Orientation to School Nutrition Management

Food Safety

Participant's Workbook

Time: 1 ½ hours

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Key Area: 2
Code: 2600 Food Safety and HACCP

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Institute of Child Nutrition
The University of Mississippi

The Institute of Child Nutrition was authorized by Congress in 1989 and established in 1990 at The University of Mississippi in Oxford and is operated in collaboration with The University of Southern Mississippi in Hattiesburg. The Institute operates under a grant agreement with the United States Department of Agriculture, Food and Nutrition Service.

PURPOSE
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
The mission of the Institute of Child Nutrition is to provide information and services that promote the continuous improvement of child nutrition programs.

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-Practice general food safety procedures.

Key Area 2: Operations

Background Information

Orientation to School Nutrition Management: Food Safety Essentials is an overview course designed by the Institute of Child Nutrition (ICN) to highlight important aspects of food safety and encourage further education on the topic. This course was developed for new school nutrition directors and managers by providing a basic understanding of food safety enabling them to begin the job using safe food handling practices.

This section of *Orientation to School Nutrition Management* is **not** an in-depth food safety training. ICN encourages more training and education on the topic of food safety. For more information and training on food safety, please visit the ICN website, **www.theicn.org,** to download our materials free of charge. Several ICN food safety resources will be referenced during this session that will provide more information on the topics discussed, materials for training your staff, and a list of additional food safety resources.

Overview

This section of Orientation to School Nutrition Management is not an in-depth food safety training. We will talk briefly about personal hygiene, important food safety practices, proper cleaning and sanitizing, and creating a food safety program in your school. ICN encourages participants to seek more education on the topic of food safety. For more information and training on food safety, please visit the ICN website, www.theicn.org, to download all our materials free of charge. Several ICN food safety resources will be referenced during this session to provide more information on the topics discussed, materials for training your staff, and a list of additional food safety resources.

Ensuring the food served to children in schools is safe is crucial to any school nutrition program. Whether it is an outbreak of a foodborne illness or a hazard in a food, every action made by school nutrition employees impacts the safety of the meals that are prepared and served

The following basic food safety topics will be covered in this training

- Personal Hygiene
    - Proper handwashing
    - No bare-hand contact with ready to eat foods
    - Handling illness at work
- Safe Food Handling Practices
    - Safe food temperatures
    - Cleaning and sanitizing
    - Thermometer calibration
    - Temperature danger zone
- Components of a Food Safety Program
    - HACCP (Hazard Analysis Critical Control Points)
    - Process approach
    - SOPs (Standard Operating Procedures)

Personal Hygiene (Sample SOP)

PURPOSE: To prevent contamination of food by school nutrition employees.

SCOPE: This procedure applies to school nutrition employees who handle, prepare, or serve food.

KEY WORDS: Personal Hygiene, Cross Contamination, Contamination

INSTRUCTIONS:

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

Personal Hygiene (Sample SOP), continued

MONITORING:

- The kitchen supervisor will inspect employees when they report to work to be sure that each employee is following this SOP.
- The kitchen supervisor will monitor that all school nutrition employees are adhering to the personal hygiene policy during all hours of operation.

CORRECTIVE ACTION:

1. Retrain any school nutrition employee found not following the procedures in this SOP.
2. Discard affected food.

VERIFICATION AND RECORD KEEPING:

The school nutrition manager will verify that school nutrition employees are following this SOP by visually observing the employees during all hours of operation. The school nutrition manager will complete the Food Safety Checklist daily. School nutrition employees will record any discarded food on the Damaged or Discarded Product Log. The Food Safety Checklist and Damaged or Discarded Product Logs are to be kept on file for a minimum of 1 year.

DATE IMPLEMENTED: _____ **BY:** _____

DATE REVIEWED: _____ **BY:** _____

DATE REVISED: _____ **BY:** _____

Use Disposable Gloves Properly

- Use disposable gloves that fit well.
- Wash hands before and after use of disposable gloves.
- Wear gloves when preparing and serving ready-to-eat foods such as fresh fruits and vegetables, sandwiches, and salads.
- Change gloves frequently and between tasks.
- Never handle money and food while wearing the same gloves.
- Change gloves after sneezing, wiping nose, touching hair, or other contact with germs.
- Never reuse or wash gloves.
- Dispose of soiled or torn gloves after use.
- If gloves are used to handle raw animal food (meat, poultry, fish, eggs) the gloves can only be used for that task. They must be changed, and hands must be washed before working with different raw meats or ready-to-eat food.

