

AZ HEALTH ZONE

FOOD SAFETY & FOOD DEMONSTRATION

PARTICIPANT GUIDE

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THE UNIVERSITY OF ARIZONA

Cooperative Extension

Pima County



PART 1

FOOD SAFETY GUIDELINES

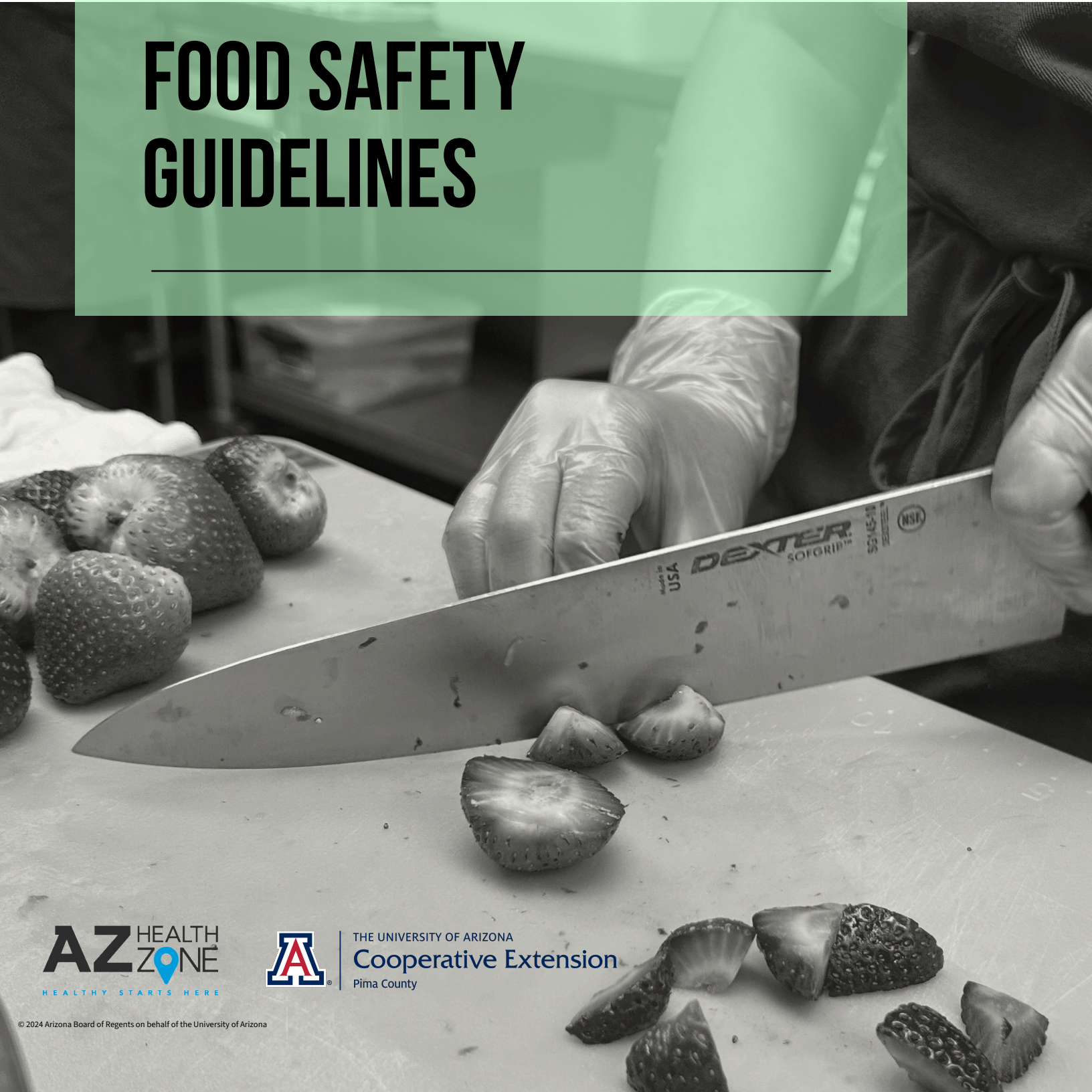


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CHAIN OF CUSTODY
AND FOOD SAMPLES

1 **FOODBORNE ILLNESS**

A foodborne illness is an illness transmitted to people through food.

¹ **ILLNESS**

What symptoms of foodborne illness should we be most concerned about when handling food?

- Vomiting
- Diarrhea
- Jaundice (yellow skin or eyes)
- Sore throat with fever
- Infected cuts and burns with pus on hands, wrists and exposed portion of the arms

What should you do if you have a sore throat with fever?

- Stop handling food and report to a supervisor.

What should you do when having symptoms of vomiting or diarrhea?

If at work:

- Stop working immediately.
- Report to a supervisor.
- Go home and return to working with food after at least 24 hours have passed since the vomiting and diarrhea symptoms ended.

If not at work:

- Notify your supervisor by phone or other agreed upon communication channel.
- Do not return to working with food until at least 24 hours have passed after the diarrhea and vomiting symptoms have ended.
- Never handle food if you are ill **or if someone that you live with** has food borne illness. Report the illness to your supervisor and reschedule the event or food preparation time.

INJURY

What should you do if you have an infected wound or cut on your hand or arm?

- Report the wound or cut to your supervisor, and properly cover it with a clean, impermeable bandage and a single-use glove (for hand wounds), before returning to work.
 - This is called a double layer of protection and will protect the food. Follow handwashing and glove changing protocols.
- If you are cut while working with food, dispose of the food in the area and clean and sanitize the area.



IF YOU ARE A SUPERVISOR:

- Be on the lookout for any of the symptoms mentioned. If team members show signs of any symptoms, other than cuts or burns, do not have them work with food or present food demonstrations.
- If team members live with someone that has any of the symptoms listed, other than cuts or burns, do not have them work with food or present food demonstrations.
- For cuts or burns that happen on site:
 - Make sure to care for the cut or burn and cover it with a double layer of protection, if it is in an area that could come in contact with food.
 - If there is required workplace injury documentation needed, fill out the paperwork.
 - Monitor the team member to make sure that a double layer of protection is maintained and basic handwashing and glove changing protocols are followed.
- For infected cuts or burns or cuts or burns that happen outside of work hours:
 - Make sure to care for the cut or burn and cover it with a double layer of protection, if it is in an area that could come in contact with food.
 - Monitor the team member to make sure that a double layer of protection is maintained and basic handwashing and glove changing protocols are followed.

2 PERSONAL HYGIENE

Personal hygiene is the set of personal habits and behaviors that a food worker can take to minimize the risk of food becoming contaminated from their own body.

ATTIRE

Show up dressed appropriately:

- Hair should be pulled back, tied, and under a cap, hairnet, or clean cloth.
- Facial hair should be covered with a net.
- Limit jewelry to a wedding band and watch.
- Have short and clean fingernails. If possible, do not wear nail polish or artificial nails. If you do have nail polish or artificial nails, you must wear gloves at all times while handling food.
- Avoid wearing perfume or cologne.
- Shirts should have at least a capped sleeve.
- Long sleeves should be fitted close to the body.
- Wear at least three-quarter length pants (no leggings) to ensure your safety.
 - Pants must be complete with no holes, in order to ensure the safety of your legs.
- Wear a clean apron.
- Wear flat shoes with closed toed and nonslip to ensure your safety.
- Do not smoke or chew gum.



HANDWASHING

Handwashing Method: ¹

1. Wet your hands with clean, running warm water (about 100 degrees) and apply soap.
2. Lather your hands by rubbing them together with the soap. Lather the backs of your hands, between your fingers, under your nails, and any exposed part(s) or your wrists and/or arms.
3. Scrub your hands for at least 20 seconds. Need a timer? Hum the "Happy Birthday" song from beginning to end twice.
4. Rinse your hands well under clean, running water.
5. Dry your hands using a clean paper towel and then turn the water off with the paper towel to avoid touching the knobs.

"THE SPREAD OF GERMS FROM THE HANDS OF FOOD WORKERS TO FOOD...ACCOUNTS FOR NINE OF TEN OUTBREAKS IN WHICH FOOD WAS CONTAMINATED BY FOOD WORKERS."²

When should hands be washed?

- When entering a food preparation area.
- Before putting on clean, single-use gloves for working with food and between glove changes.
- Before engaging in food preparation.
- Before handling clean equipment and serving utensils.
- When changing tasks like switching between handling raw foods and working with ready to eat foods.
- After handling soiled dishes, equipment, or utensils.
- After touching bare human body parts, for example, parts other than clean hands and clean, exposed portions of arms, or touching hair.
- After using the restroom. **The restroom sink is not a handwashing sink.** Rewash hands before handling food.
- After coughing, sneezing, blowing your nose, touching a phone or notes, eating, or drinking.

*Note that hand antiseptics should be used only **in addition** to proper handwashing and **do not substitute for hand washing.**

READY TO EAT VS RAW FOOD

A **ready to eat food** is a food that will not be heated to a temperature that biological contaminants can be destroyed. This includes salads, cooked meats, smoked fish, desserts, sandwiches, cheese, and food that you have cooked in advance to serve cold.

A **raw food** is a food that will be heated to a temperature that biological contaminants can be destroyed. This includes items like raw meat, vegetables that will be sautéed, and raw grains like rice.

GLOVES

- Disposable, food safe gloves are used to protect the foods' safety from being contaminated by your hands.
- Wash your hands before putting on gloves and after taking them off.
 - If you have artificial nails or painted nails **always** wear gloves.
 - If you have a cut, sore, or other wound, dress the wound and **always** wear gloves.
 - **Always** wear gloves when handling a ready to eat food. When possible, use a sanitized utensil instead of a gloved hand, to further ensure food safety.

- Per the FDA, it is recommended that gloves be changed and replaced every four hours, or immediately after they become contaminated or torn. Follow this at a minimum.¹
- Change gloves when changing jobs in the kitchen and when going from handling raw foods to ready to eat foods.

HIGHLY SUSCEPTIBLE POPULATIONS

Often we provide food demonstrations to populations that are highly susceptible to food borne illness.

What makes a population highly susceptible?

A population is highly susceptible to foodborne illness if it is:

Immunocompromised, preschool-age children, older adults, and individuals who obtain food at a facility that provides services such as custodial care, health care, or assisted living, or in a child or adult day care center, kidney dialysis center, hospital, nursing home, or nutritional or senior center.¹

Highly susceptible populations also include those who are pregnant.¹

Use extra food safety caution when providing food to a highly susceptible population.

3 FOOD STORAGE

Proper food storage will help prevent contamination of food and bacterial growth.

