



FOOD SAFETY IN CHILD CARE

INSTRUCTOR'S MANUAL

CLEAN



SEPARATE



COOK



CHILL



FOOD SAFETY IN CHILD CARE

INSTRUCTOR'S MANUAL

Time: 4 hours



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Institute of Child Nutrition

The University of Mississippi

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PURPOSE

Improve the operation of child nutrition programs through research, education and training, and information dissemination.

VISION

Lead the nation in providing research, education, and resources to promote excellence in child nutrition programs.

MISSION

Provide relevant research-based information and services that advance the continuous improvement of child nutrition programs.

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INTRODUCTION

Background Information

Food Safety in Child Care has been adapted from *Food Safety in Schools*, formerly, *Serving It Safe*.

Food Safety in Child Care has been developed as a four (4) hour face-to-face food safety training for child care foodservice employees. *Food Safety in Child Care* materials have been adapted using the

USDA Fight Bac[®] program:

- **CLEAN:** *Wash hands and surfaces often!*
- **SEPARATE:** *Don't cross contaminate!*
- **COOK:** *Cook to proper temperature!*
- **CHILL:** *Refrigerate promptly!*

The Instructor's Manual provides instructions on how each lesson should be presented. The Instructor's Manual contains the following components:

- Preparation Checklist
- Training-at-a-Glance
- Lesson Objectives
- Lesson Plan
- Appendix

Training Recommendations

To prepare for teaching this training, please find below some essential guidelines. Instructors should follow the model program provided, using the script as much as possible. Become familiar with the following prompts and their meanings.

- **SAY:** This prompt is used to tell the instructor what to say to the participants.
- **ASK:** This prompt is used when the instructor should ask the participants a question. If the question warrants feedback, it will be followed by the FEEDBACK prompt.
- **FEEDBACK:** This prompt is used to ensure certain elements are covered in discussions.
- **DO:** This prompt is used to explain what the instructor/participants are to do.
- **SHOW SLIDE:** This prompt is used for showing PowerPoint slides.

Pre and Post-Assessment

This manual includes a Pre-/Post-Assessment that will be administered at the beginning and at the end of the training.

Ground Rules

- **Show up on time and come prepared.** Be prompt in arriving and in returning from breaks. Come with a positive attitude.
- **Stay mentally and physically present.** Be present and stay on task. Listen attentively to others and avoid disruptive side conversations.
- **Let everyone participate.** Be patient when listening to others speak. Treat all participants with the same respect that you would want from them.
- **Listen with an open mind.** Stay open to new ways of doing things, and listen for understanding. You can respect another person's point of view without agreeing with them.
- **Think before speaking.** Seek first to understand, then to be understood. Avoid using idioms, three letter acronyms, and phrases that can be misunderstood.
- **Attack the problem, not the person.** Respectfully challenge the idea, not the person. Honest and constructive discussions are necessary to get the best results.

Preparation Checklist

Instructions: The following tasks are necessary for presenting this lesson. Assign each task to a specific person, and determine the date that each task must be completed. Keep track of the progress by recording information on the tracking form and checking off tasks as they are completed.

Task	Person Responsible	Completion Date	✓
Reserve equipment and gather supplies as needed for use on the day of class (6 weeks prior). Instructor's Manual Participant's Workbook PowerPoint Presentation Videos: Handwashing to Prevent the Spread of Disease A Flash of Food Safety Calibrating a Thermometer: Ice Water Method Agenda Roster of participants attending for instructor Participants' sign-in sheets Ground Rules Evaluations Pre/Post-Assessments List of presentation equipment and supplies: Microphone (preferably wireless) Projector Computer to present slides and/or DVD Speakers Screen Supplies for activities (see lessons for details): Flip chart (self-adhesive strip sheets) Painter's tape (do not use masking tape) Markers (1 box per 4-5 participants) Pens or pencils (1 per person) Name tags and table tents Multi-colored sticky note pads One set of 6 index cards – each card with one of the following items written on it: <ul style="list-style-type: none"> • Clothing • Fingernails • Jewelry 			

Preparation Checklist, continued

Task	Person Responsible	Completion Date	✓
<ul style="list-style-type: none"> • Wounds and sores • Hair • Tasting food 12 bimetallic thermometers 1 (2 quart) liquid measure crushed ice cold water calibration tool or wrench 12 cups 4 signs with one cooking temperature on each sign. (165 °F, 160 °F, 140 °F, 145 °F) 21 index cards - each card has one of the foods below listed on it. <ul style="list-style-type: none"> • Canned green beans • Frozen chicken patties (precooked) • Frozen broccoli • Canned corn • Canned chicken noodle soup • Corn dogs • Roast beef • Lamb chops • Sausage • Taco filling • Sloppy joes • Hamburger patties • Chili • Pork roast • Ham (uncooked) • Frozen chicken patties (if not precooked) • Leftover lasagna • Chicken noodle casserole • Leftover chili • Stuffed pasta shells • Roasted turkey 			

COMPETENCIES, KNOWLEDGE AND SKILLS FOR CHILD CARE PROVIDERS

These are the competencies, knowledge and skills that apply to this training. A complete list can be found on the ICN website.

Functional Area 1: Administration

1.9: Implements safety and sanitation procedures in child care operations.

- Knowledge: Knows local and state regulations regarding proper food safety and sanitation requirements.

Functional Area 4: Health and Safety

4.1: Understands and complies with local, state, and federal regulations and guidelines for safety and sanitation.

- Knowledge: Knows basic health, sanitation, and safety requirements.

4.2: Establishes policies and procedures to create safe work environment practices and environment to prevent and reduce safety risks.

- Knowledge: Knows principles for selecting, storing, using, and maintaining chemical supplies and other hazardous materials.

4.3: Establishes policies and procedures to ensure food is prepared and served in a safe environment that meets food safety and sanitation standards.

- Knowledge: Knows sanitation and food safety regulations.
Knows acceptable food storage and cleaning techniques.
Knows principles of foodborne illness prevention.

Source: *Competencies, Knowledge and Skills for Child Care Providers in CACFP Operations* available on the ICN website: www.theicn.org

Training-at-a-Glance

Welcome and Overview	30 minutes
Lesson 1: Clean	40 minutes
Objectives: 1. List good personal hygiene practices that should be followed by employees in child care facilities. 2. List the appropriate times for handwashing, and demonstrate proper handwashing procedures. 3. Describe how to clean and sanitize food contact surfaces, dishes, and equipment.	
Lesson 2: Separate	60 minutes
Objectives: 1. Describe ways food can be contaminated in a child care facility. 2. List methods to avoid cross contamination, chemical contamination, and cross contact. 3. Describe methods to safely receive food. 4. Describe appropriate storage techniques for food and chemicals.	
Lesson 3: Cook	50 minutes
Objectives: 1. Demonstrate how to use a food thermometer. 2. Demonstrate how to calibrate a food thermometer. 3. Define the temperature danger zone for food. 4. Discuss appropriate internal cooking temperatures for food. 5. Describe the process for reheating food.	
Lesson 4: Chill	40 minutes
Objectives: 1. Describe methods for maintaining food temperatures when receiving, storing, preparing, and cold holding of food. 2. Describe the process for cooling food and handling leftovers.	
Conclusion	20 minutes
Food Safety Facts Game (Jeopardy style)	

Total hours for training: 4 hours

LESSON 1: CLEAN

Lesson Directory

Lesson Introduction and Learning Objectives

Lesson-at-a-Glance

Lesson Plan

Fact Sheets

Personal Hygiene

Handwashing

Cleaning and Sanitizing

Manual Dishwashing

Mechanical Dishwashing

Sample Standard Operating Procedures

Personal Hygiene

Washing Hands

Cleaning and Sanitizing Food Contact Surfaces

Storing and Using Poisonous or Toxic Chemicals

Handouts

Activity: *How to Wash Hands*

Activity: *Handwashing to Prevent the Spread of Disease (video)*

Activity: *How to Wash Hands Answer Key*

Activity: *Steps in Cleaning and Sanitizing for Manual Dishwashing*

Activity: *Steps in Cleaning and Sanitizing for Manual Dishwashing Answer Key*

Dishmachine Cleaning and Sanitizing Log

Child Care Food Safety Posters

Remember to Wash Hands with Soap and Warm Running Water When...

Drown a Germ... Wash Your Hands!

Lesson Introduction and Learning Objectives

One of the fundamental requirements of any foodservice operation is cleanliness – not only of the facility, but of the employees. Personal hygiene and handwashing are important procedures for employees to follow. In addition, employees must know how to appropriately clean and sanitize food contact surfaces, dishes, and equipment. At the end of this lesson, participants will be able to:

1. List good personal hygiene practices that should be followed by employees in child care facilities.
2. List the appropriate times for handwashing, and demonstrate proper handwashing procedures.
3. Describe how to clean and sanitize food contact surfaces, dishes, and equipment.

Lesson-at-a-Glance

Time	Topic	Task	Materials
Set Up	Lesson Preparation	<ul style="list-style-type: none"> Set up classroom for Lesson 1 	<ul style="list-style-type: none"> Preparation Checklist
5 minutes	Introduction and Overview Lesson Objectives	<ul style="list-style-type: none"> Introduce lesson List lesson objectives Pre-Assessment Ground Rules Ice Breaker 	<ul style="list-style-type: none"> Pre-Assessment
15 minutes	Objective List good personal hygiene practices that should be followed by employees in child care facilities.	<ul style="list-style-type: none"> Activity: Personal Hygiene Infomercial 	<ul style="list-style-type: none"> <i>Personal Hygiene</i> Fact Sheet <i>Personal Hygiene</i> Sample Standard Operating Procedure
10 minutes	Objective List the appropriate times for handwashing, and demonstrate proper handwashing procedures.	<ul style="list-style-type: none"> Activity: <i>How to Wash Hands</i> 	<ul style="list-style-type: none"> <i>Handwashing</i> Fact Sheet <i>Washing Hands</i> Sample Standard Operating Procedure Activity: <i>How to Wash Hands</i> <i>Handwashing to Prevent the Spread of Disease</i> Video Activity: <i>How to Wash Hands</i> Answer Key Child Care Food Safety Posters: <ul style="list-style-type: none"> <i>Remember to Wash Hands</i> <i>Drown a Germ... Wash Your Hands!</i> Flip chart Markers

Time	Topic	Task	Materials
10 minutes	Objective Describe how to clean and sanitize food contact surfaces, dishes, and equipment.	<ul style="list-style-type: none"> Activity: Steps in Cleaning and Sanitizing for Manual Dishwashing 	<ul style="list-style-type: none"> <i>Cleaning and Sanitizing Fact Sheet</i> <i>Cleaning and Sanitizing Food Contact Surfaces Sample Standard Operating Procedure</i> <i>Storing and Using Poisonous or Toxic Chemicals Sample Standard Operating Procedure</i> <i>Activity: Steps In Cleaning and Sanitizing for Manual Dishwashing</i> <i>Activity: Steps In Cleaning and Sanitizing for Manual Dishwashing Answer Key</i> <i>Manual Dishwashing Fact Sheet</i> <i>Mechanical Dishwashing Fact Sheet</i> <i>Dishmachine Cleaning and Sanitizing Log</i>

LESSON PLAN

Introduction

SHOW SLIDE: Welcome to Food Safety in Child Care

SHOW SLIDE: Pre-Assessment, Ground Rules, and Ice Breaker

Pre-Assessment

SAY:

The training has a Pre and Post-Assessment. Each participant should place an identifier on the Pre-Assessment. Choose a non-name identifier, such as a number, letter, or picture. The identifier should be something you will remember. Place the identifier in the space provided. Read each multiple choice question slowly and carefully. Choose what you think is the best answer. Then, circle your answer on the assessment.

DO:

Distribute the Pre-Assessment at the beginning of the training, allow sufficient time to complete the assessment, and collect the assessment before proceeding to the next part of the training.

Ground Rules

SAY:

It is always important to cover some ground rules before beginning training.

- **Show up on time and come prepared.** Be prompt in arriving and in returning from breaks. Come with a positive attitude.
- **Stay mentally and physically present.** Be present and stay on task. Listen attentively to others and avoid disruptive side conversations.
- **Let everyone participate.** Be patient when listening to others speak. Treat all participants with the same respect that you would want from them.
- **Listen with an open mind.** Stay open to new ways of doing things, and listen for understanding. You can respect another person's point of view without agreeing with them.
- **Think before speaking.** Seek first to understand, then to be understood. Avoid using idioms, three letter acronyms, and phrases that can be misunderstood.
- **Attack the problem, not the person.** Respectfully challenge the idea, not the person. Honest and constructive discussions are necessary to get the best results.

Ice Breaker

DO:

Have participants at each table introduce themselves by saying their name, their title, and how many years they have worked in child care. When everyone has spoken, add up the years worked of all individuals at the table.

SAY:

Ask for a representative at each table to tell the participants in the room the total amount of years of service in child care.

DO:

The Instructor will write the number of years for each table on a flip chart. The instructor will add the number of years to give a total of years that all participants in the room have worked in child care. Allow 10 minutes for this activity.

SAY:

One of the fundamental requirements of any foodservice operation is cleanliness – not only of the facility, but of the employees. Everything must be clean including employees, work areas, dishes, serving utensils, and equipment. Personal hygiene and handwashing are important procedures for employees to follow. In addition, employees must know how to appropriately clean and sanitize food contact surfaces, dishes, and equipment. In this lesson, we will talk about good personal hygiene and handwashing to ensure that employees are clean. We will also talk about how to clean and sanitize contact surfaces, dishes, and equipment using either manual or mechanical methods.

DO:

Refer participants to the Lesson Objectives in the *Food Safety in Child Care Participant's Workbook*.

SHOW SLIDE: Lesson 1: Clean**SAY:**

At the end of this lesson you will be able to:

- List good personal hygiene practices that should be followed by employees in child care facilities.
- List the appropriate times for handwashing, and demonstrate proper handwashing procedures.
- Describe how to clean and sanitize food contact surfaces, dishes, and equipment.

SHOW SLIDE:

Objective: List good personal hygiene practices that should be followed by employees in child care facilities.

SHOW SLIDE: Good Personal Hygiene Practices**SAY:**

Employees in child care facilities must follow good personal hygiene as one way to limit contamination of food and facilities. Most operations have a Standard Operating Procedure on personal hygiene. In your Participant's Workbook, there is a *Personal Hygiene* Sample Standard Operating Procedure. The one you use in your child care facility may differ slightly, but most procedures will be the same or similar. Compare what we talk about to what happens in your place of work. These SOPs are available on ICN's website in Word so that you can adapt it to your facility.

DO:

Refer to the copy of the *Personal Hygiene* Fact Sheet and the *Personal Hygiene* Sample Standard Operating Procedure that are included in the Participant's Workbook.

SHOW SLIDE: Activity: Personal Hygiene Infomercial

Note to Instructor: There are no handouts or supplemental materials in the Participant's Workbook for the following activity. You will use the set of six index cards from the tool kit.

DO:**Activity: Personal Hygiene Infomercial****Materials Needed:**

- 1 set of 6 – 3 x 5 inch index cards with one the following personal hygiene practice areas written on the back of each card:
 - Clothing
 - Fingernails
 - Jewelry
 - Wounds and Sores
 - Hair
 - Tasting Food

Instructions:

1. Divide participants into 6 groups by counting off 1, 2, 3, 4, 5, and 6. If you have a small group, divide into pairs so that more topics are covered. Give participants 3-5 minutes to do the activity.
2. Distribute one index card to each group.
3. Explain that each group is being assigned one area of personal hygiene. Group members are asked to identify key procedures related to the area assigned, and present a 1-minute infomercial to the group on the importance of this area of personal hygiene. Stress that they are “selling” a food safety practice, not a product. They can present the information on flip chart paper or as a skit. Props, such as aprons or hairnets, may be used if available. For example, try a rhyme or skit: “Wearing neat clothes that are crisp and clean lets the world know you practice good personal hygiene.”
4. Have each group present. Ask participants if there are any other key points that can be added.

DO:

Allow groups five minutes to prepare. Then have groups present their commercials. After groups have presented go over the key points.

Activity: Personal Hygiene Infomercial Answer Key

Personal Hygiene Infomercial	
Attire <ul style="list-style-type: none">• Wear clean uniform or appropriate clothing.• Change apron when dirty.• Remove apron when going to restroom or taking out trash. Fingernails <ul style="list-style-type: none">• Keep fingernails clean and filed.• Wear no artificial nails.• Wear no nail polish. Jewelry <ul style="list-style-type: none">• Wear no jewelry, except for a plain ring such as wedding band with no stones.	Wounds and Sores <ul style="list-style-type: none">• Treat and bandage wounds and sores.• Wear single-use gloves or finger cot to cover bandage.• Cover any lesions.• Wear single-use glove over bandage when working with food. Hair <ul style="list-style-type: none">• Keep hair clean.• Wear suitable hair restraints.• Pull long hair back and restrain. Tasting Food <ul style="list-style-type: none">• Place a small amount of food into a separate container.• Step away from exposed food and food contact surfaces for tasting.• Use a teaspoon to taste food and remove to dishroom.• Never reuse a spoon that has been used for tasting food.

Personal Hygiene

Fact Sheet

Introduction

Good personal hygiene is a basic requirement for implementing a food safety program. All child care employees must follow the Standard Operating Procedures for personal hygiene written for their child care facility. Poor personal hygiene is a risk factor that must be controlled in all types of child care operations.

Application

- Report to work in good health, clean, and dressed in clean clothes.
- Report any illness to your supervisor.
- Change apron when it becomes dirty.
- Wash hands properly, frequently, and at the appropriate times.
- Keep fingernails trimmed, filed, clean, and neat.
- Do not wear artificial fingernails or fingernail polish.
- Wear single-use gloves when working with ready-to-eat food.
- Do not wear jewelry except for a plain ring such as a wedding band.
- Treat and bandage wounds and sores immediately. When hands are bandaged, wear single-use gloves to cover bandage.
- Cover any lesion containing pus with a clean 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, use tobacco, or chew gum only in designated break areas where food or food contact surfaces may not become contaminated.
- Wear suitable and effective hair restraints while in the kitchen.
- 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.

Remember, follow state or local health department requirements.

Personal Hygiene

Sample Standard Operating Procedure

PURPOSE: To prevent contamination of food by child care employees.

SCOPE: This procedure applies to child care employees who handle, prepare, or serve food.

KEY WORDS: Cross Contamination, Temperatures, Receiving, Holding, Frozen Goods, Delivery

INSTRUCTIONS:

- Train child care employees on using the procedures in this Standard Operating Procedure (SOP).
- Follow state or local health department requirements.
- Follow the Employee Health Policy (The Employee Health Policy is not included in this resource. Please see www.theicn.org).
- Report to work in good health, clean, and dressed in clean clothes.
- Report any illnesses to your supervisor.
- Change apron when it becomes dirty.
- Wash hands properly, frequently, and at the appropriate times.
- Keep fingernails trimmed, filed, and clean.
- Avoid wearing artificial fingernails and fingernail polish. If artificial fingernails or polish is worn, single-use gloves must be worn when working with food.
- Wear single-use gloves when working with ready-to-eat food.
- 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.
- 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.
- Eat, drink, use tobacco, or chew gum only in designated break areas where food or food contact surfaces may not become contaminated.
- 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.
- Wear suitable and effective hair restraints while in the kitchen.