Common Foodborne Illnesses

Symptoms	Where Can Microorganism Be Found or "Common Source"	Prevention Strategies
Shiga toxin-producing *Escherichia coli* O157:H7		
Symptoms begin 3–8 days after eating contaminated food, can last 2–9 days, and include: • cramping, • diarrhea (watery or bloody), • vomiting, and • hemolytic uremic syndrome (hus).	• Intestinal tract of animals, particularly cattle and humans • Raw or undercooked ground beef • Raw milk or dairy products • Unpasteurized apple cider or juice • Imported cheeses • Dry salami • Uncooked fruits and vegetables	• Practice good personal hygiene. • Follow handwashing guidelines. • Follow procedures to avoid cross contamination. • Cook all poultry and meat to correct internal temperature, and confirm with a thermometer. • Use only pasteurized milk, dairy products, or juices. • Wash all produce in cold, running water. • Cool foods properly.
Salmonellosis *Salmonella spp.* (Nontyphoidal *Salmonella*)		
Symptoms begin 6–48 hours after eating contaminated food, last 1–2 days, and include: • stomach cramps, • headache, • nausea, • fever, • diarrhea, • vomiting, and • severe dehydration (infants and elderly).	• Raw meats and poultry • Milk and dairy products • Fish and shrimp • Sauces and salad dressings • Cake mixes • Cream-filled desserts and toppings • Peanut butter • Cocoa and chocolate • Sliced fresh fruits and vegetables such as melons, strawberries, or tomatoes • Raw sprouts	• Practice good personal hygiene. • Follow handwashing guidelines. • Follow procedures to avoid cross-contamination. • Cook all foods to correct internal temperature and confirm with a thermometer. • Hold hot foods at 135 ºF or above. • Cool foods properly.

Symptoms	Where Microorganism Can Be Found or "Common Source"	Prevention
	***Salmonella* Typhi (Typhoid Fever)**	
Symptoms usually begin in 1–3 weeks, but may show as long as 2 months after exposure. Symptoms include: • high fever, • stomach pain, • diarrhea or constipation, • aches, • headaches, • fatigue, • loss of appetite, and • rash of flat, rose-colored spots.	• Intestinal tract of humans • Untreated or fecal-contaminated water or ice • Raw fish, meats, and poultry • Unpasteurized milk and dairy products • Raw vegetables, fresh fruit, and salads washed with untreated or sewage-contaminated water	• Follow handwashing guidelines. • Avoid bare hand contact with ready-to-eat foods. • Report symptoms of diarrhea and vomiting and diagnosis of or exposure within the past 14 days to others with typhoid fever to your immediate supervisor. Do not work when you have these symptoms. • Use potable (clean) water for handwashing, cleaning, and sanitizing food contact surfaces and washing produce. • Ensure all foods are purchased from a safe supplier. • Cook all foods to correct internal temperature and confirm with a thermometer.
	***Shigella spp.* (Shigellosis)**	
Symptoms begin 12–50 hours after eating contaminated food, last up to 2 weeks, and include: • abdominal pain, • diarrhea containing blood/mucus, • fever, • nausea, • vomiting, • chills, • fatigue, and • dehydration.	• Intestinal tract of humans • Polluted water; spread by flies and food handlers • Meat salads • Potato and pasta salads • Lettuce and other raw vegetables • Milk and dairy products • Ready-to-eat foods	• Practice good personal hygiene. • Follow handwashing guidelines. • Follow procedures to avoid cross contamination. • Use water from approved sources. • Control flies. • Maintain storage temperatures. • Cool foods properly.

