

Manager's Corner: Food Safety Basics

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I N S T I T U T E O F
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Institute of Child Nutrition

The University of Mississippi

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The purpose of the Institute of Child Nutrition is to improve the operation of child nutrition programs through research, education and training, and information dissemination.

MISSION

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VISION

The vision of the Institute of Child Nutrition is to be the leader in providing education, research, and resources to promote excellence in child nutrition programs.

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Professional Standards

FOOD SAFETY AND HACCP TRAINING – 2600

Employee will be able to effectively utilize all food safety program guidelines and health department regulations to ensure optimal food safety.

2620 - Food Safety - General

2630 - Federal, State, and Local Food Safety Regulations

2640 - Food Safety Culture

Key Area: 2 Operations



Introduction

Manager's Corner: Food Safety Basics is designed for directors/managers to use in training their staff. Each lesson is roughly 15 minutes. This resource is one of a continuous series of training resources designed to give directors/managers an easy-to-use lesson plan for training staff in various food safety topics. *Manager's Corner: Food Safety Basics* provides a method for using and training with many of the Institute of Child Nutrition's food safety resources. Every lesson plan contains the following:

- learning objective,
- statement explaining the importance of the topic,
- list of materials,
- instructions on how to present the information,
- questions to ask staff, and
- additional resources to strengthen or refresh the knowledge of the director/manager.

All of the ICN *Food Safety Mini-Posters* and the majority of the *Food Safety Fact Sheets* are available in English and Spanish. If resources are available in both languages, the (E/S) will be placed next to them.

All materials including videos can be found on the ICN website at www.theicn.org.

Landing pages for materials listed in *Manager's Corner*:

- *Food Safety Fact Sheets*:
<http://www.theicn.org/ResourceOverview.aspx?ID=109>
- *Food Safety Mini-Posters*:
<http://www.theicn.org/ResourceOverview.aspx?ID=74>
- *HACCP-based Standard Operating Procedures*:
<http://www.theicn.org/ResourceOverview.aspx?ID=75>
- *Food Safety for Summer Meals*:
www.theicn.org/safesummermeals

Standard Operating Procedures

Objective: Discuss the importance of Standard Operating Procedures.

Why it is important: Standard Operating Procedures offer employees a step-by-step how-to guide for maintaining a safe and clean school kitchen and serving food safely.

Materials:

Hot and Cold Holding for Time and Temperature Control for Safety Foods (Sample SOP): <http://www.theicn.org/ResourceOverview.aspx?ID=75>

Instruction:

Discuss the importance of Standard Operating Procedures. Provide the Hot and Cold Holding for Time and Temperature Control for Safety Foods (Sample SOP). Have staff read and discuss.

Ask questions. Show staff where to locate Standard Operating Procedures in the kitchen. Answer all staff questions.

Annually, schedule managers and lead personnel to review Standard Operating Procedures. **Document** the date and time the review of Standard Operating Procedures was completed by all managers and lead personnel.

Questions for the staff:

- What temperature should cold food be kept below? **41 °F**
- What temperature should hot food be kept above? **135 °F**
- How do you monitor that hot and cold foods are kept out of the temperature danger zone? **Use a calibrated thermometer to take and record temperatures of the food at regular intervals.**
- What records would provide the temperature of a hot food during production and service? **Hot and cold holding log, production records**
- What corrective action would you take if the cold food records showed the walk-in refrigerator to be at 50 °F? **Check the refrigerator log for the last time the temperature was taken. Discard food that has been in the temperature danger zone for more than 4 hours.**

Additional Resources:

Fact sheets: <http://www.theicn.org/ResourceOverview.aspx?ID=109>

- Calibrating Thermometers Fact Sheet (E/S)
- Holding Cold Foods Fact Sheet (E/S)
- Holding Hot Foods Fact Sheet (E/S)



Calibrate Thermometer

Objective: Demonstrate how to calibrate a bi-metallic stem (dial) thermometer.

Why it is important: A thermometer that is not calibrated reads incorrect temperatures. This means that if a thermometer is reading higher than it should, the internal cooking temperature may not be reached. This could lead to a child becoming sick from food that contains bacteria that was not killed in the cooking process. For example, a thermometer that was not calibrated reads 155 °F, but the true temperature of the beef is 143 °F.

