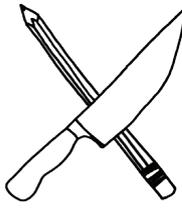


CULINARY BOOT CAMP TRAINING GUIDE

Student workbook from the School Food Initiative Culinary Boot Camp.



CULINARY BOOT CAMP



SCHOOL FOOD an Orfalea Initiative
Our Food, Our Future





ORFALEA
FOUNDATION

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Version 1.7



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Welcome to the School Food Initiative’s Culinary Boot Camp, a week-long training designed to reintroduce you to the basics. Working directly with our Chef Instructors and your peers, you will practice the skills required for integrating more scratch-cooking techniques into your school kitchen. We strive to support continuing professional development and culinary training in the school setting; keeping in mind the specific requirements and unique limitations of school facilities and budgets. Culinary Boot Camp is designed to expose you to practical techniques and knowledge that will be useful to you and the students that you feed every day.

As a school food service worker, you feed our future. Every child who comes through the lunch line is directly influenced by the food that they are served and the experience that they have in the cafeteria. The School Food Initiative aims to empower you and your school district to prepare and serve healthy scratch-cooked meals that nourish your school community.

Below are some highlighted lessons that we will cover during our week together:

- Baking Techniques
- Simple Breakfasts
- Basic Knife Skills
- Sauce Production
- Salad Bar Essentials
- Poultry, Roasts, and Ground Meat
- Flavor Profiles
- Math in the Kitchen
- Time Management
- Local Procurement
- Menu Planning
- Commodities Ordering

And the learning does not stop after our week together. Once you return to your school kitchen, you will receive follow-up visits from our Mobile Chef Instructors to ensure that the lessons have been absorbed and integrated into your daily routine. You can contact us for support as you perfect new recipes, test more efficient production methods, introduce fresh ingredients from local farmers and vendors, and create a plan to market your new menu items. The obstacles between you and serving scratch-cooked meals will be tackled one by one.





The School Food Initiative envisions the children of Santa Barbara County making healthy food choices throughout their lives.

The School Food Initiative Mission is to empower school districts in Santa Barbara County to implement and sustain nourishing cooked-from-scratch food programs by:

Providing education and training opportunities for school communities

Intensive culinary workshops, in-service training, and ongoing professional development programs, coupled with education about food systems, empower food service workers and facilitate change in their operations. In parallel, students form a personal relationship with real whole foods through hands-on cooking and gardening experiences on their own campuses.

Assisting with local procurement

A healthy school food culture supports and is supported by local agriculture. Connecting school cafeterias with our community's farms ensures fresh, delicious and healthy produce and reduces the environmental impact of long-distance distribution. The School Food Initiative facilitates the connections between food service teams, students and local producers.

Providing strategic resources

The School Food Initiative provides on-going in-service support for school kitchens on topics such as ordering, menu planning, kitchen design and marketing new foods to students. In addition, individual grants will be made available on a case-by-case basis to fund the equipment needed to prepare safe and healthy cooked-from-scratch meals.

Increasing public awareness of the links between whole food and health

The School Food Initiative promotes events and educational opportunities that inform students, parents, school personnel and the public about food system issues and related topics. Increasing the food literacy in a school builds a base of support for better school meals to be accepted. New healthy eating behaviors in the school travel home and into the community at large.

Working for national level reform

Galvanizing local and national resources spreads school food reform beyond our county's borders and engages an ever widening range of individuals and organizations. Sharing of the School Food Initiative's best practices and general roadmap will pave the way for other communities as they join the movement towards healthier school food.

Together with food service personnel, principals, teachers, students, parents, and the community at large, we will continue to promote the health of students by enabling School Districts to provide more wholesome school food.

For more information on the School Food Initiative, visit our website www.SchoolFood.org





**CULINARY
BOOT
CAMP**



SCHEDULE



Check-in

Welcome, Orientation

Food Safety and Sanitation

Kitchen Essentials

Recipe Reading

Kitchen Tour

Kitchen Production

Baking

Lunch

Classroom Session

Movie Viewing

Time Management

Taste Exploration

Review



Breakfast Team

Breakfast Service

Kitchen Essentials

Knife Basics

Sauce

Kitchen Production

Sauce Production

Knife Skills Lab

Lunch

Classroom Session

Movie Viewing

Time Management

Recipe Conversions

Taste Exploration

Review



Breakfast Team

Breakfast Service

Kitchen Essentials

Plants as Food

Cooking Techniques Part 1

Kitchen Production

Plant Cookery

Lunch

Classroom Session

Movie Viewing

Food Systems

USDA

Taste Exploration

Review



Breakfast Team

Breakfast Service

Kitchen Essentials

Cooking Techniques Part 2

Kitchen Production

Meat and Poultry

Lunch

Classroom Session

Movie Viewing

NSLP

Menu Planning

Wellness Policies

Taste Exploration

Review



Breakfast Team

Breakfast Service

Culinary Jeopardy

Movie Viewing

Goal Setting

Managing Transitions

Guests Arrive

Graduation

Celebratory Lunch



**CULINARY
BOOT
CAMP**



**DAY ONE
MONDAY**

Check-in
Welcome, Orientation
Food Safety and Sanitation
Kitchen Essentials
Recipe Reading
Kitchen Tour
Kitchen Production
Baking
Lunch
Classroom Session
Movie Viewing
Time Management
Taste Exploration
Review

THE SIMPLE DOs AND DON'Ts OF SAFE FOOD HANDLING

For most of us, the idea of **Food Safety** is almost synonymous with “the way we do things” in the kitchen. Many of us treat food and safety issues the way we were told to, the way we have always done them, or the way that our mothers did these tasks. Perhaps if we take a closer look, we will see that there are a few details that we have missed.

DOs

- DO** Battle bacteria.
- DO** Reheat to 165°F. Most bacteria die within a few seconds.
- DO** Hold hot foods and sauces above 140°F.
- DO** Hold refrigerated foods between 33°F-39°F.
- DO** Hold frozen foods at 32°F or lower.
- DO** Calibrate thermometers regularly: at least every week, when exposed to extreme temperatures, and if dropped.
- DO** Stagger pans on speed racks for proper cooling.
- DO** Wash hands (and sing a song while you're at it!)
- DO** Wear a clean uniform and restrain/cover your hair.

DON'Ts

- DON'T** Risk safety.
- DON'T** Thaw frozen food on counter.
- DON'T** Cool hot foods improperly in the refrigerator.
- DON'T** Cover hot foods while cooling.
- DON'T** Hold hot food for more than 2 hours.
- DON'T** Wash poultry (even if your mother did it!)
- DON'T** Cross contaminate.
- DON'T** Run with scissors, knives, or other sharp objects.
- DON'T** Wear excessive jewelry, nail polish or false nails, open-toe or open-heel shoes.



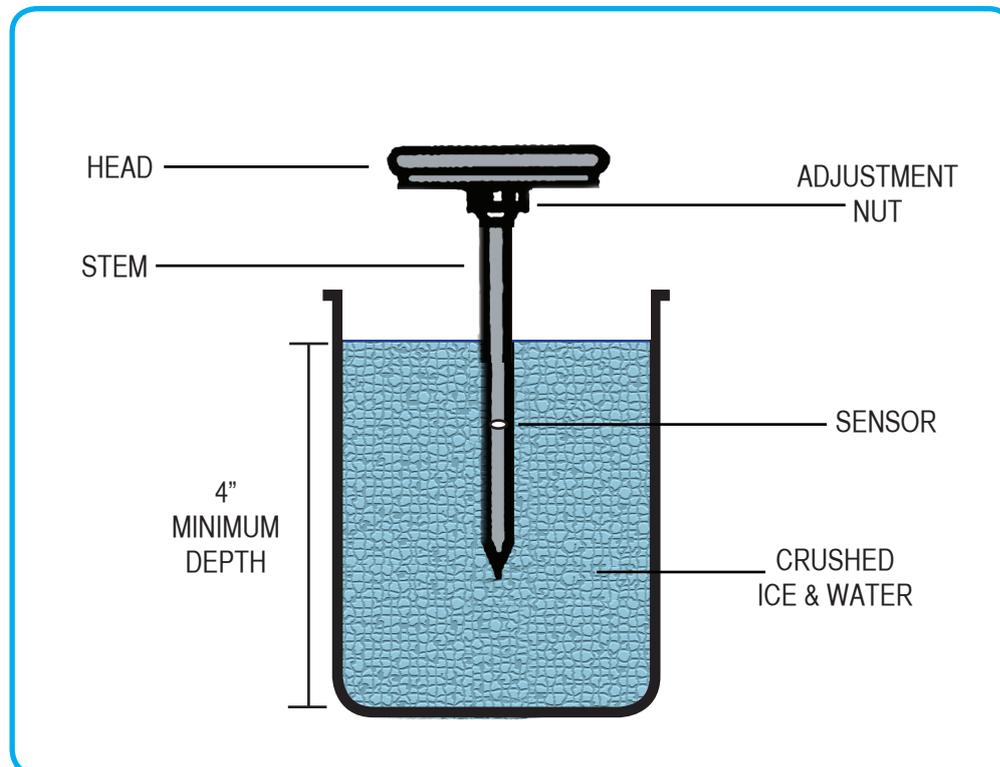
CALIBRATING A THERMOMETER

A thermometer is an indispensable tool in the kitchen. But only if it is accurate. To ensure a thermometer's accuracy, calibrate at least once a week, or anytime it is dropped, banged or subjected to extreme temperatures.

Steps for Calibrating:

1. Fill a large container with at least 4 inches of crushed ice. Add cold tap water to the depth of the ice and stir the mixture well.
2. Immerse the thermometer probe stem into the ice mixture so that the sensing dimple is completely submerged (at least 2 inches) and wait 30 seconds. Make sure the thermometer stem does not touch the sides or bottom of the container.
3. Without removing the thermometer from the ice mixture, hold the adjusting nut securely with a wrench and rotate the head of the thermometer until it reads exactly 32°F.

THE ICE POINT CALIBRATION METHOD



FOODBORNE ILLNESS

Foodborne illness, commonly known as food poisoning is the result of eating foods or beverages contaminated with:

- Harmful biological organisms (bacteria, parasites, viruses)
- Chemical agents (cleaning supplies, pesticides, etc.)
- Physical agents (foreign objects such as staples, jewelry, hair, glass, etc.)

Foodborne illness remains a major public health issue in the United States, and is increasing worldwide.

On average, over 48 million people (1 out of 4 people in the US) become sick due to foodborne illnesses each year.

Children are especially at risk because their bodies and immune systems are still developing and their stomachs may not produce enough acid needed to kill microorganisms.

Each year over 128,000 people are hospitalized and 5,000 people die as a direct result of foodborne illness. Salmonella was the leading cause of estimated hospitalizations and deaths.

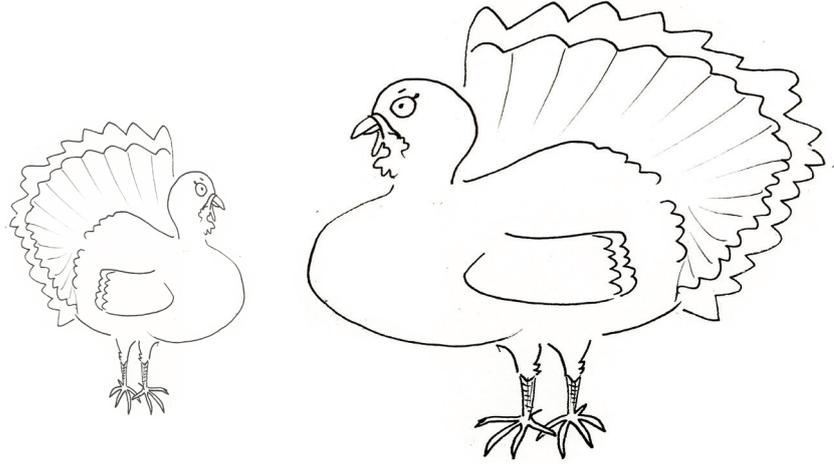
Within the category of cases connected to known pathogens, approximately 90% of estimated illnesses and deaths were from seven pathogens: Salmonella, Norovirus, Campylobacter, Toxoplasma, E.coli O157, Listeria and Clostridium perfringens. These microorganisms are more likely to flourish in the temperature danger zone. The temperature danger zone is between 41°F and 135°F.

According to the USDA, 4% to 20% of raw poultry samples test positive for Salmonella.

Unwashed or improperly washed hands, surfaces and equipment are prime causes of foodborne illness, and are examples of poor personal hygiene and cross-contamination. In order to serve safe food, all foodservice employees must follow all approved procedures during purchasing, storage, preparation, holding, service, and cleanup.



FAT TOM



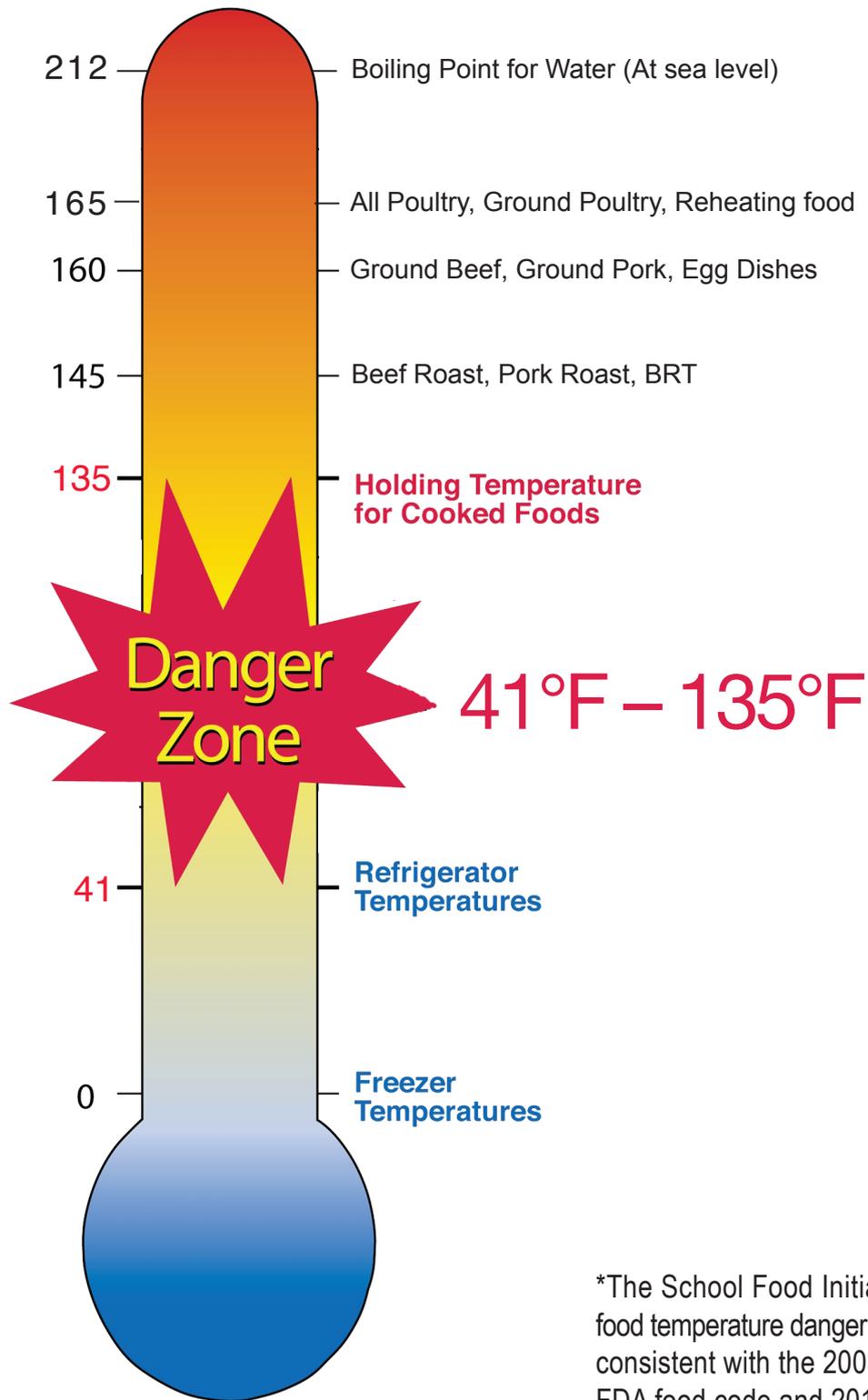
Certain favorable conditions are required for the growth of foodborne pathogens. FAT TOM is an acronym that can assist food service professionals in remembering and avoiding these six factors. Write these down and commit them to memory.

F _____
A _____
T _____
T _____
O _____
M _____

Food, Acidity, Temperature, Time, Oxygen and Moisture



THE FOOD TEMPERATURE DANGER ZONE



*The School Food Initiative recognizes the food temperature danger zone as 41°F–135°F consistent with the 2003 Supplement to the FDA food code and 2012 recommendations by Servsafe and the National Food Service Management Institute.



TRAVELING THROUGH THE DANGER ZONE

Let's take a look at a typical breakfast buffet to demonstrate the three types of food items that we handle in the kitchen. Imagine that it is Tuesday morning and we are serving a hot vegetable frittata, oatmeal, and a fruit smoothie for breakfast. Each one of these foods represents a different type of preparation process and may travel through the danger zone one or more times.

Do any of these foods travel through the **Danger Zone**? If so, how many times?

Smoothies:

To make our smoothies, on Tuesday morning, we blend frozen berries and peaches with cold milk, yogurt, and ice. The smoothies are then served.

**How many trips has the food taken through the Danger Zone (41°F-135°F)?
Is this a No-Cook, Same-Day Service, or Complex food?**

Oatmeal:

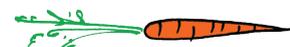
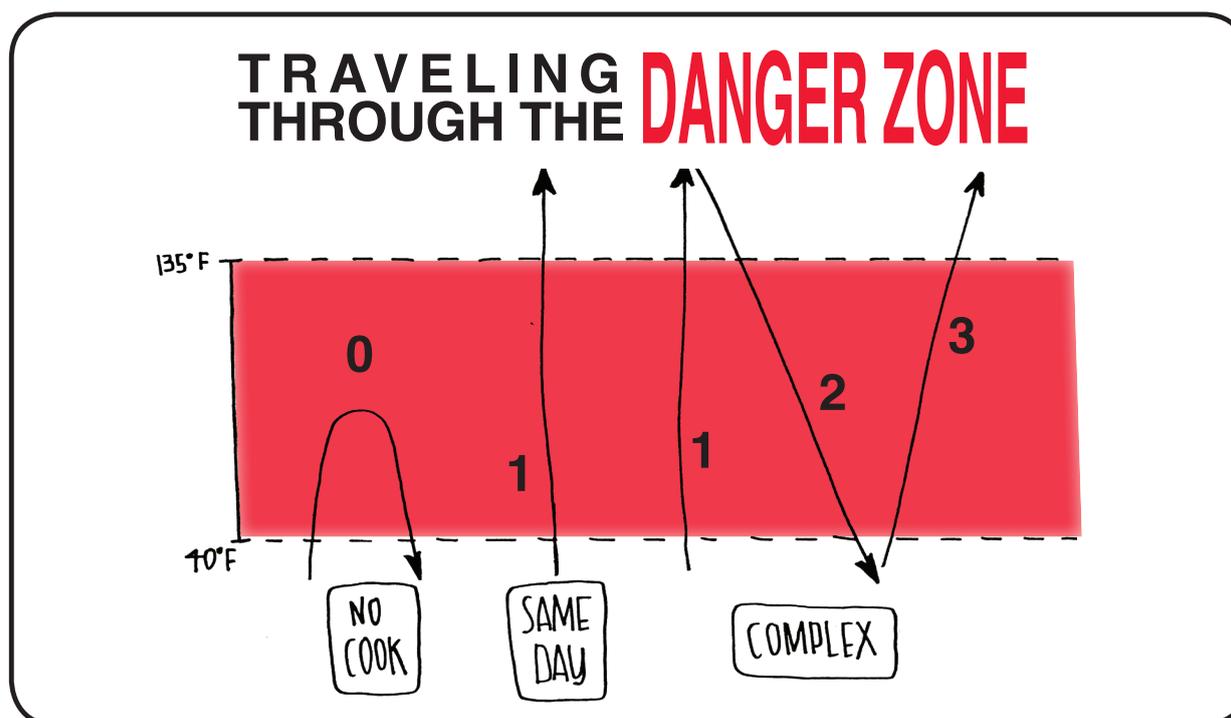
We arrive on Tuesday morning and set out to cook our oatmeal on the stove. The oats are cooked in boiling water and served when tender.

**How many trips has the food taken through the Danger Zone (41°F-135°F)?
Is this a No-Cook, Same-Day Service, or Complex food?**

Frittata:

The vegetable frittata was baked on Monday afternoon to an internal temperature of 160°F. It was then cooled in the walk-in refrigerator to a temperature of 40°F within 4 hours. On Tuesday, we removed the chilled frittata from the walk-in and reheated in the oven to an internal temperature of 165°F and served.

**How many trips has the food taken through the Danger Zone (41°F-135°F)?
Is this a No-Cook, Same-Day Service, or Complex food?**



STANDARD OPERATING PROCEDURE (SOP): PROPER COOLING



Purpose:

Whenever potentially hazardous foods are being cooled, food enters the danger zone during the process of cooling. If food cools too slowly, it can create an environment where bacteria thrive and toxins are produced, potentially causing foodborne illness. Large and dense batches of food take longer to cool.

Procedure:

Proper cooling must be executed using:

- Walk-in refrigerator or freezer
- Commercial reach-in refrigerator or freezer
- Blast chiller
- Ice bath
- Ice wands
- Pre-chilled pans and containers

For Cooked Foods:

- Ensure containers have adequate air circulation.
- Stir foods to cool more quickly and evenly.
- Once food is cooled, make sure to cover, label and date.
- Check the temperature at the center of the food with a clean and calibrated thermometer. The temperature should reach 70°F within 2 hours and from 70°F to 40°F within 4 hours. Total cooling time may not exceed 6 hours.

For Prepared, Ready to Eat Foods:

- Temperature should reach 70°F to 40°F within 4 hours.



STANDARD OPERATING PROCEDURE (SOP): PROPER COOLING

Thin and Thick Liquids:

- Adapt recipes to use either cold water or ice.
- Portion food into smaller batches.
- Use cooling wand, ice bath, or cold running water while stirring frequently.
- Place 2" or less of product in containers and refrigerate or freeze.

Solids and Semi-Solids:

- Portion food into smaller batches.
- Place 2" or less of product in containers and refrigerate or freeze.