THE FOOD DANGER ZONE

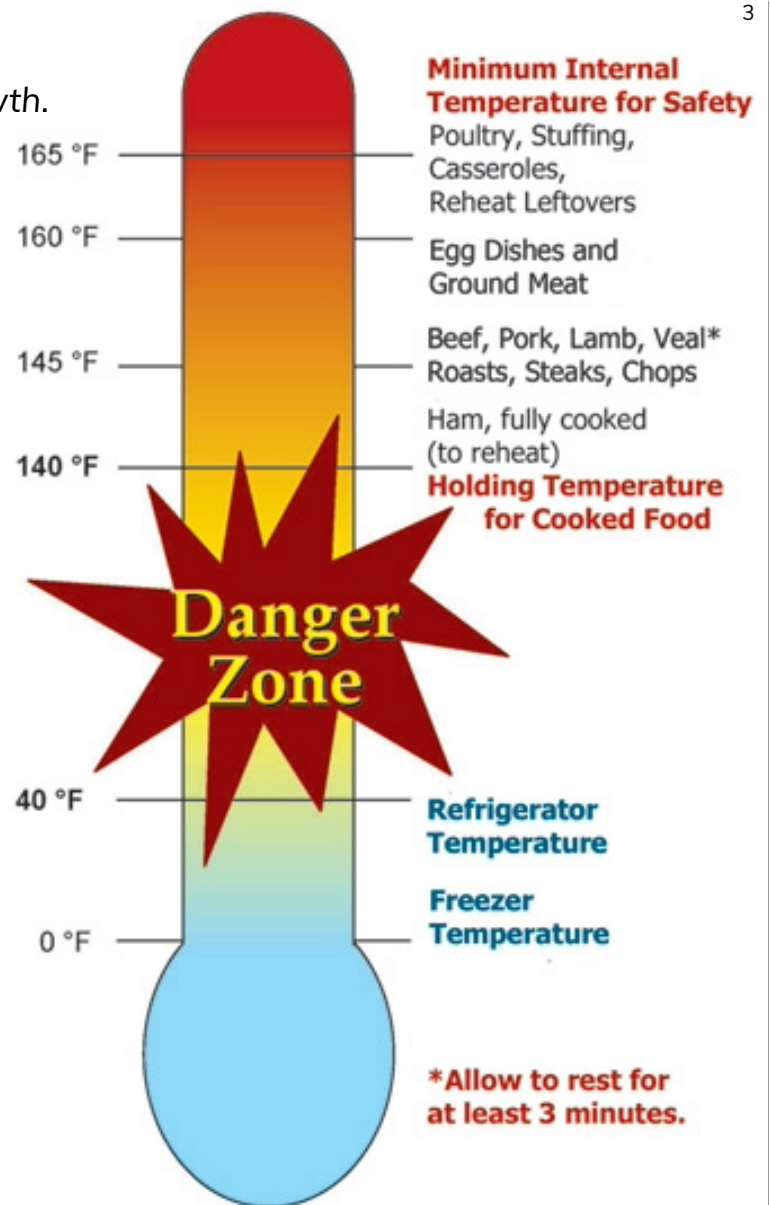
The **Food Danger Zone**, when bacteria grows the fastest, is between 41°F to 141°F. This temperature range is optimal for the growth of most bacteria. Make sure to keep hot foods hot (at or above 141°F) and cold foods cold (at or below 41°F).

Bacteria grows fastest at human body temperature, making good hygiene, handwashing, and glove use even more important when considering food safety.

DRY GOODS STORAGE

Store dry goods in a cool and dry place. They should be stored at least six inches above the floor and not directly touching a wall. Keep previously opened packages of dry goods in tightly sealed containers to prevent contamination and spoilage.

Storing dry goods in this way will lower the risk of physical contamination of the food and pests affecting the food.

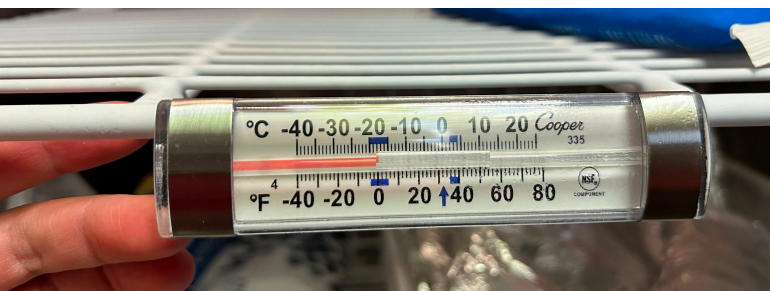


FREEZER STORAGE

Keep frozen foods packaged or tightly wrapped to prevent freezer burn. Label packages with the name of the food and date stored. Food stored constantly at 0°F will always be safe. Only the quality suffers with lengthy freezer storage. Do not over-pack the freezer to ensure that there is proper cold air circulation around all stored foods.

Freezing keeps food safe by slowing the movement of molecules, causing microbes to enter a dormant stage. Freezing preserves food for extended periods because it prevents the growth of microorganisms that cause both food spoilage and foodborne illness.⁴

The dial settings for a freezer are not a temperature gauge. They often have labels like 'cold' and 'colder'. This is not a sufficient way to know the temperature of a freezer. Be sure to use a thermometer.



Freezing to 0°F inactivates any microbes — bacteria, yeasts and molds — present in food. Once thawed, however, these microbes can again become active, multiplying under the right conditions to levels that can lead to foodborne illness.

Since they will then grow at about the same rate as microorganisms on fresh food, you must handle thawed items as you would any perishable food.⁴

THAWING

Do not thaw food at room temperature. The temperature may go above 40°F before the center of the food is thawed, which could result in bacterial growth.

Use one of these methods to properly thaw frozen foods:⁵

1. Place frozen foods in refrigerator overnight to thaw.
2. Submerge frozen food under cold running water (70°F) until thawed.
3. Thaw frozen food in a microwave (if it is to be cooked and served immediately).

TO ENSURE SAFETY, KEEP FROZEN FOOD AT 0° F OR LOWER.

USE A FREEZER THERMOMETER IN ORDER TO ENSURE TEMPERATURE STAYS AT 0° F OR LOWER.

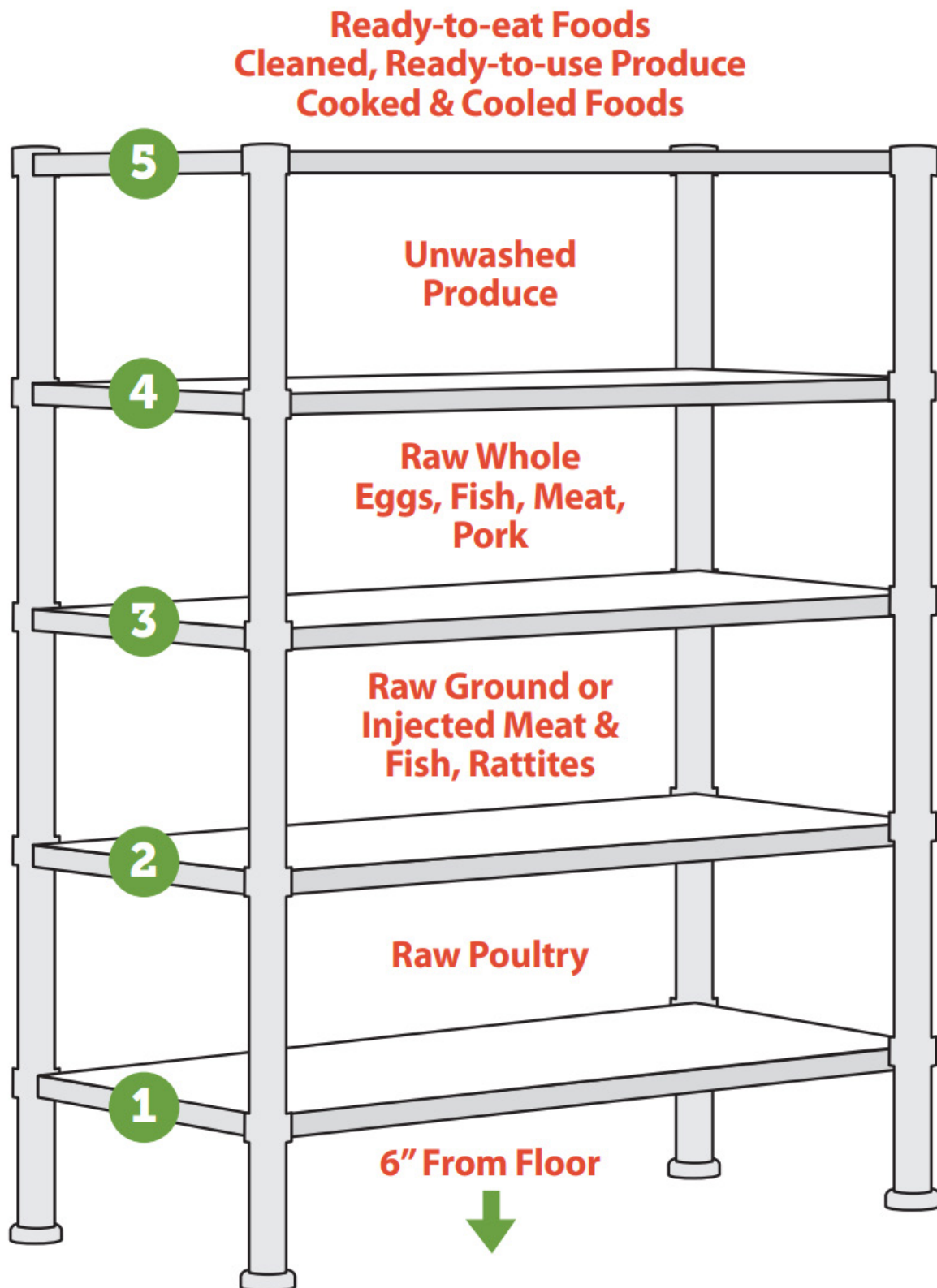
REFRIGERATOR STORAGE

- Keep the refrigerator door closed, except when removing food or placing food inside.
- Keep the refrigerator clean, including shelves, walls, and compartments.
- Ensure that the temperature is below 41°F at all times by keeping a working thermometer in the refrigerator.
- The dial settings for a refrigerator are not a temperature gauge. They often have labels like 'cold' and 'colder'. This is not a sufficient way to know the temperature of a refrigerator. Be sure to use a thermometer.
- Leave space between foods so that cold air can circulate between them—be careful not to overcrowd the refrigerator.
- Keep food tightly wrapped or in clean, sealed containers—add labels that include the name of the food and the date stored. For food demonstrations, prepared food should be thrown away seven days after preparation. Foods should only be used if it is before their expiration date.
- Store raw and cooked food separately.
- Do not allow container bottoms to touch any food.