Materials:

- A Flash of Food Safety Calibrating a Thermometer: Ice Water Method
- Bi-metallic stem (dial) thermometer
- Large container
- Ice (enough to fill large container)
- Water (enough to fill large container)
- Thermometer wrench



Instruction:

Show video of calibrating a bi-metallic stem (dial) thermometer using the Ice Water Method: Video Clip – A Flash of Food Safety Calibrating a Thermometer: Ice Water Method.

Request a staff member to demonstrate how to calibrate a bi-metallic stem (dial) thermometer. Ask questions. Answer all staff questions.

Questions for the staff:

- What are the steps for calibrating a thermometer?
 - **To use ice-point method:**
 1. **Insert the thermometer probe into a cup of crushed ice.**
 2. **Add enough cold water to cover the top.**
 3. **Allow to sit for 1 minute.**
 4. **Allow the temperature measurement to stabilize before reading temperature.**
 5. **Temperature measurement should be 32 °F (± 2 °F) [or 0 °C (± 1 °C)]. If not, adjust according to manufacturer's instructions.**
 - **To use boiling-point method:**
 1. **Immerse at least the first two inches of the probe into boiling water.**
 2. **Allow the temperature measurement to stabilize before reading temperature.**

3. Measurement should be 212 °F (± 2 °F) [or 100 °C (± 1 °C)]. This reading may vary at higher altitudes. If adjustment is required, follow manufacturer's instructions.

- How often should a thermometer be calibrated?
 - **At regular intervals (at least once per week, ideally daily)**
 - **If dropped**
 - **If used to measure extreme temperatures, such as in an oven**
 - **Whenever accuracy is in question**
- How do you reset a digital thermometer? Bi-metallic stem thermometer?
 - **Digital thermometer: may have a reset button or follow manufacturer's instructions**
 - **Bi-metallic stem thermometer, use calibration wrench**

Additional Resources:

- Calibrating Thermometers Fact Sheet (E/S):
<http://www.theicn.org/ResourceOverview.aspx?ID=109>
- Using and Calibrating Thermometers (Sample SOP):
<http://www.theicn.org/ResourceOverview.aspx?ID=75>

Temperature Danger Zone

Objective: Describe the temperature danger zone, and state why it is important.

Why it is important: The temperature danger zone (41 °F - 135 °F) is the temperature range where bacteria grow rapidly. Bacteria can double in number in as little as 20 minutes. At this rate, harmful bacteria that cause foodborne illness can quickly grow in food.

Materials:

- Temperature Danger Zone Fact Sheet (E/S):
<http://www.theicn.org/ResourceOverview.aspx?ID=109>
- Temperature Mini-Poster (E/S):
<http://www.theicn.org/ResourceOverview.aspx?ID=74>



Instruction:

Provide staff with a copy of the Temperature Danger Zone Fact Sheet. Explain the temperature danger zone using the fact sheet. Explain what happens when foods are in the temperature danger zone. Discuss keeping hot food hot and cold foods cold. Demonstrate where to locate temperature information on the production sheet.

Ask questions. Answer all staff questions. Reinforce using temperature information on production sheets to help keep hot foods hot and cold foods cold.

Post a temperature poster in the kitchen.

Questions for the staff:

- Were there any temperatures on our log that were in the temperature danger zone? If yes, was a corrective action taken?
- If a food is held at 48 °F, is it in the temperature danger zone? **Yes**
- If a food is held at 165 °F, is it in the temperature danger zone? **No**

Additional Resources:

- Keep Hot Food Hot and Cold Foods Cold Mini-Poster (E/S):
<http://www.theicn.org/ResourceOverview.aspx?ID=74>
- Hot and Cold Holding for Time/Temperature Control for Safe Foods (Sample SOP): <http://www.theicn.org/ResourceOverview.aspx?ID=75>

Personal Hygiene: Handwashing

Objective: Demonstrate proper handwashing, and state when to wash your hands.

Why it is important: Proper handwashing is one of the easiest and most efficient ways to prevent contamination of food by removing germs from hands.