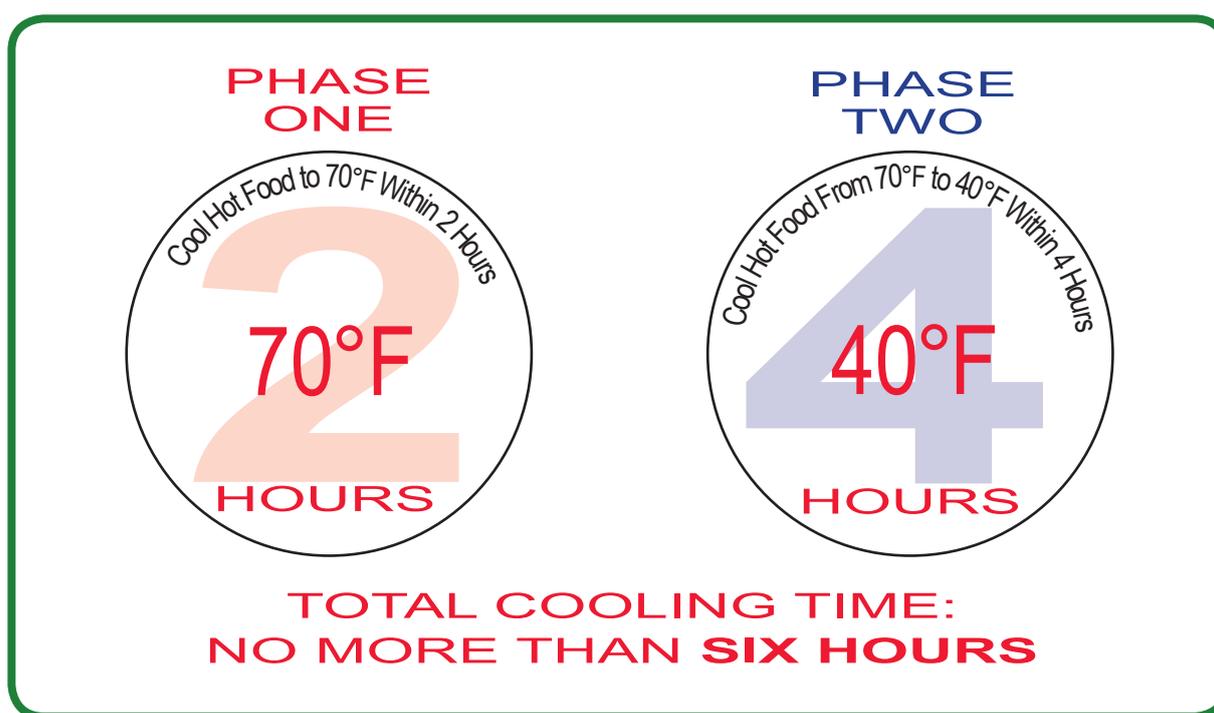
Cooling Log:

- Record temperature and time on temperature log during each hour of cooling.
- Use only reliable & calibrated thermometers.

Throw Away Food If:

- Correct cooling times or temperatures have not been reached within the proper time frame; or proper procedure has not been followed.
- Food has been held at room temperature (in the danger zone) for more than 2 hours.
- Food has been held in a malfunctioning refrigeration unit for more than 2 hours (or for an unknown period).
- Refrigeration unit is unable to accommodate the cooling process for the entire volume of food.

THE 2 PHASE COOLING METHOD FOR HOT FOODS



STANDARD OPERATING PROCEDURE (SOP): REHEATING POTENTIALLY HAZARDOUS FOODS

Purpose:

To prevent foodborne illnesses by making sure that all foods are reheated to the correct internal temperature.

Procedure:

Reheat all foods quickly. 2 hours is the maximum amount of time that the temperature of the food can be between 40°F and 165°F.

Reheated food must be served or transferred to an appropriate hot holding unit immediately.

Reheat the following foods to an internal temperature of at least 165°F for 15 seconds to serve:

- Any item that has been cooked and cooled (complex heating).
- Soup or other products made from repurposed foods.
- Processed, precooked foods that were previously cooled.

Monitoring:

At least two internal temperatures should be taken from each pan of food in different sections of the pan.

Corrective Action:

If the internal temperature does not reach the required temperature, continue heating food until the correct temperature is met within the 2 hour time limit. If not, discard.

Verification and Record Keeping:

Temperatures will be recorded by food service personnel on designated food production records and temperature logs.

REHEATING FOODS

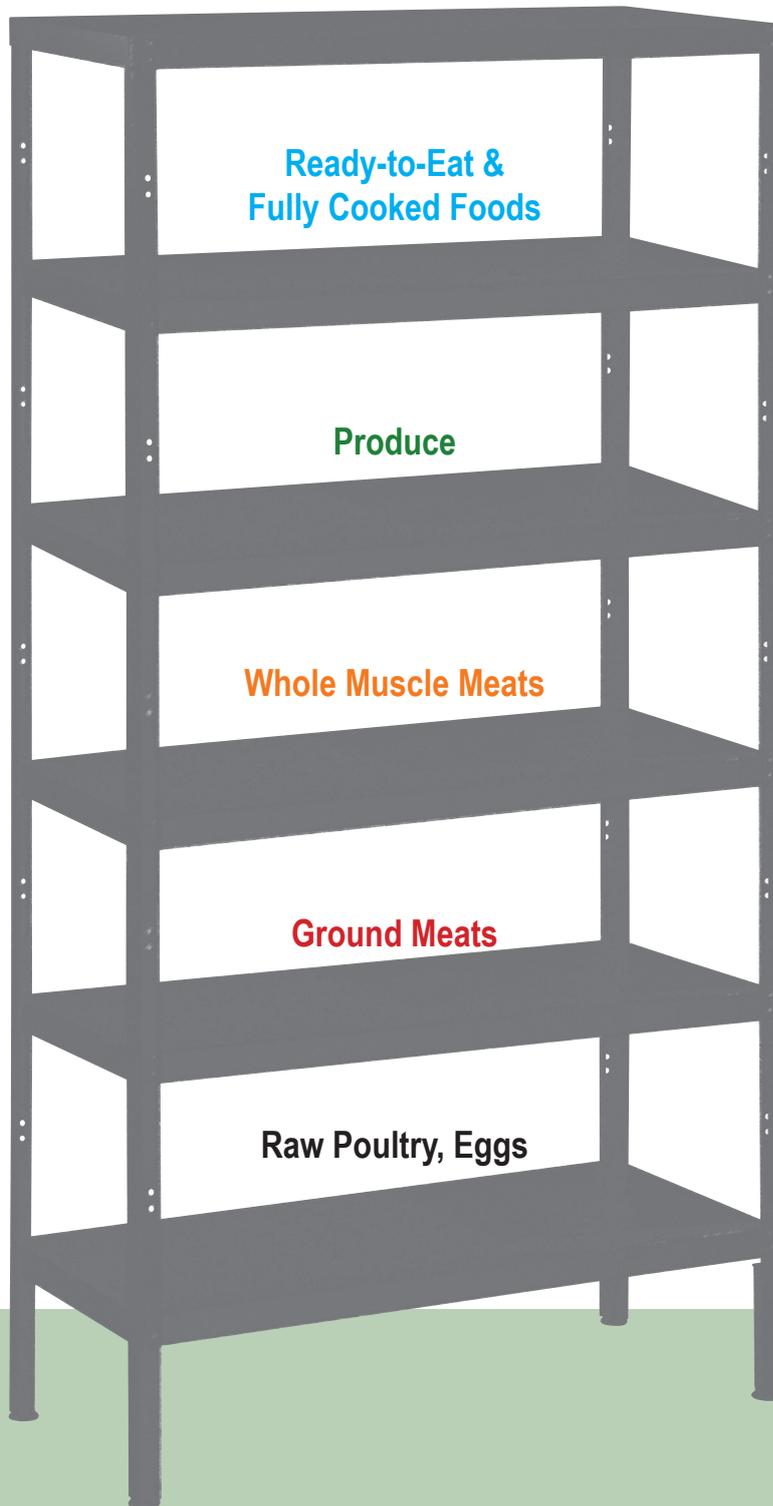


TEMPERATURE GUIDELINES FOR COOKING POTENTIALLY HAZARDOUS FOODS

<p style="text-align: center;">FOOD PRODUCT CATEGORIES</p>	<p style="text-align: center;">COOK PRODUCTS TO DESIGNATED TEMPERATURE (Must reach and maintain the temperature below for 15 seconds.)</p>
<ul style="list-style-type: none"> • Fresh, frozen, or canned fruits and vegetables that are going to be held on a steam table or in a hot box • Oatmeal and other hot cereals 	<p>135°F</p>
<ul style="list-style-type: none"> • Beef, pork or seafood • Eggs cooked to order that are placed onto a plate and immediately served 	<p>145°F</p>
<ul style="list-style-type: none"> • Products containing ground beef, ground pork, or fish • Eggs held on a steam table 	<p>160°F</p>
<ul style="list-style-type: none"> • Poultry • Stuffed fish, pork, or beef • Pasta stuffed with eggs, fish, pork, or beef (like lasagna) 	<p>165°F</p>



ORGANIZING A WALK-IN REFRIGERATOR



FIFO: “First In, First Out”

- Items should be used in order of “FIFO,” especially perishable products, meat, and fresh produce. Those items with an earlier expiration date should always be used before those with a later date.

Organizing Raw Meat in the Walk-In

- The temperature of the walk-in should stay at about 38°F (below 40°F) to properly store cold foods.
- If there is adequate space, store raw meat products away from ready-to-eat foods and produce. If not possible, meat should always be stored below produce.
- Raw meat products should always be stored on sheet trays to catch juices.
- Store raw animal foods in refrigerators or walk-in coolers by placing the raw animal foods on shelves in the following order of cooking temperature: whole beef or pork on top shelf, raw ground meats on middle shelf, and poultry on bottom shelf.

To prevent dangerous cross-contamination, stack foods top to bottom as shown.



ORGANIZING A WALK-IN REFRIGERATOR

Preventing Cross-Contamination During Food Storage

- Use only dry, cleaned, and sanitized containers for food storage.
- Clean and sanitize shelves in the storage unit on a routine basis.
- Cover all foods well and label and date them.
- Separate raw animal foods such as eggs, fish, meat, and poultry from ready-to-eat foods such as lettuce, cut melons, and lunch meats during storage.
- Separate different types of raw animal foods such as eggs, fish, meat, and poultry from each other, except when combined in recipes.
- Separate unwashed fruits and vegetables from washed fruits and vegetables and other ready-to-eat foods.
- Place food in covered containers or packages, except during cooling, and store in the refrigerator or cooler.

Refrigerator Management, Best Practices

- Designate an upper shelf of a refrigerator or walk-in cooler as a “cooling” shelf.
- Uncover containers of food during the initial quick cool-down phase to facilitate cooling.
- Store damaged goods in a separate location.
- Food is stored 6 inches off floor or in walk-in cooler.
- Refrigerator and freezer units are clean and neat.
- Proper chilling procedures are used.
- All food is properly wrapped, labeled, and dated.
- Ambient air temperature of all refrigerators and freezers is monitored and documented at the beginning and end of each shift.



USDA FOOD SAFETY CHECKLIST

Date _____ Observer _____

Directions: Use this checklist daily to determine areas in your operations requiring corrective action. Record corrective action taken and keep completed records in a notebook for future reference.

PERSONAL HYGIENE

	Yes	No	Corrective Action
● Employees wear clean and proper uniform including shoes.-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
● Effective hair restraints are properly worn.-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
● Fingernails are short, unpolished, and clean (no artificial nails). -----	<input type="checkbox"/>	<input type="checkbox"/>	_____
● Jewelry is limited to a plain ring, such as a wedding band and a watch - no bracelets. -----	<input type="checkbox"/>	<input type="checkbox"/>	_____
● Hands are washed properly, frequently, and at appropriate times.-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
● Burns, wounds, sores or scabs, or splints and water-proof bandages on hands are bandaged and completely covered with a foodservice glove while handling food. -----	<input type="checkbox"/>	<input type="checkbox"/>	_____
● Eating, drinking, chewing gum, smoking, or using tobacco are allowed only in designated areas away from preparation, service, storage, and ware washing areas. -----	<input type="checkbox"/>	<input type="checkbox"/>	_____
● Employees use disposable tissues when coughing or sneezing and then immediately wash hands. -----	<input type="checkbox"/>	<input type="checkbox"/>	_____
● Employees appear in good health.-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
● Hand sinks are unobstructed, operational, and clean.-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
● Hand sinks are stocked with soap, disposable towels, and warm water. -----	<input type="checkbox"/>	<input type="checkbox"/>	_____
● A handwashing reminder sign is posted.-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
● Employee restrooms are operational and clean.-----	<input type="checkbox"/>	<input type="checkbox"/>	_____

FOOD PREPARATION

	Yes	No	Corrective Action
● All food stored or prepared in facility is from approved sources.----	<input type="checkbox"/>	<input type="checkbox"/>	_____
● Food equipment utensils, and food contact surfaces are properly washed, rinsed, and sanitized before every use. -----	<input type="checkbox"/>	<input type="checkbox"/>	_____
● Frozen food is thawed under refrigeration or in cold running water. -----	<input type="checkbox"/>	<input type="checkbox"/>	_____
● Preparation is planned so ingredients are kept out of the temperature danger zone to the extent possible. -----	<input type="checkbox"/>	<input type="checkbox"/>	_____
● Food is tasted using the proper procedure.-----	<input type="checkbox"/>	<input type="checkbox"/>	_____
● Procedures are in place to prevent cross-contamination.-----	<input type="checkbox"/>	<input type="checkbox"/>	_____



USDA FOOD SAFETY CHECKLIST

- Food is handled with suitable utensils, such as, single use gloves or tongs. ----- _____
- Food is prepared in small batches to limit the time it is in the temperature danger zone. ----- _____
- Clean reusable towels are used only for sanitizing equipment, surfaces and not for drying hands, utensils, or floor. ----- _____
- Food is cooked to the required safe internal temperature for the appropriate time. The temperature is tested with a calibrated food thermometer. ----- _____
- The internal temperature of food being cooked is monitored and documented. ----- _____

HOT HOLDING **Yes No Corrective Action**

- Hot holding unit is clean.----- _____
- Food is heated to the required safe internal temperature before placing in hot holding. Hot holding units are not used to reheat potentially hazardous foods. ----- _____
- Hot holding unit is pre-heated before hot food is placed in unit.----- _____
- Temperature of hot food being held is at or above 135 °F.----- _____
- Food is protected from contamination.----- _____

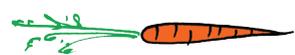
COLD HOLDING **Yes No Corrective Action**

- Refrigerators are kept clean and organized.----- _____
- Temperature of cold food being held is at or below 41 °F.----- _____
- Food is protected from contamination.----- _____

REFRIGERATOR, FREEZER, AND MILK COOLER **Yes No Corrective Action**

- Thermometers are available and accurate.----- _____
- Temperature is appropriate for pieces of equipment.----- _____
- Food is stored 6 inches off floor or in walk-in cooling equipment.-- _____
- Refrigerator and freezer units are clean and neat.----- _____
- Proper chilling procedures are used.----- _____
- All food is properly wrapped, labeled, and dated.----- _____

- The FIFO (First In, First Out) method of inventory management is used. ----- _____
- Ambient air temperature of all refrigerators and freezers is monitored and documented at the beginning and end of each shift. ----- _____



USDA FOOD SAFETY CHECKLIST

FOOD STORAGE AND DRY STORAGE

Yes No Corrective Action

- Temperatures of dry storage area is between 50 °F and 70 °F or State public health department requirement.----- _____
- All food and paper supplies are stored 6 to 8 inches off the floor.----- _____
- All food is labeled with name and received date.----- _____
- Open bags of food are stored in containers with tight fitting lids and labeled with common name.----- _____
- The FIFO (First In, First Out) method of inventory management is used.----- _____
- There are no bulging or leaking canned goods. ----- _____
- Food is protected from contamination.----- _____
- All food surfaces are clean.----- _____
- Chemicals are clearly labeled and stored away from food and food related supplies.----- _____
- There is a regular cleaning schedule for all food surfaces.----- _____

CLEANING AND SANITIZING

Yes No Corrective Action

- Three-compartment sink is properly set up for ware washing.----- _____
- Dishmachine is working properly (i.e. gauges and chemicals are at recommended levels).----- _____
- Water is clean and free of grease and food particles.----- _____
- Water temperatures are correct for wash and rinse.----- _____
- If heat sanitizing, the utensils are allowed to remain immersed in 171 °F water for 30 seconds.----- _____
- If using a chemical sanitizer, it is mixed correctly and a sanitizer strip is used to test chemical concentration.----- _____
- Smallware and utensils are allowed to air dry.----- _____
- Wiping cloths are stored in sanitizing solution while in use.----- _____

UTENSILS AND EQUIPMENT

Yes No Corrective Action

- All small equipment and utensils, including cutting boards and knives, are cleaned and sanitized between uses.----- _____
- Small equipment and utensils are washed, sanitized, and air-dried.-- _____
- Work surfaces and utensils are clean.----- _____



USDA FOOD SAFETY CHECKLIST

- Work surfaces are cleaned and sanitized between uses.----- _____
- Thermometers are cleaned and sanitized after each use.----- _____
- Thermometers are calibrated on a routine basis.----- _____
- Can opener is clean.----- _____
- Drawers and racks are clean.----- _____
- Clean utensils are handled in a manner to prevent contamination of areas that will be in direct contact with food or a person’s mouth.---- _____

LARGE EQUIPMENT **Yes No Corrective Action**

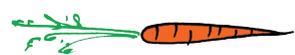
- Food slicer is clean.----- _____
- Food slicer is broken down, cleaned, and sanitized before and after every use.----- _____
- Boxes, containers, and recyclables are removed from site.----- _____
- Loading dock and area around dumpsters are clean and odor-free.-- _____
- Exhaust hood and filters are clean.----- _____

GARBAGE STORAGE AND DISPOSAL **Yes No Corrective Action**

- Kitchen garbage cans are clean and kept covered.----- _____
- Garbage cans are emptied as necessary.----- _____
- Boxes and containers are removed from site.----- _____
- Loading dock and area around dumpster are clean.----- _____
- Dumpsters are clean.----- _____

PEST CONTROL **Yes No Corrective Action**

- Outside doors have screens, are well-sealed, and are equipped with a self-closing device.----- _____
- No evidence of pests is present.----- _____
- There is a regular schedule of pest control by licensed pest control operator.----- _____



HOW TO READ A RECIPE

1. First, skim the recipe for a general overview.
2. Second, read it focusing more on the specifics of the recipe, including ingredients, method, and equipment.
3. Finally, read it another time, asking yourself the following questions:
 - Does the recipe yield what I need? Do I need to convert the recipe and scale up/down for the yield I need?
 - Do I have all of the ingredients in the quantities I need or do I need to make substitutions?
 - Do I need to take any preliminary steps or prep parts of the recipe ahead? (Pre-heat the oven, boil water, soak an ingredient?)
 - What kind of equipment am I using to prepare the recipe? Do I understand the cooking techniques?
 - Do I have enough time to make this recipe in the allotted time? How much preparation time is necessary?
 - Am I serving the item immediately, holding it for a future time to serve, or cooling it?
 - Should I cook the item closer to the time of service for the best possible quality? What tools do I need to serve the item?
 - If I am cooling it, do I have all of the equipment and systems (time/temp chart, ice wands, available speed rack, etc.) on hand to cool the item?
4. Make notes, either on the recipe card (if laminated) or in your pocket notebook and record the adjustments, substitutions and plans for preparation.
5. If working as a team, delegate tasks by determining who will do what (gather ingredients, gather equipment, pre-heat oven, measure or scale ingredients, etc.)

MAKE SURE TO READ THE RECIPE AS MANY TIMES AS NEEDED!

Anatomy of a Recipe

RECIPE TITLE — School Food Granola

YIELD — 48-1/4 cup servings

INGREDIENTS —

Oats	1 qt + 2 cups
Almonds, sliced	2 cups
Sunflower Seeds	2 cups
Vegetable Oil	3/4 cup
Honey	1/4 cup
Maple Syrup	1/2 cup
Vanilla Extract	1 Tablespoon
Cinnamon	1 1/2 Tablespoon
Cloves	1/4 teaspoon
Salt	1/2 Tablespoon
Raisins	2 cups

METHOD —

1. Preheat oven to 325°F (300°F if using a convection oven.)
2. Combine oats, almonds, and sunflower seeds in a large bowl.
3. Combine oil, maple, honey, vanilla extract, spices and salt. Heat this mixture in a saucepan until combined, making sure not to boil.
4. Pour the wet mixture over the dry ingredients, tossing until everything is moistened.
5. Spread the mixture onto two large sheet pans.
6. Bake for about 20 minutes or until the granola turns golden, stirring twice during the baking process to ensure even browning.
7. Allow granola to cool completely before adding raisins. Once cooled, transfer to a tightly sealed container.



TIME MANAGEMENT: DEFINITIONS

Safety First: Time management is not about rushing or cutting corners; time management is about structuring tasks so they can be achieved safely and efficiently.

Time Management: Priority-based structuring of time available to complete a set of tasks.

List Making: An itemized approach to management of objectives.

Prioritize: To arrange the order in which things/tasks happen.

Team Player: One who acts as part of a collective effort to complete a desired outcome.

Cross-training: A policy of training coworkers in more than one position so one may step in when needed. An excellent way to learn and appreciate each other's contribution.

Deferral: Postponement.

Delegation: Dividing of necessary tasks among team members.

Zoning: Defining an appropriate area, sometimes including strict boundaries, for specific tasks.

Sequencing: Process for completing tasks in the most logical/efficient order.

Assembly Line: Multiple coworkers working in sequential steps to complete a process.

Economies of Motion: The simplification and reduction of body motions to preserve energy. Budget movement.

Economies of Scale: Savings in cost and/or energy achieved by combining tasks.

Multi-tasking: Engaging in more than one task at a time.

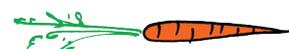
Working Ahead: Using foresight to identify needs/tasks beforehand.

Pros/Cons: A list of the potential outcomes of doing a task or making a decision. Positives and negatives associated with a decision or task.