REFRIGERATOR SHELF STORAGE

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4 HANDLING AND PREPARATION

Food handling is the process of acquiring, transporting, storing, washing, and preparing food so that it is safe for public consumption.

SANITATION ISSUES

There are two major sanitation problems when handling and preparing food:

- Cross contamination—the transfer of bacteria from one source to another. Bacteria transfer may occur from food to food, from equipment to food, or from work surface to food. Another kind of cross contamination can involve foods that cause an allergic reaction for some people. This occurs when a food allergen is transferred to on to a food that does not contain the allergen. For example, setting fruit on to a surface with peanut butter on it. The fruit can now cause an allergic reaction for people with a peanut allergy.
- Bacterial growth—the multiplication of bacteria. This is most likely to occur when working in the Danger Zone (between 41° and 140°F).

General Rules to follow:

- Only purchase foods from reputable suppliers that have completed food safety checks. If purchasing at a farmer's market, make sure to ask the farmer/seller what safety checks they use at the farm. If using a school or community garden, use Certified School Gardens, to ensure safety. To help a school garden get certified, see information through Arizona Department of Health Services.
- Purchasing or using food with exposure to biological contaminants makes it very difficult to render the food safe again. For example, if lettuce purchased has E. coli, it will have E. coli when served (no cooking involved).

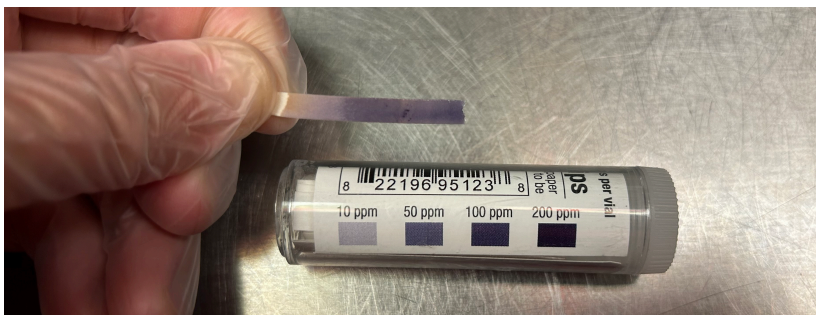
- Clean and sanitize equipment, worktables, and stations before preparing food and keep them clean and sanitary at all times. When cleaning and sanitizing, wipe thoroughly with a cleaning solution first, then follow with a sanitizing solution, and allow equipment and surfaces to air dry.
- Handle foods as little as possible. Use spatulas, tongs, or other sanitized utensils instead of hands whenever possible. This includes when you are using gloves, if food can be handled with a sanitized utensil, that is preferred.
- Clean as you go. Do not wait until the end of the day to clean everything at once.
- A good time to clean is when you are switching jobs (For example, in between cleaning produce and preparing produce).
- Change out your equipment at a minimum of every four hours (this includes utensils, cutting boards, etc.)
- After handling raw poultry, meat, fish, or eggs, immediately clean and sanitize cutting surfaces and equipment.
- Do not take more food from refrigeration than you will use in one hour.
- Keep foods covered when not actively working with them.
- Do not mix leftover food with freshly prepared food. Food that is used at a food demonstration should not be reused.

CLEANING

- Cleaning physically removes most germs, dirt, and impurities from objects and surfaces.
- Use soap or detergents with water to scrub, wash, and rinse surfaces or objects.
- Cleaning should be performed regularly and always comes before sanitizing objects and surfaces.

SANITIZING

- Sanitizing reduces the number of contaminants on objects and surfaces to levels considered safe.
- Bacteria are destroyed in two ways—by using heat or by using chemicals.
- Use a bleach solution of 50-100 parts per million (ppm) to sanitize (approximately 1 tablespoon or ½ oz. bleach per one gallon of hot water, 110°F). Use a test strip to ensure the proper ppm. Too low in ppm will not effectively reduce the number of contaminants and too high in ppm can leave a residue.



WASHING RAW PRODUCE

No washing method completely removes or kills all microbes which may be present on produce but studies have shown that thoroughly rinsing fresh produce under running water is an effective way to reduce the number of microorganisms. Washing fruits and vegetables not only helps remove dirt, bacteria, and pests, but it also helps remove residual pesticides.

- Under running water or in a clean bowl, rub or scrub fruits and vegetables briskly with your hands or a brush to remove dirt and surface microorganisms. A clean bowl is a better choice than the sink because the drain area often harbors microorganisms and is difficult to sanitize.
- Wash water should be no more than 10 degrees colder than produce to prevent the entrance of microorganisms into the stem or blossom end of the produce.
- Do not wash fruits and vegetables with detergent or bleach solutions. Many types of fresh produce are porous and could absorb these chemicals, changing their safety and taste.
- The FDA advises against using commercial produce washes because the safety of their residues has not been evaluated and their effectiveness has not been tested or standardized.
- Adding vinegar to the water (1 cup distilled white vinegar per 3 cups water), followed by a clean water rinse, has been shown in some cases to reduce bacterial contamination. The USDA recommendation is to use clean running water.

- Do not wash meats. Washing meats can spread contaminants to additional preparation areas.

Some produce has to be washed in a specific way. Following are some of the most common:

Leafy green vegetables:

Separate and individually rinse the leaves of lettuce and other greens, discarding the outer leaves if torn and bruised. Leaves can be difficult to clean so immersing the leaves in a bowl of cold water for a few minutes and agitating the water with your clean hand is helpful to remove physical contaminants like dirt.



Root vegetables and other hard vegetables/fruits:

Clean well with a scrub brush under running water or in a bowl of clean water. If a fruit or vegetable can be scrubbed without causing damage to the surface, scrub with a brush. Use a second bowl of water to rinse additionally.

Melons:

The pocketed surfaces of some types of melon provide a favorable environment for bacteria. Clean well with a scrub brush under running water or in a bowl of clean water. Use a second bowl of water to rinse additionally.

Soft fruits and vegetables:

Wash under running water or agitate in a bowl of clean water and set out to dry. Do not wash berries before you are ready to use them.

• Ice water calibration:

- To use the ice water method, fill a large glass with finely crushed ice. Add clean tap water to the top of the ice and stir well. Immerse the food thermometer stem a minimum of 2 inches into the mixture, touching neither the sides nor the bottom of the glass. Wait a minimum of 30 seconds before adjusting. Without removing the stem from the ice, hold the adjusting nut under the head of the thermometer with a suitable tool and turn the head so the pointer reads 32°F.



USING A FOOD THERMOMETER

How to Calibrate a Food Thermometer:

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There are two ways to check the accuracy of a food thermometer. One method uses ice water, the other uses boiling water. Many food thermometers have a calibration nut under the dial that can be adjusted. Check the thermometer package for instructions. Because water boils at a variety of temperatures depending on elevation, it is recommended to use the ice water testing method.

EVEN IF THE FOOD THERMOMETER CANNOT BE CALIBRATED, IT SHOULD STILL BE CHECKED FOR ACCURACY.

REPLACE INACCURATE FOOD THERMOMETERS.

How to Use a Food Thermometer:

The most important thing in using a food thermometer is to place it in the food at the proper location to determine that the food has reached a safe temperature throughout. In general, the food thermometer should be placed in the thickest part of the food, away from bone, fat, or gristle.⁹

- You can view a USDA video on how to use a food thermometer (see citation for URL).¹¹
- Make sure to insert the thermometer into food without touching the container or cooking vessel that it is in.¹²
- For specific foods, see below:
 - Meat
 - When taking the temperature of beef, pork, or lamb roasts, the food thermometer should be placed midway in the roast, avoiding the bone. When cooking hamburgers, steaks, or chops, insert the thermometer in the thickest part, away from bone, fat, or gristle.

- When the food being cooked is irregularly shaped, such as with a beef roast, check the temperature in several places.
- Poultry
 - Check the internal temperature in the innermost part of the thigh and wing and the thickest part of the breast. For optimum safety, do not stuff poultry. If stuffing whole poultry, the center of the stuffing must reach a safe minimum internal temperature of 165 °F. If cooking poultry parts, insert food thermometer into the thickest area, avoiding the bone. The food thermometer may be inserted sideways if necessary. When the food is irregularly shaped, the temperature should be checked in several places.
- Combination Dishes
 - For casseroles and other combination dishes, place the food thermometer into the thickest portion of the food or the center of the dish. Egg dishes and dishes containing ground meat and poultry should be checked in several places.
- To avoid burning fingers, it may be helpful to remove the food from the heat source (if cooking on a grill or in a frying pan) and insert the food thermometer sideways after placing the item on a clean spatula or plate.



SAFE FOOD TEMPERATURES

The list below includes foods and the corresponding minimum temperatures that need to be reached in cooking in order to minimize food borne illness.

- Fish 145°F (62.8°C)
- Beef roasts (medium) 160°F (71.1°C)
- Ground or flaked meats 160°F (71.1°C)
- Pork, ham, bacon 160°F (71.1°C)
- Egg dishes 160°F (71.1°C)
- Meat with stuffing 165°F (73.9°C)
- Ground poultry 165°F (73.9°C)
- Casseroles 165°F (73.9°C)
- Reheated foods 165°F (62.8°C)
- Poultry (breasts) 170°F (76.7°C)
- Poultry (whole) 165°F (82.2°C)
- Microwaved foods 165°F (62.8°C); let stand for 1/3 of the original cooking time, or as recipe directs.

CHILLING COOKED FOODS

Chill foods as quickly as possible over ice or in a cold-water bath before placing into the refrigerator. Prepared foods should be cooled to 70°F within two hours and to 41°F or below within an additional four hours. Total cooling time should not exceed six hours.

- Use a clean food thermometer to monitor cooling process.
- Use many small containers to speed cooling of large amounts of foods, for example a shallow baking dish.



5 EQUIPMENT

Equipment handling for food safety includes the processes and techniques to minimize risk to both food demonstrators and participants.

EQUIPMENT HANDLING

- Do not attempt to catch a falling knife.
- A sharp knife is a safe knife. Always keep knives sharp.
- Use knives only for cutting, not for opening bottles, or any other unintended purpose.
- Cut away from yourself and other people.
- Carry a knife properly by holding it beside yourself, point down, with the sharp edge back and away from your body.
- Do not put knives anywhere they cannot be seen (for example, into a sink full of soapy water).