MONITORING:

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

CORRECTIVE ACTION:

- Retrain any child care employee found not following the procedures in this SOP.
- Discard affected food.

VERIFICATION AND RECORD KEEPING:

The child care manager will verify that child care employees are following this SOP by visually observing the employees during all hours of operation. The child care manager will complete the Food Safety Checklist daily. Child care 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:** _____

SHOW SLIDE:

Objective: List the appropriate times for handwashing, and demonstrate proper handwashing procedures.

SHOW SLIDE: Personal Hygiene Starts With a Clean You!**SAY:**

Personal hygiene starts with you. It's important to pay close attention to personal hygiene details to reduce the chance of food contamination.

SHOW SLIDE: Attire, Wounds and Sores, and Fingernails**SAY:**

Regarding attire, all of the clothes you wear at work must be clean so you don't contaminate the work area or food being prepared. You could wear a uniform with or without an apron, but the clothes must be clean. Aprons should never be worn over clothes while traveling to work and must be taken off when going to the restroom. If you have an open wound or sore on your arms, it must be covered with an impermeable bandage. Wounds on hands should be bandaged and covered with a finger cot and disposable glove. Fingernails should be kept short, clean, and free of polish or gel. Use single-use gloves or utensils such as tongs, spatulas, or deli tissue while handling ready-to-eat food or food that will not receive further cooking.

SHOW SLIDE: Hair, Jewelry, and Tasting Food**SAY:**

All hair should be covered with a hair restraint such as a hairnet or hat. Beards should also be covered with a beard restraint. Jewelry should not be worn except for a plain ring such as a wedding band. Taste food appropriately so there is no cross contamination. When tasting food, it is important to put the food in a separate plate or bowl and use a separate spoon. Step away from the stove to taste. Put all items you use for tasting in the dish room area, and wash your hands appropriately before returning to the work area.

We have reviewed many good personal hygiene practices that should be followed by child care employees. One important personal hygiene practice we have not talked about is handwashing.

It is important to know when hands should be washed and the proper methods for washing hands to minimize the risk of contaminating food.

DO:

Have the participants locate the *Handwashing* Fact Sheet and the *Washing Hands* Sample Standard Operating Procedure (SOP) in their Participant's Workbook. Review both with the participants by asking someone to read or say some of the proper procedures for when to wash hands. Write the responses on the flip chart.

SAY:

Can someone name a time when it's important to wash your hands?

Note to Instructor:

- Ask one or two participants to give you the proper procedure and follow up by going through the outline of the *Handwashing* Fact Sheet and *Washing Hands* Sample Standard Operating Procedure (SOP).

DO:

Have different participants give up to 7 responses. Review the remaining responses out loud that were not listed.

FEEDBACK:

- Before starting work
- During food preparation
- When moving from one food preparation area to another
- Before putting on or changing gloves
- After using the toilet
- After sneezing, coughing, or using a handkerchief or tissue
- After touching hair, face, or body
- After smoking, eating, drinking, or chewing gum or tobacco
- After handling raw meats, poultry, or fish
- After any clean up activity such as sweeping, mopping, or wiping counters
- After touching dirty dishes, equipment, or utensils
- After handling trash
- After handling money
- After any time the hands may become contaminated
- After changing a diaper or assisting a child in using the restroom

Handwashing

Fact Sheet

Introduction

Handwashing is the single most important practice in any child care operation. Child care employees can improve the safety of the food they serve by washing their hands frequently, correctly, and at the appropriate times.

Here Are the Facts

Foodborne illnesses are transmitted by food handlers that contaminate food and food contact surfaces. Individuals who handle food when they have a foodborne illness, gastrointestinal illness, infected lesion, or are around someone who is ill can pass along those illnesses. Individuals can simply touch a surface that is contaminated with a bacteria or virus and pass it along to others. Handwashing minimizes the risk of passing along bacteria or viruses that can cause foodborne illnesses.

Application

It is important to know how and when to wash hands and exposed areas of the arms.

How?

- Wet hands and forearms with warm running water at least 100 °F (as measured by a calibrated thermometer) and apply soap.
- Scrub lathered hands and forearms, under fingernails, and between fingers for at least 20 seconds.
- Rinse thoroughly under warm running water.
- Dry hands and forearms thoroughly with single-use paper towels or dry hands using a warm air hand dryer.
- Turn off water using paper towels.
- Use paper towel to open door when exiting the restroom.

When?

- Beginning to work, either at the beginning of shift or after breaks

Before

- Moving from one food preparation area to another
- Putting on or changing single-use gloves

After

- Using the toilet
- Sneezing, coughing, or using a handkerchief or tissue
- Touching hair, face, or body

- Handling raw meats, poultry, or fish
- Smoking, eating, drinking, or chewing gum or tobacco
- 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
- Changing a diaper or assisting a child in using the restroom

Follow U.S. Food and Drug Administration (FDA) recommendations when using hand sanitizers. These recommendations are as follows:

- Use hand sanitizers only after hands have been properly washed and dried.
- Use only hand sanitizers that comply with the *FDA Food Code*. Confirm with the manufacturers that the hand sanitizers used meet these requirements.
- Use hand sanitizers in the manner specified by the manufacturer.

Remember, follow state or local health department requirements.

Washing Hands

Sample Standard Operating Procedure (SOP)

PURPOSE: To prevent foodborne illness by contaminated hands.

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

KEY WORDS: Handwashing, Cross Contamination

INSTRUCTIONS:

1. Train child care employees on using the procedures in this Standard Operating Procedure (SOP).
2. Follow state or local health department requirements.
3. Post handwashing signs or posters near all handwashing sinks, in food preparation areas, and restrooms. Use a language understood by all child care staff.
4. Use designated handwashing sinks for handwashing only. Do not use food preparation, utility, and dishwashing sinks for handwashing.
5. Provide warm running water, soap, and a way to dry hands. Provide a waste container at each handwashing sink or near the door in restrooms.
6. Keep handwashing sinks accessible anytime employees are present.
7. Wash hands:
 - Before starting work
 - During food preparation
 - When moving from one food preparation area to another
 - Before putting on or changing gloves
 - After using the toilet
 - After sneezing, coughing, or using a handkerchief or tissue
 - After touching hair, face, or body
 - After smoking, eating, drinking, or chewing gum or tobacco
 - After handling raw meats, poultry, or fish
 - After any clean up activity such as sweeping, mopping, or wiping counters
 - After touching dirty dishes, equipment, or utensils
 - After handling trash
 - After handling money
 - After any time the hands may become contaminated
 - After changing a diaper or assisting a child in using the restroom

8. Follow proper handwashing procedures as indicated below:

- Wet hands and forearms with warm, running water and apply soap.
- Scrub lathered hands and forearms, under fingernails, and between fingers with a total wash time of at least 20 seconds.
- Rinse hands and forearms with warm running water.
- Dry hands and forearms thoroughly with single-use paper towels or dry hands using a warm hand dryer.
- Turn off water using paper towels.
- Use paper towel to open door when exiting the restroom.

CORRECTIVE ACTION:

MONITORING:

1. A designated employee will visually observe the handwashing practices of the child care staff during all hours of operation.
2. The designated employee will visually observe that handwashing sinks are properly supplied during all hours of operation.

CORRECTIVE ACTION:

1. Retrain any child care employees found not following the procedures in this SOP.
2. Ask employees who are observed not washing their hands at the appropriate times or using the proper procedure to wash their hands immediately.
3. Retrain employees to ensure proper handwashing procedure.

VERIFICATION AND RECORD KEEPING:

The child care manager will complete the Food Safety Checklist daily to indicate that monitoring is being conducted as specified. 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:** _____

SHOW SLIDE: Activity: How to Wash Hands**SAY:**

Now let's learn the proper procedures for how to wash hands. Turn in your Participant's Workbook to the Activity: *How to Wash Hands* worksheet. We are going to watch a short video to demonstrate the correct steps. As you watch the video, list the steps for proper handwashing. The first one has been completed for you.

DO:**Activity: How to Wash Hands****Materials Needed:**

- Activity: *How to Wash Hands*
- *Handwashing to Prevent the Spread of Disease* video (located in presentation)

Instructions:

1. Ask participants to locate the Activity: *How to Wash Hands* worksheet in their Participant's Workbook.
2. Read the following directions aloud. As you watch the video, list the steps for proper handwashing. The first one has been completed for you.
3. Allow 5 minutes for participants to complete this activity. Then, ask for volunteers to share their responses.
4. Review the Activity: *How to Wash Hands* Answer Key with the participants.

Activity: How to Wash Hands

Instructions: As you watch the video, list the steps for proper handwashing. The first one has been completed for you.

How to Wash Hands

- Wet hands and forearms with warm running water and apply soap.

Activity: How to Wash Hands Answer Key

How to Wash Hands

- Wet hands and forearms with running water of at least 100 °F (as measured by a calibrated thermometer) and apply soap.
- Scrub lathered hands and forearms, under fingernails, and between fingers for at least 20 seconds. Rinse thoroughly under warm running water.
- Dry hands and forearms thoroughly with single-use paper towels.
- Dry hands if using a warm air hand dryer.
- Turn off water using paper towels.
- Use paper towel to open door when exiting the restroom.

SAY:

We have included two child care safety posters in the Participant's Workbook titled *Remember to Wash Hands* and *Drown a Germ... Wash Your Hands!* Please feel free to copy and post in obvious places.

Remember to Wash Hands with Soap and Warm Running Water When...

- Arriving to work.
- Entering a food preparation area.
- Preparing and serving meals.
- Preparing meat, poultry, and fish.
- Feeding an infant.
- Eating or drinking.
- Changing diapers or cleaning up a child who has used the toilet.
- Using the bathroom.
- Helping in the bathroom.
- Sneezing, coughing, and wiping runny noses.
- Coming in contact with body fluids.
- Leaving for the day.

Drown a Germ... Wash Your Hands!

- Use soap and warm running water.
- Lather hands with soap up to the elbows.
- Vigorously rub hands together for 20 seconds.
- Wash backs of hands, wrists, between fingers, and under fingernails.
- Use fingernail brush as specified by local health regulation.
- Rinse hands thoroughly.
- Turn off running water with a paper towel, not bare hands.
- Dry hands with paper towel or air dryer.

SHOW SLIDE:

Objective: Describe how to clean and sanitize food contact surfaces, dishes, and equipment.

SHOW SLIDE: Cleaning and Sanitizing**SAY:**

Properly cleaning and sanitizing reduces the opportunity for bacteria and viruses to contaminate food.

ASK:

Think about your child care facility's kitchen, classroom, and other areas. What are some things that you should clean and sanitize in child care facilities?

DO:

Allow participants to provide feedback.

FEEDBACK:

(Food contact surfaces, sinks, equipment, toys, tables)

SAY:

You have identified some important surfaces that need to be cleaned and sanitized. Now, let's discuss the cleaning and sanitizing process.

SHOW SLIDE: Maintaining Safe Environments**SAY:**

Cleaning and sanitizing is important for maintaining safe environments in child care settings. Child care employees who follow proper cleaning and sanitizing practices reduce the risk of cross contamination that can lead to foodborne illnesses. Cross contamination is defined as the transfer of bacteria or viruses from one surface to another.

SHOW SLIDE: Wash, Rinse, and Sanitize

SAY:

Wash, rinse, and sanitize food contact surfaces of sinks, tables, equipment, utensils, thermometers, and carts:

- 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.
- Before preparing an allergen-free meal.

SHOW SLIDE: How to Wash, Rinse, and Sanitize**SAY:**

Wash, rinse, and sanitize food contact surfaces by

- Washing the surface with detergent solution to clean
- Rinsing the surface with clean water to remove debris and detergent
- Sanitizing the surface using a sanitizing solution mixed at the concentration specified on the manufacturer's label to kill microorganisms or 171 °F for 30 seconds
- Allowing the surface to air dry to prevent recontamination

For additional information on cleaning and sanitizing, refer to the *Cleaning and Sanitizing* Fact Sheet and *Cleaning and Sanitizing Food Contact Surfaces* Sample Standard Operating Procedure, in your Participant's Workbook.

Cleaning and Sanitizing

Fact Sheet

Introduction

Cleaning and sanitizing is important for maintaining safe environments in child care settings. Child care employees who follow proper cleaning and sanitizing practices reduce the risk of cross contamination that can lead to foodborne illnesses.

Application

Clean and sanitize work surfaces, equipment, and other food contact surfaces using proper procedures.

- Follow state and local health department requirements.
- Follow manufacturer's instructions regarding the use and cleaning of equipment specified on the manufacturer's label.
- Follow manufacturer's instructions regarding the use of chemicals for cleaning and sanitizing food contact surfaces.
- **Refer to the Safety Data Sheets (SDSs) provided by the manufacturer if you have questions about the use of specific chemicals. Effective June 1, 2015 the SDSs must be in a uniform format to include all associated information such as hazards regarding the chemical and first aid measures to be in a uniform format.**
- 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.
- Wash, rinse, and sanitize food contact surfaces using the following procedures:
 - Wash surface with detergent solution to clean.
 - Rinse surface with clean water to remove debris and detergent.
 - Sanitize surface using a sanitizing solution mixed at the concentration specified on the manufacturer's label or in water at 171 °F for 30 seconds.
 - Allow items to air dry.

Take corrective action to make sure that cleaning and sanitizing is done properly.

- Wash, rinse, and sanitize dirty food contact surfaces.
- Sanitize food contact surfaces if it cannot be determined that they have been sanitized properly.
- Discard food that comes in contact with food contact surfaces that have not been sanitized properly.

Remember, follow state or local health department requirements.

Cleaning and Sanitizing Food Contact Surfaces

Sample Standard Operating Procedure

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

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

KEY WORDS: Food Contact Surface, Cleaning, Sanitizing

INSTRUCTIONS:

1. Train child care employees on using the procedures in this Standard Operating Procedure (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.
 - Allow to air dry.
6. If a three-compartment sink is used, set up 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:

1. Child care employees will, 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 three-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.
 - If using hot water to sanitize, use a calibrated thermometer to measure the water temperature. Refer to *Using Thermometers in Child Care* Fact Sheet and *Calibrating Thermometers in Child Care* Fact Sheet in Lesson 3.
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 a hot water sanitizing dishmachine, ensure that food contact surfaces are reaching the appropriate temperature of 160 °F or above. Test by placing a piece of heat sensitive tape on a smallware item or a irreversible registering temperature 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 child care 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 three-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.
 - 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 three-compartment sink until the machine is repaired or use disposable single service/single-use items if a three-compartment sink is not available.
 - For a chemical sanitizing dishmachine, check the level of sanitizer remaining in the bulk the 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 three-compartment sink to wash, rinse, and sanitize until the machine is repaired.

VERIFICATION AND RECORD KEEPING:

Foodservice employees will record monitoring activities and any corrective action taken on the Food Contact Surfaces Cleaning and Sanitizing Log. The child care manager will verify that child care employees have taken the required temperatures and tested the sanitizer concentration by visually monitoring child care 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 child care 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:** _____

Storing and Using Poisonous or Toxic Chemicals

Sample Standard Operating Procedure

PURPOSE: To prevent foodborne illness by chemical contamination.

SCOPE: This procedure applies to child care employees who use chemicals in the kitchen.

KEY WORDS: Chemicals, Chemical Contamination, Safety Data Sheets (SDSs).

INSTRUCTIONS:

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

MONITORING:

Child care employees and child care managers will visually observe that chemicals are being stored, labeled, and used properly during all hours of operation.

CORRECTIVE ACTION:

Retrain any child care employee found not following the procedures in this SOP.

Discard any food contaminated by chemicals.

Label and properly store any unlabeled or misplaced chemicals.

VERIFICATION AND RECORD KEEPING:

The child care manager will complete the Food Safety Checklist daily to indicate that monitoring is completed. Child care employees will record the name of the contaminated food, date, time, and the reason why the food was discarded on the Damaged and Discarded Product Log. The child care manager will verify that appropriate corrective actions are being taken by reviewing, initialing, and dating the Damaged and Discarded Product Log each day. The Food Safety Checklist and Damaged and Discarded Product Logs are kept on file for a minimum of 1 year.

DATE IMPLEMENTED: _____ **BY:** _____

DATE REVIEWED: _____ **BY:** _____

DATE REVISED: _____ **BY:** _____

SHOW SLIDE: Washing Dishes: Manual or Mechanical**SAY:**

As you are cleaning and sanitizing, it is important to know there are two key methods for washing dishes: manual and mechanical. Let's review the steps for manually dishwashing.

SHOW SLIDE: Activity: Steps in Cleaning and Sanitizing for Manual Dishwashing**DO:****Activity: Steps in Cleaning and Sanitizing for Manual Dishwashing****Materials Needed:**

- Activity: *Steps in Cleaning and Sanitizing for Manual Dishwashing*
- *Cleaning and Sanitizing* Fact Sheet

Instructions:

1. Ask participants to locate the Activity: *Steps in Cleaning and Sanitizing for Manual Dishwashing* worksheet in their Participant's Workbook.
 - Divide participants into three groups by having all participants count off 1, 2, and 3. Have them break off into assigned groups.
 - Give Group 1: First Step, Group 2: Second Step, and Group 3: Third Step.
 - As each slide is shown have each group teach the topic they had. The instructor can clarify, correct, and/or confirm the content.
2. Have each group fill in the activity sheet with the steps and best practices by using the SOP and Fact Sheet as a reference.

Activity: Steps in Cleaning and Sanitizing for Manual Dishwashing Answer Key

SINK 1	<p>Step 1: Wash</p> <ul style="list-style-type: none"> • Cleaning surfaces with warm soapy water to remove all debris and grease film. • The water should be at or above 110 °F. • Quantity of detergent should be based on the manufacturer's instructions. • Scrape and rinse dishes when needed. • Pre-soak flatware and heavily soiled items. • Cleaning may require vigorous rubbing with a brush or cloth to loosen and remove any visible food particles. • Check wash temperatures periodically.
SINK 2	<p>Step 2: Rinse</p> <ul style="list-style-type: none"> • Clean water to remove all of the detergent. • Use clean, hot water (110 °F) to rinse away traces of food, debris, and detergent. • Change water if it gets too cold or shows signs of food, debris, or detergent.
SINK 3	<p>Step 3: Sanitize</p> <ul style="list-style-type: none"> • Sanitizing can be done with a chemical sanitizing solution or with hot water. • Chemical sanitizing solution <ul style="list-style-type: none"> ▪ The concentration or parts per million (ppm) needs to be at the proper level recommended by the manufacturer and should be tested with test strips. ▪ Change sanitizing solutions when they are visibly dirty or when concentrations drop below the required level. • Hot water solution <ul style="list-style-type: none"> ▪ Water should be maintained at 171 °F or above. ▪ Submerge dishes in hot water for at least 30 seconds for adequate sanitizing.

Manual Dishwashing

Fact Sheet

Introduction

Manual dishwashing is completed in child care operations to clean and sanitize dishes, smallwares, and utensils when there is not a dishmachine. Child care employees must use proper dishwashing procedures and monitor to ensure that sanitizing is completed.

Here Are the Facts

Dishwashing is a three-step process: wash, rinse, and sanitize. Sanitizing can be done with the use of either hot water at the proper temperature or chemical sanitizers at the appropriate concentrations. If sanitizing is not done appropriately, cross contamination can occur.

Application

Clean and sanitize dishes, smallwares, and utensils using proper dishwashing procedures.