Materials:

- Handwashing to Prevent the Spread of Disease
- How to Properly Wash Your Hands Poster (E/S): www.theicn.org/safesummermeals
- Poster paper
- Marker
- Painters tape



Instruction:

Show video. Request a staff member demonstrate proper handwashing.

Ask questions. Record the answers on poster paper for everyone to see. Discuss answers recorded. Answer all staff questions.

Post a handwashing poster at every sink in the kitchen and restrooms.

Questions for the staff:

- What are the steps for properly washing your hands?
 1. **Wet hands and forearms with warm running water and apply soap.**
 2. **Scrub lathered hands and forearms, under fingernails, and between fingers for at least 10–15 seconds.**
 3. **Rinse thoroughly under warm running water for 5–10 seconds.**
 4. **Dry hands and forearms thoroughly with single-use paper towels, or using a warm air hand dryer.**
 5. **Turn off water using paper towels.**
 6. **Use paper towel to open door when exiting the restroom.**
- When should you wash your hands?
 - **Beginning to work, either at the beginning of shift or after breaks**
 - **Before**
 - **When moving from one food preparation area to another**
 - **Putting on or changing disposable gloves**
 - **After**
 - **Using the toilet**
 - **Sneezing, coughing, or using a handkerchief or tissue**
 - **Touching hair, face, or body**
 - **Handling raw meats, poultry, or fish**

- **Eating, drinking, or chewing gum**
- **Clean up activity such as sweeping, mopping, or wiping counters**
- **Touching dirty dishes, equipment, or utensils**
- **Handling trash**
- **Handling money**
- **Any time that hands may have become contaminated**

Additional Resources:

- Handwashing Fact Sheet (E/S):
<http://www.theicn.org/ResourceOverview.aspx?ID=109>
- Washing Hands (Sample SOP):
<http://www.theicn.org/ResourceOverview.aspx?ID=75>
- Hand Washing - #1 Defense Against Foodborne Illness Mini-Poster (E/S):
<http://www.theicn.org/ResourceOverview.aspx?ID=74>

Personal Hygiene: Proper Glove Use and Attire

Objective: Describe how to properly use gloves and what kind of attire to wear to work.

Why it is important: Properly using gloves and wearing clean and proper attire can prevent food from being contaminated by an employee. Gloves can help prevent the contamination of ready-to-eat foods by placing a barrier between the employee's hands and the food. Proper attire such as a hairnet and wearing clean clothes can prevent the employee from accidentally transferring outside contaminants into the food.

Materials:

- How to Properly Use Disposable Gloves Poster (E/S): www.theicn.org/safesummermeals
- Personal Hygiene Mini-Poster (E/S): <http://www.theicn.org/ResourceOverview.aspx?ID=74>
- Poster paper
- Marker
- Painters tape



Instruction:

Discuss steps for proper glove use. Reinforce proper glove use by posting the How to Properly Use Disposable Gloves poster in the kitchen.

Show Personal Hygiene poster. Discuss the importance of dressing for success and safety in the kitchen.

Ask questions. Record the answers on poster paper for everyone to see. Discuss answers recorded. Answer all staff questions.

After the training, hang posters.

Questions for the staff:

- When should you change your gloves?
 - **Frequently and between tasks**
 - **After sneezing, wiping nose, touching hair, or other contact with germs**
 - **If gloves are soiled**
 - **If gloves are torn**
 - **If handling raw animal food (meat, poultry, fish, eggs) then changing tasks to work with different raw meats or ready-to-eat foods**
- What should you do before putting on gloves and between changing gloves?
wash hands
- What is proper work attire?