**BE AWARE OF THE ENVIRONMENT
AROUND YOU WHEN USING A KNIFE OR
ANY CUTTING EQUIPMENT, INCLUDING
PEOPLE MOVING THROUGH THE SPACE.**

- Point pot handles away from active burners, open flames, and walkways in order to prevent burns and spills.
- Do not grasp any pot handle with your bare hands. Use dry potholders or towels to handle hot pans (damp or wet towels will create steam, which can cause steam burns).
- Keep a supply of salt or baking soda nearby in case it becomes necessary to put out a range top fire.
- Make sure to know where fire extinguishers are located. Choose the correct type of fire extinguisher when putting out a fire. Fire extinguishers are labeled according to the type of fire they smother. Class A is for ordinary combustible materials such as wood, fabric, papers, or plastic. Class B is for flammable liquids like cooking oil. Class C is for electrical fires.
- Do not use any equipment unless you understand its proper application and operation.
- Be sure to unplug electrical equipment before cleaning it.
- Do not touch or handle electrical equipment while your hands are wet.
- Do not leave food, specifically hot fats, unattended on the stove.
- Clean up any spills immediately.
- Keep walkways and stairs clear of objects to limit tripping hazards and equipment damage.

- Use a ladder or step ladder to reach objects on high shelves.
- Get help when lifting heavy objects.
- Use a cart or similar equipment to move heavy objects.



EQUIPMENT CLEANING & SANITIZING

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Manual Dishwashing

- **Scrape and pre-rinse.** This step keeps the washing water clean longer.
- **Wash.** This removes all soil and grease. Use warm water (110°F) and a cleaning agent. Scrub equipment well with a brush. Replace cleaning agent solution when water is unclear or suds have disappeared.
- **Rinse.** The purpose of rinsing is to remove all soap from the equipment. Use clean, warm water (110°F) and change the water often. Use running water to rinse equipment when a 3-compartment sink is not available.
- **Sanitize.** Place equipment in a rack and immerse it in hot water (180°F) for 30 seconds. Sanitizing can also be completed with disinfectants instead of heat. If disinfectant chemicals are used it is important to follow the instructions on the manufacturer's label. If using bleach, use a bleach solution of 50-100 parts per million (ppm) to sanitize (approximately 1 tablespoon or ½ oz. bleach per one gallon of hot water, 110°F). Use a test strip to ensure the proper ppm. Too low in ppm will not effectively reduce the number of contaminants and too high in ppm can leave a residue.
- **Drain and air dry.** Do not towel dry equipment as this may lead to recontamination.



Mechanical Dishwashing

- Scrape and pre-rinse.
- Place the dishes in the rack so that the dishwasher spray will touch all surfaces. Piling dishes on top of each other will prevent them from getting cleaned and sanitized.
- Run the machine for a full cycle. Proper temperature depends on the type of machine used. Check user's manual for appropriate temperature.
- Sanitizing temperature and pressure depends on the method used by the dishwashing machine; a machine that sanitizes by chemical disinfectant should be set between 120-140°F (49-60°C), and a machine that sanitizes by heat should be set at 181°F (82°C). Check user's manual to verify appropriate temperature.
- Air dry and inspect for cleanliness. Do not towel dry equipment as this may lead to re-contamination.

Stationary Equipment

- Follow the manufacturer's instructions for cleaning stationary equipment.
- Sanitizing should be done with a bleach solution of 50-100 parts per million (ppm) to sanitize (approximately 1 tablespoon or ½ oz. bleach per one gallon of hot water, 110°F). Use a test strip to ensure the proper ppm. Too low in ppm will not effectively reduce the number of contaminants and too high in ppm can leave a residue. Follow manufacturer's instructions for how to handle equipment while sanitizing.



IT IS A GOOD IDEA TO STAY UP TO DATE ON POSSIBLE FDA OR USDA CHANGES:

WWW.FDA.GOV/FOOD/BUY-STORE-SERVE-SAFE-FOOD/SAFE-FOOD-HANDLING

WWW.FSIS.USDA.GOV/FOOD-SAFETY/SAFE-FOOD-HANDLING-AND-PREPARATION/FOOD-SAFETY-BASICS/STEPS-KEEP-FOOD-SAFE

6 CHAIN OF CUSTODY AND FOOD SAMPLES

The chain of custody is the unbroken path a product takes from the first stage in the supply chain to the end consumer, including where it is purchased, transporting food, transformation into a dish, storage, and distribution to participants.

CHAIN OF CUSTODY CONSIDERATIONS

When purchasing food, make sure to keep foods at food safe temperatures during travel to your location, especially in the heat.

To ensure safety of food, ask yourself:

- Where will the food be stored?
- Can you ensure that other people are not going to change the integrity of it from the last time that you last saw it (this includes perishable and non-perishable items)?
- Are other materials/foods/etc. that could cause a food safety issue stored in the same place as your food demo materials?
 - For example, our Extension office breakroom refrigerator stores all manner of items, including bugs for entomology and forgotten staff lunches, so it would not be appropriate for storing foods for food demonstrations.

- How will the foods and equipment be transported to the class location?
 - Are they going to be protected from contaminants?
 - Transport food and equipment in sealed, sanitized containers, to ensure food safety. This could be a cooler (for hot or cold foods) to protect them and/or containers that seal with a lid to protect equipment.
 - Make sure food and equipment can be protected at the class location too.
 - Make sure everyone unpacking supplies has clean hands and gloves, if necessary.

THESE ARE THE SAME QUESTIONS
THAT NEED TO BE ANSWERED FOR ALL
EQUIPMENT AND PAPER GOODS THAT
COME INTO CONTACT WITH FOODS AND
SAMPLES.

- Make sure to clean and sanitize the classroom area before unpacking either equipment or foods. Think about your displayed foods. If you are going to use these foods in creating samples, make sure that the area is sanitized where they are displayed and that no one else can touch them.
- When placing samples out, make sure that participants only touch the one that they are taking, and none are put back. This is the same for napkins/utensils/cups, etc.
 - This is more easily controlled if the instructor is handing samples all out individually to participants.

CONSIDERATIONS FOR FOOD SAMPLES MADE AT OR BEFORE FOOD DEMONSTRATIONS

Food preparation should be done in a licensed kitchen with equipment that is stored there. Food samples can be created onsite, if a licensed kitchen is not available, during a closed session class.

Check with your local licensing health department for specific considerations and to see if closed sessions are allowed.

For a closed session in Pima County:

- If the temporary event is by “invitation only,” then you do not have to have a temporary license because the event is considered “private.” However, if you prepare, sell, or give food away at temporary events that are open to the public, then you will need a temporary license. Usually, each food booth or tent has a temporary license at a special event.
- Make sure that you have a sign-up list for the closed class.
- No food should leave the session with participants because it could be distributed to other people.
- The class should be held in contained area and with a contained number of people.
- Do not reuse foods from this closed session. Bring only what you need and dispose of the rest.
 - For example: measure out spices and leave the rest in a food safe location to be used later. If you bring a gallon of milk to a food demonstration in order to use a cup of milk, you cannot use the rest of the milk at a later class.



General Considerations:

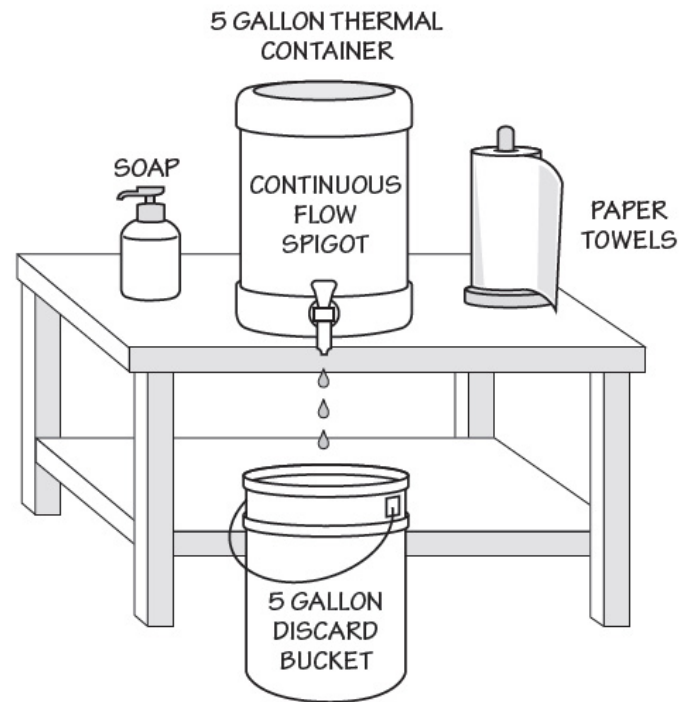
- Food must always be served at safe temperatures using proper serving utensils.
- Cook foods to the appropriate food safe temperature, reheat premade food to 165°F and make sure the holding temperature is at or above 140°F. Use a food thermometer to monitor the holding temperature of hot foods. Cold cooked foods and leftovers should not be reheated in a slow cooker.
- Place cooked food in chafing dishes, preheated steam tables, warming trays, and/or slow cookers.
- Make sure to only take out the foods from cold storage that are needed, as they are needed.
 - Keep cold food cold -- at or below 40°F. Place food in containers on ice and only take out a small portion of food at a time. Use a food thermometer to monitor the holding temperature of cold foods.
 - If the temperature is above 90°F, food should not be left out for more than 1 hour.
 - Use a cooler with individual containers of small amounts of food samples, so that there is not a large portion of food out for a long period of time. When using a new container of samples, also replace utensils with a new set.
- Ice used in drinks must be kept in a separate food container and cannot be used to keep foods cold.
- Unwrapped food cannot directly come in contact with ice. Melted ice water should be periodically drained from coolers. At no time should there be food containers floating in the cooler, because of cross contamination concerns.
- Bring a food thermometer and test temperatures of foods throughout the food demonstration and sampling.
- Demonstrators or servers must wear appropriate clothing, including hairnets and gloves. See section on dressing appropriately to handle food.
- Demonstrators and servers must be able to wash their hands and change gloves during a demonstration as needed.
- This may seem simple but can be challenging during a food demonstration. Creating talking points around why this is done can be helpful and ensures the presenter doesn't have large silent gaps of time during the demonstration.

ICE IS CONSIDERED A FOOD AND SHOULD BE TREATED THE SAME WAY AS OTHER FOODS.