Symptoms	Where Microorganism Can Be Found or "Common Source"	Prevention
Norovirus (Norwalk and Norwalk-Like Viral Agents)		
Symptoms begin 1–2 days after ingesting contaminated food or water and include: • nausea, • vomiting, • diarrhea • abdominal pain, • headache, and • mild fever.	• Contaminated drinking water • Shellfish from contaminated water • Raw vegetables, fresh fruit, and salads contaminated by dirty hands	• Practice good personal hygiene. • Follow procedures to avoid cross contamination. • Wash all fresh produce to be served whole, peeled, or cooked, in cold, running water. • Use water from approved sources. • Obtain shellfish from approved, health-inspected sources, and cook thoroughly. • Cook all foods to required internal temperatures, and confirm with a thermometer.
Hepatovirus (Hepatitis A)		
Symptoms begin 10 days up to almost 2 months after ingesting contaminated food or water and include: • fever, • fatigue, • headache, • nausea, • loss of appetite, • vomiting, • stomach pain, and later jaundice (yellow skin and eyes).	• Intestinal tract of humans • Human urinary tract • Contaminated water • Foods contaminated by food handlers, processing plants, or foodservice facilities • Foods of particular concern – prepared foods requiring no additional cooking: deli meats, salads, sandwiches, fruit and fruit juices, milk and dairy products, raw fruits and vegetables	• Practice good personal hygiene. • Follow procedures to avoid cross contamination. • Wash all fresh produce to be served whole, peeled, or cooked, in cold, running water. • Use water from approved sources. • Cook all foods to the required internal temperature, and confirm with a thermometer.

Symptoms	Where Microorganism Can Be Found or "Common Source"	Prevention
***Clostridium botulinum* (Botulism)**		
Symptoms begin 18–36 hours after eating contaminated food and include: • diarrhea or constipation; • weakness; • dizziness; • double vision or blurred vision; • difficulty speaking, swallowing, or breathing; and • paralysis.	• Home-canned foods • Improperly processed foods • Sausages and meats • Canned low-acid foods, such as certain vegetables • Untreated garlic in oil • Leftover, unrefrigerated, foil-wrapped baked potatoes • Sautéed onions in butter sauce	• Discard damaged cans. • Do not use home-canned foods in a foodservice establishment. • Do not mix and store oil and garlic. • Follow rules for time and temperature control. • Sauté onions as needed. Do not sauté and store unrefrigerated for later use. • Do not store leftover baked potatoes in foil wrapping. Unwrap and chill correctly. • Cool foods properly.
***Campylobacter jejuni* (Campylobacteriosis)**		
Symptoms begin 2–5 days after eating contaminated food, can last 7–10 days, and include: • diarrhea (watery or bloody), • fever, • nausea and vomiting, • abdominal pain, • headache, and • muscle pain.	• Unpasteurized milk and dairy products • Raw poultry • Raw beef • Non-chlorinated or fecal-contaminated water • Birds and flies can carry and contaminate food	• Practice good personal hygiene. • Follow handwashing guidelines. • Follow procedures to avoid cross contamination. • Cook all poultry, meat, and other foods to appropriate internal temperature and confirm with a thermometer. • Maintain good pest control. • Use only pasteurized dairy products. • Use water from approved sources.

Symptoms	Where Microorganism Can Be Found or "Common Source"	Prevention
Clostridium perfringens		
Symptoms begin 8–24 hours after eating contaminated food, last 24 hours, and include: • abdominal cramping and • diarrhea.	• Intestinal tracts of humans and animals • Cooked meat and poultry • Gravy • Beans	• Practice good personal hygiene. • Follow handwashing guidelines. • Follow procedures to avoid cross contamination. • Cook all foods to correct internal temperature and confirm with a thermometer. • Hold hot foods at 135 °F or above. • Cool foods properly.
***Listeria monocytogenes* (Listeriosis)**		
Symptoms begin 3–70 days after eating contaminated food; 21-day onset is most common. Symptoms include: • sudden onset of fever, • muscle aches, • diarrhea or vomiting, • headaches, • stiff neck, • confusion, • loss of balance, and • convulsions.	• In soil, ground water, plants, and intestinal tracts of humans and animals • Unpasteurized milk and cheese • Ice cream • Raw vegetables • Raw and cooked poultry • Raw meat and fish • Prepared and chilled ready-to-eat foods • Deli meats, luncheon meats, hot dogs • Soft cheese such as feta, Brie, and Mexican-style cheeses	• Practice good personal hygiene. • Follow handwashing guidelines. • Follow procedures to avoid cross contamination. • Cook all poultry and meat to correct internal temperature and confirm with a thermometer. • Use only pasteurized milk, dairy products, or juices. • Wash all fresh produce in cold, running water. • Clean and sanitize food contact surfaces. • Maintain proper food temperatures.