- Follow state and local health department requirements.
- Follow manufacturer's instructions regarding the use and cleaning of equipment.
- Follow manufacturer's instructions regarding use of chemicals for cleaning and sanitizing.
- Refer to the Safety Data Sheets (SDSs) provided by the manufacturer if you have questions about use of specific chemicals.
- Set up and use the three-compartment 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 using an appropriate test strip.

Reminder: Always wash hands before handling clean and sanitized dishes, equipment, and utensils. NEVER load dirty dishes and then handle clean dishes without washing hands.

Monitor cleaning and sanitizing procedures.

- Inspect food contact surfaces of equipment and utensils visually to ensure that surfaces are clean.
- Monitor use of three-compartment sink on a daily basis.
 - Monitor the water visually in each sink to make sure it is clean and free of food debris.
 - Take the water temperature in the first compartment of the sink by using a calibrated thermometer.
 - Test sanitizer concentration in the third sink using appropriate test strips if chemical sanitizing method is used.
 - Test temperature of water in the third sink with a calibrated thermometer if hot water sanitizing method is used.

Take corrective action to make sure that cleaning and sanitizing is done properly.

- Drain and refill compartments periodically and as needed to keep the water clean and free of debris.
- Adjust the water temperature by adding hot water until the desired temperature is reached.
- Add more sanitizer or water, as appropriate, until the proper sanitizing solution concentration is achieved.

Remember, follow state or local health department requirements.

SHOW SLIDE: Manual Dishwashing: First Step**SAY:**

The first step is cleaning surfaces with warm soapy water to remove all debris and grease film. The water should be at or above 110 °F, and the quantity of detergent should be based on the manufacturer's instructions. Prior to cleaning, scraping and rinsing may be needed. You may even want to pre-soak flatware and heavily soiled items.

Cleaning may require vigorous rubbing with a brush or cloth to loosen and remove any visible food particles. Check wash temperatures periodically.

SHOW SLIDE: Manual Dishwashing: Second Step**SAY:**

The second step is rinsing with warm, clean water to remove all of the detergent. Clean, hot water (110 °F) should be used to rinse away traces of food, debris, and detergent. The water should be changed if it gets too cold or shows signs of food, debris, or detergent. If there are detergent or food particles on the surface, the next sanitizing step will not be effective.

SHOW SLIDE: Manual Dishwashing: Third Step**SAY:**

The third step is sanitizing. Sanitizing can be done with a chemical sanitizing solution or with hot water. If you use a chemical sanitizing solution, the concentration or parts per million (ppm) needs to be at the proper level recommended by the manufacturer and should be tested with test strips. Sanitizing solutions need to be changed when they are visibly dirty or when concentrations drop below the required level. If you use hot water, the water should be maintained at 171 °F or above. Items should be submersed in the hot water at least 30 seconds for adequate sanitizing.

For additional information on manual dishwashing, refer to the Food Safety handout *Manual Dishwashing* Fact Sheet in your Participant's Workbook.

SHOW SLIDE: Mechanical Dishwashing**SAY:**

The second method for washing dishes is mechanical dishwashing. Mechanical dishmachines are often used as an easy and quick process for cleaning and sanitizing dishes, smallwares, and utensils. However, it is important to use the dishmachine properly to ensure proper sanitation.

Please locate in your workbook, *Mechanical Dishwashing* Fact Sheet.

DO:

Review the application section of the *Mechanical Dishwashing* Fact Sheet with the participants.

Mechanical Dishwashing

Fact Sheet

Introduction

Dishmachines are often used in child care operations to clean and sanitize dishes, smallwares, and utensils. Child care employees must use the dishmachine properly and monitor that the machine is working properly to ensure proper sanitation.

Here Are the Facts

Dishwashing is a three-step process: wash, rinse, and sanitize. Sanitizing can be done with the use of either hot water at the proper temperature or chemical sanitizers at the appropriate concentrations. If sanitizing is not done appropriately, cross contamination can occur.

Application

Clean and sanitize dishes, smallwares, and utensils using proper dishwashing procedures.

- Follow state and local health department requirements.
- Follow manufacturer's instructions regarding use of chemicals for cleaning and sanitizing.
- Refer to the Safety Data Sheets (SDSs) provided by the manufacturer if you have questions about use of specific chemicals.
- Use the dishmachine correctly.
 - Check with the dishmachine manufacturer to verify that the information on the data plate is correct. Refer to information on the data plate to determine wash, rinse, sanitizing (final) rinse temperatures; sanitizing solution concentrations; and water pressures, as applicable.

Reminder: Always wash hands before handling clean and sanitized dishes, equipment, and utensils. NEVER load dirty dishes and then handle clean dishes without washing hands.

Monitor cleaning and sanitizing of dishmachines.

- Inspect food contact surfaces of equipment and utensils visually to ensure that surfaces are clean.
- Monitor use of dishmachine on a daily basis:
 - Monitor visually to see if the water and interior parts of the dishmachine are clean and free of debris.
 - Monitor temperature and pressure gauges to ensure that the machine is operating according to recommendations on the data plate.

- Ensure that food contact surfaces reach a surface temperature of 160 °F or above if using hot water to sanitize. Check the temperature gauge on the machine, but also do a secondary check using a heat sensitive tape or irreversible registering temperature indicator to ensure that appropriate temperatures for sanitizing are reached.
- Check the sanitizer concentration of the rinse water in chemical dishmachines using appropriate test strips.

Take corrective action to make sure cleaning and sanitizing are done properly. Follow your Standard Operating Procedure.

Remember, follow state or local health department requirements.

SAY:

It's important to follow the instructions and to verify that the information is correct. The dishes must be cleaned properly, at the correct temperature and/or at the correct chemical dilution. If the chemical is not at correct dilution, you run the risk of not being able to clean the dishes properly or using too much chemical that may remain on your dishes and utensils.

DO:

Ask participants to locate the *Cleaning and Sanitizing Food Contact Surfaces* Sample Standard Operating Procedure (SOP) which was covered earlier. Refer to #6 and #7 on the SOP.

SAY:

Look at #6 and #7 of the *Cleaning and Sanitizing Food Contact Surfaces* Sample Standard Operating Procedure.

ASK:

As you read numbers 6 and 7, why should we be concerned with the temperature of the water or the concentration of the chemical used?

6. If a three-compartment sink is used, set up 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.

FEEDBACK:

- The temperature of the water helps to remove food, debris, and grease film.
- Clean water will remove all the detergent.
- When the sanitizing solution is not at the correct concentration or the water temperature is not in the correct range, the dishes may not be cleaned properly or too much of the chemicals could be left on the plate.

SAY:

Let's look at the *Dishmachine Cleaning and Sanitizing Log* in your Participant's Workbook.

ASK:

Would someone tell me how you would use the log in your child care facility?

FEEDBACK:

- Record the temperatures of water in manual dishwashing.
- Record temperatures and place any heat sensitive tapes of mechanical dishwashing on logs.

Dishmachine Cleaning and Sanitizing Log

Instructions: Record time, temperatures, or sanitizer concentration as appropriate and any corrective action taken on this form. The child care manager will verify that child care workers have taken the required information by visually monitoring child care employees and preparation procedures during the shift and by reviewing, initialing, and dating this log daily. Maintain this log for a minimum of 1 year.

Date(D) and Time(T)	Wash Temp	Rinse Temp	Final Rinse (Sanitation) Temperature	Heat Sensitive Tape (place here)	Sanitizer Concentration (in ppm)	Corrective Action	Employee Initials	Verified By/Date
D: T:								
D: T:								
D: T:								
D: T:								
D: T:								
D: T:								
D: T:								

Conclusion

SHOW SLIDE: Conclusion of Lesson 1

SAY:

In this lesson, you have learned some basic cleaning principles that should be used in your child care operation.

ASK:

Are the processes for cleaning using cleaning buckets and maintaining equipment, manual dishwashing (using a three-compartment sink), and mechanical dishwashing (high temperature and chemical dishmachines) the same or different?

FEEDBACK:

All are the same wash, rinse, and sanitize.

SAY:

The basic process is the same.

ASK:

1. Are there any practices that we have discussed in this lesson that are not routinely followed in your operation?
2. Name one practice that should be adopted in your child care facility.

FEEDBACK:

- Wash the surface with a detergent solution to make sure it is clean.
- Rinse the surface with clean water to remove debris and detergent.
- Sanitize the surface with a sanitizer that has been mixed properly.
- Allow surface to air dry.

LESSON 2: SEPARATE

Lesson Directory

Lesson Introduction and Learning Objectives

Lesson-at-a-Glance

Lesson Plan

Fact Sheets

Using Suitable Utensils When Handling Ready-to-Eat Foods

Preventing Contamination During Food Preparation

Preventing Contamination During Food Storage

Storing and Using Chemicals

Lesson Introduction and Learning Objectives

Research conducted by the U.S. Food and Drug Administration (FDA) shows that prevention of contamination is one food safety practice that needs improvement in many foodservice operations. Cross contamination, or transfer of pathogens from a food, person, or surface to another food during preparation or storage, can be controlled by foodservice employees. One way to control cross contamination is to separate product—for example, separating raw foods from cooked foods. Chemicals should be stored away from food to avoid chemical contamination.

Lesson 2 will focus on using separation as a way to control contamination. At the end of this lesson, participants will be able to:

1. Describe ways food can become contaminated in a child care facility.
2. List methods to avoid cross contamination, chemical contamination, and cross contact.
3. Describe methods to safely receive food.
4. Describe appropriate storage techniques for food and chemicals.

Lesson-at-a-Glance

Time	Topic	Task	Materials
Set Up	Lesson Preparation	<ul style="list-style-type: none"> Set up classroom for Lesson 2 	<ul style="list-style-type: none"> Preparation Checklist
5 minutes	Introduction and Overview Lesson Objectives	<ul style="list-style-type: none"> Introduce lesson List lesson objectives 	
15 minutes	Objective Describe ways food can become contaminated in a child care facility.		<ul style="list-style-type: none"> <i>Using Suitable Utensils When Handling Ready-to-Eat Foods</i> Fact Sheet Flip chart Markers
15 minutes	Objective List methods to avoid cross contamination, chemical contamination, and cross contact.	<ul style="list-style-type: none"> Activity: Gallery Walk Avoiding Cross Contamination and Cross Contact 	<ul style="list-style-type: none"> <i>Preventing Contamination During Food Preparation</i> Fact Sheet
15 minutes	Objective Describe methods to safely receive food.		
10 minutes	Objective Describe appropriate storage techniques for food and chemicals.		<ul style="list-style-type: none"> <i>Preventing Contamination During Food Storage</i> Fact Sheet <i>Storing and Using Chemicals</i> Fact Sheet

LESSON PLAN

Introduction:

SHOW SLIDE: Lesson 2: Separate

SAY:

There are several types of contamination:

- Cross Contamination
- Chemical Contamination/Hazard
- Cross Contact

Cross contamination is described as being the unintentional transfer of pathogens from a food, person, or surface to another food during preparation or storage.

We also have chemical contamination or chemical hazard. This happens when a chemical accidentally comes in contact with food. Chemicals should be stored away from food preferably in a separate location to avoid chemical contamination.

Cross contact occurs when an allergen is accidentally transferred from a food containing an allergen to a food or surface without the allergen. It is important to decrease the risk of allergen-free food having cross contact with foods that have one or more known allergens.

Lesson 2 will focus on separating products to minimize the risk of contaminating food through cross contamination, chemical contamination, or cross contact.

DO:

Refer participants to the Lesson Objectives in the Participant's Workbook.

SAY:

After this lesson you will be able to:

- Describe ways food can become contaminated in a child care facility.
- List methods to avoid cross contamination, chemical contamination, and cross contact.
- Describe methods to safely receive food.
- Describe appropriate storage techniques for food and chemicals.

SHOW SLIDE:

Objective: Describe ways food can become contaminated in a child care facility.

SAY:

Food can become contaminated with harmful microorganisms, chemicals, or allergens in a child care facility when proper food handling practices are not followed. It is the responsibility of all employees in a child care operation to follow good food handling practices to minimize the risk of food becoming contaminated. Upon arriving to work, all employees should wash their hands appropriately. Use single-use gloves while handling ready-to-eat food. Store all food appropriately in the refrigerator or dry storage areas. Do not store raw food over cooked food. All equipment should be washed, rinsed, and sanitized before and after use. All chemicals should be stored in a separate locked area away from food. Follow procedures that do not allow allergen-free food to come into contact with known allergens.

ASK:

What are some ways that food might become contaminated in your child care operation?

DO:

Allow possible feedback from participants and record those ways on one sheet of flip chart paper.

FEEDBACK:

- Chemicals not stored away from food

SHOW SLIDE: Types of Contamination**SAY:**

The types of cross contamination can be grouped into three categories

- **Hand-to-food cross contamination.** Some examples include
 - Hands not washed properly.
 - Gloves not used for handling ready-to-eat foods.
- **Food-to-food cross contamination.** Some examples include
 - Food stored in refrigerator not wrapped properly.
 - Raw food stored over cooked food.
- **Equipment/Food contact surface-to-food cross contamination.** Some examples include
 - Equipment not cleaned and sanitized properly.
 - Rinse temperatures or chemicals not adequate for sanitation.

- **Chemical contamination/hazard.** Some examples include
 - Chemical residue too high on work surface that touches food.
 - Chemical inadvertently gets spilled into food.
- **Cross contact.** Some examples include
 - Using equipment on which food with known allergens have been prepared then preparing allergen-free food on same equipment without washing, rinsing, and sanitizing properly.
 - Regular food with known allergens has spilled over into food that is allergen-free.
- **Physical Contamination.** Some examples include
 - Hair
 - Nail polish flakes
 - Insects

SAY:

We have identified the major ways in which food may become contaminated. As mentioned earlier, cross contamination is defined as the transfer of harmful microorganisms from a surface to food or from one food to another food. Child care workers have the responsibility to take actions that will minimize the possibility for contamination of food to occur. Proper cleaning and sanitizing procedures help reduce the risk of cross contamination. Chemicals must be kept in a location away from food to help avoid accidental spillage into food causing chemical contamination. To avoid cross contact, cook allergy-safe foods first. Also, use utensils, cutting boards, and pans that have been thoroughly washed with soap and water.

For additional information on avoiding cross contamination, refer to the *Using Suitable Utensils When Handling Ready-to-Eat Foods* and *Preventing Contamination During Food Preparation* Fact Sheets in your Participant's Workbook.

Using Suitable Utensils When Handling Ready-to-Eat Foods Fact Sheet

Introduction

Ready-to-eat foods will not be cooked further before serving; it is important to handle them properly. Child care employees must follow appropriate food handling techniques to ensure that these foods do not become contaminated during preparation, storage, holding, and service to customers.

Here Are the Facts

Since ready-to-eat foods will not have further heat treatment to kill microorganisms, special care is needed to decrease opportunities for cross contamination. Use of suitable utensils when handling ready-to-eat foods is one important way to ensure safety.

Application

Use suitable utensils when handling ready-to-eat foods.

- Wash hands and exposed parts of the arms properly before preparing, handling food, or at any time the hands may become contaminated.
- Use proper procedures for glove use, including washing hands before putting on gloves.
- Use utensils that are clean and sanitized when working with ready-to-eat food. Examples include the following:
 - Single-use gloves,
 - Deli tissue,
 - Foil wrap,
 - Tongs, spoodles, spoons, and spatulas.

Monitor use of utensils for handling ready-to-eat foods.

- Conduct visual inspections to make sure the guidelines for use of utensils are followed.
- Check to make sure hands are washed at appropriate times.
- Check to make sure utensils and gloves are changed at appropriate times.

Take corrective actions to ensure appropriate use of utensils when handling ready-to-eat foods.

- Replace contaminated utensils with clean and sanitized utensils.
- Discard ready-to-eat food that has been touched with bare hands.
- Record corrective actions taken.

Remember, follow state or local health department requirements.

Preventing Contamination During Food Preparation

Fact Sheet

Introduction

Cross contamination is the transfer of bacteria or viruses from hand-to-food, food-to-food, or equipment and food contact surface-to-food. Chemical contamination or hazard, is when chemicals unintentionally come in contact with food. Cross contact occurs when an allergen is accidentally transferred from a food containing an allergen to a food or surface that does not contain the allergen. All three – cross contamination, chemical contamination/hazard, and cross contact are types of contamination that can happen in a child care center. Child care employees can minimize or eliminate contamination by following the Standard Operating Procedures in their child care food safety program.

Here Are the Facts

One of the most common causes of foodborne illness is cross contamination. Cross contamination may occur when 1) a sick employee handles food, 2) raw food contaminates a ready-to-eat food, 3) food contact surfaces are not cleaned and sanitized properly and come in contact with a ready-to-eat food, or 4) equipment is used for multiple foods without cleaning and sanitizing between preparing foods. Chemical contamination may occur if chemicals are improperly handled or if manufacturer instructions are not followed. Cross contact may occur if proper cleaning and food handling procedures are not followed with preparing allergen-free foods.

Application

There are many practices in the Standard Operating Procedures that child care employees can follow to minimize or eliminate contamination during food preparation.

Hand-to-Food Cross Contamination

- Wash hands properly, frequently, and at appropriate times.
- Wash hands before putting on single-use gloves and change gloves frequently.
- Wear gloves when handling ready-to-eat foods.
- Cover cuts, sores, and wounds with a clean bandage and a single-use glove.
- Keep fingernails short, unpolished, and clean.
- Do not wear jewelry, except for a plain band such as a wedding ring.
- Do not allow sick employees to work.

Food-to-Food Cross Contamination

- Separate raw animal foods from ready-to-eat foods during receiving, storage, and preparation.

- Separate different types of raw animal foods, such as eggs, fish, meat, and poultry, from each other except when combined in recipes.
- Separate unwashed fruits and vegetables from washed fruits and vegetables and other ready-to-eat foods.
- Place food in covered containers or packages, except during cooling. Store in the refrigerator or cooler.

Equipment/Food Contact Surface-to-Food Cross Contamination

- Use only dry, cleaned, and sanitized equipment and utensils for food preparation.
- Clean and sanitize work tables, equipment, and cutting boards after each use and before beginning a new task. For example, after slicing ham, the slicer should be cleaned and sanitized before slicing turkey.
- Clean and sanitize surfaces that are handled often, such as refrigerator and freezer handles.
- Maintain a fresh bucket of cleaning solution and a fresh bucket of sanitizing solution in the work area so that cleaning and sanitizing can be done easily.

Chemical Contamination/Hazard

- Store chemicals away from food. Keep chemicals in a locked storage area with access only to authorized employees.
- Use Safety Data Sheets (SDSs) provided by the manufacturer to ensure chemicals are stored and used properly.
- Check the concentration of the sanitizing solution with a sanitizing test kit to make sure it is at appropriate levels to sanitize.
- Store chemicals in original containers, never in containers that once stored food.
- Teach employees how to use chemicals.

Cross Contact

- Use color coded utensils, equipment, etc., or designate equipment and utensils for foods that are allergen-free.
- Isolate ingredients that are allergen-free in storage and preparation.
- Prepare allergen-free foods first, wrap and label them (with name, color code, or stickers), and place them on the top storage shelf until service.
- Follow proper handwashing procedures, and wash hands between handling allergen-free foods and foods which contain allergens.
- Properly clean and sanitize all utensils, equipment, and surfaces before preparing allergen-free foods.

Remember, follow state or local health department requirements.