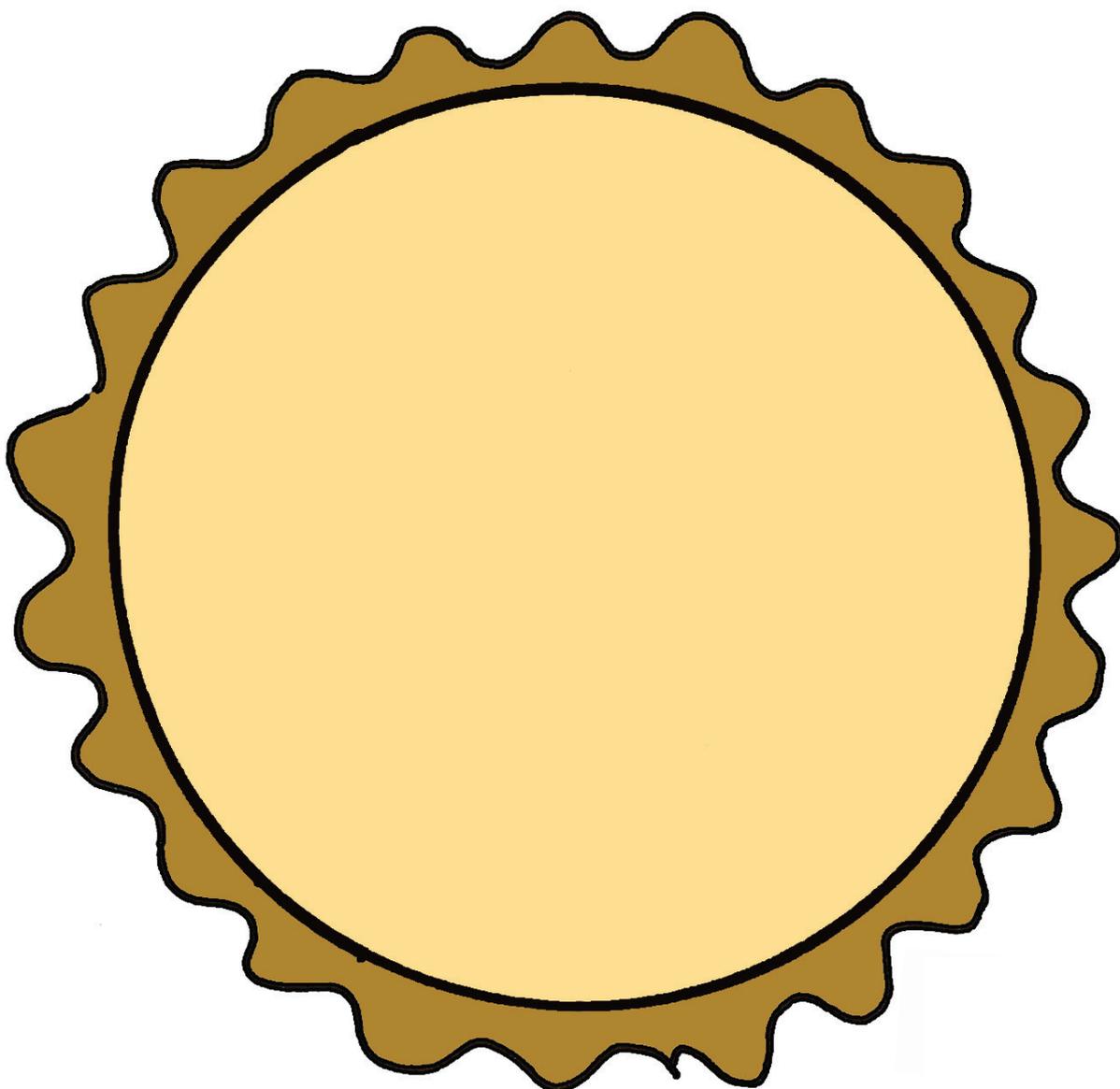
Mise en Place: To put in place.

Flexibility and Imagination: Use of substitution, adaptability, and creativity to achieve desired outcomes within the specified timeframe.

“The only reason for time is so that everything doesn’t happen at once.”
— Albert Einstein



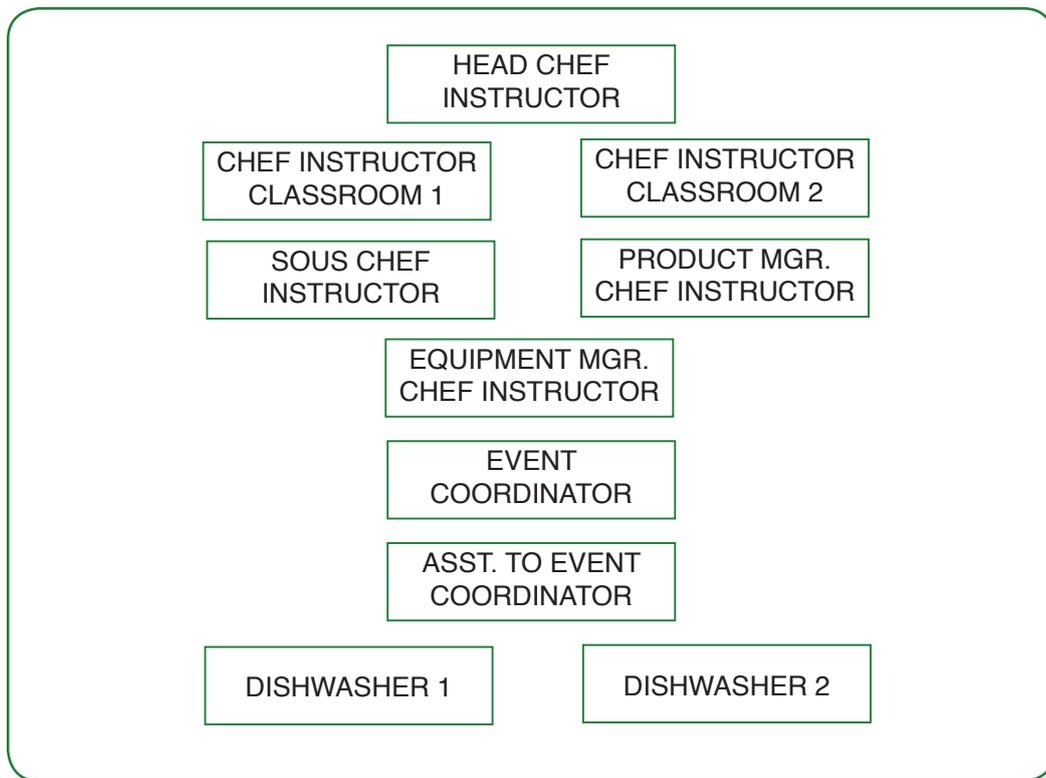
TIME MANAGEMENT: ACTIVITY



KITCHEN BRIGADE SYSTEM

The brigade system of organization and zoning were introduced into the professional kitchen in the early 1900s by Auguste Escoffier, a man known by some as the “King of Chefs.” Escoffier was the first to incorporate the military brigade style of organization and discipline into chaotic kitchens. Instead of everyone working on random tasks without any clear management, the brigade system assigned responsibility for each section of the kitchen to a particular Chef improving communication and efficiency of production.

The School Food Initiative Culinary Boot Camp employs its own organizational brigade which looks something like this:



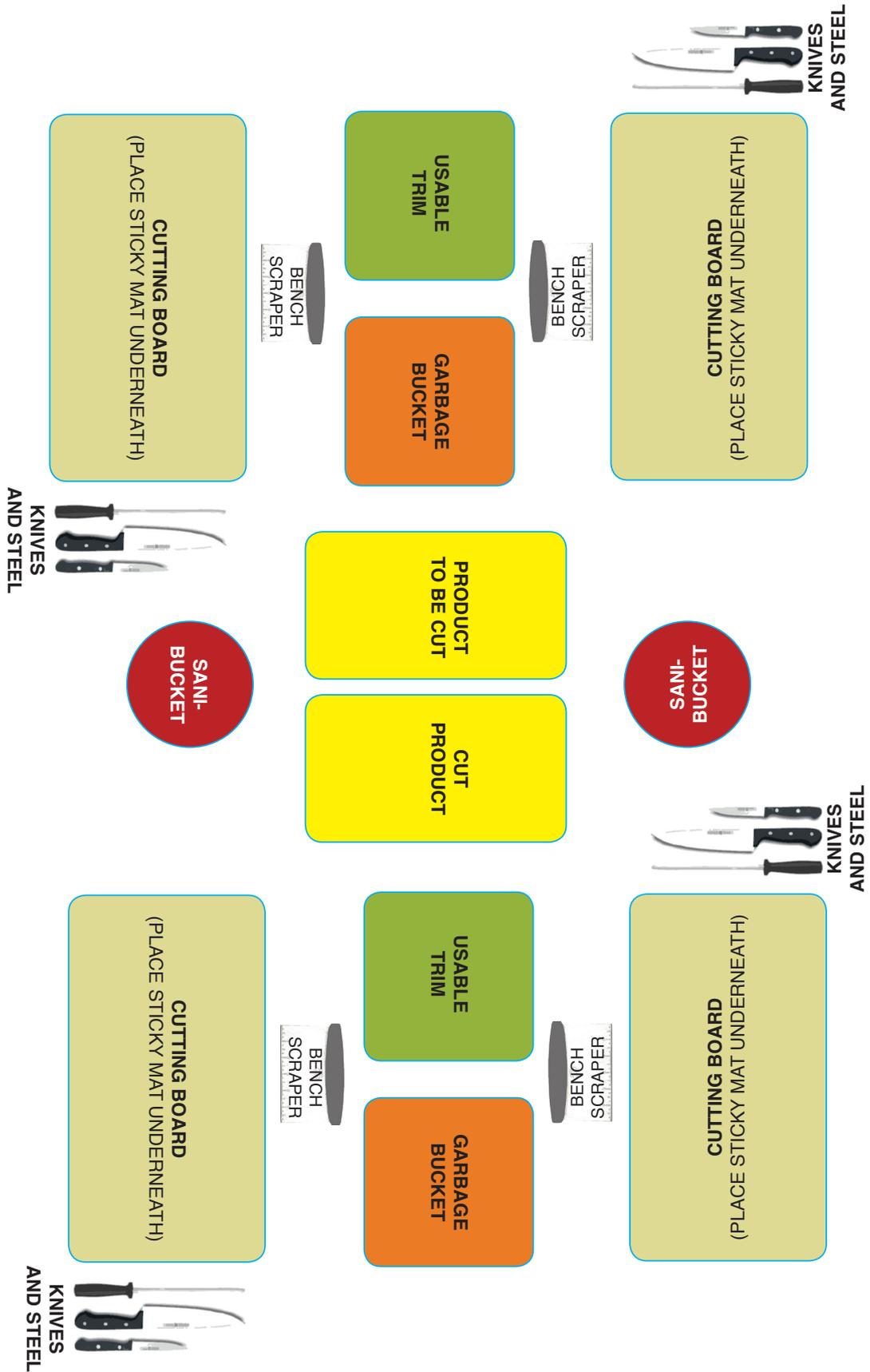
**CULINARY
BOOT
CAMP**



**DAY TWO
TUESDAY**

Breakfast Team
Breakfast Service
Kitchen Essentials
Knife Basics
Sauce
Kitchen Production
Sauce Production
Knife Skills Lab
Lunch
Classroom Session
Movie Viewing
Time Management
Recipe Conversions
Taste Exploration
Review

SETTING UP A KNIFE STATION

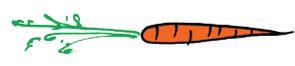
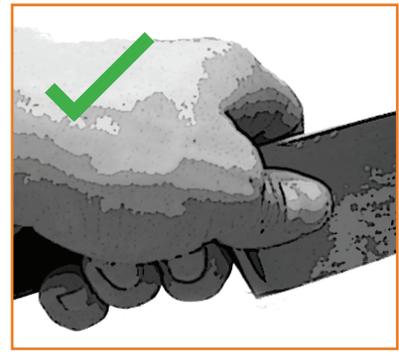


ANATOMY OF A KNIFE



SEVEN KEY POINTS FOR KNIFE SAFETY

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____



BASICS AT A GLANCE

Scoops (Dishers)



Size/No. ¹	Level Measure	Color Code ²
6	2/3 cup	
8	1/2 cup	
10	3/8 cup	
12	1/3 cup	
16	1/4 cup	
20	3-1/3 Tbsp	
24	2-2/3 Tbsp	
30	2 Tbsp	
40	1-2/3 Tbsp	
50	3-3/4 tsp	
60	3-1/4 tsp	
70	2-3/4 tsp	
100	2 tsp	

¹Scoops are left or right hand or squeeze type that can be used for both hands. Number on the scoop indicates how many level scoops make one quart. For example, eight No. 8 scoops = 1 quart.



²Use colored dots matching the brand-specific color coding of scoop sizes.

Ladles Portion Servers



Ladle fl oz	Approx. Measure	Portion Server fl oz
1 oz	1/8 cup	1 oz
2 oz	1/4 cup	2 oz
3 oz	3/8 cup	3 oz
4 oz	1/2 cup	4 oz
6 oz	3/4 cup	6 oz
8 oz	1 cup	8 oz
12 oz	1-1/2 cups	—

Ladles and portion servers (measuring-serving spoons that are volume-standardized) are labeled “oz.” “Fl oz” would be more accurate since they measure volume, not weight.

Use ladles for serving soups, stews, creamed dishes, sauces, gravies, and other liquid products.

Use portion servers (solid or perforated) for portioning solids and semi-solids such as fruits and vegetables, and condiments.

Cooking or Serving Spoons



Solid Spoons



Perforated Spoons



Slotted Spoons

Spoons vary in length (11", 13", 15", 18", 21") for ease of use in cooking or serving. Spoons can have plastic handles that are heat-resistant. Level scoops, ladles, and portion servers provide more accurate portion control than serving spoons that are not volume-standardized measure.

Specialty Spoons



A thumb notch on a server or spoon handle prevents the spoon from slipping into the pan and prevents hands from sliding into the food. Triple-edge (solid or perforated) spoons have a flat edge that increases the area where the spoon touches the bottom of the pan when stirring.



BASICS AT A GLANCE

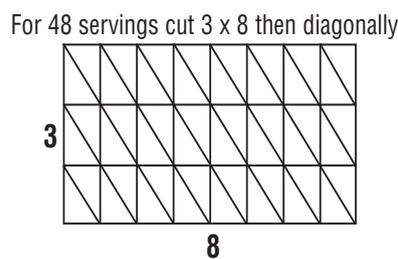
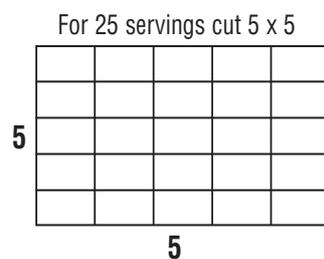
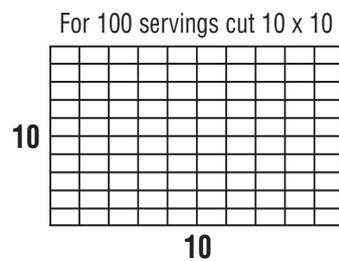
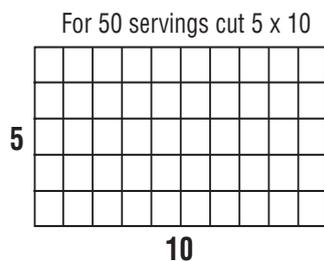
Steamtable Pan Capacity

Pan Size	Approx. Capacity	Serving Size	Ladle (fl oz)	Scoop #	Approx. # Servings
12" x 20" x 2-1/2" 	2 gal	1/2 cup 3/8 cup 1/3 cup 1/4 cup	4 oz 3 oz 2.65 oz 2 oz	8 10 12 16	64 80 96 128
12" x 20" x 4" 	3-1/2 gal	1/2 cup 3/8 cup 1/3 cup 1/4 cup	4 oz 3 oz 2.65 oz 2 oz	8 10 12 16	112 135 168 224
12" x 20" x 6" 	5 gal	1/2 cup 3/8 cup 1/3 cup 1/4 cup	4 oz 3 oz 2.65 oz 2 oz	8 10 12 16	160 200 240 320

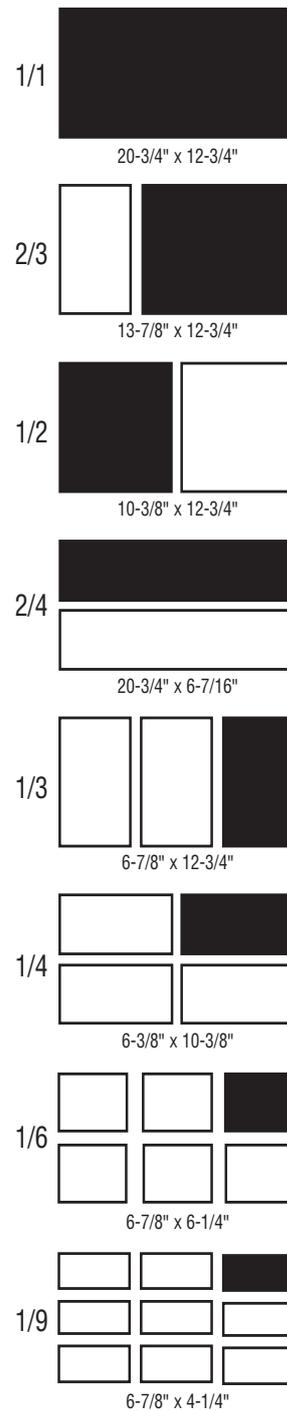
Approximate Dimensions of Serving Sizes from Different Pan Sizes

Pan	Approx. Size	No. and Approx. Size Servings per Pan		
		25	50	100
Baking or steamtable	12" x 20" x 2-1/2"	2" x 3-3/4"	2" x 2"	-----
Sheet or bun	18" x 26" x 1"	3-1/4" x 5"	3-1/4" x 2-1/2"	1-3/4" x 2-1/2"

Cutting Diagrams for Portioning



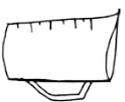
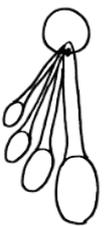
Other Pan Sizes



Steamtable or counter pans are available in various sizes. Smaller size pans may require the use of an adapter bar.



Quick Culinary Conversions



3 t	1 T	1/2 fl oz	1/32 lb
2 T	1/8 c	1 fl oz	1/16 lb
4 T	1/4 c	2 fl oz	1/8 lb
8 T	1/2 c	4 fl oz	1/4 lb
16 T	1 c or 1/2 pt	8 fl oz	1/2 lb
32 T	2 c or 1 pt	16 fl oz	1 lb
64 T	4 c or 1 qt	32 fl oz	2 lb
128 T	8 c or 1/2 gal	64 fl oz	4 lb
256 T	16 c or 1 gal	128 fl oz	8 lb

Abbreviations

Teaspoon = t, tsp
Tablespoon = T, tbs, tbsp
Ounce = oz
Pound = lb, #
Cup = c
Pint = pt
Quart = qt
Gallon = gal
Package = pkg
Each = ea

Metric Equivalents

1 kilo = 2.2 lbs
1 fl. oz = 28 grams
1 lb = 454 grams
1 liter = 34 fl. oz.





CONVERTING RECIPES

The Conversion Factor: *The number by which all ingredients are multiplied when converting a recipe.*

A Conversion Factor represents a rule or a relationship that always stays the same. We use conversion factors more than we know in our daily lives, and most commonly, in our kitchens. We adjust the yield of our recipe by using a conversion factor.

When you take the **NEW YIELD** and divide it by the **OLD YIELD**, this will give you the **CONVERSION FACTOR**.

Yield defined: the number of servings or total volume of a recipe

Let's take a look at this equation:

$$\frac{\text{NEW}}{\text{OLD}} = \text{CONVERSION FACTOR}$$

NEW this represents the YIELD that we want to achieve

OLD this represents the YIELD that the recipe makes as it is written

In other words:

$$\text{NEW YIELD} \div \text{OLD YIELD} = \text{CONVERSION FACTOR}$$

Change fractions to decimals for weights and measures that are given in fractions.

- 1/8 = 0.12
- 1/4 = 0.25
- 3/8 = 0.38
- 1/2 = 0.50
- 5/8 = 0.62
- 3/4 = 0.75
- 7/8 = 0.88

Change ounces to pounds. In order to do this, it is often necessary to change ounces to fractions of a pound.

- 1 oz = 0.06 lb 9 oz = 0.56 lb
- 2 oz = 0.12 lb 10 oz = 0.62 lb
- 3 oz = 0.19 lb 11 oz = 0.69 lb
- 4 oz = 0.25 lb 12 oz = 0.75 lb
- 5 oz = 0.31 lb 13 oz = 0.81 lb
- 6 oz = 0.38 lb 14 oz = 0.88 lb
- 7 oz = 0.44 lb 15 oz = 0.94 lb
- 8 oz = 0.50 lb 16 oz = 1.00 lb

Exceptions to the Conversion Factor

Although this equation always works for converting recipes, there are some exceptions for certain ingredients that do not need to be multiplied by the same conversion factor. These ingredients are specific to the technique and application in a recipe.

Ingredient	When Baking	When Sautéing, Roasting, etc.
Spices & Salt	Always follow the conversion factor to convert the amounts for these ingredients.	Depending on recipe, reduce the amount of spices and salt that are added to the new yield.
Oil & Fat	Always follow the conversion factor to convert the amounts for these ingredients.	Depending on recipe, reduce the amount of oil or fat that is used to cook product. Generally, enough to coat the pan is all that is necessary.



CONVERTING RECIPES: EXAMPLES

Grandma Helen's Swedish Limpa Recipe yields 8 servings. We would like to convert this recipe to make 240 servings:

$$\text{NEW YIELD} \div \text{OLD YIELD} = \text{CONVERSION FACTOR}$$

$$\frac{240 \text{ servings}}{8 \text{ servings}} = 30$$

or

$$240 \div 8 = 30$$

This gives us a **Conversion Factor** of **30**.

To find the new amount needed for each ingredient, we multiply the amount of each ingredient from the original recipe by **30**.

Julie's Potato Salad recipe yields 12 servings. We would like to convert this recipe to make 432 servings.

$$\text{NEW YIELD} \div \text{OLD YIELD} = \text{CONVERSION FACTOR}$$

$$\frac{432 \text{ servings}}{12 \text{ servings}} = 36$$

or

$$432 \div 12 = 36$$

This gives us a **Conversion Factor** of **36**.

To find the new amount needed for each ingredient, we multiply the amount of each ingredient from the original recipe by **36**.

Tia Diana makes some awesome salsa, but her recipe yields 10 quarts and we only need 5 quarts. We would like to convert this recipe to 5 quarts.

$$\text{NEW YIELD} \div \text{OLD YIELD} = \text{CONVERSION FACTOR}$$

$$\frac{5 \text{ quarts}}{10 \text{ quarts}} = .5$$

or

$$5 \div 10 = .5$$

This gives us a **Conversion Factor** of **.5**.

To find the new amount needed for each ingredient, we multiply the amount of each ingredient from the original recipe by **.5**.



CONVERTING RECIPES: ACTIVITY

Find the **Conversion Factor** and scale the recipe to the desired number of servings for each of the recipes.

Remember, **NEW YIELD** ÷ **OLD YIELD** = **CONVERSION FACTOR**

Tassajara Granola serves **48**, scale for **24**

Ingredient	Amount
Oats	1 qt + 2 cups
Almonds, sliced	2 cups
Sunflower Seeds	2 cups
Vegetable Oil	3/4 cup
Honey	1/4 cup
Maple Syrup	1/2 cup
Vanilla Extract	1 Tablespoon
Cinnamon	1 1/2 Tablespoon
Cloves	1/4 teaspoon
Salt	1/2 Tablespoon
Raisins	2 cups

Work Station



CONVERTING RECIPES: ACTIVITY

Find the **Conversion Factor** and scale the recipe to the desired number of servings for each of the recipes.

Remember, **NEW YIELD** ÷ **OLD YIELD** = **CONVERSION FACTOR**

Caesar Dressing serves **128**, scale for **1280**

Ingredient	Amount
Olive Oil	3 cups
Apple Cider Vinegar	3/4 cup
Dijon Mustard	3/4 cup
Soy Sauce	3/4 cup
Garlic, finely chopped	3/4 cup
Parmesan Cheese, grated, dry	1 1/2 cups
Mayonnaise	2 quarts
Lemon Juice	3/4 cup

Work Station



HOW MUCH SUGAR ARE WE SERVING? ACTIVITY

Sugar at a Glance

4.2 grams = 1 teaspoon granulated* sugar 1 pound of body weight = 3,500 calories
114 teaspoons = 1 pound of sugar 1 teaspoon of granulated sugar = 15 calories

*rule of thumb, as granularity of sugars differ

Using the information from above, let's practice some calculations:

10 teaspoons of sugar is how many grams?

(10 teaspoons \times 4.2 grams = 42 grams)

20 teaspoons of sugar is how many grams?