Employee Health and Personal Hygiene Video Key Points

1. **What symptoms should you report to your supervisor?**

    - Diarrhea
    - Vomiting
    - Sore throat with fever
    - Infected wound or boil on hands or arms
    - Jaundice (yellowing of skin and eyes)
    - Diagnosis of a foodborne illness

2. **What are the Big 6 foodborne pathogens?**

    - Norovirus
    - *Salmonella*
    - *Salmonella* Typhi
    - *E. coli*
    - *Shigella*
    - Hepatitis A

3. **What is the difference between being excluded and restricted from work?**

- Exclusion means a school nutrition employee is not permitted to work in or enter a food preparation site. This requirement applies to areas where food is received, prepared, stored, packaged, served, vended, transported, or purchased.

- Restriction means a school nutrition employee's activities are limited to prevent the risk of transmitting a disease through food. A restricted employee cannot handle exposed food; clean equipment, utensils, linens; or unwrapped single-service or single-use articles.

4. **What symptoms require exclusion from work?**

- Vomiting
- Diarrhea
- Jaundice (yellowing of the skin and eyes)
- Diagnosed with one of the Big 6 foodborne pathogens
- Sore throat with fever if working with a highly susceptible population (i.e., preschool age children, immunocompromised people, or older adults)

5. **What symptoms require restriction at work?**

- Sore throat with fever if **not** working with a highly susceptible population (i.e. preschool age children, immunocompromised people, or older adults)
- Open wounds or cuts on the hands or arms that are not properly covered

6. **What are some jobs that can be performed under restriction?**

    - Cashier
    - Stocking canned or packaged food products
    - Cleaning and maintenance outside of production kitchen

7. **What are the employee's incorrect actions that contributed to the foodborne illness outbreak?**

- She did not report her symptoms of illness to her supervisor.
- She did not wash her hands properly after throwing up in the restroom.
- She wiped her hands on her apron.
- She double gloved her hands.
- Sneezed into her gloves, did not throw her gloves away, wash her hands, or put on a new pair of gloves.

- Wiped her face with a towel and then used that towel to clean a scoop.

8. What are some ways to prevent a foodborne illness?

- Report symptoms to your supervisor.
- Exclude or restrict employees based on symptoms.
- Wash hands properly and at proper times.
- No bare hand contact with ready-to-eat foods.
- Replace gloves when they become dirty or when switching tasks.
- Protect an infected cut or wound with a bandage and a single use glove.

1-Minute Challenge

Take one minute to brainstorm ways to keep foods at the proper temperature. You will have one minute for cold foods and one minute for hot foods.

How to keep foods at or below 41° F?

1.

2.

3.

4.

5.

6.

7.

8.

How to keep hot foods at or above 135°F?

1.

2.

3.

4.

5.

6.

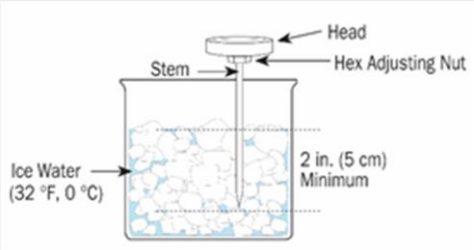
7.

8.

Ice-Water Method for Thermometer Calibration

Materials Needed:

- Bi-metallic stem (dial) thermometer
- Quart-size container
- Ice (enough to fill quart-size container)
- Water (enough to fill quart-size container)
- Thermometer wrench



Ice Water Method

1. Fill a 2-quart measure with ice.
2. Add water to within 1 inch of top of container.
3. Stir mixture well.
4. Let sit for one minute.
5. Place thermometer in container so that the sensing area of stem or probe is completely submerged over the dimple.
6. Keep the thermometer from touching sides or bottom of container.
7. Let thermometer stay in ice water for 30 seconds or until the dial stops moving.
8. Place the calibration tool on the hex adjusting nut and rotate until the dial reads 32 °F, while in ice water.
9. Some digital stemmed thermometers (thermistors) and thermocouples have a reset button that should be pushed.
10. Repeat process with each thermometer.