HANDWASHING AT A FOOD DEMONSTRATION

- Hands must be washed at a demonstration in the same way as when preparing food. See the Handwashing section, under *When should hands be washed?* on page 4.
- Handwashing stations must be available for use by demonstrators or anyone handling food. **A restroom is not a handwash station.** There must be another source of water to wash hands outside of a restroom.
 - Try to hold your class somewhere with a sink that has hot water(100°F) and bring soap and paper towels.
 - If that is not possible, you will need an alternative, such a Gravity Flow Hand Wash Station (check with your local licensing agency). To set up a Gravity Flow Hand Wash Station:¹⁶
 - Use a large urn or igloo filled with a minimum temperature of 100°F water.
 - Replace the push button spigot with a valve, or spigot that allows the water flow to be turned on and run without holding a button down.
 - Place a soap dispenser next to the water dispenser.
 - Use a roll of paper towels placed in a holder for drying hands.
 - Use a bucket to collect the dirty water from washing.

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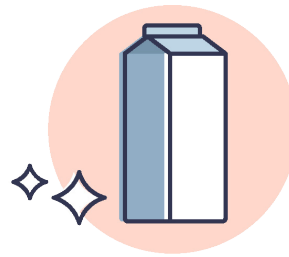


**A RESTROOM IS NOT A
HANDWASHING STATION**

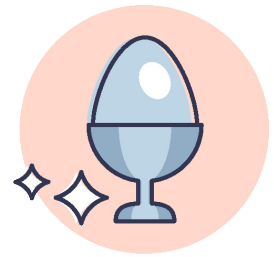
ALLERGENS

Make sure that the audience has access to the recipe in its entirety. If you have substituted ingredients, make sure to clearly explain that during your demonstration.

- Use an allergens handout to indicate what allergens are present.
- Nine major food allergens (see handout):¹⁷
 - milk
 - eggs
 - fish, such as bass, flounder, cod
 - crustacean shellfish, such as crab, lobster, shrimp
 - tree nuts, such as almonds, walnuts, pecans
 - peanuts
 - wheat
 - soybeans
 - sesame
- Purchased ingredients may have allergens in them that are not obvious (like bread made in a factory that processes nuts). **Be sure to read all the labels of foods used in creating samples and indicate any of the major nine allergens that are present.**
 - It is best practice to retain any containers that foods came in, so that ingredients can be shared (for example, the bread bag, even if sample sandwiches are handed out).



MILK



EGGS



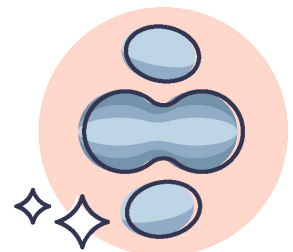
FISH



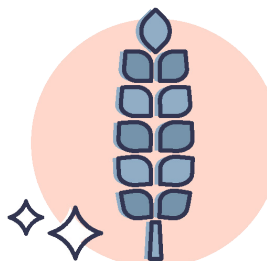
SHELLFISH



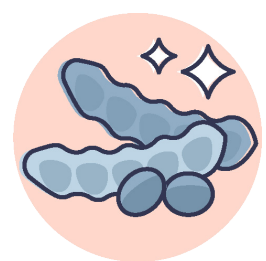
TREE NUTS



PEANUTS



WHEAT



SOY



SESAME



PART 2

FOOD DEMONSTRATION GUIDELINES

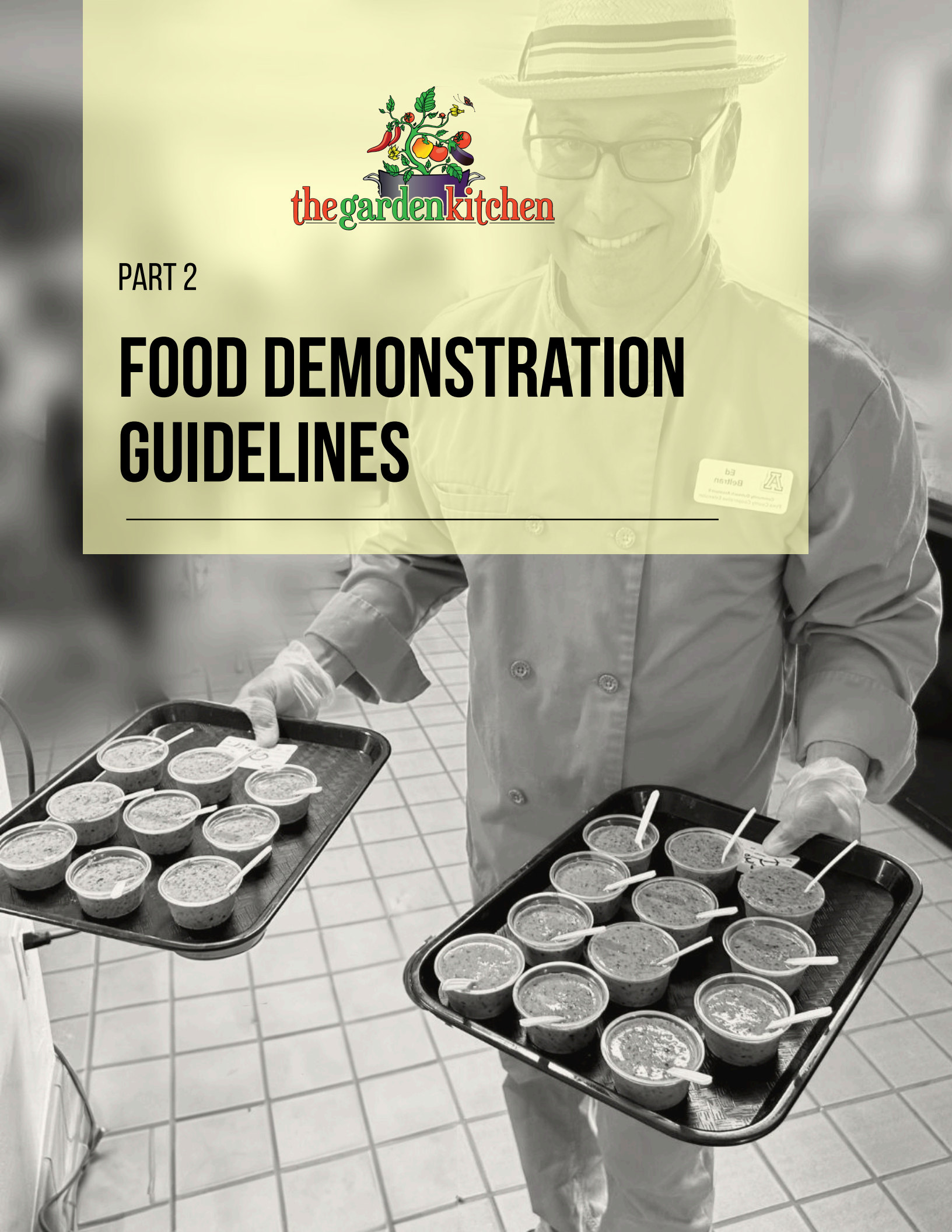


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BASIC COOKING
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WHY INCLUDE FOOD DEMONSTRATIONS AS PART OF YOUR PROGRAMMING?

Food provides a way to connect with our participants and share in an important aspect of health. Different types of learners can be engaged through their senses including sight, hearing, and taste, and there is an opportunity to share community wisdom and stories. Food demonstrations can serve as an effective tool in connecting with an audience in a fun and interactive way as well as provide an opportunity to discuss how to tailor foods and recipes for populations with gardens, limited access to food, or other needs, without sacrificing flavor or enjoyment.

Food demonstrations can also be a way to talk about food in a way that considers whole health, including spending time with loved ones, the enjoyment of smelling a dish that is cooking, remembering a dish that is culturally important, or engaging in a variety of activities that bring audiences' joy. This means that you can include food demonstrations in many types of programming, not just when educating about nutrition. Think of them as an opportunity to extend learning beyond a lecture or a day in the garden.

Types of Food Demonstrations

A Tasting of a Single Food Item or Single Food Items of Different Types

- This is an effective way to introduce new foods to audiences and have conversations about seasonality, local foods, gardening and other topics. This could include activities like:
 - Providing sample slices of a locally grown apple at a farmer's market.
 - Providing samples of foods grown in a certified school garden for children to taste what they have grown.
 - Providing an opportunity to try different spices on a grain, in order to expose audiences to new flavor combinations.
- This can also be an effective way to introduce concepts such as mindful eating or food identification. For example, questions may include:
 - What does the food item look like?
 - What does the food item smell like?
 - What does the food item taste like?
- The demonstration set up, breakdown, ingredients, and time required for this type of food demonstration are likely to be the least intensive. This is a good demonstration for short periods of time, locations with limited utilities and resources available, or paired with an additional lesson.

A Tasting of Many Different Varieties of a Single Food Item

- This can be an effective way to educate an audience about substitutions for recipes and how a single ingredient may or may not change the flavor of a dish. This can also be used to teach children vocabulary when encountering foods that are the same and/or different and introduce varieties of foods that may be unusual to an audience, while still having foods that are more recognizable present, among other topics. This could include activities like:
 - Providing sample slices of a variety of locally grown apples available at a farmer's market to discuss the differences in color, texture, and taste.
 - Growing and tasting many colors of carrots at an early childhood center.
 - Providing samples of meat with different amounts of fat content to experience the texture, visual appeal, or taste differences.
 - Providing a tasting of a variety of citrus, including navel oranges and pomelos.

Demonstrating a Whole Dish or Recipe

- This provides an opportunity to introduce a wide variety of culinary techniques, ranging from basic to more advanced skills, depending on the audience's needs. This also provides an opportunity to educate audiences on reading a recipe, understanding how to modify it, and/or using substitutions based on servings needed, dietary needs, or availability of products. This is a good opportunity to discuss using recipes as a template, so that ingredients can be easily substituted, and the recipe can be modified according to the audience's needs. This could include activities like:
 - Demonstrating a pesto recipe to understand the framework of making an herb sauce and discussing alternative ingredients to use in the recipe, based on seasonality.
 - Using different kinds of beans for a soup and giving out samples of each soup to discuss modifications.
 - Scaling a recipe up or down to discuss how to do this at home.
 - Making a sautéed meat dish to discuss how to sauté, how to use a food thermometer, and food safe temperatures.
 - Though this is the most complex kind of food demonstration discussed, it does not need to be complicated to be effective. The demonstration can be simple and still achieve many teaching objectives.