- **Report to work in good health, clean, and dressed in clean attire.**
- **Change apron when it becomes soiled.**
- **Keep fingernails trimmed, filed, and maintained.**
- **Keep fingernails short and without artificial nails or nail polish.**
- **Do not wear any jewelry except for a plain ring such as a wedding band.**
- **Treat and bandage wounds and sores immediately. When hands are bandaged, single-use gloves must be worn.**
- **Report any illness to your manager.**
- **Cover any 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.**
- **Eat, drink, or chew gum only in designated break areas where food or food contact surfaces may not become contaminated.**
- **Wear hairnet, hat, or cap while in the kitchen.**
- How should a hairnet be worn?
 - **Completely over the hair without any hair sticking out.**

Additional Resources:

- Personal Hygiene Fact Sheet (E/S):
<http://www.theicn.org/ResourceOverview.aspx?ID=109>
- Personal Hygiene (Sample SOP):
<http://www.theicn.org/ResourceOverview.aspx?ID=75>

Correctly Preparing Sanitizer

Objective: Demonstrate the proper method of mixing a sanitizer solution and how to test the sanitizer with a testing kit.

Why it is important: Manufacturers design sanitizer concentrations to specifically be strong enough to effectively kill bacteria but not so strong to as to damage equipment and materials.

Materials:

- Sanitizer
- Sanitizer test strips
- Bucket
- Poster paper
- Marker
- Painters tape



Instruction:

Demonstration: A supervisor will demonstrate the proper method of mixing the sanitizer solution and how to test with a test kit.

Using poster paper, record the appropriate steps to mix, test, and store sanitizer solution. Discuss proper first aid steps and location of Safety Data Sheets (SDS).

Ask questions. Record all responses on poster paper. Answer all staff questions.

Emphasize the importance of cleanliness in personal work habits and in cleaning equipment and food surfaces.

Questions for the staff:

- When would you use sanitizer solution during the work day?
 - **Whenever you need to clean and sanitize contaminated equipment, surfaces, or utensils.**
- Why is using sanitizer solution important?
 - **Sanitizer helps eliminate microorganisms on a surface.**

Additional Resources:

- Cleaning and Sanitizing Fact Sheet (E/S):
<http://www.theicn.org/ResourceOverview.aspx?ID=109>
- Cleaning and Sanitizing Food Contact Surfaces (Sample SOP):
<http://www.theicn.org/ResourceOverview.aspx?ID=75>

Foodborne Illness Prevention Is OUR Business Part 1

Objective: State ways to maintain a safe food preparation and service environment.

Why it is important: Throughout the food production and service of food, employees must work to keep food safe. Proper cooking and reheating temperatures help ensure that harmful bacteria are killed. Proper holding temperatures help prevent the growth of bacteria. Prevention of cross contamination helps reduce the risk of bacteria getting into food.

Materials:

Posters: <http://www.theicn.org/ResourceOverview.aspx?ID=74>

- Keep Hot Foods Hot! Keep Cold Foods Cold! Mini-Poster (E/S)
- Hand Washing – #1 Defense Against Foodborne Illness Mini-Poster (E/S)
- Refrigerate for Safety! Mini-Poster (E/S)
- Use That Thermometer! Mini-Poster (E/S)
- Cutting Boards Mini-Poster (E/S)
- Reheating Foods Mini-Poster (E/S)
- Painters tape

Instruction:

Display posters on walls in the training room. Posters may include: Keep Hot Foods Hot! Keep Cold Foods Cold!; Hand Washing – #1 Defense Against Foodborne Illness; Refrigerate for Safety!; Use That Thermometer!; Cutting Boards; and Reheating Foods.

Ask a volunteer to read the information on the poster assigned.

Ask questions. Reinforce prevention and steps to maintain a safe food preparation and service environment. Answer all staff questions.

After training post all posters in the kitchen.

Questions for the staff:

- How can foodborne illness be prevented?
 - **Follow good personal practices**
 - **Wash hands properly and at appropriate times**
 - **Do not work when sick**
 - **Use utensils or disposable gloves to handle ready-to-eat foods**
- What are the temperatures in the temperature danger zone? **41 °F to 135 °F**
- If a refrigerator thermometer is reading 52 °F, is this safe?
 - **No, the fridge has been sitting in the temperature danger zone. Check the refrigerator log to see when the last temperature was recorded to determine what corrective action is needed.**



- A calibrated thermometer is at 25 °F in an ice-water bath. Is this thermometer calibrated correctly?
 - **No, it is reading too low. The thermometer should read 32 °F.**

Additional Resources:

Fact sheets: <http://www.theicn.org/ResourceOverview.aspx?ID=109>

- Calibrating Thermometers Fact Sheet (E/S)
- Preventing Contamination When Using Cutting Boards Fact Sheet (E/S)
- Handwashing Fact Sheet (E/S)
- Reheating Foods Fact Sheet (E/S)
- Temperature Danger Zone Fact Sheet (E/S)
- Using Food Thermometers Fact Sheet (E/S)

Foodborne Illness Prevention Is OUR Business Part 2

Objective: Discuss ways to prevent foodborne illness in the kitchen.