Temperatures through Food Production

Important Temperatures	Why It Is Important	Best Practices
Purchasing		
• Cold food: 41 °F and below • Hot food: 135 °F and below	Buy from vendors that have good food safety practices in place to ensure the food you purchase has not been temperature abused.	• Buy from reputable vendors. • Include food safety standards in purchasing agreements.
Receiving		
• Refrigerated food: 41 °F and below • Frozen food: at or below 32 °F • Hot food: held at or above 135 °F	Cold foods must be received at 41 °F or below so that it is not in the temperature danger zone. Frozen food must be frozen and contain no ice crystals. Ice crystals are a sign that the food has been thawed and refrozen.	• Keep receiving area clean. • Inspect the delivery truck. Make sure it is clean and free of odors. Check food temperatures, paying particular attention to frozen and refrigerated products. • Look for signs of contamination and container damage. Reject damaged packages; their contents may also be contaminated or damaged. • Check for separation of raw and ready-to-eat or prepared foods during transport. • Store foods immediately.
Storing		
• Dry storage areas: between 50 °F and 70 °F • Refrigerated storage areas: at or below 41 °F • Deep chilling storage areas: between 26 °F and 32 °F • Freezer storage areas: between -10 °F and 0 °F	Storing food out of the temperature danger zone assists in preserving food quality and decreases the likelihood of bacterial growth. However, dry storage items are shelf stable in the temperature danger zone because bacteria present in the sealed container is eliminated during processing.	• Use the First In First Out (FIFO) principle. Older products should be used first. • Store products in original packaging. Label foods with delivery date. • Keep raw foods separate from cooked or ready-to-eat products. • Store foods at least 6 inches off the floor and 6 inches away from the wall. • Keep storage areas clean, dry, and pest-free. • Store chemicals away from foods and food-related supplies. • Maintain, monitor, and record refrigerator, freezer, and dry storage room temperatures.

Important Temperatures	Why It Is Important	Best Practices
Preparing		
• Pre-chill ingredients for cold foods to 41 °F or below before combining with other ingredients. • Limit the preparation time of any ingredients to no more than 30 minutes at room temperature before cooking, serving, or returning to the refrigerator.	These methods prevent food from being in the temperature danger zone too long.	• Wash hands frequently, properly, and at appropriate times. • Avoid cross contamination. • Keep foods out of the temperature danger zone. • Use batch cooking to limit the time between preparation and service. • Thaw foods properly. • Chill all cold foods as quickly as possible. • Prepare foods as close to serving time as the menu will allow.
Cooking		
• 165 °F – poultry, stuffing, stuffed meats, stuffed pasta, casseroles, leftovers • 155 °F – ground meats, such as hamburger, ground pork, sausage, eggs for hot holding • 145 °F – beef roasts, pork roasts, beef steaks, ham, fish • 135 °F – ready-to-eat foods taken from a commercially processed, hermetically sealed package; vegetables (frozen or canned)	Cooking foods to the correct internal temperature will destroy existing bacteria, even though it may not kill toxins or bacterial spores.	• Avoid cross contamination. • Cook foods to the proper internal temperature for appropriate time. • Use a clean and calibrated food thermometer. • Record internal food temperature.

Important Temperatures	Why It Is Important	Best Practices
Holding and Serving		
• Cold food: held at or below 41 °F • Hot food: held at or above 135 °F	These temperatures keep food out of the temperature danger zone and prevent pathogen growth.	• Avoid cross contamination. • Keep foods out of the temperature danger zone. • Monitor and record food temperatures. • Monitor the temperature of hot holding and cold holding equipment.
Cooling		
• Hot food must be cooled from 135 °F to 70 °F within 2 hours. If not, the food must be reheated to 165 °F for 15 seconds or discarded. • Food must be cooled within a total of 6 hours from 135 °F to 41 °F (if step one is achieved). • Foods that start at room temperature (70 °F) must be cooled to 41 °F within 4 hours.	This is the time and temperature regulations specified by the *Food Code* to safely cool foods in order to prevent bacterial growth.	• Speed up cooling by using techniques such as: ○ Stirring frequently ○ Dividing food into small quantities ○ Using shallow pans ○ Using ice water baths or ice paddles whenever possible • Use a clean and calibrated food thermometer to check temperatures. • Monitor and record food temperatures during the cooling process. • Store foods appropriately – covered, labeled with product name and date prepared.
Reheating		
165 °F for 15 seconds within 2 hours	This is the temperature and time required to kill any bacteria that may be present in the food.	• Reheat to internal temperature of 165 °F for 15 seconds within 2 hours of less. • Monitor and record internal temperatures of foods. • Never reheat food in hot holding equipment. • Reheat food one time.
Transporting		
Refer to temperatures for holding		

Cleaning and Sanitizing Food Contact Surfaces (Sample SOP)

PURPOSE: To prevent foodborne illness by ensuring that all food contact surfaces are properly cleaned and sanitized.