(20 teaspoons \times 4.2 grams = 84 grams)

100 teaspoons of sugar is how many grams?

(100 teaspoons \times 4.2 grams = 420 grams)

Now try grams into teaspoons:

42 grams = how many teaspoons of sugar?

(42 \div 4.2 = 10 teaspoons)

84 grams = how many teaspoons of sugar?

(84 grams \div 4.2 = 20 teaspoons)

420 grams = how many teaspoons of sugar?

(420 \div 4.2 = 100 teaspoons)



Work Station



RETHINK YOUR DRINK: ACTIVITY

There are 26 grams of sugar in an 8 ounce serving of chocolate-flavored milk. How can we determine how many teaspoons of sugar that is?

26 grams = how many teaspoons of sugar?

($26 \div 4.2 = 6.19$ teaspoons of sugar)

What if the bottle of chocolate-flavored milk is 24 ounces? What can we do to figure out the amount of sugar in this whole bottle?

We take the total size of the bottle (24 oz) and divide it by the serving size (8 oz). This is our number of servings per container (which is generally listed on the packaging.)

($24 \div 8 = 3$ servings)

How do we find the total amount of sugar per container?

We take the amount of sugar per serving (6.19 teaspoons) and multiply it by the number of servings in the container (3).

($6.19 \times 3 = 18.57$ teaspoons of sugar)

How do you calculate the total amount of extra sugar consumed by a student if he or she drinks flavored milk for their entire thirteen-year school career?



TAKING A CLOSER LOOK AT SUGAR

Have you ever noticed how much sugar is in processed foods? Even if you do not see the word “sugar” on the label, there are many ingredients that are essentially considered to be sugar. Do any of these look familiar?

barley malt	date sugar	glucose solids	maltose
beet sugar	dextran	golden sugar	mannitol
brown sugar	dextrose	golden syrup	molasses
buttered syrup	diatase	grape sugar	raw sugar
cane-juice crystals	diastatic malt	high-fructose corn syrup	refiner’s syrup
cane sugar	ethyl maltol	honey	sorbitol
caramel	fructose	invert sugar	sorghum syrup
carob syrup	fruit juice	lactose	sucrose sugar
corn syrup	fruit juice concentrate	malt syrup	turbinado sugar
corn syrup solids	glucose	maltodextrin	

Sugar Trivia

- Sugar is the only taste humans are born craving.
- As early as 500 B.C. in India, a “reed which gives honey without bees” existed. This reed would later become known as sugar cane.
- In London during the 16th century, 1 teaspoon of sugar cost \$5.
- The English word, sugar, originates from the Arabic word, *sukkar*.

Sugar and the Body

- Naturally occurring sugar and added sugar are different. Natural sugar from fruit (fructose) and other whole foods releases energy more slowly and evenly, as compared to artificial or processed sugars found in sugary drinks and cereals which give short bursts of energy that burn quickly.
- When your body has absorbed the energy that it needs from sugar, it converts any extra into fat that is stored for later use.
- Sugar gives us energy quickly, but it also can cause a ‘crash’ or tiredness. That causes us to crave more sugar in order to sustain the high energy feeling. Sugar does not contain any of the minerals or vitamins that our bodies require.

Sugar Numbers

- The average American consumes between 60-100 pounds of sugar a year.
- The American Heart Association recommends that men limit added sugar to 36 grams per day and that women and children limit added sugar to 24 grams and 12 grams respectively.
- The average 12 oz. can of soda contains around 40 grams of sugar, more than three times a child’s daily allowance. A 32 oz. Big Gulp with 4 oz. of ice contains an average of 91 grams of sugar, more than a child’s entire weekly maximum recommendation.
- According to researchers at the Harvard School of Public Health, people who drink just one 12-oz. serving of soda or other sweetened soft drink each day have a 15 percent higher chance of developing type 2 diabetes, and those who drink two servings increase their risk by 26 percent.



HOW TO READ A FOOD LABEL

Nutrition Facts

Serving Size 1 slice (47g)
Servings Per Container 6

Amount Per Serving

Calories 160 Calories from Fat 90

	% Daily Value*
Total Fat 10g	15%
Saturated Fat 2.5g	11%
Trans Fat 2g	
Cholesterol 0mg	0%
Sodium 300mg	12%
Total Carb 15g	5%
Dietary Fiber less than 1g	3%
Sugars 1g	
Protein 3g	
Vitamin A 0%	Vitamin C 4%
Calcium 45%	Iron 6%
Thiamin 8%	Riboflavin 6%
Niacin 6%	

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

Quick Guide to % Daily Value:
5% or less is low
20% or more is high

Source: www.fda.gov/Food/ResourcesForYou/Consumers

% Daily Value (DV) defined: the daily value is the FDA's recommended amount of a given nutrient that a person should intake each day based upon a 2,000 calorie diet. An individual's age, height, weight, sex and other factors will determine his or her actual daily requirements of any given nutrient. When you see Daily Value on a food label, it will be listed as a percentage (%) of daily value, which means that one is receiving this % of the recommended amount in each serving. Nutrients like fat, sodium, sugar and cholesterol should be limited to *no more* than 100% of the daily value. Eat *at least* the daily value of other nutrients such as protein, vitamins, minerals and dietary fiber.

If we know how to read and decipher food labels, we can start to “do the math.” Reading labels and knowing what we are putting into our bodies (and our family's bodies) are a valuable source of empowerment. If we can incorporate this activity as a habit in our daily lives, we can nourish ourselves and our loved ones by making informed choices.

The first place to start when you look at the Nutrition Facts label is the serving size and the number of servings in the package. Serving sizes are standardized to make it easier to compare similar foods. They are provided in familiar units, such as cups or pieces, followed by the metric amount, e.g., the number of grams.

The size of the serving on the food package influences the number of calories and all the nutrient amounts listed on the top part of the label. Pay attention to the serving size, especially how many servings there are in the food package. Then ask yourself, “How many servings am I consuming?” On a product label, the ingredients are listed in order of predominance, with the ingredients used in the greatest amount first, followed in descending order by those in smaller amounts.



**CULINARY
BOOT
CAMP** 

DAY THREE WEDNESDAY

Breakfast Team

Breakfast Service

Kitchen Essentials

Plants as Food

Cooking Techniques Part 1

Kitchen Production

Plant Cookery

Lunch

Classroom Session

Movie Viewing

Food Systems

USDA

Taste Exploration

Review



A CLOSER LOOK AT GRAINS

Grains are the hard seeds of cereal grasses that first started out as wild crops that humans have cultivated as a source of food for thousands of years. Today, wheat, rice and corn are the main staple grains that feed the world.

Q: Can you think of any other grains? Hint: Think of the types of bread that you see in your market and some of the specialty pastas that are now available for gluten-intolerant people. A: See below.

As seen below, the structure of a grain consists of the hull, bran, endosperm and germ.

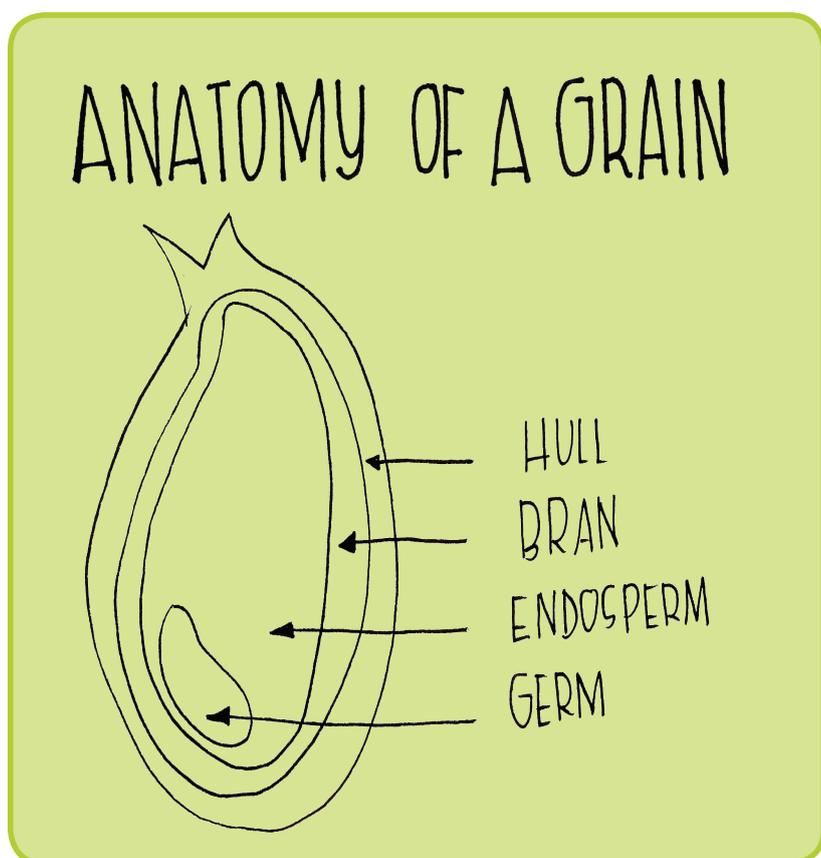
- The HULL is the outermost protective coating of a grain that surrounds the edible kernel.
- The BRAN is the second layer of protective coating of a grain. It is a good source of fiber, and also contains carbohydrates, calcium, and phosphorus.
- The ENDOSPERM is the middle layer that contains carbohydrates and proteins.
- The GERM is the innermost part of the grain kernel's nucleus or embryo that actually sprouts. Sprouted grains have substantially higher nutritional values and are sometimes found in commercial breads. The germ is rich in vitamins, minerals and is a substantial source of thiamine, vitamin E, iron and riboflavin. The germ also contains the essential fatty acids that can cause rancidity and spoilage.

The all-purpose flour that most of us are familiar with is refined from wheat which has had the hull, bran and germ removed. The remaining endosperm is ground into flour, losing much of the nutritional value that was once available in the whole grain.

Whole wheat flour is considered a whole grain as the **whole grain** is ground into flour.

Historically, refined grains became desirable when people started urbanizing and moving away from their local grain mills. Storing refined grains was easier because the germ that contains the oil in a grain had been removed, and this meant that the product would have a longer shelf life. Communities moved from processing their cracked wheat, whole wheat and cornmeal on a weekly basis to buying refined flours from general stores much less frequently.

Today, grains and flour should be stored in a cool, dry place for optimal shelf life, and bought in smaller quantities based on usage.



A: Some answers include: amaranth, barley, buckwheat, bulgar, farro, millet, oats, rye, teff, wild rice



THE INSIDE SCOOP ON LEGUMES

Legumes are plants that produce seed pods that split along the two sides when ripe with a single row of seeds inside.

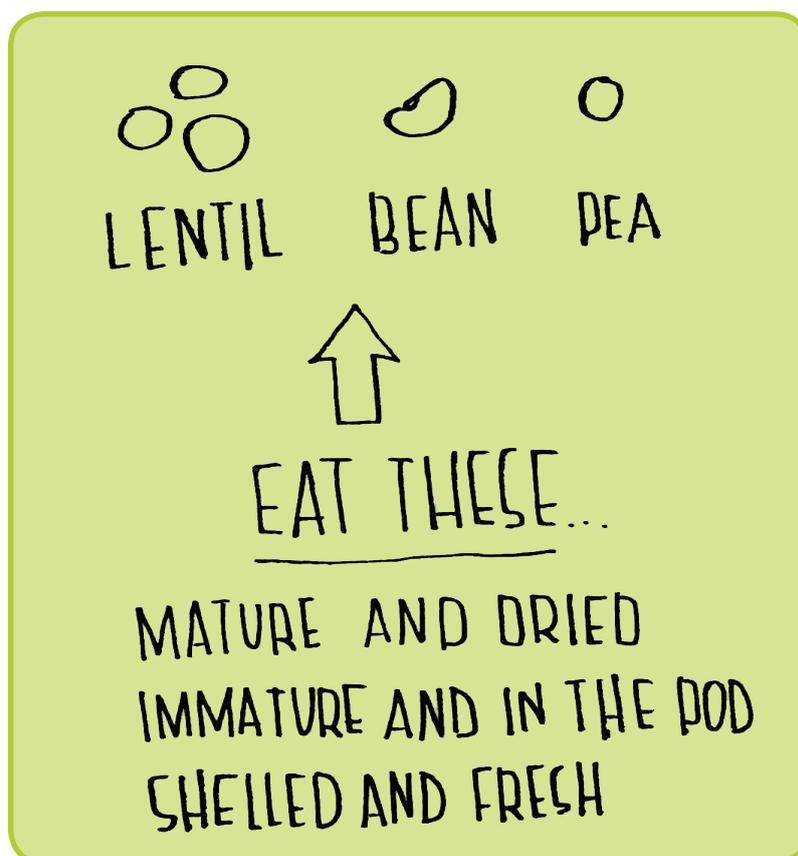
Legumes are an often underappreciated source of nutrients in the modern diet. While not as popular in U.S., these unsung heroes are the basis of many diets around the world. Besides being an excellent addition to a healthy diet, legumes are inexpensive, easy to cook, and highly flavorful.

Historically, legumes are a critical ingredient in the cuisine of almost every country and culture around the world. Fava beans have been found in ancient archaeological sites and soybeans were cultivated over 4,000 years ago. They're inexpensive and versatile, lending themselves to many flavors, spices and in combination with a whole grain constitute a complete protein comparable to that of meat with fewer calories and at a lower cost.

As a source of protein, beans are comparable to meat, but they outshine meat with their high fiber and water content. These two elements make us feel fuller more quickly, discouraging over-eating. Not only do we eat more sensibly when we add beans to our diet, but we remain satisfied for a longer amount of time as our body works to digest the fiber. Beans also have something else that meat lacks: antioxidants. These antioxidants help incapacitate cell-damaging free radicals, which have been linked to cancer, and Parkinson's and Alzheimer's diseases. In a U.S. Department of Agriculture study, researchers measured the antioxidant capacities of more than 100 common foods, and three types of beans made the top four!

There are many classic or traditional combinations of grains and legumes from around the world. Do you recognize any of these combinations?

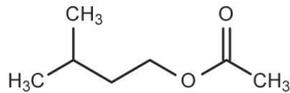
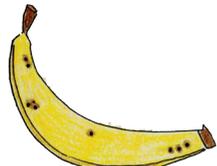
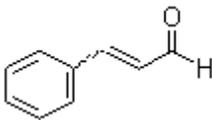
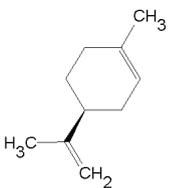
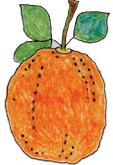
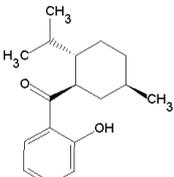
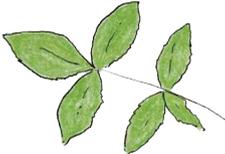
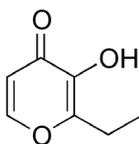
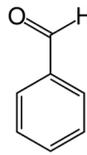
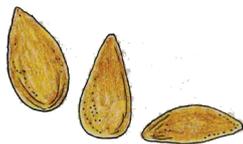
- **Rice and beans (Latin and Central America)**
- **Lentils and rice (Lebanon, Indian sub-continent)**
- **Pigeon peas and rice (Africa)**
- **Fava beans and risotto (Italy)**
- **Succotash of fresh corn and beans (USA)**
- **Sticky glutinous rice and black adzuki beans (Japan)**
- **Pasta (or rice) and beans in minestrone soup (Italy)**
- **Pistou soup with white beans (France)**



ARTIFICIAL FLAVORS*: MIMICKING MOTHER NATURE

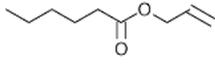
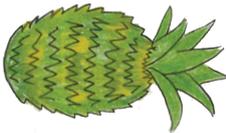
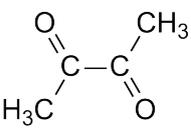
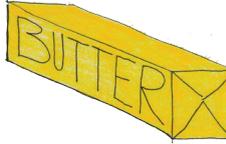
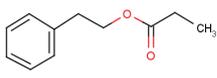
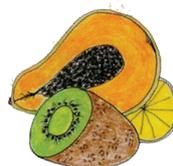
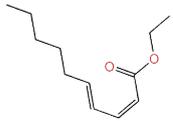
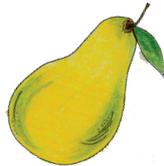
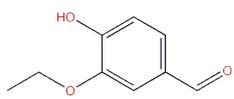
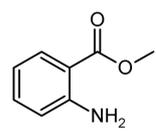
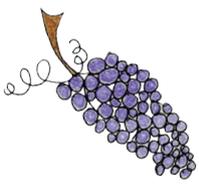
Chemical Engineers** work to alter and create the foods that we eat every day. If you are eating flavored oatmeal, chicken nuggets, or many types of candy, or if you are taking aspirin, using shaving cream, or wear contact lenses, then you are using something that has probably been manipulated by a Chemical Engineer. If you are eating or using something processed that has a scent or a taste, there are chemicals involved.

Below is a partial list of artificial flavors in both their scientific and simple forms.

CHEMICAL COMPOUND	FLAVOR / TASTE / SCENT
Isoamyl Acetate 	Banana 
Cinnamic Aldehyde 	Cinnamon 
Limonene 	Orange 
Methyl Salicylate 	Wintergreen 
Ethyl Maltol 	Sugar (or Cotton Candy) 
Benzaldehyde 	Bitter Almond 

*Chemical mixtures that mimic a natural flavor **The science or profession of applying chemistry to industrial processes

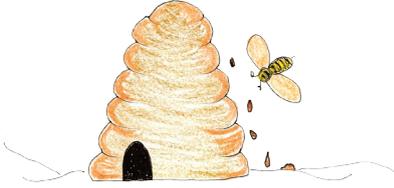
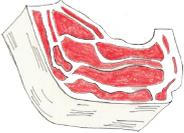


CHEMICAL COMPOUND	FLAVOR / TASTE / SCENT
Allyl Hexanoate  $C_9H_{16}O_2$	Pineapple 
Diacetyl 	Butter 
Ethyl Propionate 	Fruity 
Ethyl -(E,Z) 2,4 Decadienoate 	Pear 
Ethyl Vanillin 	Vanilla 
Methyl Anthranilate 	Grape 



TASTE DEFINED

Taste: Distinguishing flavors in the mouth; to perceive as if by the sense of taste; to detect flavor with added elements of texture and smell.

	<p>Sweet: This is the only taste that humans are born craving! For most, regarded as a very pleasurable sensation. Created by the presence of sugars and a few additional substances (miraculin, circulin). Protein receptors on the tastebuds are coupled with G protein gustducin, and at least two different variants of sweetness receptors must be present to taste sweetness.</p>
	<p>Sour: The transfer of positive charge! This taste is caused by numerous protons in the cells of tastebuds, therefore it causes an electrical charge. Foods included in this taste family include lemon, grape, tamarind, orange and sometimes, melon. Sour taste is very popular in North America.</p>
	<p>Salty: Another chemistry lesson! Salty taste is mostly experienced by the presence of sodium ions. The saltiness of substances is rated relative to sodium chloride. Salt is the taste that comes from the earth, not from a living organism, nor was it produced by a living organism! Sea water and tears and skin all have a level of salinity.</p>
	<p>Bitter: The most sensitive of tastes, and with good reason! It is thought that bitter was once the way we determined a substance may not be good for us to eat. It is regarded as unpleasant, sharp, or disagreeable. Common bitter foods are coffee, unsweetened cocoa, citrus peel, and escarole.</p>
	<p>Umami: Direct translation from Japanese – good flavor, or good taste. This is an appetitive taste, sometimes described as savory, or meaty. Also described as a mouth ‘feel’, or taste that your whole mouth experiences at the same time. Umami is considered to be fundamental in many Eastern cuisines.</p>
	<p>Calcium: This taste is the newest addition to the taste chart. Researchers have found that there are actual receptors for calcium. It has a somewhat chalky sensation and may even be bitter or a little sour to the taste. Certain vegetables contain more calcium, including bok choy, collard greens, kale, and bitter melon.</p>



ANATOMY OF TASTE

A Tale of 10,000 Taste Buds

Five hundred years ago, the value of spices coming from Southeast Asia matched that of gold powder. Humans have always been hard-wired to appreciate the taste and experience of food. Spices were such a luxury that they inspired people to travel thousands of miles to obtain different spices, crossing mountains, oceans, and deserts along the way.

Today, we have the luxury of spices at our fingertips. We are more knowledgeable about the lands where spices come from, and we are exposed to the foods of many cultures, which naturally includes the spices and spice blends that enhance these dishes.

Taste is often considered the queen of the senses. The number of taste buds that each mouth has varies significantly from person to person. Most people have around 10,000 taste buds, while others can have as little as 500 or as many as 20,000. We are born with these natural deliverers of flavor, but as we age we slowly lose some of this original “tasting power.” Other factors that contribute to the loss of taste buds are chemical-laden foods, smoking, and burning the tongue or mouth.

Taste buds are actually receptors. These receptors are grouped on tiny, round protuberances located on the tongue, roof of the mouth, pharynx, and esophagus. Each taste bud contains over 100 cells, and all buds react to the six basic tastes, though some buds react to certain tastes first. Sweet, sour, and salty types of taste induce electrical signals. Bitter triggers a chemical signal, but overall, the sense of taste is considered a chemical sense, much like the sense of smell.



OUR FOOD SYSTEM

In the United States...

- Two companies are responsible for 98% of the poultry industry and two companies sell 58% of U.S. GMO (Genetically Modified Organism) seed corn.
- The Food and Drug Administration (FDA) has allowed the production of cloned meat animals since 2008.
- Genetically modified (GMO) crops have increased overall pesticide use by 318.4 million pounds over the first 13 years they have been in use.
- Chemical pesticides have been associated with cancer, autism and other neurological diseases, and artificial sweeteners like aspartame have been linked to migraines, memory loss, seizures, obesity and infertility.
- The majority of all food products travel 1,500 miles to get to the consumer.
- Food transporting accounts for almost 33,000 TONS of greenhouse gas emissions every year!
- The greatest contributor to greenhouse gas emissions are industrialized agriculture production methods.

And Locally...

- In 2008, Santa Barbara County's agricultural production was valued at \$1.14 billion, which placed it in the top 1% of all counties in the U.S.
- Less than 1% of produce grown in Santa Barbara County is consumed in Santa Barbara County.
- CSA stands for "Community Supported Agriculture," usually in the form of a small, farmer-driven business that delivers fresh, seasonal produce and other locally grown items (honey, jam, meat, etc.) to members. A community really can support local agriculture, so check your own area for a local CSA and visit your local farmers' markets.



LOCAL PROCUREMENT

Five Reasons to Buy Local Food

1. Local produce tastes better and it's better for you.

A recent study showed that fresh produce loses nutrients quickly. In a weeklong (or more) delay from harvest to dinner table, sugars turn to starches, plant cells shrink, and produce loses its vitality. Even in California, produce may have traveled surprisingly far to get to your grocery store. Food grown in your own community was probably picked within the past day or two. It is crisp, sweet and loaded with flavor.

2. Local food supports local farm families.

Fewer than one million Americans now claim farming as their primary occupation (less than 1%). Farming is a vanishing lifestyle. And no wonder: the farmer today gets less than 10 cents of the retail food dollar. Local farmers who sell directly to consumers cut out the many middlemen and get full retail price for their food — which means farm families can afford to stay on the farm, doing the work they love.