SHOW SLIDE:

Objective: List methods to avoid cross contamination, chemical contamination, and cross contact.

SAY:

Let's discuss ways that child care workers can minimize contamination in each of the 5 areas.

- Always wash hands appropriately before handling food, utensils, or equipment.
- Avoid improper handling of ready-to-eat food by wearing single use gloves.
- Store food on appropriate shelving in refrigerator and storage area.
- Never allow raw food to be stored above ready-to-eat food.
- Always wash, rinse, and sanitize table surfaces and equipment before and after use.
- Store chemicals in a separate locked area.
- Store allergen-free food above all other food in dry storage. Store allergen-free food on top shelf of refrigerator with a cover and appropriate label including the name of child, food, and date.

SHOW SLIDE: Activity: Gallery Walk-Avoiding Cross Contamination, Chemical Contamination, and Cross Contact

DO:

Activity: Gallery Walk–Avoiding Cross Contamination, Chemical Contamination, and Cross Contact

Materials Needed:

- Flip chart paper
- Markers
- Painter's tape

Instructions:

1. Divide participants into five groups and assign the three types of cross contamination (Hand-to-food, Food-to-food, and Equipment/Food contact surface-to-food cross contamination), chemical contamination/hazard, and cross contact (allergens).
2. Ask each group to take one sheet of flip chart paper and write the type of contamination they were assigned at the top.
3. Ask each group to write down two or three ways that the type of contamination they have been assigned can be avoided in their facility and post their flip chart paper. Allow 2-3 minutes to complete this part of the activity.

4. Ask each group to do a gallery walk. As they rotate, ask them to add any new items that come to mind to the flip chart paper from the other groups. To complete the gallery walk, each group will rotate around the room until they have viewed the responses of the other groups. Allow 4–6 minutes to complete this part of the activity.

DO:

Do a short overview of the cross contamination first, adding any new ones that come to mind.

SAY:

Some potential responses may include the following:

Hand-to-Food

- Handwashing frequently
- Handwashing techniques
- Wearing gloves when handling ready-to-eat foods
- Use appropriate utensils for handling foods: tongs, spoons, tissue paper

Food-to-Food

- Storing food properly
- Thawing food properly
- Separating food during preparation
- Separating food during service

Equipment/Food Contact Surface-to-Food

- Cleaning and sanitizing properly
- Checking concentrations of sanitizing solutions
- Using separate cutting boards for different foods
- Prepare foods in designated areas
- Use designated sinks for handwashing and food preparation
- Clean and sanitize equipment between preparation of different foods

SAY:

You have identified some really good methods that child care employees can use to avoid cross contamination. It is important that these methods be implemented by all employees in a child care setting.

DO:

Do a short overview of the chemical contamination/hazard next, adding any new ones that come to mind.

SAY:

Some potential responses for avoiding Chemical Contamination or Chemical Hazard may include:

- Store chemicals in separate areas from food
- Store chemicals properly
- Store in original containers
- Label containers
- Never use food containers for chemicals
- Mix chemicals properly
- Check concentration of sanitizing solutions
- Use appropriate chemicals

DO:

Do a short overview of cross contact next, adding any new ones that come to mind.

SAY:

Some potential responses to avoid cross contact in dry storage areas may include:

- Cover allergen-free food before placing in the refrigerator
- Avoid storing food containing known allergens above or with allergen-free foods

SHOW SLIDE: Allergen-Free and Special Foods**SAY:**

Always check all labels when receiving foods. Check the food label of **all** the food you ordered. Make sure it does not contain known allergens. Check the labels for each delivery as the ingredient list can change without notice from the manufacturers.

Another suggestion is to designate one area in the kitchen, pantry/dry storage area, and refrigerator for preparation and storage of allergen-free products. Always wash, rinse, and sanitize the area where you plan to prepare the allergen-free food. Prepare allergen-free food first, then store the

allergen-free food away from foods containing allergens. Another way to help prevent cross contact is to use color-coded containers, dishes, and cookware for allergen-free products. You may also dedicate one set of dishes, cookware, eating utensils, and preparation area to use for allergen-free foods. Always make sure to wash (with warm soapy water), rinse, and sanitize food areas and containers properly before using them for storage of allergen-free products.

Key Points to Remember

- Wash, rinse, and sanitize properly all areas and utensils used for preparing allergen-free food.
- Use warm, soapy water and rinse, to remove allergens.
- Sanitize after using the warm soapy water and rinsing but remember that the sanitizing will not remove the allergens.
- In order to protect children in child care settings who have allergies and sensitivity to specific foods, provide a special area or shelf to store allergen-free products.
- Ideally the shelf should be at the top of the shelving unit to prevent other food from spilling over into it and coming into contact with the item.

SHOW SLIDE: Labeling Allergen-Free or Special Foods**SAY:**

Once the meal is prepared, cover and label the dish with the child's name and allergen-free food name then place on top shelf. If by chance there are two children in the classroom with the same name, you could add the child's birthday as another identifier. When the allergen-free food has been prepared and put away in an allergen-free zone, you may start your regular food preparation.

To go over a few items again:

- You should consistently use the same area.
- A separate, small refrigerator would be ideal to use for allergen-free food if your budget will allow for this.
- Every precaution must be taken to assure allergen-free food is above other food in the refrigerator to avoid any type of contamination.
- Storing allergen-free food properly in the dry storage area is also important.
- Make sure other food cannot fall into or contaminate the allergen-free food.

SHOW SLIDE:

Objective: Describe methods to safely receive food.

ASK:

Who works in a child care center? Who works in a family child care home?

SAY:

The size of your organization will determine if you shop at the grocery store or receive deliveries from approved food vendors. Food should be kept safe at all times. When shopping at the grocery store you must keep the different kinds of meat separated. Meat should not come in contact with other meat or food especially if the meat is raw. Allergen-free food should also be kept separate so cross contact will not occur with allergen containing products.

Groceries should not be left in the car, but taken directly to the center and placed in the refrigerator or freezer within 1 hour of purchase if the temperature outside is 90 °F or higher, and within 2 hours of purchase if the temperature outside is less than 90 °F.

When receiving deliveries, it is important to make sure all food is fresh and dated appropriately. It is also important to take temperatures of the food that is being delivered. Do not accept food if it is not in the correct temperature range. Check food for cleanliness and unbroken packaging. If the product that is being delivered has a package that is dirty, broken, not at proper temperature, or not the product you ordered, it should be refused.

Reject frozen food if it is not frozen solid or has ice crystals. Reject out of date, swollen, dented, or flawed cans. Report any problems to your supervisor and keep written records of problems related to delivery of food.

All product should be put away properly and immediately. Do not have food delivered when staff is not available to receive the food or when it will be left unattended. Monitor the trucks on which your food is being delivered. Look for cleanliness, organization, and refrigeration/freezer ability.

SHOW SLIDE: Storage Areas**SAY:**

There are four types of storage areas in all food-service operations: dry storage, refrigerated storage, freezer storage, and chemical storage. Sometimes storage space is very limited in child care facilities, so it is extremely important to use that space wisely.

Food must be stored properly on shelves in dry storage. Temperatures in dry storage areas should be 50 °F to 70 °F. We serve a high risk, vulnerable, or highly susceptible age group. We must be very careful with handling as well as storing food properly. Refer participants to the *Preventing Contamination During Food Storage* Fact Sheet. We will cover the proper cold temperatures in the next lesson.

Preventing Contamination During Food Storage

Fact Sheet

Introduction

Cross contamination is the transfer of bacteria or viruses from hand-to-food, food-to-food, or equipment and food contact surface-to-food. Chemical contamination, or hazard, is when chemicals unintentionally come in contact with food. Cross contact occurs when an allergen is accidentally transferred from a food containing an allergen to a food or surface that does not contain the allergen. All three – cross contamination, chemical contamination/hazard, and cross contact are types of contamination that can happen in a child care center. Child care employees can minimize or eliminate contamination by following the Standard Operating Procedures in their child care food safety program.

Here Are the Facts

One of the most common causes of foodborne illness is cross contamination. Cross contamination may occur when a sick employee handles food, raw food contaminates a ready-to-eat food, food contact surfaces that are not cleaned and sanitized properly come in contact with a ready-to-eat food, or equipment is used for multiple foods without cleaning and sanitizing between preparing foods. Chemical contamination may occur if chemicals are improperly handled or if manufacturer instructions are not followed. Cross contact may occur if proper cleaning and food handling procedures are not followed while preparing allergen-free foods. Proper food storage also is important in preventing contamination. Storage areas include the refrigerator, freezer, and dry storage.

Application

There are many practices in the Standard Operating Procedures that child care employees can follow to minimize or eliminate contamination during food storage.

Hand-to-Food Cross Contamination

- Wash hands properly, frequently, and at appropriate times.

Food-to-Food Cross Contamination

- Separate raw animal foods such as eggs, fish, meat, and poultry from ready-to-eat foods such as lettuce, cut melons, and lunch meats during storage.
- Separate different types of raw animal foods such as eggs, fish, meat, and poultry from each other except when combined in recipes.
- Store raw animal foods in refrigerators or walk-in coolers by placing the raw animal foods on shelves in the following order of cooking temperature: whole beef or pork highest up, then raw ground meats on the shelf below, and then poultry on the bottom shelf.

- Separate unwashed fruits and vegetables from washed fruits and vegetables and other ready-to-eat foods.
- Place food in covered containers or packages except during cooling and store in the refrigerator or cooler.
- Designate an upper shelf of a refrigerator or walk-in cooler as a “cooling” shelf. Uncover containers of food during the initial quick cool-down phase to facilitate cooling.
- Store damaged goods in a separate location.

Equipment/Food Contact Surface-to-Food Cross Contamination

- Use only dry, cleaned, and sanitized containers for food storage.
- Clean and sanitize shelves in the storage unit on a routine basis.
- Cover all foods well and label and date them.

Chemicals Hazard/Contamination

- Store all chemicals away from food products, preferably in a separate storeroom.
- Keep chemicals in a locked storage area with access only to authorized employees.

Cross Contact

- Have a designated storage area for allergen-free foods, preferably on the top shelf to prevent foods containing allergens from spilling into them.
- If using color coding utensils, equipment, etc., or designate equipment and utensils for foods that are allergen-free, store them in a closed container to prevent allergens from coming into contact with them.
- Store allergen-free food that has been prepared on a designated shelf away from where allergen-containing foods can spill into it. Wrap and label the container.

Remember, follow state or local health department requirements.

Storing and Using Chemicals

Fact Sheet

Introduction

Chemicals are used in child care operations for a variety of cleaning and sanitizing functions. Child care employees must use and store these chemicals properly to minimize the risk of food contamination.

Here Are the Facts

Chemical hazards are one of the three major types of hazards in a child care operation. A foodborne illness can result from a harmful chemical getting into a food that is eaten by a person.

Application

Follow safe practices for handling chemicals.

- Wash hands properly, frequently, and at appropriate times.

Chemical-to-Food Cross Contamination

- Know where the Safety Data Sheets (SDSs) are stored for every chemical that you handle. The SDSs are provided by the manufacturer. The SDSs provide information on how to use the chemical and what to do if someone is accidentally exposed to inappropriate quantities of the chemical.
- Follow the manufacturer's directions for mixing, storing, and first aid instructions on the chemical containers or on the SDSs.
- Store all chemicals in a designated secured area away from food and food contact surfaces using spacing or partitioning.
 - Limit access to chemicals by use of locks, seals, or key cards.
 - Maintain a perpetual inventory of chemicals.
- Store only chemicals that are necessary to the operation and maintenance of the kitchen.
- Mix, test, and use sanitizing solutions as recommended by the manufacturer and the state or local health department.
- Use the appropriate chemical test kit to measure the concentration of sanitizer each time a new batch is mixed.
- Use chemical containers only for storing the original chemical that came in the container and not for storing any food or water.
- Use only hand sanitizers that comply with the *FDA Food Code*. Confirm with the manufacturer that a hand sanitizer complies with the *FDA Food Code* before using.

- Label and store first aid supplies in a container that is located away from food or food contact surfaces.
- Label and store medicines for employees in a designated area and away from food contact surfaces. Do not store medicines in food storage areas.
- Store refrigerated medicines in a covered, leak proof container where they are not accessible to children and cannot contaminate food.

Take corrective action if chemicals contaminate food or food contact surfaces.

- Discard any food that may have been contaminated by chemicals.
- Label and properly store any unlabeled or misplaced chemicals.
- Discard any chemical that cannot be identified.

Remember, follow state or local health department requirements.

SHOW SLIDE:

Objective: Describe appropriate storage techniques for food and chemicals.

SHOW SLIDE: Safety Data Sheets (SDSs)**SAY:**

Chemical manufacturers, distributors, or importers must provide a Safety Data Sheet (SDS) (formerly MSDS or Material Safety Data Sheet) for every hazardous chemical they have. The sheet is to communicate the hazards as well as what to do in case of an accidental spill of the chemical. Information contained in the SDS is the same information that was in the MSDS but now the information is presented in the same order for every chemical, and the information must be easy to retrieve and understand. Information shown will include environmental health hazards, safety precautions for handling, storing, and transporting the chemical as well as emergency control measures. All information is required to be presented in the same manner for all chemicals making it easy for the employee to retrieve emergency information.

DO:

Refer Participants to the *Storage and Using Chemicals* Fact Sheet in the Participant's Workbook to follow along.

SHOW SLIDE: Storing and Using Chemicals**SAY:**

There are 4 areas of concern when storing and using chemicals. Let's discuss the importance of each one.

- Follow Manufacturer's Directions:
 - Know where the Safety Data Sheets are stored for all chemicals being handled.
 - Make sure that all staff can access these in case of an accidental spill. Follow the manufacturer's directions on the SDS for mixing, storing and first aid instructions.
- Locked Storage Areas
 - Limit access to chemicals by use of locks, seals, or key cards.
- Store Chemicals in Labeled Containers
 - Use chemical containers only for storing the original chemical that came in the container.
 - Store only chemicals that are necessary to the maintenance of the kitchen.
- Don't Use Chemical Containers for Food
 - Use chemical containers only for storing chemicals not for storing food or water.

Conclusion

SHOW SLIDE: Conclusion of Lesson 2

SAY:

We have learned many good food handling practices that can be used every day in a child care operation to avoid cross contamination, chemical contamination, and cross contact.

LESSON 3: COOK

Lesson Directory

Lesson Introduction and Learning Objectives

Lesson-at-a-Glance

Lesson Plan

Fact Sheets

Using Thermometers in Child Care

Calibrating Thermometers in Child Care

Cooking Foods

Reheating Foods

Temperature Danger Zone

Poster

Temperature Danger Zone Poster

Handout/Activities

Different Types of Thermometers Handout

Activity: Using Thermometers in Child Care

Activity: Using Thermometers in Child Care Answer Key

Activity: Calibrating Thermometers in Child Care Using the Ice Water Method (video)

Activity: Calibrating Thermometers in Child Care Using the Ice Water Method Answer Key

Thermometer Calibration Log

Activity: Temperature Danger Zone “Keep Food Out”

Activity: Temperature Danger Zone “Keep Food Out” Answer Key

Activity: Identify Four Cooking Temperatures

Activity: Identify Four Cooking Temperatures Answer Key

Activity: True or False? Identify Cooking Temperatures

Lesson Introduction and Learning Objectives

Lesson 3 will focus on cooking. When food is cooked properly, any bacteria present are killed. Different types of foods have different internal temperatures for cooking. Thermometers are the tools needed to check cooking temperatures. In order for the thermometers to be accurate, they must be calibrated on a regular basis. Calibration of the thermometer will verify that it is correct and that appropriate cooking temperatures are met.

At the end of this lesson, participants will be able to:

1. Demonstrate how to use a food thermometer.
2. Demonstrate how to calibrate a food thermometer.
3. Define the temperature danger zone for food.
4. Discuss appropriate internal cooking temperatures for food.
5. Describe the process for reheating food.

Lesson-at-a-Glance

Time	Topic	Task	Materials
Set Up	Lesson Preparation	<ul style="list-style-type: none"> Set up classroom for Lesson 3 	<ul style="list-style-type: none"> Preparation Checklist
5 minutes	Introduction and Overview Lesson Objectives	<ul style="list-style-type: none"> Introduce lesson List lesson objectives 	
15 minutes	Objective Demonstrate how to use a food thermometer.	<ul style="list-style-type: none"> Activity: <i>Using Thermometers in Child Care</i> 	<ul style="list-style-type: none"> <i>Using Thermometers in Child Care</i> Fact Sheet <i>Different Types of Thermometers</i> Handout Activity: <i>Using Thermometers in Child Care</i> Activity: <i>Using Thermometers in Child Care</i> Answer Key
10 minutes	Objective Demonstrate how to calibrate a food thermometer.	<ul style="list-style-type: none"> Activity: <i>Calibrating Thermometers in Child Care Using the Ice Water Method</i> (video) 	<ul style="list-style-type: none"> <i>Calibrating Thermometers in Child Care</i> Fact Sheet Bimetallic stemmed thermometer 2-quart liquid measure Ice, crushed Cold water Calibration tool or wrench

Time	Topic	Task	Materials
	Objective (continued) Demonstrate how to calibrate a food thermometer.	<ul style="list-style-type: none"> Activity: <i>Calibrating Thermometers in Child Care Using the Ice Water Method</i> (continued) 	<ul style="list-style-type: none"> Video: <i>A Flash of Food Safety Calibrating a Thermometer: Ice Water Method</i> <i>Calibrating Thermometers in Child Care Using the Ice Water Method</i> <i>Calibrating Thermometers in Child Care Using the Ice Water Method Answer Key</i> <i>Thermometer Calibration Log Handout</i>
10 minutes	Objective Define the temperature danger zone for food.	<ul style="list-style-type: none"> Activity: Temperature Danger Zone “Keep Foods Out” 	<ul style="list-style-type: none"> <i>Temperature Danger Zone Fact Sheet</i> Activity: <i>Temperature Danger Zone “Keep Foods Out”</i> <i>Temperature Danger Zone Poster</i>
5 minutes	Objective Discuss appropriate internal cooking temperatures for food.	<ul style="list-style-type: none"> Activity: <i>Identify Four Cooking Temperatures</i> 	<ul style="list-style-type: none"> <i>Cooking Foods Fact Sheet</i> Activity: <i>Identify Four Cooking Temperatures Answer Key</i>
5 minutes	Objective Describe the process for reheating food.	<ul style="list-style-type: none"> Activity: <i>True or False? Identify Cooking Temperatures</i> 	<ul style="list-style-type: none"> <i>Reheating Foods Fact Sheet</i>

LESSON PLAN

Introduction:

SHOW SLIDE: Lesson 3: Cook

SAY:

When we talk about temperatures in child care, please be aware that some of the temperature guidelines are different than those for other types of foodservice operations. Since child care settings are more similar to homes and they serve a vulnerable population, USDA recommends following the consumer-based Food Safety and Inspection Service (FSIS) temperatures in child care. For example, the temperature danger zone is 40 °F – 140 °F in child care, and the recommended cooking temperature for ground beef is 160 °F.

For more information on cooking temperatures for child care programs, go to www.fsis.usda.gov

DO:

Refer participants to the Lesson Objectives in the Participant's Workbook.

SAY:

After this lesson you will be able to:

- Demonstrate how to use a food thermometer.
- Demonstrate how to calibrate a food thermometer.
- Define the temperature danger zone for food.
- Discuss appropriate internal cooking temperatures for food.
- Describe the process for reheating food.