SCOPE: This procedure applies to school nutrition employees involved in cleaning and sanitizing food contact surfaces.

KEY WORDS: Food Contact Surface, Cleaning, Sanitizing

INSTRUCTIONS:

1. Train school nutrition employees on using the procedures in this SOP.
2. Follow state or local health department requirements.
3. Follow manufacturer's instructions regarding the use and maintenance of equipment and use of chemicals for cleaning and sanitizing food contact surfaces. Refer to Storing and Using Poisonous or Toxic Chemicals SOP.
4. If state or local requirements are based on the FDA Food Code, wash, rinse, and sanitize food contact surfaces of sinks, tables, equipment, utensils, thermometers, carts, and equipment:
    - Before each use.
    - Between uses when preparing different types of raw animal foods, such as eggs, fish, meat, and poultry.
    - Between uses when preparing ready-to-eat foods and raw animal foods, such as eggs, fish, meat, and poultry.
    - Any time contamination occurs or is suspected.
5. Wash, rinse, and sanitize food contact surfaces of sinks, tables, equipment, utensils, thermometers, carts, and equipment using the following procedure:
    - Wash surface with detergent solution.
    - Rinse surface with clean water.
    - Sanitize surface using a sanitizing solution mixed at a concentration specified on the manufacturer's label.
    - Place wet items in a manner to allow air drying.

Cleaning and Sanitizing Food Contact Surfaces (Sample SOP), continued

INSTRUCTIONS, continued:

6. If a 3-compartment sink is used, setup and use the sink in the following manner:
    - In the first compartment, wash with a clean detergent solution at or above 110 °F or at the temperature specified by the detergent manufacturer.
    - In the second compartment, rinse with clean water.
    - In the third compartment, sanitize with a sanitizing solution mixed at a concentration specified on the manufacturer's label or by immersing in hot water at or above 171 °F for 30 seconds. Test the chemical sanitizer concentration by using an appropriate test kit.
7. If a dishmachine is used:
    - Check with the dishmachine manufacturer to verify that the information on the data plate is correct.
    - Refer to the information on the data plate for determining wash, rinse, and sanitization (final) rinse temperatures; sanitizing solution concentrations; and water pressures, if applicable.
    - Follow manufacturer's instructions for use.
    - Ensure that food contact surfaces reach a surface temperature of 160 °F or above if using hot water to sanitize.

MONITORING:

School nutrition employees will:

1. During all hours of operation, visually and physically inspect food contact surfaces of equipment and utensils to ensure that the surfaces are clean.
2. In a 3-compartment sink, on a daily basis:
    - Visually monitor that the water in each compartment is clean.
    - Take the water temperature in the first compartment of the sink by using a calibrated thermometer.
    - If using chemicals to sanitize, test the sanitizer concentration by using the appropriate test kit for the chemical.

Cleaning and Sanitizing Food Contact Surfaces, continued (Sample SOP)

- If using hot water to sanitize, use a calibrated thermometer to measure the water temperature. It should be at or above 171 °F. Refer to Using and Calibrating Thermometers SOPs.

3. In a dishmachine, on a daily basis:
   - Visually monitor that the water and the interior parts of the machine are clean and free of debris.
   - Continually monitor the temperature and pressure gauges, if applicable, to ensure that the machine is operating according to the data plate.
   - For hot water sanitizing dishmachine, ensure that food contact surfaces are reaching the appropriate temperature at or above 160 °F by placing a piece of heat sensitive tape on a smallware item or an irreversible registering temperature indicator on a rack and running the item or rack through the dishmachine.
   - For chemical sanitizing dishmachine, check the sanitizer concentration on a recently washed food-contact surface using an appropriate test kit.