7 AZ HEALTH ZONE GUIDELINES

BASIC GUIDELINES

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- All food demonstrations should have a current "And Justice For All" poster clearly visible.
- Demonstrations should be limited to one to two techniques and up to three simple recipes per one hour class. The message should be simple and the learning objective(s) should be defined before the demonstration.
- The demonstrator should practice good handwashing techniques prior to handling any food products and ensure proper use of gloves during demonstrations.
- Allow the participants to taste the food after the demonstration. This is the most important part of the food demonstration.
 - Serve only sample-size portions (2 oz or less) in the food demonstrations.
 - Food samples associated with a nutrition education lesson are an allowable expense, but meal-size portions or a complete meal service are not.
- Distribute the recipes after the food demonstration, making sure that each has the appropriate USDA statements that are required on printed materials, as specified in the Social Marketing policy. This is at a minimum.
- Think about distributing the recipe before the food demonstration, so that participants can follow along, ask any questions that may come up, and participate with the demonstrator as the demonstration is happening.
- Labels of specific brands should not be shown and should be marked off containers.
- Specific stores should not be highlighted.
- Ingredients should not be labeled as bad, instead highlight an alternative ingredient.
 - For example, instead of saying soda is bad because of the sugar content, you could say that water does not contain sugar and is a good way to stay hydrated in the summertime.

RECIPE GUIDELINES

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Recipes should:

- contain foods that are readily available and low cost.
- have ten ingredients or less (this excludes water, salt, pepper, spices/seasonings, and nonstick cooking spray).
- require 30 minutes or less to prepare, if possible. This does not include inactive cooking time (marinating, soaking, or setting) that may exceed 30 minutes.
- utilize cooking equipment reflective of tools and appliances used by the participants receiving the recipe, or alternative tools must be suggested on the recipe or during the food demonstration event.
- encourage a variety of flavors, colors, textures, and cooking methods.
- be written in easy to follow, understandable language, that is at the appropriate reading level.
- be appropriate for the participants' cooking skill level. (Creating many dishes or having advanced techniques needed for cooking a dish can discourage participants from trying to cook new foods.)
- be flexible and support a variety of options including:
 - additions or substitutions for ingredients to accommodate for seasonality
 - accessibility
 - food allergies or intolerances, and/or personal preference.
- highlight how to add at least one nutrient-rich option from the food groups (fruits, vegetables, protein, grains, and dairy).
- highlight how to try different preparation and cooking methods.
- reflect the interests, regional foods, and cultural influences of community members.
- Recipes that are inspired by ethnic cuisines must be researched through reputable sources (see Message and Materials Development in the Guidance and Policy Manual) and/or community engagement with members from the specific cultural group the recipe reflects.

RECIPE FORMAT GUIDELINES
CAN BE FOUND IN THE AZ
HEALTH ZONE GUIDANCE AND
POLICY MANUAL

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8 PREPARING FOR A FOOD DEMONSTRATION

Use the Style Guide Language of Health²⁰
to guide your talking points.

KNOW YOUR AUDIENCE

You are probably interacting with this audience quite a lot and have asked them about their motivations for taking these classes. It's always good to consider these motivations in your talking points during the food demonstration. It's also just as important to know what it is that participants don't want to change as what they are willing to or want to change.

For example: If the topic of not eating dessert has come up as a point of interest, think about the following when developing your talking points.

- It's not that participants can never eat dessert again. Why has this been brought up?
 - Do participants want to change the ingredients in the dessert? You can help with this by highlighting substitutions.

- Do participants want to change the type of dessert that they make? You can help with new dessert recipes.
- Is there something about dessert time that is important to them, like an after-meal conversation with their family? If they don't want to eat dessert, how else might they make sure not to lose this conversation time?
- Do they see having dessert as a stress response instead of something that is joyful? How might this be resolved with a different activity?

Think about all of these factors when creating your talking points and if you don't already know, ask your audience what they care about.

Make sure that whatever you're saying and doing is relevant to participants in order to make your demonstration more successful. This includes honoring their knowledge by not teaching the exact same lesson to every audience.

Consider asking participants open-ended questions; oftentimes this leads to a good audience discussion, and they learn more from each other than from the demonstrator. Plan to allow time for this, so that you can let them talk if they want to share.

Meet people where they are:

Effective messages resonate with participants and what they currently believe and do. Provide guidance and recommendations that are realistic and fit their lifestyle. Small steps can lead to great change, while unrealistic messages can decrease the likelihood of positive behavior change.

HAVE CLEAR AND SIMPLE MESSAGES

Participants are often learning a lot of new information during classes and having clear, simple messages repeated during the food demonstration will help them remember important concepts. Think about where your audience is coming from and what health knowledge they may or may not already have.

For example: Do you need to explain what protein is and why it is needed before talking about what foods contain it?

Remember to highlight reasons that we eat food other than for nutrients. Maybe participants love to cook, or they enjoy the time with their family, or they love to eat. All of this can be considered in your food demonstration.

Use respectful, considerate messages:

Remember to highlight reasons that we eat food other than for nutrients. Maybe participants love to cook or they enjoy the time with their family or they love to eat. All of this can be considered in your messaging during your food demonstration.

Being respectful and considerate also means not assuming equal or easy access to food for all participants. Take care to avoid food shaming (labeling food as bad, unhealthy, etc.) and include messages that invite participants to try something rather than dictating or being prescriptive.

BE ORGANIZED AND WELL PREPARED

You may need to do research to come up with talking points for your demonstration, depending on what sources you are using. Remember to keep information relevant to participants. Consider instead of just teaching the recipe you are demonstrating, explaining the techniques you are using and how to use the recipe ingredients in other ways or substitute different ingredients in the recipe, so that participants can use the information in multiple ways.

USE MESSAGES THAT COME FROM A PLACE OF UNDERSTANDING, RATHER THAN JUDGMENT AND BIASES.

For example: Helping an audience to understand how to appropriately cook dried beans or grains can then be used for creating lots of other dishes, not just the recipe that you are showing them.

Remember that we want to honor that all food fits. Maybe the amount of something eaten or the frequency the food is eaten could change, but we don't want to tell participants to take away things unnecessarily or make participants feel overwhelmed with huge changes. Small changes are more effective in creating lasting changes over time and when added up, lead to big changes.

It's a good idea to provide substitutions as part of your demonstration if ingredients or equipment may not be available or price prohibitive for participants.

Make sure to practice the recipe with food a few times. Once you are comfortable cooking and talking, you can just practice the talking points (with colleagues or on your own). It is very different to incorporate cooking into teaching a class versus teaching a class lecture style. Focus on gaining the skills you need to feel confident teaching others the recipe. Remember, it's okay to make errors in the demonstration, it makes you human and may encourage them to cook more, if they see you recover from it.

**MAKING SURE YOUR
DEMONSTRATION AREA IS CLEAN
WILL BOTH HELP IT TO BE MORE
ATTRACTIVE AND MORE FOOD SAFE.**



MAKE A LIST OF EVERYTHING NEEDED

Include sanitation equipment, handouts, sample materials, and foods. This can save you from needing to cancel or run to the store at the last minute. Check everything off the list and make sure you have it with you.

HAVE A CLEAN, ATTRACTIVE AREA

A demonstration tray of ingredients or whole fruits and vegetables on your table can help to draw participants in and show them what something would look like at the store or food distribution.

Consider using colorful posters and/or recipes.

Making sure your demonstration area is clean will both help it to be more attractive and more food safe.

QUIET CLASSES

Remember that it's okay if an audience isn't interacting very much.

There are methods that you can use to help make interaction possible, such as: asking open-ended questions, making sure that information is relevant to participants, and ensuring that your demonstration is fun and interactive, but they still may not want to participate and that's okay.

Participants could be having a long week or might not be comfortable talking in a crowd. It's not necessarily about you and it's not necessarily that the demonstration isn't going well.

For example: There have been lots of times that an audience was completely silent and I felt like I was doing terribly, only to have participants come up to me later and tell me how much they enjoyed the class.



9 VIRTUAL FOOD DEMONSTRATIONS

BEFORE THE CLASS

- Practice the recipe to make sure you know when there will be breaks in cooking, what might be challenging for participants (so that you can really explain those concepts), and where interaction would be natural.
- Don't plan to cook for the entire time, try to make sure that there are some breaks in the demonstration/class, in case participants start to fall behind in a hands-on class or there are lots of questions/discussion.
- If you are planning to have a participant lead a part of the recipe, contact them beforehand and run through it, so that you can help each other during the class.
- Send all the information that participants will need to be prepared for the hands-on class (shopping list, equipment list, oven preheated, etc.) prior to the class.
- If you're not comfortable checking the chat and running the technology while you are teaching the class, make sure that there is someone that can help moderate.
- Try to prepare your setup so that you don't need to turn away from the camera to cook. If you do have to turn away, be sure to narrate your actions and show participants what you're doing when you turn back around.
- Make sure the lighting and the sound make the demonstration easy to watch and understand.





DAY OF THE CLASS

- If you have a longer recipe, make sure that most of what you need to do is already done, so you can help any participants that fall behind in a hands-on class.
 - For example: If a recipe calls for six shredded carrots, pre-shred all but one of them and demonstrate how to do it during class. Demonstrations that continue to move along are more engaging (people don't want to watch you shred six carrots in general).
- Remind participants of what they will need when they log in for a hands-on class (equipment list, oven preheated, etc.) and/or make sure everyone has the recipe in order to follow along.
- Plan to be on your virtual platform about 15 minutes before the class to help anyone that is having technical difficulties.
- As you're going through the recipe, make sure participants can see and hear what you are doing, so that you engage different types of learners.
- Use any down time that you have or time that participants are at different stages in the recipe to engage with them on your talking points, ask how they would modify the recipe, what they would do if cooking this for their family, or any other relevant information you want to share or ask.

HAVE A FINAL, COMPLETED PRODUCT AVAILABLE TO SHOW IF PARTICIPANTS WILL NEED TO KEEP COOKING AFTER CLASS (BAKING BREAD, SLOW COOKER MEALS, ETC.).

10 IN PERSON FOOD DEMONSTRATIONS

BEFORE THE CLASS

- Do a site visit to ensure the location allows for following all local health department guidelines and you will have everything that you need for a successful demonstration.
 - For example: Some spaces have no open flame requirements. Will the recipe still be appropriate for this location? Will you need to acquire different equipment to use at this location?
 - Make sure that utilities and equipment will be conveniently located during the food demonstration, so that you don't have to turn or walk away from the audience.
 - Ensure that there is a hand washing station conveniently located or that you have all necessary equipment to bring the hand washing set up with you to the demonstration.
 - If using commercial equipment, consider that conventional or home equipment may be very different to work with when participants create the foods at home. Be sure to mention the differences, if necessary.
 - Make sure that the audience is able to see and hear the demonstration comfortably from where they are, without distractions.
- Determine what kind of food demonstration you will be conducting and what type of food you will prepare.
- Find the appropriate recipe for your demonstration.
- Select messages that you will focus on during your food demonstration.
- Practice what you will say during your food demonstration so that you can avoid reading notes during the demonstration and interact with the participants more fully.
- Make an equipment list and include items needed for decorating the area.