3. Local food protects genetic diversity.

In the modern industrial agriculture system, produce varieties are chosen for their ability to ripen simultaneously and withstand harvesting equipment. Shippers demand produce with a tough skin that can survive packing, transport, and a long shelf life in the store. Only a handful of hybrid varieties of each fruit and vegetable meet those rigorous demands, so there is little genetic diversity in the plants grown. In contrast, local farmers that sell direct to you or direct to your local restaurants and grocery stores grow a huge number of varieties selected because they have the best flavors, provide a long harvest season, and come in an array of eye-catching colors. Many varieties are heirlooms, passed down from generation to generation because they taste good. These old varieties contain genetic material from hundreds or even thousands of years of human selection. They may someday provide the genes needed to adapt to a changing climate.

4. Local food preserves open space, and supports a clean environment.

As the value of direct-marketed fruits and vegetables increases, selling farmland for development becomes less likely. A well-managed family farm is a place where the resources of fertile soil and clean water are valued. Good stewards of the land grow cover crops that prevent erosion and replace nutrients used by their crops. Cover crops also capture emissions and help combat global warming. In addition, the patchwork of fields, hedgerows, ponds and buildings is the perfect environment for many beloved species of wildlife. That landscape will survive only as long as farms are financially viable. When you buy locally grown food, you are doing something proactive about preserving the agricultural landscape.

5. Local food is about the future.

By supporting local farmers today, you can help ensure that there will be farms in your community tomorrow, and that future generations will have access to nourishing, flavorful and abundant food.

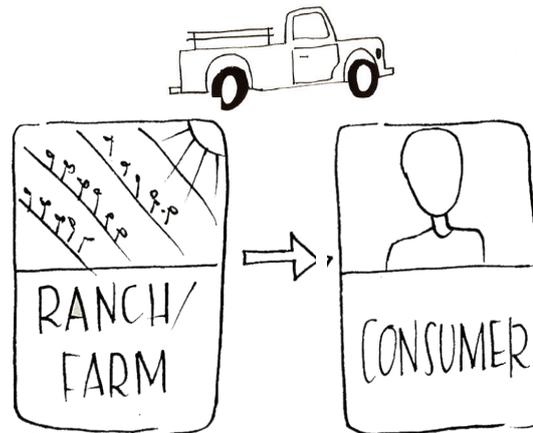
(From the "Central Coast Buy Fresh Buy Local" Campaign)



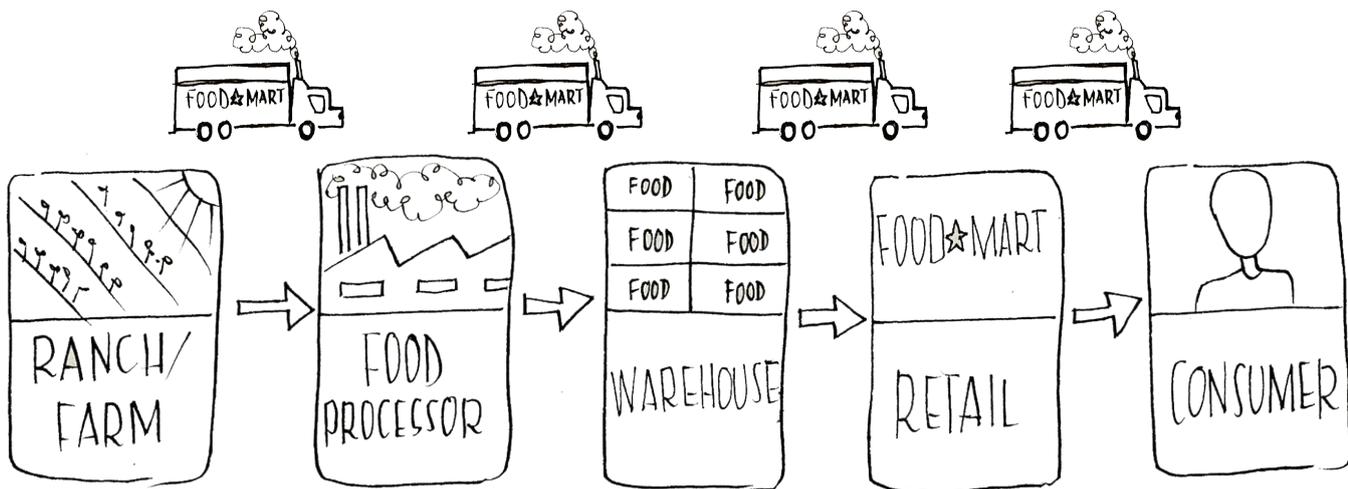
FOOD DISTRIBUTION CHAINS

The School Food Initiative has defined “local” produce as produce grown in or within 50 miles of the Santa Barbara County line purchased directly from the grower or from a broker who buys directly from local farms. To be clear, produce that has been grown in Santa Barbara County, but was then transported to a distribution or processing center more than 50 miles outside of our county line does not fall within our definition of “local.”

TRADITIONAL LOCAL FOOD DISTRIBUTION



MODERN FOOD DISTRIBUTION



THE MULTIPLIER EFFECT

HERE'S THE IDEA

Buying local products at locally owned businesses keeps money circulating closer to where you spend it. This creates a ripple effect as those businesses and their employees in turn spend your money locally. Corporate chains send most of your money out of town.



For every \$1 spent at a local business ...



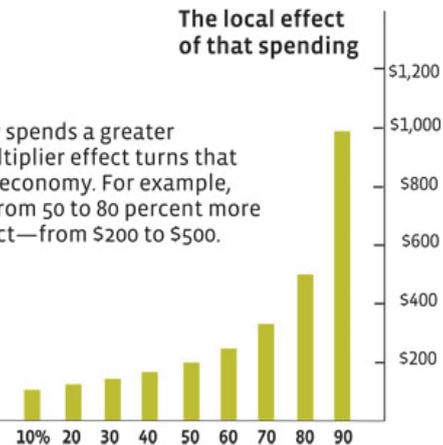
For every \$1 spent at a corporate chain ...



A LITTLE GOES A LONG WAY

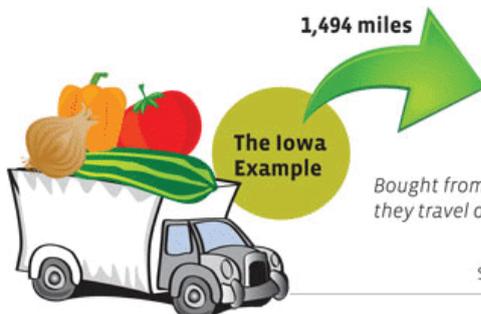
If everyone in a community spends a greater percentage locally, the multiplier effect turns that into big bucks for the local economy. For example, increasing local spending from 50 to 80 percent more than doubles the local effect—from \$200 to \$500.

Increasing percentages of \$100 spent locally



AND A BONUS!

By buying local goods, you maximize your money's impact and minimize fuel use and CO₂ production. Produce from the supermarket travels up to 92 times farther than produce grown locally.



A study by the Leopold Center found that 16 common crops that grow in Iowa travel an average of 1,494 miles to reach chain groceries there.

Bought from local growers, they travel only **56 miles**.

Sources: Sustainable Seattle; Civic Economics.

YES! MAGAZINE GRAPHIC 2007





Header
by Freddy.
Body by
milk.

Milk is packed
with nutrients to
help you play
hard.

SALAD BAR BASICS

A salad bar is a great way to add excitement to your lunch meals and increase consumption of fruits and vegetables. Plus, children love to create their own meals and are more likely to eat unfamiliar foods if they can choose them themselves.

Think variety! The choice is yours:

- Seasonal vegetables, and fruits
- Exotic or unusual ingredients
- Theme bars with ethnic and holiday themes
- Specialty food stations – taco bar, chili bar, potato bar, sandwich bar, etc.



Remember, the keys to salad bar success are quality food preparation, appetizing presentation, energetic marketing and creative promotion!

Salad Bar Food Safety

Products must be maintained at a temperature below 40°F or must only stay out on the salad bar for a 2 hour period. Time/Temperature logs must be maintained for all salad bar items.

Products may be reused for service the following day if they are clean, free of other items, appear fresh and have been held below 40°F or have been out on the salad bar for under 2 hours and have been recorded on a food time/temperature log.

Never combine an old product with a new one, even if it has been properly handled.

When changing out an old product with a new one, use a new, clean container. Do not add new product to a used container.

Do not fill protein containers more than halfway. This will ensure that the product remains at a safe temperature.

Refrigerate all canned or bottled items (such as beans and salad dressing) and their backups before putting out on the salad bar. For example, if you generally use one can of beans for service, have another one refrigerated in case you run out.



Salad Bar Etiquette

- 1 Always wash your hands first.
- 2 Use utensils. NEVER USE YOUR FINGERS.
- 3 If a utensil or plate falls on the floor, don't put it back. Tell a cafeteria person.
- 4 Don't taste food items at the salad bar.
- 5 Take a small amount of new foods to try.
- 6 Take only what you can eat.
- 7 Don't bring food back to the salad bar.
- 8 DON'T PUT YOUR HEAD UNDER THE SNEEZE GUARD OR FOOD SHIELD. Ask a friend or a cafeteria person to help if you can't reach.
- 9 Always be polite in line. Wait your turn.
- 10 Always use a clean plate for seconds.

Keep all salad bar containers refrigerated and cooling pads frozen once they have been cleaned and sanitized. This will

ensure that you start with a cold environment and will help maintain a safe product temperature while it is on the salad bar.



MAKE A RAINBOW

at the SALAD BAR

RED

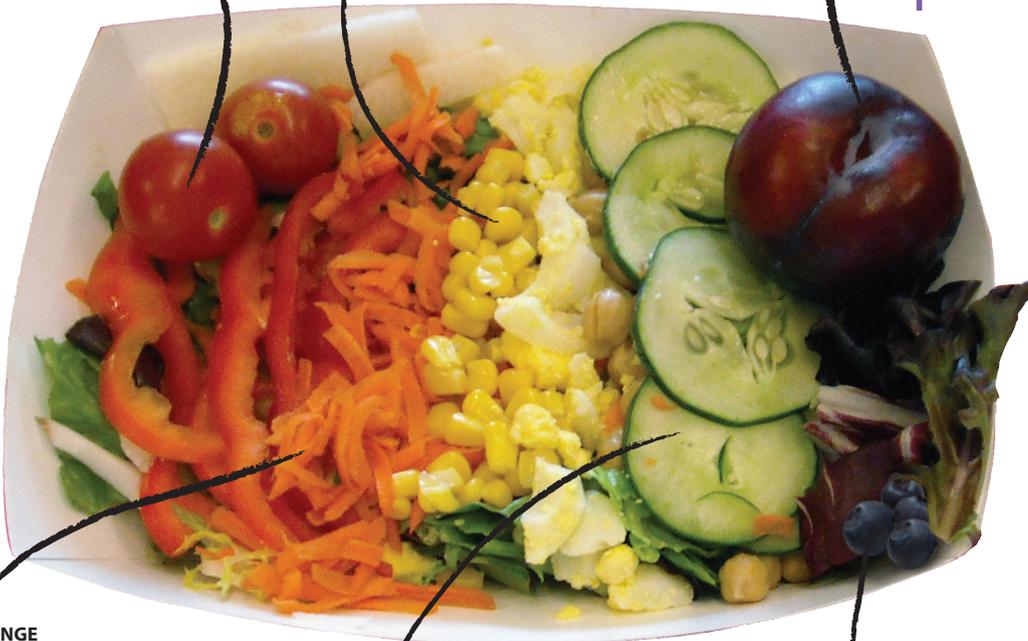
Lycopene and anthocyanins!
The delicious variety of red fruits and veggies can prevent cancer and help keep you from getting sick.

YELLOW

Eat yellow for antioxidants and an abundance of Vitamin C. Eating yellow also helps to maintain healthy skin and strengthens bones and teeth.

PURPLE

Purple colored fruits and veggies can help reduce your risk of getting a number of life-threatening diseases.



ORANGE

Lots of antioxidants!
Vitamin C and beta carotene (vitamin A) galore. Fight off those colds and help out your eyes.

GREEN

So many veggies are green!
Lots to choose from and lots of nutrients to gain. Eat **dark** leafy greens for your heart and eat broccoli and zucchini for reducing your chance of getting cancer.

BLUE

Blueberries. The magical fruit that helps improve your memory and aid in brain function.



SALAD BAR IDEAS AND TIPS

<p>Greens: All lettuce varieties: butter, head, iceberg, leaf, romaine or pre-cut Chard Endive Escarole Lettuce mix Kale Fresh spinach Red or green cabbage</p> <p>Vegetables: Asparagus, Beans, dried Beans, fresh Beets Broccoli Carrots Cauliflower Celery Cucumbers Green peas Jicama Mushrooms Onions Peppers Radishes Scallions Squash</p>	<p>Sweet potatoes Tomatoes Water chestnuts Zucchini</p> <p>Fruits: Melons Avocados Apples Bananas Berries Grapes Kiwifruit Oranges Pears Peaches Pineapple Plums Strawberries Tangerines</p> <p>Protein Items: Yogurt Meats – turkey, tuna, chicken, ham, etc. Cheeses – grated, sticks, cubes, slices, string cheese, cottage cheese Hard-cooked eggs Seasoned taco meat</p>	<p>Misc. Nuts – almonds, walnuts, peanuts, pecans Nut butters – almond, peanut, sesame, etc. Toasted sunflower and sesame seeds</p> <p>Grain/Bread Items: Bread varieties, croutons, crackers, pita, tortillas, etc. Chow mein noodles, Pasta and pasta salad Rice and rice salad</p> <p>Other Items: Dried fruit – raisins, cranberries, cherries, apples, apricots Vegetable/Fruit Salads: Variety of salad dressings Pickles, Olives Salsa Guacamole Jalapeño peppers</p>
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Write down some of your own ideas here:

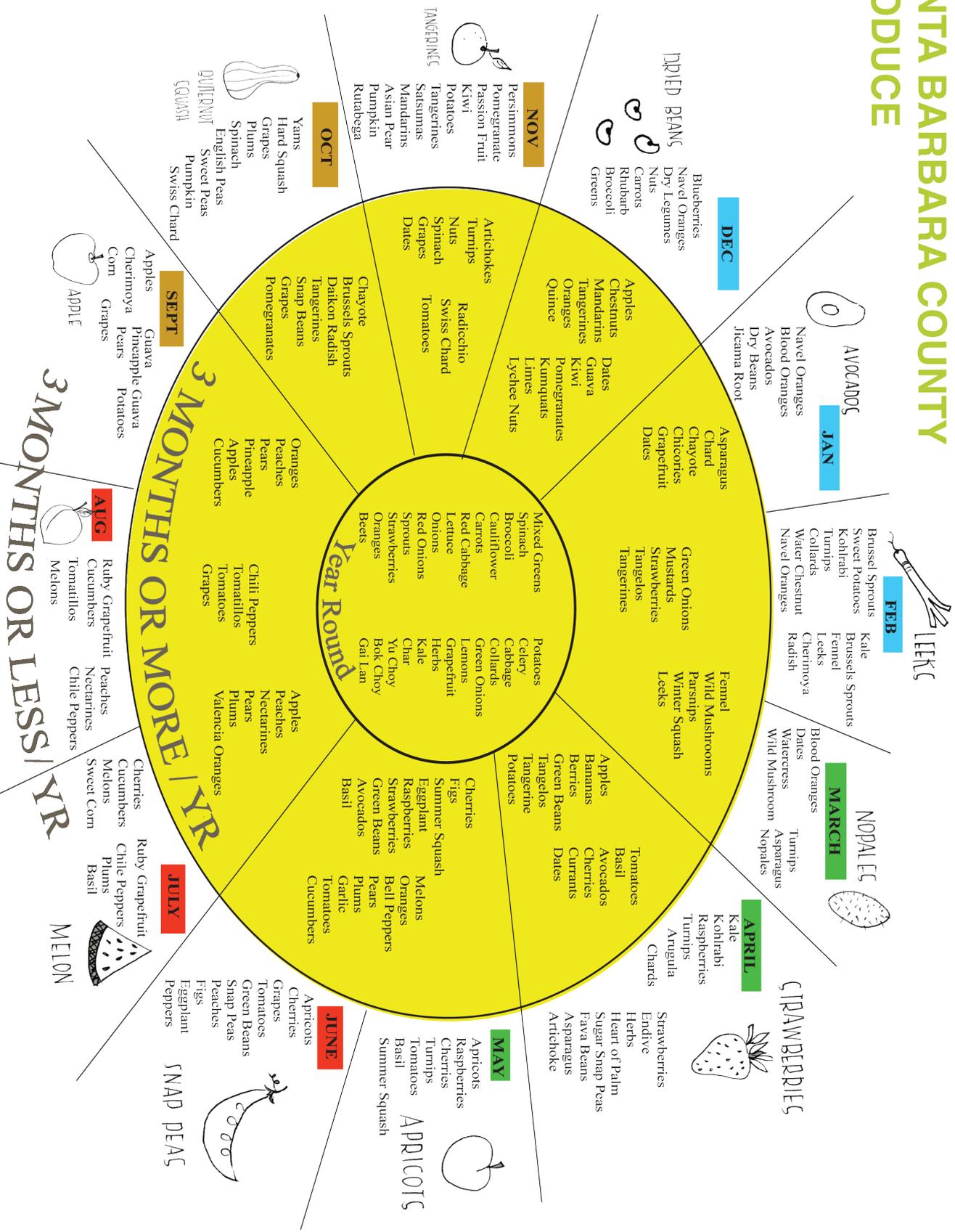
Cooking Tips:

- Green vegetables**
- The color is adversely affected by heat and acid.
 - Cook only until crisp-tender; overcooking will produce a dull olive-green or yellow product.
 - An acid such as lemon juice should never be added to a green vegetable during cooking to avoid the color change.
 - Never add baking soda to green vegetables. While it makes the green color brighter, it destroys important nutrients and can make the vegetables slimy.
- Orange & yellow vegetables**
- The color is more stable than in green vegetables.
 - Cook only until crisp-tender.
- Red vegetables**
- Add a small amount of acid (lemon juice or vinegar) to beets or red cabbage to enhance color and flavor.
- White vegetables**
- Cook in a liquid that is neutral or slightly acidic, covered, to retain the color.

CULINARY BOOT CAMP
DAY THREE
WEDNESDAY



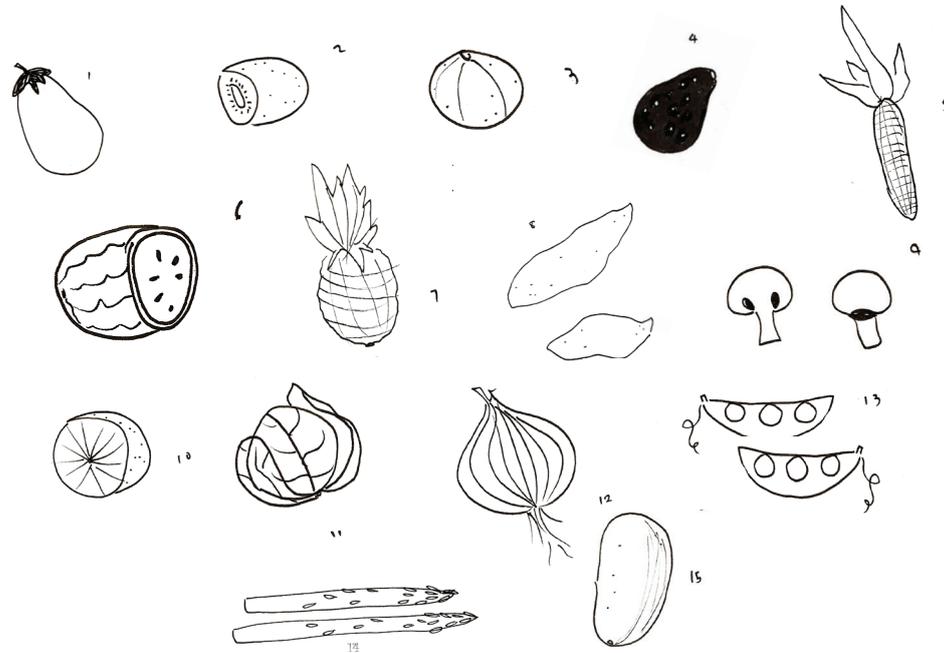
SEASONALITY CHART FOR SANTA BARBARA COUNTY PRODUCE



the CLEAN FIFTEEN and the DIRTY DOZEN

Clean Fifteen

1. Eggplant
2. Kiwis (domestic)
3. Canteloupe
4. Avocado
5. Corn
6. Watermelon
7. Pineapple
8. Sweet Potatoes
9. Mushroom
10. Grapefruit
11. Cabbage
12. Onion
13. Sweet Peas
14. Asparagus
15. Mango

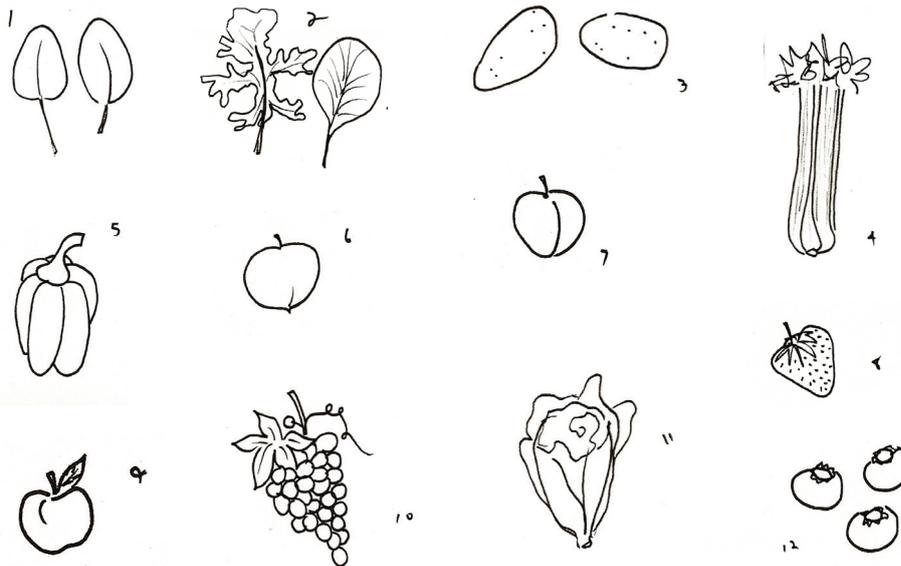


The Environmental Working Group (EWG) is a United States based organization that is dedicated to research and advocacy in the areas of toxic chemicals use. This organization has established itself in food system and food culture related groups, especially for its release of the “Clean Fifteen” and “Dirty Dozen” lists. These lists are derived from public data collected by the EWG and they have been designed to give the public access to information regarding produce and the pesticide use associated with various crops. The **Clean Fifteen** list is the produce which has tested out with the least amount of toxic pesticide use and/or retention, and **The Dirty Dozen** list is produce that tested highest.

Remembering these two lists when selecting produce can help you make more informed buying and food preparation decisions.