CORRECTIVE ACTION:

1. Retrain any school nutrition employee found not following the procedures in this SOP.
2. Wash, rinse, and sanitize dirty food contact surfaces. Sanitize food contact surfaces if it is discovered that the surfaces were not properly sanitized. Discard food that comes in contact with food contact surfaces that have not been sanitized properly.
3. In a 3-compartment sink:
   - Drain and refill compartments periodically and as needed to keep the water clean.
   - Adjust the water temperature by adding hot water until the desired temperature is reached.
   - Add more sanitizer or water, as appropriate, until the proper concentration is achieved.
4. In a dishmachine:
   - Drain and refill the machine periodically and as needed to keep the water clean.
   - Contact the appropriate individual(s) to have the machine repaired if the machine is not reaching the proper wash temperature indicated on the data plate.

Cleaning and Sanitizing Food Contact Surfaces (Sample SOP), continued

- For a hot water sanitizing dishmachine, retest by running the machine again. If the appropriate surface temperature is still not achieved on the second run, contact the appropriate individual(s) to have the machine repaired. Wash, rinse, and sanitize in the 3-compartment sink until the machine is repaired or use disposable single service/single-use items if a 3-compartment sink is not available.
- For a chemical sanitizing dishmachine, check the level of sanitizer remaining in bulk container. Fill, if needed. "Prime" the machine according to the manufacturer's instructions to ensure that the sanitizer is being pumped through the machine. Retest. If the proper sanitizer concentration level is not achieved, stop using the machine and contact the appropriate individual(s) to have it repaired. Use a 3-compartment sink to wash, rinse, and sanitize until the machine is repaired.

VERIFICATION AND RECORD KEEPING:

School nutrition employees will record monitoring activities and any corrective action taken on the Food Contact Surfaces Cleaning and Sanitizing Log. The school nutrition manager will verify that school nutrition employees have taken the required temperatures and tested the sanitizer concentration by visually monitoring school nutrition employees during the shift and reviewing, initialing, and dating the Food Contact Surfaces Cleaning and Sanitizing Log. The log will be kept on file for at least 1 year. The school nutrition manager will complete the Food Safety Checklist daily. The Food Safety Checklist is to be kept on file for a minimum of 1 year.

DATE IMPLEMENTED: _____ BY: _____

DATE REVIEWED: _____BY: _____

DATE REVISED: _____BY: _____

Reheating Time/Temperature Control for Safety Foods (Sample SOP)

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

SCOPE: This procedure applies to school nutrition employees who prepare or serve food.

KEY WORDS: Cross Contamination, Temperatures, Reheating, Holding, Hot Holding, Time/Temperature Control for Safety Foods, TCS Foods

INSTRUCTIONS:

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

Reheating Time/Temperature Control for Safety Foods (Sample SOP), continued

MONITORING:

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

CORRECTIVE ACTION:

1. Retrain any school nutrition employee found not following the procedures in this SOP.
2. Continue reheating and heating food if the internal temperature does not reach the required temperature.

VERIFICATION AND RECORD KEEPING:

School nutrition employees will record product name, time, the two temperatures/times, and any corrective action taken on the Cooking and Reheating Temperature Log. School nutrition manager will verify that school nutrition employees have taken the required reheating temperatures by visually monitoring school nutrition employees during the shift and reviewing, initialing, and dating the Cooking and Reheating Temperature Log at the close of each day. The temperature logs are kept on file for a minimum of 1 year.

DATE IMPLEMENTED: _____ **BY:** _____

DATE REVIEWED: _____ **BY:** _____

DATE REVISED: _____ **BY:** _____

HACCP Principles

	Completed	Comments
1. Conduct a Hazard Analysis		
How is the menu item prepared?		
Prepared and served without cooking		
Prepared and cooked for same day service		
Prepared, cooked, held, reheated and served		
Check your menu		
What items are similarly prepared?		
What items are TCS (Time/Temperature Control for Safety)?		
Where is the food safety hazard during the process?		
Where may food safety hazard occur for each item?		
2. Determine Critical Control Points (CCPs)		
Find points in process where hazards can be prevented, eliminated, or reduced to safe levels		
Some foods may have more than one		
3. Establish Critical Limits		
Minimum or maximum limit that must be met to prevent, eliminate, or reduce the hazard to a safe level.		
4. Establish Monitoring Procedure		
Determine best way to check procedures and monitor for consistency.		
Identify who will monitor and how often.		
5. Identify Corrective Actions		
Establish steps that must be taken when a critical limit is not met.		
6. Keep Records		
Maintain you HACCP plan.		
Maintain all documentation during the HACCP creation process.		
Keep all records.		
Monitoring activities		
Corrective action		
Equipment is in working condition		
Working with suppliers		
7. Review and verify your overall food safety program periodically		
Is your plan working as intended?		
Plan to evaluate		
Monitoring charts		
Records		
How you performed your hazard analysis		
Review all records when updating HACCP plan		