DAY OF THE CLASS

- Be sure to dress appropriately.
- Shop for ingredients needed for your demonstration and collect all of your equipment and written materials for participants.
- Set up the cooking station and preparation area.

DURING THE DEMONSTRATION

- Distribute any recipes or handouts that you have for participants.
- Prepare the recipe:
 - Show the audience what you are preparing.
 - Repeat your nutrition or other messages often during the demonstration.
 - Explain each step of the recipe in detail, as if the audience cannot see the techniques being used.
 - Discuss alternative ingredients that can be used as substitutions (ex. Frozen or fresh vegetables, black beans for pinto beans, etc.)

- Taste the food before serving it. Use a clean spoon to taste the food and then discard it.
- Ensure food safety of all samples and indicate any allergens that are present in the foods.
 - Don't rely on participants to ask about particular allergens, call out the top nine at least, especially if they are not spelled out in the recipe.
 - For example: I bought bread that had been processed with tree nuts. A participant is unlikely to ask if there are tree nuts in the sliced bread.
- Have participants taste the food.
- If you are evaluating the food demonstration, pass out evaluation materials.

IT IS OKAY TO TAKE CARE OF YOURSELF BEFORE OR DURING A DEMONSTRATION, LIKE GETTING A DRINK, CHECKING YOUR PHONE FOR NEEDED INFORMATION, READING OVER YOUR NOTES, OR USING THE RESTROOM.

MAKE SURE TO WASH YOUR HANDS AGAIN AFTER ANY OF THESE ACTIVITIES AND BEFORE HANDLING FOOD.

11 ENGAGING YOUR AUDIENCE

Provide messages of optimism and hope:²⁰

People are resilient and can recover from past trauma, obstacles, and negative life experiences. To help build resilience and empowerment, use words and phrases that are optimistic and positive.

Collaborate, don't dictate:²⁰

Using words that foster a sense of working together can empower those who feel powerless. Be mindful of potential power dynamics and use words that support working with your participants (e.g., consider, think about, try).

UNDERSTAND AUDIENCE MOTIVATIONS²¹

When planning and implementing food demonstrations be sure to respect, honor, and being aware of cultural considerations, such as dietary restrictions, practices, and norms. Not only does this promote inclusivity, but it allows better alignment of the food demonstration with the audience's needs.

- **Culture.** Think about staple ingredients, flavors, cooking methods, utensils, and appliances specific to the culture of the audience and what they will be likely to use when preparing food. Also consider the family structure of the participants and how that may influence how and when they prepare food.

- For example, participants living alone may have very different mealtime needs than a family of five with small children.

- **Food accessibility and familiarity.** Often ingredients are readily available in some regions or countries but may be difficult to find in others. Consider foods the audience will have access to and be familiar with when planning the demonstration.

- **Equipment and cooking methods.** Consider the equipment and cooking methods the audience will have access to and be familiar with when preparing foods.

COLLABORATE, DON'T DICTATE.

- **Visual aids and written instructions.**

Visual aids, such as recipes and ingredient lists, can bridge the language gap and provide clear instructions on techniques, ingredient sizes, and cooking times. Consider the audience's primary language, reading level, and the demonstrator's word choice when providing these resources.

For online resources, use accessibility considerations and a web checker to ensure that your information is accessible to all users. Tools can be found through the University of Arizona:

<https://accessibility.arizona.edu/content/web-access> as well as tutorials:
<https://accessibility.arizona.edu/tutorials>

- **Multilingual support.** Per Arizona Health Zone guidelines, we must be able to provide multilingual support by having an interpreter or translator to assist with translation during a food demonstration, ensuring that participants who do not understand the primary language used can still follow the demonstration and understand instructions. This is also part of our Civil Rights compliance. As part of this compliance, a child or family member should not be used as the interpreter for participants.

- Encourage questions and feedback. Promote a judgment free, inclusive, and supportive environment by having participants give feedback on their understanding of the ingredients, cooking techniques, and the demonstration overall. This will provide an opportunity to discuss barriers to creating meals at home, substitutions that participants may want to make, and any other questions that they may have.
- It is okay to not know the answer to every question. You can always offer to find the answer and get information to participants later.
- Remember we are a prevention program only. If participants have specific questions about illnesses or chronic disease, encourage them to check with their medical professionals for the answer. This could be their primary physician, a dietitian, or other medical professional that they are under the care of. You are not responsible for these answers.
- **Adapt to participants' needs.** Use the participants' feedback to adjust the teaching style and cooking skill level accordingly as well as provide additional explanations as needed.



HONOR COMMUNITY KNOWLEDGE

- Using a strengths-based approach, encourage the community to share their knowledge of food and cooking techniques during the food demonstration.
- Often participants learn more from each other than from instructors. Encourage participation in the food demonstration.

ALL FOOD FITS

All food fits and all foods are good foods.

When foods or ingredients are labeled as 'good' or 'better,' that implies that others are 'bad' or 'worse,' which can lead to feelings of shame and to restrictive eating.

Restrictive eating is a major risk factor for disordered eating, so how we talk about food during food demonstrations is a good opportunity to encourage a healthy relationship with food. This can also provide participants with knowledge of a variety of nutritious foods that can be enjoyed as part of a healthful diet.

By promoting the message that all foods can fit within their diet, the likelihood that people see food from a positive perspective and are receptive to health education messages and interventions can increase.

- Remember we are not providing food demonstrations in order to tell participants that a food is bad or good.
- We do highlight scientific facts about nutrients, explain cooking techniques, and discuss food substitutions.
- We also highlight how food is a part of whole health and can mean much more than just nourishing our physical health.



Consider the following nutrition talking points to prepare you for various discussion topics that may come up (or you may address) during food demonstrations. These examples are a guide; adapt as needed to be relevant for your communities and to bring your personality to the table!

DISCUSSION TOPIC

What are some interesting facts about the foods used in the demo or tips on how to use them?

Language of Health Connection: Provide actionable behaviors: Rather than focus on facts/knowledge alone (e.g., unsaturated fat is good for your heart), list easy, practical 'how-to' behaviors that someone could try (e.g., use olive oil when cooking).

Other Details: In preparation for the food demo, it could be helpful to know some interesting facts and tips for using foods that your demo is highlighting. Always utilize reputable sources such as the *Have a Plant* website.²²

NUTRITION TALKING POINTS

- What to look for when picking fresh produce at a store, food distribution, farmers market, etc.

"If selecting fresh mushrooms, choose well shaped mushrooms with a firm texture. Avoid spots and slime."

- How to store fresh, frozen, or dried goods to maintain freshness or shelf life.

"Store unripe bananas at room temperature. Store ripe bananas in the refrigerator for up to two weeks; skin may turn black, but the inside is fine!"

- Describe the flavors and/or aromas of the ingredients being used, how ingredients can be paired together to enhance or complement one another or are key flavors in different cuisines.

"Oregano is a seasoning you may have in your pantry that has many uses. Some people describe its flavor as peppery, earthy, or even minty. It is a flavor that is used both in Italian seasoning²³ and taco seasoning!"²⁴

- Additional knowledge about the food, cooking, or shopping experience that may be relevant for the audience or setting.

"This delicious chocolate pudding recipe²⁵ uses silken tofu for a soft, creamy texture. Did you know that tofu comes in many different levels of firmness to suit different recipes or cooking styles? You can use WIC benefits²⁶ to purchase and try any of these varieties of tofu as a milk alternative."

DISCUSSION TOPIC

What makes this meal “healthy,” or good for my health?

Language of Health Connection: Focus on food, as people buy and consume food, not individual nutrients. Promote the various reasons for eating a certain food, rather than only discussing the benefits of a particular nutrient.

Evidence-based nutrition strategies to support long term health and a healthy relationship with food. Practices such as ‘detoxing,’ ‘eating clean,’ or ‘eating alkaline’ are not supported by research. To maintain a consistent, clear message, only evidence-based strategies should be used.

Other Details: It's important to remember that health is multidimensional (physical, social, emotional, spiritual, etc) and that people may define “healthy” or what healthy means to them in many different ways. When providing group education and food demonstrations, share nutrition knowledge generally, avoiding specific advice or individualized care plans. Encourage participants who are interested in more specialized and individual guidance to follow up with a medical professional.

NUTRITION TALKING POINTS

- Try using a variety of terms such as ‘nutritious,’ ‘good for the body,’ ‘full of vitamins and minerals,’ and ‘nourishing’ when describing nutrient dense food. Take care to avoid relying on the word “healthy” or labeling foods as “unhealthy,” “less healthy,” or “bad.” This allows more creative descriptions of food and supports a healthy relationship with food.

"This hummus contains fat, fiber, and protein which is a great combination for energizing your body. When you pair this with your favorite crunchy vegetables or add it to a sandwich or salad, you'll get a snack or meal that's full of vitamins and minerals!"

- Highlight evidence-based nutrition strategies to support long-term health and a healthy relationship with food.

"Fruits and vegetables are a tasty source of vitamins, minerals, fiber, and hydration to support a healthy diet. Different fruits and vegetables have different nutrients in them, so try mixing it up when you can. Eating in season can be a fun way to try a variety of fruits and vegetables."

- Lean into curiosity and encourage interaction and engagement amongst participants by providing follow up questions.

"What does a healthy meal mean to you?"

"What are you already doing that you consider healthy?"

or

"For me, the star ingredient in this recipe is the juicy tomato. Do you have a favorite meal or way to cook with tomatoes?"

DISCUSSION TOPIC

What is “better” or what “should” I choose?
(Examples: Fresh, frozen, or canned produce;
brown or white rice; wheat or white bread;
oil or butter)

Language of Health Connection: Avoid assuming easy access to food: Nutrient-dense foods are not available or accessible in all areas, and some people are not able to afford them even if they are available.

All foods are good foods: When foods are labeled as ‘good’ or ‘better,’ that implies that others are ‘bad’ or ‘worse’ and should, therefore, be restricted. Restrictive eating is a major risk factor for disordered eating, so messages should promote a healthy relationship with food where no foods are restricted.

Other Details: Participant questions about choosing “this or that” could stem from conflicting nutrition information or advice they’ve heard in the past. This is a good opportunity to provide facts, dispel myths, and share positive messages around all foods. It is also helpful to keep in mind what you know about your audience or the setting type (ex: farmers market, classroom, food pantry) for relevant talking points.

NUTRITION TALKING POINTS

- Emphasize that there are many factors that go into choosing between the “either/or options” on the left, including personal preference, honoring a cultural dish and its traditional preparation, availability and accessibility of food, cost effectiveness, and convenience.