SHOW SLIDE:

Objective: Demonstrate how to use a food thermometer.

SHOW SLIDE: Use a Thermometer

SAY:

Cooking food to the appropriate internal temperature is very important for food safety. We must take food temperatures to make sure that we cook food properly to kill bacteria. To take temperatures, we need to have appropriate thermometers and use them properly.

Thermometers are essential and necessary tools for measuring the temperature of food to make sure it is safe to eat. Different thermometers have different ranges. The thermometers that are often used in child care will have a range of 0 °F to 220 °F.

Have the participants to refer to the *Using Thermometers in Child Care* Fact Sheet in their Participant's Workbook.

Using Thermometers in Child Care

Fact Sheet

Introduction

Thermometers are essential tools in any child care operation and are necessary to implement a food safety program. Child care employees need to know how to use thermometers to check food temperatures.

Here Are the Facts

Thermometers are designed for different uses and different temperature ranges. Food thermometers need to measure temperatures between 0 °F and 220 °F. Thermometers needed to check food temperatures include the following:

- Thermistor or thermocouple with a thin probe
- Bimetallic stemmed thermometer
- Oven-safe bimetallic thermometers
- Equipment thermometers

Application

How to Use Thermometers

- Clean and sanitize thermometers before each use.
- Wash the stem of the thermometer, and sanitize by dipping stem into sanitizing solution or wiping with a sanitizing wipe. Allow to air dry.
- Store food thermometers in an area that is clean and where they are not subject to contamination.
- Check and change batteries in digital thermometers on a routine basis.

How to Use Thermometers

Measure the internal temperature of food by inserting the stem of the thermometer into the thickest part of the food being sure to cover the sensor. Wait for the dial or digital indicator to stabilize at desired temperature for about 15 seconds. Take temperatures based on the type of food.

- Meats
 - Roasts: insert thermometer in the middle of the roast avoiding any bones.
 - Poultry: insert thermometer at the thickest part avoiding any bones.
 - Casseroles: check temperature in the center and at several other points.
 - Thin meats, such as hamburger patties: use a thermistor or probe that is tip sensitive to check temperatures.
- Milk: open a carton and insert thermometer at least 2 inches into the milk.
- Packaged foods: insert the thermometer between two packages without puncturing the packages.

Recording Temperatures

When food temperatures are taken, they should be recorded on the production record or on a separate cooking and reheating log.

Remember, follow state or local health department requirements.

SHOW SLIDE: Types of Thermometers**DO:**

Refer participants to the *Different Types of Thermometers* handout in their Participant's Workbook.

SAY:

Thermometers are designed for different uses and temperature ranges.

There are a variety of thermometers that measure differently. For example:

- Thermocouples will have a thin probe and several interchangeable probes such as: surface, air, penetration and immersion probes. The probe's sensing area is on the tip of the probe. Temperature will display rapidly. Thermocouple will read digitally.
- Bimetallic stemmed thermometers have dial displays with a sensing area from the tip up the stem for 2 to 2 ½ inches. They can be purchased as "oven-safe".
- Oven-safe bimetallic thermometers can be left in the oven to verify the oven is heating to the appropriate temperature. This thermometer can measure between 100 to 600 °F.
- Equipment thermometers also known as refrigerator and freezer thermometers provide accuracy of cold temperatures and are easy to use.
- Infrared or laser thermometers are used to measure the surface temperature of food and equipment. You must hold the thermometer as close to the food or equipment as possible when you measure the temperature.
- Single-use temperature indicators change color when a specific temperature is reached.

Different Types of Thermometers

Bimetallic	Hot Holding
	
Infrared	Dial Oven-Safe
	
Dial Instant-Read Bimetallic Stemmed	Digital Instant Thermistor
	
Disposable Temperature Indicator T-Sticks	Refrigerator and Freezer Thermometers
	
Thermocouple	Storage
	

SHOW SLIDE: Activity: Using Thermometers in Child Care**DO:****Activity: Using Thermometers in Child Care****Materials Needed:**

- Activity: *Using Thermometers in Child Care*

Instructions:

1. Refer participants to the Activity: *Using Thermometers in Child Care* in the Participant's Workbook. Ask participants to fill out the Activity: *Using Thermometers in Child Care* as we discuss the different types of thermometers.

SAY:

Properly using a thermometer is the best way to ensure foods are safe for everyone in your child care setting. Remember to check and change the battery in a digital thermometer on a regular basis.

Instructor's Note: Child care providers use temperatures that are in USDA Kitchen Companion. Please check with your state to learn more about the temperature requirements for your state.

SAY:

Controlling temperatures is one of the most important ways to control the growth of bacteria in food. It also helps to reduce the risk of children and staff becoming sick with a foodborne illness.

To control temperatures, you must,

- use a clean, calibrated thermometers,
- Have the correct thermometer(s),
- Place them in the right locations, and
- Use the thermometer properly to minimize the risk of a foodborne illness or outbreak in your child care setting.

SAY:

Use thermometers properly. As you prepare meals, measure the internal temperature of food by Inserting the stem of the thermometer into the thickest part of the food, being sure to cover the sensor. Be careful not to touch fat, bone, gristle, or the cooking pan to reduce the risk of an incorrect reading. Hold the thermometer in place for about 15 seconds or the recommended time provided by the manufacture for the dial or digital indicator to even out at the desired temperature. After the food has reached a safe internal temperature, clean and sanitize the thermometers before and after each use.

For more information, regarding specific temperatures for different food types, check out the Kitchen Companion: Your Safe Food Handbook at https://www.fsis.usda.gov/wps/wcm/connect/6c55c954-20a8-46fd-b617-ecffb4449062/Kitchen_Companion_Single.pdf?MOD=AJPERES

Activity: Using Thermometers in Child Care Answer Key

Instructions: Fill in the blanks with the correct answers as they are discussed.

1. What are the five common types of thermometers?

infrared , bimetallic stemmed , digital ,
thermocouple/thermister , single use

2. What cooking temperatures were recommended for the following foods:

Ready-to-eat foods 140 °F

Whole Pork 145 °F

Ground beef 160 °F

Poultry 165 °F

Soups/Casseroles 165 °F

Reheated foods 165 °F

3. When measuring temperatures of roasts, it is important to insert the thermometer in the thickest part (center) of the roast and to avoid putting the thermometer next to bone , gristle , or fat .

4. It is important to document temperatures. When you do, you should include the date , time , temperature , and initials .

5. Thermometers should be properly cleaned , sanitized , and stored .

SHOW SLIDE: How to Clean Thermometers**SAY:**

To prevent equipment-to-food or cross contact contamination, it is very important to clean and sanitize your thermometer before you and after each use.

Instructor's Note: If all the materials are available at the training site, have the participants clean their thermometers as you discuss each step. If only one thermometer is available, show participants the proper way to clean the thermometer as you discuss the steps.

DO:

Model or have class practice cleaning their thermometers as the steps are discussed.

SAY:

We are going to practice cleaning our thermometers. (Take one of the thermometers provided on your table and practice cleaning it as the steps are discussed *only if supplies are available.*)

To properly wash your thermometer,

- Remove any debris from the stem.
- Hand wash the probe with hot, soapy water. Rinse the stem of the thermometer. Do not submerge the entire thermometer because that will cause damage to the thermometer.
- Sanitize by dipping the stem or probe into an accurate sanitizing solution or use a sanitizing wipe on the stem.
- Air dry.

SHOW SLIDE: When to Calibrate Thermometers**SAY:**

For thermometers to work properly and keep food safe to eat, they must be properly calibrated. Before we learn how to calibrate them, let's look at when they should be calibrated. You should calibrate and use thermometers daily. Any time you drop a thermometer, you need to calibrate it again to make sure it is accurate. If you use a thermometer but never calibrate it, you may be taking and recording inaccurate temperatures.

SHOW SLIDE:

Objective: Demonstrate how to calibrate a food thermometer.

SHOW SLIDE: How to Calibrate a Thermometer**SAY:**

Cooking food to correct temperature is important for food safety. What happens if the temperatures taken are not accurate? For example, the USDA Food Safety Inspection Service (FSIS) guidelines specify that chicken must be cooked to an internal temperature of 165 °F. That recommendation is science-based. That is the temperature at which harmful bacteria most often associated with poultry are destroyed. Let's say that the cook takes the temperature of chicken and records that she cooked it to 165 °F. When the thermometer is checked during calibration, it measures 8 °F higher than the actual temperature. This means that the chicken was only cooked to 157 °F, a temperature that is too low to kill the harmful bacteria. She could cause children or her co-workers to become sick if the food is not cooked to the appropriate internal temperature.

This example points out the need for child care employees to use only accurate thermometers for taking food temperatures. To make sure the thermometers are accurate, they need to be calibrated. The two most common types of thermometers you may have in your child care center are bimetallic stemmed thermometers and digital thermometers (thermistors).

DO:

Ask participants to turn in their Participant's Workbook to the activity *Calibrating Thermometers in Child Care Using the Ice Water Method*.

SAY:

As we watch this video about calibrating thermometers using the ice water method, fill in the correct answer on your handout when they are discussed in the video.

SHOW SLIDE: A Flash of Food Safety Calibrating a Thermometer: Ice Water Method**Materials Needed:**

- Computer to play video
- *A Flash of Food Safety Calibrating a Thermometer: Ice Water Method* (video)
- Activity: *Calibrating Thermometers in Child Care Using the Ice Water Method*
- *Calibrating Thermometers in Child Care Using the Ice Water Method* Answer Key
- *Calibrating Thermometers in Child Care* Fact Sheet
- Bimetallic Stemmed Thermometers

Instructions:

1. Refer to *A Flash of Food Safety Calibrating a Thermometer: Ice Water Method* Video.
2. Show video clip on calibrating thermometers from *A Flash of Food Safety Calibrating a Thermometer: Ice Water Method* Video. The video is located at <https://www.youtube.com/watch?v=KCjb85pZb6c>.
3. Review responses to the video guide.

Activity: Calibrating Thermometers in Child Care Using the Ice Water Method Answer Key

Instructions: Fill in the blanks with the correct answers as they are provided during the video.

What tools or supplies did you observe being used?

1. _____ Container _____
2. _____ Ice _____
3. _____ Cold water _____
4. _____ Thermometer _____
5. _____ Calibration tool and wrench _____

What steps were used to calibrate the thermometer using the ice water method?

1. Fill a _____ container _____ with crushed ice.
2. Add _____ water _____ to within 1 inch of the top of container.
3. Stir _____ ice and water mixture _____.
4. Let sit for _____ one _____ minute(s).
5. Place _____ thermometer _____ in container so that the _____ sensing area _____ is completely submerged.
6. Let the thermometer stay in the ice water mixture for _____ 30 _____ seconds.
7. If needed, calibrate the thermometer by _____ rotating the wrench _____ until the thermometer reads 32 °F.

Note to Instructor: Do activity if ice and water is available. If ice and water is not available, have all participants to adjust the calibration tool on the hex to see how to calibrate (adjust) the temperatures on the thermometer.

SHOW SLIDE: Activity: Calibrating Thermometers in Child Care Using the Ice Water Method

DO:

Activity: Calibrating Thermometers in Child Care Using the Ice Water Method

Materials Needed:

- Bimetallic stemmed thermometers (one for each participant, if available)
- 2-quart liquid measure
- Ice, crushed
- Cold water
- Calibration tool or wrench

Instructions:

1. Divide participants into six groups.
2. Instruct groups how to set up the calibrating stations with materials provided.
3. Refer to *Calibrating Thermometers in Child Care* Fact Sheet in your Participant's Workbook.
Please follow the steps to calibrate your thermometers.

Calibrating Thermometers in Child Care

Fact Sheet

Introduction

Food temperatures must be checked throughout the food preparation process, and the thermometers used must be accurate. Child care employees are responsible for checking the accuracy of thermometers and calibrating them if they are not accurate.

Here Are the Facts

Thermometers that are not accurate will give misleading information. For example, if you use a thermometer that registers 10 °F higher than the actual temperature, you would cook ground beef to 150 °F rather than 160 °F. If the thermometer registers too low, you could easily overcook the food.

Application

It is important for child care employees to know when and how to calibrate bimetallic stemmed and digital (that can be calibrated) thermometers. Follow state or local health department requirements.

How to Take Temperatures

When?

Thermometers are sensitive and can lose calibration. It is important to calibrate them:

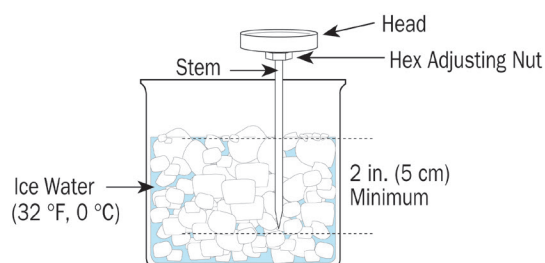
- Daily
- When they are dropped
- More often if specified by local policy

How?

There are two methods that can be used to calibrate thermometers.

Ice Water Method

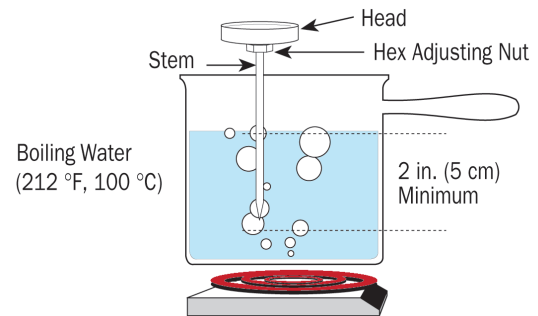
1. Fill a 2-quart measure with ice.
2. Add water to within 1 inch of top of container.
3. Stir mixture well.
4. Let sit for one minute.
5. Place thermometer in container so that the sensing area of stem or probe is completely submerged over the dimple.
6. Keep the thermometer from touching sides or bottom 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. Some digital stemmed thermometers (thermistors) and thermocouples have a reset button that should be pushed.
9. Repeat process with each thermometer.

Boiling Water Method

1. Fill a saucepan or stockpot with water.
2. Bring water to a rolling boil.
3. Place thermometer in the container so that the sensing area of the stem or probe is completely submerged over the dimple.
4. Do NOT let the thermometer stem/probe touch sides or bottom of container.
5. Let thermometer stay in the boiling water for 30 seconds or until the dial stops moving.
6. Place the calibration tool on the hex adjusting nut and rotate until the thermometer dial reads 212 °F, while in boiling water. Some digital thermometers (thermistors) and thermocouples have a reset button that should be pushed.
7. Repeat process with each thermometer.



NOTE: The boiling point of water is about 1 °F lower for every 550 feet above sea level. If you are in high altitude areas, the temperature for calibration should be adjusted. For example, if you were at 1,100 feet above sea level, the boiling point of water would be 210 °F.

SHOW SLIDE: Boiling Point Method**SAY:**

Now we will talk about the Boiling Water Method for calibrating thermometers.

Steps include:

- Fill a saucepan or stockpot with water
- Bring water to a rolling boil
- Put the calibration tool on the hex before placing thermometer in water in case you have to adjust the thermometer
- Place thermometer in the container so that the sensing area of the stem or probe is completely submerged over the dimple
- DO NOT allow the stem/probe to touch sides or bottom of container
- Let thermometer stay in the boiling water for 30 seconds or until the dial stops moving
- If needed, rotate the hex adjusting nut until the dial reads 212 °F, while in boiling water

Some digital thermometers (thermistors) and thermocouples have a reset button that should be pushed.

ASK:

How often should you calibrate your thermometers?

DO:

Allow participants time to answer.

SAY:

Thermometers should be calibrated frequently – ideally on a daily basis. Each time the thermometers are dropped, they must be calibrated. Using the same thermometer to take temperatures of very cold and very hot foods may require the thermometer to be calibrated more frequently.

SHOW SLIDE: Record the Thermometer Readings**SAY:**

Each time you calibrate a thermometer, it is recommended that you record or document that you have calibrated it. You may have a thermometer calibration record that you use in your operation, or you may use the *Thermometer Calibration Log* that was developed by the Institute of Child Nutrition (ICN).

DO:

Have participants find the *Thermometer Calibration Log* in their Participant's Workbook.

SAY:

To use a thermometer calibration log, child care employees will record the calibration temperature and corrective action taken, if applicable, on the *Thermometer Calibration Log* each time a thermometer is calibrated. The child care director will verify that child care employees are using and calibrating thermometers properly by making visual observations of employee activities during all hours of operation. The child care nutrition manager will review and initial the log daily. Logs should be maintained for a minimum of one year.

Thermometer Calibration Log

Date	Thermometer Being Calibrated	Temperature Reading	Corrective Action	Initials	Manager's Initials/Date

SHOW SLIDE:

Objective: Discuss appropriate internal cooking temperatures for food.

SHOW SLIDE: Cooking to the Correct Temperature**SAY:**

Cooking foods to the correct internal temperature will destroy existing harmful bacteria, even though it may not kill toxins or bacterial spores.

SHOW SLIDE:

Objective: Define the temperature danger zone for food.

SAY:

One of the important ways that we control the growth of microorganisms is by controlling time and temperature. The Temperature Danger Zone is the temperature range in which bacteria grow rapidly. The temperature danger zone is 40 °F – 140 °F.

The USDA Food Safety and Inspection Service (FSIS) has a campaign entitled *Be Food Safe*, that uses a temperature danger zone of 40 °F – 140 °F for consumers and child care homes. The same temperature danger zone is used for the highly susceptible population of pre-school children. Our goal in child care centers is to keep food out of the temperature danger zone as much as possible, and when it is not possible to keep food out of the temperature danger zone, we limit the time that foods are at that temperature.

DO:

Ask the participants to locate the *Temperature Danger Zone* Fact Sheet in their workbooks. Tell participants they are free to copy and post it in the child care centers.

Temperature Danger Zone

Fact Sheet

Introduction

The temperature danger zone is the temperature range in which microorganisms grow quickly and sometimes reach levels that can make people ill. Child care employees must maintain appropriate temperatures throughout the food process, from receiving until the food is served to children. Temperature control is a key component of a child care food safety program.

Here Are the Facts

Food Safety Inspection Service (FSIS) identifies the temperature danger zone as 40 °F – 140 °F. The saying “Keep hot foods hot and cold foods cold” is based on the importance of keeping food out of the temperature danger zone. In other words, cold foods must be kept at 40 °F or below, and hot foods must be kept at 140 °F or above. It is important to limit the amount of time that foods served cold or hot are in the range of 40 °F – 140 °F.

Application

- Cook, hold, serve, and chill foods at proper temperatures.
- Use a clean, sanitized, and calibrated thermometer to take food temperatures.
- Record temperatures.
- Maintain temperature logs.

Maintain temperatures at each operational step in the flow of food from receiving to storing.

- **Receiving:** Receive refrigerated foods at 40 °F or below, and frozen foods at 32 °F or below.
- **Storing:** Store refrigerated foods at 40 °F or below, and store frozen foods at 0 °F or below.
- **Preparing:** Limit the time that food is in the temperature danger zone during preparation. Batch cooking is the best way to limit time.
- **Cooking:** Cook food to the appropriate internal temperature for that item.
- **Holding:** Hold cold foods at 40 °F or below and hot foods at 140 °F or above.
- **Serving:** Serve cold food cold and hot food hot. Keep cold food below 40 °F and hot food above 140 °F.
- **Cooling:** Cool foods as quickly as possible. FSIS guidelines require that foods be cooled from 140 °F – 70 °F within two hours and from 70 °F – 40 °F within an additional four hours. This is a total of six hours. If food is not cooled from 140 °F – 70 °F within 2 hours, the food

must be reheated to 165 °F for 15 seconds and the cooling process started over. Take actions to speed the cooling process such as dividing food into smaller portions, using ice water baths, using an ice paddle, and stirring.

