new menu items during taste tests.
- **Promote with Creative Names** Call lentil sloppy joes “Savory Protein-Packed Sloppy Joes.”
- **Highlight Nutritional Benefits** Educate students about plant-based protein and fiber benefits.
- **Pair with Tasty Sides** Serve plant-based entrées with flavorful whole grain sides, like herbed quinoa.

# Questions

- How are you already plant-forward?
- Would you students like to see more or less plant-forward options?
- What strategies could you use to introduce more plants?
- What's a recipe you know that you could make plant-forward? How?


Culinary Institute
of America
Seasoning & Flavor

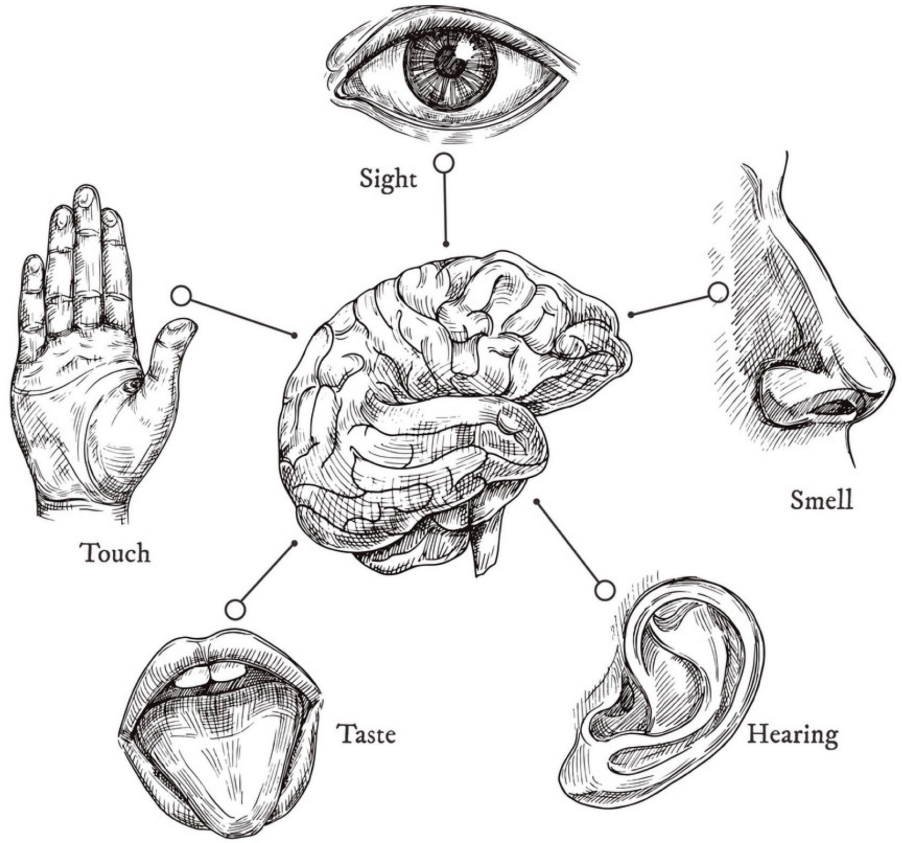
# Learning Objectives

- Recognize how the brain perceives flavor.
- Learn how to make things delicious by combining flavor perceptions and sensations and affecting them with temperature to derive texture.
- Identify the flavor of umami and explore how to interact with it in cooking.
- Understand the components of favor design and the process to create flavor.
- Experience the sensations of deliciousness.

# Key Terms

- aroma
- balance
- bitter
- complexity
- creamy
- effervescent
- flavor
- salty
- sour
- spicy
- sweet
- taste
- palate
- umami

# How do we perceive flavor?



# 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
- Current state of being (hunger, intoxicated, hungover, full)
- Food Insecurity