- Use positive messaging and offer examples of times when each may be the ideal choice.

"Cooking fats like oils and butter add flavor to your food and help in the cooking process when you're sauteing, roasting, and baking. Today we're going to make popcorn²⁷ using different oils and butter to see if you can notice the difference in the cooking and the taste. Let me know which one was your favorite!"

- Share with participants that nutrition quality is about the same for produce whether its fresh, frozen, and canned. Include practical tips and facts that can help participants plan their meals or make informed decisions based on their concerns. For example, fresh produce can be more expensive if not in season and has a shorter shelf life, and canned fruits and vegetables may have added sugars and sodium.

"Frozen and canned vegetables and fruits are picked and packed at their peak of freshness so you will be getting the same nutrients as the fresh produce. Canned and frozen foods are great to use in a meal when you're short on time. If you watch your sodium intake, you may want to drain and rinse your canned vegetables to lower the sodium and use less salt in the overall recipe."

- Use your nutrition knowledge to provide options for participants to obtain nutrients from other sources.

"Whole wheat bread is a good source of fiber, but if you prefer a different type of bread or have another bread at home that's okay. You can get fiber from a variety of other foods like fruits, vegetables, beans, and other whole grain products like cereals and pasta."

DISCUSSION TOPIC

What if I (or someone in my household) doesn't like/can't have _____. How can I make this at home?

Language of Health Connection: Food is meant to be enjoyed: People choose food for many different reasons, such as taste and health. You will reach more people and help build healthy relationships with food by using messages of how nutrient-dense food can be enjoyed. Pleasure-oriented messages focus on the enjoyment and taste of food, and can include emotional appeals regarding sharing a meal with family or friends, trying new foods, and the enjoyment of cooking a meal. Pleasure-oriented food messages improve both attitudes and intentions to eat healthy. In some cases, pleasure oriented messages improved attitudes more than health focused messages.

Encourage healthy eating: Partner with your audience by encouraging healthy choices, rather than demanding it. Use terms such as 'consider,' 'think about,' or 'try.'

Other Details: To provide relevant and developmentally appropriate food preparation tips to audiences of varying ages, cultures, and abilities, consider consulting those belonging to the community in question for knowledge and lived experiences. Also explore resources such as the Academy of Nutrition and Dietetics²⁸ or Child and Adult Care Food Program.²⁹

NUTRITION TALKING POINTS

- Put safety first and be transparent about all ingredients used in the recipe so participants are aware of potential allergens and intolerances. Always let families know that if the recipe contains honey, and that honey should not be given to children under the age of one.

"Today I will be making two different snack recipes you can try depending on what you're in the mood for, one sweet and one savory. Our sweet treat does contain peanut butter so you will want to skip that snack if you have a peanut allergy. I will make our savory snack first to keep the station clean from allergens."

- Encourage participants to use recipes as a framework or an example, letting them know it's okay to get creative, or that they can still make a similar dish even if they don't have or can't have a certain ingredient.

"I'm going to make our stir fry with a bag of frozen mixed vegetables which has peas, broccoli, and carrots. If you want to try making this at home, see what flavors you can create with the vegetables you like or have on hand."

- Cooking for others who may be choosy eaters or have dietary concerns can be challenging. It's still a good practice to encourage a healthy relationship with food and eating habits that meet people where they are. If participants voice that this is a challenge, lean into curiosity again, ask if participants would like tips/advice, and open the floor for engagement.

"What about the recipe do you think family members will not enjoy, and is there anything you can use instead?"

"Cooking for choosy eaters can be challenging, does anyone have some good tips for getting kids to try new things?"

or

"I've found my kids get more excited to try something when they help me cook it, or if I give them a special job like making the shopping list or reading the recipe as I go."

Sources:

Language of Health³⁰

AZ Health Zone Recipe Page³¹



12 BASIC COOKING TECHNIQUES

ROASTING

Roasting is a dry cooking method that is done in the oven, at a variety of temperatures, depending on what is being cooked. Browning and crisping are often the desired result of this method and require high temperature and the drying of ingredients.

The general method for roasting is:

Roasting vegetables:

- Prepare the baking sheet(s) with foil, parchment paper, or fat for easier cleanup.
- Vegetables with approximately the same cooking times should be cut to about the same size and cooked together. If cooking more than one pan of vegetables, separate water heavy vegetables (squash, tomatoes, etc.) from dryer vegetables (potatoes, onions, etc.) and cook on separate baking sheets.
- Toss vegetables with fat and seasonings. Make sure to use a fat that can withstand the temperature at which you are roasting (for example, at about 325-350F, butter burns). Adding fat and seasonings is done most effectively in a large bowl as compared to having ingredients on the baking sheet and drizzling fat, to have a more even distribution.
- Spread vegetables on baking sheet(s), being sure not to crowd them. In order to release their water and brown effectively, each piece of food needs to have air space around it.
- Roast vegetables at high heat, 350 F to 425 F. Depending on the thickness of the cut, determine the temperature (thicker pieces will need more time to cook fully, so will need a lower heat to prevent burning the outside) and cooking time.
- Toss the vegetables about halfway through the cooking time, to ensure even browning. Remove when cooked to desired tenderness.



Roasting meat:

- Season meat well. If able, sear the meat on the stove top.
- Prepare a roasting pan (a pan with sides that will hold juices, if released) with foil, parchment paper, or fat for easier cleanup and with vegetables and/or aromatics. Setting meat on top of vegetables lends more flavor to both. Season vegetables and coat with a small amount of fat before placing them in the pan.
- Roast meat at desired temperature, according to your recipe. This is often at a lower temperature, for a longer time, to keep meat from drying out. Baste the meat with juices and fat from the pan, as needed.
- Make sure to use a meat thermometer to check for the food safe temperature of the meat. Let meat rest before cutting into it, to allow juices to redistribute. Resting time will depend on the size of the meat.

SAUTÉ

Sauté is a dry cooking method, for tender cuts of meats, vegetables, and/or fruit, done on the stove top with some type of fat. It is generally done in a large skillet, or sauté pan. A sauté relies on high temperature and the drying of ingredients (through water evaporation) to caramelize (breaking down sugars in food) fruits and vegetables or create the Maillard Reaction (rearranging of sugars and amino acids in food) in meats or other foods with amino acids (proteins).

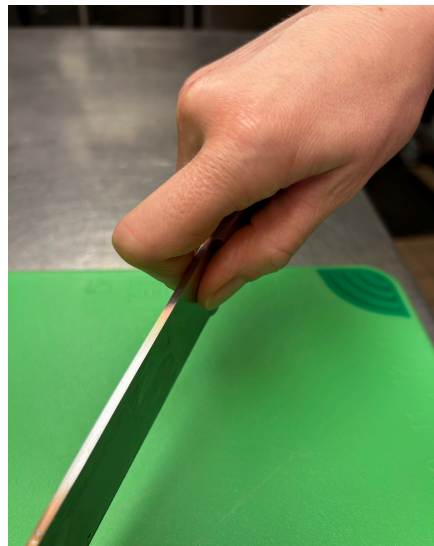
The general method for sautéing is:

- Cut ingredients to the same shape and size, so that they will cook evenly.
- Pat dry meats and season with salt and pepper, just before adding them to the pan. If seasoned with salt too early, moisture can be drawn out of the meat, inhibiting the Maillard Reaction.
- Heat fat (butter, olive oil, or a high heat oil) in a large pan with short sides. Using this type of pan ensures that the evaporating water does not get trapped in the pan. Make sure to use a fat that can withstand the temperature at which you are sautéing.
- When the fat is hot, add the ingredients. Look for oil to be shiny and butter to be foaming. Butter burns easily, using a combination of butter and oil can allow for a higher temperature to be used. You should hear a sizzle when placing your ingredients in the pan. Test with a small piece of food if you are unsure if the pan is hot enough.

- Make sure to leave airspace in the pan by leaving empty space around ingredients.
- Let ingredients sit in the pan, without stirring for the specified amount of time on your recipe. For meats, you may add aromatics and baste the meat, with the fat in the pan, during this step.
- Flip your ingredients over and allow them to sit again. The second side will likely not take as long to cook as the first side, as the pan, fat, and ingredients are already hot, especially for vegetables and fruit. Continue to baste meats.
- Take your ingredients out and prepare a pan sauce, utilizing the fond, if desired.

KNIFE SKILLS

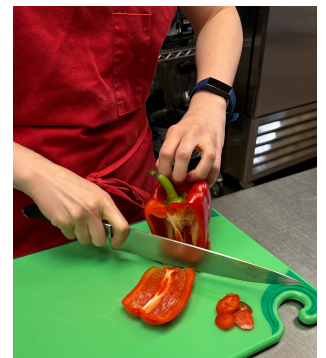
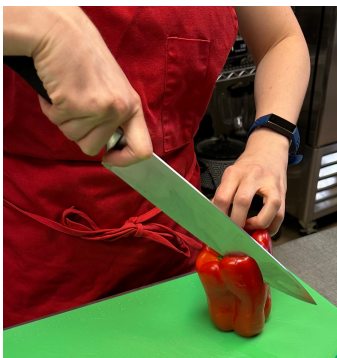
- Place a wet towel or paper towel under the cutting board to keep it stable or use a cutting board with some type of stabilizing element (rubber stoppers, raised feet, etc.).
- Keep your hand in a claw shape:
 - Elevate your wrist
 - Curl your fingertips under the rest of your finger to form a claw shape.
 - Make sure to keep your claw facing the knife, to keep your fingers safe



- Keep your eyes on the knife. Always know where it is in relation to your fingers.
- Place tip of the knife on the board, drag it back, then push the whole knife down and forward in a smooth elliptical motion.
- Whenever possible, create a flat, stable surface on the food item before cutting it into smaller pieces. This can often be done with a peeler.
- Utilize a bowl or bench scraper, instead of the knife, to pick up foods.
- Let the sharpness of the knife do the work and minimize the downward pressure you use to keep yourself safe.
 - When trying to cut a large or hard food (for example hard squash, melon, cabbage), use the elliptical motion to start the cut. When the knife gets stuck, pull the knife back to the starting position in the cut and repeat the elliptical motion again until you have cut through the food.
- Utilize a cutting glove on your non-dominant hand if you would like added protection.
- See additional safety considerations in section five, under Equipment Handling.

A Note on Other Cutting Tools

- When using a peeler, peel half of the food that you are not holding and then peel the other half, moving the position of your hand to the peeled side.
- Utilize a cutting glove when using tools such as a grater, micrograter, or mandolin.



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