- **Reheating:** Reheat all leftover foods to 165 °F for 15 seconds within two hours.
- **Transporting:** Transport cold foods cold at 40 °F or below, and hot foods hot at 140 °F or above.

Remember, follow state or local health department requirements.

SHOW SLIDE: Activity: Temperature Danger Zone “Keep Foods Out”**DO:****Activity: Temperature Danger Zone “Keep Foods Out”****Materials Needed:**

- *Temperature Danger Zone Fact Sheet*
- *Temperature Danger Zone Poster*
- *Activity: Temperature Danger Zone “Keep Foods Out”*

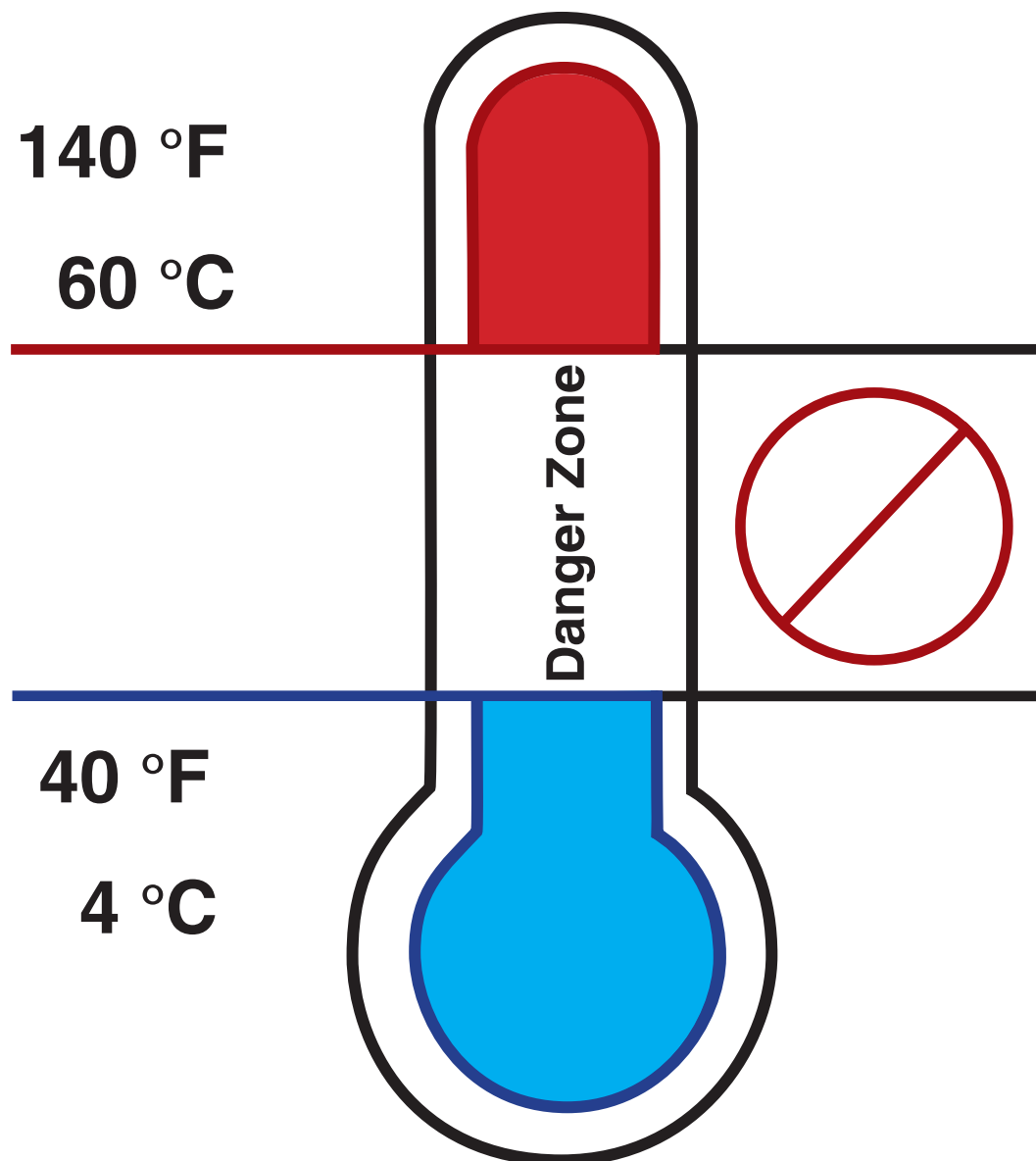
Instructions:

1. Locate the *Activity: Temperature Danger Zone* handout and *Temperature Danger Zone* Poster in the Participant's Workbook.
2. Point out to participants that the temperature danger zone on the poster is between 40 °F and 140 °F.
3. Discuss the importance of the temperature danger zone.
 - a. Bacteria grow rapidly in the temperature danger zone.
 - b. It is important to minimize the time that food is in the temperature danger zone.
4. Ask the participants, what are some ways that we can keep food out of the temperature danger zone? Have participants record their answers on the *Activity: Temperature Danger Zone “Keep Foods Out”* handout.

Activity: Temperature Danger Zone “Keep Foods Out” Answer Key

40 °F or below	140 °F or above
<ul style="list-style-type: none"> • Receive refrigerated foods at 40 °F or below • Maintain refrigerator temperatures at 40 °F or below • Maintain milk coolers at 40 °F or below • Prepare salads, deli sandwiches, and other foods in batches • Serve cold food at 40 °F or below • Store cold foods appropriately at service areas <ul style="list-style-type: none"> ▪ Refrigerators ▪ Milk coolers ▪ Refrigerated serving lines ▪ Ice around food ▪ Ice packs 	<ul style="list-style-type: none"> • Cook food to appropriate temperatures • Cook food in batches near serving time • Hold food in holding cabinets or insulated containers at 140 °F or above • Serve food from heated serving lines

Temperature Danger Zone Poster



DO:

Draw a large thermometer with hash marks at 5 °F intervals.

SAY:

There are four important temperatures that we must remember for cooking food:

165 °F, 160 °F, 145 °F, and 140 °F.

DO:

Mark the four temperatures on the thermometer. As you give examples of foods that require each of the internal cooking temperatures, note some examples next to the temperature.

SHOW SLIDE: Four Temperatures**SAY:**

There are several examples of food items that require each of these cooking temperatures:

- 140 °F: Ready-to-eat foods taken from a commercially processed, hermetically sealed package; vegetables (frozen or canned); precooked ham (to reheat)
- 145 °F: Whole roasts, chops, or steaks of beef, pork, veal, or lamb; (uncooked) ham
- 160 °F: Ground meats, such as hamburger, ground pork, or sausage; egg dishes; fish sticks or nuggets
- 165 °F: Poultry, stuffing, stuffed meats, stuffed pasta, casseroles, leftovers

SAY:

The final cooking temperature is based on the temperature that is needed to destroy the harmful bacteria that is most likely to be associated with the product. Also, keep in mind that there is a time related to that temperature – the product must be heated to that temperature for at least 15 seconds.

SHOW SLIDE: Activity: Identify Four Cooking Temperatures

DO:**Activity: Identify Four Cooking Temperatures****Materials Needed:**

- Flip chart paper
- Markers
- Painter's tape
- Temperatures signs: 140 °F, 145 °F, 160 °F, 165 °F
- Index cards with menu items written on them
- *Cooking Foods* Fact Sheet

Instructions:

1. Post the four temperature signs on the wall.
2. Cover the thermometer that was just used to illustrate cooking temperatures. Distribute one index card with a menu item written on it to each participant. Index cards will list one of the following foods per card: canned green beans, frozen chicken patties, taco filling, leftover lasagna, frozen broccoli, pork roast, sausage, chicken noodle casserole, lamb chops, hamburger patties, uncooked ham, roast beef, sloppy joes, canned corn, leftover chili, stuffed pasta shells, roasted turkey, canned chicken noodle soup, corn dogs, and chili.
3. Ask participants to tape their menu item under the internal cooking temperature that is appropriate for their menu items.
4. Go to each temperature sign and discuss the menu items that are in each group, moving items to other categories as needed.

Instructor's Note: For large groups, give each table 3-4 index cards and have them decide as a group.

Activity: Identify Four Cooking Temperatures Answer Key

140 °F	145 °F	160 °F	165 °F
Canned green beans	Roast beef	Sausage	Frozen chicken patties (if not precooked)
Frozen chicken patties (precooked)	Lamb chops	Taco filling	Leftover lasagna
Frozen broccoli	Pork roast	Sloppy Joes	Chicken noodle casserole
Canned corn	Ham (uncooked)	Hamburger patties	Leftover chili
Canned chicken noodle soup		Chili	Stuffed pasta shells
Corn dogs			Roasted turkey

DO:

Refer to the *Cooking Foods* Fact Sheet.

Cooking Foods

Fact Sheet

Introduction

Cooking is a critical control point, or a point at which reaching appropriate internal temperatures can help ensure that a food is safe to eat. Child care employees must know the proper temperatures for cooking food, monitor internal cooking temperatures, and record cooking temperatures.

Here Are the Facts

The appropriate temperature for cooking foods is based on temperatures that will kill harmful bacteria associated with that specific food. That is why poultry products have a higher cooking temperature than beef. It is important to know the temperature requirements for menu items used in your child care operation.

Application

There are four key internal temperatures in child care.

- 140 °F: Ready-to-eat foods taken from a commercially processed, hermetically sealed package; vegetables (frozen or canned); precooked ham (to reheat)
- 145 °F: Whole roasts, chops, or steaks of beef, pork, veal, or lamb; (uncooked) ham
- 160 °F: Ground meats, such as hamburger, ground pork, or sausage; egg dishes; fish sticks or nuggets
- 165 °F: Poultry, stuffing, stuffed meats, stuffed pasta, casseroles, leftovers

Monitor cooking temperatures.

- Check food temperatures with clean, sanitized, and calibrated thermometer.
- Avoid inserting the thermometer into pockets of fat or near bones when taking internal temperatures.
- Take at least two internal temperatures from each batch of food.
- Insert thermometer into the thickest part of the food, which usually is in the center.
- Record the temperature and the time the temperature was checked.

Take corrective action if appropriate temperatures are not met, which usually means that cooking is continued until the temperature at the thickest part of the food product is appropriate.

Remember, follow state or local health department requirements.

SHOW SLIDE: Reinforce Temperature Measurement**SAY:**

I will read a statement and ask you why the statement is true. Check food temperatures with a clean, sanitized, and calibrated thermometer.

ASK:

Why is this statement true?

FEEDBACK:

To avoid cross contamination and cross contact.

To make sure the proper internal cooking temperature is reached.

SAY:

Avoid inserting the thermometer into pockets of fat or near bones when taking internal temperatures.

ASK:

Why is this statement true?

FEEDBACK:

Fat and bone may get hotter than the meat beside it, resulting in an inaccurate cooking temperature for the actual meat.

SAY:

Take at least two internal temperatures from each batch of food.

ASK:

Why is this statement true?

FEEDBACK:

Food does not cook evenly. For example, a casserole will be hotter at the edges than in the middle. Meat cooks from the outside in, so the outer parts of meat will be hotter than the middle.

SAY:

Insert the thermometer into the thickest part of the food.

ASK:

Why is this statement true?

FEEDBACK:

The thickest part of the food will be the last to reach the recommended internal cooking temperature.

SAY:

Record the temperature and the time that the temperature was checked.

ASK:

Why is this statement true?

FEEDBACK:

It is important to document cooking temperatures. Documentation shows that appropriate food handling practices are being followed.

SAY:

If a temperature is taken and does not meet the standard, the typical corrective action is to continue cooking until the appropriate temperature is reached.

SHOW SLIDE: Holding Food at Appropriate Temperatures**SAY:**

Once food is cooked to the appropriate internal cooking temperature, it is important to hold it at 140 °F or warmer until the food is served to children. To ensure that food is held at appropriate temperatures, food should be cooked as close to serving time as possible and be kept warm in warming cabinets or ovens.

SHOW SLIDE:

Objective: Describe the process for reheating food.

SAY:

Reheating is the process of heating a previously cooked food or a leftover. Reheating must be done to the appropriate temperature, and it must be done quickly. The rule for reheating is that food must be heated to 165 °F for 15 seconds within 2 hours.

The goal is to take the food through the temperature danger zone as quickly as possible. There are a couple of other guidelines to keep in mind when reheating:

- Never mix leftover foods with fresh food.
- Use refrigerated leftovers within 3 to 4 days – if they have been kept at 40 °F or below.

Instructor's Note: In the past, leftovers were allowed to be kept for a longer period of time. Now it is recommended to use refrigerated leftovers within 3-4 days.

DO:

Refer to *Reheating Foods* Fact Sheet in the Participant's Workbook.

Reheating Foods

Fact Sheet

Introduction

Reheating is a critical control point, or a point at which reaching appropriate internal temperatures can help ensure that a food is safe to eat. Child care employees must know the proper temperature for reheating food, monitor the reheating process, and record temperatures of reheated foods.

Here Are the Facts

The USDA Food Safety Inspection Service (FSIS) guidelines require that all leftover foods or foods that have a pre-cooked or leftover food as an ingredient is reheated to 165 °F for 15 seconds within 2 hours.

Application

Reheat foods using proper procedures.

- Reheat the following foods to 165 °F for at least 15 seconds within 2 hours:
 - Any food that has been cooked and cooled, and will be reheated for hot holding,
 - Leftovers reheated for hot holding,
 - Products made from leftovers, such as soup or casseroles, and
 - Precooked, processed foods that have been previously cooled.
- Reheat foods rapidly. When reheating food, the total time the temperature of the food is between 40 °F and 140 °F cannot exceed two hours.
- Serve reheated food immediately or place in appropriate hot holding unit.

Monitor reheating process.

- Check food temperatures with a clean, sanitized, and calibrated thermometer.
- Take at least two internal temperatures from each batch of food that is reheated.
- Insert thermometer into the thickest part of the food, which usually is in the center.
- Record the temperature and the time the temperature is checked.

Take corrective action if appropriate temperatures of the food are not met.

- Continue reheating until required temperature is reached, up to a maximum of two hours.
- Discard food if reheating temperature is not met within two hours.

Remember, follow state or local health department requirements.

SHOW SLIDE: Reheating is a Critical Control Point**SAY:**

Reheating is a critical control point. Remember that reaching the appropriate internal temperature can ensure that a food is safe to eat for the children and the child care employees. Both cooking and reheating are critical to food safety.

We will wrap up this lesson on cooking by playing a little game–True or False?

SHOW SLIDES: Activity: True or False? Identify Cooking Temperatures (multiple slides for this activity)

DO:

Activity: *True or False? Identify Cooking Temperatures*

Materials Needed:

- Presentation slides

Instructions:

1. Explain to the participants that the group is going to play a short game. There will be eleven questions that will be shown on the PowerPoint slides. Once the instructor asks the question, the timer (10 seconds) will start.
2. Tell the participants this is a speed round, and each question will have a time limit of 10 seconds.
3. If the question cannot be answered in that time span, the other team will be given an opportunity to answer in 5 seconds.
4. Depending on the number of participants, you may break them into two groups, several groups, or one group.
5. Have them choose which individuals will answer or if they will take turns answering the questions. (Once the round starts, there will not be enough time to choose.)
6. The instructor will begin by reading the first statement.
7. The participant will say if the statement is “True” or “False?”
8. Once the question has been answered, click the mouse again and the correct answer will show.
9. Explain to participants that if they say the statement is true, and it is true, you will click on the next question.
10. If the statement is false and the participant has answered the question correctly, the

participant must explain why it is false. Click again and the correct explanation will show.

11. If the participant answers false and that answer is incorrect, give the other group/person the opportunity to say the correct answer.
12. If both groups give incorrect answers, the instructor should click to the next computer screen to demonstrate why it is incorrect.
13. Review as many of the statements as time permits.

Activity: True or False?

Identify Cooking Temperatures Answer Key

1. A bimetallic stemmed thermometer is tip sensitive. **False; It has a sensing area from the tip to the dimple.**
2. Crushed ice with water is used for calibrating thermometers. **True**
3. The ice-point method is the only acceptable way to calibrate a thermometer. **False; Thermometers also can be calibrated with boiling water.**
4. Thermometers do not need to be calibrated more often than weekly. **False; If they are dropped or used for measuring temperature extremes, they need to be calibrated more frequently.**
5. Ground meat must be cooked to 160 °F. **True**
6. Poultry needs to be cooked to 160 °F. **False; Poultry needs to be cooked to 165 °F.**
7. Pre-cooked entrees need to be cooked to 145 °F. **False; They need to be cooked to 140 °F.**
8. Leftovers should be reheated to 155 °F. **False; They must be reheated to 165 °F for 15 seconds.**
9. Food must be reheated to 165 °F for 15 seconds within 2 hours. **True**
10. Casseroles should be cooked to 165 °F. **True**
11. Vegetables should be cooked to 140 °F. **True**
12. A thermometer is a food contact surface. **True**

Conclusion

SHOW SLIDE: Conclusion of Lesson 3

SAY:

This concludes lesson three. In this lesson, we learned how to use, clean, and calibrate a food thermometer. We also reviewed internal cooking temperatures as well as the proper process for reheating food. Now we are ready to move to our last lesson.

LESSON 4: CHILL

Lesson Directory

Lesson Introduction and Learning Objectives

Lesson-at-a-Glance

Lesson Plan

Fact Sheets

Storing Foods

Controlling Time and Temperature During Preparation

Thawing Foods

Holding Cold Foods

Cooling Foods

Sample Standard Operating Procedures

Receiving Deliveries

Handout/Activities

Activity: *Storing Items on Refrigerator Shelves*

Activity: *Storing Items on Refrigerator Shelves* Answer Key

Wrap-up Activity: "Let's Make a Quilt"

Wrap-up Activity: "Let's Make a Quilt" Answer Key

Lesson Introduction and Learning Objectives

Lesson 4 will focus on chilling foods and/or keeping cold foods cold. The temperature danger zone will be described so that participants will see the importance of keeping food cold. Chilling foods is important at several points in the child care operation: receiving, storing, preparing, and cold holding.

At the end of this lesson, participants will be able to:

1. Describe methods for maintaining food temperatures when receiving, storing, preparing, and cold holding of food.
2. Describe the process for cooling food and handling leftovers.