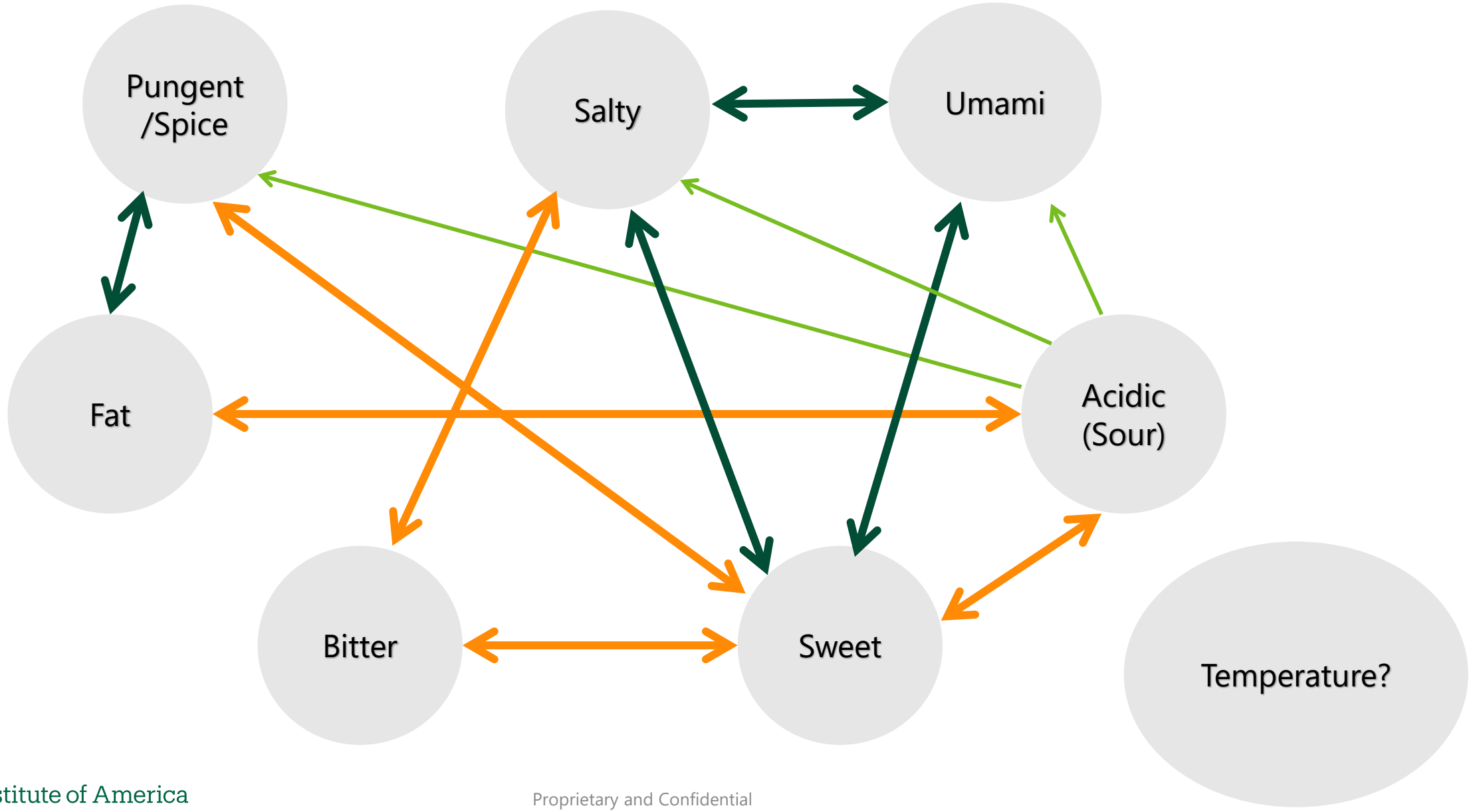
# What does a chef think about?

# Flavor Fingerprint

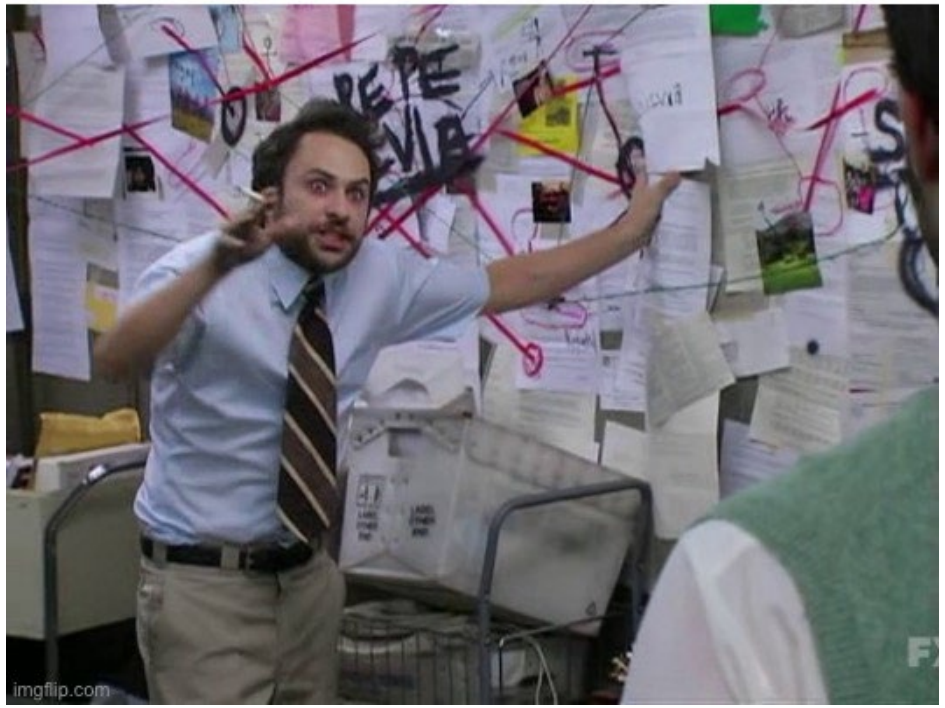
## Ingredient

## Dish

# Balance of elements



# 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 |

# 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)


**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)

# 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, Mallard reaction, slow cooking

# 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

# Sweet – Not just for Desserts

Used in balance, often softens and rounds out acidity, balances spice, and enhances umami