Dirty Dozen

1. Spinach
2. Kale and Collard Greens
3. Potatoes
4. Celery
5. Bell Peppers (imported)
6. Peaches
7. Nectarines (imported)
8. Strawberries
9. Apples
10. Grapes (imported)
11. Lettuce
12. Blueberries (domestic)



**CULINARY
BOOT
CAMP**



**DAY FOUR
THURSDAY**

Breakfast Team
Breakfast Service
Kitchen Essentials
Cooking Techniques Part 2
Kitchen Production
Meat and Poultry
Lunch
Classroom Session
Movie Viewing
NSLP
Menu Planning
Wellness Policies
Taste Exploration
Review

ANIMALS AS FOOD

Animals Provide Protein

As we discussed yesterday, we can get the protein that our bodies need by integrating a wide variety of vegetables, legumes, and grains into our diet, but we can also get protein by consuming animals. Our muscles, organs, and immune system are almost entirely built by protein. When we eat food that contains protein, our digestive system breaks down the protein into units called “amino acids.” There are twenty-two amino acids that are very important to our health, and nine that we can only get by eating protein-rich foods. These are referred to as the “essential amino acids” because it is essential that we get them from the food that we eat.

One specific example of the role that proteins play in our body is to create molecules called “hemoglobin,” which are the part of the red blood cells that carry oxygen throughout our body. Without protein, these molecules would not be created, and our body could not function.

Animals as Food

When we refer to animals as food, we generally refer to “meat.” There are many different forms of animals that are consumed around the world depending on culture, geography, and accessibility. We will refer to the most common sources of meat that we see in our schools for this segment which are cows, pigs, chickens, and turkeys.

Meat defined: The muscles (and other parts) of animals that are consumed.

Poultry defined: Birds that have been domesticated and raised for consumption.

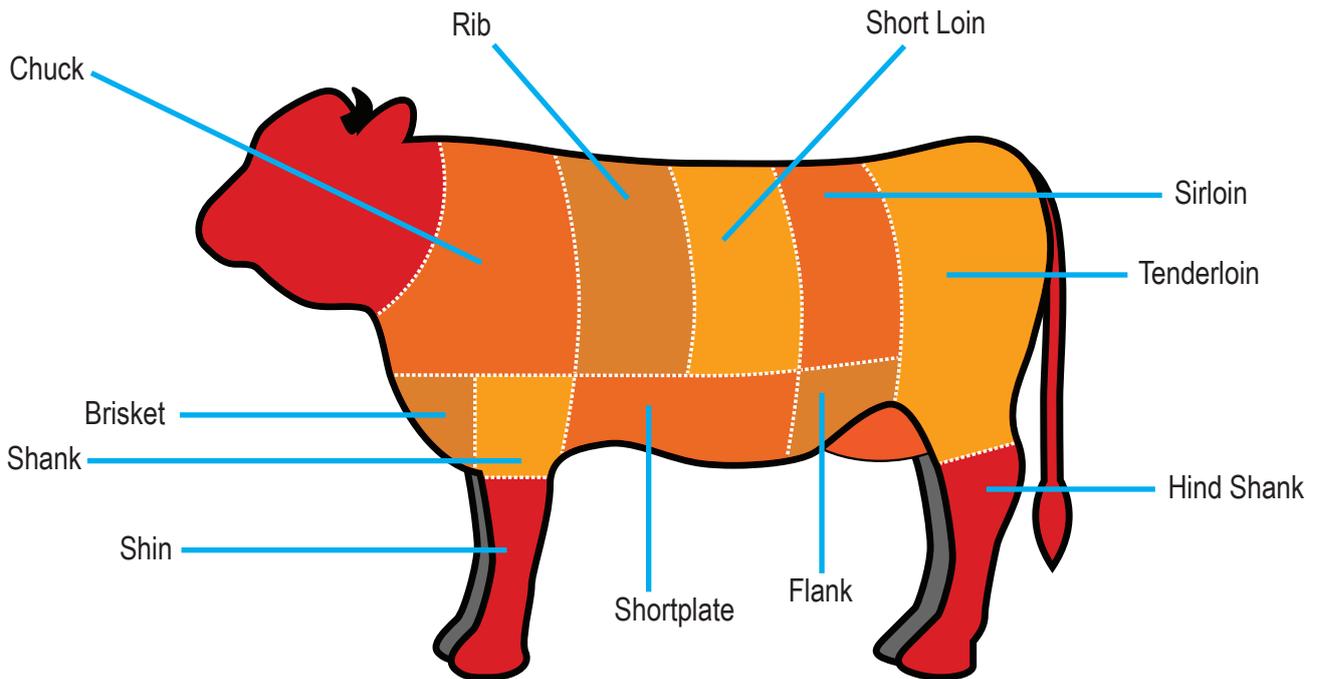
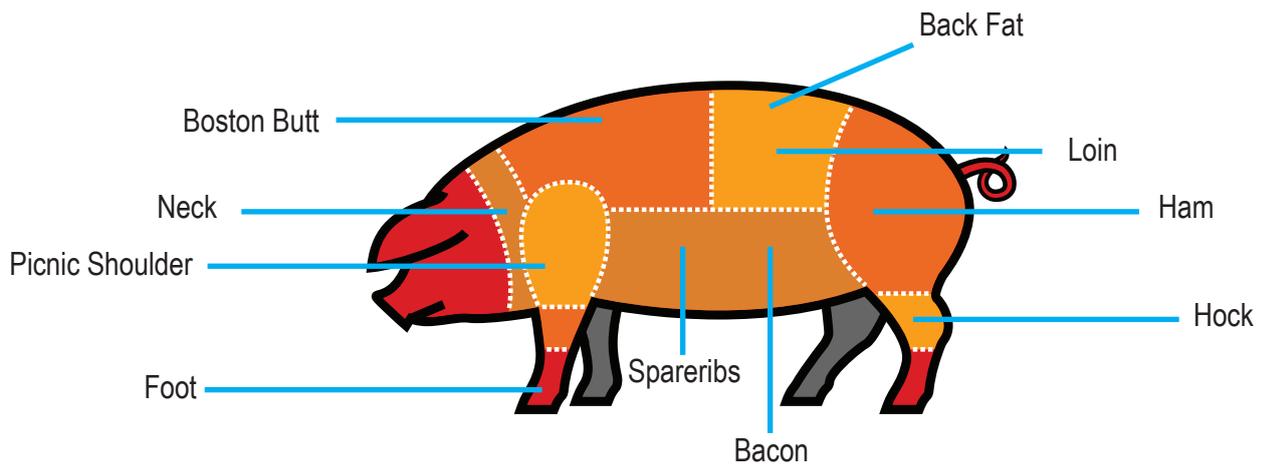
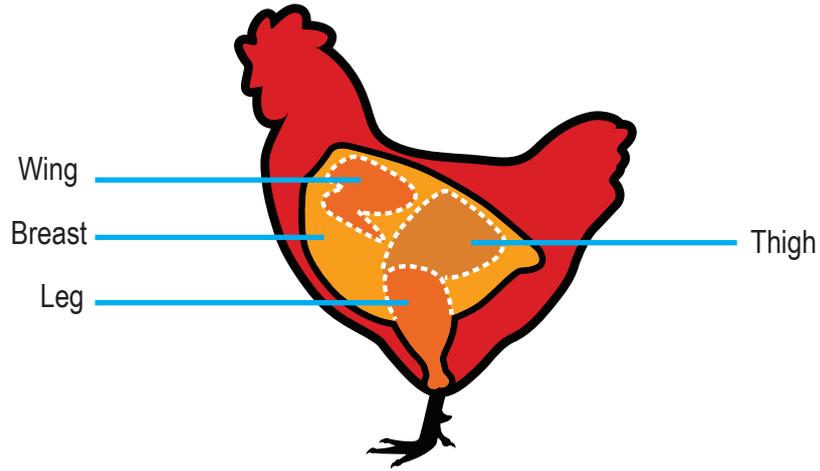
AT-A-GLANCE COOKING TEMPERATURES FOR MEAT



**HOLD AT TEMP.
FOR AT LEAST 15 SECONDS**



ANIMALS AS FOOD



CULINARY BOOT CAMP THURSDAY DAY FOUR



STANDARD OPERATING PROCEDURE (SOP)

SAFE HANDLING OF RAW MEAT

Pre-Preparation

Defrosting: Raw protein should be thawed **in the refrigerator** on the appropriate shelf with a pan in place to catch dripping.

Note: Ground meat and roasts can take two days or more to defrost so be sure to **PLAN AHEAD!**

- Assign a place in the walk-in cooler specifically for raw meat that is a safe distance from produce and ready-to-eat foods.
- Raw meats should be stored in order of cooking temperature: highest final cooking temperature at the bottom to lowest final cooking temperature at the top.
- Containers should always be covered to avoid cross-contamination.
- If raw proteins are removed from their case, make sure to thoroughly clean and sanitize your work area and any equipment utilized.

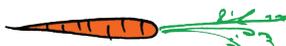
Choosing Your Workstation: You will need sufficient counter space to handle raw proteins and transfer them to hotel pans for cooking. No other production can happen in this area while you are handling raw proteins.

Wash and Sanitize work area before you start working.

Mise en place: Gather and organize necessary equipment before taking raw protein out of refrigerator or walk-in.

- Hotel pans (for holding raw protein once removed from package)
- Speed rack (for preparing a large quantity of raw protein)
- Sanitizer bucket with sanitation solution and side towel (in case of spills)
- Small knife (for opening packaging that hold raw protein)
- Lined trashcan (for immediate disposal of gloves, packaging, disposable aprons, etc.)
- Gloves (remove from box before beginning) to wear while preparing raw proteins
- Preheat oven to the appropriate temperature if you are roasting right away.

Wash hands thoroughly!



STANDARD OPERATING PROCEDURE (SOP)

SAFE HANDLING OF RAW MEAT

Preparation

- Have proper amounts of marinade or preparation ingredients measured and ready before taking out raw protein. Bring out only what you need, never bringing out a larger batch of raw protein than you need for service. Raw proteins can easily become cross-contaminated and need to be thrown out.
- Only bring out the amount of raw protein that you can prepare in 1 hour. Bringing out too much can increase the time spent in the “danger zone,” and cause foods to become hazardous.
- Open bags and transfer proteins to hotel pans for cooking. Be cautious as to minimize cross-contamination.
- NEVER WASH RAW PROTEINS.
- Throw away contaminated bags into designated, lined trashcan.
- If a large quantity is being prepared, carefully put full hotel pans onto sheetpans on speed rack to avoid spillage.
- This process is to be repeated for the entire amount of raw protein being prepared. If the cooking does not happen within one hour of prepping, move the speed rack into refrigeration.

Cooking

- Cook items to the correct internal temperatures:
 - 165°F for 15 seconds for ground poultry and turkey roasts
 - 160°F for 15 seconds for ground beef and ground pork
 - 145°F for 15 seconds for whole pork and beef roasts
- Make sure your thermometer is accurately calibrated weekly and after dropping.
- Check temperature at multiple locations on the roasts and ground meat. Wash and sanitize thermometer between readings.
- The thickest part of the flesh should be tested on roasts, and the bone should be avoided.

Cleaning and Sanitizing

- Wash and sanitize all counter tops, walls, and sinks thoroughly in the preparation space (Don't forget the sink handles and spouts!) Make sure to sanitize fronts of drawers and shelves under the counter as well. When in doubt, clean it!
- Walk-in and reach-in door handles must be sanitized if they've been touched, shelves if there was spillage, and raw protein contaminated equipment.
- All contaminated equipment should be brought to the dish room. Personally wash and sanitize this equipment or communicate with the dishwasher that it has been used for raw protein and must be washed with urgency. Never just leave it by the sink and walk away. Drain, sanitize, and change the water in the 3-compartment sink after washing.
- Throw away sanitizer bucket solution, wash bucket, and set up new solution with a clean towel.
- Put all used towels in the laundry bag.



STANDARD OPERATING PROCEDURE (SOP)

SAFE HANDLING OF RAW MEAT



Washing Food: Does it Promote Food Safety?

Historically, we equate washing with cleanliness. We wash clothes, linens, cars, dishes, and ourselves. So, it is logical that many people believe meat and poultry can be made cleaner and safer by washing it. Is this true? Does washing meat, poultry, eggs, fruits, and vegetables make them safer to eat?

Washing Meat and Poultry

Washing raw poultry, beef, pork, lamb, or veal before cooking it is **NOT RECOMMENDED**. Washing does not kill bacteria in raw meat and poultry, and juices can be spread to other foods, utensils, and surfaces. We call this cross-contamination.

Some consumers think they are removing bacteria and making their meat or poultry safe. However, some of the bacteria are so tightly attached that you could not remove them no matter how many times you washed. There are other types of bacteria that can be easily washed off and splashed on the surfaces of your kitchen. Failure to clean these contaminated areas can lead to foodborne illness. Cooking (baking, broiling, boiling, and grilling) to the right temperature kills the bacteria, so washing food is not necessary.

Using a food thermometer is the only sure way of knowing if your food has reached a high enough temperature to destroy foodborne bacteria. Cook all raw meat to recommended minimum internal temperature as measured with a food thermometer before removing meat from the heat source.

Washing Eggs

Do not wash eggs before storing them. Washing is a routine part of commercial egg processing and the eggs do not need to be washed again. Federal regulations outline procedures and cleansers that may be used. "Bloom," the natural coating on just-laid eggs that helps prevent bacteria from permeating the shell, is removed by the washing process and is replaced by a light coating of edible mineral oil which restores protection. Extra handling of the eggs, such as washing, could increase the risk of cross-contamination, especially if the shell becomes cracked.

Packaging materials from raw meat or poultry also can cause cross-contamination. Never reuse them with other food items. These and other disposable packaging materials, such as foam meat trays, egg cartons, or plastic wraps, should be discarded.



USDA FACT SHEET: COMMODITY PROCESSING

The School Food Initiative Position on Diversion of USDA Foods:

The USDA Foods program provides raw proteins, such as chicken, beef, and pork, essentially free to schools, whereby schools get credit against participation numbers. Since some schools do not cook from scratch, USDA recommends diverting its foods to a handful of approved vendors that process the food for ease of preparation and serving by unskilled workers. Unfortunately, this process of “diversion” can degrade the food’s nutritional value and dramatically increase its cost, most recently to between \$1.50 and \$1.75 per pound. A school that uses 15,000 pounds of raw proteins would end up spending nearly \$30,000 for food it could have received for free.*

We support scratch cooking because it produces superior nutrition by letting us control what goes into the foods prepared for our children, and because it promotes better understanding of food systems in our schools. The School Food Initiative opposes diversion because it increases costs, decreases control, and disempowers school food service workers. Perhaps worst of all, it reduces student exposure to foods other than those that mimic fast food, preventing them from developing an affinity for real food.

Commodity Processing

1. What is Commodity Processing?

Commodity Processing allows State distributing agencies and eligible recipient agencies such as school districts to contract with commercial food processors to convert raw bulk USDA commodities into more convenient, ready-to-use end products.

USDA began commodity processing in 1958 to permit agencies to maximize the use of donated commodities. Most of the commodities processed through the program go to schools participating in the National School Lunch Program.

Commodity Processing expands donated food use from a limited number of commodities to a broader array of nutritionally sound, popular items, while keeping labor costs to a minimum. Also, State distributing agencies and food processing companies have learned that working together is mutually beneficial to the food industry and program participants alike.

That is, the processing of donated foods provides industry the opportunity to market its finished products while eligible States and recipient agencies have the opportunity to receive a wider variety of popular table-ready end products.

2. Who is eligible to participate in Commodity Processing?

Any State distributing agency and recipient agencies, such as school districts, are eligible.

3. What benefits do processing participants receive?

By participating in Commodity Processing, State distributing agencies and recipient agencies find that they can:

- Stretch their commodity dollars by ordering lower-cost bulk products;
- Eliminate back-hauling charges because USDA vendors deliver commodities directly to processors;
- Increase their variety of end products;
- Reduce labor costs and cash outlays for food preparation; and
- Reduce storage costs.

4. How does Commodity Processing currently operate?

USDA offers States an estimate of the dollars planned to support a particular commodity. Multiple forms of a commodity are available as ordering options, one of which is bulk for reprocessing.

For example, funds to support the turkey market may be spent on turkey roasts, turkey ham, whole turkeys or bulk pack turkeys. The bulk pack is specifically designed for efficient processing into end products such as sliced deli meat, hot dogs, etc. The State coordinates with school districts the best forms in which to order this commodity to meet schools needs.

For raw bulk donated foods to be further processed into selected end products, the State distributing agency or recipient agency contracts with commercial food processors to have the donated foods converted to more useable forms.



USDA FACT SHEET: COMMODITY PROCESSING

This legally binding agreement (or processing agreement) allows the processor to receive USDA donated food like bulk chicken as an ingredient in the production of a finished end product like chicken nuggets or patties. In turn, the value of the donated food is passed through to the recipient agency in the form of a lower cost for the finished product. USDA purchases and delivers bulk donated foods to the designated processing location as ordered by the State. Some State agencies delegate certain processing functions, such as ordering, bidding, and monitoring, to school districts. Others manage these functions themselves.

5. How does the commodity value get passed on to the recipient agency?

Processors entering into these types of agreements must ensure that the full value of the donated food contained in the finished products is returned to the recipient agency. This value can be returned to the recipient agency by:

- (a) discounting the normal commercial price of a product; or
- (b) paying a refund to the school,
- (c) charging a fee for service for converting the donated food.

End products made from meat or poultry are usually produced under fee-for-service agreements. Under this arrangement the end products are sold at a processing fee, which represents the processor's costs for labor, packaging, other ingredients, and administrative overhead. With a fee for service, the value of the donated commodities in the end products is not included in the price of the product.

6. What is the purpose of a Commodity Processing Agreement?

As with any contractual arrangement, the processing agreement is designed to protect

the interests of all parties involved—i.e., the distributing agency, the recipient agency and the processor. Under this agreement, the processor agrees to protect and account for all USDA donated foods delivered to them for further processing.

Processors also agree to produce the end products in the specific form requested by the State distributing agency or school.

7. Is there only one type of Commodity Processing Agreement?

No. Processing agreements can be between FNS, a distributing agency and a processor, or a recipient agency and a processor. There are four basic types of agreements:

National Processing Agreement (NPA). To reduce costs and paperwork, FNS has taken on the role of holding the agreement with the processor, monitoring the bond and approving all of the end products manufactured under the agreement. Almost all States are participating in some NPA. By SY 07 all multi-State processors must have a national agreement in place. For additional information on NPA, click here: www.fns.usda.gov/fdd/processing/national/

State Master Agreement. Under a State master agreement, the distributing agency enters into an agreement with the processor and designated eligible recipient agencies may purchase end products from their processor.

State Agreement. Under a State agreement, the distributing agency negotiates bids/and/or prices, selects the processor and the end products which will be produced, and enters into an agreement with the processor.

Recipient Agency Agreement. Under a recipient agency agreement, the recipient agency or school enters into an agreement with the processor. This kind of arrangement requires the approval of the distributing



USDA FACT SHEET: COMMODITY PROCESSING

agency. Once approved, the recipient agency may purchase end products from that processor. A recipient agency agreement should be used after the agency has completed its procurement process.

8. Who is responsible for the procurement of processing services?

- Under a National agreement, the State DA or recipient agency is responsible for conducting procurement depending on who controls the finished product.
- Under a State agreement, the State is responsible for conducting procurement.
- Under both the State master agreement and the recipient agency agreement, the recipient agency is responsible for conducting the procurement.

Regardless of the type of agreement that is used, processing services should be procured as stipulated in 7 CFR 3016.36.

All procurements are subject to the most stringent procurement thresholds whether that is Federal, State, or local thresholds.

9. What should be included in the Processor Agreement?

It is essential that the processing agreement be accurately completed. The agreement must contain the following:

- State distributing agency information-- State, agency name, agency representative or contact person, address, and telephone number;
- Processor information--company name, company representative, address, and telephone number;
- List of all donated foods used by the processor--the processor must be very

specific about what donated foods will be used;

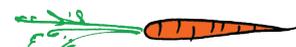
- Specific information regarding the processor's plant location(s);
- Effective dates of the agreement--both beginning and ending dates must be specified;
- Information regarding the value pass-through system(s) the processor will use--e.g., discount system vs. refund system;
- Debarment certification which states that the processor has not been debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from certain transactions with the Federal or State government;
- Specific information that may be required in a "Special Provisions" article of the agreement, such as subcontracting information, delivery requirements, information regarding by-product credits (particularly for meat and poultry processing), etc.; and
- Names, addresses, titles, and signatures of the authorizing persons who represent the distributing agency and the processor.

10. How many processors participate in Commodity Processing?

Over 150 processors.

11. How many processors have processing agreements in more than one State?

Over 100 processors.



USDA FACT SHEET: COMMODITY PROCESSING

12. What is the value of the foods processed under Commodity Processing Agreements?

In SY 2005/6 approximately \$1 billion worth of USDA commodities were made available to schools. Of that total, over half was diverted for further processing under processing agreements.

13. What foods are available for reprocessing?

At least 70 products are reprocessed. Those that are reprocessed most often are:

<u>Basic Commodity</u>	<u>Processed End Products</u>
Pork	Cooked sausage patties and links, pizza topping, pork bar-b-que
Beef	Charbroiled patties, crumbles, meat balls
Frozen fruit	Fruit pops, turnovers
Chicken	Nuggets, patties, roasted pieces, breaded chicken
Turkey	Turkey ham, bologna, breast deli slices
Flour, mozzarella, tomato paste	Pizza

14. What regulations govern Commodity Processing?

Commodity Processing is governed by regulations contained in the Code of Federal Regulations @ [7 CFR Part 250.30](#). For a complete copy of 7 CFR 250 regulations may be found on the Food Distribution website at: www.fns.usda.gov/fdd/regs/fd_regulations.htm

15. Who should I contact for more information about Commodity Processing?

For more information about Commodity Processing, we suggest that you contact your State distributing agency. A list of these State Contacts may be found on the Food Distribution web site at: www.fns.usda.gov/fdd/contacts/sdacontacts.htm.

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Visit us at www.fns.usda.gov/fdd.