Lesson-at-a-Glance

Time	Topic	Task	Materials
Set Up	Lesson Preparation	<ul style="list-style-type: none"> Set up classroom for Lesson 4 	<ul style="list-style-type: none"> Preparation Checklist
5 minutes	Introduction and Overview Lesson Objectives	<ul style="list-style-type: none"> Introduce lesson List lesson objectives 	
15 minutes	Objective Describe methods for maintaining food temperatures when receiving, storing, preparing, and cold holding of food.	<ul style="list-style-type: none"> Activity: Storing Items on Refrigerator Shelves Activity: Methods for Maintaining Cold Food Temperatures 	<ul style="list-style-type: none"> <i>Receiving Deliveries</i> Sample Standard Operating Procedures <i>Storing Foods</i> Fact Sheet Activity: <i>Storing Items on Refrigerator Shelves</i> Handout and Answer Key <i>Controlling Time and Temperature During Preparation</i> Fact Sheet <i>Thawing Foods</i> Fact Sheet <i>Holding Cold Foods</i> Fact Sheet
15 minutes	Objective Describe the process for cooling food and handling leftovers.		<ul style="list-style-type: none"> <i>Cooling Foods</i> Fact Sheet
5 minutes	Wrap Up	<ul style="list-style-type: none"> Wrap-up Activity: "Let's Make a Quilt" Post-Assessment 	

LESSON PLAN

Introduction:

SHOW SLIDE: Lesson 4: Chill

SAY:

Lesson 4 will focus on chilling or keeping cold foods cold. Chilling foods is important at several points in the child care operation: receiving, storing, preparing, and cold holding. Today, we will talk about the importance of chilling and methods for cooling food properly.

DO:

Refer participants to the Lesson Objectives in the Participant's Workbook.

SAY:

After this lesson you will be able to:

- Describe methods for maintaining food temperatures at receiving, storing, preparing, and cold holding of food.
- Describe the process for cooling food and handling leftovers.

SHOW SLIDE:

Objective: Describe methods for maintaining food temperatures when receiving, storing, preparing, and cold holding food.

SAY:

There are many steps in a child care operation where the temperature of cold food needs to be maintained: receiving, storing, preparing, and cold holding. At the receiving step, the temperature of cold foods is checked. If the temperature is in the temperature danger zone, the food is rejected at delivery. That step is fairly straight forward. Now, let's look at receiving, storing, preparing, and cold holding steps to see what we need to do to maintain cold temperatures.

SHOW SLIDE: Receiving Food

SAY:

After you have chosen a reputable vendor, how you receive food is very important. The food you receive must meet standards of un-adulteration regardless if it is fresh, frozen, or canned. Food delivered to your facility must be in the appropriate temperature range, packaging must be intact, frozen items must not have ice crystals, and there is a list of other items to look for on the sample SOP. Let's look at *Receiving Deliveries* Standard Operating Procedure and *Storing Foods* Fact Sheet in your Participant's Workbook.

Receiving Deliveries

Sample Standard Operating Procedure

PURPOSE: To ensure that all food is received fresh and safe when it enters the child care operation and to transfer food to proper storage as quickly as possible.

SCOPE: This procedure applies to child care employees who handle, prepare, or serve food.

KEY WORDS: Cross Contamination, Temperatures, Receiving, Holding, Frozen Goods, Delivery

INSTRUCTIONS:

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

MONITORING:

1. Inspect the delivery truck when it arrives to ensure that it is clean, free of putrid odors, and organized to prevent cross contamination. Be sure refrigerated foods are delivered on a refrigerated truck.
2. Check the interior temperature of refrigerated trucks.
3. Confirm vendor name, day and time of delivery, as well as driver's identification before accepting delivery. If driver's name is different from what is indicated on the delivery schedule, contact the vendor immediately.
4. Check frozen foods to ensure that they are all frozen solid and show no signs of thawing and refreezing, such as the presence of large ice crystals or liquids on the bottom of cartons.
5. Check the temperature of refrigerated foods.
 - a. For fresh meat, fish, and poultry products, insert a clean and sanitized thermometer into the center of the product to ensure a temperature of 40 °F or below. The temperature of milk should be 40 °F or below.

- b. For packaged products, insert a food thermometer between two packages being careful not to puncture the wrapper. If the temperature exceeds 40 °F, it may be necessary to take the internal temperature before accepting the product.
6. Check dates of milk, eggs, and other perishable goods to ensure safety and quality.
7. Check the integrity of food packaging.
8. Check the cleanliness of crates and other shipping containers before accepting products. Reject foods that are shipped in dirty crates.

CORRECTIVE ACTION:

1. Retrain any child care employee found not following the procedures in this SOP.
2. Reject the following:
 - Frozen foods with signs of previous thawing
 - Cans that have signs of deterioration, such as swollen sides or ends, flawed seals or seams, dents, or rust
 - Punctured packages
 - Foods with out-dated expiration dates
 - Foods that are out of safe temperature zone or deemed unacceptable by the established rejection policy

VERIFICATION AND RECORD KEEPING:

Record the temperature and the corrective action on the delivery invoice or on the Receiving Log. The child care manager will verify that child care employees are receiving products using the proper procedure by visually monitoring receiving practices during the shift and reviewing the Receiving Log at the close of each day. Receiving Logs are kept on file for a minimum of 1 year.

DATE IMPLEMENTED: _____ **BY:** _____

DATE REVIEWED: _____ **BY:** _____

DATE REVISED: _____ **BY:** _____

Storing Foods

Fact Sheet

Introduction

Proper storing of food will help maintain food quality and safety. Child care employees who store food play an important role in a child care facility by following proper storing practices.

Here Are the Facts

Food is a perishable product so it is important to store it at the appropriate temperature for an appropriate time. Dry storage areas should be maintained at 50 °F – 70 °F, refrigerated storage areas should be maintained at 40 °F or below, and frozen storage areas should be maintained at 0 °F or below.

Application

Follow good storage practices.

- Keep storage areas clean.
- Store all food and supplies at least 6 inches off the floor.
- Keep food in original containers or labeled containers approved for food storage.
- Label all food with the name and delivery date.
- Use the First In, First Out (FIFO) method of inventory rotation. Dating products and storing new products behind old products will make FIFO easier.
- Store chemicals in a separate area from foods, preferably in a locked room or cabinet.
- Check products for damage or spoilage, and discard products that show signs of damage or spoilage.
- Avoid cross contamination and cross contact.
- Store ready-to-eat foods in the refrigerator separately from raw foods. If multiple products are stored in one refrigerator, place them in the following order:
 - Highest shelf
 - Ready-to-eat foods
 - Whole meat
 - Ground meat
 - Lowest shelf
 - Poultry

Monitor storage practices.

- Check storage areas for cleanliness.
- Check product expiration dates.
- Check temperatures of all storage areas a minimum of once a day.
- Record the temperatures and the time temperatures are taken for all storage areas.

Take corrective action if appropriate storage practices are not followed.

- Clean storage areas.
- Dispose of expired foods.
- Report to the supervisor if storage areas are not at the appropriate temperature.

Remember, follow state or local health department requirements.

SHOW SLIDE: Storing Food**SAY:**

Storing food includes dry, refrigerated, and frozen storage. Dry storage temperature should be between 50 – 70 °F; cold storage (refrigerator) should be 40 °F or below, and frozen storage should be 0 °F – -10 °F. All storage areas must be kept clean. Keep food in original containers if possible. Foods not in original container must be labeled appropriately. Label all stored items using First In, First Out (FIFO) method. FIFO requires you to put the date you receive the item on the container or box. This will help to use the older items first by storing the newer items behind the older items.

Often, refrigerator storage space is limited and many types of food are stored in the same refrigerator. When that occurs, the placement of food in the refrigerator unit is extremely important.

SHOW SLIDE: Activity: Storing Items on Refrigerator Shelves**DO:****Activity: Storing Items on Refrigerator Shelves****Materials Needed:**

- Activity Sheet: *Storing Items on Refrigerator Shelves*
- Pen or pencil for each participant
- Flip chart paper with four “refrigerator shelves” drawn,
- Marker
- Painter’s tape

Instructions:

1. Refer participants to the Activity: *Storing Items on Refrigerator Shelves* in the Participant’s Workbook.
2. Ask participants to spend one minute matching the foods with the shelf where they should be stored.
3. Draw four “refrigerator shelves” on flip chart paper (4 horizontal quadrants) and number them one to four from top to bottom.
4. Ask participants to tell which foods should be stored on shelves one through four. As they state the correct items, write them on the correct “shelves” on the flip chart paper.
5. Explain the rationale for which items should be stored on which shelf. Starting from the top, write “No Cook” next to shelf one. Write 145 °F next to shelf two, 160 °F next to shelf three, and 165 °F next to shelf four. Tell participants that the internal cooking temperature

is higher for the foods at the bottom, and the temperature will kill pathogens associated with foods on the next higher shelf, in case cross contamination occurs.

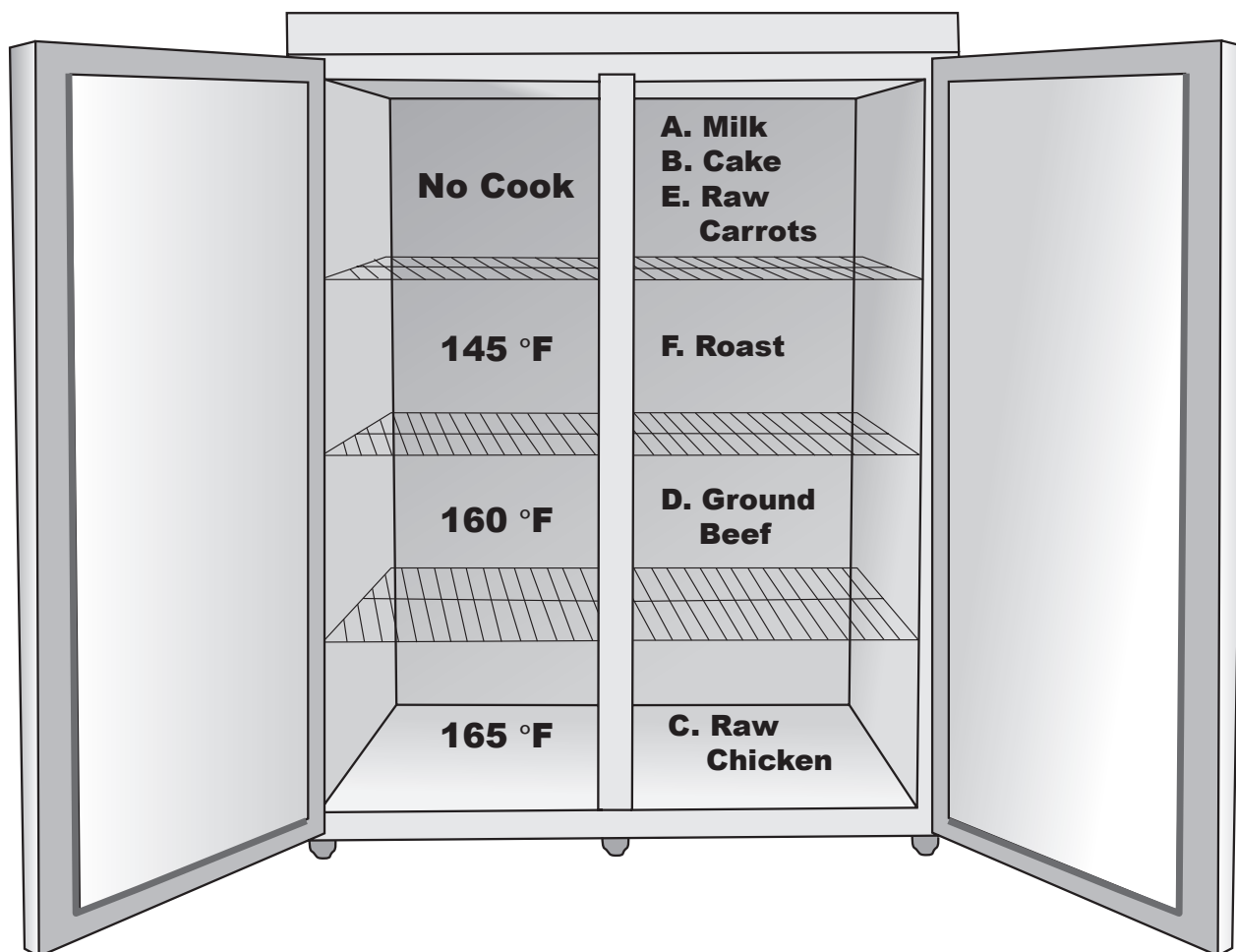
6. Ask what are other good storage practices to prevent cross contamination?
7. Discuss the need to cover food tightly, label and date food, and rotate inventory to minimize opportunity for bacterial growth.

SAY:

Refrigerated items should be stored on shelves in the refrigerator according to the cooking temperature. No cook or ready-to-eat food should be stored on the top shelf and the lowest shelf having foods that requires the highest cooking temperature. Chemicals should have a separate area for storage. Chemicals should be stored away from foods and heat, and kept under lock and key.

Activity: Storing Items on Refrigerator Shelves

Answer Key



SHOW SLIDE: Controlling Time and Temperature During Preparation**SAY:**

The temperature danger zone is 40 °F – 140 °F. All foods must be kept out of this range. We can pre-chill ingredients for items we are going to put together for a meal. Prepare food close to serving time so it is not sitting out a long period of time. Monitor the time and temperature of foods as you prepare them. Always use a calibrated thermometer so you will get an accurate reading. Any time you have to cool hot food, it must be cooled rapidly.

We will look at the *Controlling Time and Temperature During Preparation* Fact Sheet.

Controlling Time and Temperature During Preparation

Fact Sheet

Introduction

Preparation is an important step in the flow of food. Child care employees can use good food handling practices during preparation to ensure that food temperatures are controlled and the time that foods are in the temperature danger zone is minimized.

Here Are the Facts

Bacteria grow most rapidly in the temperature danger zone, between 40 °F and 140 °F.

Application

Limit the time that foods are in the temperature danger zone during preparation.

- Pre-chill ingredients for cold foods, such as sandwiches, salads, and cut fruits, to 40 °F or below before combining with other ingredients.
- Prepare foods as close to serving times as the menu will allow.
- Prepare food in small batches. For example, when assembling deli sandwiches, remove only enough meat and cheese to prepare 25 sandwiches. Return the sandwiches to the refrigerator, and then remove enough meat and cheese to prepare another 25 sandwiches.
- Limit the time for preparation of any batches of food so that the ingredients are not at room temperature for more than 30 minutes before cooking, serving, or returning to the refrigerator.
- Chill all cold foods as quickly as possible.

Monitor the time and temperatures of foods during preparation.

- Use a clean, sanitized, and calibrated thermometer (preferably a thermocouple) to check temperatures.
- Take at least two internal temperatures from each pan of food at various stages of preparation.
- Monitor the amount of time that food is in the temperature danger zone. It should not exceed 4 hours. Remember the 4 hour period is not just for preparation. By the end of the 4-hour period, the food would need to be served, consumed or discarded.

Take corrective action to make sure that time and temperature are maintained during preparation.

- Begin the cooking process immediately after preparation for any foods that will be served hot.
- Cool rapidly any ready-to-eat foods or foods that will be cooked at a later time.
- Return ingredients to the refrigerator if the anticipated preparation time is expected to exceed 30 minutes.
- Discard food held in the temperature danger zone for more than 4 hours. Again this period would also include service and consumption, in addition to preparation.

Remember, follow state or local health department requirements.

SHOW SLIDE: Thawing Foods**SAY:**

Freezing food is a good way to keep food from spoiling. However, when you thaw the food, it must be thawed in a manner that will not allow bacteria to multiply. There are four ways to thaw foods correctly.

1. Thaw by placing food in a container, and place in the refrigerator with a temperature of 40 °F or lower.
2. Thaw frozen food under running water with a temperature of 70 °F or below. The water velocity should be strong enough that loose particles will slough off. Ready-to-eat food temperature should not reach a temperature higher than 40 °F.
3. Thaw in microwave if you are going to cook the food immediately.
4. Thaw frozen food as part of the cooking process. For example: frozen patties, pizza, or lasagna.

SHOW SLIDE: Activity: Methods for Maintaining Cold Food Temperatures**DO:****Activity: Methods for Maintaining Cold Food Temperatures****Materials Needed:**

- Flip chart paper
- Markers
- Painter's tape
- *Receiving Deliveries* Sample Standard Operation Procedures
- *Storing Foods* Fact Sheet
- *Controlling Time and Temperature During Preparation* Fact Sheet
- *Thawing Foods* Fact Sheet
- *Holding Cold Foods* Fact Sheet

Instructions:

1. Divide participants into four groups by naming off four foods that require cold temperature control (milk, green salad, sandwich, fruit juice).
2. Assign each group one of the four *Receiving Deliveries* Sample Standard Operating Procedure, Fact Sheets: *Storing Foods*, *Controlling Time and Temperature During Preparation*, *Thawing Foods*, and *Holding Cold Foods*.
3. Give each group one sheet of flip chart paper with the title of the Fact Sheets and the Sample Standard Operating Procedure written on it and a marker.
4. Ask each group to review the Fact Sheets and the Standard Operating Procedure they were given and identify four to six key concepts that the group believes is important to use in a child care facility.
5. Ask participants to list the key concepts on the sheet of flip chart paper.
6. Allow 5 minutes for group discussion.
7. Ask each group to post its flip chart paper, and review the key concepts with all participants.

FEEDBACK:

Some potential responses may include the following:

- Receiving food at appropriate temperatures
- Store refrigerated food at 40 °F and frozen food at 0 °F
- Cook food to the appropriate internal temperature
- Hold cold foods at 40 °F or below and hot foods at 140 °F or above
- Serve cold food cold and hot food hot. Keep cold food 40 °F or below and hot food 140 °F or above

Thawing Foods

Fact Sheet

Introduction

Thawing frozen food correctly is important for keeping food safe to eat. USDA's Food Safety and Inspection Service (FSIS) guidelines state that the temperature of food should not exceed 40 °F during the thawing process. Child care foodservice employees must plan ahead so that they can use an appropriate method for thawing.

Here Are the Facts

Freezing food keeps most bacteria from multiplying, but it does not kill them. If food is allowed to enter the temperature danger zone of 40 °F – 140 °F, bacteria will grow rapidly. There are four acceptable methods for thawing food: in a refrigerator, under cold running water, in a microwave, or as part of the cooking process.

Application

Use good production planning to determine the quantity of food needed and when food should be thawed in advance. Indicate preparation such as thawing that needs to be done on the daily production record.

Use one of the four safe methods when thawing frozen foods.

1. Thaw frozen food in the refrigerator at a temperature at or below 40 °F.
 - Place packages of frozen food in a pan so that juices cannot drip on other foods.
 - Change the drip pan when liquid is visible in the pan.
 - Allow adequate time for thawing. A small quantity of food may thaw in one day, while a large product such as a turkey may take several days.
2. Thaw frozen food completely submerged under clean, drinkable running water.
 - The water temperature should be 70 °F or below.
 - The water should be running fast enough to knock off loose particles.
 - Ready-to-eat foods should never be allowed to rise above 40 °F.
 - Foods that will be cooked should never be allowed to rise above 40 °F for more than 4 hours, including thawing and cooking time or thawing and chilling time.
3. Thaw frozen food in a microwave oven only if it will be cooked immediately.
4. Thaw frozen food as part of the cooking process. This method typically is used for products such as frozen patties, nuggets, pizza, lasagna, chili, soup, and vegetables.

Monitor thawing process for frozen foods.

- Check temperature of food during the thawing process using an infrared thermometer or a calibrated stemmed thermometer.
 - For thawing as part of the cooking process, temperatures should be checked as they would be for cooking. Food should be heated to the internal cooking temperature within 2 hours.
 - For refrigerator thawing, check the temperature at the end of the thawing process. If the refrigeration unit is working properly, the food will never exceed 40 °F.
 - For microwave thawing, food should be cooked immediately and the temperature checked at the end of the cooking process, which should not exceed 2 hours.
 - For thawing in running water, check the temperature of the food every 30 minutes.
- Check food temperatures with a clean, sanitized, and calibrated thermometer.
- Check the water temperature with a clean, sanitized, and calibrated thermometer if cold running water is used for thawing.
- Record the temperature and the time the temperature is checked.