- Honey, Maple syrup, molasses, agave, date syrup, jams
- Fruits & Vegetables (carrots, apples, fennel, dates, sweet potato, tomato, dried fruits etc.)
- Dairy, (sweetness from milk, cream, butter, even cheeses)
- Sweet sauces: bbq, ketchup

**Balancing acidity** – honey in vinaigrettes, sugar in tomato sauce.

**Developing sweetness through cooking techniques:** roasting, caramelization, mallard reaction, searing, sous vide

**Pairing with umami** – balsamic glaze over roasted mushrooms.

**Enhancing spice** – mango chutney with spicy curries.

# Sour (Acidity) – Brightness & Contrast

Adds freshness, balances fats, enhances complexity

- Citrus: Lemon, lime, grapefruit, yuzu.
- Vinegars: Apple cider, balsamic, rice, sherry.
- Fermented foods: Pickles, Sauerkrat, kimchi, yogurt, buttermilk
- Fermented drinks: kombucha, kefir,

**Cutting through richness** – lemon juice over fried foods, yogurt in sauces, juice from ferment foods in dressings

**Balancing sweet flavors** – vinegar in fruit based dishes

**Brightening up dishes** – lime on tacos, vinegar in soups, vinaigrettes in salads

# Fat – The Flavor Carrier


Adds richness, enhances texture, carries flavors, creates mouthfeel

- Plant-based Fats: Olive oil, avocado, nuts, seeds, coconut oil, sesame oil, peanut oil, canola oil, nut-butters
- Animal fats/dairy fats: butter, ghee, lard, fatty cuts of meat, cream, cheese, yogurt

**Carrying fat-soluble flavors** – garlic-infused olive oil, herb butter.

**Balancing bitterness & acidity** – creamy dressing for arugula salads.

**Adding richness to dishes** – finishing drizzle of sesame oil or coconut milk.

# Spice/Pungent (Heat & Warmth)

Adds warmth, heat, pungency. Excites the palate and builds complexity. Can enhance or contrast other flavors

- Fresh and dried chilies, smoked, ground (jalapeno, serrano, chipotle, cayenne, poblano)
- Aromatics: black pepper, wasabi, horseradish, mustard
- Warming spices: cinnamon, ginger, nutmeg, clove, allspice
- Spice blends: curry powder, harrisa, garam masala

# Bringing it together
# building flavor with reduced salt

# HOW?

# Salty Ingredients


https://www.wekivaculinary.org/balancing-flavors/

# Building Flavor without Salt
# Herbs & Spices

**How & When to Use?**

•Fresh Herbs: Add at the end for brightness (cilantro, basil)

•Dried Herbs: Add early in cooking to release flavors (oregano, thyme)

•Toasting Spices: Heat in dry pan or oil to intensify aroma (cumin, coriander)