NATIONAL SCHOOL LUNCH PROGRAM: PAST AND CURRENT REQUIREMENTS

Food Group	Past Requirements K-12	Current Requirements K-12 (starting July 1, 2012)
Fruit and Vegetables	1/2 - 3/4 cup of fruit and vegetables combined per day	1/4 - 1 cup of vegetables plus 1/2 - 1 cup of fruit per day Note: Students are allowed to select 1/2 cup fruit or vegetable under OVS (offer vs. serve)
Vegetables	No Specifications as to type of vegetable subgroup	Weekly requirement for: Dark green Red/orange Beans/peas (legumes) Starchy Other (as defined in 2010 Dietary Guidelines)
Meat/Meat Alternate (M/MA)	1.5—2 oz eq. (daily minimum)	Daily minimum and weekly ranges: Grades K-5: 1 oz eq. min. daily (8-10 oz weekly) Grades 6-8: 1 oz eq. min. daily (9-10 oz weekly) Grades 9-12: 2 oz eq. min. daily (10-12 oz weekly)
Grains	8 servings per week (minimum of 1 serving per day)	Daily minimum and weekly ranges: Grades K-5: 1 oz eq. min. daily (8-9 oz weekly) Grades 6-8: 1 oz eq. min. daily (8-10 oz weekly) Grades 9-12: 2 oz eq. min. daily (10-12 oz weekly)
Whole Grains	Encouraged	At least half of the grains must be whole grain-rich beginning July 1, 2012. Beginning July 1, 2014, all grains must be whole grain rich.
Milk	1 cup Variety of fat contents allowed; flavor not restricted	1 cup Must be fat-free (unflavored/flavored) or 1% low fat (unflavored)



NATIONAL SCHOOL LUNCH PROGRAM: PAST AND CURRENT REQUIREMENTS

School Breakfast Program Meal Pattern

Food Group	Past Requirements K-12	Current Requirements K-12
Fruit	½ cup per day (vegetable substitution allowed)	1 cup per day (vegetable substitution allowed) Note: Quantity required SY 2014-15. Students are allowed to select ½ cup of fruits under OVS.
Grains and Meat/Meat Alternate (M/MA)	2 grains, or 2 meat/meat alternates, or 1 of each per day	Daily min. and weekly ranges for grains: Grades K-5: 1 oz eq. min. daily (7-10 oz weekly) Grades 6-8: 1 oz eq. min. daily (8-10 oz weekly) Grades 9-12: 1 oz eq. min. daily (9-10 oz weekly) Note: Quantity required SY 2013-14. Schools may substitute M/MA for grains after the minimum daily grains requirement is met.
Whole Grains	Encouraged	At least half of the grains must be whole grain-rich beginning July 1, 2013. Beginning July 1, 2014, all grains must be whole grain rich.
Milk	1 cup Variety of fat contents allowed; flavor not restricted	1 cup Must be fat-free (unflavored/flavored) or 1% low fat (unflavored)

Nutrient Standards

Nutrient	Current Requirements K-12		
Sodium Reduce, <u>no set targets</u>	Target 1: SY 2014-15 Lunch ≤1230mg (K-5) ≤1360mg (6-8) ≤1420mg (9-12) Breakfast ≤540mg (K-5) ≤600mg (6-8) ≤640mg (9-12)	Target 2: SY 2017-18 Lunch ≤935mg (K-5) ≤1035mg (6-8) ≤1080mg (9-12) Breakfast ≤485mg (K-5) ≤535mg (6-8) ≤570mg (9-12)	Final target: SY 2022-23 Lunch ≤640mg (K-5) ≤710mg (6-8) ≤740mg (9-12) Breakfast ≤430mg (K-5) ≤470mg (6-8) ≤500mg (9-12)



NATIONAL SCHOOL LUNCH PROGRAM: PAST AND CURRENT REQUIREMENTS

Nutrient Standards

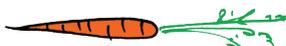
Past Requirements K-12	Current Requirements K-12
<p>Calories (min. only) Traditional Menu Planning Lunch: 633 (grades K-3) 785 (grades 4-12) 825 (optional grades 7-12) Breakfast: 554 (grades K-12)</p> <p>Enhanced Menu Planning Lunch: 664 (grades K-6) 825 (grades 7-12) 633 (optional grades K-3) Breakfast: 554 (grades K-12) 774 (optional grades 7-12)</p> <p>Nutrient-Based Menu Planning Lunch: 664 (grades K-6) 825 (grades 7-12) 633 (optional grades K-3) Breakfast: 554 (grades K-12) 618 (optional grades 7-12)</p>	<p>Calorie Ranges (min. & max.) Only food-based menu planning allowed</p> <p>Lunch: 550-650 (grades K-5) 600-700 (grades 6-8) 750-850 (grades 9-12)</p> <p>Breakfast: 350-500 (grades K-5) 400-550 (grades 6-8) 450-600 (grades 9-12)</p>
<p>Saturated Fat <10% of total calories</p>	<p>Saturated Fat <10% of total calories</p>
<p>Trans Fat: No limit</p>	<p>New specification: Zero grams per serving (nutrition label)</p>



IDEAS FOR MENU THEMES

(Use when planning a cycle menu)

MENU THEME	MENU THEME	MENU THEME
MENU ITEMS: THEME #1	MENU ITEMS: THEME #2	MENU ITEMS: THEME #3
MENU THEME	MENU THEME	MENU THEME
MENU ITEMS: THEME #4	MENU ITEMS: THEME #5	MENU ITEMS: THEME #6



THEME MENU PLANNING CALENDAR

THEME	THEME	THEME	THEME	THEME	THEME
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	

CULINARY BOOT CAMP

 DAY FOUR
 THURSDAY



2 WEEK CYCLE MENU PLANNING CALENDAR FOR BREAKFAST

	WEEK 1	WEEK 2
MONDAY		
TUESDAY		
WEDNESDAY		
THURSDAY		
FRIDAY		



**CULINARY
BOOT
CAMP**



**DAY FIVE
FRIDAY**

**Breakfast Team
Breakfast Service
Culinary Jeopardy
Movie Viewing
Goal Setting
Managing Transitions
Guests Arrive
Graduation
Celebratory Lunch**





CULINARY
BOOT
CAMP



RESOURCES

[Additional Resources](#)
[Sample HACCP Plan](#)
[Glossary](#)
[What Comes Next](#)

ADDITIONAL RESOURCES

Books:

The Omnivore's Dilemma, In Defense of Food and Food Rules by Michael Pollan
Food Politics, Safe Food, What to Eat, and Why Calories Count by Marion Nestle
Stuffed and Starved by Raj Patel
Diet for a Small Planet by Frances Moore Lappe
Fast Food Nation by Eric Schlosser
Appetite for Profit by Michele Simon
Food Fight: The Citizen's Guide to a Food and Farm Bill by Daniel Imhoff
Slow Food Nation: Why our food should be Good, Clean, Fair by Carlo Petrini
Plenty: One Man, One Woman, and a Raucous Year by Alicia Smith and J.B. Mckinnon
The Food of a Younger Land by Mark Kulansky
A Year without "Made in China" by Sara Bongiorni
The End Of Overeating: Taking Control of the Insatiable American Appetite by David A. Kessler
All You Can Eat: How Hungry is America? by Joel Berg

Films:

Dirt: The Movie (2009)
Food Fight (2008)
Food, Inc. (2008)
Food Stamped (2010)
Forks Over Knives (2011)
Fresh (2009)
Killer at Large (2008)
King Corn (2007)
Super Size Me (2004)
The Garden (2008)
The Future of Food (2004)
The Real Dirt on Farmer John (2006)
The True Cost of Food (2008)
Truck Farm (2011)
Ground Operations (2012)

Links:

School Food Initiative: www.schoolfood.org
Orfalea Foundation: www.orfaleafoundation.org
The Lunchbox-Healthy Tools to Help Schools: www.thelunchbox.org
Civil Eats Blog: www.civileats.com
Edible Schoolyard: www.edibleschoolyard.org
National School Lunch Program: www.fns.usda.gov/cnd/lunch
Slow Food: www.slowfoodusa.org
Environmental Working Group: www.ewg.org
Environmental Footprint Calculator: <http://footprint.wwf.org.uk>
Food Myth Busters: www.foodmyths.org
Food Politics by Marion Nestle: www.foodpolitics.com
Center for Ecoliteracy: www.ecoliteracy.org
The Food Times: www.thefoodtimes.org
Small Bites: www.smallbites.andybellatti.com
Seafood Watch: www.montereybayaquarium.org/cr/seafoodwatch.aspx
Appetite for profit: www.appetiteforprofit.com

Add Your Own:



USDA SAMPLE HACCP PLAN

Step 1: Develop, document, and implement SOPs.

General safety considerations

- Prohibit bare hand contact with ready-to-eat (RTE) foods.
- Store chemicals away from food and food-related supplies.

Personnel

- Require hand washing after restroom use, sneezing, coughing, or after performing any cleaning activity.
- Develop a policy for restricting or excluding ill employees from food production or preparation areas.

Product procurement

- Follow recommendations for selecting vendors such as those found in State distributing agency vendor certification procedures.
- Develop buyer product specifications.

Receiving

- Reject all cans with swollen sides or ends, flawed seals and seams, rust or dents.
- Put perishable foods into the refrigerator or freezer immediately.

Storing

- Store all food and paper supplies 6 to 8 inches off the floor.
- Label all food with name of the school and delivery date.

Transporting

- Preheat transfer carts prior to use.
- Limit transport travel time to a maximum of 2 hours.
 - Transport cold foods in insulated containers with blue

Holding

- Keep hot foods hot (above 135 °F) and cold foods cold (below 41 °F).

Preparation

- Do not keep food in the “danger zone” (between 41 °F and 135 °F) for more than 4 hours.
- Handle food with utensils; clean, gloved hands; or clean hands. (Bare hand contact with food during preparation should be limited. Bare hand contact with RTE foods should be prohibited.)

Cleaning/sanitizing

- Use clean water, free of grease and food particles.
- Keep wiping cloths in sanitizing solution while cleaning.

Cooking and documenting temperatures

- Record all temperatures when they are taken.
- Use only a clean and sanitized thermometer when taking internal temperatures of foods.



USDA SAMPLE HACCP PLAN, CONTINUED

Cooling

- Cool rapidly by storing food in small batches in individual containers; cover loosely so that heat can escape quickly.
- Keep cold foods cold by pre-chilling ingredients for salads.

Reheating

- Transfer reheated food to hot-holding equipment only when the food reaches the proper temperature.
- Use only cooking ranges, ovens, steamers, and microwave ovens to reheat foods. Use hot-holding equipment only to maintain temperature and not for rapidly heating food.

Step 2: Identify and document in writing all menu items according to the Process Approach to HACCP.

Step 3: Identify and document control measures and critical limits.

Step 4: Establish monitoring procedures.

Step 5: Establish corrective actions.

Step 6: Keep records.



USDA SAMPLE HACCP PLAN, CONTINUED

Cooking Potentially Hazardous Foods

(Sample SOP)

Purpose: To prevent foodborne illness by ensuring that all foods are cooked to the appropriate internal temperature

Scope: This procedure applies to foodservice employees who prepare or serve food.

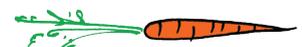
Key Words: Cross-Contamination, Temperatures, Cooking

Instructions:

1. Train foodservice employees who prepare or serve food on how to use a food thermometer and cook foods using this procedure.
2. If a recipe contains a combination of meat products, cook the product to the highest required temperature.
3. Follow State or local health department requirements regarding internal cooking temperatures.
4. If State or local health department requirements are based on the *2001 FDA Food Code*, cook products to the following temperatures:
5. 145 °F for 15 seconds
 - a. Seafood, beef, and pork
 - b. Eggs cooked to order that are placed onto a plate and immediately served
6. 155 °F for 15 seconds
 - a. Ground products containing beef, pork, or fish
 - b. Fish nuggets or sticks
 - c. Eggs held on a steam table
 - d. Cubed or Salisbury steaks
7. 165 °F for 15 seconds
 - a. Poultry
 - b. Stuffed fish, pork, or beef
 - c. Pasta stuffed with eggs, fish, pork, or beef (like lasagna or manicotti)
8. 135 °F for 15 seconds
 - a. Fresh, frozen, or canned fruits and vegetables that are going to be held on a steam table or in a hot box

Monitoring:

1. Use a clean, sanitized, and calibrated probe thermometer (preferably a thermocouple).
2. Avoid inserting the thermometer into pockets of fat or near bones when taking internal cooking temperatures.
3. Take at least two (2) internal temperatures from each batch of food by inserting the thermometer into the thickest part of the product (usually the center).



USDA SAMPLE HACCP PLAN, CONTINUED

Cooking Potentially Hazardous Foods, continued (Sample SOP)

4. Take at least two (2) internal temperatures of each large food item, like a turkey, to ensure that all parts of the product reach the required cooking temperature.

Corrective Action:

Continue cooking food until the internal temperature reaches the required temperature.

Verification and Record Keeping:

Foodservice employees will record product name, time, the two (2) temperatures/times, and any corrective action taken on the Cooking - Reheating Temperature Log. Foodservice manager will verify that foodservice employees has taken the required cooking temperatures by visually monitoring foodservice employees and preparation procedures during the shift and reviewing, initialing, and dating the temperature log at the close of each day. The Cooking – Reheating Temperature Log are kept on file for a minimum of one year.

Date Implemented: **By:**

Date Reviewed: **By:**

Date Revised: **By:**



USDA SAMPLE HACCP PLAN, CONTINUED

Cooling Potentially Hazardous Foods (Sample SOP)

Purpose: To prevent foodborne illness by ensuring that all potentially hazardous foods are cooled properly

Scope: This procedure applies to foodservice employees who prepares, handles, or serves food.

Key Words: Cross-Contamination, Temperatures, Cooling, Holding

Instructions:

1. Train foodservice employees who prepare or serve food on how to use a food thermometer and how to cool foods using this procedure.
Modify menus, production schedules, and staff work hours to allow for implementation of proper cooling procedures.
2. Prepare and cool food in small batches.
3. Chill food rapidly using an appropriate cooling method:
 - Place food in shallow containers (no more than 4 inches deep) and uncovered on the top shelf in the back of the walk-in or reach-in cooler
 - Use a quick-chill unit like a blast chiller
 - Stir the food in a container placed in an ice water bath
 - Add ice as an ingredient
 - Separate food into smaller or thinner portions
 - Pre-chill ingredients and containers used for making bulk items like salads
4. Follow State or local health department requirements regarding required cooling parameters.
5. If State or local requirements are based on the *2001 FDA Food Code*, chill cooked hot food from:
 - 135 °F to 70 °F within 2 hours. Take corrective action immediately if food is not chilled from 135 °F to 70 °F within 2 hours.
 - 70 °F to 41 °F or below in remaining time. The total cooling process from 135 °F to 41 °F may not exceed 6 hours. Take corrective action immediately if food is not chilled from 135 °F to 41 °F within the 6 hour cooling process.
6. Chill prepared, ready-to-eat foods such as tuna salad and cut melons from 70 °F to 41 °F or below within 4 hours. Take corrective action immediately if ready-to-eat food is not chilled from 70 °F to 41 °F within 4 hours.



USDA SAMPLE HACCP PLAN, CONTINUED

Cooling Potentially Hazardous Foods, continued

(Sample SOP)

Monitoring:

1. Use a clean, sanitized, and calibrated probe thermometer to measure the internal temperature of the food during the cooling process.
2. Monitor temperatures of products every hour throughout the cooling process by inserting a thermometer into the center of the food and at various locations in the product.

Corrective Action:

1. Reheat cooked hot food to 165 °F for 15 seconds and start the cooling process again using a different cooling method when the food is
 - Above 70 °F and 2 hours or less into the cooling process; and
 - Above 41 °F and 6 hours or less into the cooling process.
2. Discard cooked hot food immediately when the food is
 - Above 70 °F and more than 2 hours into the cooling process; or
 - Above 41 °F and more than 6 hours into the cooling process.
3. Use a different cooling method for prepared ready-to-eat foods when the food is above 41 °F and less than 4 hours into the cooling process.
4. Discard prepared ready-to-eat foods when the food is above 41 °F and more than 4 hours into the cooling process.

Verification and Record Keeping:

Foodservice employees will record temperatures and corrective actions taken on the Cooling Temperature Log. Foodservice employees will record if there are no foods cooled on any working day by indicating “No Foods Cooled” on the Cooling Temperature Log. Foodservice manager will verify that foodservice employees are cooling food properly by visually monitoring foodservice employees during the shift and reviewing, initialing, and dating the temperature log each working day. The Cooling Temperature Logs are kept on file for a minimum of one year.

Date Implemented: _____ **By:** _____

Date Reviewed: _____ **By:** _____

Date Revised: _____ **By:** _____



USDA SAMPLE HACCP PLAN, CONTINUED

Holding Hot and Cold Potentially Hazardous Foods (Sample SOP)

Purpose: To prevent foodborne illness by ensuring that all potentially hazardous foods are held at the proper temperature

Scope: This procedure applies to foodservice employees who prepare or serve food.

Key Words: Cross-Contamination, Temperatures, Holding, Hot Holding, Cold Holding, Storage

Instructions:

1. Train foodservice employees who prepare or serve food about proper hot and cold holding procedures. Include in the training a discussion of the temperature danger zone.
2. Follow State or local health department requirements regarding required hot and cold holding temperatures. If State or local health department requirements are based on the *2001 FDA Food Code*:
 - Hold hot foods at 135 °F or above; and
 - Cold foods at 41 °F or below.
3. Preheat steam tables and hot boxes.

Monitoring:

1. Use a clean, sanitized, and calibrated probe thermometer to measure the temperature of the food.
2. Take temperatures of foods by inserting the thermometer near the surface of the product, at the thickest part, and at other various locations.
3. Take temperatures of holding units by placing a calibrated thermometer in the coolest part of a hot holding unit or warmest part of a cold holding unit.
4. For hot-held foods:
 - Verify that the air/water temperature of any unit is at 135 °F or above before use.
 - Reheat foods in accordance with the Reheating for Hot Holding SOP.
 - All hot potentially hazardous foods should be 135 °F or above before placing the food out for display or service.
 - Take the internal temperature of food before placing it on a steam table or in a hot holding unit and at least every 2 hours thereafter.
5. For cold foods held for service:
 - Verify that the air/water temperature of any unit is at 41 °F or below before use.
 - Chill foods, if applicable, in accordance with the Cooling SOP.



USDA SAMPLE HACCP PLAN, CONTINUED

Holding Hot and Cold Potentially Hazardous Foods, continued (Sample SOP)

- All cold potentially hazardous foods should be 41 °F or below before placing the food out for display or service.
 - Take the internal temperature of the food before placing it onto any salad bar, display cooler, or cold serving line and at least every 2 hours thereafter.
6. For cold foods in storage:
- Take the internal temperature of the food before placing it into any walk-in cooler or reach-in cold holding unit.
 - Chill food in accordance with the Cooling SOP if the food is not 41 °F or below.
 - Verify that the air temperature of any cold holding unit is at 41 °F or below before use and at least every 4 hours thereafter during all hours of operation.

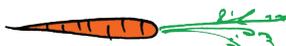
Corrective Action:

For hot foods:

- Reheat the food to 165 °F for 15 seconds if the temperature is found to be below 135 °F and the last temperature measurement was 135 °F or higher and taken within the last 2 hours. Repair or reset holding equipment before returning the food to the unit, if applicable.
- Discard the food if it cannot be determined how long the food temperature was below 135 °F.

For cold foods:

- Rapidly chill the food using an appropriate cooling method if the temperature is found to be above 41 °F and the last temperature measurement was 41 °F or below and taken within the last 2 hours:
 - Place food in shallow containers (no more than 4 inches deep) and uncovered on the top shelf in the back of the walk-in or reach-in cooler
 - Use a quick-chill unit like a blast chiller
 - Stir the food in a container placed in an ice water bath
 - Add ice as an ingredient
 - Separate food into smaller or thinner portions
- Repair or reset holding equipment before returning the food to the unit, if applicable.
- Discard the food if it cannot be determined how long the food temperature was above 41 °F.



USDA SAMPLE HACCP PLAN, CONTINUED

Date Marking Ready-to-Eat, Potentially Hazardous Food (Sample SOP)

Purpose: To ensure appropriate rotation of ready-to-eat food to prevent or reduce foodborne illness from *Listeria monocytogenes*

Scope: This procedure applies to foodservice employees who prepares, stores, or serves food.

Key Words: Ready-to-Eat Food, Potentially Hazardous Food, Date Marking, Cross-Contamination

Instructions:

1. Establish a date marking system and train employees accordingly. The best practice for a date marking system would be to include a label with the product name, the day or date, and time it is prepared or opened. Examples of how to indicate when the food is prepared or opened include:
 - Labeling food with a calendar date, i.e. cut cantaloupe, 5/26/05, 8:00 a.m.,
 - Identifying the day of the week, i.e. cut cantaloupe, Monday, 8:00 a.m., or
 - Using color-coded marks or tags, i.e. cut cantaloupe, blue dot, 8:00 a.m. means “cut on Monday at 8:00 a.m.”
2. Label ready-to-eat, potentially hazardous foods that are prepared on-site and held for more than 24 hours.
3. Label any processed, ready-to-eat, potentially hazardous foods when opened, if they are to be held for more than 24 hours.
4. Refrigerate all ready-to-eat, potentially hazardous foods at 41° F or below.
5. Serve or discard refrigerated, ready-to-eat, potentially hazardous foods within 7 days.
6. Indicate with a separate label the date prepared, the date frozen, and the date thawed of any refrigerated, ready-to-eat, potentially hazardous foods.
7. Calculate the 7-day time period by counting only the days that the food is under refrigeration. For example:
 - On Monday, 8/1/05, lasagna is cooked, properly cooled, and refrigerated with a label that reads, “Lasagna – Cooked – 8/1/05.”
 - On Tuesday, 8/2/05, the lasagna is frozen with a second label that reads, “Frozen – 8/2/05.” Two labels now appear on the lasagna. Since the lasagna was held under refrigeration from Monday, 8/1/05 – Tuesday, 8/2/05, only 1 day is counted towards the 7-day time period.
 - On Tuesday, 8/16/05, the lasagna is pulled out of the freezer. A third label is placed on the lasagna that reads, “Thawed – 8/16/05.” All three labels now appear on the lasagna. The lasagna must be served or discarded within 6 days.
8. Follow State and local public health requirements.



USDA SAMPLE HACCP PLAN, CONTINUED

Personal Hygiene (Sample SOP)

Purpose: To prevent contamination of food by foodservice employees

Scope: This procedure applies to foodservice employees who handles, prepares, or serves food

Key Words: Personal Hygiene, Cross-Contamination, Contamination

Instructions:

1. Train foodservice employees on the employee health policy (Develop SOP for Implementing an Employee Health Policy) and on practicing good personal hygiene.
2. Follow the employee health policy.
3. Report to work in good health, clean, and dressed in clean attire.
4. Change apron when it becomes soiled.
5. Wash hands properly, frequently, and at the appropriate times.
6. Keep fingernails trimmed, filed, and maintained so that the edges are cleanable and not rough.
7. Avoid wearing artificial fingernails and fingernail polish.
8. Wear single-use gloves if artificial fingernails or fingernail polish are worn.
9. Do not wear any jewelry except for a plain ring such as a wedding band.
10. Treat and bandage wounds and sores immediately. When hands are bandaged, single use gloves must be worn.
11. Cover a lesion containing pus with a bandage. If the lesion is on a hand or wrist, cover with an impermeable cover such as a finger cot or stall and a single-use glove.
12. Eat, drink, use tobacco, or chew gum only in designated break areas where food or food contact surfaces may not become contaminated.
13. Taste food the correct way:
 - Place a small amount of food into a separate container.
 - Step away from exposed food and food contact surfaces.
 - Use a teaspoon to taste the food. Remove the used teaspoon and container to the dish room. Never reuse a spoon that has already been used for tasting.
 - Wash hands immediately.
14. Wear suitable and effective hair restraints while in the kitchen.
15. Follow State and local public health requirements.



USDA SAMPLE HACCP PLAN, CONTINUED

Personal Hygiene, continued

(Sample SOP)

Monitoring:

A designated foodservice employee will inspect employees when they report to work to be sure that each employee is following this SOP. The designated foodservice employee will monitor that all foodservice employees are adhering to the personal hygiene policy during all hours of operation.

Corrective Action:

Any foodservice employee found not following this procedure will be retrained at the time of the incident. Affected food will be discarded.