Why it is important: Throughout the food production and service of food, employees must work to keep food safe. Being aware of all the food safety concerns in your kitchen can help employees avoid them.

Materials:

Posters: <http://www.theicn.org/ResourceOverview.aspx?ID=74>

- Keep Hot Foods Hot! Keep Cold Foods Cold! Mini-Poster (E/S)
- Hand Washing – #1 Defense Against Foodborne Illness Mini-Poster (E/S)
- Refrigerate for Safety! Mini-Poster (E/S)
- Use That Thermometer! Mini-Poster (E/S)
- Cutting Boards Mini-Poster (E/S)
- Reheating Foods Mini-Poster (E/S)

Instruction:

Schedule all staff to meet in the center of the kitchen. Walk around kitchen and stop at each of the following:

- Refrigerator/Walk-In
- Freezer/Walk-In
- Cutting boards
- Hand sink
- Smallwares
- Equipment

Ask questions at each stop. Answer all staff questions.

Questions for the staff:

At each stop ask a volunteer to share how to prevent foodborne illness at this location. Ask staff if they have any other suggestions to prevent foodborne illness. Summarize the information that was shared.

Additional Resources:

Food Safety Checklist:

<http://www.theicn.org/ResourceOverview.aspx?ID=75>



The Process Approach: No Cook

Objective: Discuss the process approach, why it is important, and how to safely handle no cook foods.

Why it is important: Menu items in the no cook process do not make a complete trip through the temperature danger zone. These are items such as deli sandwiches and salads that are prepared and served cold. For no cook foods, it is very important to control, monitor, and keep records of temperatures to minimize time in the temperature danger zone.

Materials:

- No Cook Process Fact Sheet (E/S):
<http://www.theicn.org/ResourceOverview.aspx?ID=109>
- Lunch menu
- Poster paper
- Marker
- Painters tape

Instruction:

Provide all staff the No Cook Process Fact Sheet, and review the information.

Provide all staff a lunch menu. Write the lunch menu on poster paper and post at the front of the room. Ask staff to share which foods on the lunch menu are the No Cook Process. Circle the menu items on the poster paper. Discuss what they learned. Answer staff questions.

Questions for the staff:

- What is the Process Approach?
 - **The Process Approach to developing a food safety program categorizes menu items into three broad preparation processes (no cook, same day service, and complex preparation) based on the number of times the food passes through the temperature danger zone (TDZ).**
- Why is The Process Approach important?
 - **It helps determine how to control a food's temperature ensuring food safety by keeping food out of the TDZ.**
- What is a No Cook food item?
 - **No cook menu items do not go through the TDZ**
- What are some examples of No Cook food items on our menu?
 - **Examples: fresh fruit, fresh vegetables, deli sandwiches**



- What steps do you take to keep no cook foods safe?
 - **Cold hold food at 41 °F or below**
- Are the steps we are doing in our school keeping No Cook foods out of the danger zone?

Additional Resources:

Fact sheets: <http://www.theicn.org/ResourceOverview.aspx?ID=109>

- Temperature Danger Zone Fact Sheet (E/S)
- The Process Approach Fact Sheet (E/S)

The Process Approach: Same Day Service

Objective: Discuss the process approach for same day service foods, why it is important, and how to safely handle same day service foods.

Why it is important: Menu items in the same day service process go through the temperature danger zone one time. These are items such as hamburgers, pizza, chicken nuggets, and scrambled eggs. For same day service foods, it is very important to control, monitor, and keep records of temperatures to minimize time in the temperature danger zone.