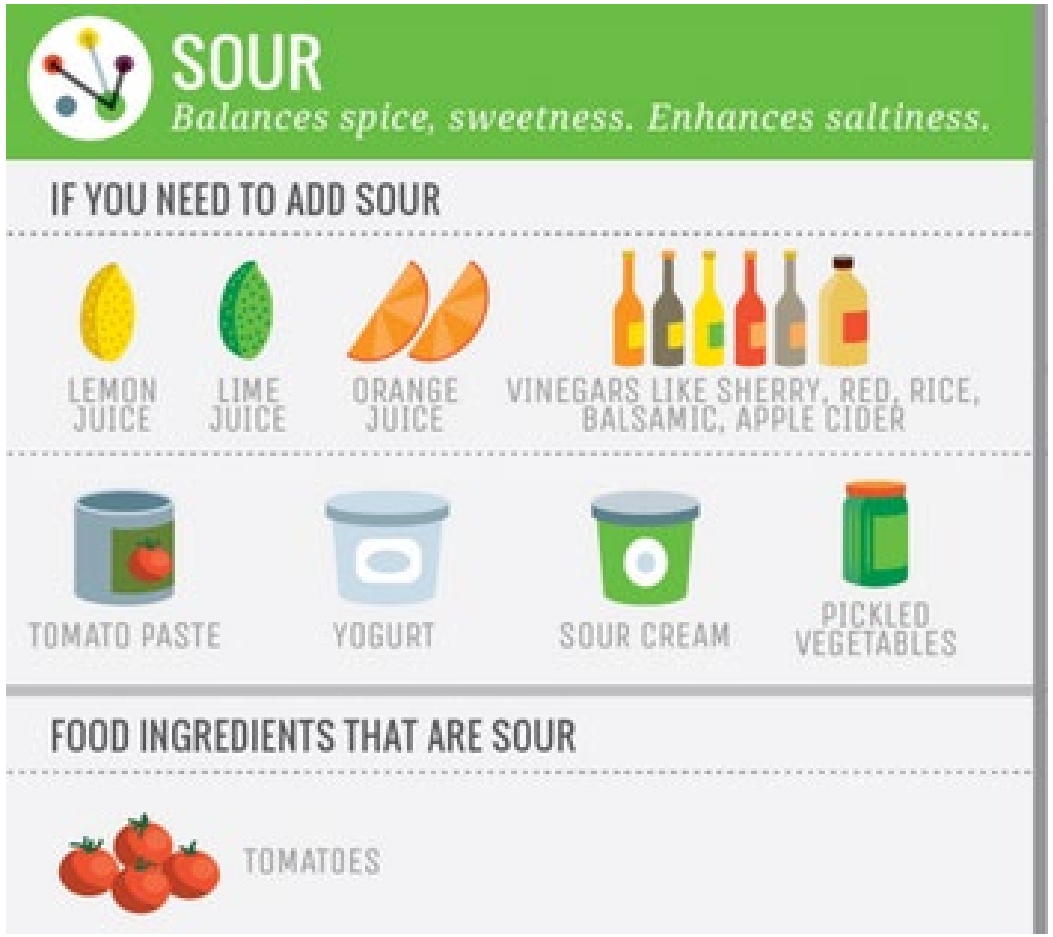
•Blending Flavors: Combine herbs & spices to build layers (e.g., curry blends, BBQ rubs)

Add depth, complexity and aroma

Examples:

- Fresh Herbs: Basil, cilantro, parsley, mint, dill
- Dried herbs: thyme, oregano, rosemary
- Spice Blends: za'atar, curry, togerashi
- Warming Spices: cinnamon, clove, nutmeg, allspice
- Earth spices: cumin, coriander, turmeric, paprika
- Pungent spices: garlic, onion, mustard
- Heat & spice: black pepper, chili, cayenne ginger

# Building Flavor without Salt
# Acidic Ingredients




**How & When to Use?**

- Finishing with acidity: lemon juice over veggies, lime on tacos, vinegar in soups
- Marinades & Dressings
- Layering acidic ingredients: tomatoes in soup, pickled onions on tacos, kimchi in stir-fry or on top of a bowl

# Building Flavor without Salt Cooking Techniques

**Searing, Grilling, Roasting** → (Maillard Reaction)

- Amino acids + sugar = deepen flavors

**Caramelization** → Adds natural sweetness & depth

**Reduction** → Concentrates flavor (think balsamic glaze)

**Fermentation** → Adds umami & tangy complexity

**Acid & Spice Pairing** → Balances flavor (lemon + chili, vinegar + mustard)

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

# Examples

**Flavor-Building in Different Cultures**

•Mexican: Lime, cilantro, chili, cumin (bright & spicy)

•Asian: Soy sauce alternatives, vinegar, ginger, sesame oil, chili paste

•Mediterranean: Lemon, oregano, olive oil, garlic

•Middle Eastern: Sumac, tahini, za’atar, yogurt

**Example Dishes Without Salt**

•Roasted Vegetables with Lemon & Herbs

•Citrus & Herb Marinated Chicken

•Spiced Lentil Soup with Caramelized Onions

•Gochujang Chicken and Rice Bowl

•Yogurt-Based Sauces & Dressings

# Key Takeaways

Deliciousness is a balance of multiple taste components!

Great chefs don’t just rely on salt – they build layers of flavor.

Use herbs, spices, acids, and cooking techniques to enhance taste naturally.

Understand your ingredients and experiment with balance!


Culinary Institute
of America
What's
Next?

# Next steps

- How can you use what you learned?
  - Timing
  - Efficiency
  - Organization
  - Quality of Food
- What was your most important take away?

# Benefits

- Helps improve the Team as a whole
- Reduces difficult situations
- Helps to “Work smarter not harder”
- Reduces liability issues
- Overall helps produce better food
- Personal growth and satisfaction

# Ways to improve

- Discussions with Management
- Continued Training/Education
- Professional development
  - Culinary classes
  - Educational workshops
- Team meetings and discussions
- Reassess and evaluate current methods with management

Culinary Institute of America

# Any Questions?