Menu Items by Process Category

Directions: Place a check mark in the appropriate column of the Food Preparation Process for the menu item as it is prepared in your operation. If you have more than one school present, select one school to complete this activity.

Menu Item	No Cook	Same Day Service	Complex Food Preparation
Egg patty			
Milk			
Nachos with meat and cheese			
Stacked turkey with Swiss on bun			
Seasoned corn			
Baked potato wedges			
Breakfast pizza			
Hot dogs			
Lettuce			
Spaghetti sauce			
Tacos			
Bean burritos			
Cole slaw			
Baked beans			
French toast sticks			
Sliced baked turkey			
Try a few of your own items from your school or district. Enter the menu item and mark the appropriate box.			
Menu Item	**No Cook**	**Same Day Service**	**Complex Food Preparation**

Additional Food Safety Resources

Institute of Child Nutrition

- Cooling Foods Safely
  - Video
  - Fact sheets
  - Mini-posters
- Employee Health and Personal Hygiene
  - Resource Guides
    - School nutrition managers and directors
    - School nutrition staff
  - Videos: training mini-series
  - Resource folder
- Food Allergy Resources: **www.theicn.org/foodallergy**
  - Fact Sheets
    - Major Eight
    - SOP
    - Managing food allergies in school and CACFP programs
    - Common questions
  - Face-to-face training: *Managing Food Allergies in School Nutrition Programs*
  - Online course: *Managing Food Allergies in School Nutrition Programs*
  - Videos
  - Resource folder
- Food Safety Fact Sheets
- Food Safety for Summer Meals
  - Summer Meals Training Guide
  - Posters
  - Food Safety Tip Card
- Food Safety Mini - Posters

- General Food Safety Trainings
    - 8-hour face-to-face training *Food Safety in Schools*
    - 4-hour face-to-face training *Food Safety Basics*
    - Online course: *Serving It Safe*
- HACCP-based Standard Operating Procedures
- *Manager's Corner: Food Safety – Series 1*
- Norovirus: **www.theicn.org/norovirus**
    - Face-to-face training
    - Mini-posters
    - Fact sheets
    - Video
    - Standard Operating Procedures
    - Three, 1-hour online courses
    - Resource folder
- Produce Safety: **www.theicn.org/producesafety**
    - Best practice for handling fresh produce in schools
    - Videos
    - Fact sheets
    - Presentations and talking points
    - *Conducting a Mock Recall*
    - Resource folder
- *Thermometer Information Resource*
- *Wash Your Hands: Educating the School Community*

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Appendix
Menu Items by Process Category

Menu Item	No Cook	Same Day Service	Complex Food Preparation
Egg patty		X	
Milk	X		
Nachos with meat and cheese		X	X
Stacked turkey with Swiss on bun	X		X
Seasoned corn		X	
Baked potato wedges		X	
Breakfast pizza		X	
Hot dogs		X	
Lettuce	X		
Spaghetti sauce		X	X
Tacos		X	X
Bean burritos		X	
Cole slaw	X		
Baked beans		X	
French toast sticks		X	
Sliced baked turkey		X	X

Please note that answers can vary based on how the items are prepared among different schools.

The following food items may fall under more than one category depending on the specific preparation process.

Nachos with meat and cheese - same day or complex, depending on practices followed in specific foodservice operation

Stacked turkey with Swiss on bun - could be same day or complex if turkey was cooked and cooled and sliced in the operation

Spaghetti sauce - could be same day or complex, depending when the meat is cooked

Tacos - could be same day or complex, depending when the meat is cooked

Bean burritos - same day if it is a frozen product

Tuna salad sandwiches - no cook (if eggs are purchased precooked); complex if eggs are cooked and cooled prior to service

BBQ pork sandwich - same day or complex if pork roasts are cooked on site, cooled, and then made into BBQ

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