Materials:

- Same Day Service Process Fact Sheet (E/S):
<http://www.theicn.org/ResourceOverview.aspx?ID=109>
- Completed production sheet

Instruction:

Provide all staff the Same Day Service Fact Sheet, and review the information. Provide all staff a completed production sheet. Ask questions. Answer staff questions.

Questions for the staff:

- According to the Process Approach, what is a same day service food?
 - **Same day service menu items go through the temperature danger zone one time**
- What are some examples of Same Day Service food items on our menu?
 - **Examples: pizza, baked chicken, hamburgers**
- What steps do you take during food preparation to prevent cross contamination?
 - **Use good personal hygiene.**
 - **Follow proper handwashing practices.**
 - **Use sanitized, calibrated thermometer to take food temperatures.**
 - **Serve food so that there is no bare hand contact (use appropriate utensils, deli paper, or single-use gloves).**
 - **Restrict ill employees from working with food.**
- How do you limit the time food is in the temperature danger zone?
 - **Hot hold food at 135 °F or above**
- What information is available on the production sheet to assist you in maintaining the proper temperature of foods?
 - **Cooking temperatures, holding temperatures, corrective actions**
- Are the steps we are doing in our school keeping Same Day Service foods out of the danger zone?

Additional Resources:

Fact sheets: <http://www.theicn.org/ResourceOverview.aspx?ID=109>

- Personal Hygiene Fact Sheet (E/S)
- Preventing Contamination During Food Preparation Fact Sheet (E/S)
- Temperature Danger Zone Fact Sheet (E/S)
- The Process Approach Fact Sheet (E/S)

The Process Approach: Complex

Objective: Discuss the process approach for complex foods, why it is important, and how to safely handle complex foods.

Why it is important: Menu items in the complex process go through the temperature danger zone, during cooking, cooling, and when foods are reheated. Examples of these items will vary in different schools, but may include turkey roasts, taco meat, chili, and leftovers. The complex food preparation process includes foods that require time and temperature control and have been cooled. For complex foods, it is very important to control, monitor, and keep records of temperatures to minimize time in the temperature danger zone.

Materials:

- Complex Process Fact Sheet (E/S):
<http://www.theicn.org/ResourceOverview.aspx?ID=109>
- Completed production sheet
- Poster paper
- Marker
- Painters tape

Instruction:

Provide all staff the Complex Process Fact Sheet, and review the information. Provide staff a completed production sheet. Select an item on the production sheet, and write the item on poster paper.

Ask questions. Write down staff responses and discuss. Answer staff questions.

Questions for the staff:

- According to the Process Approach, what is a complex food?
 - **Complex menu items pass through the TDZ three times**
- What are some examples of Complex food items on our menu?
 - **Examples: chili made the day before, cooked turkey roast used to make sandwiches, tamale pie**
- What steps do you take to check the internal cooking temperature of the complex food listed on the production sheet?
 - **Use a clean and sanitized calibrated thermometer.**
 - **Insert thermometer into food and allow display to settle.**
 - **Record temperature on log.**
 - **Take corrective actions if needed.**

- What steps do you take in cooling the complex cooked food?
 - **Hot food must be cooled from 135 °F – 70 °F within 2 hours.**
 - **Hot food must be cooled from 135 °F – 41 °F within a total of 6 hours.**
 - **If food does not cool to 70 °F within 2 hours, reheat the food to 165 °F for 15 seconds, and begin the cooling process again.**
- Why is proper cooling of cooked food important?
 - **If food cools too slowly then food stays in the temperature danger zone allowing bacteria to grow.**
- What steps do you take in reheating food? **Heat food to 165 °F within 2 hours.**
- What is the holding temperature for complex menu items? **135 °F**
- Are the steps we are doing in our school keeping Complex foods out of the danger zone?

Additional Resources:

Fact sheets: <http://www.theicn.org/ResourceOverview.aspx?ID=109>

- Cooking Foods Fact Sheet (E/S)
- Cooling Foods Fact Sheet (E/S)
- Reheating Foods Fact Sheet (E/S)
- Temperature Danger Zone Fact Sheet (E/S)
- The Process Approach Fact Sheet (E/S)
- Using Food Thermometers Fact Sheet (E/S)

Resources

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