Take corrective action if appropriate thawing temperature of the food is not met.

- If water temperature is warmer than 70 °F from the tap, use another thawing method.
- Record corrective actions taken.

Remember, follow state or local health department requirements.

SHOW SLIDE: Holding Cold Foods**SAY:**

Guidelines require that cold foods are held at 40 °F or lower. Pre-chill ingredients you are using prior to the preparation. Monitor the temperatures of food with a calibrated thermometer. Keeping a log of the food temperature would be helpful.

Holding Cold Foods

Fact Sheet

Introduction

Holding is a point at which maintaining proper temperatures can help ensure that a food is safe to eat. Cooks and servers must know the proper temperature for holding food, monitor the holding process, and record temperatures of foods during holding.

Here Are the Facts

USDA's Food Safety and Inspection Service (FSIS) guidelines require that all cold foods be maintained at 40 °F or below. When temperatures of food are above 40 °F, they are in the temperature danger zone, and bacteria are growing at a rapid pace. Research has shown that inadequate cold holding temperatures are a problem in many child care operations.

Application

Hold cold foods at 40 °F or below.

- Pre-chill ingredients for items to be served cold.
- Schedule food production to minimize the time that food is maintained on the serving line.
- Use batch preparation for cold items to minimize the time that ingredients and completed foods are at room temperature.

Monitor holding process for cold foods.

- Check temperature of all cold holding units by placing a calibrated thermometer in the warmest part of the holding unit. The unit should be 40 °F or below.
- Check internal temperatures of cold food with a clean, sanitized, and calibrated thermometer.
- Take at least two internal temperatures from each batch of food during holding.
- Insert thermometer into the thickest part of the food, which usually is in the center.
- Record the temperature, the date, and the time the temperature was taken.

Take corrective action if appropriate holding temperature of cold food is not met.

- Rapidly chill food using an appropriate cooling method if the temperature is found to be above 40 °F and the last temperature taken was 40 °F or below and taken within the last 2 hours.
- Place food in shallow containers (no more than 2 inches deep) and uncovered on the top shelf in the back of the walk-in or reach-in cooler.
- Use a quick chill unit, such as a blast chiller.
- Stir the food in a container placed in an ice water bath.
- Separate food into smaller or thinner portions.
- Repair or reset holding equipment before returning the food to the unit, if applicable.
- Discard food if it cannot be determined how long the food temperature was above 40 °F.
- Record corrective actions taken.

Remember, follow state or local health department requirements.

SHOW SLIDE: Keep Cold Foods Cold and Hot Foods Hot!**SAY:**

We have covered quite a few methods for keeping foods chilled at receiving, storing, preparing, and cold holding. Keep in mind the old adage, “Keep cold foods cold and hot foods hot,” and that means keeping them out of the temperature danger zone.

Remember, never let raw meat, poultry, eggs, cooked food, or fresh cut fruits and vegetables sit at room temperature more than two hours before putting them in the refrigerator or freezer (1 hour when the temperature is above 90 °F).

SHOW SLIDE:

Objective: Describe the process for cooling food and handling leftovers.

SAY:

One of the most common causes of foodborne illness is improper cooling of cooked foods. Because bacteria are everywhere, even after food is cooked to a safe internal temperature, they can be reintroduced to the food and then reproduce. For this reason, leftovers must be put in shallow containers for quick cooling and refrigerated within two hours. Cooling is a step that may not occur frequently, or may not be done at all, in some child care centers. If cooling is done, temperature control is extremely important.

FSIS guidelines require that foods be cooled from 140 °F – 70 °F within 2 hours and from 70 °F – 40 °F within an additional 4 hours. If food is not cooled from 140 °F – 70 °F within 2 hours, the food must be reheated to 165 °F for 15 seconds and the cooling process started over.

ASK:

What are some methods to speed up cooling of food?

DO:

List these cooling methods on a flip chart page and post.

FEEDBACK:

- Place food in pans no more than 2" deep.
- Place food in a bowl nested in ice or ice water.
- Stir food with an ice paddle.
- Use ice as an ingredient (such as soup).
- Metal containers cool foods quicker than plastic containers.

SHOW SLIDE: Correct Storage of Leftovers**SAY:**

Many child care operations have a policy not to serve leftovers to children. If you do use leftovers, here are some guidelines for handling leftovers:

- Place leftovers into shallow containers and immediately put in the refrigerator or freezer for rapid cooling.

Remember to follow state or local health department requirements.

SAY:

Lets discuss a few examples of cooling.

Scenario 1:

Food is refrigerated at 2:00 pm for start of cooling. Starting temperature is 165 °F as measured by a thermometer.

Temperature is measured at 3:00 pm at 150 °F and again at 4:00 pm at 100 °F. Was this cooling correct, if not what action should be taken?

FEEDBACK:

No.

The temperature should be cooled to 70 °F within 2 hours

SAY:

Food that is not cooled to 70 °F in 2 hours should be reheated to 165 °F. This first process can be performed as many times as it takes for the food to reach the correct temperature in the correct amount of time.

Scenario 2:**SAY:**

Food is cooled from 165 °F to 70 °F within 2 hours then

From 70 °F to 40 °F in another 3 hours.

Was this cooling correct, if not what action should be taken?

FEEDBACK:

The cooling was done correctly.

The correct temperature was reached in the appropriate amount of time (70 °F within 2 hours and to 40 °F within 4 hours).

ASK:

Is the corrective action needed?

FEEDBACK:

No. The food was properly cooled in the appropriate time.

SAY:

Cooling time must take no longer than 2 hours for the first part and no longer than 4 hours for the second part. The total is 6 hours however it may take less time.

SAY:

We have talked about helpful ways to cool food faster.

Refer to the application part of the *Cooling Foods* Fact Sheet.

Cooling Foods

Fact Sheet

Introduction

Cooling is a critical control point, or a point at which reaching proper temperatures within an appropriate time period can help ensure that a food is safe to eat. Cooks must know the proper temperatures for cooling food, monitor the temperature of food as it cools, and record cooling temperatures.

Here Are the Facts

Food has to go through the temperature danger zone (40 °F – 140 °F) during the cooling process. Bacteria grow rapidly in the temperature danger zone, so the time that food can be in that temperature range has to be minimized to limit bacterial growth. Important cooling temperatures and times include the following:

1. Hot foods must be cooled from 140 °F – 70 °F within 2 hours.
2. Hot foods must be cooled from 70 °F – 40 °F in an additional 4 hours.
3. Foods at room temperature (70 °F) must be cooled to 40 °F within 4 hours.

Application

Cool foods to the appropriate temperature within the appropriate time.

Select a rapid cooling method to speed the cooling process.

- Place food in shallow containers no more than 2 inches deep and uncovered on the top shelf in the back of a walk-in or reach-in cooler.
- Use a quick-chill unit such as a blast chiller.
- Place the container of food in an ice water bath and stir.
- Separate food into smaller or thinner portions.
- Pre-chill ingredients used for making bulk items such as salads.

Monitor cooling temperatures.

- Check food temperatures with clean, sanitized, and calibrated thermometer.
- Take the temperature of food during the cooling process frequently to make sure that the time requirements are met and to allow time for corrective action to be taken.
- Record the temperature and the time the temperature was checked on the cooling temperature log.

Take corrective actions if the temperature and time requirements are not met.

SHOW SLIDE: Wrap-up Activity: “Let’s Make a Quilt”**SAY:**

In this lesson, we have discussed the importance of chilling food. Now that you are “cool,” I want you to wrap up this lesson by making a quilt! Each person write one action point to keep foods cold.

DO:**Wrap-up Activity: “Let’s Make a Quilt”****Materials Needed:**

- Multi-colored stick note pads
- Markers of various colors for each team
- Flip chart paper

Instructions:

1. Provide each team of six individuals with a blank sheet of flip chart paper.
Instructor’s Note: Teams should be no smaller than four to six. If you have a small number of participants in the seminar, do this activity as a single group. It will be easier to assemble the “quilt” if the groups have an even number of participants.
2. Ask each team to post one of the sheets of flip chart paper on the wall.
3. Ask each team to use the same amount of sticky notes as the number of members on the team for the quilt pieces.
4. Team Members may also draw or write their visual representation.
5. Instruct each team member to turn his/her quilt block into a visual representation of one key concept learned in the lesson “Chill” using the markers provided.
6. Ask group members to assemble their quilt on the blank piece of flip chart paper on the wall.
7. Ask each team to briefly share the key concepts learned from this lesson.

SAY:**Wrap-up Activity: “Let’s Make a Quilt” Answer Key**

- Keep cold food cold 40 °F or lower
- Thaw food properly
- Cool food properly
- Control time and temperature during food preparation
- Keep food out of the danger zone
- Hold food properly

- Receive food correctly
- Serve cold foods cold
- List the cooling procedure

Conclusion

SHOW SLIDE: Conclusion of Lesson 4

ASK:

Do you have any questions that were not answered during the course of the class?

DO:

Answer any unanswered questions.

SHOW SLIDE: Food Safety Facts Game

Note to Instructor:

This game may be played different ways depending on the amount of time you have.

1. Two teams playing against each other **OR**
2. As a review where the Instructor will provide different points. (Use this way if you are short on time).

Allow 20 minutes to play this game.

Instructions on how to facilitate the game using PowerPoint presentation:

This game can only be played using a laptop and not a clicker for advancing slides.

1. Choose someone to be the time keeper and score keeper. Have the score keeper record the points earned for each team using a flip chart.
2. Divide the room into two teams and assign the team names “Team Chill” and “Team Heat”.
3. Open the Food Facts game presentation.
4. Begin the game on the game board which is slide 2. Have a team choose a category and amount, then click on corresponding amount.
5. Read the question aloud. Allow the team 10 seconds to answer. After team answers, click on the word “Answer” for the answer to appear. If answered correctly, that team receives the points for the answer. If answered incorrectly, no team receives points. Click on the green arrow to return to the game board.
6. Have the other team choose an category and amount. Then repeat the process alternating teams until all questions are answered.
7. Total the team amounts to determine the winning team.

SAY: (Option 1 – Full Game)

We are going to play the Food Safety Facts Game. This game will be played for fun and to go over some of the concepts we talked about during the training.

The categories are:

- Splish Splash (covers questions on cleaning),
- Parting Ways (covers questions on keeping foods separated)
- What's Cooking (covers questions on food temperatures),
- The Big Chill (covers questions on temperatures for danger zones, reheating, and cooling)
- Thanks, No Thanks (covers storage).

Instructions for game:

1. Each team will have the opportunity to choose a category and amount.
2. Each question will be read aloud. You will have 10 seconds to answer. If answered correctly the team will received the points. If answered incorrectly no team receives the points. Then the other team will go next.
3. Once the game has been completed, the team with the highest total is the winner.

(Option 2 – Review)**To Use Game as a Review****SAY:**

Let's go over some main points of the Food Safety Facts Game

- The three steps in the cleaning and sanitizing process are Wash, Rinse, and Sanitize.
- Use proper handwashing procedures.
- Wash hands when they are soiled and before serving children.
- A plain ring such as a wedding band with no stones is acceptable to wear.
- Sanitizing solution of a chemical dishmachine should be tested at the end of a rinse cycle.
- Food can become contaminated in a child care facility through Hand-to-food, Equipment-to-food and Food-to-food.
- When storing food in the refrigerator always store the food that needs to be cooked to the highest temperature on the bottom shelf. For an example from top shelf to bottom: Fresh apples and oranges, ground meat, then poultry on bottom shelf.
- Poultry, stuffing, stuffed meats, and leftovers should be cooked to 165 °F.
- The four temperatures used in child care are 140, 145, 160, and 165 °F.
- The two methods used to calibrate a thermometer are ice water and boiling water methods.
- Avoid inserting the thermometer into pockets of fat or near bones because it may give you an inaccurate reading.
- Remember to never mix leftover food with fresh food, use refrigerated leftovers within 3-4 days, and reheat food to 165 °F for at least 15 seconds within 2 hours.
- The temperature danger zone for food is 40 °F - 140 °F
- The temperature and time for reheating food is 165 °F for 15 seconds within 2 hours.
- Store refrigerated foods at 40 °F and frozen food at 0 °F.
- Monitor the amount of time that food is in the danger zone.
- Shelving should be at least 6 inches off the floor.
- The proper rotation of food is First In First Out.
- An allergen that is inadvertently transferred from an allergen containing food to a food or surface that does not contain an allergen is called Cross Contact.

Post-Assessment

DO:

At the conclusion of the training and Food Safety Game, distribute the Post-Assessment. Allow sufficient time to complete the assessment, and then collect the assessment. Copies of the Pre/Post-Assessment Answer Key will be available after the Post-Assessments are turned in.

SAY:

We are now ready to take the Post-Assessment and complete the training evaluation. Use the same identifier on the Post-Assessment as you did on the Pre-Assessment to allow comparison for learning. Copies of the Pre/Post-Assessment Answer Key will be available after the Post-Assessments are turned in.

SHOW SLIDE: Institute of Child Nutrition

Food Safety Facts Game

The Food Safety Facts Game is designed to be played on the computer. If there is not access to a computer, please follow the directions below.

The Food Safety Facts Game has been designed as a review of the information covered in the four lessons in the Food Safety in Child Care seminar. To prepare for the game, instructors should:

- Prepare five category signs
 - Splish, Splash
 - Parting Ways
 - What's Cookin'?
 - The Big Chill
 - Thanks, No Thanks
- Prepare point value signs for each category (five each of the values below)
 - 100
 - 200
 - 300
 - 400
 - 500
- Post the five category signs across the top, with the point value signs underneath, as shown below.

Splish, Splash	Parting Ways	What's Cookin'?	The Big Chill	Thanks, No Thanks
100	100	100	100	100
200	200	200	200	200
300	300	300	300	300
400	400	400	400	400
500	500	500	500	500

1. Choose someone to be the time keeper and score keeper. Have the score keeper record the points earned for each team using a flip chart.
2. Divide the room into two teams and assign the team names "Team Chill" and "Team Heat".
3. Open the Food Facts game presentation.
4. Begin the game on the game board which is slide 2. Have a team choose a category and amount, then click on corresponding amount.

5. Read the question aloud. Allow the team 10 seconds to answer. After team answers, click on the word "Answer" for the answer to appear. If answered correctly, that team receives the points for the answer. If answered incorrectly, no team receives points. Click on the green arrow to return to the game board.
6. Have the other team choose an category and amount. Then repeat the process alternating teams until all questions are answered.
7. Total the team amounts to determine the winning team.

Questions for the game are given below by category and amount. Correct responses are given in bold.

Splish, Splash

100 What are the three steps in the cleaning and sanitizing process?

Wash, Rinse, Sanitize

200 Which of the following are not procedures for proper handwashing?

Dry with a reusable cloth towel

300 Which of the following are examples of when your hands should be washed?

All of the above

400 When it comes to personal hygiene in child care facilities, you are advised to wear no jewelry, except for? **A plain ring such as a wedding band with no stones**

500 When should the sanitizing solution of a chemical dishmachine be tested?

At the end of a rinse cycle

Parting Ways

100 Which of the following are examples of ways food can be contaminated in a child care facility?

All of the above

- **Hand-to-food**
- **Equipment-to-food**
- **Food-to-food**

200 Which of the following are examples of how to prevent hand-to-food contamination?

Improving handwashing techniques

300 When properly using disposable gloves, you will minimize the possibility of what form of cross contamination? **Hand-to-food**

400 Going from the top shelf to the bottom shelf, what is the correct order for storing oranges, poultry, ground meat, and fresh apples in a refrigerator?

Fresh apples and oranges, ground meat, poultry

500 Using a cutting board that has been wiped off but not sanitized, is an example of what form of cross contamination? **Equipment-to-food**

What's Cookin'?

100 Poultry, stuffing, stuffed meats, stuffed pasta, casseroles, and leftovers should be cooked to what temperature? **165 °F**

200 What are the four temperatures that must be remembered when cooking food in child care facilities? **140, 145, 160, 165 °F**

300 What are the two methods that can be used to calibrate a thermometer?

Ice water and boiling water method

400 When taking the internal temperature of meat and poultry, why should you avoid inserting the thermometer into pockets of fat or near bones? **Inaccurate temperature readings**

500 What guidelines should be kept in mind when reheating food?

All of the above

- **Never mix leftover foods with fresh food**
- **Use refrigerated leftovers within 3-4 days**
- **Reheating food should be reheated to 165 °F for at least 15 seconds within 2 hours**

The Big Chill

- 100 What is the temperature danger zone for foods? **40 – 140 °F**
- 200 What is the temperature and time for reheating food? **165 °F for 15 seconds within 2 hours**
- 300 What are the rules for 2-step cooling of food? Cool food from ____ to ____ within two hours; and cool from ____ to ____ within an additional four hours with no more than 6 hours total.
Cool food from 140 °F – 70 °F within two hours; and cool from 70 °F – 40 °F, within an additional 4 hours with no more than 6 hours total.
- 400 Store refrigerated food at ____ °F or below, and frozen foods at ____ °F or below? **40 °F and 0 °F**
- 500 How can you monitor the time and temperatures of foods during preparation time?
All of the above
- **Use a clean, sanitized, and calibrated thermometer to check food temperatures**
 - **Monitor the amount of time the food spent in the temperature danger zone**
 - **Take at least two internal temperatures from each pan of food at various stages of preparation**

Thanks, No Thanks

- 100 When storing food, how many inches off the floor should the shelving be? **6 inches**
- 200 What is the proper rotation of food within any food service operation? **First In First Out (FIFO)**
- 300 When an allergen is inadvertently transferred from an allergen containing food to a food or surface that does not contain an allergen, it is called? **Cross Contact**
- 400 What can you do to avoid cross contact of allergen-free food? **All of the above**
- **Wash, rinse, and sanitize areas before preparing allergen-free food.**
 - **Store allergen-free foods on separate shelves.**
 - **Color code all items used to store/prepare allergen-free foods**
- 500 Why is it important to periodically check the temperature of your purchased goods?
To keep it out of the danger zone

End of Game

APPENDIX

Glossary

References

Glossary

Adulterated : Foods which are no longer fit for human consumption as a result of spoilage, contamination, infestation, or other damage.

Allergen: A protein in a food that triggers an immune in a person who has an allergy.

Calibrated: Adjusting equipment to ensure measurements are accurate.

Cross Contamination: Cross contamination is described as being the (unintentional) transfer of pathogens from a food, person, or surface to another food during preparation or storage.

Cross Contact: Cross Contact is used to describe when an allergen is accidentally transferred from a food with the allergen to a food or surface without the allergen.

Chemical Contamination: A chemical that has been transferred to a food, person, or surface during use of that chemical.

Danger Zone: The temperature zone in which bacteria multiply rapidly; between 40 °F – 140 °F.

Food Allergy: An abnormal immune response that occurs when the body reacts to a certain food as if it is a harmful substance.

Food Contact Surfaces: A surface of equipment or a utensil with which food normally comes into contact.

Foodborne Illness: A foodborne illness is an illness that results from eating contaminated food.

Unadulteration: Not diluted or made impure, contains no substances that make it injurious to health, has not been held, packed, or produced under insanitary conditions.

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