Verification and Record Keeping:

The foodservice manager will verify that foodservice employees are following this policy by visually observing the employees during all hours of operation. The foodservice manager will complete the Food Safety Checklist daily. Foodservice employees will record any discarded food on the Damaged or Discarded Product Log, which will be kept on file for a minimum of one year.

Date Implemented: **By:**

Date Reviewed: **By:**

Date Revised: **By:**



USDA SAMPLE HACCP PLAN, CONTINUED

Reheating Potentially Hazardous Foods

(Sample SOP)

Purpose: To prevent foodborne illness by ensuring that all foods are reheated to the appropriate internal temperature

Scope: This procedure applies to foodservice employees who prepare or serve food.

Key Words: Cross-Contamination, Temperatures, Reheating, Holding, Hot holding

Instructions:

1. Train foodservice employees who prepare or serve food on using a food thermometer and how to reheat foods using this procedure.
2. Follow State or local health department requirements regarding reheating temperatures.
3. If State or local requirements are based on the *2001 FDA Food Code*, heat processed, ready-to-eat foods from a package or can, such as canned green beans or prepackaged breakfast burritos, to an internal temperature of at least 135 °F for 15 seconds for hot holding.
4. Reheat the following products to 165 °F for 15 seconds:
 - Any food that is cooked, cooled, and reheated for hot holding
 - Leftovers reheated for hot holding
 - Products made from leftovers, such as soup
 - Precooked, processed foods that have been previously cooled
5. Reheat food for hot holding in the following manner if using a microwave oven:
 - Heat processed, ready-to-eat foods from a package or can to at least 135 °F for 15 seconds
 - Heat leftovers to 165 °F for 15 seconds
 - Rotate (or stir) and cover foods while heating
 - Allow to sit for 2 minutes after heating
6. Reheat all foods rapidly. The total time the temperature of the food is between 41 °F and 165 °F may not exceed 2 hours.
7. Serve reheated food immediately or transfer to an appropriate hot holding unit.

Monitoring:

1. Use a clean, sanitized, and calibrated probe thermometer.
2. Take at least two internal temperatures from each pan of food.



USDA SAMPLE HACCP PLAN, CONTINUED

Reheating Potentially Hazardous Foods, continued

(Sample SOP)

Corrective Action:

Continue reheating/heating food if the internal temperature does not reach the required temperature.

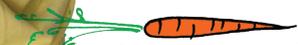
Verification and Record Keeping:

Foodservice employees will record product name, time, the two temperatures/times, and any corrective action taken on the Cooking – Reheating Temperature Log. Foodservice manager will verify that foodservice employees have taken the required reheating temperatures by visually monitoring foodservice employees during the shift and reviewing, initialing, and dating the Cooking – Reheating Temperature Log at the close of each day. The Cooking – Reheating Temperature Logs are kept on file for a minimum of one year.

Date Implemented: **By:**

Date Reviewed: **By:**

Date Revised: **By:**



USDA SAMPLE HACCP PLAN, CONTINUED

Receiving Deliveries

(Sample SOP)

Purpose: To ensure that all food is received fresh and safe when it enters the foodservice operation, and to transfer food to proper storage as quickly as possible

Scope: This procedure applies to foodservice employees who handles, prepares, or serves food.

Key Words: Cross-Contamination, Temperatures, Receiving, Holding, Frozen Goods, Delivery

Instructions:

1. Train foodservice employees who accept deliveries on proper receiving procedures.
2. Schedule deliveries to arrive at designated times during operational hours.
3. Post the delivery schedule including the names of vendors, days and times of deliveries, and drivers' names.
4. Establish a rejection policy to ensure accurate, timely, consistent, and effective refusal and return of rejected goods.
5. Organize freezer and refrigeration space, loading docks, and store rooms before deliveries.
6. Gather product specification lists and purchase orders, temperature logs, calibrated thermometers, pens, flashlights, and clean loading carts before deliveries.
7. Keep receiving area clean and well lighted.
8. Do not touch ready-to-eat foods with bare hands.
9. Determine whether foods will be marked with the date of arrival or the "use-by" date and mark accordingly upon receipt.
10. Compare delivery invoice against products ordered and products delivered.
11. Transfer foods to their appropriate locations as quickly as possible.

Monitoring:

1. Inspect the delivery truck when it arrives to ensure that it is clean, free of putrid odors, and organized to prevent cross-contamination. Be sure refrigerated foods are delivered on a refrigerated truck.
2. Check the interior temperature of refrigerated trucks.
3. Confirm vendor name, day and time of delivery, as well as driver's identification before accepting delivery. If driver's name is different than what is indicated on the delivery schedule, contact the vendor immediately.
4. Check frozen foods to ensure that they are all frozen solid and show no signs of thawing and refreezing, such as the presence of large ice crystals or liquids on the bottom of cartons.



USDA SAMPLE HACCP PLAN, CONTINUED

Receiving Deliveries, continued

(Sample SOP)

5. Check the temperature of refrigerated foods.
 - a. For fresh meat, fish, and poultry products, insert a clean and sanitized thermometer into the center of the product to ensure a temperature of 41 °F or below. The temperature of milk should be 45 °F or below.
 - b. For packaged products, insert a food thermometer between two packages being careful not to puncture the wrapper. If the temperature exceeds 41 °F, it may be necessary to take the internal temperature before accepting the product.
 - c. For eggs, the interior temperature of the truck should be 45 °F or below.
6. Check dates of milk, eggs, and other perishable goods to ensure safety and quality.
7. Check the integrity of food packaging.
8. Check the cleanliness of crates and other shipping containers before accepting products. Reject foods that are shipped in dirty crates.

Corrective Action:

1. Reject the following:
 - a. Frozen foods with signs of previous thawing
 - b. Cans that have signs of deterioration – swollen sides or ends, flawed seals or seams, dents, or rust
 - c. Punctured packages
 - d. Expired foods
 - e. Foods that are out of safe temperature zone or deemed unacceptable by the established rejection policy

Verification and Record Keeping:

Record temperature and corrective action on the delivery invoice or on the Receiving Log. Foodservice manager will verify that foodservice employees are receiving products using the proper procedure by visually monitoring receiving practices during the shift and reviewing the Receiving Log at the close of each day. Receiving Logs are kept on file for a minimum of one year.

Date Implemented: _____ **By:** _____

Date Reviewed: _____ **By:** _____

Date Revised: _____ **By:** _____



USDA SAMPLE HACCP PLAN, CONTINUED

Storing and Using Poisonous or Toxic Chemicals (Sample SOP)

Purpose: To prevent foodborne illness by chemical contamination

Scope: This procedure applies to foodservice employees who use chemicals in the kitchen.

Keywords: Chemicals, Cross-Contamination, Contamination, Material Safety Data Sheet

Instructions:

1. Train foodservice employees on the proper use, storage, and first aid of chemicals and on the proper use of chemical test kits as specified in this procedure.
2. Designate a location for storing the Material Safety Data Sheets (MSDS).
3. Label and date all poisonous or toxic chemicals with the common name of the substance.
4. Store all chemicals in a designated secured area away from food and food contact surfaces using spacing or partitioning.
5. Limit access to chemicals by use of locks, seals, or key cards.
6. Maintain an inventory of chemicals.
7. Store only chemicals that are necessary to the operation and maintenance of the kitchen.
8. Mix, test, and use sanitizing solutions as recommended by the manufacturer, State, or local health department.
9. Use the appropriate chemical test kit to measure the concentration of sanitizer each time a new batch of sanitizer is mixed.
10. Follow manufacturer's directions for specific mixing, storing, and first aid instructions on chemicals.
11. Do not use chemical containers for storing food or water.
12. Use only hand sanitizers that comply with the *2001 FDA Food Code*. Confirm with the manufacturer that the hand sanitizers used meet the requirements of the *FDA Food Code*.
13. Label and store first aid supplies in a container that is located away from food or food contact surfaces.
14. Label and store medicines for employee use in a designated area and away from food contact surfaces. Do not store medicines in food storage areas.
15. Store refrigerated medicines in a covered, leak proof container, where they are not accessible to children, and cannot contaminate food.
16. Follow State and local public health requirements.



USDA SAMPLE HACCP PLAN, CONTINUED

Using Suitable Utensils When Handling Ready-to-Eat Foods (Sample SOP)

Purpose: To prevent foodborne illness due to hand-to-food cross-contamination

Scope: This procedure applies to foodservice employees who prepare, handle, or serve food.

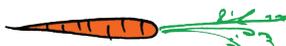
Key Words: Ready-to-Eat food, Cross-Contamination

Instructions:

1. Use proper hand washing procedures to wash hands and exposed arms prior to preparing or handling food or at anytime when the hands may have become contaminated.
2. Do not use bare hands to handle ready-to-eat foods at any time unless washing fruits and vegetables.
3. Use suitable utensils when working with ready-to-eat food. Suitable utensils may include:
 - Single-use gloves
 - Deli tissue
 - Foil wrap
 - Tongs, spoodles, spoons, and spatulas
4. Wash hands and change gloves:
 - Before beginning food preparation
 - Before beginning a new task
 - After touching equipment (such as refrigerator doors) or utensils that have not been cleaned and sanitized
 - After contacting chemicals
 - When interruptions in food preparation occur, such as when answering the telephone or checking in a delivery
 - Handling money
 - Anytime a glove is torn, damaged, or soiled
 - Anytime contamination of a glove might have occurred
5. Follow State and local public health requirements.

Monitoring:

A designated foodservice employee will visually observe that gloves or suitable utensils are used and changed at the appropriate times during all hours of operation.



USDA SAMPLE HACCP PLAN, CONTINUED

Using Suitable Utensils When Handling Ready-to-Eat Foods,

continued

(Sample SOP)

Corrective Action:

Employees observed touching ready-to-eat food with bare hands will be retrained at the time of the incident. Ready-to-eat food touched with bare hands will be discarded.

Verification and Record Keeping:

The foodservice manager will verify that foodservice workers are using suitable utensils by visually monitoring foodservice employees during all hours of operation. The foodservice manager will complete the Food Safety Checklist daily. The designated foodservice employee responsible for monitoring will record any discarded food on the Damaged and Discarded Product Log. This log will be maintained for a minimum of one year.

Date Implemented: **By:**

Date Reviewed: **By:**

Date Revised: **By:**



USDA SAMPLE HACCP PLAN, CONTINUED

Washing Fruits and Vegetables

(Sample SOP)

Purpose: To prevent or reduce risk of foodborne illness or injury by contaminated fruits and vegetables.

Scope: This procedure applies to foodservice employees who prepare or serve food.

Keywords: Fruits, Vegetables, Cross-Contamination, Washing

Instructions:

1. Train foodservice employees who prepare or serve food on how to properly wash and store fresh fruits and vegetables.
2. Wash hands using the proper procedure.
3. Wash, rinse, sanitize, and air-dry all food-contact surfaces, equipment, and utensils that will be in contact with produce, such as cutting boards, knives, and sinks.
4. Follow manufacturer's instructions for proper use of chemicals.
5. Wash all raw fruits and vegetables thoroughly before combining with other ingredients, including:
 - Unpeeled fresh fruit and vegetables that are served whole or cut into pieces.
 - Fruits and vegetables that are peeled and cut to use in cooking or served ready-to-eat.
6. Wash fresh produce vigorously under cold running water or by using chemicals that comply with the *2001 FDA Food Code*. Packaged fruits and vegetables labeled as being previously washed and ready-to-eat are not required to be washed.
7. Scrub the surface of firm fruits or vegetables such as apples or potatoes using a clean and sanitized brush designated for this purpose.
8. Remove any damaged or bruised areas.
9. Label, date, and refrigerate fresh-cut items.
10. Serve cut melons within 7 days if held at 41 °F or below (see SOP for Date Marking, Ready-to-Eat, Potentially Hazardous Food).
11. Do not serve raw seed sprouts to highly susceptible populations such as preschool-age children.
12. Follow State and local public health requirements.

Monitoring:

Foodservice manager will visually monitor that fruits and vegetables are being properly washed, labeled, and dated during all hours of operation. In addition, foodservice employees will check daily the quality of fruits and vegetables in cold storage.



USDA SAMPLE HACCP PLAN, CONTINUED

Washing Fruits and Vegetables, continued

(Sample SOP)

Corrective Action:

Unwashed fruits and vegetables will be removed from service and washed immediately before being served. Unlabeled fresh cut items will be labeled and dated. Discard cut melons held after 7 days.

Verification and Record Keeping:

Foodservice manager will complete the Food Safety Checklist daily to indicate that monitoring is being conducted as specified in this procedure.

Date Implemented: **By:**

Date Reviewed: **By:**

Date Revised: **By:**



USDA SAMPLE HACCP PLAN, CONTINUED

Washing Hands (Sample SOP)

Purpose: To prevent foodborne illness caused by contaminated hands

Scope: This procedure applies to anyone who handles, prepares, and serves food.

Keywords: Handwashing, Cross-Contamination

Instructions:

1. Train any individual who prepares or serves food on proper handwashing. Training may include viewing a handwashing video and demonstrating proper handwashing procedure.
2. Post handwashing signs or posters in a language understood by all foodservice staff near all handwashing sinks, in food preparation areas, and restrooms.
3. Use designated handwashing sinks for handwashing only. Do not use food preparation, utility, and dishwashing sinks for handwashing.
4. Provide warm running water, soap, and a means to dry hands. Provide a waste container at each handwashing sink or near the door in restrooms.
5. Keep handwashing sinks accessible anytime employees are present.
6. Wash hands:
 - Before starting work
 - During food preparation
 - When moving from one food preparation area to another
 - Before putting on or changing gloves
 - After using the toilet
 - After sneezing, coughing, or using a handkerchief or tissue
 - After touching hair, face, or body
 - After smoking, eating, drinking, or chewing gum or tobacco
 - After handling raw meats, poultry, or fish
 - After any clean up activity such as sweeping, mopping, or wiping counters
 - After touching dirty dishes, equipment, or utensils
 - After handling trash
 - After handling money
 - After any time the hands may become contaminated



USDA SAMPLE HACCP PLAN, CONTINUED

Washing Hands, continued

(Sample SOP)

7. Follow proper handwashing procedures as indicated below:
 - Wet hands and forearms with warm, running water (at least 100 °F) and apply soap.
 - Scrub lathered hands and forearms, under fingernails and between fingers for at least 10 - 15 seconds. Rinse thoroughly under warm running water for 5 - 10 seconds.
 - Dry hands and forearms thoroughly with single-use paper towels.
 - Dry hands for at least 30 seconds if using a warm air hand dryer.
 - Turn off water using paper towels.
 - Use paper towel to open door when exiting the restroom.
8. Follow FDA recommendations when using hand sanitizers. These recommendations are as follows:
 - Use hand sanitizers only after hands have been properly washed and dried.
 - Use only hand sanitizers that comply with the 2001 FDA Food Code. Confirm with the manufacturers that the hand sanitizers used meet these requirements. Use hand sanitizers in the manner specified by the manufacturer.

Monitoring:

A designated employee will visually observe the handwashing practices of the foodservice staff during all hours of operation. In addition, the designated employee will visually observe that handwashing sinks are properly supplied during all hours of operation.

Corrective Action:

Employees that are observed not washing their hands at the appropriate times or using the proper procedure will be asked to wash their hands immediately. Employee will be re-trained to ensure proper handwashing procedure.

Verification and Record Keeping:

Foodservice manager will complete the Food Safety Checklist daily to indicate that monitoring is being conducted as specified.

Date Implemented:	By:
Date Reviewed:	By:
Date Revised:	By:



USDA SAMPLE HACCP PLAN, CONTINUED

Appendix II. (SAMPLE) Procedure for Handling Leftover Sliced Turkey

A. Roast Turkey. Cook, Serve, Cool Leftovers, Reheat, and Serve

↓

Receive:

Frozen turkey from certified vendor (USDA inspected).

↓

Store in walk-in freezer (0°F or below).

↓

Thaw bulk turkey in refrigerator (41°F or below).

↓

Cook to proper temperature (165 °F for a minimum of 15 seconds).

↓

Slice, portion, and serve (hot holding at 135 °F or above).

↓

Immediately refrigerate leftovers. Place in shallow pans and cool to 41°F or below within 6 hours but from 135°F to at least 70°F in the first 2 hours. (Take temperature at 1.5 hours.)

↓

Remove leftovers from refrigerator and reheat to 165 °F for a minimum of 15 seconds.

↓

Hot hold at 135 °F or above.

↓

Serve.



USDA SAMPLE HACCP PLAN, CONTINUED

REVIEW OF THE SCHOOL FOOD SAFETY PROGRAM

The school food service manager will review the school food safety program at the beginning of each school year and when any significant changes occur in the operation. The attached checklist will be used for the review.

Food Safety Program Review Checklist

1. Documents to review

- Standard Operating Procedures**
- Food Preparation Process Charts**
- Control Measures in the Process Approach (CCPs and SOPs)**
- Corrective Actions**

2. Monitoring recordkeeping. Choose at random one week from the previous four.

Type of Record (SOP, CCP, Corrective Action, etc.)	Monitoring Frequency and Procedure (How often? Initialed and dated? Etc.)	Record Location (Where is record kept?)

2. Describe the strengths or weaknesses with the current monitoring or recordkeeping methods.



USDA SAMPLE HACCP PLAN, CONTINUED

3. Who is responsible for verifying that the required records are being completed and properly maintained?
4. Describe the training that has been provided to support the food safety program.
5. Do the managers and staff demonstrate knowledge of the plan?
6. Have there been any changes to the menu or operation (new equipment, etc.)?
7. Was the plan modified because of these changes?



GLOSSARY

Bake: To surround food with hot dry air in the oven as with cakes, bread, and pastries

Baste: To lightly moisten a dish by spooning over melted fat or cooking juices from the dish itself

Beat: To work a substance of mixture energetically to modify its consistency, appearance, or color

Blanch: To cook briefly in boiling water to fix color and tenderize

Boil: To cook submerged in water that has reached 212°F

Bone: To remove bones from meat, fish, or poultry

Braise: To cook covered in a small amount of liquid, with or without browning first

Bran: The hard outer covering of kernels of wheat and other grains

Bread: To coat with bread crumbs through standard breading procedure

Broil: To cook using radiant overhead heat

Caramelize: To turn sugar into caramel by gently heating; also, browning the natural sugars of certain vegetables

Clarify: To remove impurities

Cream: To blend ingredients together

Creaming Method: To beat fat and sugar together to blend them uniformly and incorporate air

Deep Fry: Cooking an item in fat, usually between 325°F and 375°F

Deglaze: To use the addition of a liquid to lift sediment left in pan after roasting or sautéing in order to make a sauce or gravy

Degrease: To remove excess grease

Dice: To cut into cubes

Drain: To remove excess water or liquid

Dredge: To coat with flour

Dress: To season, stuff and tie poultry

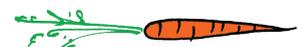
Dry Roast: To roast with no fat or liquid

Dust: To lightly cover with flour, etc.

Emince: To cut into thin slices or rounds

Eviscerate: To remove internal organs from fish and poultry

Extract: A concentrated aromatic liquid used to enhance the flavor of certain culinary preparations.



GLOSSARY, CONTINUED

Fold: To gently mix in ingredients with a rubber spatula in a folding motion so as to retain volume and lightness

Filet: To remove bones

Garnish: To decorate or embellish a dish or plate

Glaze: To add sweet or shiny coating

Gluten: An elastic substance, formed from proteins present in wheat flours, that gives structure and strength to baked goods

Griddle: Flat top stove

Grill: To cook by radiant heat, using heat source from below

Hydrogenation: A process that converts liquid oils to solid fats (shortenings) by chemically bonding hydrogen to the fat molecules (now, which are referred to as Trans Fats and are thought to be unhealthful)

Leavening: The production or incorporation of gases in a baked product to increase volume and to produce shape and texture especially in baked goods. Yeast, baking soda and powder are all forms of leavenings

Line: To cover the bottom and sides of a pan to prevent sticking

Marinate: To soak in a seasoned or flavored liquid

Muffin Method: A mixing method, commonly used in baking, in which the mixed dry ingredients are combined with the mixed liquid ingredients

Mince: To chop finely

Pan Fry: To cook in shallow oil, 1/2-inch. Food is usually floured or breaded first

Parboil: To partially cook in boiling water

Pare/Peel: To remove outer skin with knife or peeler

Plunge: To shock in cold water

Poach: To cook gently in flavored or acidic liquid, 160°F to 180°F

Pour Batter: A batter that is liquid enough to pour

Pressure Cook: To cook in liquid under pressure

Proof: To expand dough through yeast's production of carbon dioxide



GLOSSARY, CONTINUED

Rest: To allow meat to sit before slicing so juices will redistribute throughout the meat; also, to put dough or batter in a cool place as part of its preparation

Rice: To pass through the fine holes of a ricer (as with cooked potatoes)

Roast: To surround food with hot dry air, as in an oven or an open air spit

Sauté: To cook quickly in a small amount of fat

Scaling: To measure ingredients by weight

Sear: To brown on all sides

Simmer: To cook slowly and steadily in a sauce or other liquid over gentle heat at 185°F

Skim: To remove scum and impurities that rise to the surface of a stock or sauce when it is boiled

Steaming: To cook in a perforated container or steamer basket, which is set above boiling water

Steep: To soak foods in hot liquid to add flavor

Stew: As with braising but with bite sized pieces

Stir: To agitate ingredients gently with a utensil

Sweat: To cook vegetables in fat over gentle heat so that they become soft but not brown

Truss: To thread twine through the body of poultry or game bird

Whip/Whisk: To beat and incorporate air

Whole Wheat Flour: Flour made by grinding the entire wheat kernel, including the bran and germ



WHAT COMES NEXT:

A Note on Transitions from Kathleen de Chadenèdes, Director, School Food Initiative

After spending a week in Culinary Boot Camp we hope that you have experienced some moments of professional and personal transformation. In order for you and the children you serve to derive the maximum benefit from your hard work at Culinary Boot Camp, the Orfalea Foundation will provide the following services to ensure your professional development:

- Give a presentation on Transitions Management that gives you the tools to make the most of change.
- Arrange for a goal-setting session for you and the decision makers in your workplace to agree on some achievable short-term and long-term goals.
- Conduct a follow-up visit. Members of the Culinary Boot Camp Instructional Team will assist you in the implementation of your goals, evaluate the need to apply for an equipment or infrastructure grant, and help you strategize your way to success.
- Provide on-going technical assistance from our team of Mobile Chef Instructors.

Better school food depends on the cooperation of inspired individuals who keep that Culinary Boot Camp “spark” alive as they implement incremental changes in their food service operations. That spark may manifest itself in a more positive attitude or the courage to use new skills on the job.

Please reach out to each other to share best practices and seek encouragement when confronting challenges. We could not transform school food without you; you are the agents of change.

*Thank you for your dedication,
Kathleen de Chadenèdes*





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ORFALEA FOUNDATION

Our primary objective is the empowerment of others.

We take pride in our dedication to this transformative work, which demands boldness and courage from us and our partners.

We value accountability, candor, initiative, teamwork, and learning through shared successes and failures.

We strive to be receptive listeners, and to always show respect for our coworkers, partners, community, and environment.

We honor the entrepreneurial spirit of our founders by seeking innovative solutions and measurable results.

At our best, we use our strength to help others find theirs.

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